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NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Level 4 Laboratory Report, Electronic Data Deliverable, SDG BSI09

Marine Corps Ballistics Base Barstow
Barstow, California

November 2019

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DoD Type I Data Package

Prepared for:

Gutierrez Canales Engineering
2655 Camino del Rio North
Suite 100
San Diego CA 92108

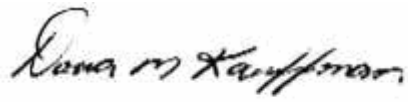
Project: Barstow Site Inspection
Soil Samples
Collected on 10/29/18

SDG# BSI09

GROUP	SAMPLE NUMBERS
2005362	9881943-9881952, 9881955-9881958, 9881961-9881962

A2LA (DoD) Cert. # 0001.01
PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: 

Dana M. Kauffman
Manager

Date: 01/22/2019

Any questions or concerns you might have regarding this data package should be directed to your client representative, Lyssa Longenecker at (717) 556-7321.

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Sample Reference List for SDG Number BSI09
with a Data Package Type of I-DOD

43806 - Gutierrez Canales Engineering

Project: Barstow Site Inspection

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9881943	OU1-CAOC1517-S-02-01	10/29/2018 10:05	11/02/2018 10:10
9881944	OU1-CAOC1517-S-02-03	10/29/2018 10:20	11/02/2018 10:10
9881945	OU1-CAOC1517-S-02-05	10/29/2018 10:28	11/02/2018 10:10
9881946	OU1-CAOC1517-S-02-6.5	10/29/2018 10:45	11/02/2018 10:10
9881947	OU1-CAOC1517-S-02-10	10/29/2018 10:55	11/02/2018 10:10
9881948	OU1-CAOC1517-S-02-12	10/29/2018 11:00	11/02/2018 10:10
9881949	OU1-CAOC1517-S-01-01	10/29/2018 11:30	11/02/2018 10:10
9881950	OU1-CAOC1517-S-01-03	10/29/2018 12:00	11/02/2018 10:10
9881951	OU1-CAOC1517-S-01-05	10/29/2018 12:10	11/02/2018 10:10
9881952	OU1-CAOC1517-S-01-08	10/29/2018 12:17	11/02/2018 10:10
9881955	OU1-BLDG573-S-05-01	10/29/2018 13:10	11/02/2018 10:10
9881956	OU1-BLDG573-S-05-03	10/29/2018 13:20	11/02/2018 10:10
9881957	OU1-BLDG573-S-05-05	10/29/2018 13:25	11/02/2018 10:10
9881958	OU1-BLDG573-S-05-08	10/29/2018 13:38	11/02/2018 10:10
9881961	OU1-BLDG573-S-04-01	10/29/2018 14:10	11/02/2018 10:10
9881962	OU1-BLDG573-S-04-03	10/29/2018 14:25	11/02/2018 10:10

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14478 PFAS in Soil by LC/MS/MS-DoD
14510 PFAS Solid Prep - DoD

A 1 gram sample of soil/sediment is sonicated with an acetonitrile/methanol solution followed by dispersive cleanup of the extract using graphitized carbon. The resultant extract is analyzed by LC/MS/MS in negative electrospray ionization (ESI) mode.

Reference: Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LCMSMS), EPA 537 Version 1.1, September 2009, Modified. Department of Defense Quality System Manual Version 5.1, Table B-15.

00111 Moisture

A well-mixed sample is heated by reflected infrared in an aluminum pan and dried to a constant weight. The decrease in weight in weight after drying is calculated as the moisture content.

Reference: SM 2540 G-1997 %Moisture Calculation for Dry Weight Determination

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Gutierrez Canales Engineering
2655 Camino del Rio North
Suite 100
San Diego CA 92108

Report Date: January 18, 2019 14:13

Project: Barstow Site Inspection

Account #: 43806
Group Number: 2005362
SDG: BSI09
State of Sample Origin: CA

Electronic Copy To Gutierrez Canales Engineering Attn: Jesse MacNeill

Respectfully Submitted,

Lyssa M. Longenecker
Specialist

(717) 556-7321

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
OU1-CAOC1517-S-02-01 Grab Soil	10/29/2018 10:05	9881943
OU1-CAOC1517-S-02-03 Grab Soil	10/29/2018 10:20	9881944
OU1-CAOC1517-S-02-05 Grab Soil	10/29/2018 10:28	9881945
OU1-CAOC1517-S-02-6.5 Grab Soil	10/29/2018 10:45	9881946
OU1-CAOC1517-S-02-10 Grab Soil	10/29/2018 10:55	9881947
OU1-CAOC1517-S-02-12 Grab Soil	10/29/2018 11:00	9881948
OU1-CAOC1517-S-01-01 Grab Soil	10/29/2018 11:30	9881949
OU1-CAOC1517-S-01-03 Grab Soil	10/29/2018 12:00	9881950
OU1-CAOC1517-S-01-05 Grab Soil	10/29/2018 12:10	9881951
OU1-CAOC1517-S-01-08 Grab Soil	10/29/2018 12:17	9881952
OU1-CAOC1517-S-01-10 Grab Soil	10/29/2018 12:28	9881953
OU1-CAOC1517-S-01-12 Grab Soil	10/29/2018 12:32	9881954
OU1-BLDG573-S-05-01 Grab Soil	10/29/2018 13:10	9881955
OU1-BLDG573-S-05-03 Grab Soil	10/29/2018 13:20	9881956
OU1-BLDG573-S-05-05 Grab Soil	10/29/2018 13:25	9881957
OU1-BLDG573-S-05-08 Grab Soil	10/29/2018 13:38	9881958
OU1-BLDG573-S-05-10 Grab Soil	10/29/2018 13:42	9881959
OU1-BLDG573-S-05-12 Grab Soil	10/29/2018 13:45	9881960
OU1-BLDG573-S-04-01 Grab Soil	10/29/2018 14:10	9881961
OU1-BLDG573-S-04-03 Grab Soil	10/29/2018 14:25	9881962

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: Barstow Site Inspection
ELLE Group #: 2005362

General Comments:

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.
Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

EPA 537 mod QSM 5.1 table B-15, LC/MS/MS Miscellaneous

Sample #s: 9881956, 9881962

The following analytes were manually integrated due to incorrect integrations:
Perfluorohexanesulfonate

Sample #s: 9881943

The following analytes were manually integrated due to incorrect integrations:
Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample #s: 9881955

The following analytes were manually integrated due to incorrect integrations:
Perfluorohexanoic acid, Perfluoroheptanoic acid, Perfluoro-octanesulfonate

Sample #s: 9881950, 9881951, 9881961

The following analytes were manually integrated due to incorrect integrations:
Perfluoro-octanesulfonate

Sample #s: 9881947, 9881948

The following analytes were manually integrated due to incorrect integrations:
Perfluorooctanoic acid

Sample #s: 9881949

The following analytes were manually integrated due to incorrect integrations:

Perfluorooctanoic acid, Perfluoroheptanoic acid, Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample #s: 9881945

The following analytes were manually integrated due to incorrect integrations:
Perfluorooctanoic acid, Perfluorohexanesulfonate

Sample #s: 9881946

The following analytes were manually integrated due to incorrect integrations:
Perfluorooctanoic acid, Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample #s: 9881944

The following analytes were manually integrated due to incorrect integrations:
Perfluorooctanoic acid, Perfluorohexanoic acid, Perfluorohexanesulfonate, Perfluoro-octanesulfonate

Sample Description: **OU1-CAOC1517-S-02-01 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 10:05
SDG#: BSI09-01

Gutierrez Canales Engineering
ELLE Sample #: SW 9881943
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.51	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.51	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.61	0.81	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.69	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.69	0.81	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.69	0.81	1
14478	Perfluorohexanesulfonate	355-46-4	0.69 J	0.20	0.65	0.81	1
14478	Perfluorohexanoic acid	307-24-4	0.27 J	0.20	0.69	0.81	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.69	0.81	1
14478	Perfluoro-octanesulfonate	1763-23-1	16	0.20	0.66	0.81	1
14478	Perfluorooctanoic acid	335-67-1	1.1	0.20	0.69	0.81	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.69	0.81	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.69	0.81	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.69	0.81	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	7.0	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/07/2018 14:30	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004A	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-CAOC1517-S-02-03 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 10:20
SDG#: BSI09-02

Gutierrez Canales Engineering
ELLE Sample #: SW 9881944
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.51	2.1	3.1	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.51	2.1	3.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.21	0.62	0.82	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.31	0.70	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.21	0.70	0.82	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.21	0.70	0.82	1
14478	Perfluorohexanesulfonate	355-46-4	1.7	0.21	0.66	0.82	1
14478	Perfluorohexanoic acid	307-24-4	0.39 J	0.21	0.70	0.82	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.21	0.70	0.82	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.21	0.67	0.82	1
14478	Perfluorooctanoic acid	335-67-1	4.4	0.21	0.70	0.82	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.21	0.70	0.82	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.21	0.70	0.82	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.21	0.70	0.82	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	7.5	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/07/2018 14:39	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004A	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-CAOC1517-S-02-05 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 10:28
SDG#: BSI09-03

Gutierrez Canales Engineering
ELLE Sample #: SW 9881945
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.49	2.0	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.49	2.0	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.67	0.98	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	0.67 J	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	0.53 J	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	1.3	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	5.7	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/08/2018 12:42	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004A	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-CAOC1517-S-02-6.5 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 10:45
SDG#: BSI09-04

Gutierrez Canales Engineering
ELLE Sample #: SW 9881946
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.49	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.49	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.67	0.98	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	0.75 J	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	0.38 J	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.29 J	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	1.4	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	3.2	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/08/2018 12:51	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004A	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-CAOC1517-S-02-10 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 10:55
SDG#: BSI09-05

Gutierrez Canales Engineering
ELLE Sample #: SW 9881947
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.47	1.9	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.47	1.9	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.56	0.75	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.28	0.64	0.94	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.64	0.75	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.64	0.75	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.60	0.75	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.19	0.64	0.75	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.64	0.75	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.61	0.75	1
14478	Perfluorooctanoic acid	335-67-1	0.26 J	0.19	0.64	0.75	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.64	0.75	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.64	0.75	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.64	0.75	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.9	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18331014	11/29/2018 17:19	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18331014	11/27/2018 21:30	Danielle D McCully	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18337820002A	12/03/2018 10:37	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-CAOC1517-S-02-12 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 11:00
SDG#: BSI09-06

Gutierrez Canales Engineering
ELLE Sample #: SW 9881948
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.57	0.77	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.65	0.96	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.65	0.77	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.65	0.77	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.61	0.77	1
14478	Perfluorohexanoic acid	307-24-4	0.20 J	0.19	0.65	0.77	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.65	0.77	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.62	0.77	1
14478	Perfluorooctanoic acid	335-67-1	0.35 J	0.19	0.65	0.77	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.65	0.77	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.65	0.77	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.65	0.77	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.5	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18331014	11/29/2018 17:28	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18331014	11/27/2018 21:30	Danielle D McCully	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18337820002A	12/03/2018 10:37	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-CAOC1517-S-01-01 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 11:30
SDG#: BSI09-07

Gutierrez Canales Engineering
ELLE Sample #: SW 9881949
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.49	2.0	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.49	2.0	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.59	0.79	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.67	0.98	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoroheptanoic acid	375-85-9	0.33 J	0.20	0.67	0.79	1
14478	Perfluorohexanesulfonate	355-46-4	0.62 J	0.20	0.63	0.79	1
14478	Perfluorohexanoic acid	307-24-4	0.81	0.20	0.67	0.79	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.67	0.79	1
14478	Perfluoro-octanesulfonate	1763-23-1	4.2	0.20	0.64	0.79	1
14478	Perfluorooctanoic acid	335-67-1	2.5	0.20	0.67	0.79	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.67	0.79	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.67	0.79	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.67	0.79	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.1	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/08/2018 13:00	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004A	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-CAOC1517-S-01-03 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 12:00
SDG#: BSI09-08

Gutierrez Canales Engineering
ELLE Sample #: SW 9881950
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.48	1.9	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.48	1.9	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.57	0.76	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.65	0.95	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.65	0.76	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.61	0.76	1
14478	Perfluorohexanoic acid	307-24-4	0.28 J	0.19	0.65	0.76	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.65	0.76	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.19	0.62	0.76	1
14478	Perfluorooctanoic acid	335-67-1	0.22 J	0.19	0.65	0.76	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.65	0.76	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.65	0.76	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.65	0.76	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.1	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/08/2018 13:09	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004A	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-CAOC1517-S-01-05 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 12:10
SDG#: BSI09-09

Gutierrez Canales Engineering
ELLE Sample #: SW 9881951
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.47	1.9	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.47	1.9	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.19	0.57	0.75	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.28	0.64	0.94	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.19	0.64	0.75	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.19	0.64	0.75	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.19	0.60	0.75	1
14478	Perfluorohexanoic acid	307-24-4	0.24 J	0.19	0.64	0.75	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.19	0.64	0.75	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.49 J	0.19	0.61	0.75	1
14478	Perfluorooctanoic acid	335-67-1	0.34 J	0.19	0.64	0.75	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.19	0.64	0.75	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.19	0.64	0.75	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.19	0.64	0.75	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	0.93	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/08/2018 13:18	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004B	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-CAOC1517-S-01-08 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 12:17
SDG#: BSI09-10

Gutierrez Canales Engineering
ELLE Sample #: SW 9881952
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.81	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.69	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.69	0.81	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.69	0.81	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.65	0.81	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.69	0.81	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.69	0.81	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.66	0.81	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.69	0.81	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.69	0.81	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.69	0.81	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.69	0.81	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	4.6	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/08/2018 13:27	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004B	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

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Sample Description: **OU1-CAOC1517-S-01-10 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 12:28
SDG#: BSI09-11

Gutierrez Canales Engineering
ELLE Sample #: **SW 9881953**
ELLE Group #: **2005362**

Sample Comments

CA ELAP Lab Certification No. 2792

Sample Description: **OU1-CAOC1517-S-01-12 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 12:32
SDG#: BSI09-12

Gutierrez Canales Engineering
ELLE Sample #: **SW 9881954**
ELLE Group #: **2005362**

Sample Comments

CA ELAP Lab Certification No. 2792

Sample Description: **OU1-BLDG573-S-05-01 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 13:10
SDG#: BSI09-13

Gutierrez Canales Engineering
ELLE Sample #: SW 9881955
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.57	2.3	3.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.57	2.3	3.4	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.23	0.68	0.91	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.34	0.78	1.1	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.23	0.78	0.91	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.23	0.78	0.91	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.23	0.73	0.91	1
14478	Perfluorohexanoic acid	307-24-4	0.27 J	0.23	0.78	0.91	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.23	0.78	0.91	1
14478	Perfluoro-octanesulfonate	1763-23-1	0.50 J	0.23	0.74	0.91	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.23	0.78	0.91	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.23	0.78	0.91	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.23	0.78	0.91	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.23	0.78	0.91	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	16.5	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/08/2018 13:36	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004B	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-BLDG573-S-05-03 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 13:20
SDG#: BSI09-14

Gutierrez Canales Engineering
ELLE Sample #: SW 9881956
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.59	2.4	3.5	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.59	2.4	3.5	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.24	0.71	0.94	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.35	0.80	1.2	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.24	0.80	0.94	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.24	0.80	0.94	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.24	0.75	0.94	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.24	0.80	0.94	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.24	0.80	0.94	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.24	0.77	0.94	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.24	0.80	0.94	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.24	0.80	0.94	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.24	0.80	0.94	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.24	0.80	0.94	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	17.7	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/08/2018 13:45	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004B	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-BLDG573-S-05-05 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 13:25
SDG#: BSI09-15

Gutierrez Canales Engineering
ELLE Sample #: SW 9881957
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.56	2.2	3.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.56	2.2	3.4	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.22	0.67	0.89	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.34	0.76	1.1	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.22	0.76	0.89	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.22	0.76	0.89	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.22	0.71	0.89	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.22	0.76	0.89	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.22	0.76	0.89	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.22	0.73	0.89	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.22	0.76	0.89	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.22	0.76	0.89	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.22	0.76	0.89	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.22	0.76	0.89	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	13.9	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/08/2018 13:54	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004B	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-BLDG573-S-05-08 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 13:38
SDG#: BSI09-16

Gutierrez Canales Engineering
ELLE Sample #: SW 9881958
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.50	2.0	3.0	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.50	2.0	3.0	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.60	0.80	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.30	0.68	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoroheptanoic acid	375-85-9	N.D.	0.20	0.68	0.80	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.64	0.80	1
14478	Perfluorohexanoic acid	307-24-4	N.D.	0.20	0.68	0.80	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.68	0.80	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.65	0.80	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.68	0.80	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.68	0.80	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.68	0.80	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.68	0.80	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	1.4	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/08/2018 14:03	Joshua P Trost	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004B	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-BLDG573-S-05-10 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 13:42
SDG#: BSI09-17

Gutierrez Canales Engineering
ELLE Sample #: **SW 9881959**
ELLE Group #: **2005362**

Sample Comments

CA ELAP Lab Certification No. 2792

Sample Description:	**OU1-BLDG573-S-05-12 Grab Soil** **MCLB Barstow**	**Gutierrez Canales Engineering**	
		ELLE Sample #:	**SW 9881960**
		ELLE Group #:	**2005362**
Project Name:	**Barstow Site Inspection**		
Submittal Date/Time:	11/02/2018 10:10		
Collection Date/Time:	10/29/2018 13:45		
SDG#:	BSI09-18		

Sample Comments

CA ELAP Lab Certification No. 2792

Sample Description: **OU1-BLDG573-S-04-01 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 14:10
SDG#: BSI09-19

Gutierrez Canales Engineering
ELLE Sample #: SW 9881961
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.52	2.1	3.1	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.52	2.1	3.1	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.21	0.62	0.83	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.31	0.71	1.0	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.21	0.71	0.83	1
14478	Perfluoroheptanoic acid	375-85-9	2.6	0.21	0.71	0.83	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.21	0.67	0.83	1
14478	Perfluorohexanoic acid	307-24-4	1.7	0.21	0.71	0.83	1
14478	Perfluorononanoic acid	375-95-1	0.47 J	0.21	0.71	0.83	1
14478	Perfluoro-octanesulfonate	1763-23-1	2.5	0.21	0.68	0.83	1
14478	Perfluorooctanoic acid	335-67-1	6.9	0.21	0.71	0.83	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.21	0.71	0.83	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.21	0.71	0.83	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.21	0.71	0.83	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	5.8	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/07/2018 20:43	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004B	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **OU1-BLDG573-S-04-03 Grab Soil**
MCLB Barstow

Project Name: **Barstow Site Inspection**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 10/29/2018 14:25
SDG#: BSI09-20

Gutierrez Canales Engineering
ELLE Sample #: SW 9881962
ELLE Group #: 2005362
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Detection Limit*	Dry Limit of Detection	Dry Limit of Quantitation	DF
LC/MS/MS Miscellaneous	**EPA 537 mod QSM 5.1 table B-15**		**ng/g**	**ng/g**	**ng/g**	**ng/g**	
14478	NEtFOSAA	2991-50-6	N.D.	0.49	2.0	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14478	NMeFOSAA	2355-31-9	N.D.	0.49	2.0	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14478	Perfluorobutanesulfonate	375-73-5	N.D.	0.20	0.59	0.78	1
14478	Perfluorodecanoic acid	335-76-2	N.D.	0.29	0.66	0.98	1
14478	Perfluorododecanoic acid	307-55-1	N.D.	0.20	0.66	0.78	1
14478	Perfluoroheptanoic acid	375-85-9	0.25 J	0.20	0.66	0.78	1
14478	Perfluorohexanesulfonate	355-46-4	N.D.	0.20	0.62	0.78	1
14478	Perfluorohexanoic acid	307-24-4	2.7	0.20	0.66	0.78	1
14478	Perfluorononanoic acid	375-95-1	N.D.	0.20	0.66	0.78	1
14478	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.20	0.63	0.78	1
14478	Perfluorooctanoic acid	335-67-1	N.D.	0.20	0.66	0.78	1
14478	Perfluorotetradecanoic acid	376-06-7	N.D.	0.20	0.66	0.78	1
14478	Perfluorotridecanoic acid	72629-94-8	N.D.	0.20	0.66	0.78	1
14478	Perfluoroundecanoic acid	2058-94-8	N.D.	0.20	0.66	0.78	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	**%**	
00111	Moisture	n.a.	5.1	0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14478	PFAS in Soil by LC/MS/MS-DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/07/2018 20:52	Marissa C Drexinger	1
14510	PFAS Solid Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	18309005	11/05/2018 11:55	Pamela Rothharpt	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18312820004B	11/08/2018 13:07	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Gutierrez Canales Engineering Group Number: 2005362
Reported: 01/18/2019 14:13

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	DL**	LOD	LOQ
	ng/g	ng/g	ng/g	ng/g
Batch number: 18309005	Sample number(s): 9881943-9881946,9881949-9881952,9881955-9881958,9881961-9881962			
NEtFOSAA	N.D.	0.50	2.0	3.0
NMeFOSAA	N.D.	0.50	2.0	3.0
Perfluorobutanesulfonate	N.D.	0.20	0.60	0.80
Perfluorodecanoic acid	N.D.	0.30	0.68	1.0
Perfluorododecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroheptanoic acid	N.D.	0.20	0.68	0.80
Perfluorohexanesulfonate	N.D.	0.20	0.64	0.80
Perfluorohexanoic acid	N.D.	0.20	0.68	0.80
Perfluorononanoic acid	N.D.	0.20	0.68	0.80
Perfluoro-octanesulfonate	N.D.	0.20	0.65	0.80
Perfluorooctanoic acid	N.D.	0.20	0.68	0.80
Perfluorotetradecanoic acid	N.D.	0.20	0.68	0.80
Perfluorotridecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroundecanoic acid	N.D.	0.20	0.68	0.80
Batch number: 18331014	Sample number(s): 9881947-9881948			
NEtFOSAA	N.D.	0.50	2.0	3.0
NMeFOSAA	N.D.	0.50	2.0	3.0
Perfluorobutanesulfonate	N.D.	0.20	0.60	0.80
Perfluorodecanoic acid	N.D.	0.30	0.68	1.0
Perfluorododecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroheptanoic acid	N.D.	0.20	0.68	0.80
Perfluorohexanesulfonate	N.D.	0.20	0.64	0.80
Perfluorohexanoic acid	N.D.	0.20	0.68	0.80
Perfluorononanoic acid	N.D.	0.20	0.68	0.80
Perfluoro-octanesulfonate	N.D.	0.20	0.65	0.80
Perfluorooctanoic acid	N.D.	0.20	0.68	0.80
Perfluorotetradecanoic acid	N.D.	0.20	0.68	0.80
Perfluorotridecanoic acid	N.D.	0.20	0.68	0.80
Perfluoroundecanoic acid	N.D.	0.20	0.68	0.80

LCS/LCSD

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:13

Group Number: 2005362

LCS/LCSD

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18309005	Sample number(s): 9881943-9881946,9881949-9881952,9881955-9881958,9881961-9881962								
NEtFOSAA	1.36	1.14	1.36	1.32	84	97	70-130	15	30
NMeFOSAA	1.36	1.39	1.36	1.29	102	95	70-130	7	30
Perfluorobutanesulfonate	1.20	1.30	1.20	1.33	108	111	70-130	3	30
Perfluorodecanoic acid	1.36	1.36	1.36	1.59	100	117	70-130	15	30
Perfluorododecanoic acid	1.36	1.34	1.36	1.47	98	108	70-130	10	30
Perfluoroheptanoic acid	1.36	1.54	1.36	1.64	113	121	70-130	6	30
Perfluorohexanesulfonate	1.29	1.39	1.29	1.45	108	113	70-130	4	30
Perfluorohexanoic acid	1.36	1.50	1.36	1.59	110	117	70-130	6	30
Perfluorononanoic acid	1.36	1.60	1.36	1.59	118	117	70-130	0	30
Perfluoro-octanesulfonate	1.30	1.40	1.30	1.50	108	116	70-130	7	30
Perfluorooctanoic acid	1.36	1.49	1.36	1.72	110	127	70-130	14	30
Perfluorotetradecanoic acid	1.36	1.40	1.36	1.51	103	111	70-130	8	30
Perfluorotridecanoic acid	1.36	1.42	1.36	1.50	104	110	70-130	6	30
Perfluoroundecanoic acid	1.36	1.35	1.36	1.69	100	124	70-130	22	30
Batch number: 18331014	Sample number(s): 9881947-9881948								
NEtFOSAA	1.36	1.41	1.36	1.42	104	105	70-130	1	30
NMeFOSAA	1.36	1.24	1.36	1.25	91	92	70-130	1	30
Perfluorobutanesulfonate	1.20	1.22	1.20	1.25	101	104	70-130	2	30
Perfluorodecanoic acid	1.36	1.32	1.36	1.32	97	97	70-130	1	30
Perfluorododecanoic acid	1.36	1.56	1.36	1.42	115	104	70-130	10	30
Perfluoroheptanoic acid	1.36	1.39	1.36	1.37	102	101	70-130	1	30
Perfluorohexanesulfonate	1.29	1.21	1.29	1.13	94	88	70-130	7	30
Perfluorohexanoic acid	1.36	1.50	1.36	1.39	110	102	70-130	7	30
Perfluorononanoic acid	1.36	1.50	1.36	1.34	110	99	70-130	11	30
Perfluoro-octanesulfonate	1.30	1.05	1.30	1.06	80	81	70-130	1	30
Perfluorooctanoic acid	1.36	1.36	1.36	1.36	100	100	70-130	0	30
Perfluorotetradecanoic acid	1.36	1.39	1.36	1.38	102	102	70-130	1	30
Perfluorotridecanoic acid	1.36	1.63	1.36	1.61	120	118	70-130	1	30
Perfluoroundecanoic acid	1.36	1.46	1.36	1.53	107	112	70-130	5	30
	%	%	%	%					
Batch number: 18312820004A	Sample number(s): 9881943-9881946,9881949-9881950								
Moisture	89.5	89.34			100		99-101		
Batch number: 18312820004B	Sample number(s): 9881951-9881952,9881955-9881958,9881961-9881962								
Moisture	89.5	89.34			100		99-101		
Batch number: 18337820002A	Sample number(s): 9881947-9881948								
Moisture	89.5	89.37			100		99-101		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:13

Group Number: 2005362

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Batch number: 18312820004A	Sample number(s): 9881943-9881946,9881949-9881950 BKG: 9881943			
Moisture	6.99	6.64	5	5
Batch number: 18312820004B	Sample number(s): 9881951-9881952,9881955-9881958,9881961-9881962 BKG: 9881955			
Moisture	16.5	17.32	5	5

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18309005

	13C3-PFBS		13C5-PFHxA		13C3-PFHxS		13C4-PFHpA		13C8-PFOA		13C8-PFOS	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9881943	74	0.57	79	0.38	79	0.57	76	0.57	78	0.57	77	0.85
9881944	73	0.57	79	0.38	78	0.57	80	0.57	78	0.57	80	0.86
9881945	65	0.56	76	0.37	75	0.56	75	0.56	76	0.56	73	0.83
9881946	67	0.57	74	0.38	70	0.57	70	0.57	77	0.57	69	0.86
9881949	66	0.58	69	0.39	69	0.58	69	0.58	68	0.58	71	0.87
9881950	74	0.57	81	0.38	79	0.57	75	0.57	83	0.57	80	0.85
9881951	71	0.56	74	0.37	73	0.56	73	0.56	80	0.56	77	0.84
9881952	76	0.58	79	0.38	81	0.58	79	0.58	84	0.58	84	0.87
9881955	71	0.57	71	0.38	73	0.57	75	0.57	78	0.57	72	0.86
9881956	66	0.58	68	0.39	73	0.58	71	0.58	75	0.58	74	0.87
9881957	70	0.58	78	0.38	77	0.58	74	0.58	80	0.58	80	0.87
9881958	73	0.59	78	0.40	77	0.59	75	0.59	80	0.59	75	0.89
9881961	69	0.59	70	0.39	73	0.59	71	0.59	72	0.59	74	0.88
9881962	74	0.56	85	0.37	81	0.56	80	0.56	88	0.56	75	0.83
Blank	71	1.2	79	0.80	81	1.2	77	1.2	83	1.2	78	1.8
LCS	72	1.2	74	0.80	75	1.2	75	1.2	77	1.2	75	1.8
LCSD	69	1.2	71	0.80	69	1.2	67	1.2	75	1.2	73	1.8
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C9-PFNA		13C6-PFDA		d3-NMeFOSAA		13C7-PFUnDA		d5-NEtFOSAA		13C2-PFDoDA	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9881943	78	0.38	79	0.57	79	0.85	78	0.57	73	0.85	77	0.57

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:13

Group Number: 2005362

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18309005

	13C9-PFNA		13C6-PFDA		d3-NMeFOSAA		13C7-PFUnDA		d5-NEtFOSAA		13C2-PFDoDA	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9881944	76	0.38	73	0.57	60	0.86	87	0.57	61	0.86	78	0.57
9881945	75	0.37	77	0.56	76	0.83	83	0.56	73	0.83	67	0.56
9881946	74	0.38	76	0.57	76	0.86	79	0.57	71	0.86	71	0.57
9881949	74	0.39	73	0.58	64	0.87	77	0.58	60	0.87	68	0.58
9881950	78	0.38	78	0.57	82	0.85	78	0.57	68	0.85	74	0.57
9881951	82	0.37	75	0.56	72	0.84	78	0.56	74	0.84	74	0.56
9881952	85	0.38	88	0.58	61	0.87	86	0.58	64	0.87	78	0.58
9881955	77	0.38	74	0.57	78	0.86	75	0.57	73	0.86	71	0.57
9881956	73	0.39	72	0.58	71	0.87	75	0.58	71	0.87	73	0.58
9881957	76	0.38	79	0.58	81	0.87	79	0.58	75	0.87	75	0.58
9881958	76	0.40	73	0.59	69	0.89	76	0.59	68	0.89	70	0.59
9881961	75	0.39	69	0.59	68	0.88	70	0.59	65	0.88	69	0.59
9881962	80	0.37	82	0.56	77	0.83	87	0.56	75	0.83	75	0.56
Blank	81	0.80	78	1.2	78	1.8	79	1.2	77	1.8	76	1.2
LCS	77	0.80	75	1.2	72	1.8	78	1.2	69	1.8	73	1.2
LCSD	76	0.80	63	1.2	62	1.8	63	1.2	62	1.8	65	1.2
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA	
	%Rec	LOD (ng/g)
9881943	76	0.57
9881944	66	0.57
9881945	69	0.56
9881946	65	0.57
9881949	68	0.58
9881950	67	0.57
9881951	67	0.56
9881952	79	0.58
9881955	70	0.57
9881956	68	0.58
9881957	71	0.58
9881958	66	0.59
9881961	65	0.59
9881962	74	0.56
Blank	76	1.2
LCS	71	1.2
LCSD	59	1.2

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Quality Control Summary

Client Name: Gutierrez Canales Engineering
Reported: 01/18/2019 14:13

Group Number: 2005362

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18309005

Limits: 50-150

Analysis Name: PFAS in Soil by LC/MS/MS-DoD
Batch number: 18331014

	13C3-PFBS		13C5-PFHxA		13C3-PFHxS		13C4-PFHpA		13C8-PFOA		13C8-PFOS	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9881947	71	0.55	74	0.37	83	0.55	74	0.55	82	0.55	79	0.83
9881948	79	0.57	84	0.38	90	0.57	78	0.57	88	0.57	81	0.85
Blank	71	1.2	72	0.80	85	1.2	75	1.2	83	1.2	80	1.8
LCS	71	1.2	73	0.80	83	1.2	76	1.2	76	1.2	76	1.8
LCSD	74	1.2	79	0.80	90	1.2	81	1.2	90	1.2	79	1.8
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C9-PFNA		13C6-PFDA		d3-NMeFOSAA		13C7-PFUnDA		d5-NEtFOSAA		13C2-PFDoDA	
	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)	%Rec	LOD (ng/g)
9881947	69	0.37	77	0.55	96	0.83	77	0.55	79	0.83	82	0.55
9881948	79	0.38	84	0.57	103	0.85	86	0.57	87	0.85	83	0.57
Blank	74	0.80	74	1.2	94	1.8	77	1.2	81	1.8	75	1.2
LCS	72	0.80	73	1.2	90	1.8	74	1.2	77	1.8	73	1.2
LCSD	75	0.80	80	1.2	90	1.8	74	1.2	77	1.8	72	1.2
Limits:	50-150		50-150		50-150		50-150		50-150		50-150	

	13C2-PFTeDA	
	%Rec	LOD (ng/g)
9881947	77	0.55
9881948	81	0.57
Blank	70	1.2
LCS	73	1.2
LCSD	71	1.2
Limits:	50-150	

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
(3) The surrogate spike amount was less than the LOD.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 43806 Group # 205362 Sample # 9881943-62

COC # 568804

Client Information

Client: GCE	Acct. #:
Project Name/#: 14G-C719-006 Barstow Site Inspection	PWSID #:
Project Manager: Eric Rider	P.O. #:
Sampler: Jesse MacNeill	Quote #:
State where samples were collected: CA	For Compliance: Yes ☐ No ☒

Matrix

Soil ☒ Sediment ☐ Tissue ☐ Water ☐ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Other: ____

Analysis Requested

Preservation and Filtration Codes

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

For Lab Use Only
FSC:
SCR#:

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	EPA 537 Modified	Remarks
OU1-CAOC1517-S-02-01	10/29/18	1005	X		2	X	
OU1-CAOC1517-S-02-03		1020	X		2	X	
OU1-CAOC1517-S-02-05		1028	X		2	X	
OU1-CAOC1517-S-02-6.5		1045	X		1	X	
OU1-CAOC1517-S-02-10		1055	X		1	X	Hold
OU1-CAOC1517-S-02-12		1100	X		1	X	Hold
OU1-CAOC1517-S-01-01		1130	X		2	X	
OU1-CAOC1517-S-01-03		1200	X		1	X	
OU1-CAOC1517-S-01-05		1210	X		1	X	
OU1-CAOC1517-S-01-08	↓	1217	X		1	X	

Turnaround Time (TAT) Requested (please circle)
(Standard) Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: jmacneill@neiaw.com

Data Package Options (circle if required)
(Type I (EPA Level 3 Equivalent/non-CLP)) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jesse MacNeill	10/31/18	1300			
				11-2-18	1610

EDD Required? (Yes) No
If yes, format: NEDD, EDF

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ____ Other ____

Temperature upon receipt 05.7.6 °C

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 43806 Group # 2WS362 Sample # 9881943-62

COC # 568803

Client Information

Client: GCE	Acct. #:
Project Name/#: 14G-C719-006 Barstow Site Inspection	PWSID #:
Project Manager: Eric Rider	P.O. #:
Sampler: Jesse MacNeill	Quote #:
State where samples were collected: CA	For Compliance: Yes ☐ No ☒

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil/Sediment	Water: Tissue	Water: Ground	Water: Surface	Water: Potable	Water: NPDES	Other:	Total # of Containers	Analysis Requested: EPA 537 Modified	Remarks
OU1-CAOC1517-S-01-10	10/29/18	1228	X		X							1	X	Hold
OU1-CAOC1517-S-01-12		1232	X		X							1	X	Hold
OU1-BLDG573-S-05-01		1310	X		X							2	X	
OU1-BLDG573-S-05-03		1320	X		X							2	X	
OU1-BLDG573-S-05-05		1325	X		X							2	X	
OU1-BLDG573-S-05-08		1338	X		X							1	X	
OU1-BLDG573-S-05-10		1342	X		X							1	X	Hold
OU1-BLDG573-S-05-12		1345	X		X							1	X	Hold
OU1-BLDG573-S-04-01		1410	X		X							2	X	
OU1-BLDG573-S-04-03		1425	X		X							2	X	

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days:

E-mail address: jmacneill@neiaw.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jesse MacNeill	10/31/18	1300			
				11-2-18	1010

EDD Required? (Yes) No
If yes, format: NEDD, EDF

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS FedEx Other

Temperature upon receipt 0.5-7.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 231984

Group Number(s): 2005362

Client: GCE

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/02/2018 10:10
Number of Packages:	6	Number of Projects:	7
State/Province of Origin:	CA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 20:43 on 11/02/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples Collected Same Day as Receipt?
1	DT131	5.5	DT	Wet	Y	Bagged	N	N
2	DT131	0.5	DT	Wet	Y	Bagged	N	N
3	DT131	5.8	DT	Wet	Y	Bagged	N	N
4	DT131	7.6	DT	Wet	Y	Bagged	Y	N
5	DT131	1.5	DT	Wet	Y	Bagged	N	N
6	DT131	0.5	DT	Wet	Y	Bagged	N	N

Elevated Temperature Details

All Temperatures in °C

Cooler #	Thermometer ID	Top Left Temp	Top Right Temp	Bottom Left Temp	Bottom Right Temp	Center Temp	Factors Contributing to Elevated Temp	Comments
4	32170023	10.2	8.2	9.4	11.0	8.3	Temp bottle wasn't touching ice bag.	

2425 New Holland Pike
Lancaster, PA 17601-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Client: GCE

Samples In Elevated-Temperature Coolers

Cooler #	Sample ID
4	OU1-Bldg 371-S-03-10
4	OU1-Bldg 371-S-04-6
4	OU1-Bldg 371-S-04-03
4	OU1-Bldg 371-S-04-01
4	OU1-Bldg 371-S-03-03
4	OU1-Bldg 371-S-04-10
4	OU1-Bldg 371-S-03-08
4	OU1-Bldg 371-S-04-08
4	OU1-Bldg 371-S-04-12
4	OU1-Bldg 371-S-03-01
4	OU1-Bldg 371-S-03-05
4	OU1-Bldg 371-S-03-12

2425 New Holland Pike
Lancaster, PA 17605-2425

T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

PFAS by LC/MS/MS Data

Case Narrative/Conformance Summary

PFAS by LC/MS/MS

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Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI09

PFAS Group

Fraction: PFAS by LC/MS/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9881943	OU1-CAOC1517-S-02-01		X	1	
9881944	OU1-CAOC1517-S-02-03		X	1	
9881945	OU1-CAOC1517-S-02-05		X	1	
9881946	OU1-CAOC1517-S-02-6.5		X	1	
9881947	OU1-CAOC1517-S-02-10		X	1	
9881948	OU1-CAOC1517-S-02-12		X	1	
9881949	OU1-CAOC1517-S-01-01		X	1	
9881950	OU1-CAOC1517-S-01-03		X	1	
9881951	OU1-CAOC1517-S-01-05		X	1	
9881952	OU1-CAOC1517-S-01-08		X	1	
9881955	OU1-BLDG573-S-05-01		X	1	
9881956	OU1-BLDG573-S-05-03		X	1	
9881957	OU1-BLDG573-S-05-05		X	1	
9881958	OU1-BLDG573-S-05-08		X	1	
9881961	OU1-BLDG573-S-04-01		X	1	
9881962	OU1-BLDG573-S-04-03		X	1	

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

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Case Narrative/Conformance Summary

CLIENT: Gutierrez Canales Engineering
SDG: BSI09

PFAS Group

Fraction: PFAS by LC/MS/MS

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

PFAS by LC/MS/MS

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Quality Control Reference List
PFAS Group

CLIENT: Gutierrez Canales Engineering
SDG: BSI09

Fraction: PFAS by LC/MS/MS

Analysis	Batch Number	Sample Number	Analysis Date
PFAS in Soil by LC/MS/MS-DoD	18309005	BLK309005B	11/07/2018 13:17
		LCS309005Q	11/07/2018 13:26
		LCSDAY	11/07/2018 13:35
		9881943	11/07/2018 14:30
		9881944	11/07/2018 14:39
		9881945	11/08/2018 12:42
		9881946	11/08/2018 12:51
		9881949	11/08/2018 13:00
		9881950	11/08/2018 13:09
		9881951	11/08/2018 13:18
		9881952	11/08/2018 13:27
		9881955	11/08/2018 13:36
		9881956	11/08/2018 13:45
		9881957	11/08/2018 13:54
		9881958	11/08/2018 14:03
		9881961	11/07/2018 20:43
		9881962	11/07/2018 20:52
PFAS in Soil by LC/MS/MS-DoD	18331014	BLK331014B	11/29/2018 16:16
		LCS331014Q	11/29/2018 16:25
		LCSDAY	11/29/2018 16:34
		9881947	11/29/2018 17:19
		9881948	11/29/2018 17:28

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Quality Control Summary
Method Blank
PFAS Group
SDG: BSI09
Matrix: SOLID

Fraction: PFAS by LC/MS/MS

18309005 / BLK309005B **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**DL**	**LOD**	**LOQ**
Perfluorooctanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/07/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/07/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/07/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/07/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/07/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/07/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/07/18	N.D.	ng/g	0.50	2.0	3.0

18331014 / BLK331014B **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**DL**	**LOD**	**LOQ**
Perfluorooctanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorononanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorodecanoic acid	11/29/18	N.D.	ng/g	0.30	0.68	1.0
Perfluoroundecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorododecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotridecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorotetradecanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorohexanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluoroheptanoic acid	11/29/18	N.D.	ng/g	0.20	0.68	0.80
Perfluorobutanesulfonate	11/29/18	N.D.	ng/g	0.20	0.60	0.80
Perfluorohexanesulfonate	11/29/18	N.D.	ng/g	0.20	0.64	0.80
Perfluoro-octanesulfonate	11/29/18	N.D.	ng/g	0.20	0.65	0.80
NEtFOSAA	11/29/18	N.D.	ng/g	0.50	2.0	3.0
NMeFOSAA	11/29/18	N.D.	ng/g	0.50	2.0	3.0

SDG No.: BSI09
Matrix: SOIL

18309005		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK309005	11/07/18 13:17	76	76	71	81	77
LCS309005	11/07/18 13:26	73	71	72	75	75
LCSDA	11/07/18 13:35	65	59	69	69	67
9881943	11/07/18 14:30	77	76	74	79	76
9881944	11/07/18 14:39	78	66	73	78	80
9881961	11/07/18 20:43	69	65	69	73	71
9881962	11/07/18 20:52	75	74	74	81	80
9881945	11/08/18 12:42	67	69	65	75	75
9881946	11/08/18 12:51	71	65	67	70	70
9881949	11/08/18 13:00	68	68	66	69	69
9881950	11/08/18 13:09	74	67	74	79	75
9881951	11/08/18 13:18	74	67	71	73	73
9881952	11/08/18 13:27	78	79	76	81	79
9881955	11/08/18 13:36	71	70	71	73	75
9881956	11/08/18 13:45	73	68	66	73	71
9881957	11/08/18 13:54	75	71	70	77	74
9881958	11/08/18 14:03	70	66	73	77	75

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI09
Matrix: SOIL

18309005		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK309005	11/07/18 13:17	79	78	79	83	78
LCS309005	11/07/18 13:26	74	75	78	77	75
LCSDA	11/07/18 13:35	71	63	63	75	73
9881943	11/07/18 14:30	79	79	78	78	77
9881944	11/07/18 14:39	79	73	87	78	80
9881961	11/07/18 20:43	70	69	70	72	74
9881962	11/07/18 20:52	85	82	87	88	75
9881945	11/08/18 12:42	76	77	83	76	73
9881946	11/08/18 12:51	74	76	79	77	69
9881949	11/08/18 13:00	69	73	77	68	71
9881950	11/08/18 13:09	81	78	78	83	80
9881951	11/08/18 13:18	74	75	78	80	77
9881952	11/08/18 13:27	79	88	86	84	84
9881955	11/08/18 13:36	71	74	75	78	72
9881956	11/08/18 13:45	68	72	75	75	74
9881957	11/08/18 13:54	78	79	79	80	80
9881958	11/08/18 14:03	78	73	76	80	75

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI09
Matrix: SOIL

18309005		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK309005	11/07/18 13:17	81	78	77
LCS309005	11/07/18 13:26	77	72	69
LCSDA	11/07/18 13:35	76	62	62
9881943	11/07/18 14:30	78	79	73
9881944	11/07/18 14:39	76	60	61
9881961	11/07/18 20:43	75	68	65
9881962	11/07/18 20:52	80	77	75
9881945	11/08/18 12:42	75	76	73
9881946	11/08/18 12:51	74	76	71
9881949	11/08/18 13:00	74	64	60
9881950	11/08/18 13:09	78	82	68
9881951	11/08/18 13:18	82	72	74
9881952	11/08/18 13:27	85	61	64
9881955	11/08/18 13:36	77	78	73
9881956	11/08/18 13:45	73	71	71
9881957	11/08/18 13:54	76	81	75
9881958	11/08/18 14:03	76	69	68

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI09
Matrix: SOIL

18331014		13C2-PFDODA	13C2-PFTEDA	13C3-PFBS	13C3-PFHXS	13C4-PFHPA
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK331014	11/29/18 16:16	75	70	71	85	75
LCS331014	11/29/18 16:25	73	73	71	83	76
LCSDA	11/29/18 16:34	72	71	74	90	81
9881947	11/29/18 17:19	82	77	71	83	74
9881948	11/29/18 17:28	83	81	79	90	78

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI09
Matrix: SOIL

18331014		13C5-PFHXA	13C6-PFDA	13C7-PFUNDA	13C8-PFOA	13C8-PFOS
	Limits	50-150	50-150	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery
BLK331014	11/29/18 16:16	72	74	77	83	80
LCS331014	11/29/18 16:25	73	73	74	76	76
LCSDA	11/29/18 16:34	79	80	74	90	79
9881947	11/29/18 17:19	74	77	77	82	79
9881948	11/29/18 17:28	84	84	86	88	81

* Outside QC Limits

FORM 02A
SURROGATES
LC/MS/MS

SDG No.: BSI09
Matrix: SOIL

18331014		13C9-PFNA	D3-NMEFOSAA	D5-NETFOSAA
	Limits	50-150	50-150	50-150
LAB SAMPLE ID	**DATE/TIME**	% Recovery	% Recovery	% Recovery
BLK331014	11/29/18 16:16	74	94	81
LCS331014	11/29/18 16:25	72	90	77
LCSDA	11/29/18 16:34	75	90	77
9881947	11/29/18 17:19	69	96	79
9881948	11/29/18 17:28	79	103	87

* Outside QC Limits

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: BSI09
Matrix: SOLID

PFAS Group
Fraction: PFAS by LC/MS/MS

LCS: LCS309005Q LCSD: LCSDAY	Batch: **18309005** (Sample number(s): 9881943-9881946, 9881949-9881952, 9881955-9881958, 9881961-9881962)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.36	1.49	1.72	110	127	70-130	14	30
Perfluorononanoic acid	1.36	1.60	1.59	118	117	70-130	0	30
Perfluorodecanoic acid	1.36	1.36	1.59	100	117	70-130	15	30
Perfluoroundecanoic acid	1.36	1.35	1.69	100	124	70-130	22	30
Perfluorododecanoic acid	1.36	1.34	1.47	98	108	70-130	10	30
Perfluorotridecanoic acid	1.36	1.42	1.50	104	110	70-130	6	30
Perfluorotetradecanoic acid	1.36	1.40	1.51	103	111	70-130	8	30
Perfluorohexanoic acid	1.36	1.50	1.59	110	117	70-130	6	30
Perfluoroheptanoic acid	1.36	1.54	1.64	113	121	70-130	6	30
Perfluorobutanesulfonate	1.20	1.30	1.33	108	111	70-130	3	30
Perfluorohexanesulfonate	1.29	1.39	1.45	108	113	70-130	4	30
Perfluoro-octanesulfonate	1.30	1.40	1.50	108	116	70-130	7	30
NEtFOSAA	1.36	1.14 J	1.32 J	84	97	70-130	15	30
NMeFOSAA	1.36	1.39 J	1.29 J	102	95	70-130	7	30

LCS: LCS331014Q LCSD: LCSDAY	Batch: **18331014** (Sample number(s): 9881947-9881948)							
Analyte	**Spike Added ng/g**	**LCS Conc ng/g**	**LCSD Conc ng/g**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Perfluorooctanoic acid	1.36	1.36	1.36	100	100	70-130	0	30
Perfluorononanoic acid	1.36	1.50	1.34	110	99	70-130	11	30
Perfluorodecanoic acid	1.36	1.32	1.32	97	97	70-130	1	30
Perfluoroundecanoic acid	1.36	1.46	1.53	107	112	70-130	5	30
Perfluorododecanoic acid	1.36	1.56	1.42	115	104	70-130	10	30
Perfluorotridecanoic acid	1.36	1.63	1.61	120	118	70-130	1	30
Perfluorotetradecanoic acid	1.36	1.39	1.38	102	102	70-130	1	30
Perfluorohexanoic acid	1.36	1.50	1.39	110	102	70-130	7	30
Perfluoroheptanoic acid	1.36	1.39	1.37	102	101	70-130	1	30
Perfluorobutanesulfonate	1.20	1.22	1.25	101	104	70-130	2	30
Perfluorohexanesulfonate	1.29	1.21	1.13	94	88	70-130	7	30
Perfluoro-octanesulfonate	1.30	1.05	1.06	80	81	70-130	1	30
NEtFOSAA	1.36	1.41 J	1.42 J	104	105	70-130	1	30
NMeFOSAA	1.36	1.24 J	1.25 J	91	92	70-130	1	30

Fraction: PFAS by LC/MS/MS

14478: PFAS in Soil by LC/MS/MS-DoD Analyte Name	Default DL	Default LOD	Default LOQ	Units
Perfluorooctanoic acid	.2	.68	0.80	ng/g
Perfluorononanoic acid	.2	.68	0.80	ng/g
Perfluorodecanoic acid	.3	.68	1.0	ng/g
Perfluoroundecanoic acid	.2	.68	0.80	ng/g
Perfluorododecanoic acid	.2	.68	0.80	ng/g
Perfluorotridecanoic acid	.2	.68	0.80	ng/g
Perfluorotetradecanoic acid	.2	.68	0.80	ng/g
Perfluorohexanoic acid	.2	.68	0.80	ng/g
Perfluoroheptanoic acid	.2	.68	0.80	ng/g
Perfluorobutanesulfonate	.2	.6	0.80	ng/g
Perfluorohexanesulfonate	.2	.64	0.80	ng/g
Perfluoro-octanesulfonate	.2	.65	0.80	ng/g
NEtFOSAA	.5	2	3.0	ng/g
NMeFOSAA	.5	2	3.0	ng/g

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631
Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33
Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorobutanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.238	19.1	±30
CAL2	0.093	0.50	0.545	9.0	±30
CAL3	0.362	2.00	2.120	6.0	±30
CAL4	1.495	8.00	8.747	9.3	±30
CAL5	3.745	20.00	21.919	9.6	±30
CAL6	8.813	50.00	51.576	3.2	±30
CAL7	16.327	100.00	95.554	-4.4	±30

Perfluoropentanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.234	16.8	±30
CAL2	0.090	0.50	0.533	6.6	±30
CAL3	0.345	2.00	2.052	2.6	±30
CAL4	1.413	8.00	8.399	5.0	±30
CAL5	3.658	20.00	21.739	8.7	±30
CAL6	8.578	50.00	50.979	2.0	±30
CAL7	16.282	100.00	96.765	-3.2	±30

Perfluorobutanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.17	0.213	25.6	±30
CAL2	0.093	0.44	0.470	6.7	±30
CAL3	0.345	1.77	1.740	-1.7	±30
CAL4	1.491	7.08	7.518	6.2	±30
CAL5	3.619	17.69	18.246	3.1	±30
CAL6	9.131	44.22	46.035	4.1	±30
CAL7	16.978	88.45	85.599	-3.2	±30

4:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.19	0.191	2.3	±30
CAL2	0.183	0.47	0.492	5.3	±30
CAL3	0.731	1.87	1.964	5.2	±30
CAL4	2.975	7.47	7.999	7.1	±30
CAL5	7.477	18.68	20.102	7.6	±30
CAL6	17.311	46.70	46.538	-0.3	±30
CAL7	34.031	93.40	91.487	-2.0	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631
Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33
Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorohexanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.055	0.20	0.235	17.4	±30
CAL2	0.123	0.50	0.529	5.8	±30
CAL3	0.498	2.00	2.137	6.9	±30
CAL4	2.041	8.00	8.751	9.4	±30
CAL5	5.013	20.00	21.499	7.5	±30
CAL6	11.088	50.00	47.549	-4.9	±30
CAL7	20.388	100.00	87.434	-12.6	±30

Perfluoropentanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.019	0.19	0.183	-3.7	±30
CAL2	0.047	0.47	0.465	-0.9	±30
CAL3	0.180	1.88	1.772	-5.7	±30
CAL4	0.803	7.50	7.922	5.6	±30
CAL5	1.911	18.76	18.849	0.5	±30
CAL6	4.746	46.90	46.806	-0.2	±30
CAL7	9.480	93.80	93.501	-0.3	±30

Perfluorohexanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.038	0.19	0.194	2.3	±30
CAL2	0.095	0.47	0.484	2.3	±30
CAL3	0.357	1.89	1.809	-4.3	±30
CAL4	1.514	7.56	7.676	1.5	±30
CAL5	3.791	18.91	19.215	1.6	±30
CAL6	9.344	47.28	47.360	0.2	±30
CAL7	18.567	94.55	94.113	-0.5	±30

Perfluoroheptanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.065	0.20	0.220	9.9	±30
CAL2	0.160	0.50	0.539	7.8	±30
CAL3	0.636	2.00	2.139	6.9	±30
CAL4	2.500	8.00	8.409	5.1	±30
CAL5	6.316	20.00	21.243	6.2	±30
CAL6	14.317	50.00	48.150	-3.7	±30
CAL7	25.595	100.00	86.081	-13.9	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631
Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33
Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

6:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.058	0.19	0.146	-23.1	±30
CAL2	0.229	0.47	0.570	20.3	±30
CAL3	0.830	1.90	2.071	9.3	±30
CAL4	3.200	7.58	7.982	5.2	±30
CAL5	8.507	18.96	21.223	11.9	±30
CAL6	18.600	47.40	46.401	-2.1	±30
CAL7	37.244	94.80	92.910	-2.0	±30

Perfluoroheptanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.19	0.207	8.9	±30
CAL2	0.091	0.48	0.476	0.0	±30
CAL3	0.359	1.90	1.877	-1.2	±30
CAL4	1.523	7.61	7.966	4.7	±30
CAL5	3.716	19.03	19.439	2.2	±30
CAL6	8.964	47.58	46.896	-1.4	±30
CAL7	18.173	95.15	95.074	-0.1	±30

Perfluorooctanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.218	9.1	±30
CAL2	0.097	0.50	0.547	9.5	±30
CAL3	0.378	2.00	2.131	6.5	±30
CAL4	1.592	8.00	8.963	12.0	±30
CAL5	3.824	20.00	21.532	7.7	±30
CAL6	9.132	50.00	51.417	2.8	±30
CAL7	17.031	100.00	95.892	-4.1	±30

Perfluoro-octanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.19	0.206	8.2	±30
CAL2	0.100	0.48	0.517	8.1	±30
CAL3	0.375	1.91	1.943	1.7	±30
CAL4	1.534	7.65	7.953	4.0	±30
CAL5	3.719	19.12	19.287	0.9	±30
CAL6	9.270	47.80	48.067	0.6	±30
CAL7	18.277	95.60	94.776	-0.9	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631
Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33
Lab File Names: CAL1= 18NOV07DCAL-10.WIFF; CAL2= 18NOV07DCAL-11.WIFF; CAL3= 18NOV07DCAL-12.WIFF;
CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorononanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.063	0.20	0.235	17.4	±30
CAL2	0.138	0.50	0.517	3.4	±30
CAL3	0.584	2.00	2.182	9.1	±30
CAL4	2.302	8.00	8.604	7.6	±30
CAL5	5.965	20.00	22.292	11.5	±30
CAL6	13.786	50.00	51.521	3.0	±30
CAL7	25.514	100.00	95.349	-4.7	±30

Perfluorononanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.19	0.174	-8.3	±30
CAL2	0.061	0.48	0.485	1.1	±30
CAL3	0.245	1.92	1.946	1.3	±30
CAL4	1.045	7.68	8.284	7.9	±30
CAL5	2.423	19.20	19.215	0.1	±30
CAL6	6.277	48.00	49.770	3.7	±30
CAL7	11.805	96.00	93.596	-2.5	±30

Perfluorodecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.216	7.8	±30
CAL2	0.095	0.50	0.520	4.0	±30
CAL3	0.383	2.00	2.107	5.3	±30
CAL4	1.568	8.00	8.626	7.8	±30
CAL5	4.015	20.00	22.091	10.5	±30
CAL6	9.247	50.00	50.875	1.7	±30
CAL7	17.498	100.00	96.265	-3.7	±30

8:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.104	0.19	0.235	22.5	±30
CAL2	0.251	0.48	0.567	18.3	±30
CAL3	0.845	1.92	1.904	-0.6	±30
CAL4	3.495	7.66	7.877	2.8	±30
CAL5	8.887	19.16	20.031	4.5	±30
CAL6	20.717	47.90	46.697	-2.5	±30
CAL7	38.137	95.80	85.963	-10.3	±30

FORM 06
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CAL4= 18NOV07DCAL-13.WIFF; CAL5= 18NOV07DCAL-14.WIFF; CAL6= 18NOV07DCAL-15.WIFF;
CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorooctanesulfonamide	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.036	0.20	0.194	-3.1	±30
CAL2	0.098	0.50	0.529	5.8	±30
CAL3	0.386	2.00	2.084	4.2	±30
CAL4	1.581	8.00	8.545	6.8	±30
CAL5	3.322	20.00	17.959	-10.2	±30
CAL6	9.665	50.00	52.247	4.5	±30
CAL7	18.341	100.00	99.141	-0.9	±30

NMeFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.035	0.20	0.178	-10.8	±30
CAL2	0.118	0.50	0.607	21.4	±30
CAL3	0.396	2.00	2.039	2.0	±30
CAL4	1.685	8.00	8.670	8.4	±30
CAL5	4.175	20.00	21.482	7.4	±30
CAL6	9.476	50.00	48.760	-2.5	±30
CAL7	19.233	100.00	98.963	-1.0	±30

Perfluorodecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.021	0.19	0.201	5.6	±30
CAL2	0.055	0.48	0.525	8.9	±30
CAL3	0.199	1.93	1.898	-1.6	±30
CAL4	0.859	7.70	8.210	6.6	±30
CAL5	2.032	19.26	19.412	0.8	±30
CAL6	4.983	48.15	47.605	-1.1	±30
CAL7	10.066	96.30	96.161	-0.1	±30

Perfluoroundecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.079	0.20	0.227	13.7	±30
CAL2	0.187	0.50	0.535	7.0	±30
CAL3	0.757	2.00	2.170	8.5	±30
CAL4	2.909	8.00	8.341	4.3	±30
CAL5	7.397	20.00	21.214	6.1	±30
CAL6	17.761	50.00	50.936	1.9	±30
CAL7	33.921	100.00	97.277	-2.7	±30

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FORM 06
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CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

NEtFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.043	0.20	0.183	-8.7	±30
CAL2	0.110	0.50	0.474	-5.3	±30
CAL3	0.441	2.00	1.896	-5.2	±30
CAL4	1.838	8.00	7.900	-1.3	±30
CAL5	5.175	20.00	22.240	11.2	±30
CAL6	11.319	50.00	48.645	-2.7	±30
CAL7	23.121	100.00	99.363	-0.6	±30

Perfluorododecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.224	11.9	±30
CAL2	0.101	0.50	0.545	9.0	±30
CAL3	0.377	2.00	2.046	2.3	±30
CAL4	1.466	8.00	7.946	-0.7	±30
CAL5	3.887	20.00	21.067	5.3	±30
CAL6	9.018	50.00	48.873	-2.3	±30
CAL7	15.613	100.00	84.613	-15.4	±30

10:2-fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.071	0.19	0.222	15.0	±30
CAL2	0.177	0.48	0.551	14.4	±30
CAL3	0.647	1.93	2.014	4.5	±30
CAL4	2.271	7.71	7.073	-8.3	±30
CAL5	6.446	19.28	20.071	4.1	±30
CAL6	15.876	48.20	49.437	2.6	±30
CAL7	30.453	96.40	94.827	-1.6	±30

NMePFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.054	0.20	0.244	22.1	±30
CAL2	0.124	0.50	0.555	11.0	±30
CAL3	0.453	2.00	2.029	1.5	±30
CAL4	1.959	8.00	8.781	9.8	±30
CAL5	4.923	20.00	22.062	10.3	±30
CAL6	11.752	50.00	52.660	5.3	±30
CAL7	21.059	100.00	94.369	-5.6	±30

FORM 06
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CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

NMePFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.036	0.20	0.201	0.6	±30
CAL2	0.101	0.50	0.568	13.6	±30
CAL3	0.375	2.00	2.101	5.1	±30
CAL4	1.368	8.00	7.657	-4.3	±30
CAL5	3.939	20.00	22.050	10.2	±30
CAL6	9.140	50.00	51.162	2.3	±30
CAL7	17.323	100.00	96.961	-3.0	±30

Perfluorododecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.010	0.19	0.189	-0.3	±30
CAL2	0.025	0.48	0.487	0.7	±30
CAL3	0.108	1.94	2.084	7.4	±30
CAL4	0.416	7.74	8.039	3.9	±30
CAL5	0.991	19.36	19.132	-1.2	±30
CAL6	2.465	48.40	47.576	-1.7	±30
CAL7	5.047	96.80	97.407	0.6	±30

NEtPFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.074	0.20	0.237	18.5	±30
CAL2	0.181	0.50	0.579	15.9	±30
CAL3	0.650	2.00	2.083	4.2	±30
CAL4	2.703	8.00	8.666	8.3	±30
CAL5	6.965	20.00	22.328	11.6	±30
CAL6	16.033	50.00	51.396	2.8	±30
CAL7	29.763	100.00	95.411	-4.6	±30

NEtPFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.043	0.20	0.191	-4.7	±30
CAL2	0.096	0.50	0.424	-15.3	±30
CAL3	0.393	2.00	1.732	-13.4	±30
CAL4	1.711	8.00	7.534	-5.8	±30
CAL5	4.679	20.00	20.605	3.0	±30
CAL6	11.449	50.00	50.423	0.8	±30
CAL7	22.658	100.00	99.791	-0.2	±30

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CAL7= 18NOV07DCAL-16.WIFF; CAL8= ;

Perfluorotridecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.250	25.1	±30
CAL2	0.082	0.50	0.519	3.9	±30
CAL3	0.337	2.00	2.128	6.4	±30
CAL4	1.306	8.00	8.235	2.9	±30
CAL5	3.375	20.00	21.280	6.4	±30
CAL6	7.657	50.00	48.287	-3.4	±30
CAL7	12.611	100.00	79.528	-20.5	±30

Perfluorotetradecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.232	16.2	±30
CAL2	0.082	0.50	0.482	-3.6	±30
CAL3	0.358	2.00	2.103	5.1	±30
CAL4	1.428	8.00	8.383	4.8	±30
CAL5	3.558	20.00	20.892	4.5	±30
CAL6	8.573	50.00	50.344	0.7	±30
CAL7	16.733	100.00	98.263	-1.7	±30

Perfluorohexadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.019	0.20	0.236	17.9	±30
CAL2	0.042	0.50	0.524	4.8	±30
CAL3	0.167	2.00	2.078	3.9	±30
CAL4	0.673	8.00	8.351	4.4	±30
CAL5	1.699	20.00	21.085	5.4	±30
CAL6	3.954	50.00	49.083	-1.8	±30
CAL7	8.003	100.00	99.343	-0.7	±30

Perfluorooctadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.015	0.20	0.220	10.2	±30
CAL2	0.036	0.50	0.511	2.2	±30
CAL3	0.142	2.00	2.041	2.0	±30
CAL4	0.570	8.00	8.162	2.0	±30
CAL5	1.481	20.00	21.218	6.1	±30
CAL6	3.399	50.00	48.698	-2.6	±30
CAL7	6.970	100.00	99.849	-0.2	±30

* Outside QC Limits

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorobutanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.043	0.20	0.237	18.4	±30
CAL2	0.107	0.60	0.584	-2.7	±30
CAL3	0.406	2.00	2.225	11.2	±30
CAL4	1.463	8.00	8.021	0.3	±30
CAL5	3.811	20.00	20.892	4.5	±30
CAL6	8.910	50.00	48.841	-2.3	±30
CAL7	15.845	100.00	86.862	-13.1	±30

Perfluoropentanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.046	0.20	0.225	12.5	±30
CAL2	0.103	0.60	0.505	-15.8	±30
CAL3	0.466	2.00	2.284	14.2	±30
CAL4	1.556	8.00	7.634	-4.6	±30
CAL5	4.107	20.00	20.152	0.8	±30
CAL6	9.020	50.00	44.258	-11.5	±30
CAL7	16.145	100.00	79.219	-20.8	±30

Perfluorobutanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.18	0.194	9.4	±30
CAL2	0.098	0.53	0.475	-10.6	±30
CAL3	0.401	1.77	1.948	10.1	±30
CAL4	1.393	7.08	6.761	-4.5	±30
CAL5	3.638	17.70	17.661	-0.2	±30
CAL6	9.036	44.20	43.864	-0.8	±30
CAL7	18.326	88.40	88.956	0.6	±30

4:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.075	0.19	0.200	6.8	±30
CAL2	0.202	0.56	0.540	-3.7	±30
CAL3	0.800	1.87	2.142	14.5	±30
CAL4	2.854	7.47	7.640	2.3	±30
CAL5	7.396	18.70	19.798	5.9	±30
CAL6	17.601	46.70	47.117	0.9	±30
CAL7	34.162	93.40	91.451	-2.1	±30

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CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorohexanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.058	0.20	0.233	16.5	±30
CAL2	0.146	0.60	0.586	-2.4	±30
CAL3	0.551	2.00	2.211	10.5	±30
CAL4	2.004	8.00	8.042	0.5	±30
CAL5	4.915	20.00	19.728	-1.4	±30
CAL6	11.061	50.00	44.400	-11.2	±30
CAL7	20.035	100.00	80.421	-19.6	±30

Perfluoropentanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.020	0.19	0.207	10.1	±30
CAL2	0.054	0.56	0.549	-2.4	±30
CAL3	0.213	1.88	2.157	14.7	±30
CAL4	0.735	7.50	7.436	-0.9	±30
CAL5	1.909	18.80	19.314	2.7	±30
CAL6	4.502	46.90	45.538	-2.9	±30
CAL7	9.335	93.80	94.429	0.7	±30

Perfluoroheptanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.078	0.20	0.240	19.9	±30
CAL2	0.184	0.60	0.567	-5.5	±30
CAL3	0.725	2.00	2.238	11.9	±30
CAL4	2.537	8.00	7.829	-2.1	±30
CAL5	6.457	20.00	19.926	-0.4	±30
CAL6	14.179	50.00	43.759	-12.5	±30
CAL7	23.161	100.00	71.480	-28.5	±30

Perfluorohexanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.18	0.181	-0.6	±30
CAL2	0.093	0.55	0.435	-20.6	±30
CAL3	0.391	1.82	1.831	0.6	±30
CAL4	1.405	7.30	6.580	-9.9	±30
CAL5	3.854	18.20	18.044	-0.9	±30
CAL6	9.382	45.60	43.929	-3.7	±30
CAL7	20.044	91.20	93.850	2.9	±30

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6:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.087	0.19	0.226	18.9	±30
CAL2	0.227	0.57	0.591	3.9	±30
CAL3	0.823	1.90	2.149	13.1	±30
CAL4	3.275	7.58	8.546	12.7	±30
CAL5	7.342	19.00	19.156	0.8	±30
CAL6	17.619	47.40	45.972	-3.0	±30
CAL7	33.528	94.80	87.481	-7.7	±30

Perfluoroheptanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.19	0.209	10.2	±30
CAL2	0.097	0.57	0.485	-15.1	±30
CAL3	0.396	1.90	1.976	4.0	±30
CAL4	1.490	7.61	7.439	-2.2	±30
CAL5	3.788	19.00	18.906	-0.5	±30
CAL6	9.599	47.60	47.909	0.6	±30
CAL7	19.064	95.20	95.147	-0.1	±30

Perfluorooctanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.213	6.6	±30
CAL2	0.103	0.60	0.533	-11.1	±30
CAL3	0.425	2.00	2.197	9.8	±30
CAL4	1.618	8.00	8.361	4.5	±30
CAL5	3.950	20.00	20.411	2.1	±30
CAL6	9.499	50.00	49.084	-1.8	±30
CAL7	17.301	100.00	89.401	-10.6	±30

Perfluoro-octanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.19	0.172	-7.0	±30
CAL2	0.109	0.56	0.457	-17.6	±30
CAL3	0.450	1.85	1.888	2.1	±30
CAL4	1.627	7.40	6.826	-7.8	±30
CAL5	4.356	18.50	18.273	-1.2	±30
CAL6	10.840	46.30	45.472	-1.8	±30
CAL7	22.481	92.60	94.301	1.8	±30

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CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorononanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.060	0.20	0.229	14.7	±30
CAL2	0.156	0.60	0.599	-0.1	±30
CAL3	0.588	2.00	2.253	12.6	±30
CAL4	2.104	8.00	8.064	0.8	±30
CAL5	5.611	20.00	21.504	7.5	±30
CAL6	12.565	50.00	48.151	-3.7	±30
CAL7	23.016	100.00	88.201	-11.8	±30

Perfluorononanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.031	0.19	0.193	0.7	±30
CAL2	0.077	0.58	0.486	-15.7	±30
CAL3	0.295	1.92	1.864	-2.9	±30
CAL4	1.249	7.68	7.885	2.7	±30
CAL5	3.037	19.20	19.177	-0.1	±30
CAL6	7.581	48.00	47.867	-0.3	±30
CAL7	15.220	96.00	96.096	0.1	±30

Perfluorodecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.222	11.2	±30
CAL2	0.108	0.60	0.612	2.0	±30
CAL3	0.417	2.00	2.360	18.0	±30
CAL4	1.454	8.00	8.227	2.8	±30
CAL5	3.687	20.00	20.868	4.3	±30
CAL6	8.633	50.00	48.868	-2.3	±30
CAL7	17.604	100.00	99.643	-0.4	±30

8:2 fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.104	0.19	0.197	2.4	±30
CAL2	0.284	0.58	0.536	-6.9	±30
CAL3	1.067	1.92	2.011	4.8	±30
CAL4	3.846	7.66	7.253	-5.3	±30
CAL5	10.368	19.20	19.551	1.8	±30
CAL6	21.098	47.90	39.786	-16.9	±30
CAL7	39.430	95.80	74.355	-22.4	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorooctanesulfonamide	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.042	0.20	0.212	5.9	±30
CAL2	0.111	0.60	0.562	-6.3	±30
CAL3	0.420	2.00	2.128	6.4	±30
CAL4	1.562	8.00	7.914	-1.1	±30
CAL5	4.013	20.00	20.329	1.6	±30
CAL6	9.802	50.00	49.655	-0.7	±30
CAL7	17.627	100.00	89.294	-10.7	±30

NMeFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.030	0.20	0.193	-3.7	±30
CAL2	0.091	0.60	0.582	-3.0	±30
CAL3	0.348	2.00	2.220	11.0	±30
CAL4	1.243	8.00	7.928	-0.9	±30
CAL5	3.230	20.00	20.602	3.0	±30
CAL6	7.997	50.00	51.010	2.0	±30
CAL7	15.405	100.00	98.267	-1.7	±30

Perfluorodecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.19	0.171	-11.6	±30
CAL2	0.059	0.58	0.471	-18.5	±30
CAL3	0.260	1.93	2.060	6.8	±30
CAL4	0.956	7.70	7.582	-1.5	±30
CAL5	2.461	19.30	19.512	1.1	±30
CAL6	5.967	48.20	47.309	-1.8	±30
CAL7	12.246	96.30	97.096	0.8	±30

Perfluoroundecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.062	0.20	0.222	10.9	±30
CAL2	0.157	0.60	0.563	-6.2	±30
CAL3	0.626	2.00	2.236	11.8	±30
CAL4	2.346	8.00	8.387	4.8	±30
CAL5	5.860	20.00	20.945	4.7	±30
CAL6	14.523	50.00	51.912	3.8	±30
CAL7	27.007	100.00	96.536	-3.5	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

NEtFOSAA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.040	0.20	0.194	-3.2	±30
CAL2	0.115	0.60	0.560	-6.7	±30
CAL3	0.407	2.00	1.980	-1.0	±30
CAL4	1.473	8.00	7.175	-10.3	±30
CAL5	4.109	20.00	20.014	0.1	±30
CAL6	10.300	50.00	50.166	0.3	±30
CAL7	20.679	100.00	100.712	0.7	±30

Perfluorododecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.045	0.20	0.249	24.6	±30
CAL2	0.107	0.60	0.589	-1.9	±30
CAL3	0.446	2.00	2.442	22.1	±30
CAL4	1.434	8.00	7.854	-1.8	±30
CAL5	3.673	20.00	20.121	0.6	±30
CAL6	9.045	50.00	49.545	-0.9	±30
CAL7	16.657	100.00	91.243	-8.8	±30

10:2-fluorotelomersulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.097	0.19	0.214	10.9	±30
CAL2	0.277	0.58	0.610	5.6	±30
CAL3	1.087	1.93	2.396	24.1	±30
CAL4	3.492	7.71	7.701	-0.1	±30
CAL5	10.411	19.30	22.957	18.9	±30
CAL6	21.857	48.20	48.197	0.0	±30
CAL7	41.828	96.40	92.235	-4.3	±30

NMePFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.049	0.20	0.207	3.7	±30
CAL2	0.139	0.60	0.587	-2.2	±30
CAL3	0.532	2.00	2.239	12.0	±30
CAL4	1.893	8.00	7.968	-0.4	±30
CAL5	5.008	20.00	21.073	5.4	±30
CAL6	12.293	50.00	51.733	3.5	±30
CAL7	23.048	100.00	96.993	-3.0	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

NMePFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.038	0.20	0.203	1.3	±30
CAL2	0.108	0.60	0.575	-4.1	±30
CAL3	0.411	2.00	2.179	9.0	±30
CAL4	1.485	8.00	7.873	-1.6	±30
CAL5	3.882	20.00	20.577	2.9	±30
CAL6	9.378	50.00	49.716	-0.6	±30
CAL7	18.802	100.00	99.677	-0.3	±30

Perfluorododecanesulfonate	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.013	0.19	0.181	-6.8	±30
CAL2	0.037	0.58	0.531	-8.6	±30
CAL3	0.132	1.94	1.892	-2.5	±30
CAL4	0.539	7.74	7.744	0.0	±30
CAL5	1.303	19.40	18.718	-3.5	±30
CAL6	3.225	48.40	46.320	-4.3	±30
CAL7	6.940	96.80	99.670	3.0	±30

NEtPFOSAE	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.068	0.20	0.245	22.4	±30
CAL2	0.166	0.60	0.596	-0.6	±30
CAL3	0.706	2.00	2.540	27.0	±30
CAL4	2.364	8.00	8.504	6.3	±30
CAL5	6.065	20.00	21.818	9.1	±30
CAL6	13.925	50.00	50.088	0.2	±30
CAL7	26.969	100.00	97.008	-3.0	±30

NEtPFOSA	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.048	0.20	0.217	8.3	±30
CAL2	0.118	0.60	0.530	-11.6	±30
CAL3	0.473	2.00	2.122	6.1	±30
CAL4	1.779	8.00	7.975	-0.3	±30
CAL5	4.417	20.00	19.796	-1.0	±30
CAL6	11.703	50.00	52.452	4.9	±30
CAL7	21.801	100.00	97.709	-2.3	±30

FORM 06
INITIAL CALIBRATION AREA RATIO SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631
Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36
Lab File Names: CAL1= 18NOV28DCAL-06.WIFF; CAL2= 18NOV28DCAL-07.WIFF; CAL3= 18NOV28DCAL-08.WIFF;
CAL4= 18NOV28DCAL-09.WIFF; CAL5= 18NOV28DCAL-10.WIFF; CAL6= 18NOV28DCAL-11.WIFF;
CAL7= 18NOV28DCAL-12.WIFF; CAL8= ;

Perfluorotridecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.041	0.20	0.249	24.7	±30
CAL2	0.103	0.60	0.621	3.5	±30
CAL3	0.427	2.00	2.576	28.8	±30
CAL4	1.410	8.00	8.500	6.2	±30
CAL5	3.304	20.00	19.916	-0.4	±30
CAL6	8.119	50.00	48.938	-2.1	±30
CAL7	14.467	100.00	87.197	-12.8	±30

Perfluorotetradecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.039	0.20	0.221	10.5	±30
CAL2	0.103	0.60	0.583	-2.8	±30
CAL3	0.406	2.00	2.303	15.2	±30
CAL4	1.418	8.00	8.033	0.4	±30
CAL5	3.685	20.00	20.882	4.4	±30
CAL6	8.609	50.00	48.777	-2.4	±30
CAL7	15.696	100.00	88.936	-11.1	±30

Perfluorohexadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.022	0.20	0.251	25.6	±30
CAL2	0.051	0.60	0.588	-1.9	±30
CAL3	0.206	2.00	2.359	17.9	±30
CAL4	0.728	8.00	8.321	4.0	±30
CAL5	1.973	20.00	22.560	12.8	±30
CAL6	4.311	50.00	49.281	-1.4	±30
CAL7	8.524	100.00	97.440	-2.6	±30

Perfluorooctadecanoic acid	Area Ratio	Specified Amount	Calculated Amount	% Difference	Limit
CAL1	0.016	0.20	0.219	9.6	±30
CAL2	0.042	0.60	0.565	-5.8	±30
CAL3	0.165	2.00	2.201	10.0	±30
CAL4	0.598	8.00	7.964	-0.4	±30
CAL5	1.619	20.00	21.571	7.9	±30
CAL6	3.728	50.00	49.663	-0.7	±30
CAL7	7.403	100.00	98.616	-1.4	±30

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FORM 06A DOD - EPA 537 mod QSM 5.1 table B-15
INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Lab File Names: CAL1=18NOV07DCAL-10.WIFF; CAL2=18NOV07DCAL-11.WIFF; CAL3=18NOV07DCAL-12.WIFF;
CAL4=18NOV07DCAL-13.WIFF; CAL5=18NOV07DCAL-14.WIFF; CAL6=18NOV07DCAL-15.WIFF;
CAL7=18NOV07DCAL-16.WIFF;

Analyte	RF							RF %RSD
	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	CAL7	
Perfluorobutanoic acid	1.018	0.931	0.905	0.934	0.936	0.881	0.816	6
Perfluoropentanoic acid	0.983	0.897	0.863	0.883	0.914	0.858	0.814	6
Perfluorobutanesulfonate	1.158	0.984	0.907	0.979	0.951	0.960	0.893	8
4:2 fluorotelomersulfonate	1.777	1.830	1.827	1.860	1.869	1.731	1.702	3
Perfluorohexanoic acid	1.369	1.233	1.246	1.275	1.253	1.109	---	6
Perfluoropentanesulfonate	0.454	0.467	0.444	0.498	0.474	0.471	0.470	3
Perfluorohexanesulfonate	0.955	0.955	0.893	0.948	0.948	0.935	0.929	2
Perfluoroheptanoic acid	1.634	1.603	1.590	1.563	1.579	1.432	---	4
6:2 fluorotelomersulfonate	1.464	2.292	2.080	2.004	2.131	1.864	1.866	13
Perfluoroheptanesulfonate	0.984	0.904	0.893	0.946	0.924	0.891	0.903	3
Perfluorooctanoic acid	0.969	0.972	0.946	0.995	0.956	0.913	0.852	5
Perfluoro-octanesulfonate	0.998	0.997	0.938	0.958	0.930	0.927	0.914	3
Perfluorononanoic acid	1.571	1.383	1.459	1.439	1.491	1.379	1.276	6
Perfluorononanesulfonate	0.553	0.609	0.611	0.650	0.603	0.625	0.588	5
Perfluorodecanoic acid	0.980	0.945	0.957	0.980	1.004	0.925	0.875	4
8:2 fluorotelomersulfonate	2.603	2.513	2.112	2.184	2.222	2.072	---	9
Perfluorooctanesulfonamide	0.896	0.979	0.964	0.988	0.831	0.967	0.917	6
NMeFOSAA	0.867	1.180	0.991	1.053	1.044	0.948	0.962	9
Perfluorodecanesulfonate	0.528	0.545	0.492	0.534	0.504	0.495	0.500	4
Perfluoroundecanoic acid	1.982	1.865	1.891	1.818	1.849	1.776	1.696	5
NEtFOSAA	1.063	1.102	1.103	1.149	1.294	1.132	1.156	6
Perfluorododecanoic acid	1.032	1.006	0.944	0.916	0.972	0.902	---	5
10:2-fluorotelomersulfonate	1.769	1.760	1.607	1.411	1.601	1.578	1.513	7
NMePFOSAE	1.362	1.238	1.132	1.225	1.231	1.175	1.053	7
NMePFOSA	0.899	1.015	0.938	0.855	0.985	0.914	0.866	6
Perfluorododecanesulfonate	0.247	0.249	0.266	0.257	0.245	0.243	0.249	3
NEtPFOSAE	1.848	1.807	1.624	1.689	1.741	1.603	1.488	7
NEtPFOSA	1.082	0.962	0.983	1.069	1.170	1.145	1.133	7
Perfluorotridecanoic acid	0.992	0.824	0.844	0.816	0.844	0.766	---	8
Perfluorotetradecanoic acid	0.989	0.821	0.895	0.892	0.889	0.857	0.837	6
Perfluorohexadecanoic acid	0.475	0.422	0.418	0.420	0.425	0.395	0.400	6
Perfluorooctadecanoic acid	0.385	0.357	0.356	0.356	0.370	0.340	0.348	4

--- Calibration point does not apply

* = % RSD > 20

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FORM 06A DOD - EPA 537 mod QSM 5.1 table B-15
INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Lab File Names: CAL1=18NOV28DCAL-06.WIFF; CAL2=18NOV28DCAL-07.WIFF; CAL3=18NOV28DCAL-08.WIFF;
CAL4=18NOV28DCAL-09.WIFF; CAL5=18NOV28DCAL-10.WIFF; CAL6=18NOV28DCAL-11.WIFF;
CAL7=18NOV28DCAL-12.WIFF;

Analyte	RF							RF %RSD
	CAL1	CAL2	CAL3	CAL4	CAL5	CAL6	CAL7	
Perfluorobutanoic acid	1.080	0.888	1.015	0.915	0.953	0.891	---	7
Perfluoropentanoic acid	1.146	0.858	1.164	0.972	1.027	---	---	11
Perfluorobutanesulfonate	1.048	0.856	1.054	0.915	0.956	0.951	0.964	7
4:2 fluorotelomersulfonate	1.863	1.681	1.998	1.784	1.847	1.760	1.708	6
Perfluorohexanoic acid	1.451	1.216	1.377	1.252	1.229	---	---	7
Perfluoropentanesulfonate	0.506	0.448	0.528	0.456	0.472	0.446	0.463	6
Perfluoroheptanoic acid	1.943	1.531	1.813	1.585	1.614	---	---	9
Perfluorohexanesulfonate	1.004	0.803	1.016	0.911	1.002	0.973	1.040	8
6:2 fluorotelomersulfonate	2.165	1.891	2.059	2.052	1.835	1.766	---	7
Perfluoroheptanesulfonate	1.044	0.805	0.986	0.926	0.943	0.954	0.947	7
Perfluorooctanoic acid	1.031	0.860	1.063	1.011	0.988	0.950	---	7
Perfluoro-octanesulfonate	1.059	0.938	1.163	1.051	1.126	1.119	1.160	7
Perfluorononanoic acid	1.496	1.303	1.470	1.315	1.403	1.256	---	6
Perfluorononanesulfonate	0.763	0.638	0.735	0.777	0.756	0.755	0.758	6
Perfluorodecanoic acid	0.983	0.901	1.042	0.908	0.922	0.863	0.880	6
8:2 fluorotelomersulfonate	2.600	2.366	2.661	2.405	2.587	---	---	5
Perfluorooctanesulfonamide	1.045	0.925	1.050	0.976	1.003	0.980	---	4
NMeFOSAA	0.755	0.760	0.870	0.777	0.807	0.800	0.770	5
Perfluorodecanesulfonate	0.533	0.491	0.644	0.594	0.609	0.592	0.608	8
Perfluoroundecanoic acid	1.551	1.312	1.564	1.466	1.465	1.452	1.350	6
NEtFOSAA	0.994	0.958	1.016	0.921	1.027	1.030	1.034	4
Perfluorododecanoic acid	1.137	0.896	1.115	0.896	0.918	0.904	---	11
10:2-fluorotelomersulfonate	2.409	2.294	2.697	2.170	2.584	2.172	2.078	9
NMePFOSAE	1.232	1.162	1.330	1.183	1.252	1.229	1.152	5
NMePFOSA	0.955	0.904	1.028	0.928	0.970	0.938	0.940	4
Perfluorododecanesulfonate	0.310	0.304	0.325	0.333	0.321	0.319	0.343	4
NEtPFOSAE	1.702	1.382	1.766	1.478	1.516	1.392	1.348	10
NEtPFOSA	1.208	0.986	1.184	1.112	1.104	1.170	1.090	6
Perfluorotridecanoic acid	1.034	0.859	1.068	0.881	0.826	0.812	---	11
Perfluorotetradecanoic acid	0.975	0.858	1.016	0.886	0.921	0.861	---	6
Perfluorohexadecanoic acid	0.549	0.429	0.516	0.455	0.493	0.431	0.426	10
Perfluorooctadecanoic acid	0.411	0.354	0.413	0.374	0.405	0.373	0.370	6

--- Calibration point does not apply

* = % RSD > 20

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631 Lab File ID: 18NOV07D-05.WIFF

Date/Time Analyzed: 11/07/2018 11:56 Lab Sample ID: CCV1_ISC_CAL2

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.50	0.55	9.69	±30
Perfluoropentanoic acid	0.50	0.56	11.11	±30
Perfluorobutanesulfonate	0.44	0.47	5.80	±30
4:2 fluorotelomersulfonate	0.47	0.46	-1.91	±30
Perfluorohexanoic acid	0.50	0.54	8.14	±30
Perfluoropentanesulfonate	0.47	0.49	3.67	±30
Perfluorohexanesulfonate	0.47	0.44	-7.73	±30
Perfluoroheptanoic acid	0.50	0.54	8.60	±30
6:2 fluorotelomersulfonate	0.47	0.54	13.25	±30
Perfluoroheptanesulfonate	0.48	0.46	-3.48	±30
Perfluorooctanoic acid	0.50	0.57	13.63	±30
Perfluoro-octanesulfonate	0.48	0.51	7.58	±30
Perfluorononanoic acid	0.50	0.52	3.57	±30
Perfluorononanesulfonate	0.48	0.43	-10.53	±30
Perfluorodecanoic acid	0.50	0.48	-3.13	±30
8:2 fluorotelomersulfonate	0.48	0.46	-3.47	±30
Perfluorooctanesulfonamide	0.50	0.52	3.09	±30
NMeFOSAA	0.50	0.47	-6.74	±30
Perfluorodecanesulfonate	0.48	0.43	-11.12	±30
Perfluoroundecanoic acid	0.50	0.54	8.99	±30
NEtFOSAA	0.50	0.58	16.02	±30
Perfluorododecanoic acid	0.50	0.52	4.53	±30
10:2-fluorotelomersulfonate	0.48	0.41	-15.22	±30
NMePFOSAE	0.50	0.54	8.68	±30
NMePFOSA	0.50	0.57	13.40	±30
Perfluorododecanesulfonate	0.48	0.49	0.96	±30
NEtPFOSAE	0.50	0.58	15.93	±30
NEtPFOSA	0.50	0.50	0.04	±30
Perfluorotridecanoic acid	0.50	0.54	8.06	±30
Perfluorotetradecanoic acid	0.50	0.51	2.25	±30
Perfluorohexadecanoic acid	0.50	0.66	31.35 *	±30
Perfluorooctadecanoic acid	0.50	0.66	32.07 *	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631 Lab File ID: 18NOV07D-12.WIFF

Date/Time Analyzed: 11/07/2018 12:59 Lab Sample ID: CCV2_CAL3

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.16	8.12	±30
Perfluoropentanoic acid	2.00	2.08	4.06	±30
Perfluorobutanesulfonate	1.77	1.90	7.18	±30
4:2 fluorotelomersulfonate	1.87	1.76	-5.91	±30
Perfluorohexanoic acid	2.00	2.12	6.10	±30
Perfluoropentanesulfonate	1.88	1.82	-3.40	±30
Perfluorohexanesulfonate	1.89	1.90	0.35	±30
Perfluoroheptanoic acid	2.00	2.13	6.33	±30
6:2 fluorotelomersulfonate	1.90	2.29	20.97	±30
Perfluoroheptanesulfonate	1.90	1.88	-0.93	±30
Perfluorooctanoic acid	2.00	2.16	7.91	±30
Perfluoro-octanesulfonate	1.91	2.02	5.61	±30
Perfluorononanoic acid	2.00	2.18	9.14	±30
Perfluorononanesulfonate	1.92	2.04	6.23	±30
Perfluorodecanoic acid	2.00	1.92	-3.77	±30
8:2 fluorotelomersulfonate	1.92	2.10	9.48	±30
Perfluorooctanesulfonamide	2.00	2.28	13.76	±30
NMeFOSAA	2.00	2.01	0.54	±30
Perfluorodecanesulfonate	1.93	2.01	4.24	±30
Perfluoroundecanoic acid	2.00	2.25	12.32	±30
NEtFOSAA	2.00	1.70	-14.97	±30
Perfluorododecanoic acid	2.00	2.03	1.68	±30
10:2-fluorotelomersulfonate	1.93	1.96	1.64	±30
NMePFOSAE	2.00	2.17	8.68	±30
NMePFOSA	2.00	2.01	0.44	±30
Perfluorododecanesulfonate	1.94	1.91	-1.73	±30
NEtPFOSAE	2.00	2.14	6.82	±30
NEtPFOSA	2.00	2.00	-0.13	±30
Perfluorotridecanoic acid	2.00	1.97	-1.31	±30
Perfluorotetradecanoic acid	2.00	2.02	1.08	±30
Perfluorohexadecanoic acid	2.00	2.19	9.41	±30
Perfluorooctadecanoic acid	2.00	2.25	12.44	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631 Lab File ID: 18NOV07D-24.WIFF

Date/Time Analyzed: 11/07/2018 14:48 Lab Sample ID: CCV3_CAL4

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	8.00	8.61	7.64	±30
Perfluoropentanoic acid	8.00	8.72	9.00	±30
Perfluorobutanesulfonate	7.08	7.43	5.00	±30
4:2 fluorotelomersulfonate	7.47	7.87	5.27	±30
Perfluorohexanoic acid	8.00	8.43	5.40	±30
Perfluoropentanesulfonate	7.50	7.89	5.22	±30
Perfluorohexanesulfonate	7.56	7.37	-2.46	±30
Perfluoroheptanoic acid	8.00	8.28	3.54	±30
6:2 fluorotelomersulfonate	7.58	8.45	11.42	±30
Perfluoroheptanesulfonate	7.61	7.66	0.62	±30
Perfluorooctanoic acid	8.00	8.52	6.47	±30
Perfluoro-octanesulfonate	7.65	7.76	1.49	±30
Perfluorononanoic acid	8.00	8.48	5.95	±30
Perfluorononanesulfonate	7.68	8.51	10.82	±30
Perfluorodecanoic acid	8.00	8.11	1.41	±30
8:2 fluorotelomersulfonate	7.66	8.41	9.72	±30
Perfluorooctanesulfonamide	8.00	8.80	9.99	±30
NMeFOSAA	8.00	8.85	10.57	±30
Perfluorodecanesulfonate	7.70	8.19	6.35	±30
Perfluoroundecanoic acid	8.00	9.00	12.46	±30
NEtFOSAA	8.00	7.47	-6.67	±30
Perfluorododecanoic acid	8.00	8.23	2.90	±30
10:2-fluorotelomersulfonate	7.71	8.00	3.77	±30
NMePFOSAE	8.00	8.97	12.06	±30
NMePFOSA	8.00	8.21	2.62	±30
Perfluorododecanesulfonate	7.74	7.76	0.27	±30
NEtPFOSAE	8.00	8.31	3.84	±30
NEtPFOSA	8.00	7.81	-2.43	±30
Perfluorotridecanoic acid	8.00	7.97	-0.43	±30
Perfluorotetradecanoic acid	8.00	8.83	10.34	±30
Perfluorohexadecanoic acid	8.00	7.96	-0.49	±30
Perfluorooctadecanoic acid	8.00	8.87	10.83	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631 Lab File ID: 18NOV07D-62.WIFF

Date/Time Analyzed: 11/07/2018 20:34 Lab Sample ID: CCV7_ISC_CAL2

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.50	0.55	10.13	±30
Perfluoropentanoic acid	0.50	0.54	7.67	±30
Perfluorobutanesulfonate	0.44	0.48	8.96	±30
4:2 fluorotelomersulfonate	0.47	0.48	3.76	±30
Perfluorohexanoic acid	0.50	0.55	9.87	±30
Perfluoropentanesulfonate	0.47	0.47	-0.23	±30
Perfluorohexanesulfonate	0.47	0.42	-10.53	±30
Perfluoroheptanoic acid	0.50	0.56	12.83	±30
6:2 fluorotelomersulfonate	0.47	0.55	16.65	±30
Perfluoroheptanesulfonate	0.48	0.47	-0.95	±30
Perfluorooctanoic acid	0.50	0.57	14.07	±30
Perfluoro-octanesulfonate	0.48	0.47	-2.57	±30
Perfluorononanoic acid	0.50	0.57	14.13	±30
Perfluorononanesulfonate	0.48	0.49	1.55	±30
Perfluorodecanoic acid	0.50	0.51	1.21	±30
8:2 fluorotelomersulfonate	0.48	0.54	12.53	±30
Perfluorooctanesulfonamide	0.50	0.54	7.47	±30
NMeFOSAA	0.50	0.59	17.22	±30
Perfluorodecanesulfonate	0.48	0.53	10.95	±30
Perfluoroundecanoic acid	0.50	0.52	4.93	±30
NEtFOSAA	0.50	0.48	-3.81	±30
Perfluorododecanoic acid	0.50	0.51	1.92	±30
10:2-fluorotelomersulfonate	0.48	0.62	28.25	±30
NMePFOSAE	0.50	0.54	8.43	±30
NMePFOSA	0.50	0.77	53.57 *	±30
Perfluorododecanesulfonate	0.48	0.42	-13.01	±30
NEtPFOSAE	0.50	0.56	11.14	±30
NEtPFOSA	0.50	0.50	0.58	±30
Perfluorotridecanoic acid	0.50	0.55	9.64	±30
Perfluorotetradecanoic acid	0.50	0.59	17.96	±30
Perfluorohexadecanoic acid	0.50	0.56	11.04	±30
Perfluorooctadecanoic acid	0.50	0.57	13.06	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631 Lab File ID: 18NOV07D-74.WIFF

Date/Time Analyzed: 11/07/2018 22:22 Lab Sample ID: CCV8_CAL3

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.16	8.13	±30
Perfluoropentanoic acid	2.00	2.11	5.50	±30
Perfluorobutanesulfonate	1.77	1.83	3.43	±30
4:2 fluorotelomersulfonate	1.87	1.84	-1.26	±30
Perfluorohexanoic acid	2.00	2.10	4.89	±30
Perfluoropentanesulfonate	1.88	1.82	-3.27	±30
Perfluorohexanesulfonate	1.89	1.82	-3.95	±30
Perfluoroheptanoic acid	2.00	2.12	6.09	±30
6:2 fluorotelomersulfonate	1.90	2.01	6.22	±30
Perfluoroheptanesulfonate	1.90	1.92	1.09	±30
Perfluorooctanoic acid	2.00	2.16	8.18	±30
Perfluoro-octanesulfonate	1.91	2.03	6.45	±30
Perfluorononanoic acid	2.00	2.11	5.48	±30
Perfluorononanesulfonate	1.92	1.95	1.44	±30
Perfluorodecanoic acid	2.00	2.13	6.52	±30
8:2 fluorotelomersulfonate	1.92	2.16	12.81	±30
Perfluorooctanesulfonamide	2.00	2.07	3.25	±30
NMeFOSAA	2.00	1.85	-7.66	±30
Perfluorodecanesulfonate	1.93	2.05	6.17	±30
Perfluoroundecanoic acid	2.00	1.97	-1.40	±30
NEtFOSAA	2.00	1.78	-11.01	±30
Perfluorododecanoic acid	2.00	2.06	2.87	±30
10:2-fluorotelomersulfonate	1.93	2.27	17.85	±30
NMePFOSAE	2.00	2.03	1.54	±30
NMePFOSA	2.00	1.87	-6.43	±30
Perfluorododecanesulfonate	1.94	1.77	-8.54	±30
NEtPFOSAE	2.00	2.15	7.54	±30
NEtPFOSA	2.00	1.90	-5.02	±30
Perfluorotridecanoic acid	2.00	2.08	4.17	±30
Perfluorotetradecanoic acid	2.00	2.16	8.02	±30
Perfluorohexadecanoic acid	2.00	2.20	10.01	±30
Perfluorooctadecanoic acid	2.00	2.08	4.10	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631 Lab File ID: 18NOV07DCAL-20.WIFF

Date/Time Analyzed: 11/07/2018 11:09 Lab Sample ID: CCV1_CAL3

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.09	4.37	±30
Perfluoropentanoic acid	2.00	2.08	4.09	±30
Perfluorobutanesulfonate	1.77	1.83	3.13	±30
4:2 fluorotelomersulfonate	1.98	2.11	6.41	±30
Perfluorohexanoic acid	2.00	2.25	12.42	±30
Perfluoropentanesulfonate	1.88	1.94	3.35	±30
Perfluorohexanesulfonate	1.89	1.93	1.87	±30
Perfluoroheptanoic acid	2.00	2.19	9.28	±30
6:2 fluorotelomersulfonate	2.09	1.92	-8.35	±30
Perfluoroheptanesulfonate	1.90	1.87	-1.62	±30
Perfluorooctanoic acid	2.00	2.15	7.42	±30
Perfluoro-octanesulfonate	1.91	2.09	9.36	±30
Perfluorononanoic acid	2.00	2.06	3.07	±30
Perfluorononanesulfonate	1.92	1.98	2.88	±30
Perfluorodecanoic acid	2.00	2.08	3.96	±30
8:2 fluorotelomersulfonate	2.11	2.09	-0.82	±30
Perfluorooctanesulfonamide	2.00	2.07	3.64	±30
NMeFOSAA	2.00	1.63	-18.67	±30
Perfluorodecanesulfonate	1.93	1.96	1.77	±30
Perfluoroundecanoic acid	2.00	2.16	8.03	±30
NEtFOSAA	2.00	1.95	-2.25	±30
Perfluorododecanoic acid	2.00	2.04	1.95	±30
10:2-fluorotelomersulfonate	2.12	1.64	-22.85	±30
NMePFOSAE	2.00	2.16	7.79	±30
NMePFOSA	2.00	2.14	6.78	±30
Perfluorododecanesulfonate	1.94	2.09	7.77	±30
NEtPFOSAE	2.00	2.19	9.62	±30
NEtPFOSA	2.00	1.79	-10.51	±30
Perfluorotridecanoic acid	2.00	2.06	2.83	±30
Perfluorotetradecanoic acid	2.00	2.10	4.78	±30
Perfluorohexadecanoic acid	2.00	2.06	2.88	±30
Perfluorooctadecanoic acid	2.00	2.01	0.72	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631 Lab File ID: 18NOV08D-05.WIFF

Date/Time Analyzed: 11/08/2018 12:24 Lab Sample ID: CCV1_ISC_CAL2

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.50	0.55	10.01	±30
Perfluoropentanoic acid	0.50	0.56	12.19	±30
Perfluorobutanesulfonate	0.44	0.44	0.21	±30
4:2 fluorotelomersulfonate	0.47	0.49	4.23	±30
Perfluorohexanoic acid	0.50	0.56	11.37	±30
Perfluoropentanesulfonate	0.47	0.50	6.68	±30
Perfluorohexanesulfonate	0.47	0.47	-0.75	±30
Perfluoroheptanoic acid	0.50	0.54	7.06	±30
6:2 fluorotelomersulfonate	0.47	0.55	16.56	±30
Perfluoroheptanesulfonate	0.48	0.48	1.26	±30
Perfluorooctanoic acid	0.50	0.52	3.35	±30
Perfluoro-octanesulfonate	0.48	0.51	6.67	±30
Perfluorononanoic acid	0.50	0.57	13.85	±30
Perfluorononanesulfonate	0.48	0.49	1.94	±30
Perfluorodecanoic acid	0.50	0.54	8.90	±30
8:2 fluorotelomersulfonate	0.48	0.49	1.38	±30
Perfluorooctanesulfonamide	0.50	0.53	6.66	±30
NMeFOSAA	0.50	0.56	11.14	±30
Perfluorodecanesulfonate	0.48	0.44	-8.46	±30
Perfluoroundecanoic acid	0.50	0.53	5.05	±30
NEtFOSAA	0.50	0.49	-2.83	±30
Perfluorododecanoic acid	0.50	0.57	13.47	±30
10:2-fluorotelomersulfonate	0.48	0.62	27.81	±30
NMePFOSAE	0.50	0.56	12.18	±30
NMePFOSA	0.50	0.60	20.48	±30
Perfluorododecanesulfonate	0.48	0.45	-6.81	±30
NEtPFOSAE	0.50	0.53	5.21	±30
NEtPFOSA	0.50	0.44	-11.15	±30
Perfluorotridecanoic acid	0.50	0.53	5.71	±30
Perfluorotetradecanoic acid	0.50	0.56	12.63	±30
Perfluorohexadecanoic acid	0.50	0.54	8.44	±30
Perfluorooctadecanoic acid	0.50	0.52	4.62	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631 Lab File ID: 18NOV08D-17.WIFF

Date/Time Analyzed: 11/08/2018 14:12 Lab Sample ID: CCV2_CAL3

Init. Calib. Date/Times: 11/07/2018 09:39 11/07/2018 10:33

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.16	8.11	±30
Perfluoropentanoic acid	2.00	1.99	-0.48	±30
Perfluorobutanesulfonate	1.77	1.84	3.90	±30
4:2 fluorotelomersulfonate	1.87	1.77	-5.37	±30
Perfluorohexanoic acid	2.00	2.16	8.02	±30
Perfluoropentanesulfonate	1.88	1.93	2.40	±30
Perfluorohexanesulfonate	1.89	1.87	-1.09	±30
Perfluoroheptanoic acid	2.00	2.15	7.75	±30
6:2 fluorotelomersulfonate	1.90	2.03	7.30	±30
Perfluoroheptanesulfonate	1.90	1.87	-1.50	±30
Perfluorooctanoic acid	2.00	2.15	7.61	±30
Perfluoro-octanesulfonate	1.91	1.91	-0.13	±30
Perfluorononanoic acid	2.00	2.10	5.13	±30
Perfluorononanesulfonate	1.92	1.86	-3.10	±30
Perfluorodecanoic acid	2.00	2.05	2.33	±30
8:2 fluorotelomersulfonate	1.92	2.04	6.24	±30
Perfluorooctanesulfonamide	2.00	1.95	-2.27	±30
NMeFOSAA	2.00	1.83	-8.72	±30
Perfluorodecanesulfonate	1.93	2.06	6.65	±30
Perfluoroundecanoic acid	2.00	2.01	0.40	±30
NEtFOSAA	2.00	1.77	-11.61	±30
Perfluorododecanoic acid	2.00	2.08	4.06	±30
10:2-fluorotelomersulfonate	1.93	2.34	21.47	±30
NMePFOSAE	2.00	2.31	15.73	±30
NMePFOSA	2.00	1.85	-7.33	±30
Perfluorododecanesulfonate	1.94	1.81	-6.56	±30
NEtPFOSAE	2.00	2.12	6.21	±30
NEtPFOSA	2.00	1.92	-4.13	±30
Perfluorotridecanoic acid	2.00	2.01	0.63	±30
Perfluorotetradecanoic acid	2.00	2.02	0.87	±30
Perfluorohexadecanoic acid	2.00	2.07	3.46	±30
Perfluorooctadecanoic acid	2.00	1.97	-1.46	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631 Lab File ID: 18NOV28DCAL-16.WIFF

Date/Time Analyzed: 11/28/2018 15:12 Lab Sample ID: CCV1_CAL3

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.29	14.50	±30
Perfluoropentanoic acid	2.00	2.15	7.30	±30
Perfluorobutanesulfonate	1.77	1.90	7.57	±30
4:2 fluorotelomersulfonate	1.87	2.10	12.26	±30
Perfluorohexanoic acid	2.00	2.32	16.20	±30
Perfluoropentanesulfonate	1.88	2.10	11.73	±30
Perfluoroheptanoic acid	2.00	2.13	6.53	±30
Perfluorohexanesulfonate	1.82	1.84	1.19	±30
6:2 fluorotelomersulfonate	1.90	2.35	23.67	±30
Perfluoroheptanesulfonate	1.90	2.07	8.75	±30
Perfluorooctanoic acid	2.00	2.15	7.45	±30
Perfluoro-octanesulfonate	1.85	1.89	2.39	±30
Perfluorononanoic acid	2.00	2.37	18.31	±30
Perfluorononanesulfonate	1.92	1.96	2.24	±30
Perfluorodecanoic acid	2.00	2.38	18.95	±30
8:2 fluorotelomersulfonate	1.92	1.87	-2.39	±30
Perfluorooctanesulfonamide	2.00	2.10	4.85	±30
NMeFOSAA	2.00	2.08	3.82	±30
Perfluorodecanesulfonate	1.93	2.07	7.49	±30
Perfluoroundecanoic acid	2.00	2.39	19.73	±30
NEtFOSAA	2.00	1.90	-5.08	±30
Perfluorododecanoic acid	2.00	2.49	24.44	±30
10:2-fluorotelomersulfonate	1.93	2.22	14.77	±30
NMePFOSAE	2.00	2.10	5.15	±30
NMePFOSA	2.00	2.11	5.69	±30
Perfluorododecanesulfonate	1.94	1.96	1.21	±30
NEtPFOSAE	2.00	2.30	14.93	±30
NEtPFOSA	2.00	2.22	10.99	±30
Perfluorotridecanoic acid	2.00	2.59	29.28	±30
Perfluorotetradecanoic acid	2.00	2.29	14.59	±30
Perfluorohexadecanoic acid	2.00	2.22	11.22	±30
Perfluorooctadecanoic acid	2.00	2.22	11.09	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631 Lab File ID: 18NOV29D-05.WIFF

Date/Time Analyzed: 11/29/2018 10:33 Lab Sample ID: CCV1_ISC_CAL2

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.59	-1.98	±30
Perfluoropentanoic acid	0.60	0.52	-14.14	±30
Perfluorobutanesulfonate	0.53	0.47	-10.86	±30
4:2 fluorotelomersulfonate	0.56	0.49	-13.37	±30
Perfluorohexanoic acid	0.60	0.58	-2.77	±30
Perfluoropentanesulfonate	0.56	0.57	0.99	±30
Perfluoroheptanoic acid	0.60	0.56	-6.28	±30
Perfluorohexanesulfonate	0.55	0.48	-12.13	±30
6:2 fluorotelomersulfonate	0.57	0.64	12.30	±30
Perfluoroheptanesulfonate	0.57	0.49	-14.63	±30
Perfluorooctanoic acid	0.60	0.53	-11.76	±30
Perfluoro-octanesulfonate	0.56	0.51	-8.84	±30
Perfluorononanoic acid	0.60	0.55	-7.57	±30
Perfluorononanesulfonate	0.58	0.45	-21.13	±30
Perfluorodecanoic acid	0.60	0.58	-4.04	±30
8:2 fluorotelomersulfonate	0.58	0.51	-11.58	±30
Perfluorooctanesulfonamide	0.60	0.53	-10.95	±30
NMeFOSAA	0.60	0.54	-9.99	±30
Perfluorodecanesulfonate	0.58	0.56	-3.35	±30
Perfluoroundecanoic acid	0.60	0.58	-3.79	±30
NEtFOSAA	0.60	0.52	-12.77	±30
Perfluorododecanoic acid	0.60	0.60	0.40	±30
10:2-fluorotelomersulfonate	0.58	0.59	1.43	±30
NMePFOSAE	0.60	0.59	-1.65	±30
NMePFOSA	0.60	0.52	-14.03	±30
Perfluorododecanesulfonate	0.58	0.49	-15.15	±30
NEtPFOSAE	0.60	0.58	-3.30	±30
NEtPFOSA	0.60	0.50	-17.33	±30
Perfluorotridecanoic acid	0.60	0.66	9.17	±30
Perfluorotetradecanoic acid	0.60	0.60	0.18	±30
Perfluorohexadecanoic acid	0.60	0.61	2.42	±30
Perfluorooctadecanoic acid	0.60	0.56	-5.99	±30

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631 Lab File ID: 18NOV29D-40.WIFF

Date/Time Analyzed: 11/29/2018 15:49 Lab Sample ID: CCV4_ISC_CAL2

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	0.60	0.58	-3.70	±30
Perfluoropentanoic acid	0.60	0.53	-11.91	±30
Perfluorobutanesulfonate	0.53	0.50	-5.10	±30
4:2 fluorotelomersulfonate	0.56	0.52	-7.12	±30
Perfluorohexanoic acid	0.60	0.54	-9.60	±30
Perfluoropentanesulfonate	0.56	0.52	-6.94	±30
Perfluoroheptanoic acid	0.60	0.57	-5.19	±30
Perfluorohexanesulfonate	0.55	0.41	-24.17	±30
6:2 fluorotelomersulfonate	0.57	0.66	15.68	±30
Perfluoroheptanesulfonate	0.57	0.48	-15.73	±30
Perfluorooctanoic acid	0.60	0.56	-6.09	±30
Perfluoro-octanesulfonate	0.56	0.44	-20.61	±30
Perfluorononanoic acid	0.60	0.55	-9.13	±30
Perfluorononanesulfonate	0.58	0.52	-9.33	±30
Perfluorodecanoic acid	0.60	0.59	-2.09	±30
8:2 fluorotelomersulfonate	0.58	0.52	-10.16	±30
Perfluorooctanesulfonamide	0.60	0.56	-6.20	±30
NMeFOSAA	0.60	0.57	-5.36	±30
Perfluorodecanesulfonate	0.58	0.50	-13.79	±30
Perfluoroundecanoic acid	0.60	0.60	0.83	±30
NEtFOSAA	0.60	0.50	-17.49	±30
Perfluorododecanoic acid	0.60	0.66	10.09	±30
10:2-fluorotelomersulfonate	0.58	0.59	1.75	±30
NMePFOSAE	0.60	0.49	-17.92	±30
NMePFOSA	0.60	0.71	18.39	±30
Perfluorododecanesulfonate	0.58	0.44	-24.52	±30
NEtPFOSAE	0.60	0.62	3.73	±30
NEtPFOSA	0.60	0.50	-16.08	±30
Perfluorotridecanoic acid	0.60	0.69	15.64	±30
Perfluorotetradecanoic acid	0.60	0.56	-5.86	±30
Perfluorohexadecanoic acid	0.60	0.59	-2.02	±30
Perfluorooctadecanoic acid	0.60	0.57	-4.99	±30

* Outside QC Limits.

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FORM 07
CALIBRATION VERIFICATION SUMMARY
LC/MS/MS

SDG No.: BSI09

Instrument ID: 27631 Lab File ID: 18NOV29D-52.WIFF

Date/Time Analyzed: 11/29/2018 17:37 Lab Sample ID: CCV5_CAL3

Init. Calib. Date/Times: 11/28/2018 13:42 11/28/2018 14:36

Analytes	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic acid	2.00	2.24	12.08	±30
Perfluoropentanoic acid	2.00	2.10	5.00	±30
Perfluorobutanesulfonate	1.77	1.97	11.32	±30
4:2 fluorotelomersulfonate	1.87	2.13	14.12	±30
Perfluorohexanoic acid	2.00	2.37	18.38	±30
Perfluoropentanesulfonate	1.88	2.13	13.27	±30
Perfluoroheptanoic acid	2.00	2.24	11.85	±30
Perfluorohexanesulfonate	1.82	1.82	-0.10	±30
6:2 fluorotelomersulfonate	1.90	2.31	21.74	±30
Perfluoroheptanesulfonate	1.90	1.97	3.62	±30
Perfluorooctanoic acid	2.00	2.19	9.74	±30
Perfluoro-octanesulfonate	1.85	1.73	-6.32	±30
Perfluorononanoic acid	2.00	2.29	14.58	±30
Perfluorononanesulfonate	1.92	1.84	-3.91	±30
Perfluorodecanoic acid	2.00	2.26	13.23	±30
8:2 fluorotelomersulfonate	1.92	1.83	-4.47	±30
Perfluorooctanesulfonamide	2.00	2.11	5.65	±30
NMeFOSAA	2.00	2.25	12.29	±30
Perfluorodecanesulfonate	1.93	1.88	-2.44	±30
Perfluoroundecanoic acid	2.00	2.24	12.04	±30
NEtFOSAA	2.00	2.27	13.26	±30
Perfluorododecanoic acid	2.00	2.24	11.88	±30
10:2-fluorotelomersulfonate	1.93	2.14	10.97	±30
NMePFOSAE	2.00	2.24	11.91	±30
NMePFOSA	2.00	2.27	13.75	±30
Perfluorododecanesulfonate	1.94	1.84	-5.06	±30
NEtPFOSAE	2.00	2.43	21.53	±30
NEtPFOSA	2.00	2.13	6.63	±30
Perfluorotridecanoic acid	2.00	2.51	25.70	±30
Perfluorotetradecanoic acid	2.00	2.29	14.50	±30
Perfluorohexadecanoic acid	2.00	2.31	15.50	±30
Perfluorooctadecanoic acid	2.00	2.20	10.10	±30

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI09
Matrix: SOIL

Batch: 18309005		13C2-PFDA	13C2-PFOA	13C3-PFBA	13C4-PFOS
File Name:18NOV07DCAL-12.WIFF		Area	Area	Area	Area
CAL3 Area/ CCV Area		311442	524424	730411	274062
LOWER LIMIT		155721	262212	365206	137031
UPPER LIMIT		467163	786636	1095617	411093
LAB SAMPLE ID	**DATE ANALYZED**				
BLK309005	11/07/18 13:17	353256	565630	813266	295029
LCS309005	11/07/18 13:26	354733	555052	775987	284083
LCSDA	11/07/18 13:35	382065	565668	766560	288519
9881943	11/07/18 14:30	355862	571813	797648	304130
9881944	11/07/18 14:39	459678	579402	839677	304231
9881961	11/07/18 20:43	382178	590090	794061	301540
9881962	11/07/18 20:52	343540	542841	794587	296027
9881945	11/08/18 12:42	341433	558206	846755	305683
9881946	11/08/18 12:51	347070	569303	820255	299152
9881949	11/08/18 13:00	352028	596386	804173	300219
9881950	11/08/18 13:09	355294	571839	804856	298507
9881951	11/08/18 13:18	350490	569337	819780	278529
9881952	11/08/18 13:27	343147	573334	797664	288015
9881955	11/08/18 13:36	343917	562636	786664	307161
9881956	11/08/18 13:45	342275	565205	809613	295889
9881957	11/08/18 13:54	332869	539991	783689	299618
9881958	11/08/18 14:03	363382	548235	792564	297999

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI09
Matrix: SOIL

Batch: 18309005 File Name:18NOV08D-05.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		315408	491983	728840	255568
LOWER LIMIT		157704	245992	364420	127784
UPPER LIMIT		473112	737975	1093260	383352
LAB SAMPLE ID	**DATE ANALYZED**				
BLK309005	11/07/18 13:17	353256	565630	813266	295029
LCS309005	11/07/18 13:26	354733	555052	775987	284083
LCSDA	11/07/18 13:35	382065	565668	766560	288519
9881943	11/07/18 14:30	355862	571813	797648	304130
9881944	11/07/18 14:39	459678	579402	839677	304231
9881961	11/07/18 20:43	382178	590090	794061	301540
9881962	11/07/18 20:52	343540	542841	794587	296027
9881945	11/08/18 12:42	341433	558206	846755	305683
9881946	11/08/18 12:51	347070	569303	820255	299152
9881949	11/08/18 13:00	352028	596386	804173	300219
9881950	11/08/18 13:09	355294	571839	804856	298507
9881951	11/08/18 13:18	350490	569337	819780	278529
9881952	11/08/18 13:27	343147	573334	797664	288015
9881955	11/08/18 13:36	343917	562636	786664	307161
9881956	11/08/18 13:45	342275	565205	809613	295889
9881957	11/08/18 13:54	332869	539991	783689	299618
9881958	11/08/18 14:03	363382	548235	792564	297999

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

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FORM 08A DOD
INTERNAL STANDARDS
LC/MS/MS

SDG No.: BSI09
Matrix: SOIL

Batch: 18331014 File Name:18NOV29D-05.WIFF		13C2-PFDA Area	13C2-PFOA Area	13C3-PFBA Area	13C4-PFOS Area
CAL3 Area/ CCV Area		451203	495984	906425	296262
LOWER LIMIT		225602	247992	453213	148131
UPPER LIMIT		676805	743976	1359638	444393
LAB SAMPLE ID	**DATE ANALYZED**				
BLK331014	11/29/18 16:16	588840	600069	1073404	363159
LCS331014	11/29/18 16:25	576159	590901	1082785	363339
LCSDA	11/29/18 16:34	599889	575371	1065182	363729
9881947	11/29/18 17:19	555363	612504	1075117	366272
9881948	11/29/18 17:28	558220	601243	1065428	358697

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* Outside QC Limits

Sample Data

PFAS by LC/MS/MS

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881943			**Data File:**		18NOV07D-22.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-CAOC1517-S-02-01 Grab Soil			**Acquis Date:**		2018-11-07T14:30:00
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	21			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.06000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	797647.8	730410.6	9	50	
13C2-PFOA	5.0	571813.4	524423.6	9	50	
13C4-PFOS	4.8	304130.0	274061.7	11	50	
13C2-PFDA	5.0	355862.4	311442.1	14	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	372160.5	13C3-PFBA	797647.8	0.467	8.774	6.461	74	50-150	
E13C5-PFHxA	615252.9	13C2-PFOA	571813.4	1.076	9.434	7.468	79	50-150	
E13C3-PFHxS	297174.1	13C2-PFOA	571813.4	0.520	8.925	7.039	79	50-150	
E13C4-PFHpA	475748.1	13C2-PFOA	571813.4	0.832	9.434	7.141	76	50-150	
E13C8-PFOA	796944.8	13C2-PFOA	571813.4	1.394	9.434	7.333	78	50-150	
E13C8-PFOS	252610.3	13C4-PFOS	304130.0	0.831	9.019	6.930	77	50-150	
E13C9-PFNA	433835.2	13C4-PFOS	304130.0	1.426	9.434	7.352	78	50-150	
E13C6-PFDA	558238.3	13C2-PFDA	355862.4	1.569	9.434	7.443	79	50-150	
Ed3-NMeFOSAA	75980.3	13C2-PFDA	355862.4	0.214	9.434	7.491	79	50-150	
E13C7-PFUnDA	241097.2	13C2-PFDA	355862.4	0.678	9.434	7.374	78	50-150	
Ed5-NEtFOSAA	56507.3	13C2-PFDA	355862.4	0.159	9.434	6.933	73	50-150	
E13C2-PFDoDA	506637.1	13C2-PFDA	355862.4	1.424	9.434	7.242	77	50-150	
E13C2-PFTeDA	375997.6	13C2-PFDA	355862.4	1.057	9.434	7.177	76	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

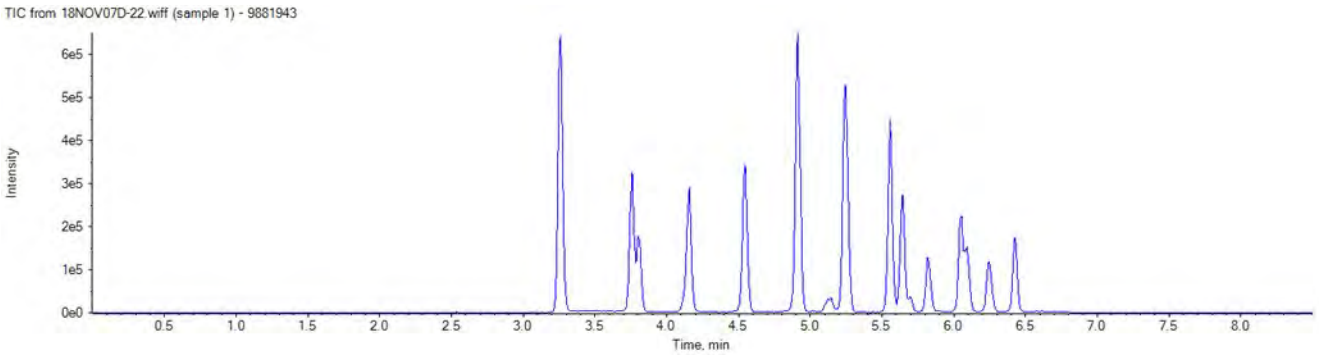
Analyte Quantitation Peak Table

Sample Name: 9881943 **Instrument Name:** LM27631 **File Name:** 18NOV07D-22.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	372160.5	N/A	
PFHxA	4.15	1.000	19198.0		A	13C5-PFHxA	4.15	615252.9	0.031	0.252
PFHxS	4.54	1.000	20071.7		M	13C3-PFHxS	4.54	297174.1	0.068	0.646
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	475748.1	N/A	
PFOA	4.91	1.000	78841.5		A	13C8-PFOA	4.91	796944.8	0.099	1.051
PFOS	5.24	1.000	386340.6		M	13C8-PFOS	5.24	252610.3	1.529	14.963
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	433835.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	558238.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	75980.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	241097.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	56507.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	506637.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	506637.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	375997.6	N/A	

Total Ion Chromatogram

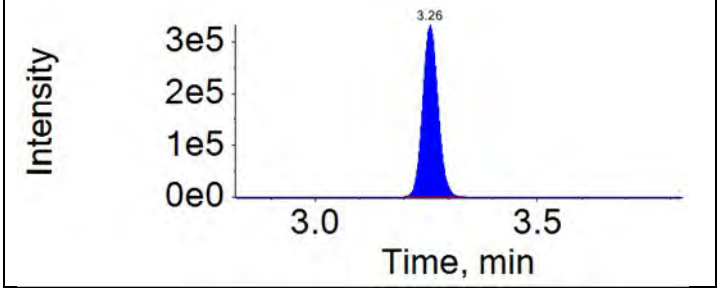


APPROVED
By MCD at 4:42 pm, 11/8/18

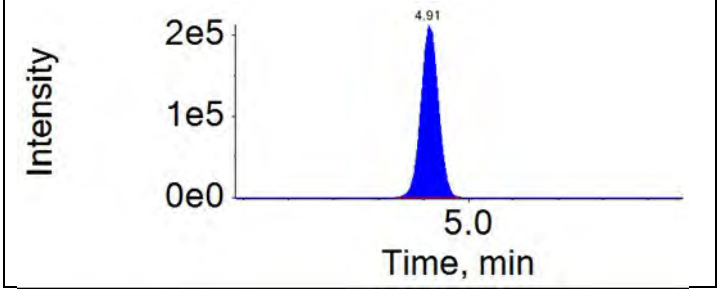
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

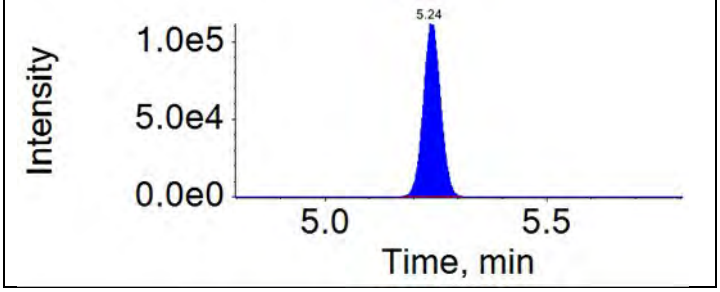
Injection Standard: 13C3-PFBA
216.0 / 172.0



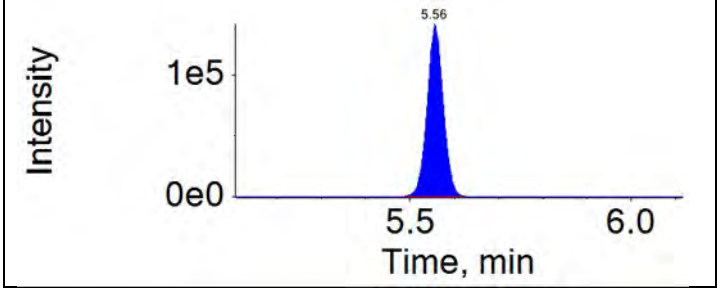
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



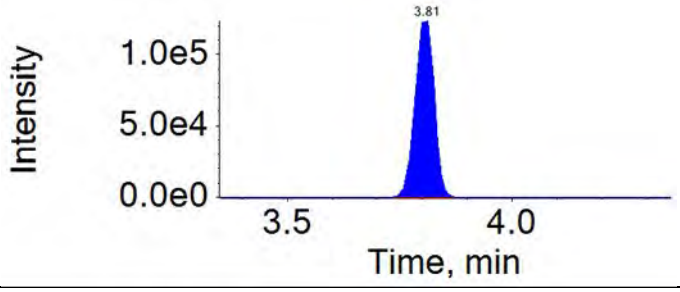
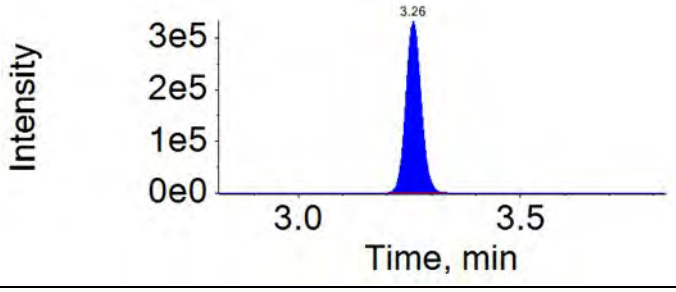
Injection Standard: 13C2-PFDA
515.0 / 470.0

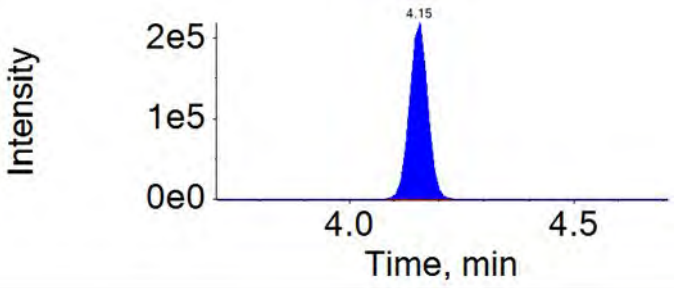
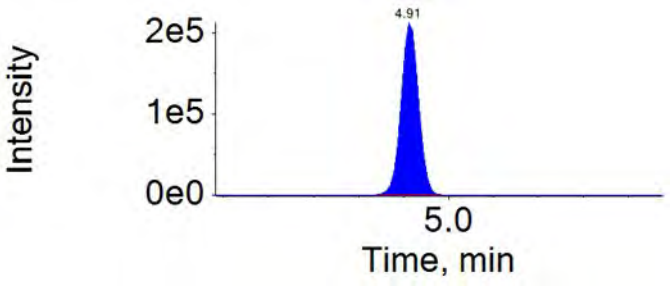


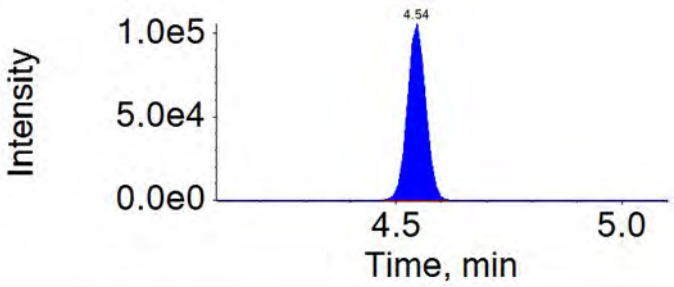
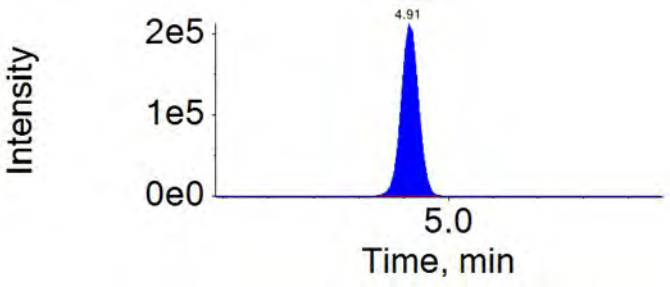
APPROVED
By MCD at 4:42 pm, 11/8/18

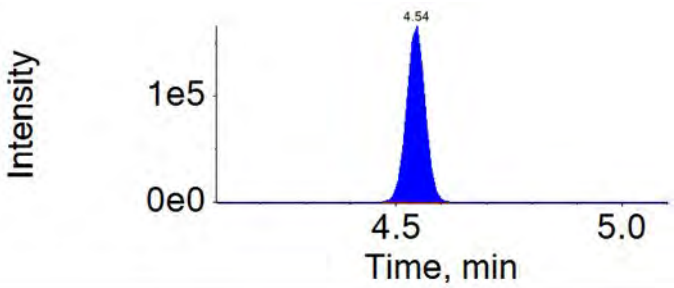
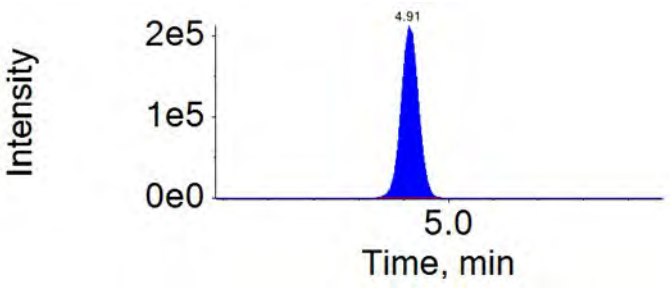
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

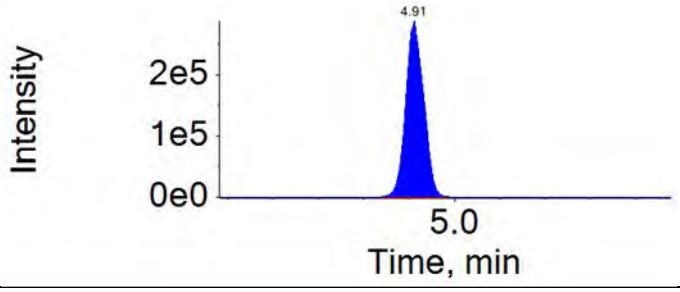
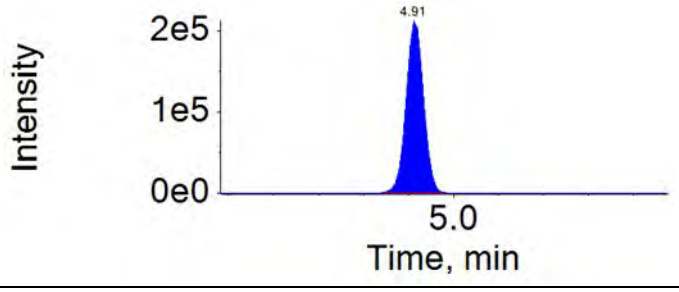
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

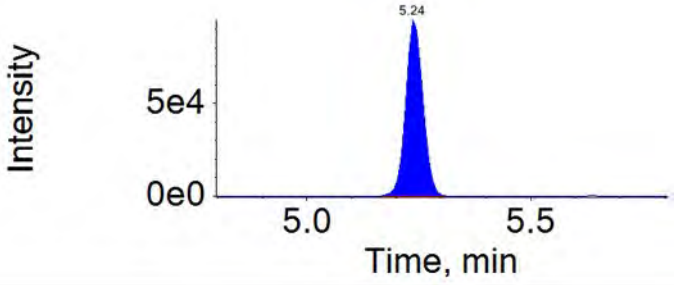
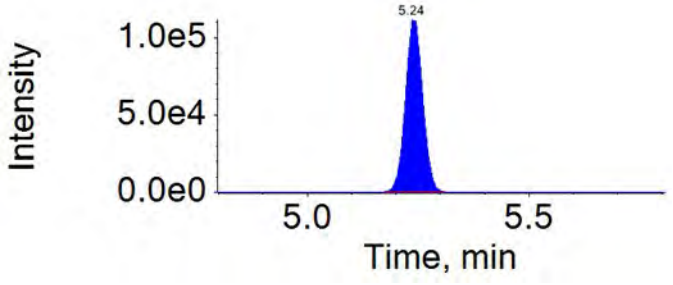
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

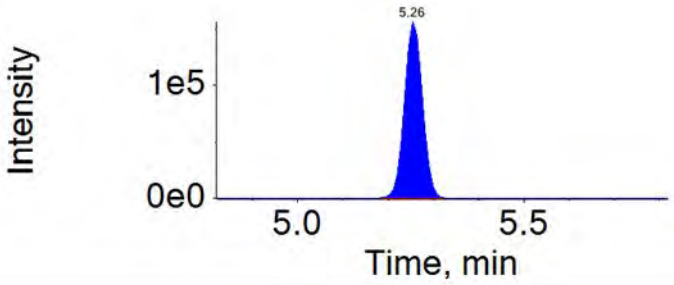
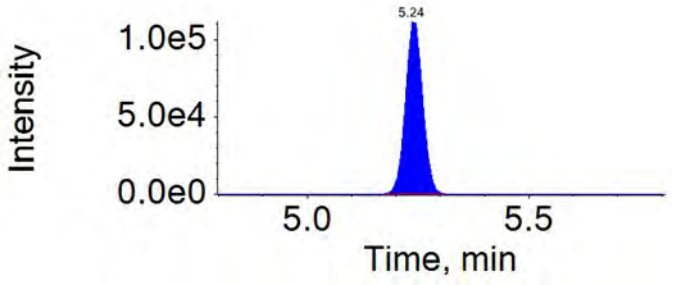
APPROVED
By MCD at 4:42 pm, 11/8/18

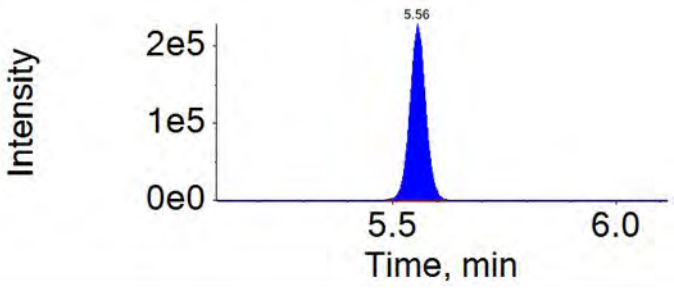
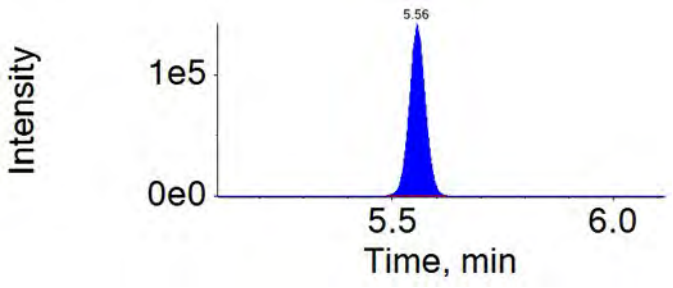
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

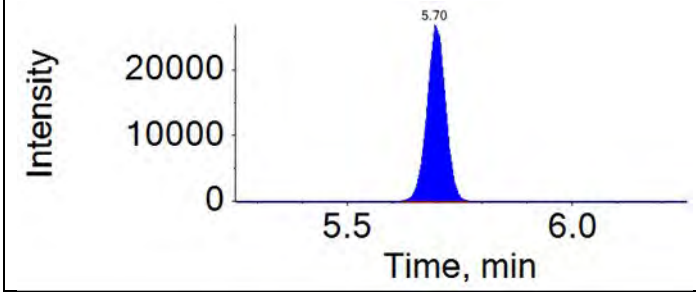
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

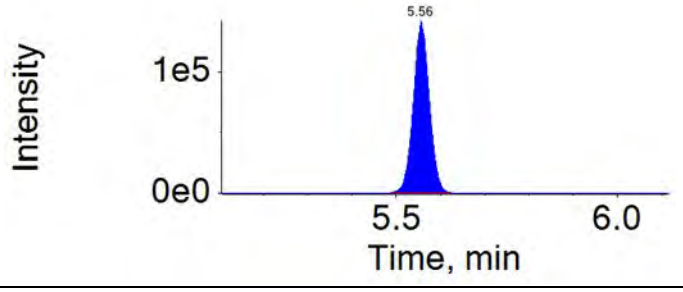
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

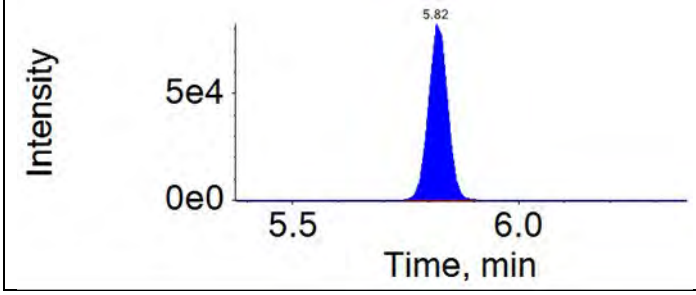
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

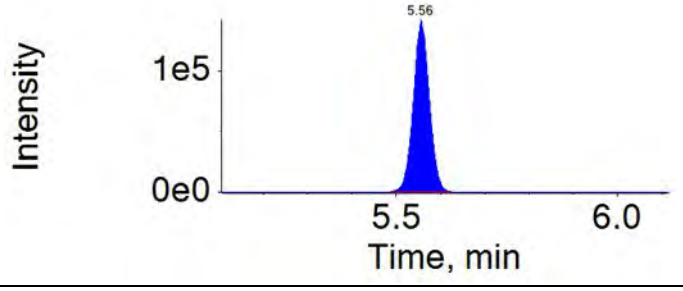
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



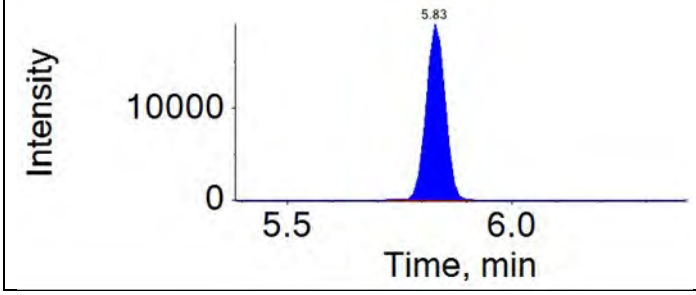


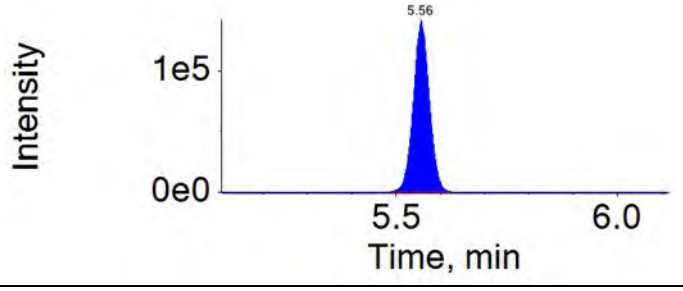
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



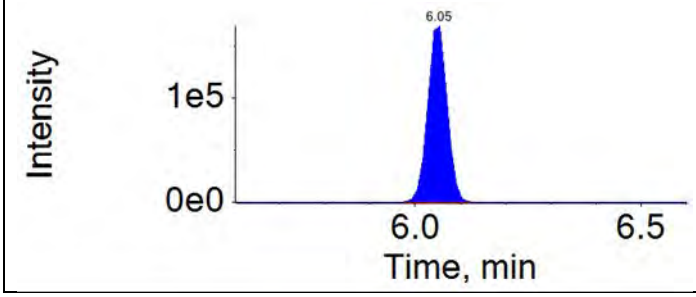


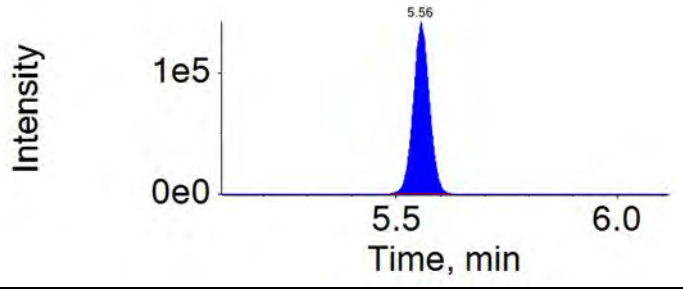
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0

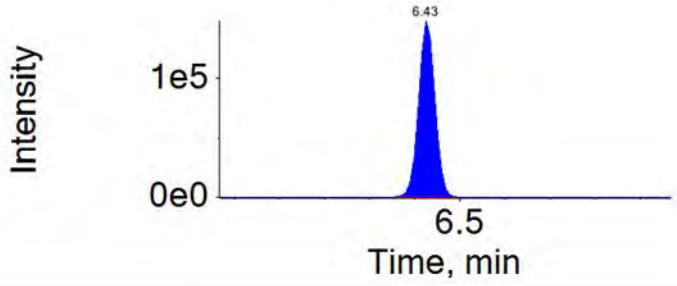
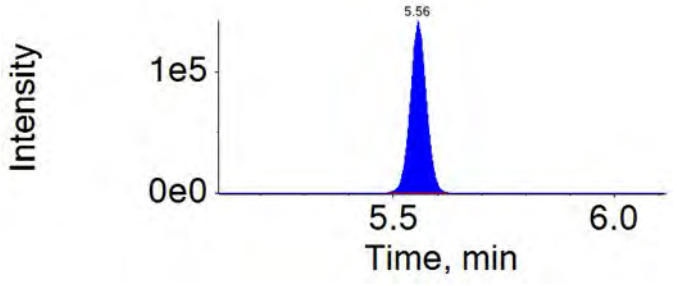




APPROVED
By MCD at 4:42 pm, 11/8/18

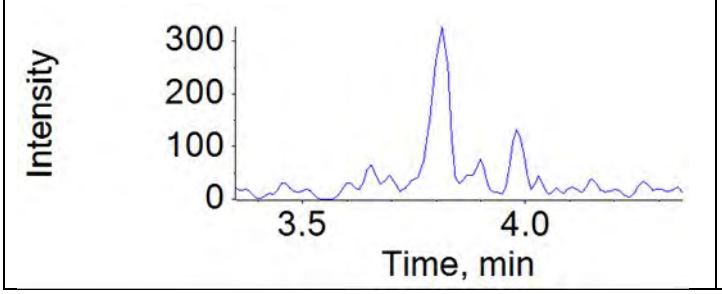
REVIEWED
By umar at 2:36 pm, 11/12/18

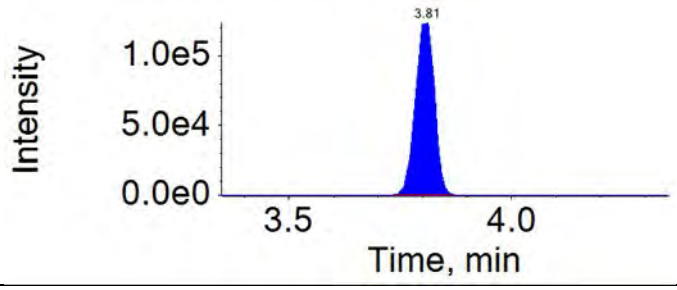
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

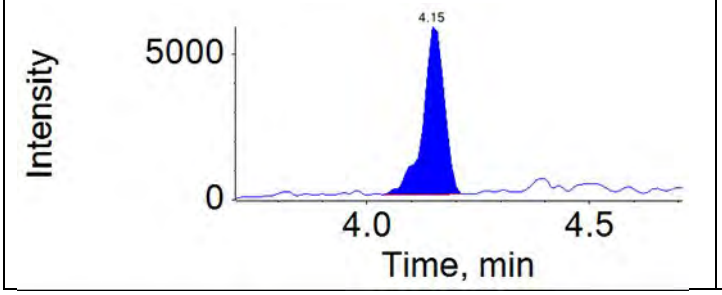
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

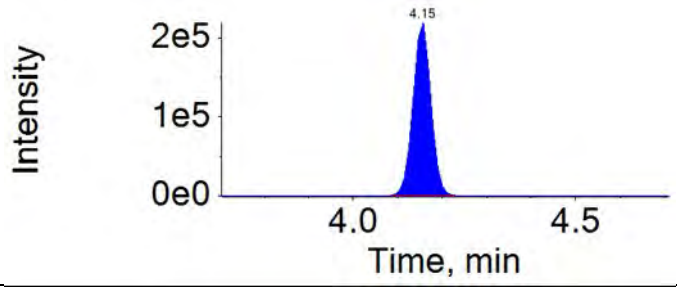
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



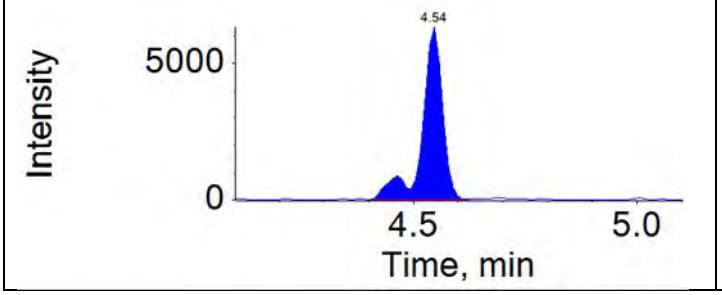


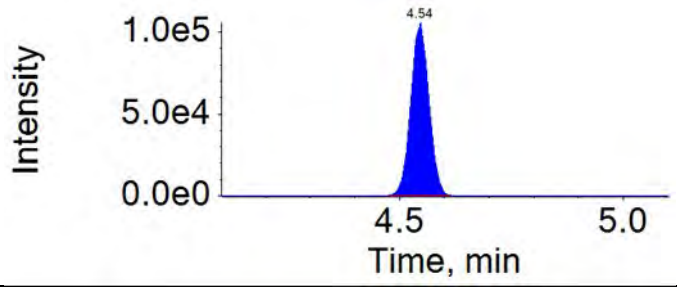
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



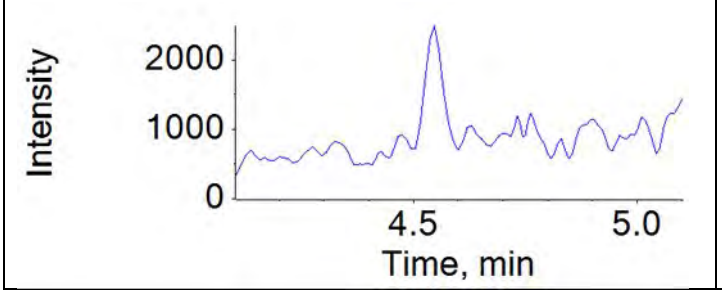


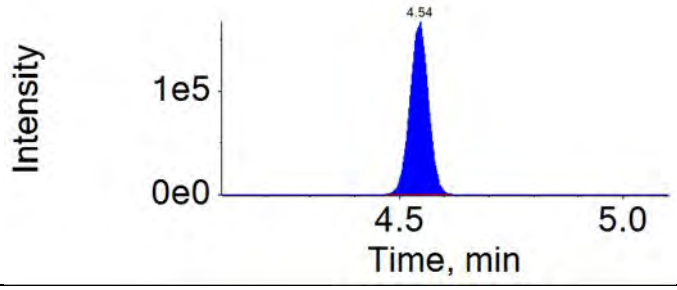
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

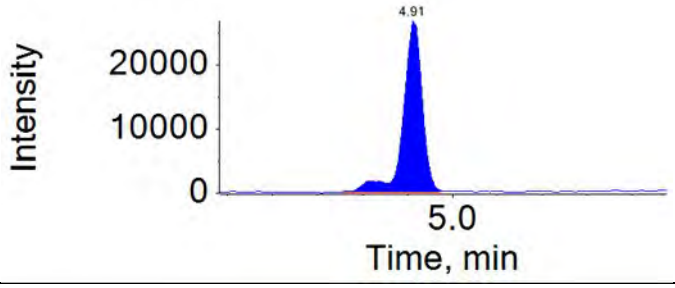
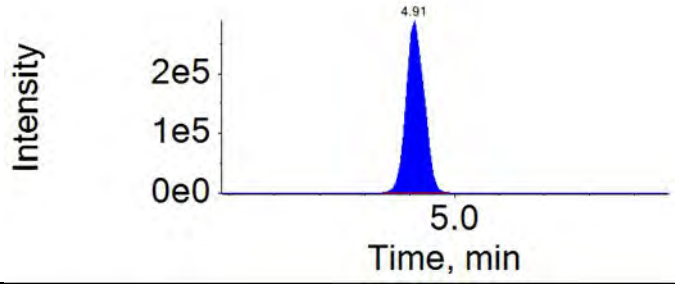


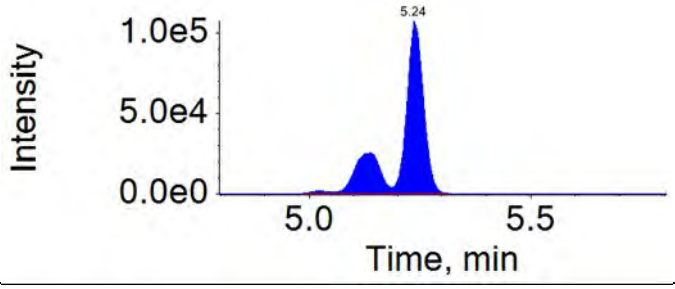
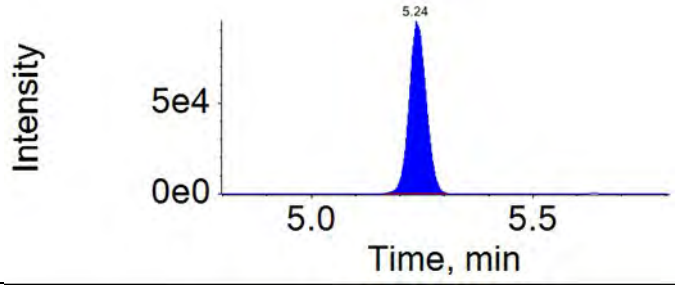


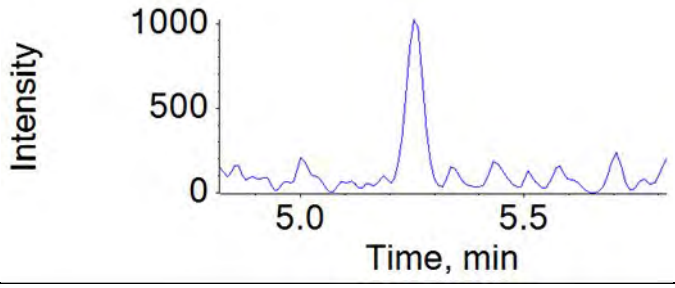
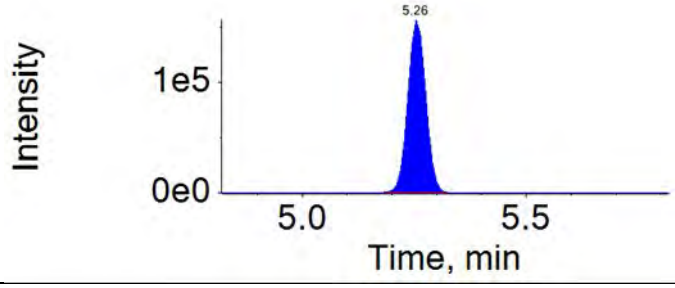
APPROVED
By MCD at 4:42 pm, 11/8/18

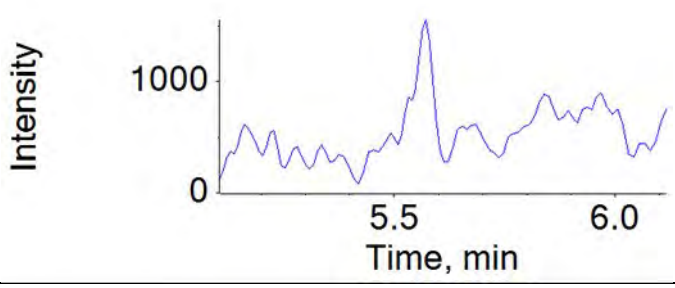
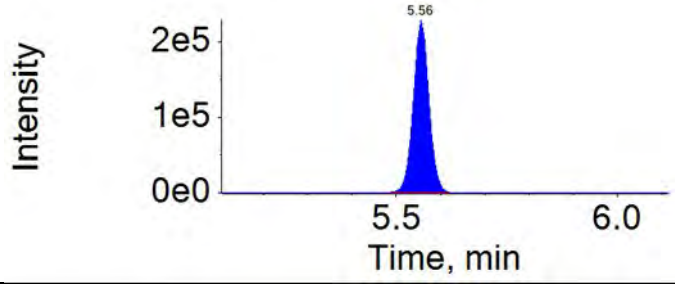
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

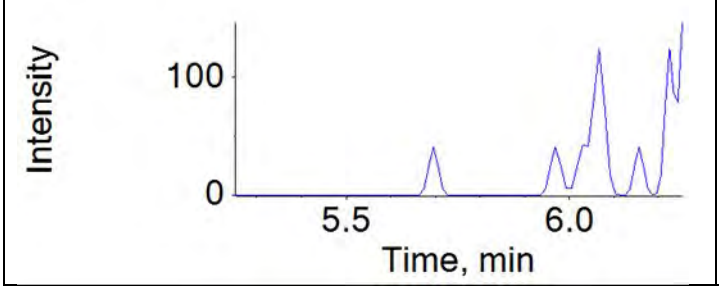
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

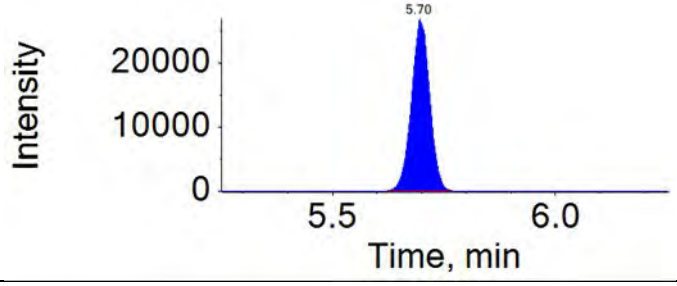
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

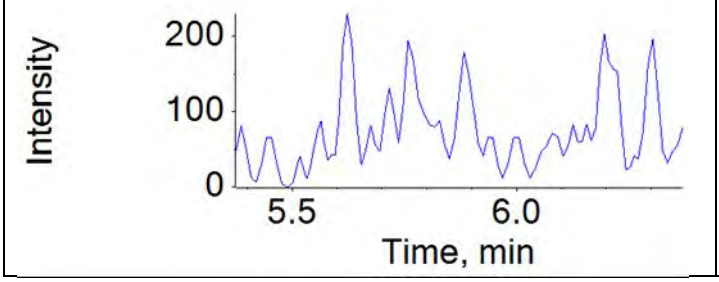
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

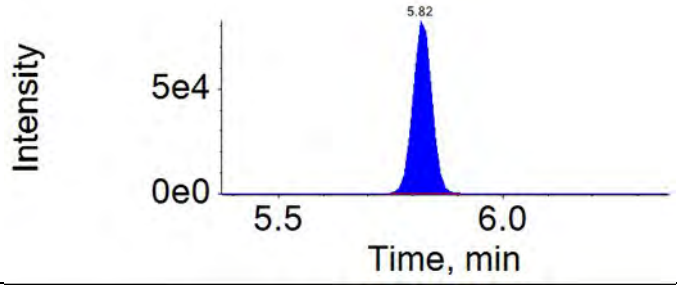
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



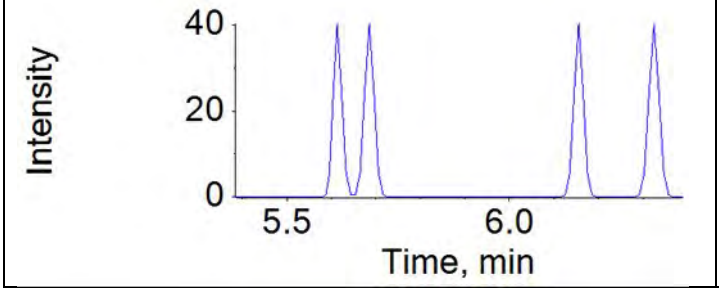


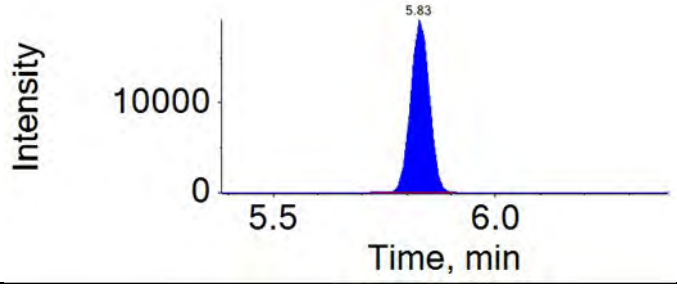
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



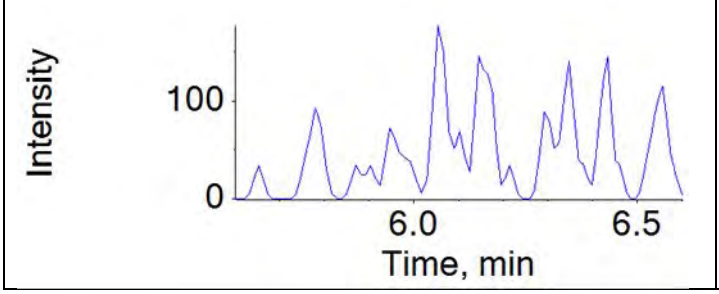


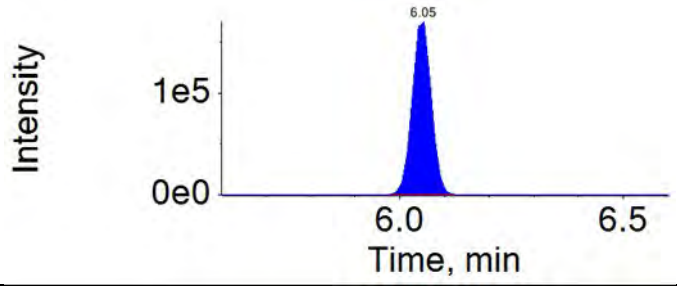
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



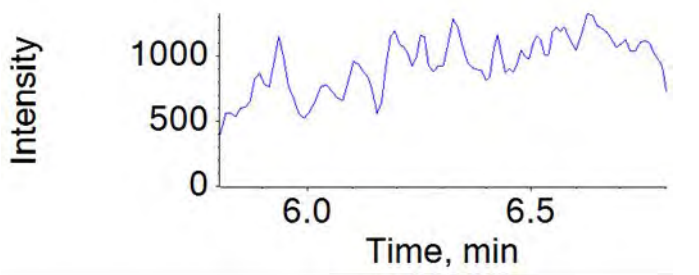


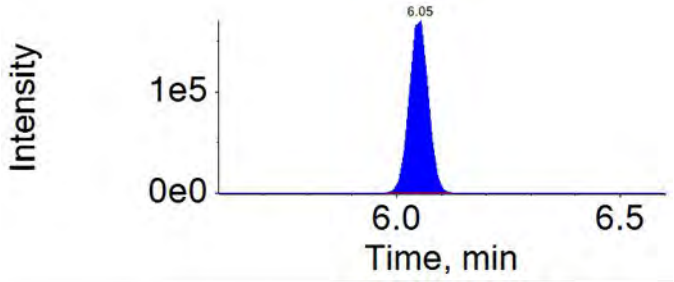
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

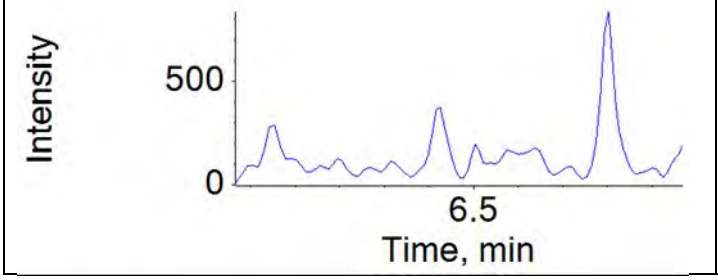
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

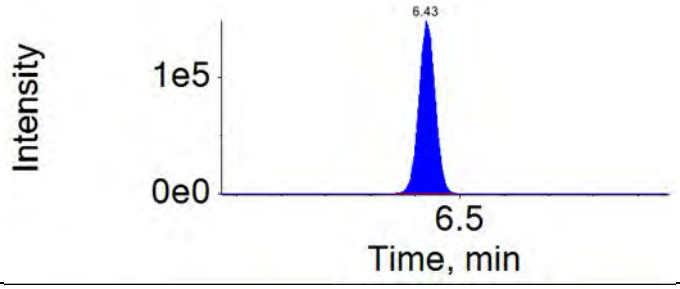
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



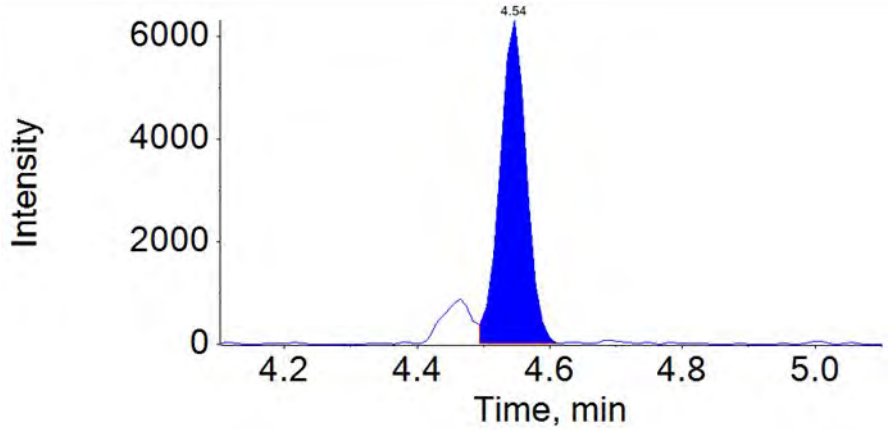


APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

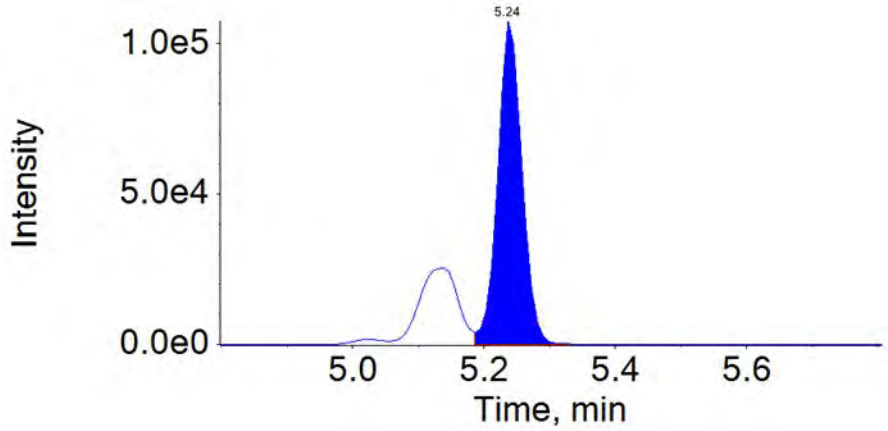
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
17355.8
Mass Range:
399.0 / 80.0
File Name:
18NOV07D-22.wiff
Sample Name:
9881943



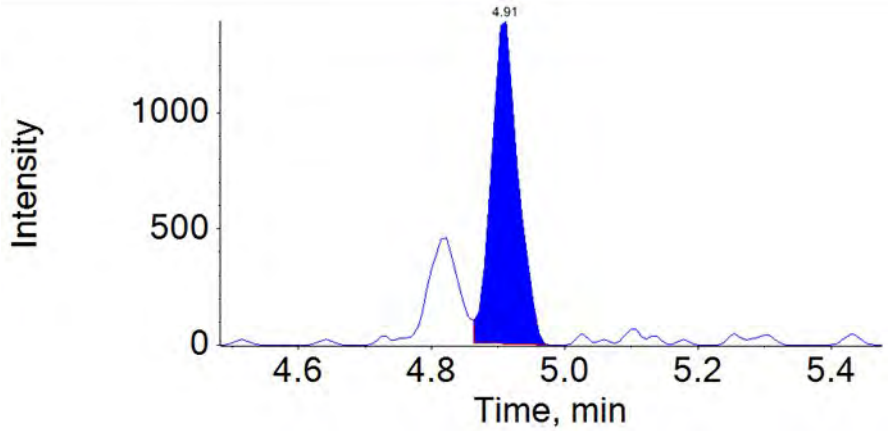
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
276314.3
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-22.wiff
Sample Name:
9881943



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
3878.1
Mass Range:
413.0 / 169.0
File Name:
18NOV07D-22.wiff
Sample Name:
9881943



Integration Comment: incorrect integration

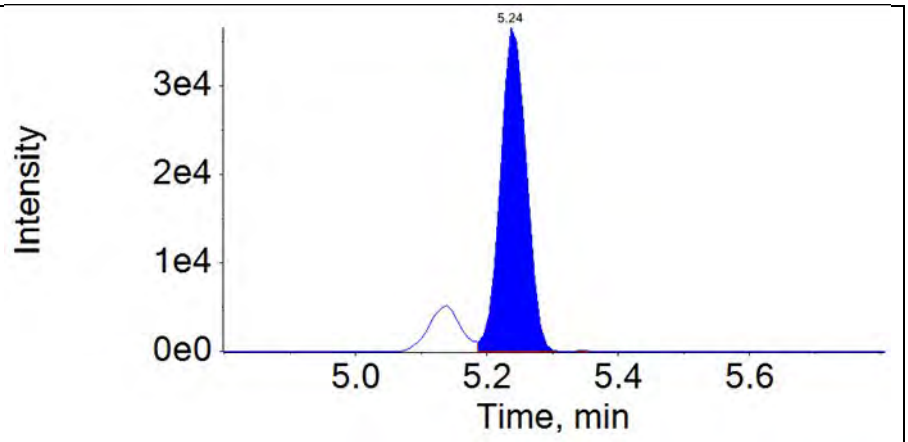
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
100935.3
Mass Range:
499.0 / 99.0
File Name:
18NOV07D-22.wiff
Sample Name:
9881943



Integration Comment: incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Ion Ratio Report

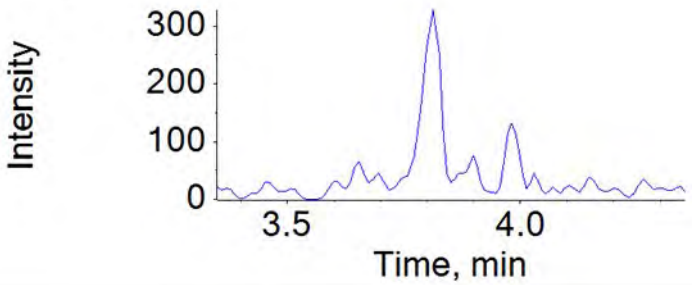
Sample Name: 9881943 **Instrument Name:** LM27631 **File Name:** 18NOV07D-22.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.15	1.00	19198.0	A	N/A	0.0045			
PFHxA_2	4.14	1.00	86.6	A	N/A	0.0045	-60	50	OOS
PFHxS	4.54	1.00	20071.7	M	N/A	0.3244			
PFHxS_2	4.54	1.00	6511.4	A	N/A	0.3244	-9	50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	4.91	1.00	78841.5	A	N/A	0.0687			
PFOA_2	4.91	1.00	5413.4	M	N/A	0.0687	8	50	
PFOS	5.24	1.00	386340.6	M	N/A	0.3061			
PFOS_2	5.24	1.00	118245.6	M	N/A	0.3061	-13	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

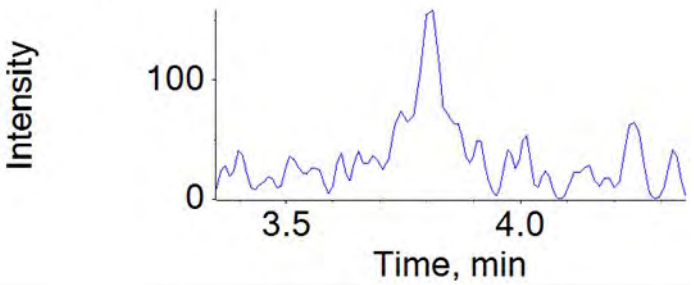
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

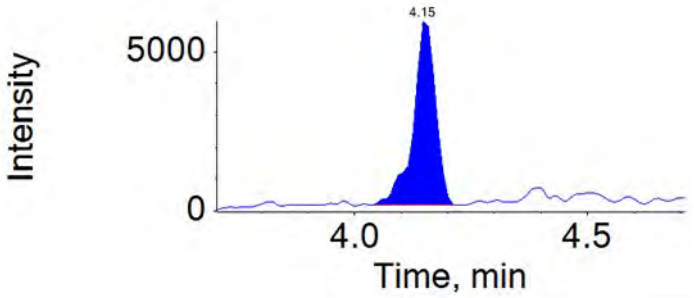
Component: PFBS
Primary Mass: 299.0 / 80.0



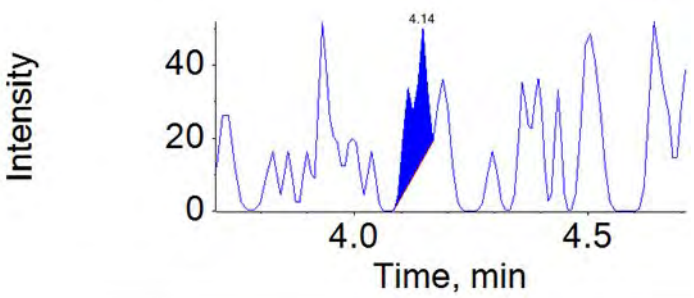
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



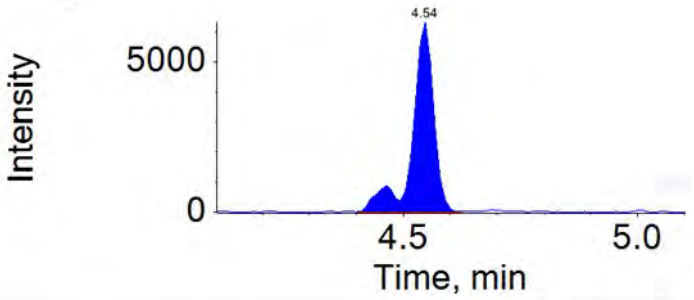
Component: PFHxA
Primary Mass: 313.0 / 269.0



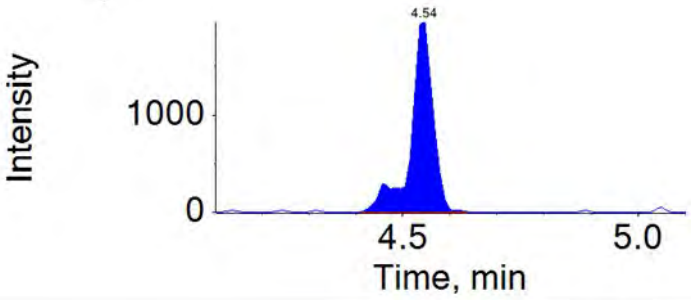
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



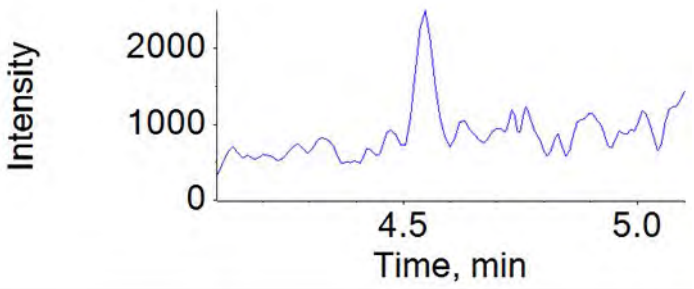
Component: PFHxS
Primary Mass: 399.0 / 80.0



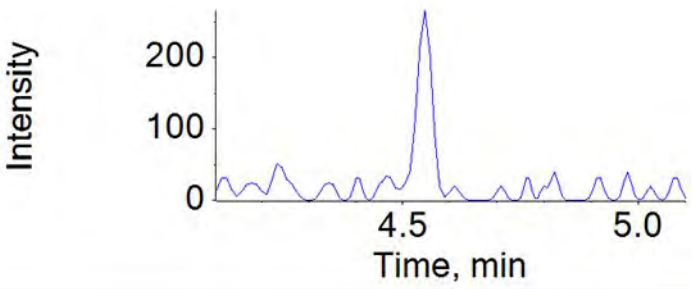
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



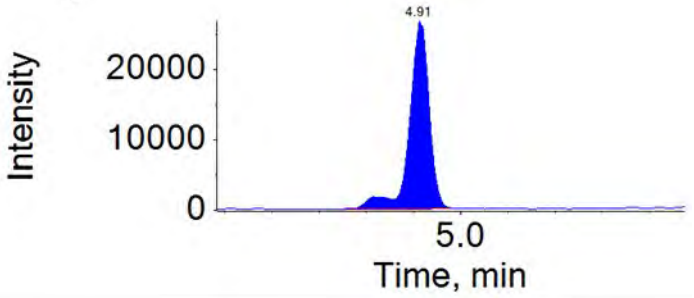
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



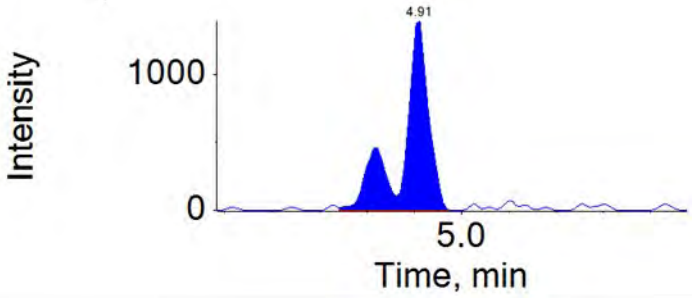
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

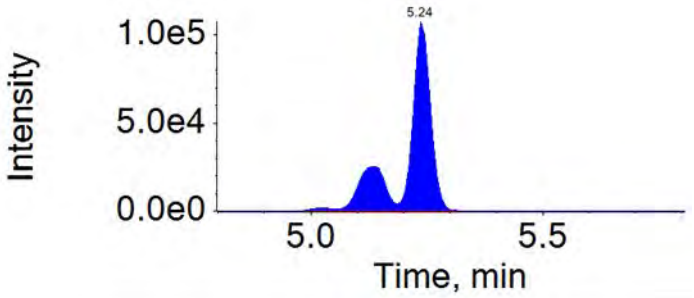
Component: PFOA
Primary Mass: 413.0 / 369.0



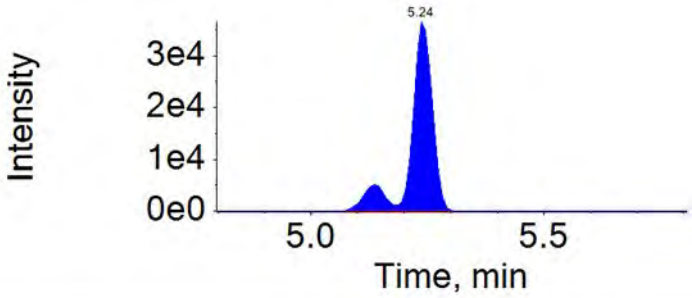
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



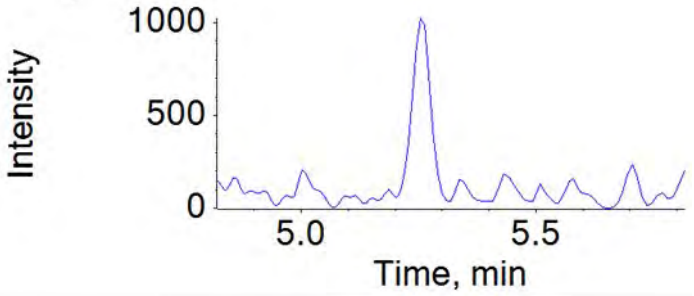
Component: PFOS
Primary Mass: 499.0 / 80.0



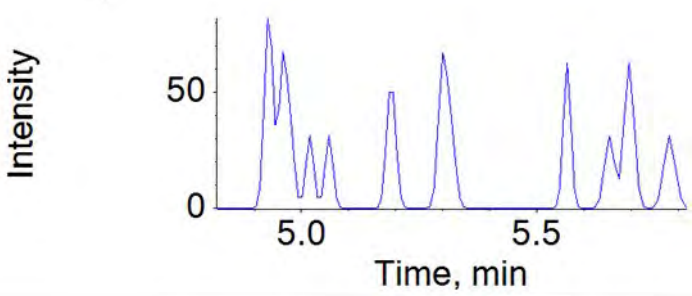
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



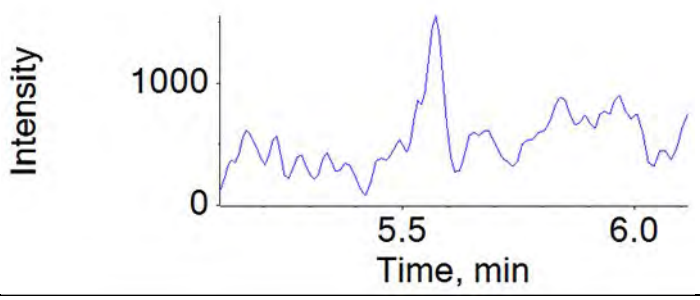
Component: PFNA
Primary Mass: 463.0 / 419.0



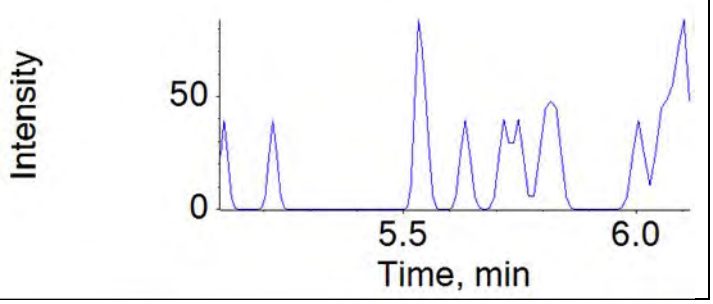
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



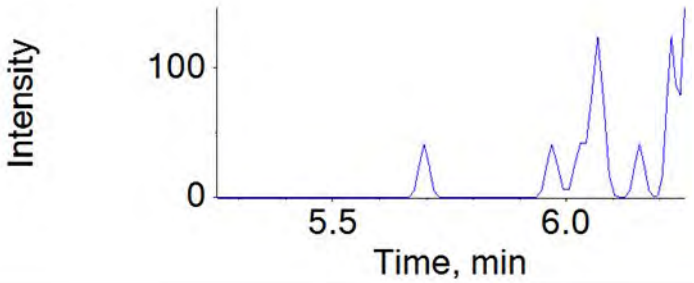
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



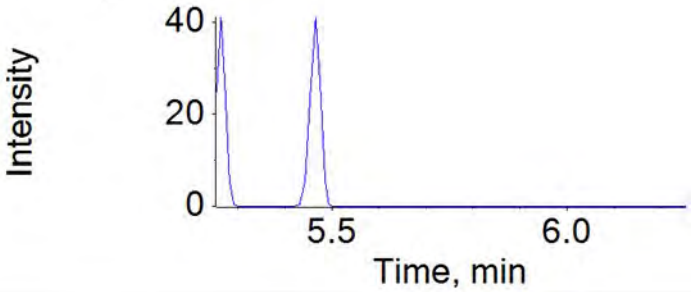
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

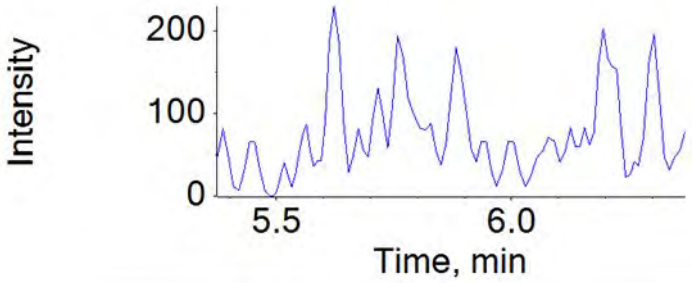
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



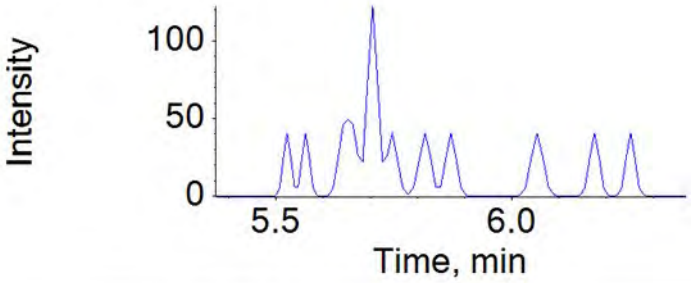
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



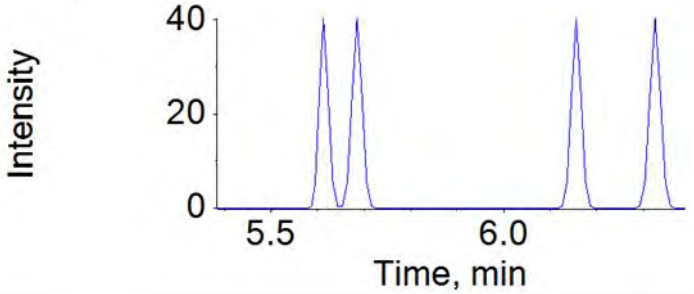
Component: PFUnDA
Primary Mass: 563.0 / 519.0



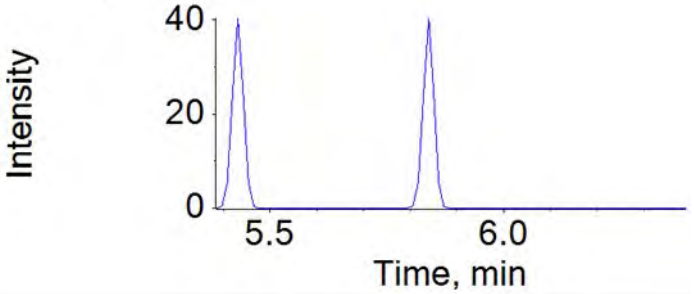
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



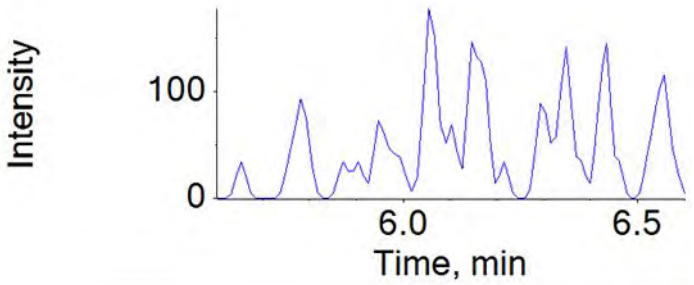
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



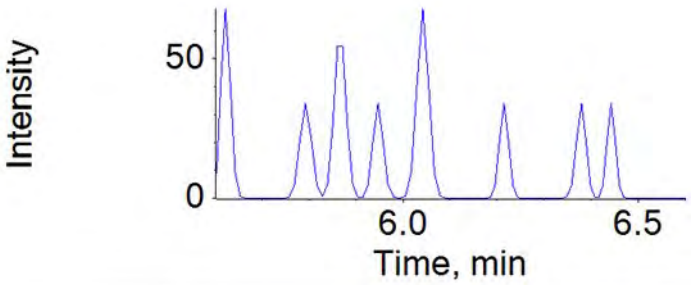
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



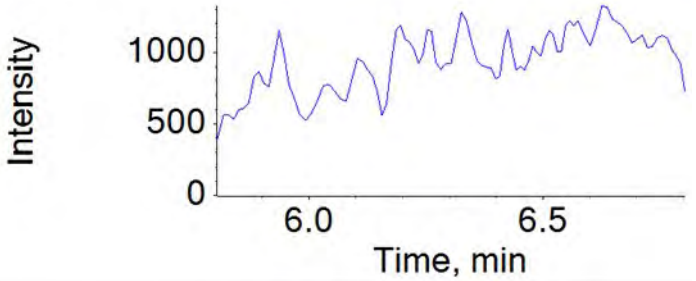
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



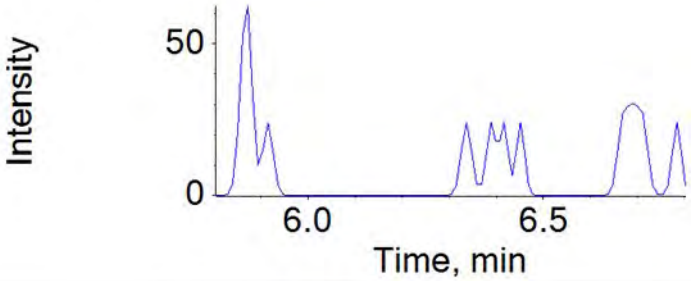
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

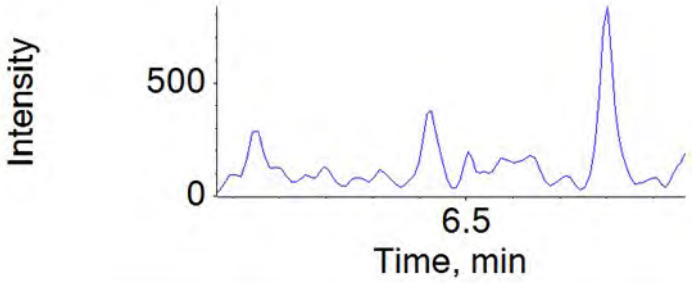
Component: PFTrDA
Primary Mass: 663.0 / 619.0



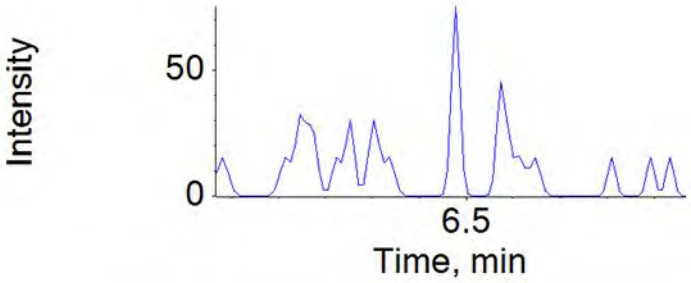
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881944			**Data File:**		18NOV07D-23.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-CAOC1517-S-02-03 Grab Soil			**Acquis Date:**		2018-11-07T14:39:00
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	22			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.05000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	839677.0	730410.6	15	50	
13C2-PFOA	5.0	579402.1	524423.6	10	50	
13C4-PFOS	4.8	304230.9	274061.7	11	50	
13C2-PFDA	5.0	459678.4	311442.1	48	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	388011.4	13C3-PFBA	839677.0	0.462	8.857	6.460	73	50-150	
E13C5-PFHxA	621879.3	13C2-PFOA	579402.1	1.073	9.524	7.520	79	50-150	
E13C3-PFHxS	297808.9	13C2-PFOA	579402.1	0.514	9.010	7.028	78	50-150	
E13C4-PFHpA	508211.0	13C2-PFOA	579402.1	0.877	9.524	7.600	80	50-150	
E13C8-PFOA	813516.1	13C2-PFOA	579402.1	1.404	9.524	7.458	78	50-150	
E13C8-PFOS	264056.9	13C4-PFOS	304230.9	0.868	9.105	7.310	80	50-150	
E13C9-PFNA	421568.8	13C4-PFOS	304230.9	1.386	9.524	7.210	76	50-150	
E13C6-PFDA	669098.2	13C2-PFDA	459678.4	1.456	9.524	6.972	73	50-150	
Ed3-NMeFOSAA	74616.4	13C2-PFDA	459678.4	0.162	9.524	5.750	60	50-150	
E13C7-PFUnDA	345943.7	13C2-PFDA	459678.4	0.753	9.524	8.269	87	50-150	
Ed5-NEtFOSAA	60690.1	13C2-PFDA	459678.4	0.132	9.524	5.820	61	50-150	
E13C2-PFDoDA	661445.7	13C2-PFDA	459678.4	1.439	9.524	7.389	78	50-150	
E13C2-PFTeDA	418936.4	13C2-PFDA	459678.4	0.911	9.524	6.249	66	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

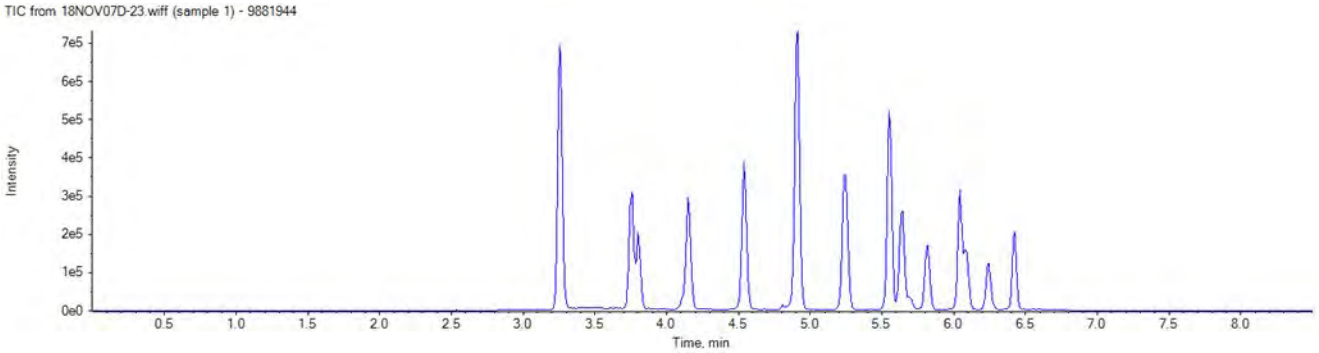
Analyte Quantitation Peak Table

Sample Name: 9881944 **Instrument Name:** LM27631 **File Name:** 18NOV07D-23.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.05000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.79	1.000	3673.7		A	13C3-PFBS	3.80	388011.4	0.009	0.091
PFHxA	4.15	1.000	27439.8		M	13C5-PFHxA	4.15	621879.3	0.044	0.360
PFHxS	4.54	1.000	47322.5		M	13C3-PFHxS	4.54	297808.9	0.159	1.534
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	508211.0	N/A	
PFOA	4.91	1.000	311234.9		M	13C8-PFOA	4.91	813516.1	0.383	4.103
PFOS	5.16	0.980	5051.2		M	13C8-PFOS	5.23	264056.9	0.019	0.189
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	421568.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	669098.2	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	74616.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	345943.7	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	60690.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	661445.7	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	661445.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	418936.4	N/A	

Total Ion Chromatogram

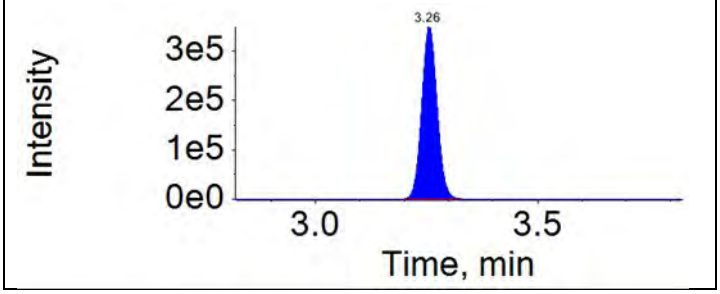


APPROVED
By MCD at 4:42 pm, 11/8/18

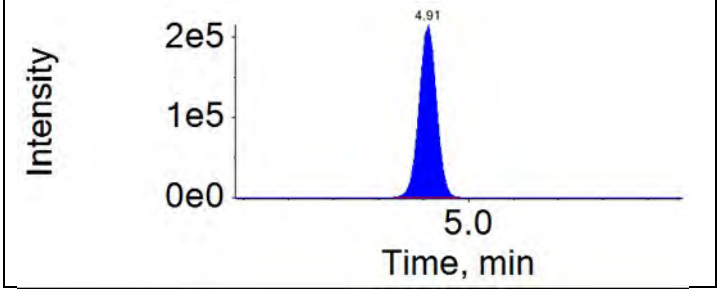
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

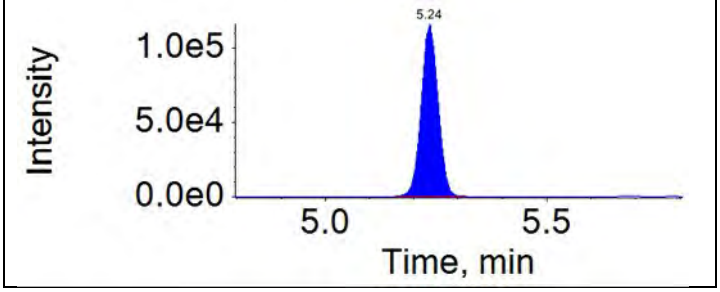
Injection Standard: 13C3-PFBA
216.0 / 172.0



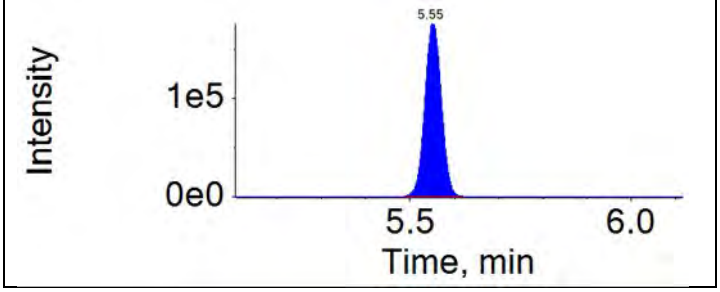
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

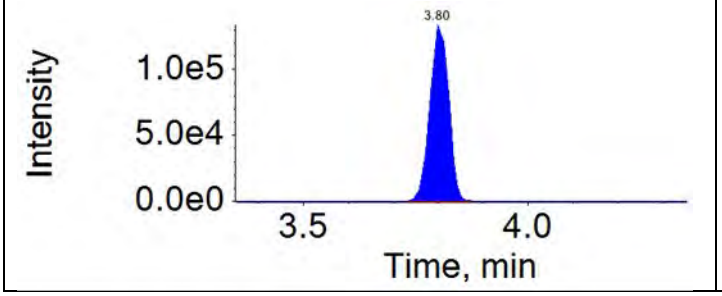


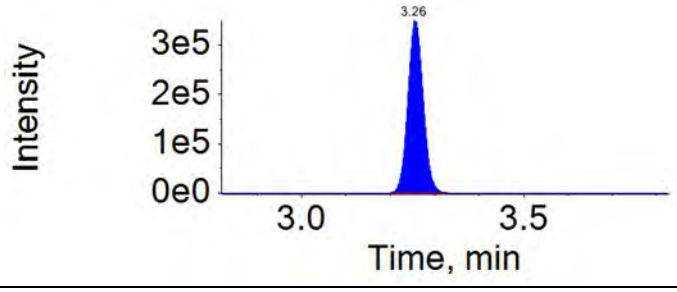
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

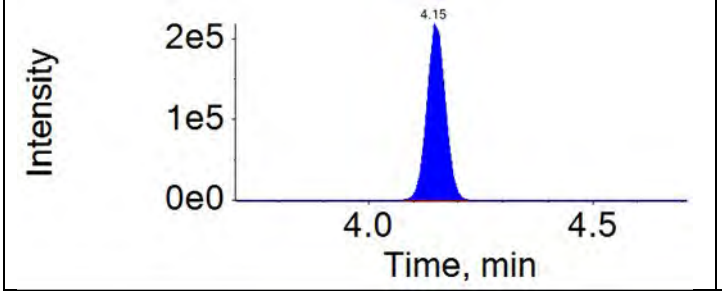
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

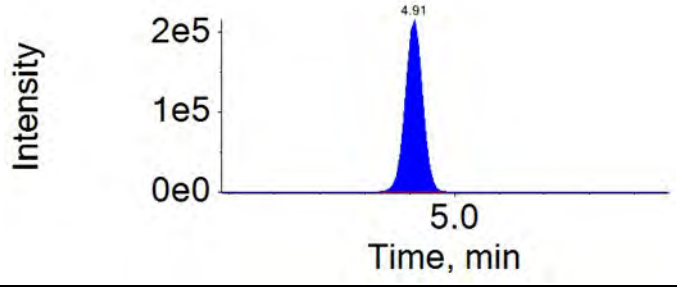
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



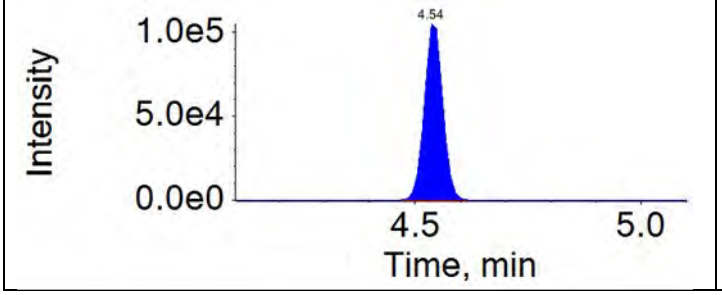


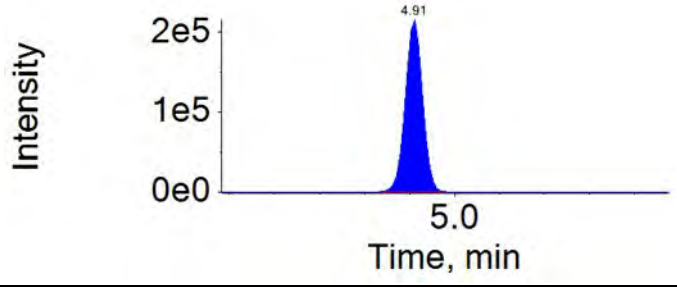
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



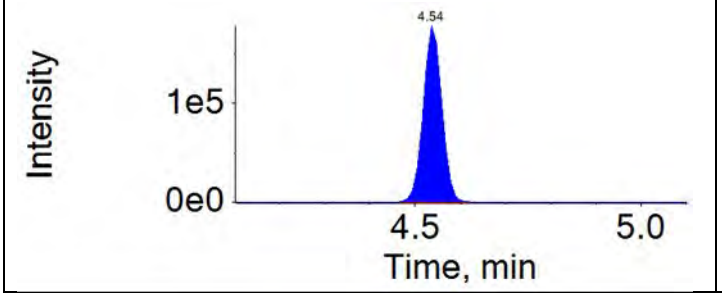


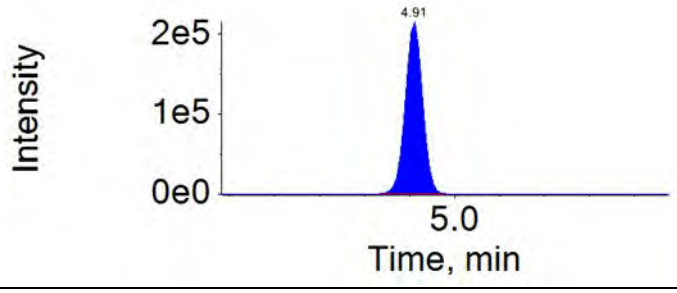
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

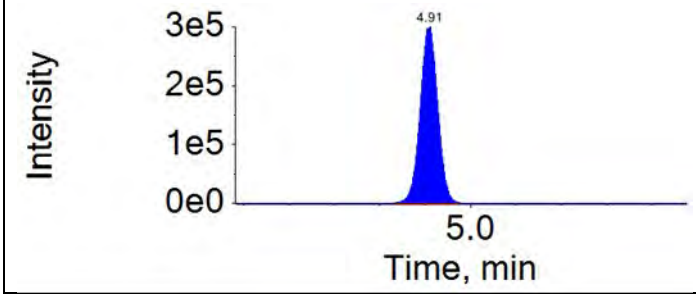
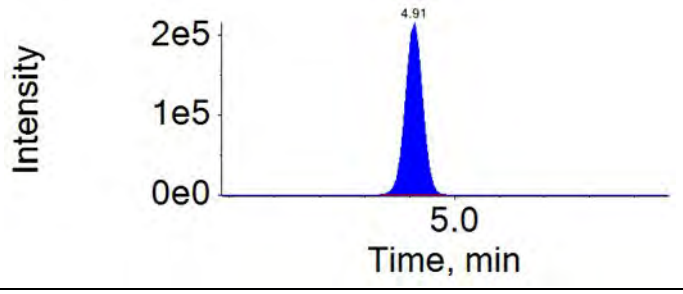


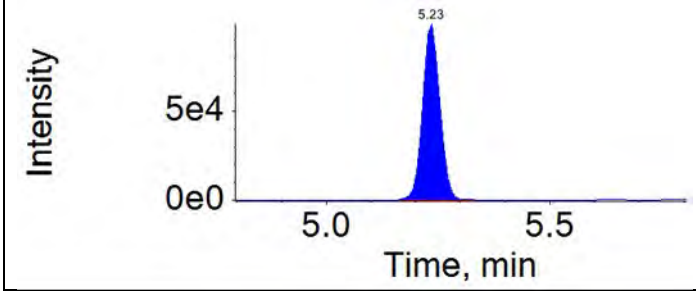
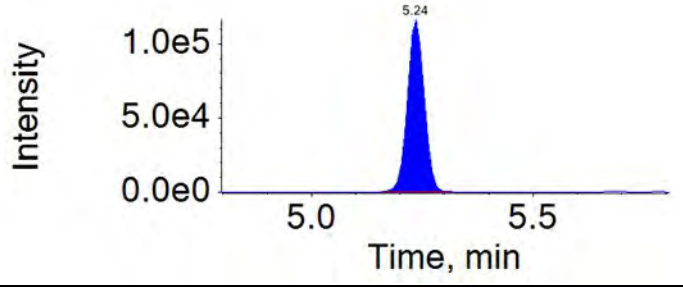


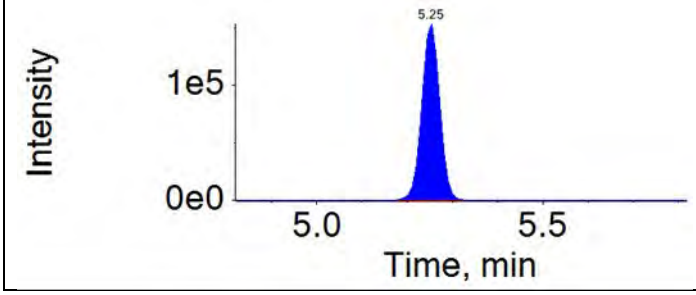
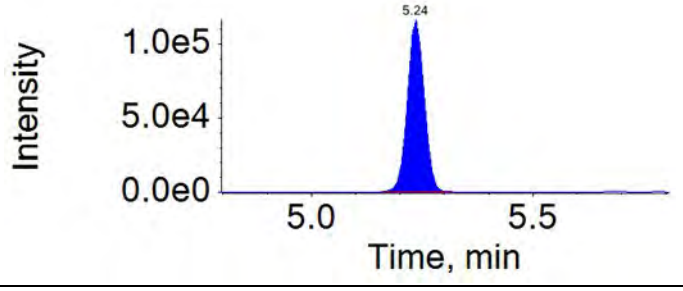
APPROVED
By MCD at 4:42 pm, 11/8/18

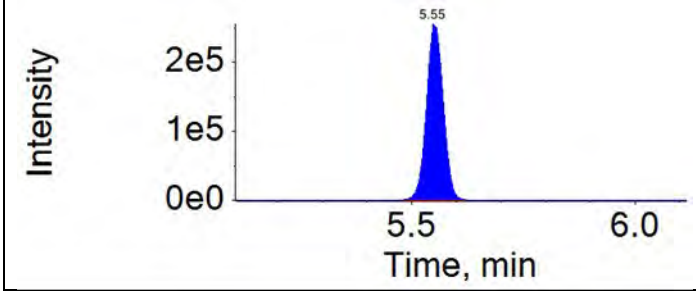
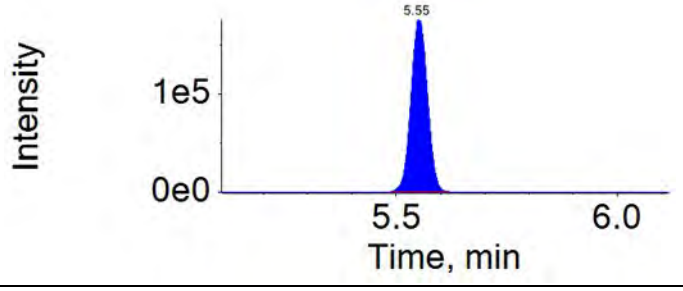
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

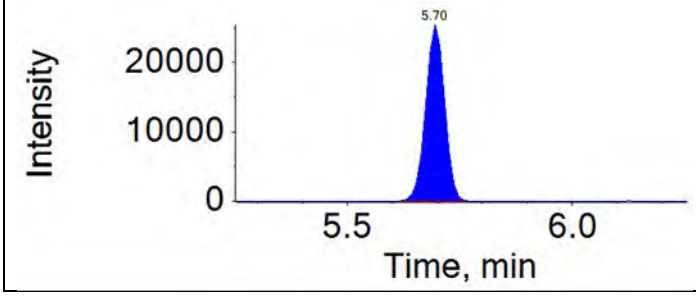
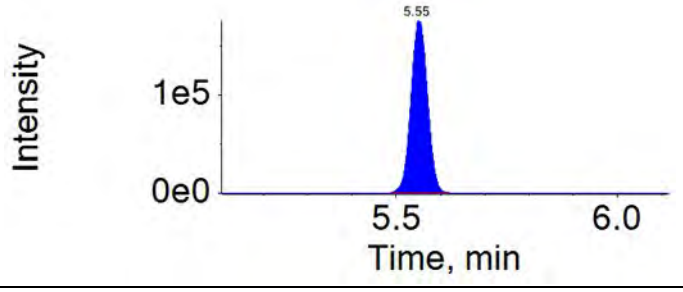
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

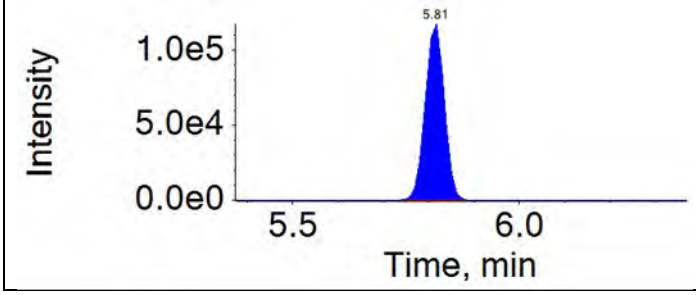
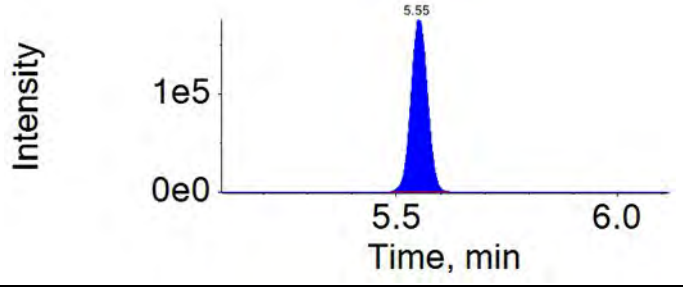
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

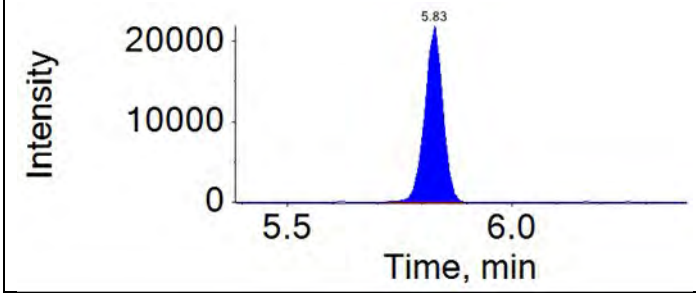
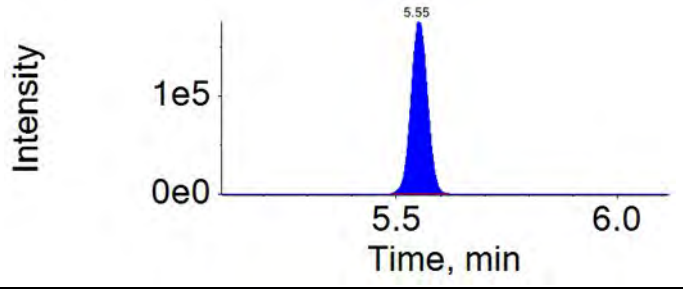
APPROVED
By MCD at 4:42 pm, 11/8/18

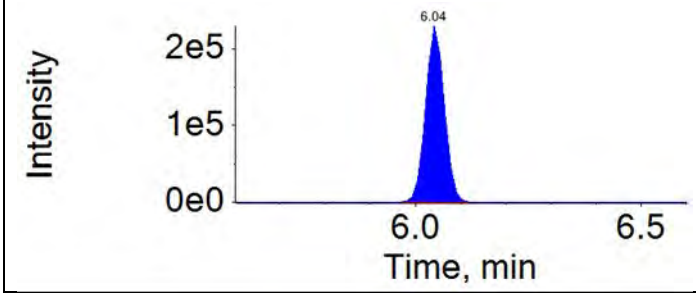
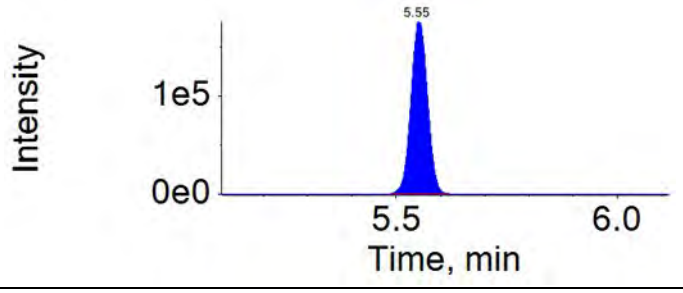
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

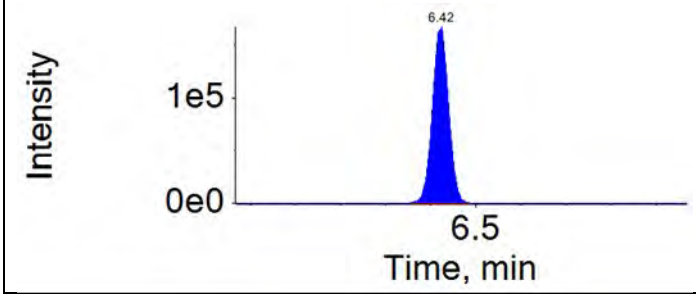
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

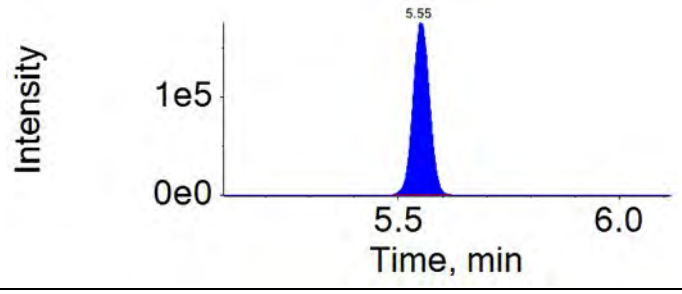
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



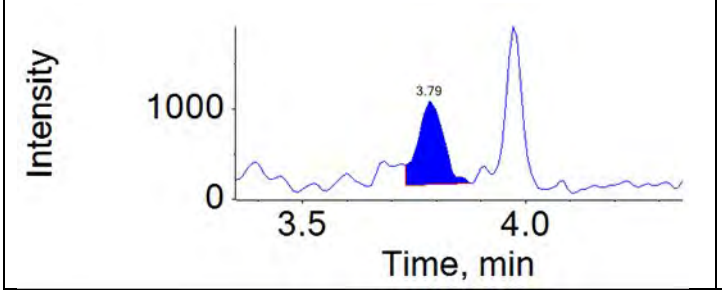


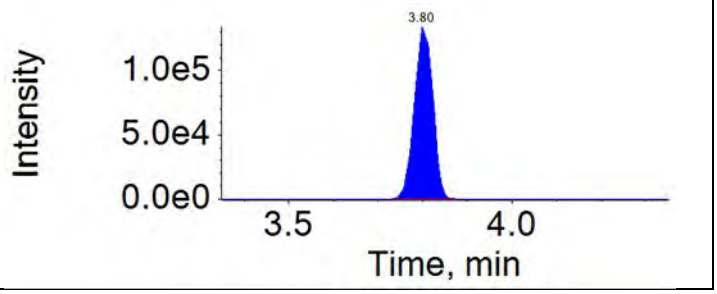
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

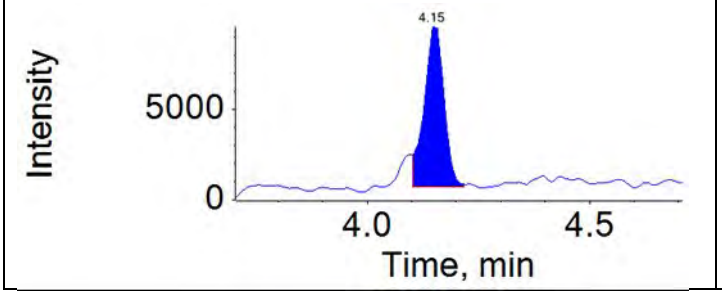
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

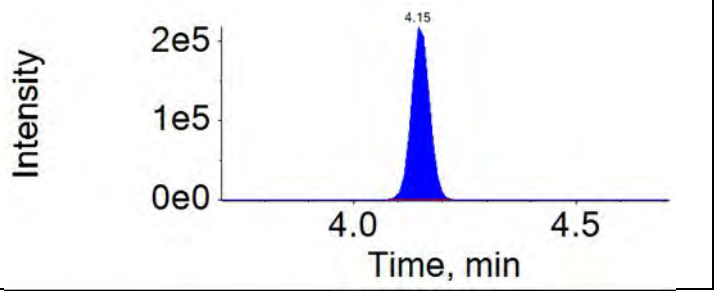
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



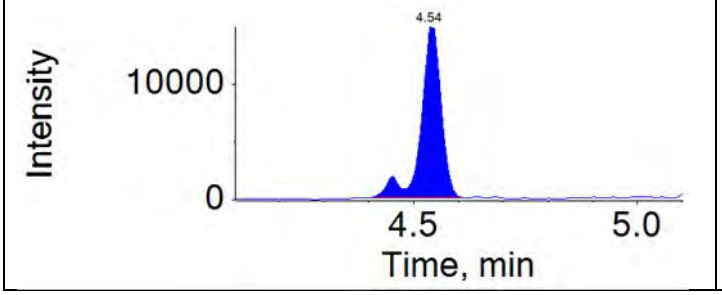


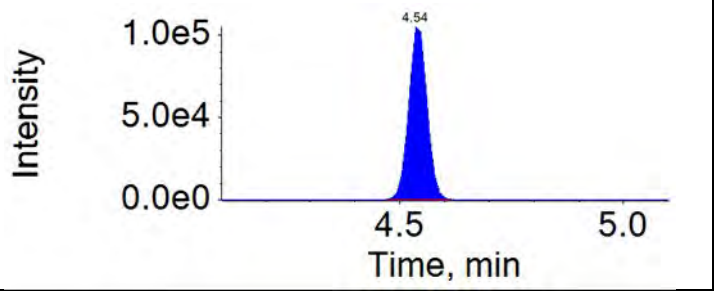
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



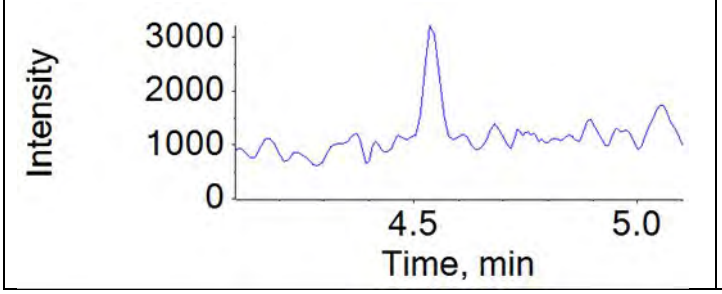


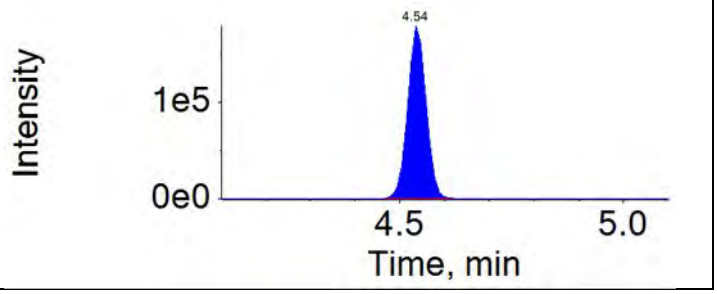
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



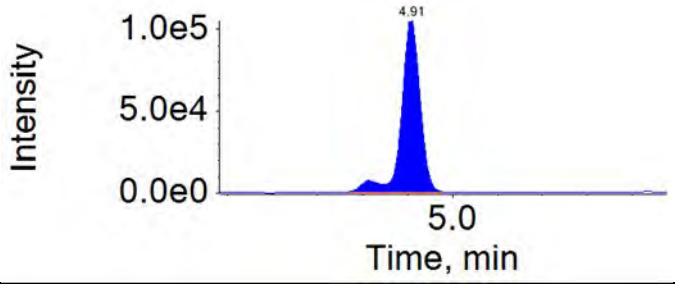


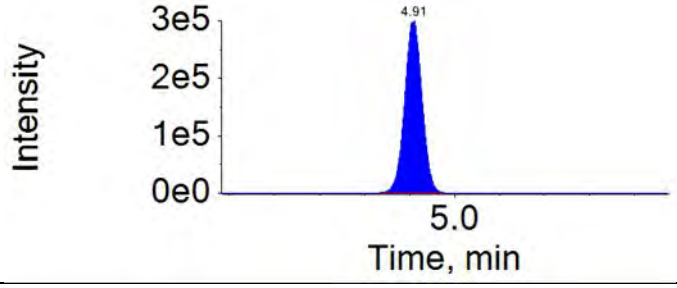
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

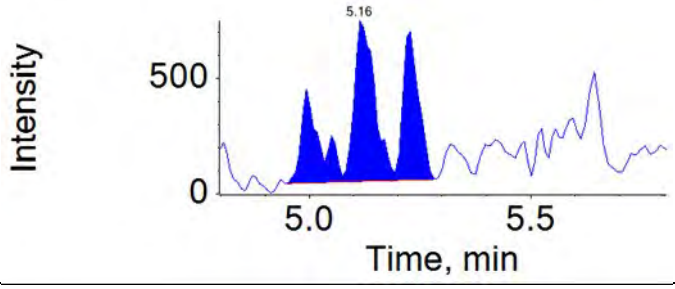
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

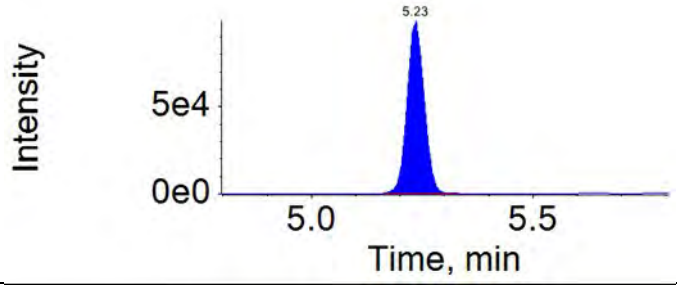
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



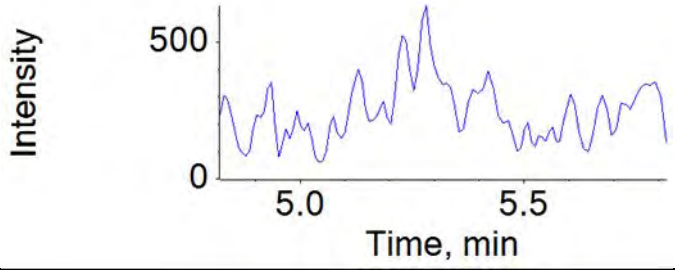


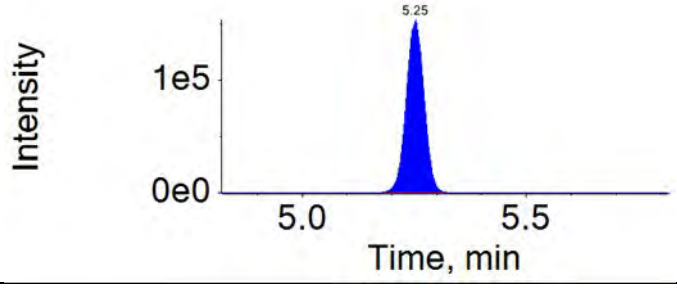
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



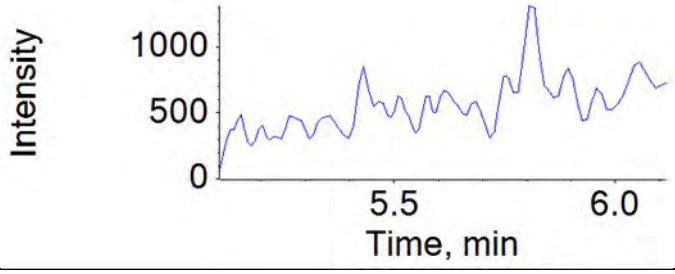


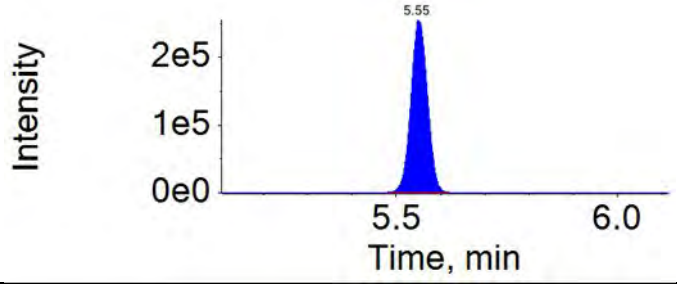
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



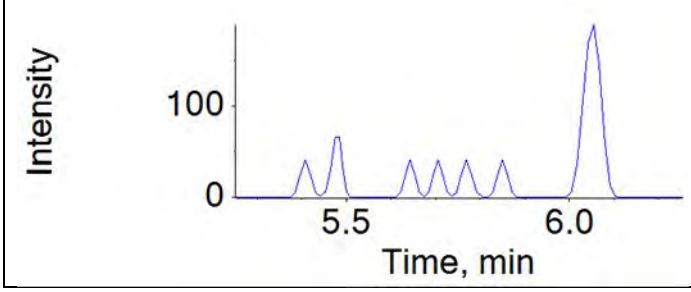


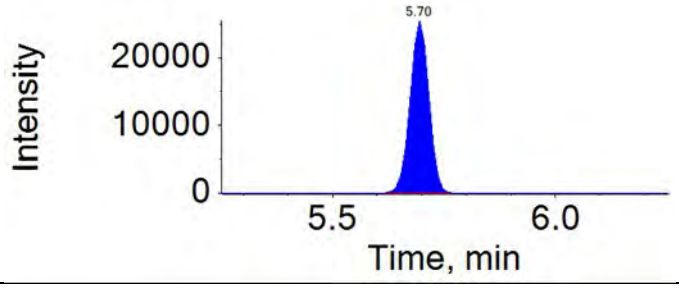
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

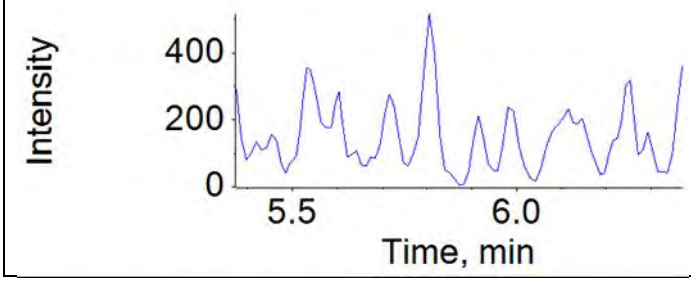
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

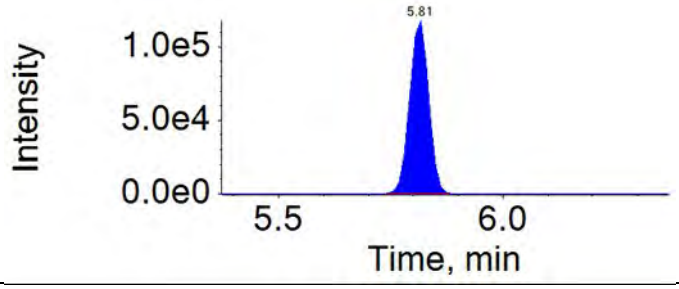
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



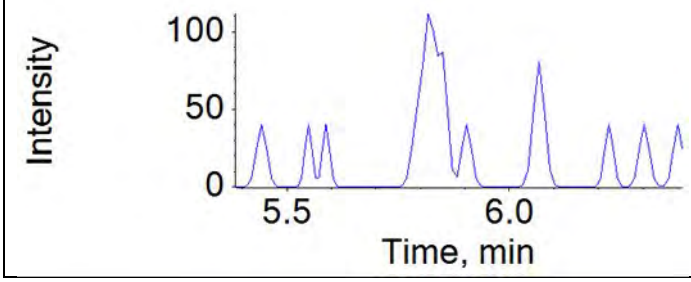


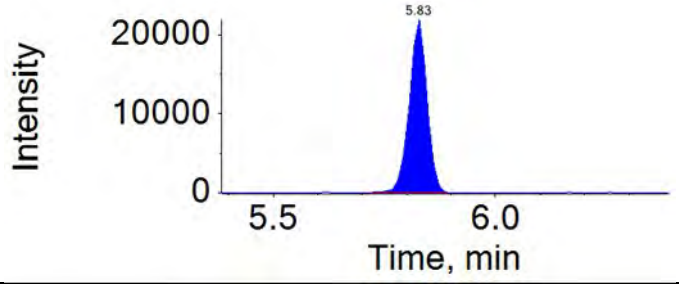
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



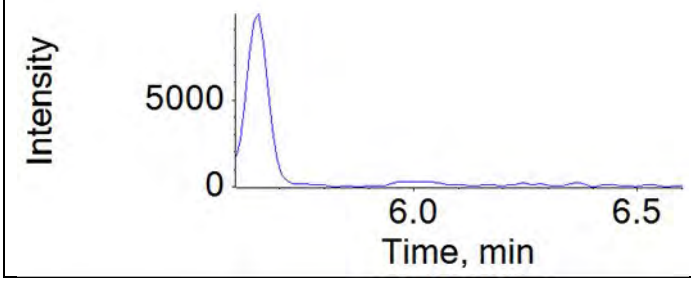


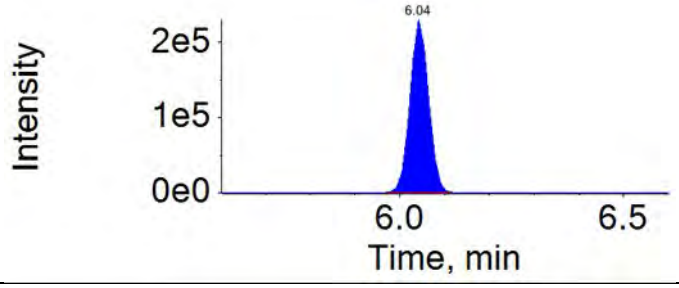
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



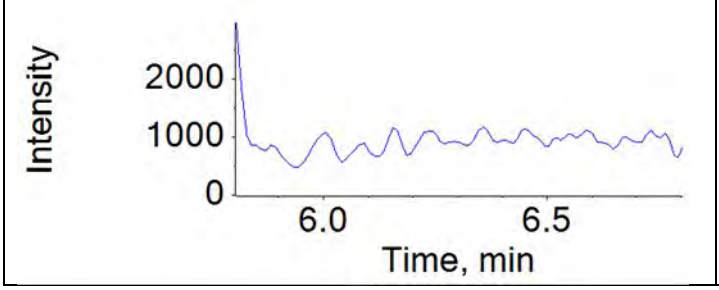


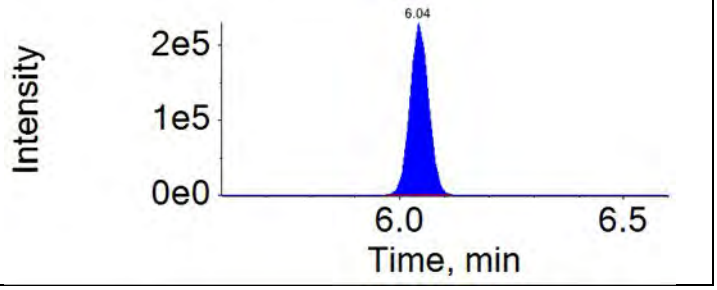
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

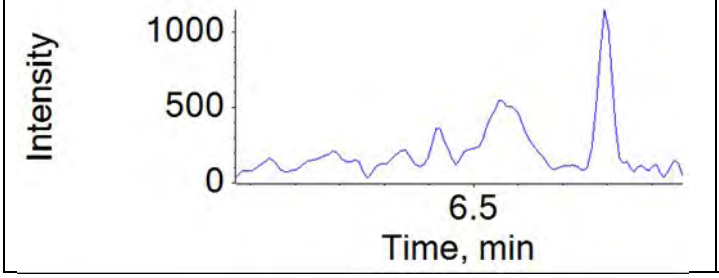
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

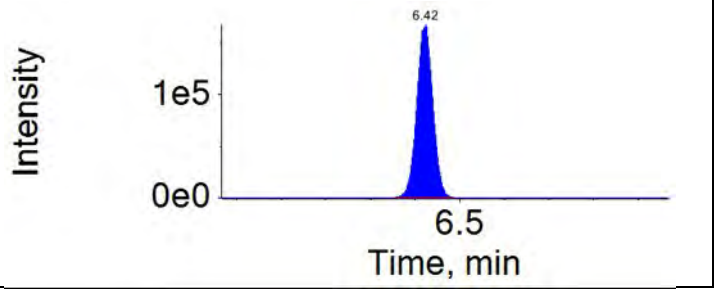
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



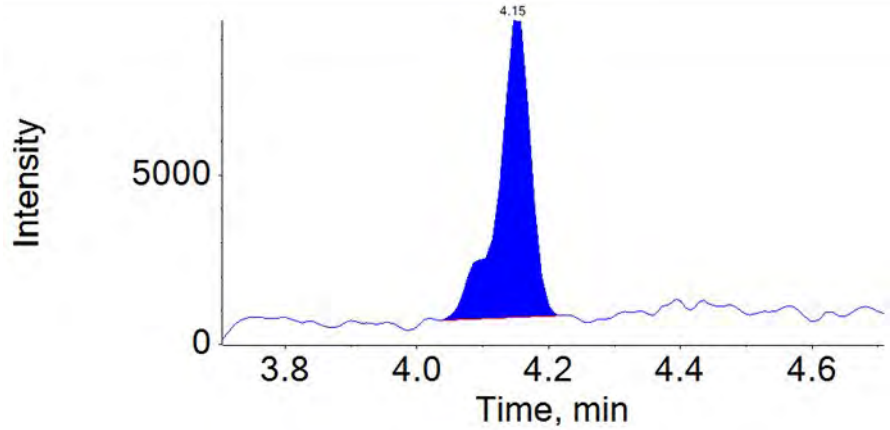


APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

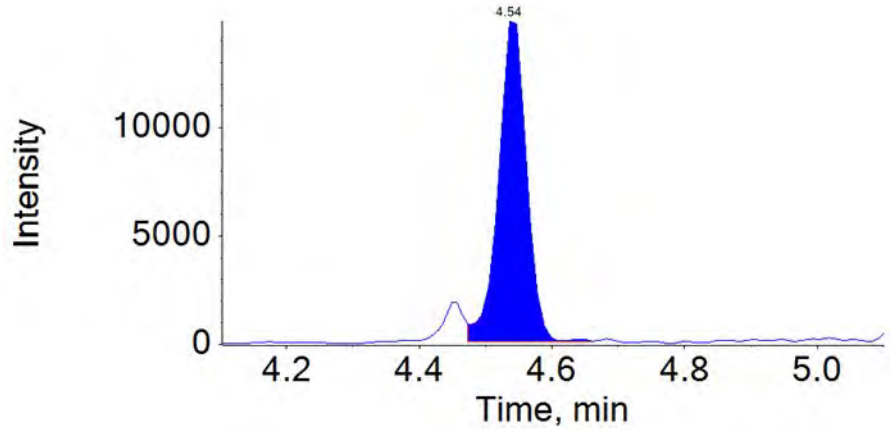
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxA
RT (min.):
4.15
Peak Area:
30371.5
Mass Range:
313.0 / 269.0
File Name:
18NOV07D-23.wiff
Sample Name:
9881944



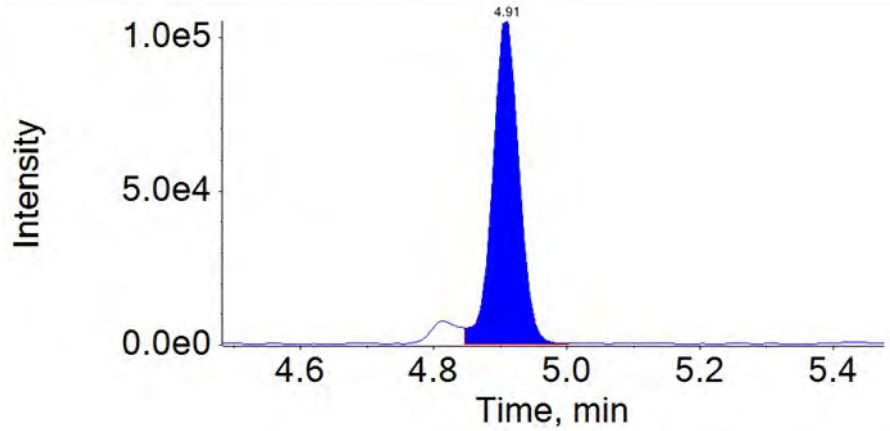
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
43626.8
Mass Range:
399.0 / 80.0
File Name:
18NOV07D-23.wiff
Sample Name:
9881944



Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
289199.6
Mass Range:
413.0 / 369.0
File Name:
18NOV07D-23.wiff
Sample Name:
9881944



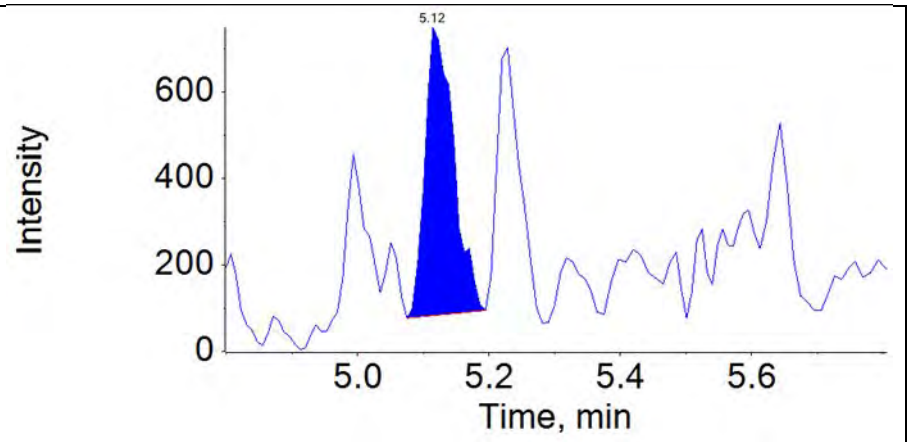
Integration Comment: incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

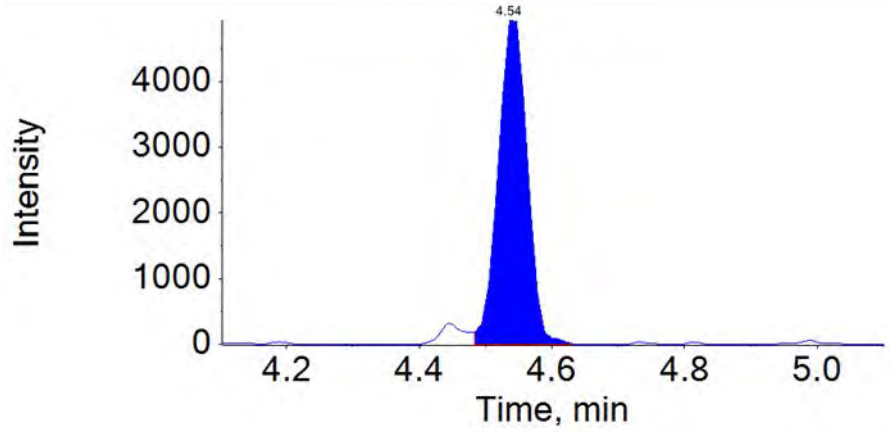
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.12
Peak Area:
2014.7
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-23.wiff
Sample Name:
9881944



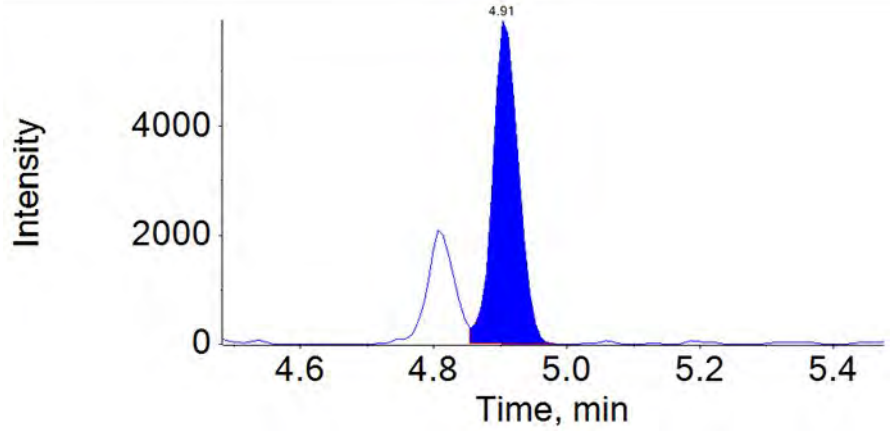
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
15143.4
Mass Range:
399.0 / 99.0
File Name:
18NOV07D-23.wiff
Sample Name:
9881944



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
15931.1
Mass Range:
413.0 / 169.0
File Name:
18NOV07D-23.wiff
Sample Name:
9881944



Integration Comment: incorrect integration

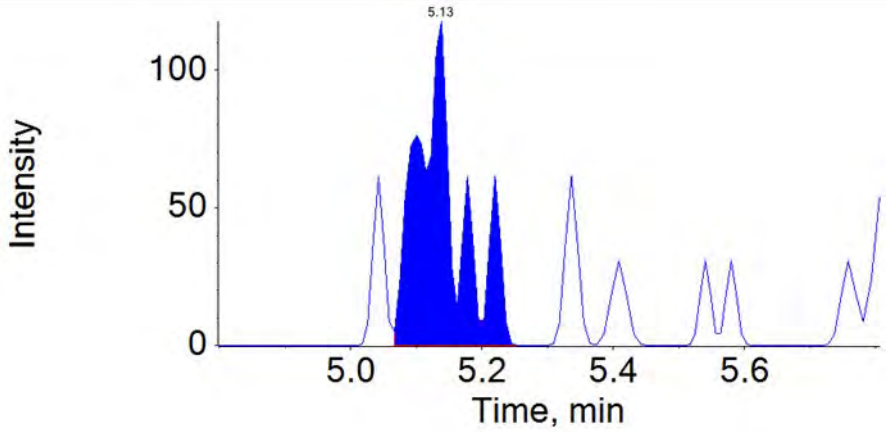
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS_2
RT (min.):
5.13
Peak Area:
517.5
Mass Range:
499.0 / 99.0
File Name:
18NOV07D-23.wiff
Sample Name:
9881944



Integration Comment: incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Ion Ratio Report

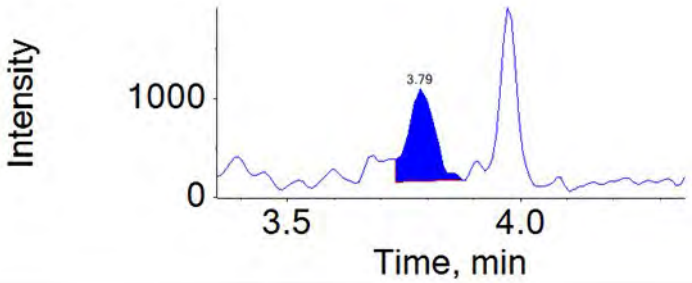
Sample Name: 9881944 **Instrument Name:** LM27631 **File Name:** 18NOV07D-23.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.79	1.00	3673.7	A	N/A	0.1887			
PFBS_2	3.80	1.00	693.2	A	N/A	0.1887	-47	50	
PFHxA	4.15	1.00	27439.8	M	N/A	0.0069			
PFHxA_2	4.16	1.00	188.4	A	N/A	0.0069	-39	50	
PFHxS	4.54	1.00	47322.5	M	N/A	0.3378			
PFHxS_2	4.54	1.00	15983.4	M	N/A	0.3378	-6	50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	4.91	1.00	311234.9	M	N/A	0.0707			
PFOA_2	4.91	1.00	22014.7	M	N/A	0.0707	11	50	
PFOS	5.16	0.98	5051.2	M	N/A	0.1176			
PFOS_2	5.13	0.98	593.9	M	N/A	0.1176	-67	50	OOS
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

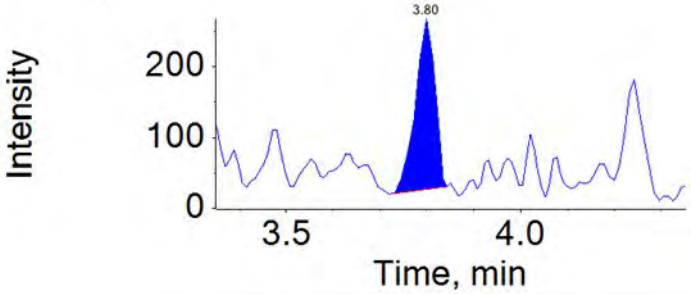
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

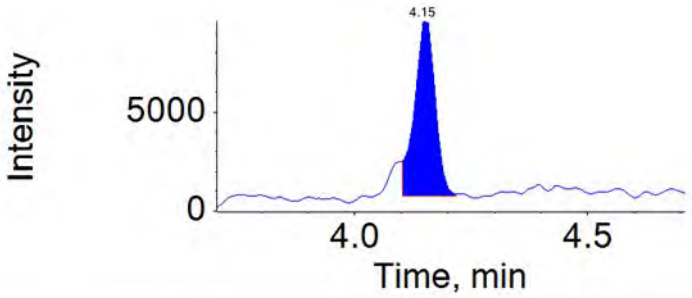
Component: PFBS
Primary Mass: 299.0 / 80.0



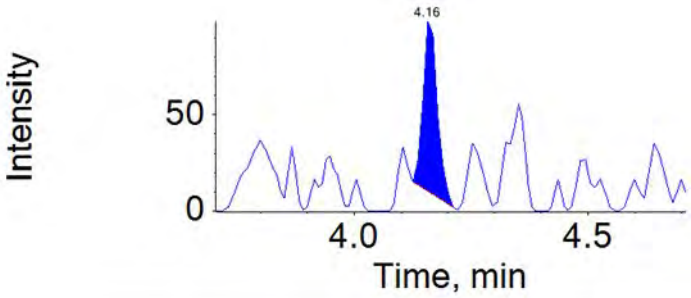
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



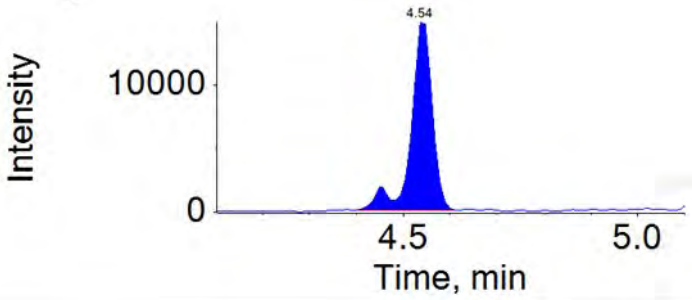
Component: PFHxA
Primary Mass: 313.0 / 269.0



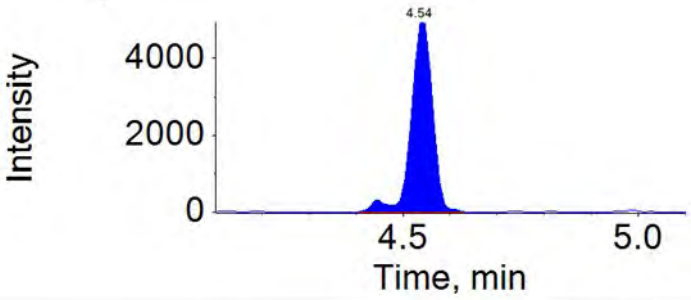
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



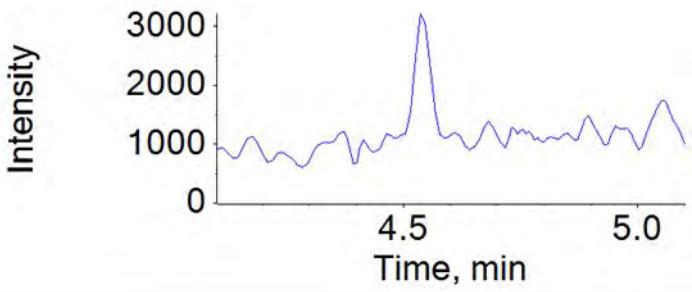
Component: PFHxS
Primary Mass: 399.0 / 80.0



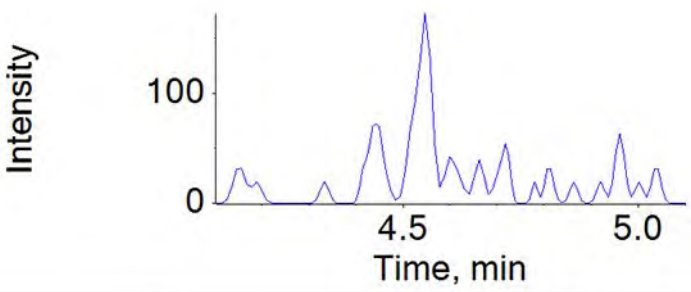
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



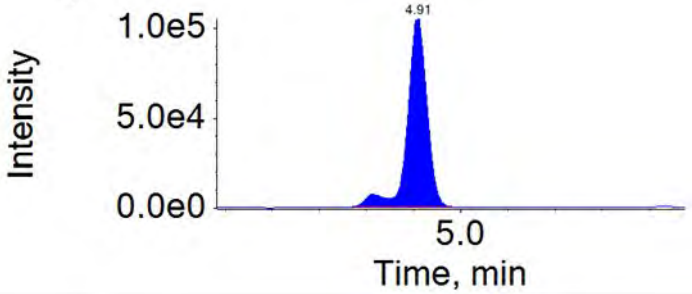
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



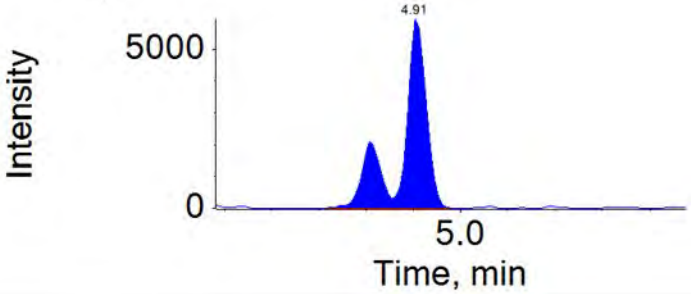
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

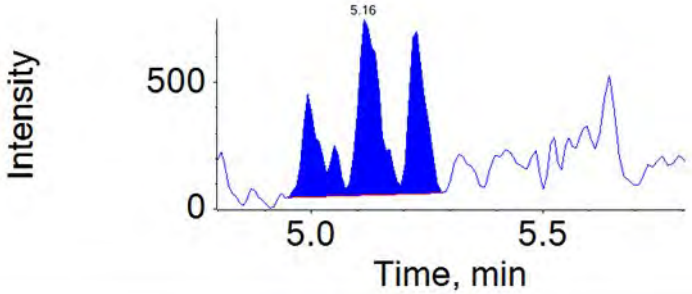
Component: PFOA
Primary Mass: 413.0 / 369.0



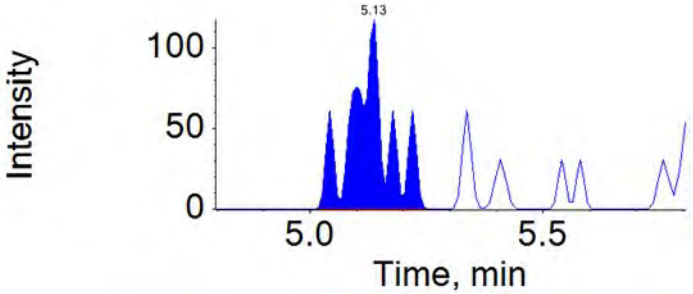
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



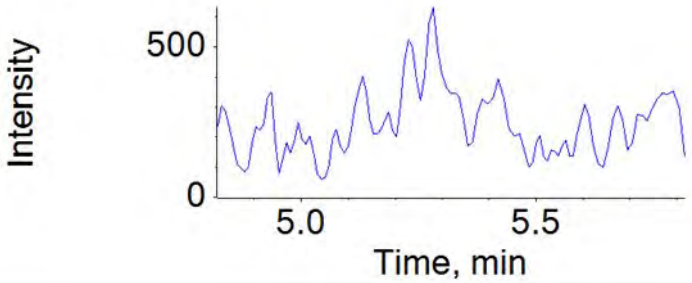
Component: PFOS
Primary Mass: 499.0 / 80.0



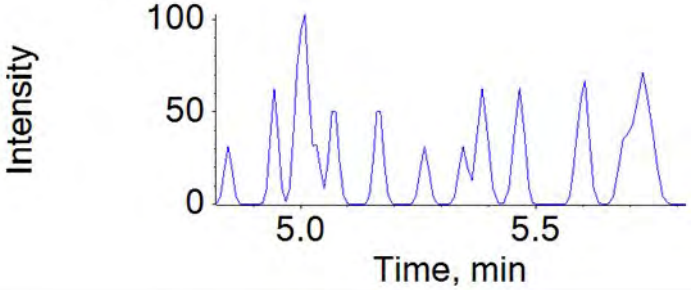
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



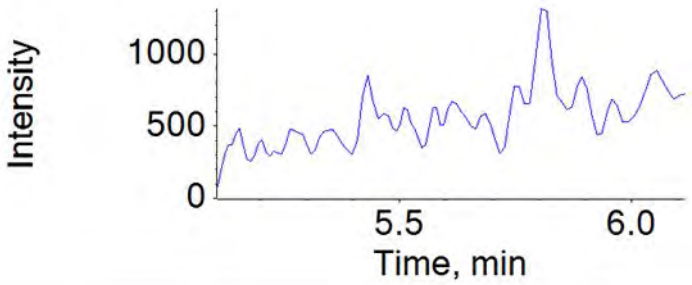
Component: PFNA
Primary Mass: 463.0 / 419.0



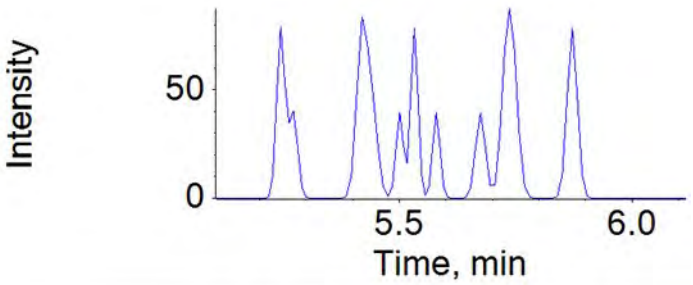
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



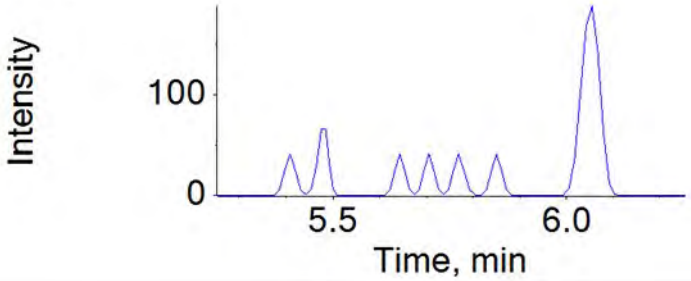
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



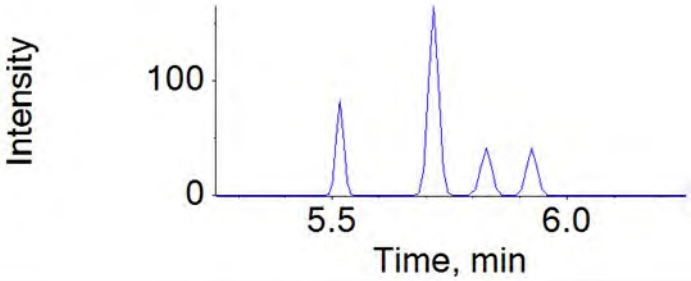
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

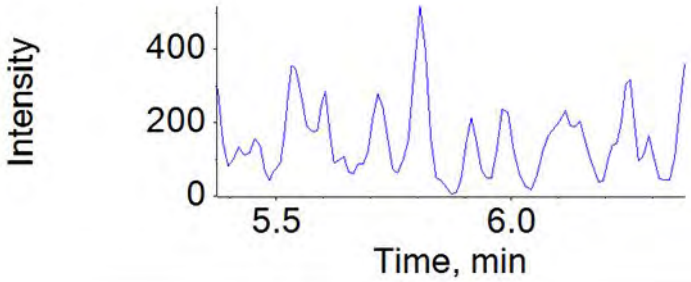
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



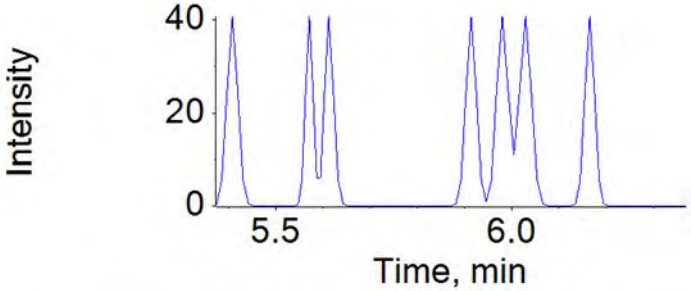
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



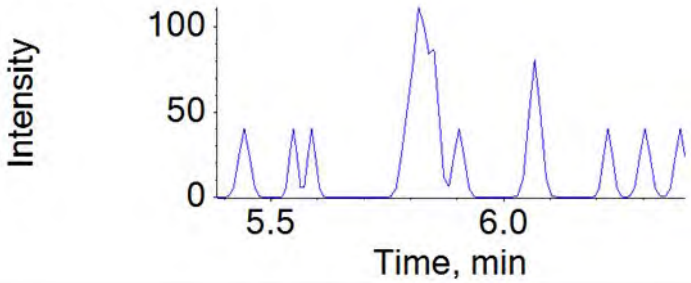
Component: PFUnDA
Primary Mass: 563.0 / 519.0



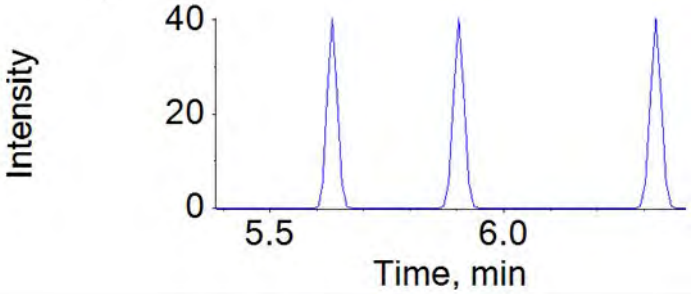
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



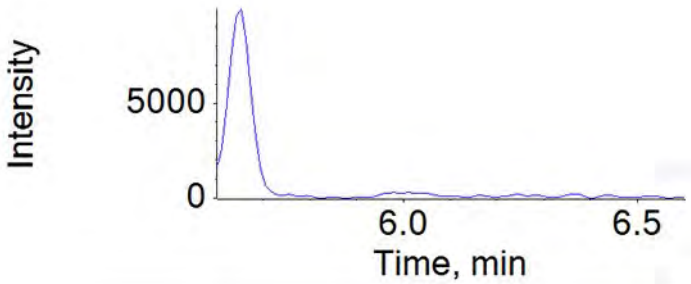
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



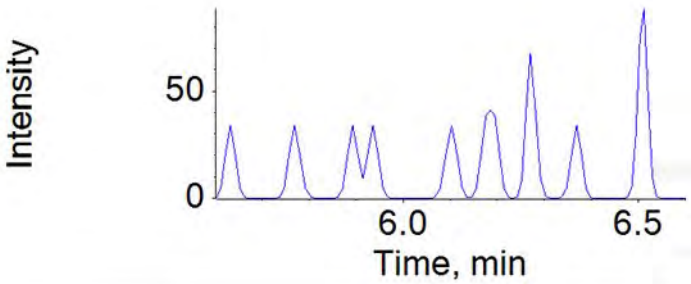
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



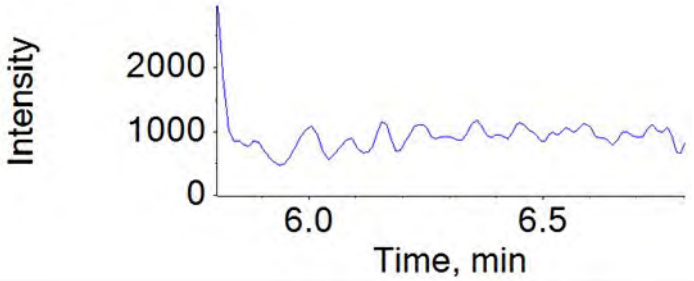
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



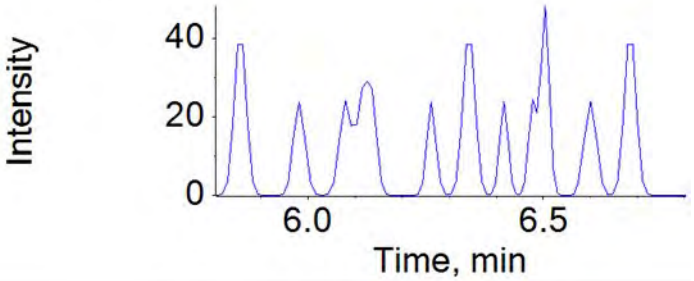
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

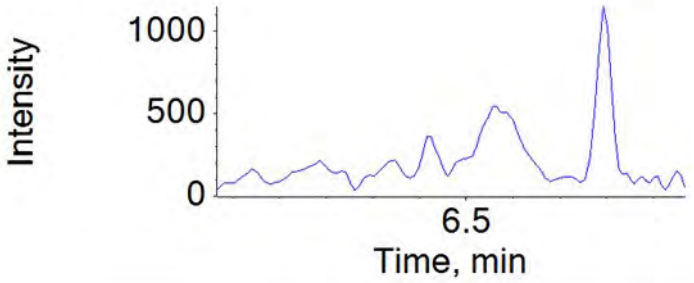
Component: PFTrDA
Primary Mass: 663.0 / 619.0



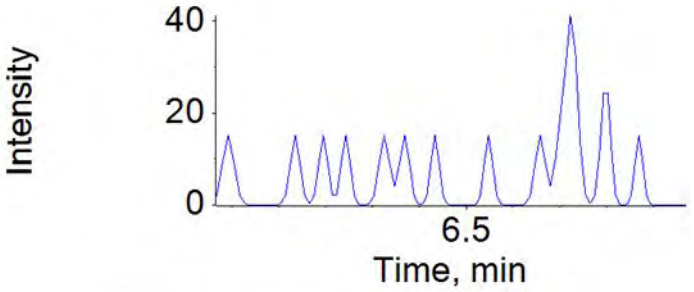
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881945			**Data File:**		18NOV08D-07.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-CAOC1517-S-02-05 Grab Soil			**Acquis Date:**		2018-11-08T12:42:43
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	23			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		JPT12262
Sample Wt.:	1.08000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	846755.2	728839.7	16	50	
13C2-PFOA	5.0	558206.5	491983.1	13	50	
13C4-PFOS	4.8	305683.2	255568.1	20	50	
13C2-PFDA	5.0	341433.0	315407.5	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	349092.7	13C3-PFBA	846755.2	0.412	8.611	5.603	65	50-150	
E13C5-PFHxA	574519.0	13C2-PFOA	558206.5	1.029	9.259	7.011	76	50-150	
E13C3-PFHxS	274702.5	13C2-PFOA	558206.5	0.492	8.759	6.542	75	50-150	
E13C4-PFHpA	461759.5	13C2-PFOA	558206.5	0.827	9.259	6.969	75	50-150	
E13C8-PFOA	765591.4	13C2-PFOA	558206.5	1.372	9.259	7.083	76	50-150	
E13C8-PFOS	240935.2	13C4-PFOS	305683.2	0.788	8.852	6.454	73	50-150	
E13C9-PFNA	419969.4	13C4-PFOS	305683.2	1.374	9.259	6.950	75	50-150	
E13C6-PFDA	520963.1	13C2-PFDA	341433.0	1.526	9.259	7.106	77	50-150	
Ed3-NMeFOSAA	69525.8	13C2-PFDA	341433.0	0.204	9.259	7.012	76	50-150	
E13C7-PFUnDA	244678.0	13C2-PFDA	341433.0	0.717	9.259	7.656	83	50-150	
Ed5-NEtFOSAA	54168.5	13C2-PFDA	341433.0	0.159	9.259	6.799	73	50-150	
E13C2-PFDoDA	422555.5	13C2-PFDA	341433.0	1.238	9.259	6.178	67	50-150	
E13C2-PFTeDA	328999.9	13C2-PFDA	341433.0	0.964	9.259	6.424	69	50-150	

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

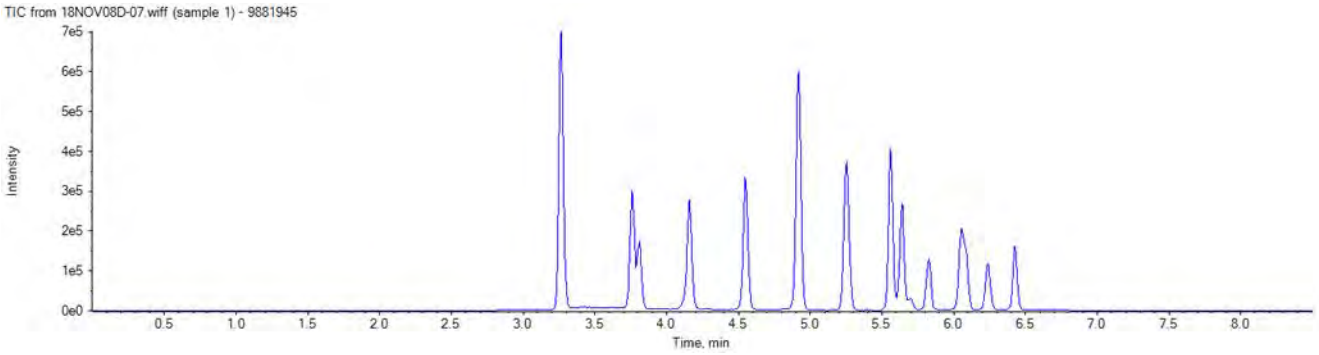
Analyte Quantitation Peak Table

Sample Name: 9881945 **Instrument Name:** LM27631 **File Name:** 18NOV08D-07.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.08000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	349092.7	N/A	
PFHxA	4.16	1.000	36393.1		A	13C5-PFHxA	4.16	574519.0	0.063	0.503
PFHxS	4.55	1.000	18518.7		M	13C3-PFHxS	4.55	274702.5	0.067	0.633
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	461759.5	N/A	
PFOA	4.92	1.000	86631.8		M	13C8-PFOA	4.92	765591.4	0.113	1.180
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	240935.2	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	419969.4	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	520963.1	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	69525.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	244678.0	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	54168.5	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	422555.5	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	422555.5	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	328999.9	N/A	

Total Ion Chromatogram

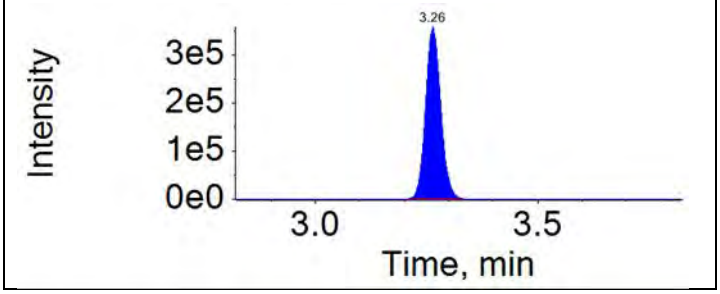


APPROVED
By JPT at 5:11 pm, 11/8/18

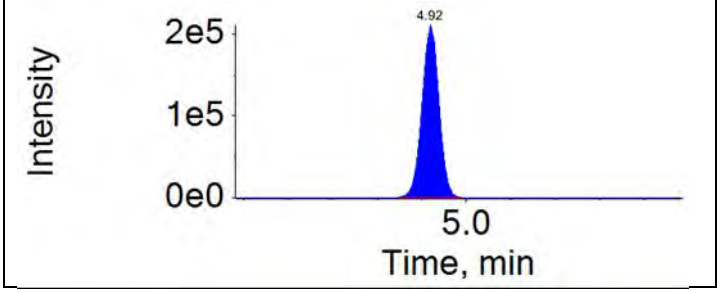
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

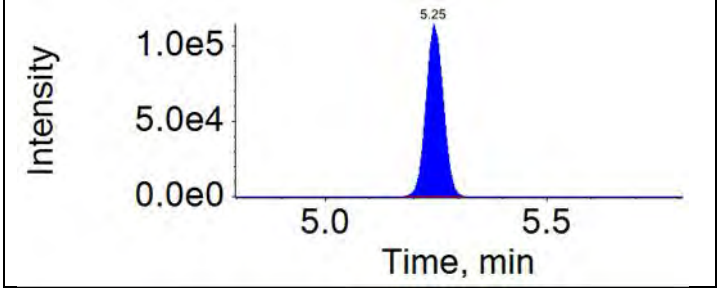
Injection Standard: 13C3-PFBA
216.0 / 172.0



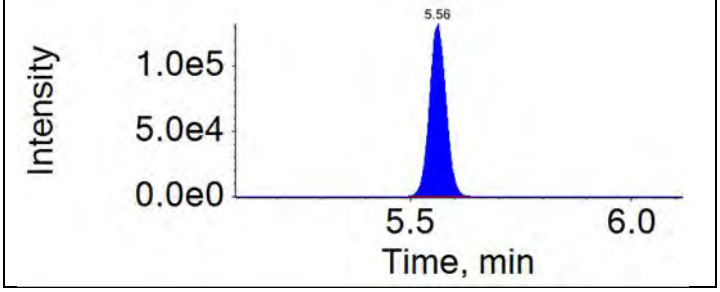
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



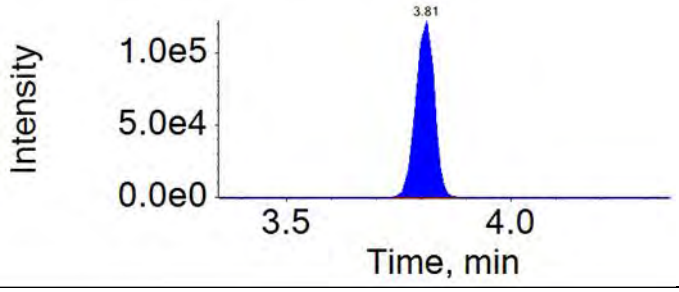
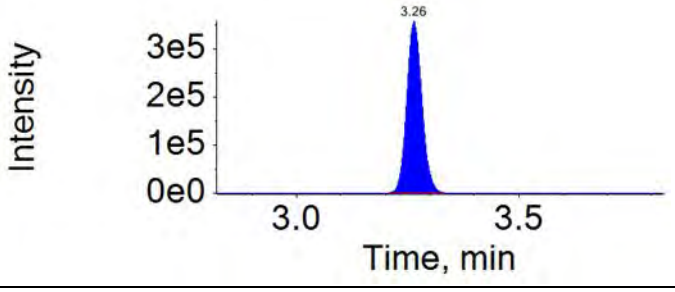
Injection Standard: 13C2-PFDA
515.0 / 470.0

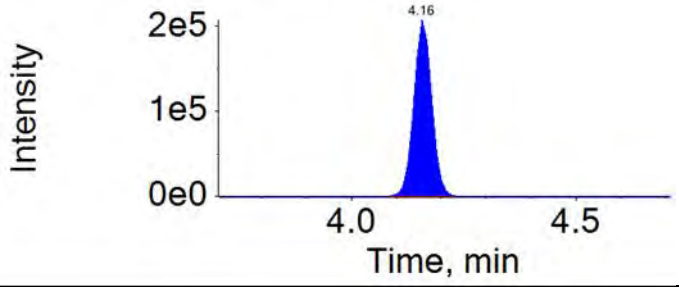
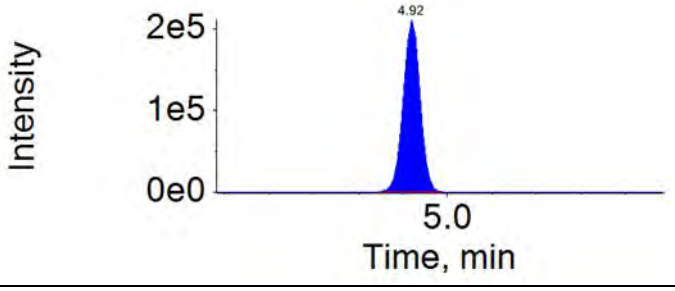


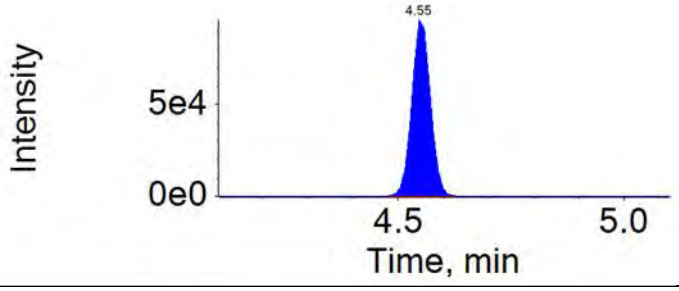
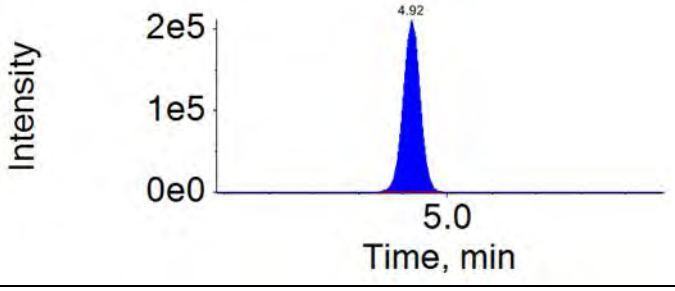
APPROVED
By JPT at 5:11 pm, 11/8/18

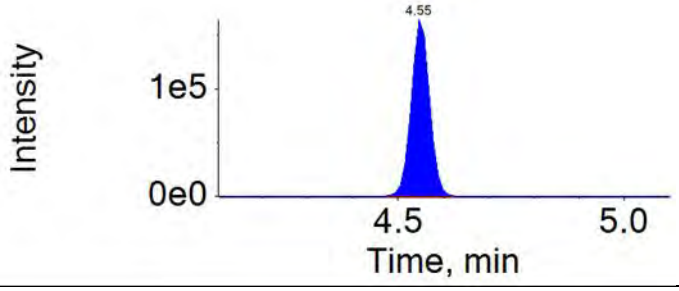
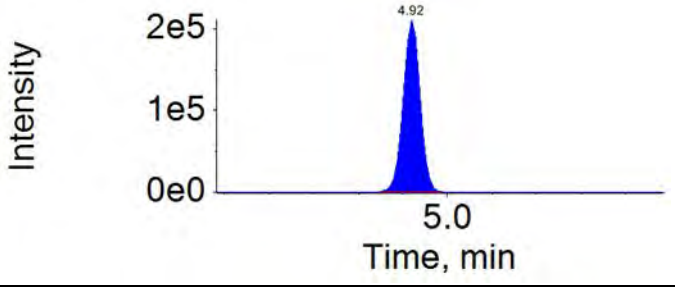
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

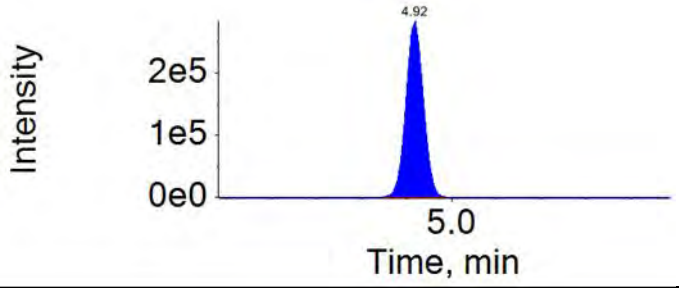
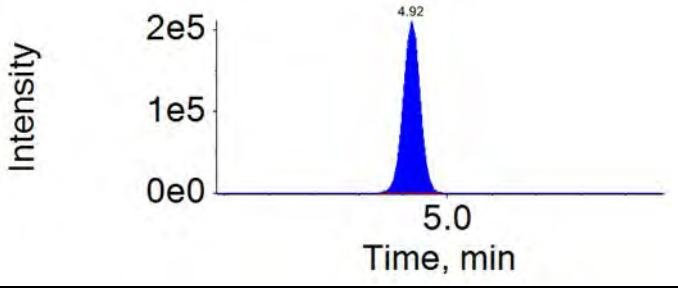
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

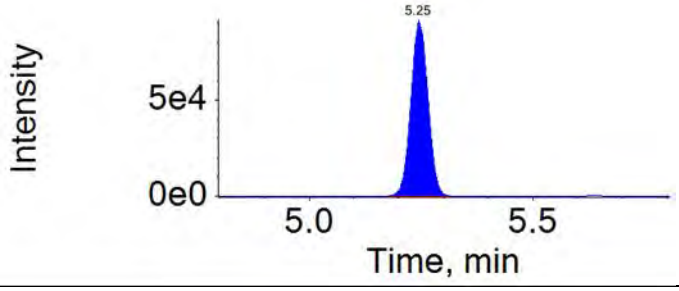
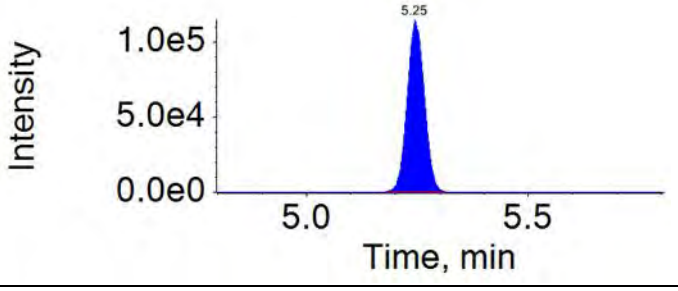
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

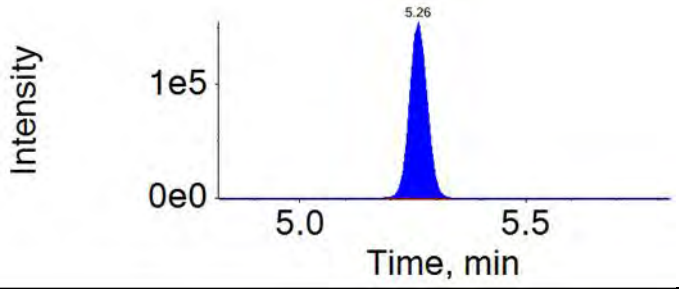
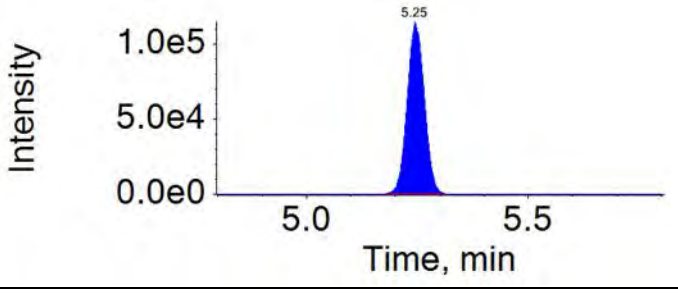
APPROVED
By JPT at 5:11 pm, 11/8/18

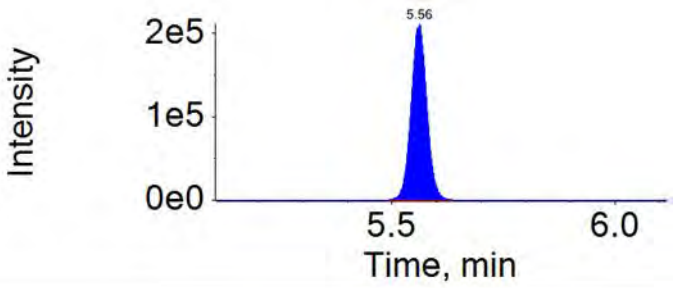
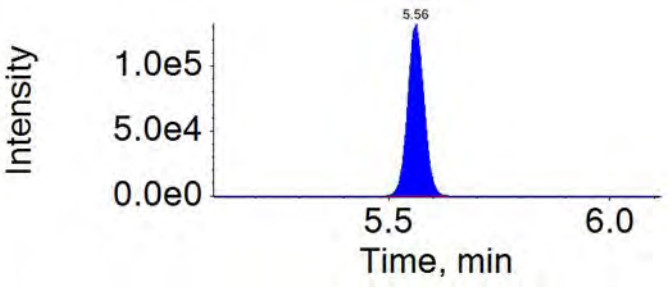
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

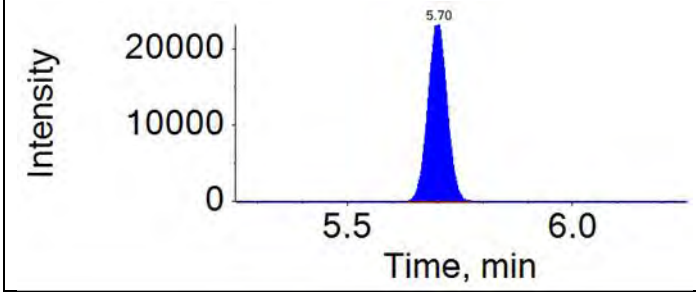
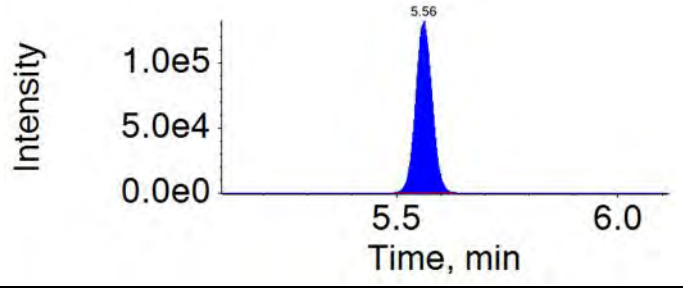
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

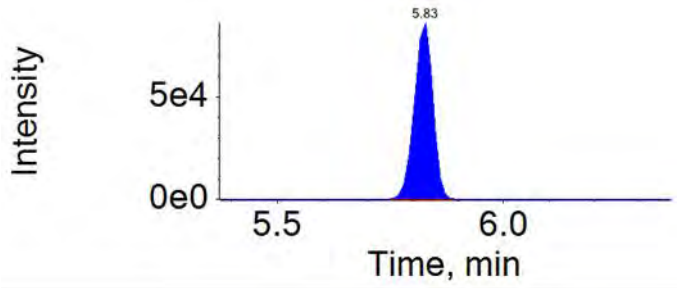
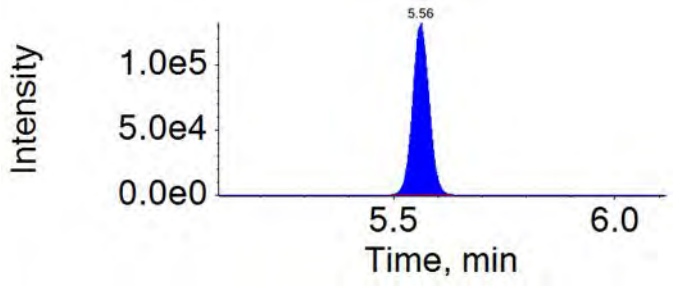
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

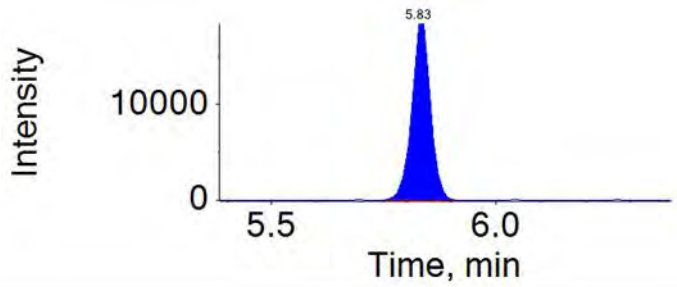
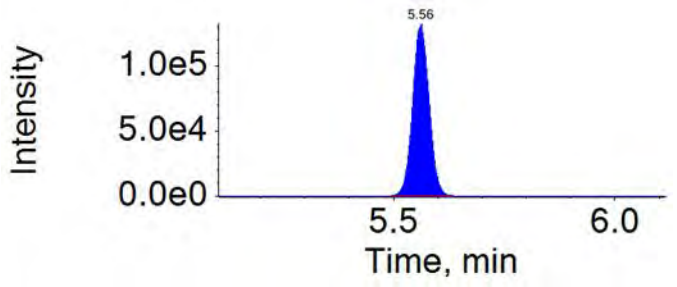
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

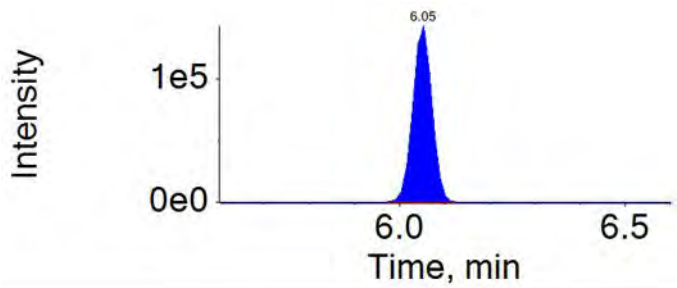
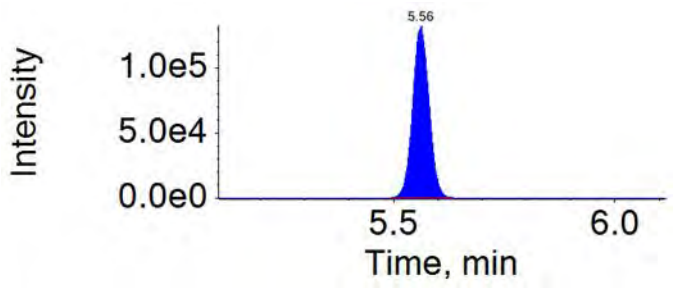
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

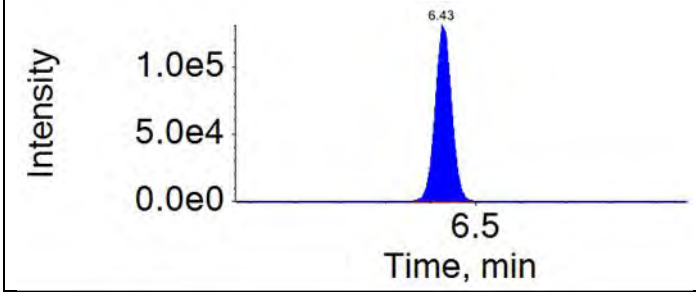
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

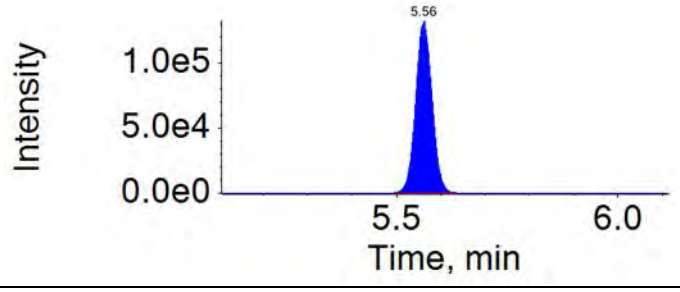
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



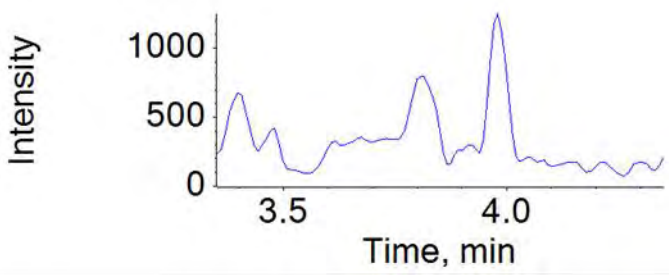


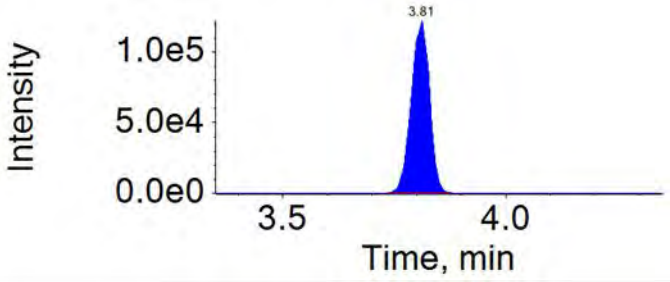
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

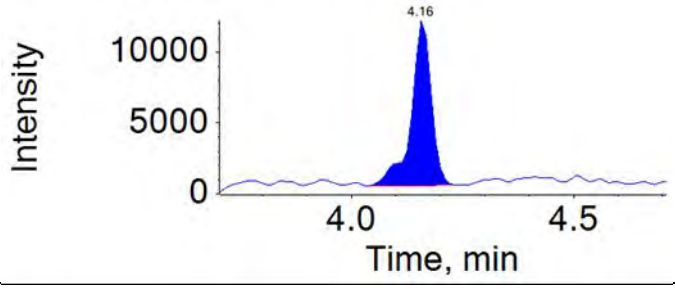
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

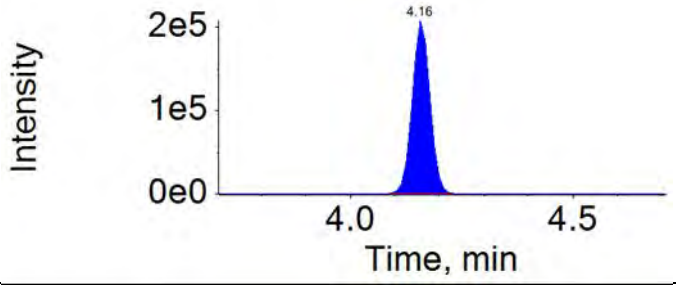
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



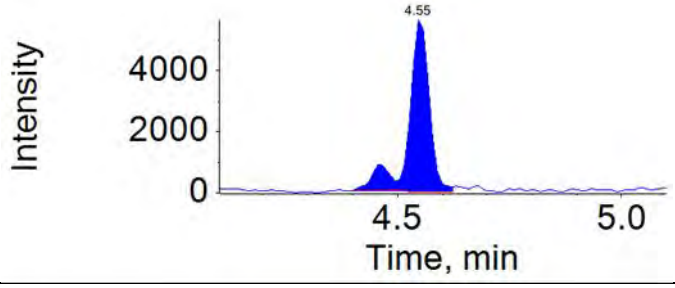


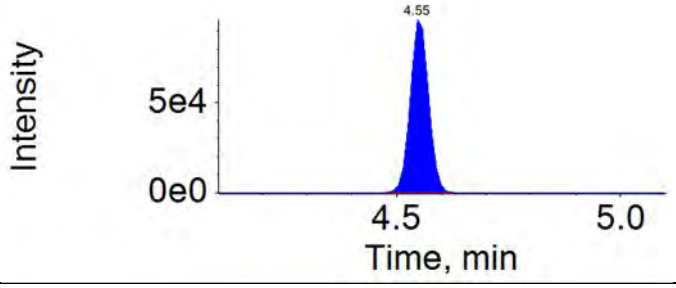
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



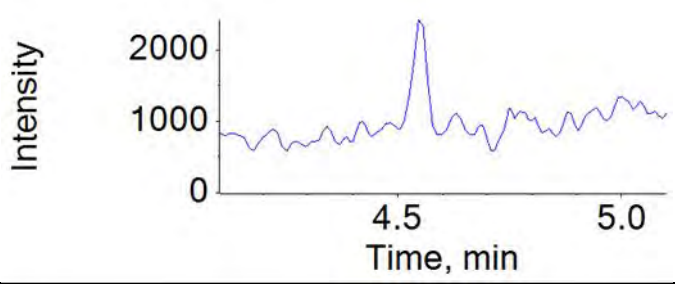


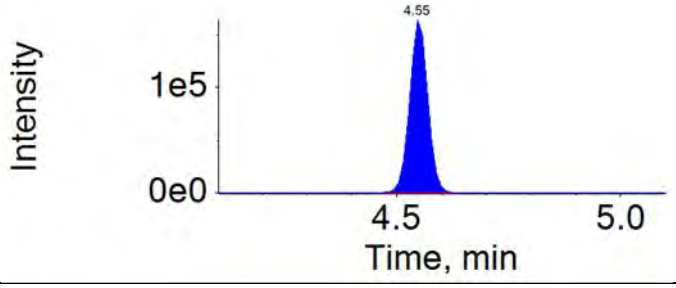
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

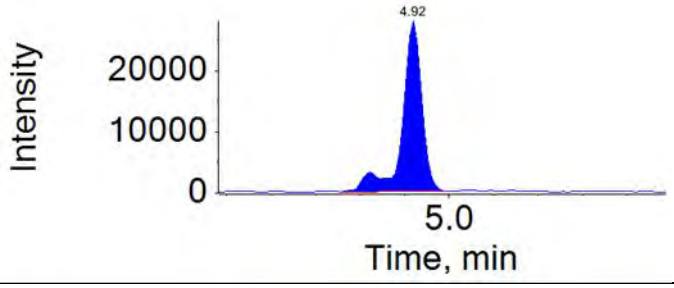
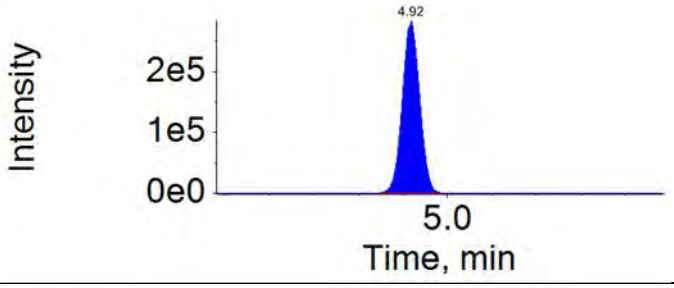


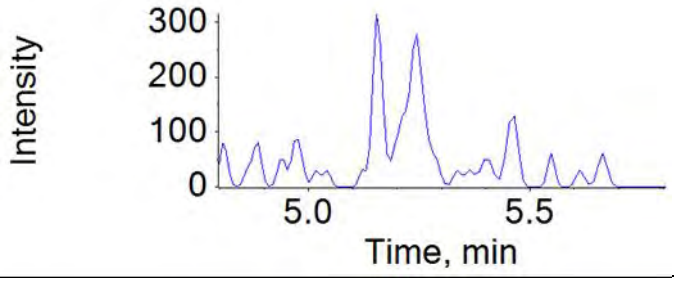
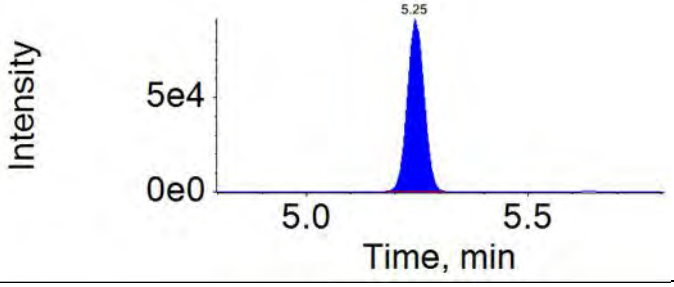


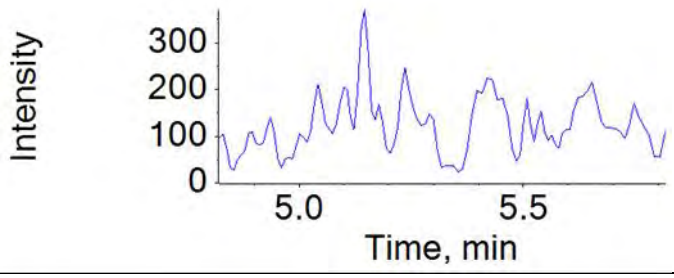
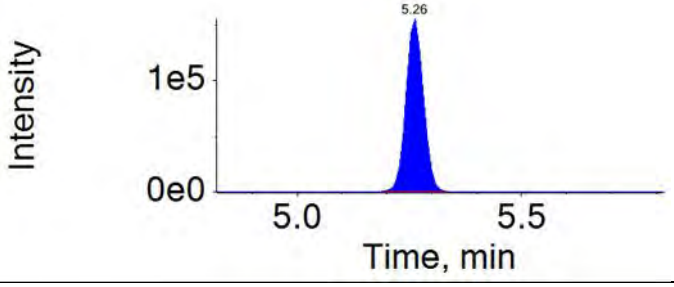
APPROVED
By JPT at 5:11 pm, 11/8/18

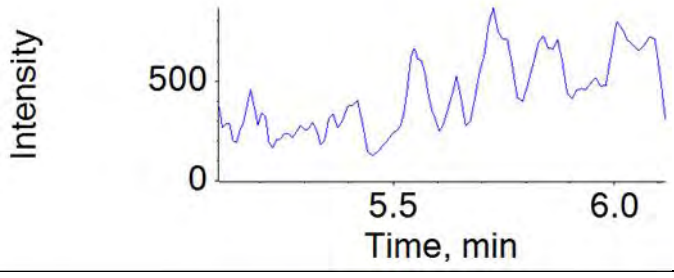
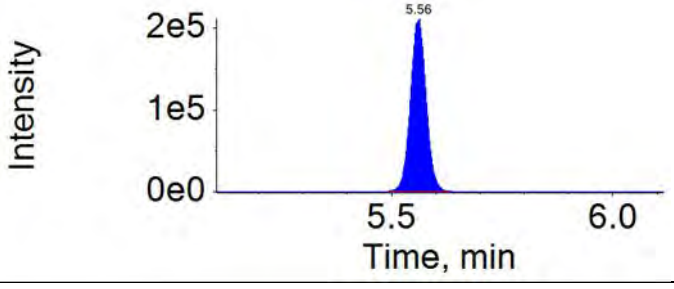
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

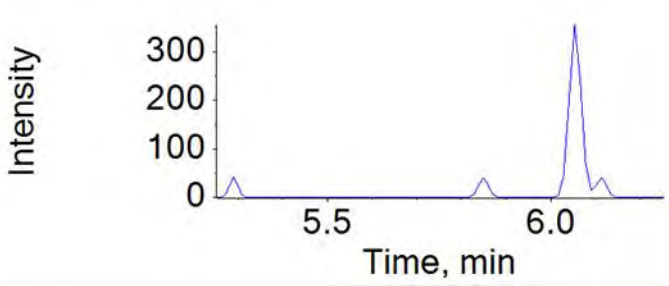
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

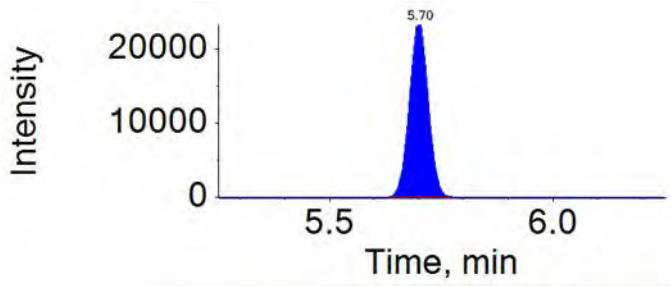
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

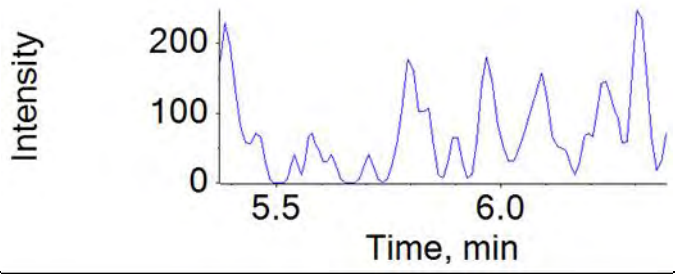
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

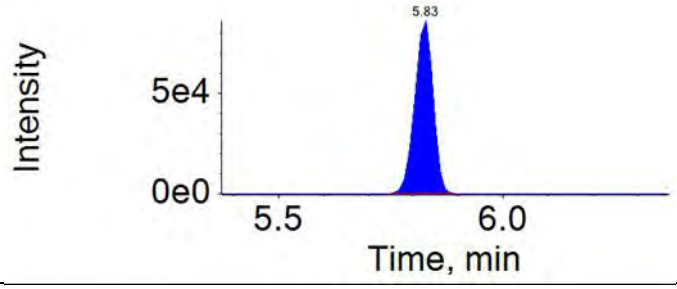
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



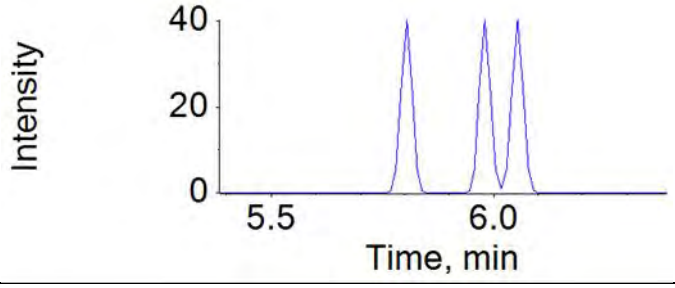


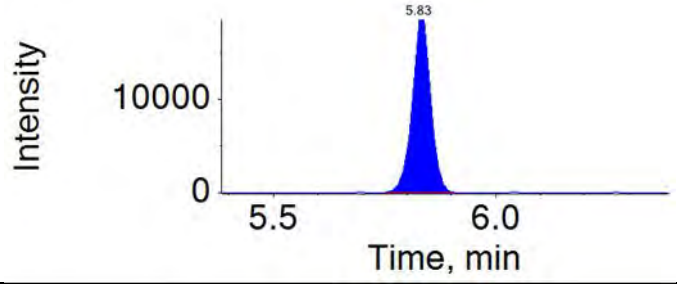
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



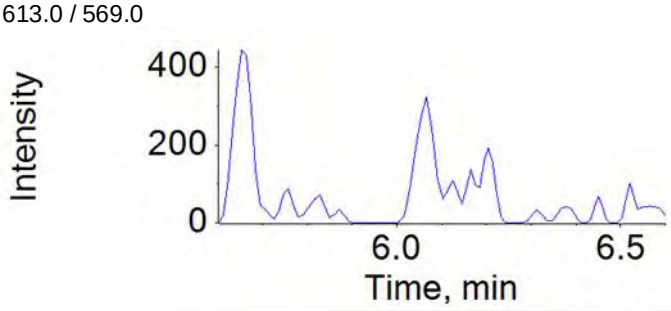


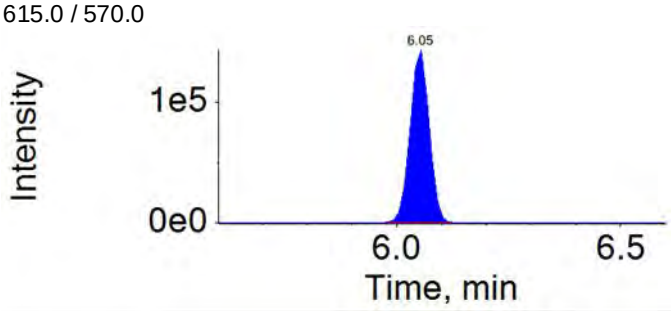
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



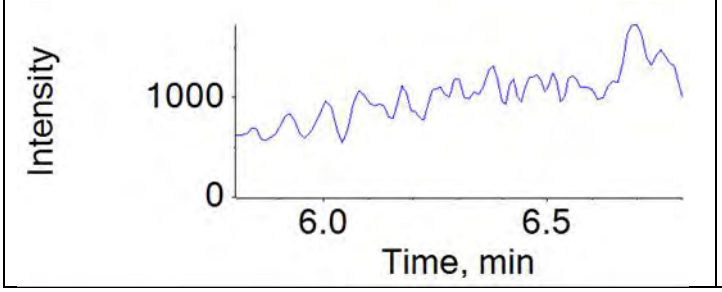


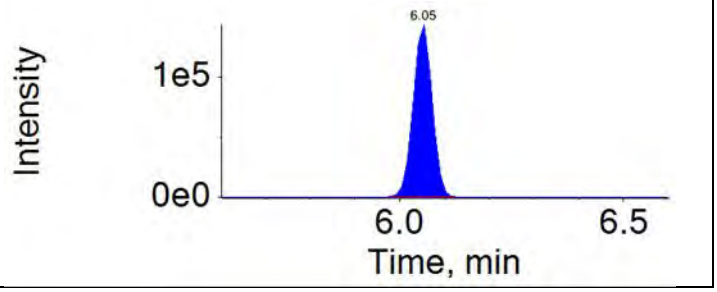
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

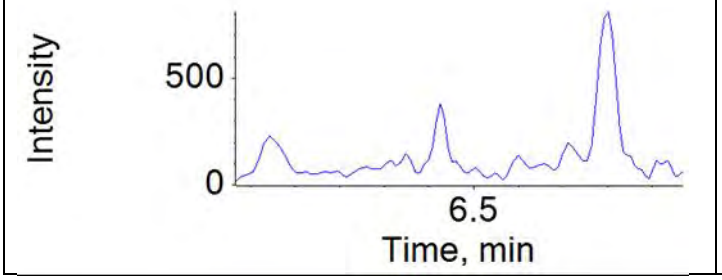
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

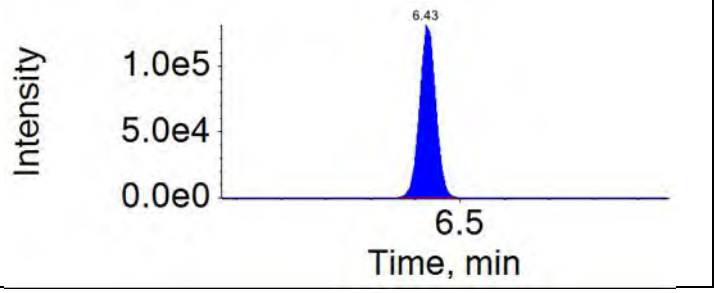
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





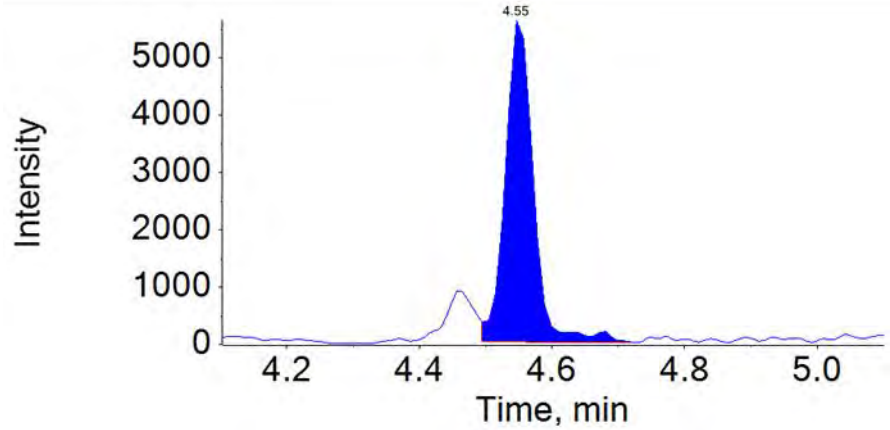
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

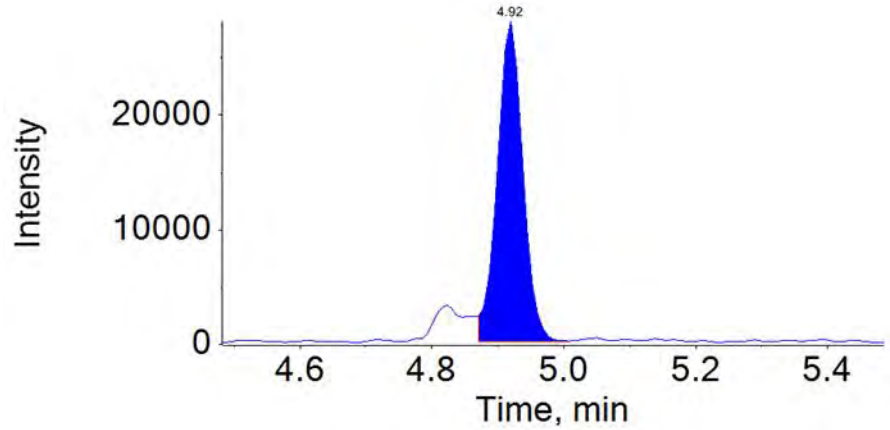
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
16654.3
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-07.wiff
Sample Name:
9881945



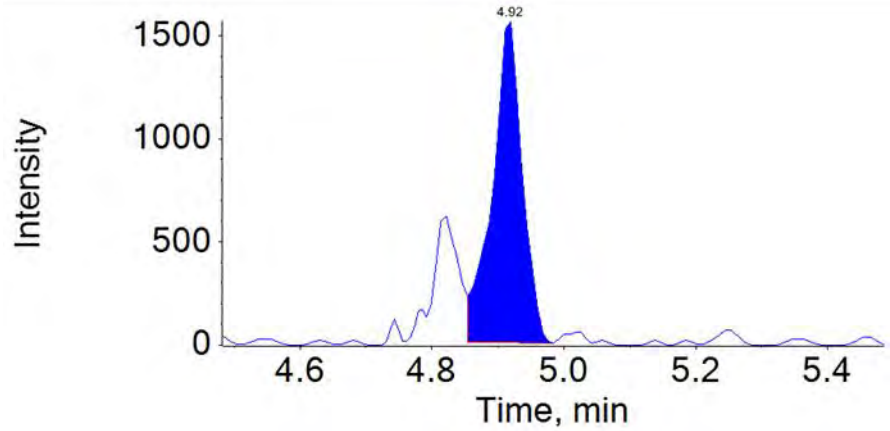
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.92
Peak Area:
74964.1
Mass Range:
413.0 / 369.0
File Name:
18NOV08D-07.wiff
Sample Name:
9881945



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
4932.6
Mass Range:
413.0 / 169.0
File Name:
18NOV08D-07.wiff
Sample Name:
9881945



Integration Comment: incorrect integration

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Ion Ratio Report

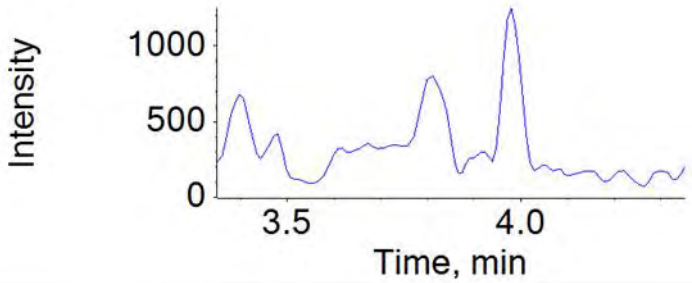
Sample Name: 9881945 **Instrument Name:** LM27631 **File Name:** 18NOV08D-07.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.16	1.00	36393.1	A	N/A	1.0000			
PFHxA_2	4.16	1.00	346.1	A	N/A	0.0095	-17	50	
PFHxS	4.55	1.00	18518.7	M	N/A	1.0000			
PFHxS_2	4.55	1.00	5916.0	A	N/A	0.3195	-10	50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	4.92	1.00	86631.8	M	N/A	1.0000			
PFOA_2	4.92	1.00	6764.0	M	N/A	0.0781	23	50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

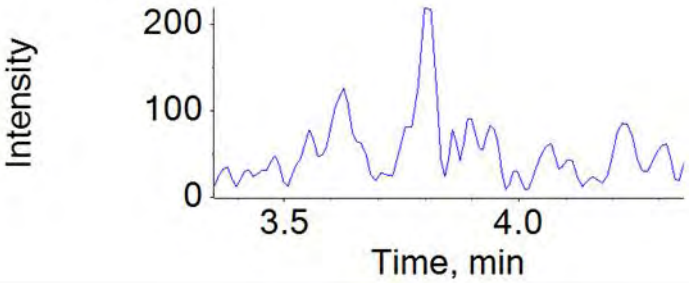
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

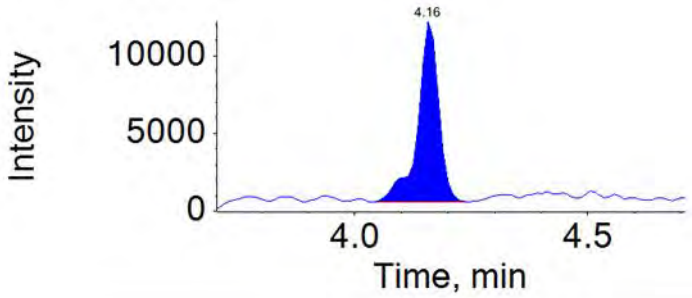
Component: PFBS
Primary Mass: 299.0 / 80.0



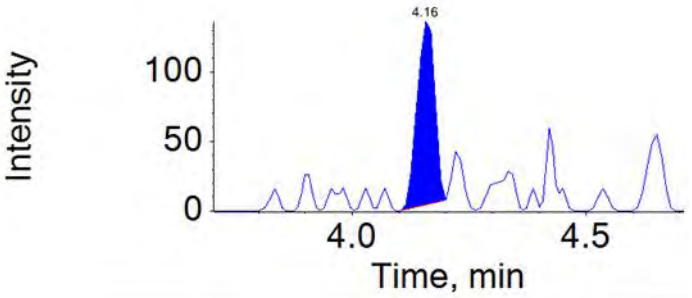
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



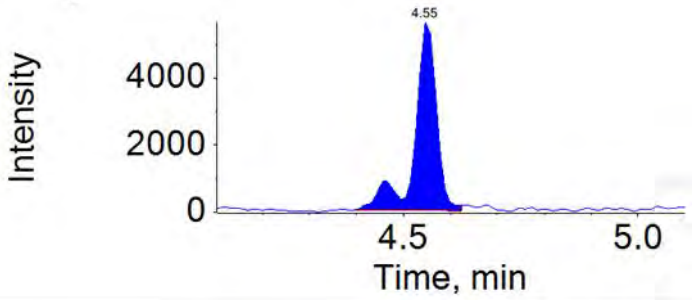
Component: PFHxA
Primary Mass: 313.0 / 269.0



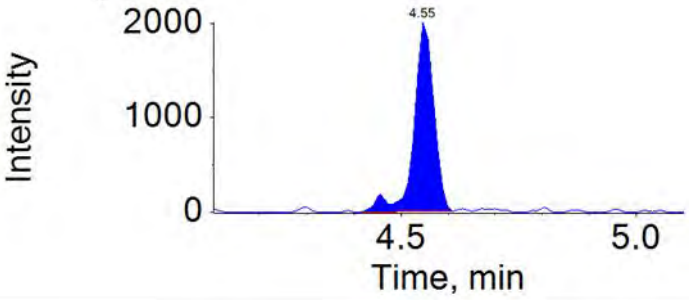
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



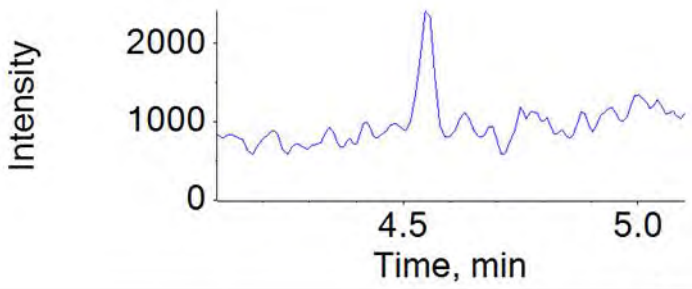
Component: PFHxS
Primary Mass: 399.0 / 80.0



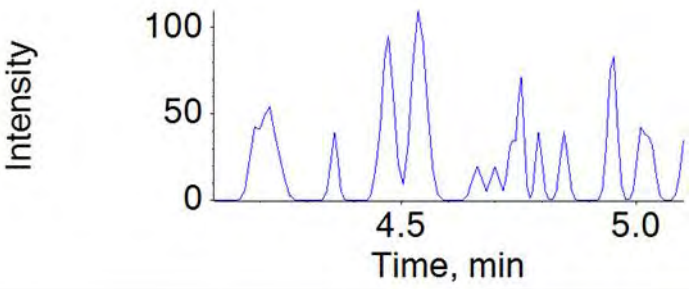
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



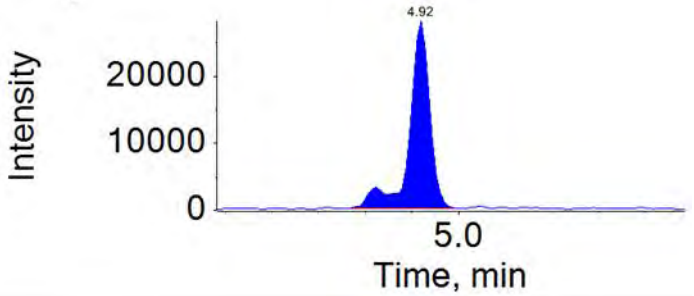
Component: PFHpA
Primary Mass: 363.0 / 319.0



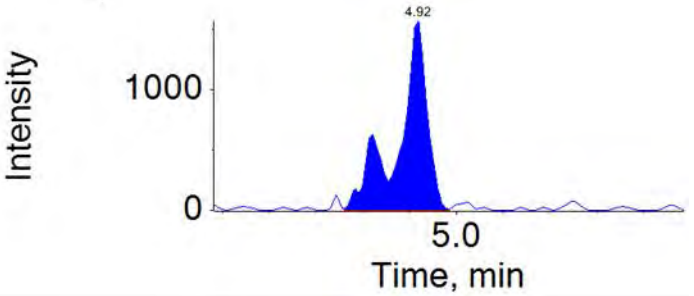
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



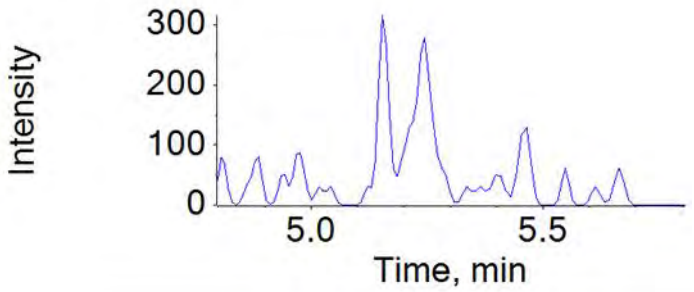
Component: PFOA
Primary Mass: 413.0 / 369.0



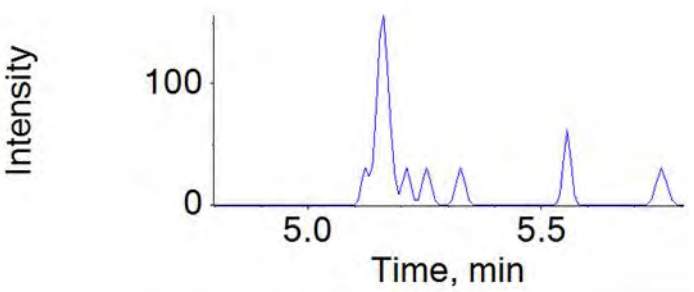
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



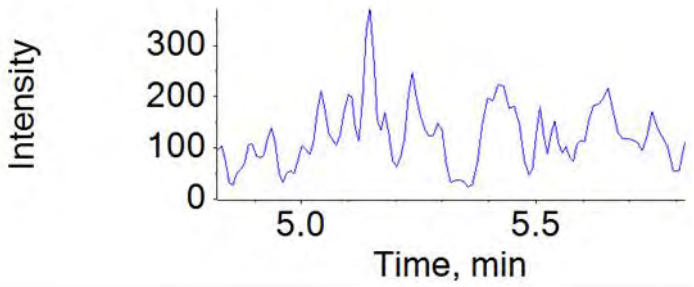
Component: PFOS
Primary Mass: 499.0 / 80.0



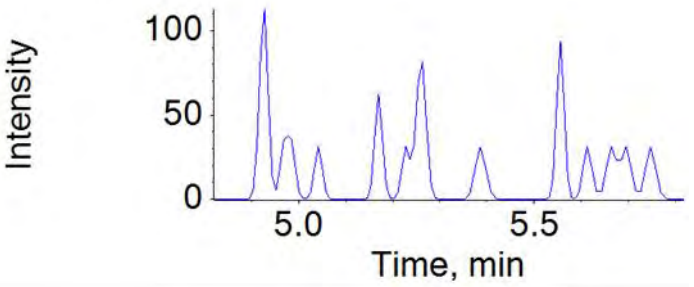
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



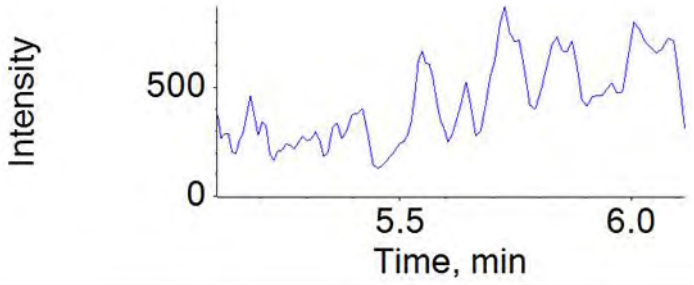
Component: PFNA
Primary Mass: 463.0 / 419.0



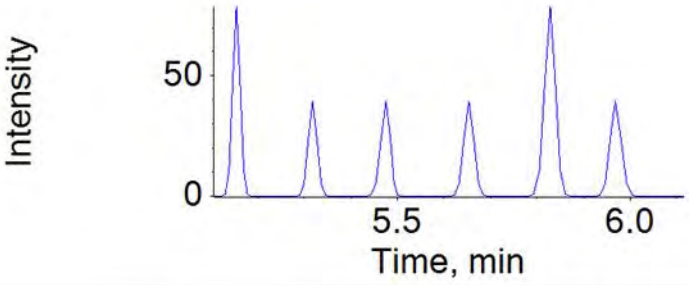
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



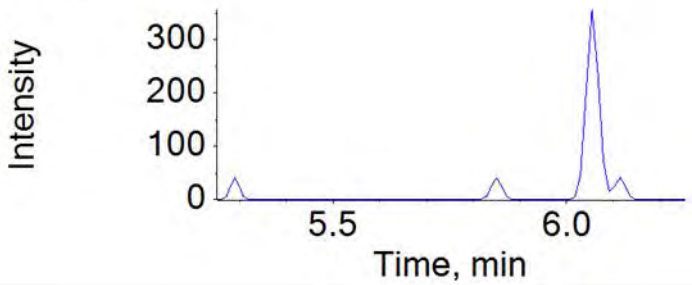
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



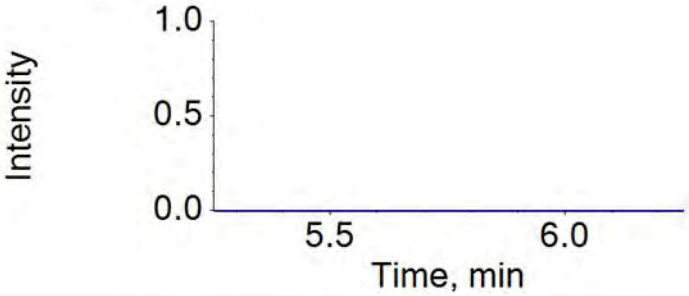
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

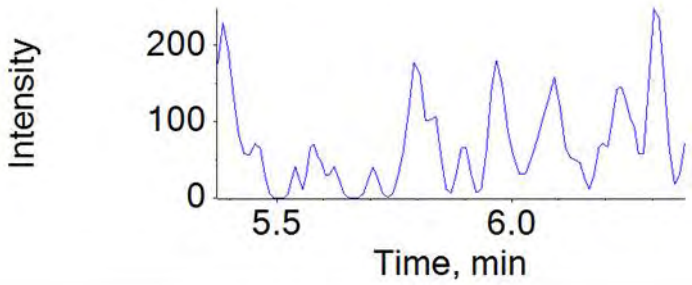
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



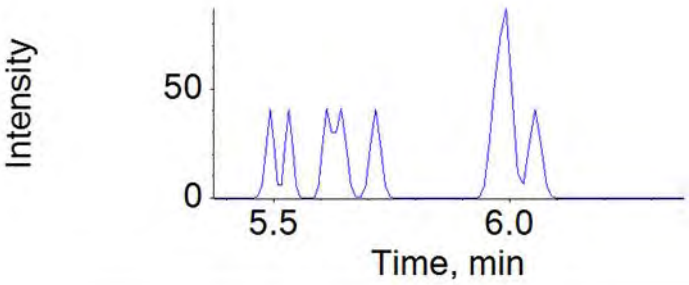
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



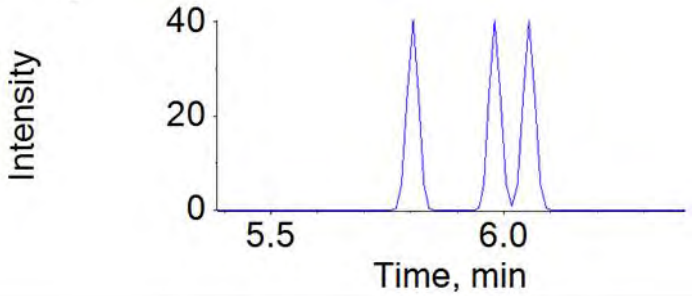
Component: PFUnDA
Primary Mass: 563.0 / 519.0



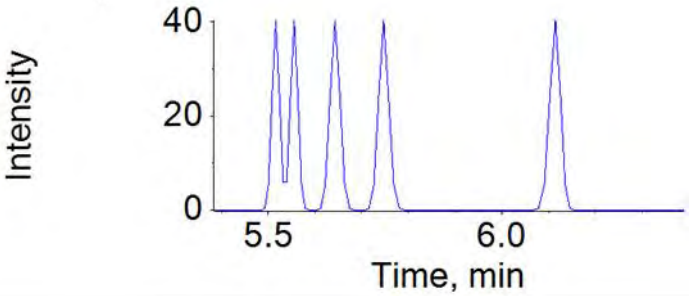
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



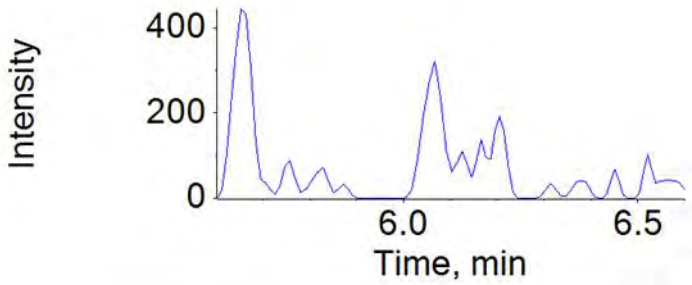
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



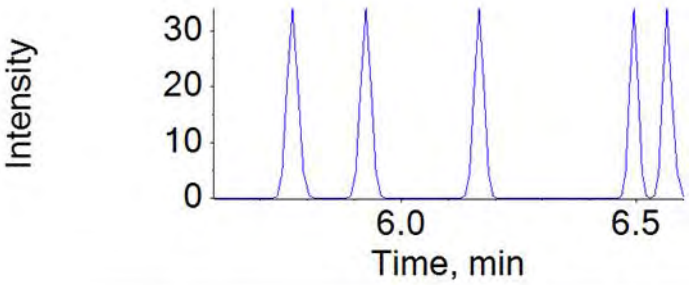
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



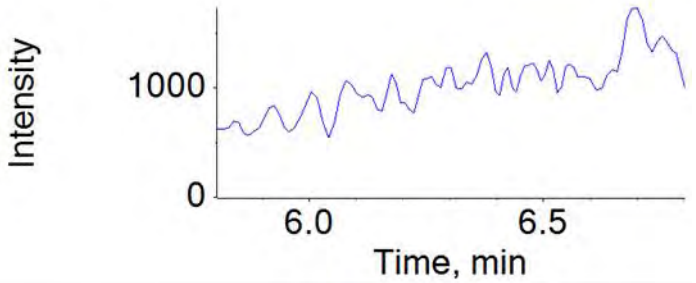
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



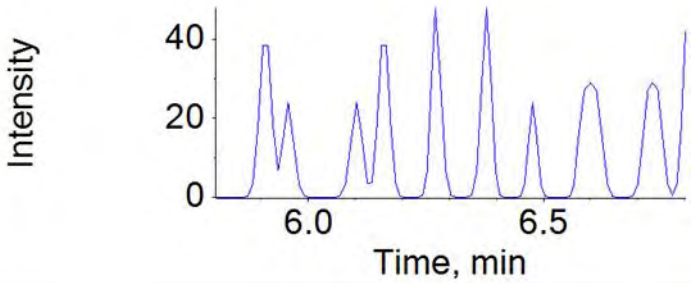
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

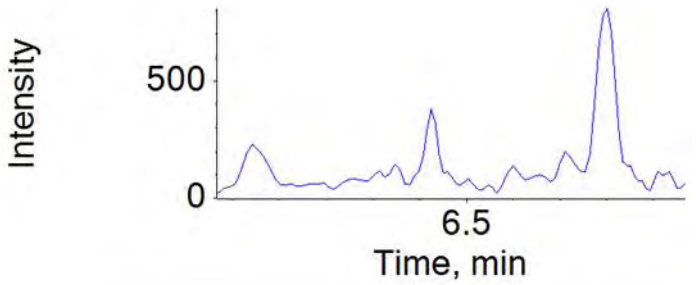
Component: PFTrDA
Primary Mass: 663.0 / 619.0



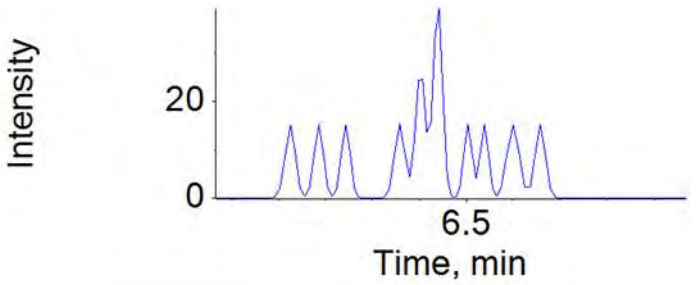
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881946			**Data File:**		18NOV08D-08.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-CAOC1517-S-02-6.5 Grab Soil			**Acquis Date:**		2018-11-08T12:51:43
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	24			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		JPT12262
Sample Wt.:	1.05000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	820255.0	728839.7	13	50	
13C2-PFOA	5.0	569302.5	491983.1	16	50	
13C4-PFOS	4.8	299152.4	255568.1	17	50	
13C2-PFDA	5.0	347070.2	315407.5	10	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	345636.5	13C3-PFBA	820255.0	0.421	8.857	5.891	67	50-150	
E13C5-PFHxA	572230.7	13C2-PFOA	569302.5	1.005	9.524	7.043	74	50-150	
E13C3-PFHxS	263124.0	13C2-PFOA	569302.5	0.462	9.010	6.320	70	50-150	
E13C4-PFHpA	436444.7	13C2-PFOA	569302.5	0.767	9.524	6.643	70	50-150	
E13C8-PFOA	784119.1	13C2-PFOA	569302.5	1.377	9.524	7.316	77	50-150	
E13C8-PFOS	222947.9	13C4-PFOS	299152.4	0.745	9.105	6.277	69	50-150	
E13C9-PFNA	406777.3	13C4-PFOS	299152.4	1.360	9.524	7.075	74	50-150	
E13C6-PFDA	524095.8	13C2-PFDA	347070.2	1.510	9.524	7.233	76	50-150	
Ed3-NMeFOSAA	70692.0	13C2-PFDA	347070.2	0.204	9.524	7.215	76	50-150	
E13C7-PFUnDA	236998.3	13C2-PFDA	347070.2	0.683	9.524	7.503	79	50-150	
Ed5-NEtFOSAA	52915.4	13C2-PFDA	347070.2	0.152	9.524	6.721	71	50-150	
E13C2-PFDoDA	458213.4	13C2-PFDA	347070.2	1.320	9.524	6.779	71	50-150	
E13C2-PFTeDA	313679.8	13C2-PFDA	347070.2	0.904	9.524	6.197	65	50-150	

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

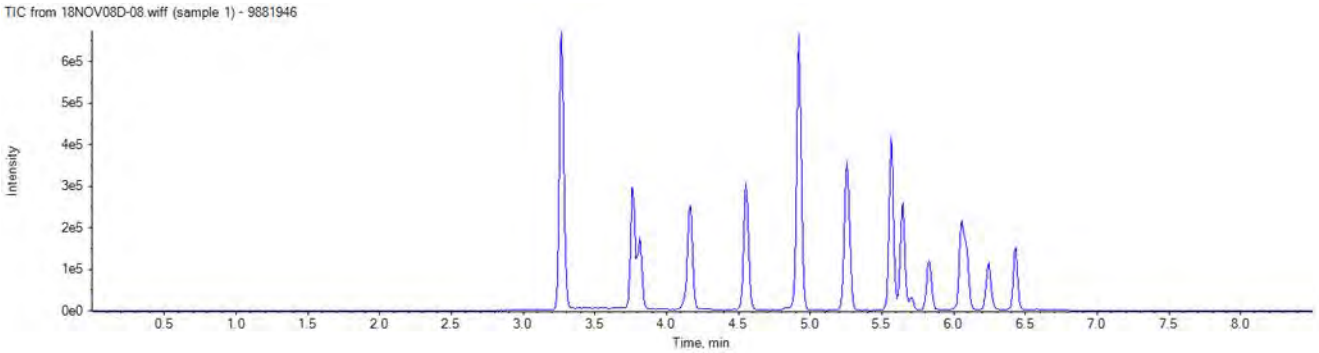
Analyte Quantitation Peak Table

Sample Name: 9881946 **Instrument Name:** LM27631 **File Name:** 18NOV08D-08.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.05000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	345636.5	N/A	
PFHxA	4.16	1.000	25845.5		A	13C5-PFHxA	4.16	572230.7	0.045	0.369
PFHxS	4.55	1.000	19769.9		M	13C3-PFHxS	4.55	263124.0	0.075	0.725
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	436444.7	N/A	
PFOA	4.92	1.000	98409.6		M	13C8-PFOA	4.92	784119.1	0.126	1.346
PFOS	5.25	1.000	6246.8		M	13C8-PFOS	5.25	222947.9	0.028	0.277
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	406777.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	524095.8	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	70692.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	236998.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	52915.4	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	458213.4	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	458213.4	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	313679.8	N/A	

Total Ion Chromatogram

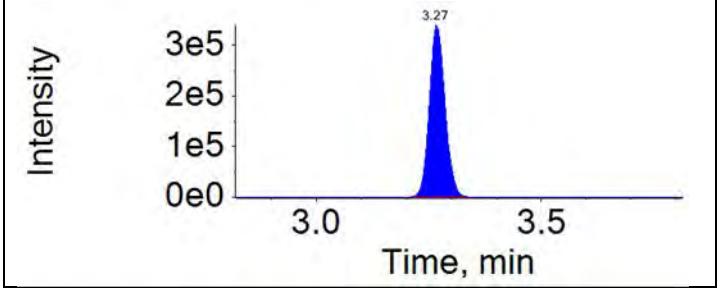


APPROVED
By JPT at 5:11 pm, 11/8/18

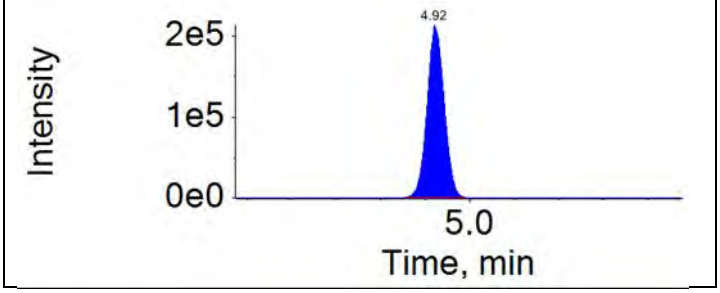
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

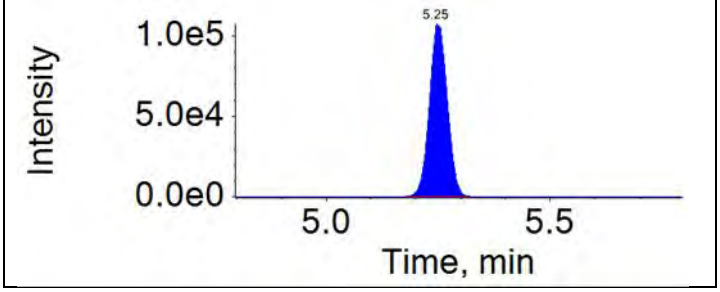
Injection Standard: 13C3-PFBA
216.0 / 172.0



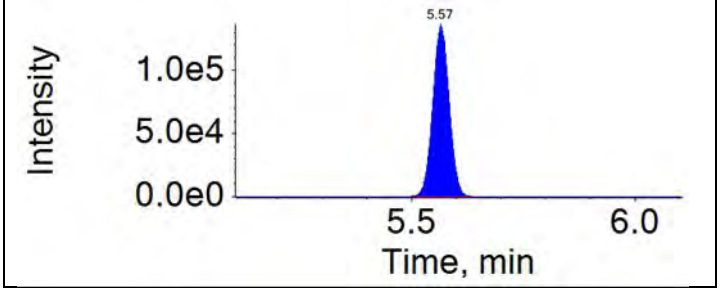
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



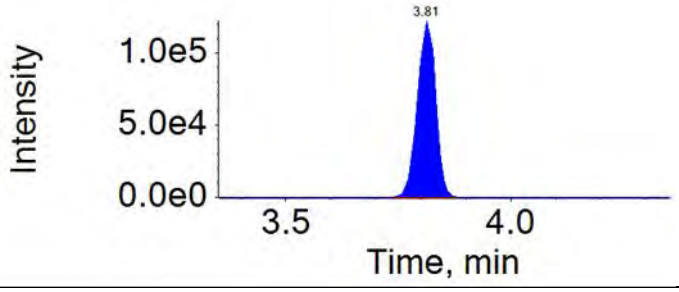
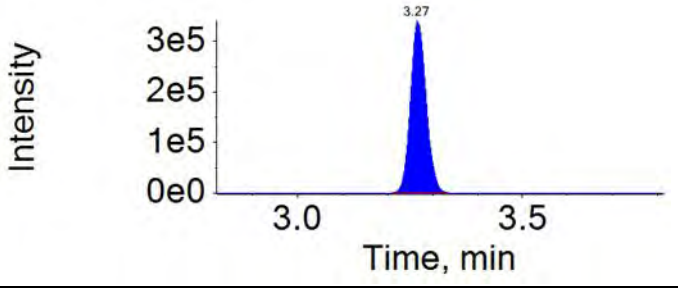
Injection Standard: 13C2-PFDA
515.0 / 470.0

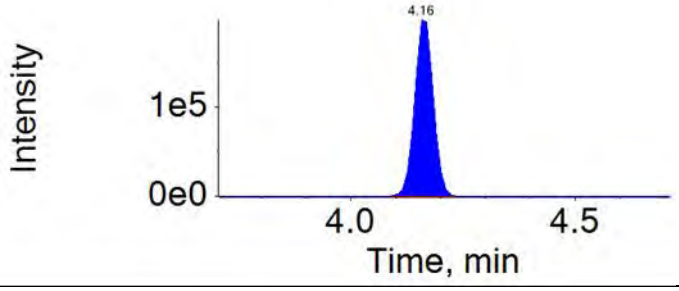
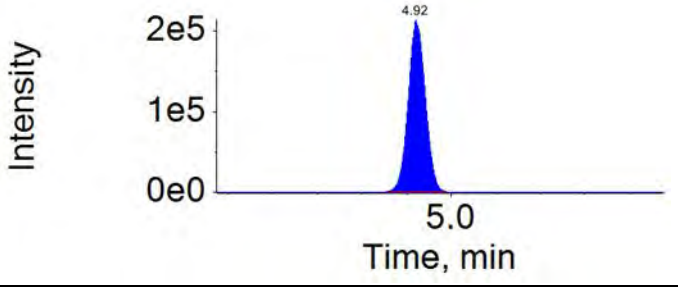


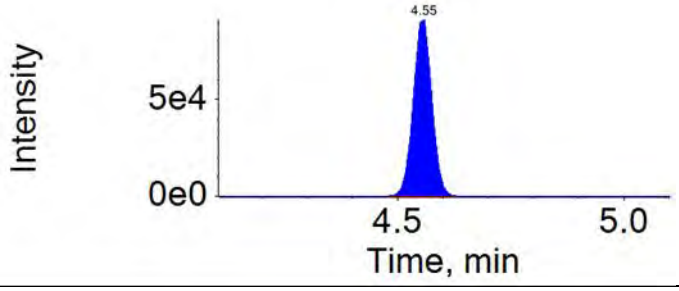
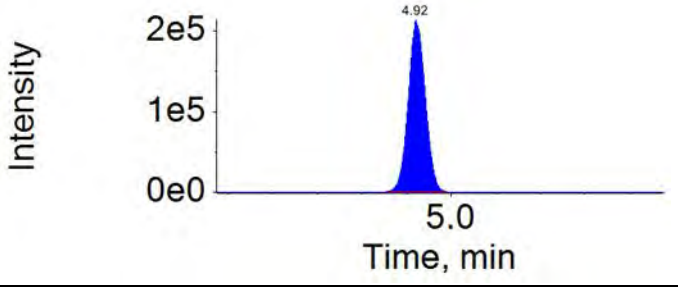
APPROVED
By JPT at 5:11 pm, 11/8/18

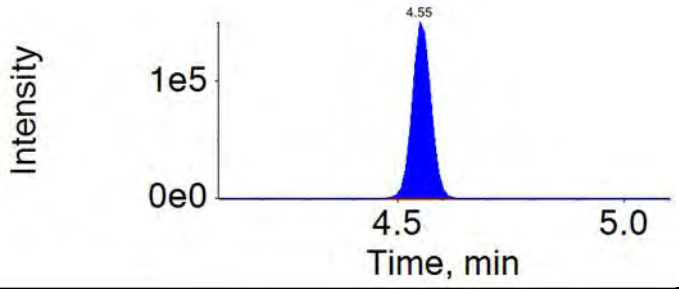
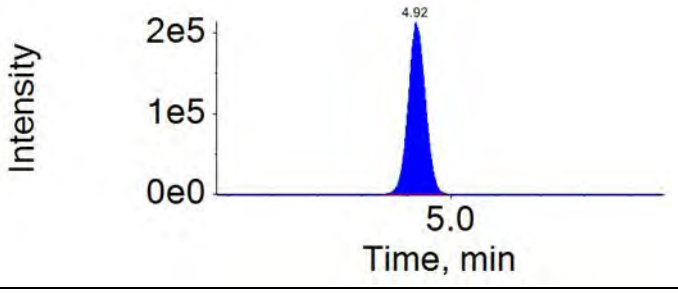
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

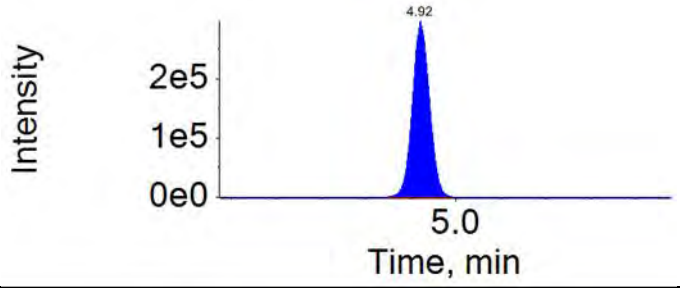
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

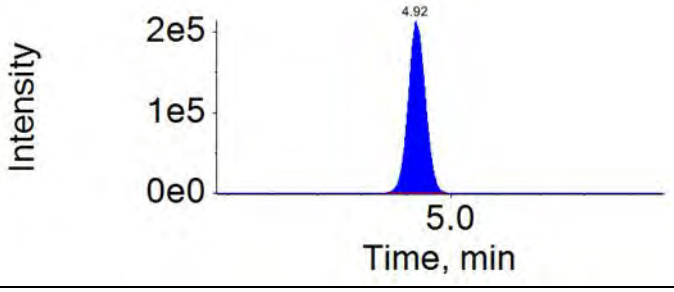
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

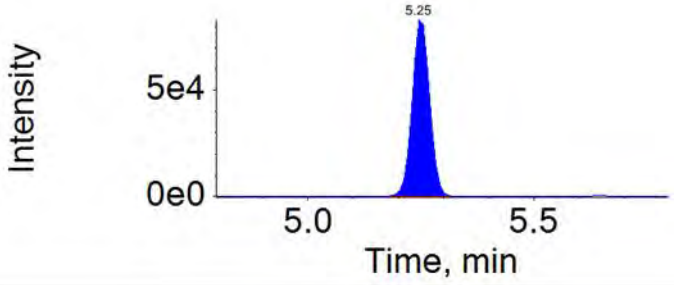
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

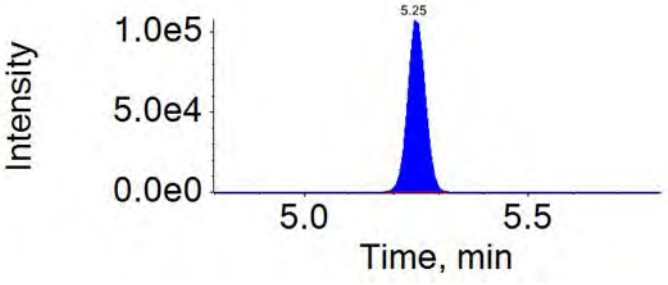
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



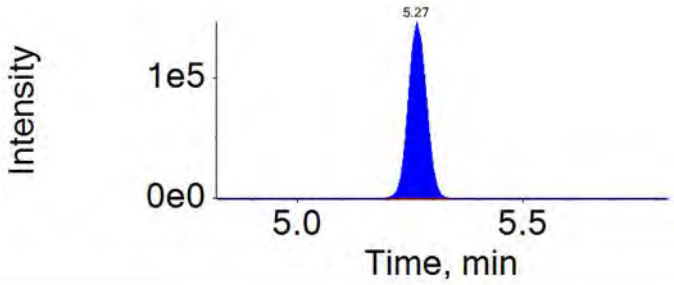


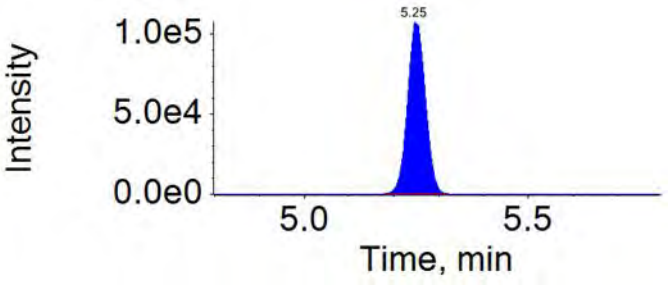
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



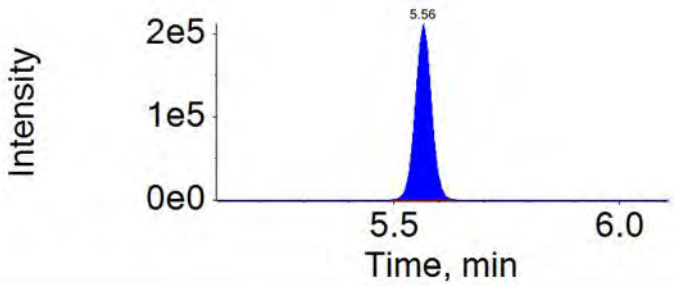


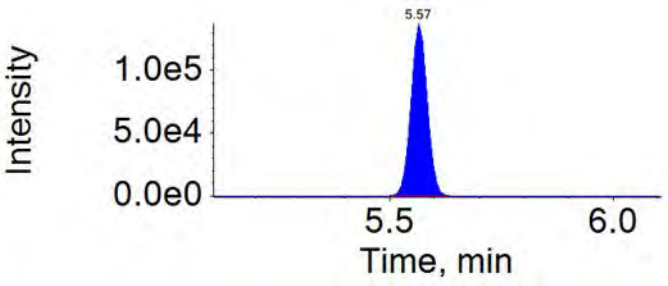
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

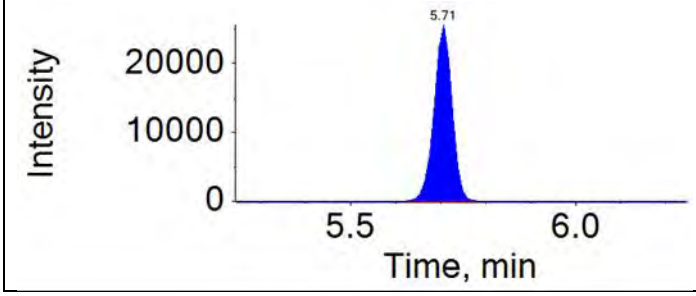
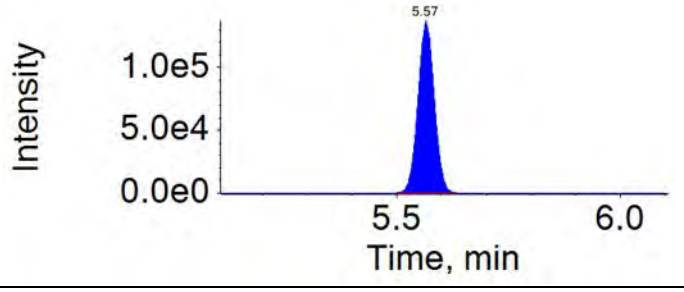


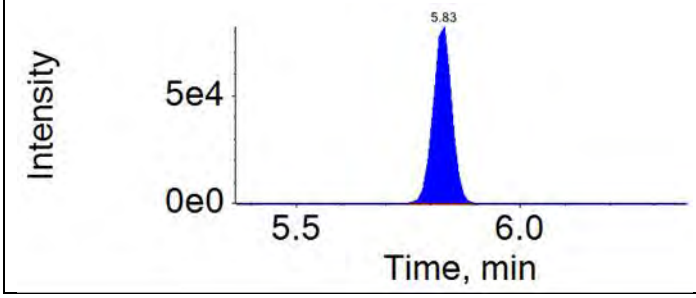
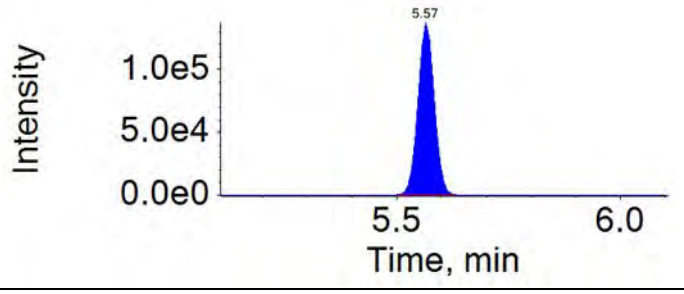


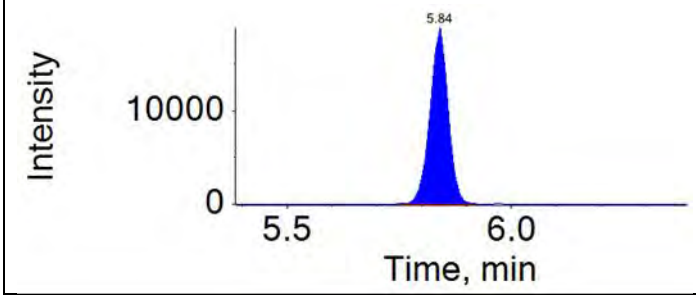
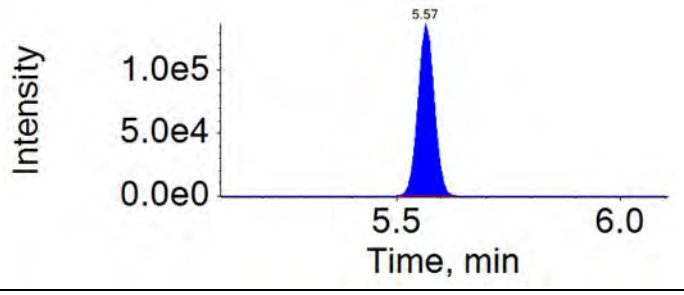
APPROVED
By JPT at 5:11 pm, 11/8/18

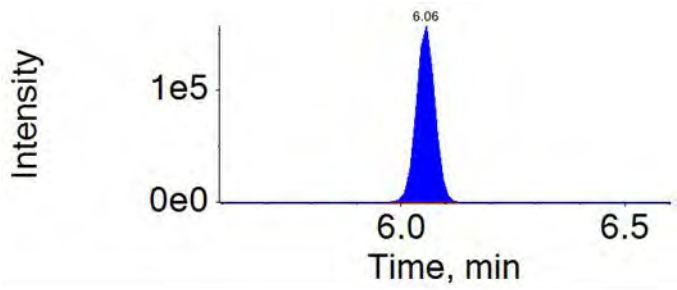
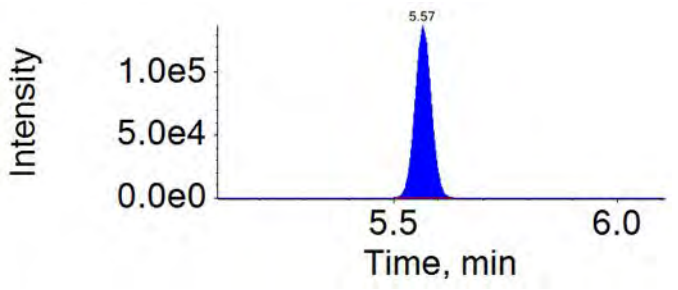
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

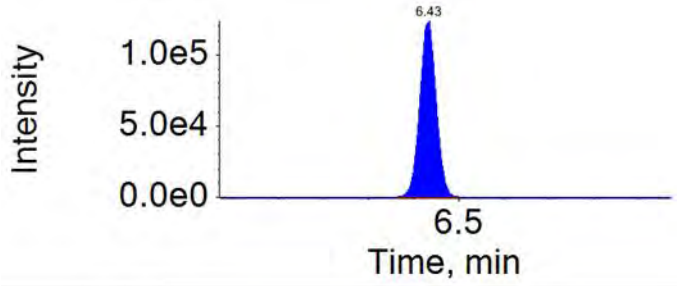
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

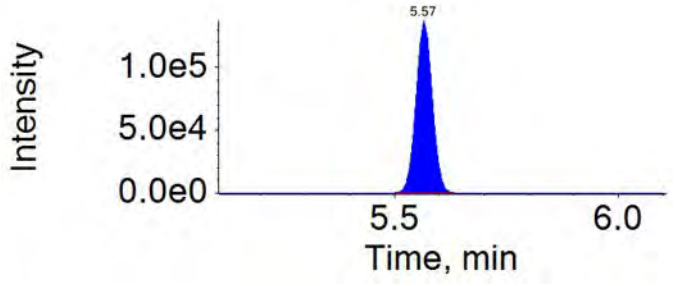
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



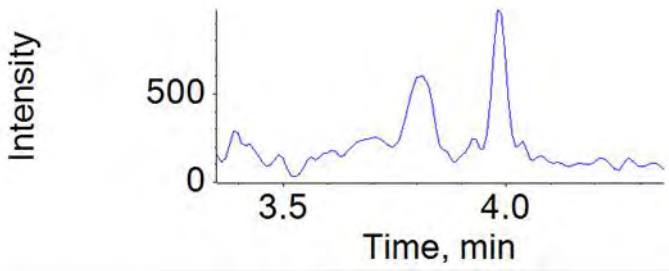


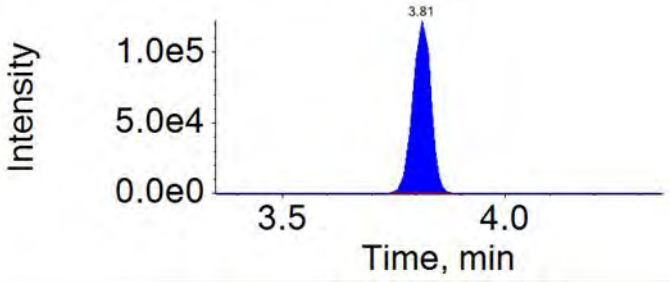
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

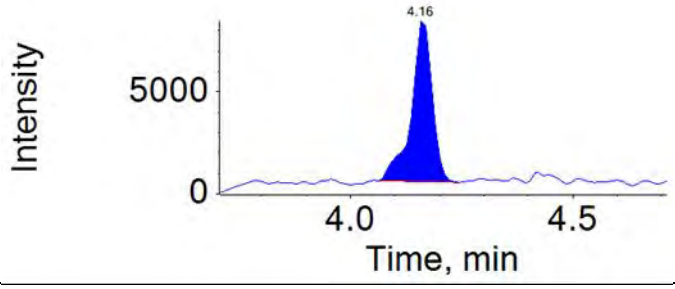
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

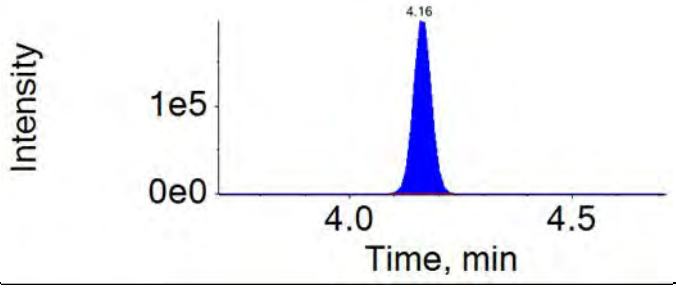
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



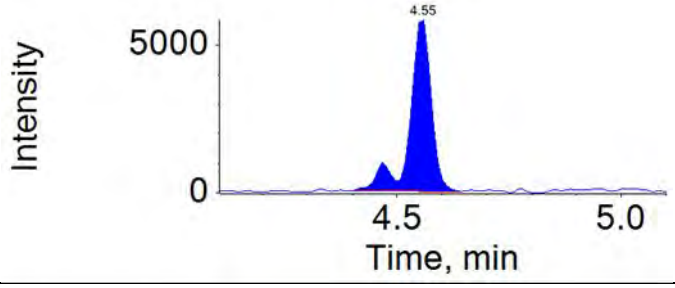


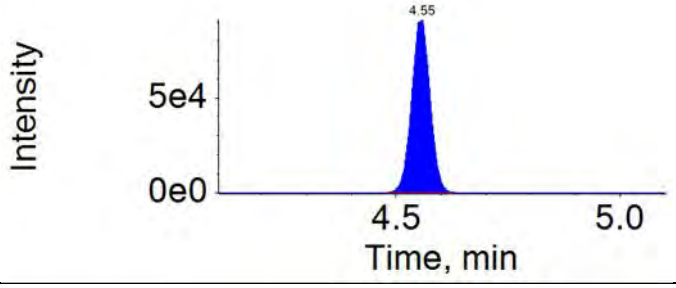
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



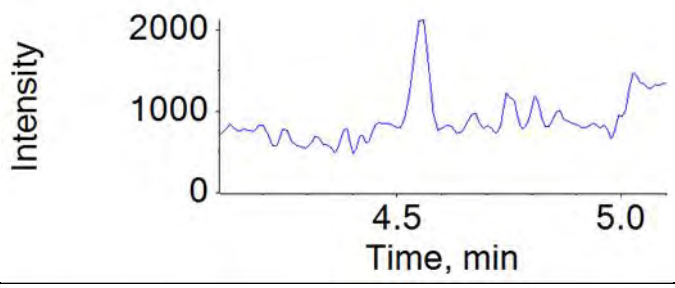


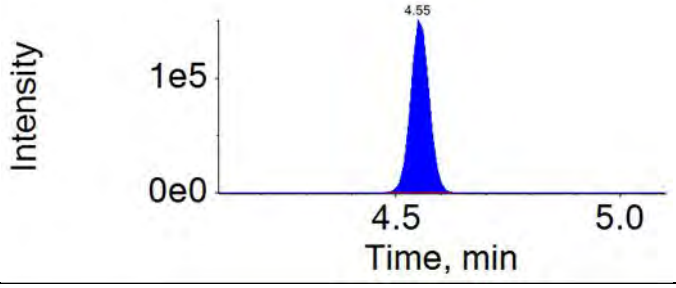
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

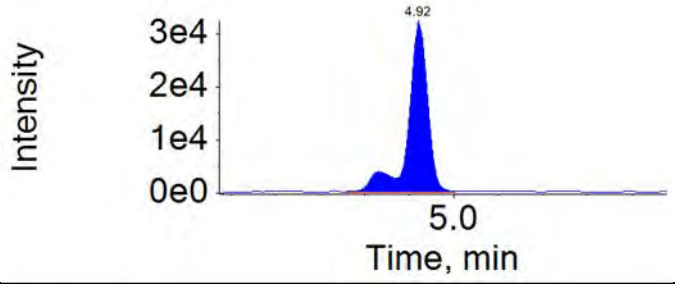
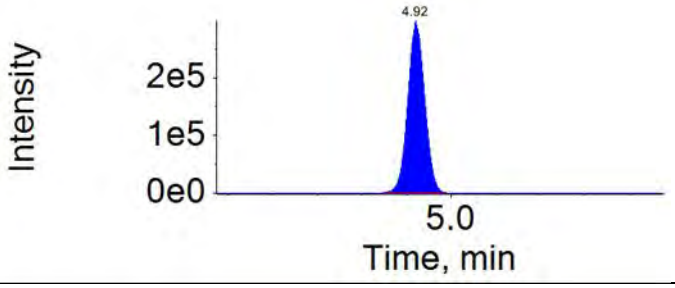


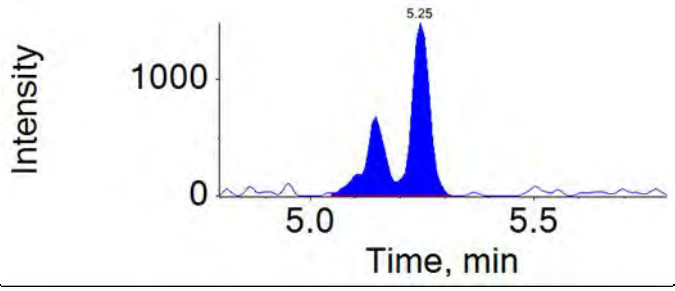
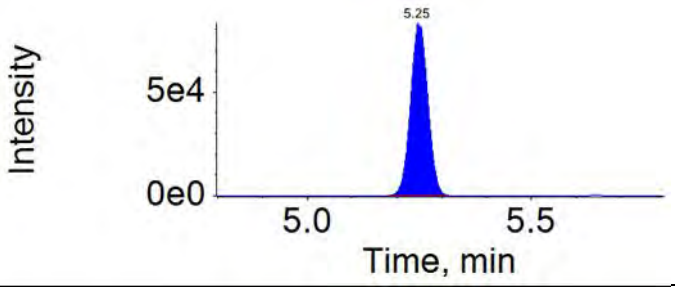


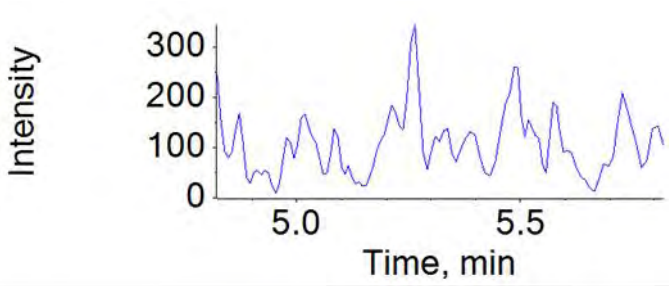
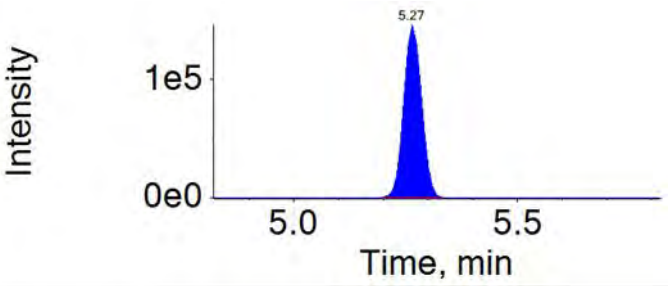
APPROVED
By JPT at 5:11 pm, 11/8/18

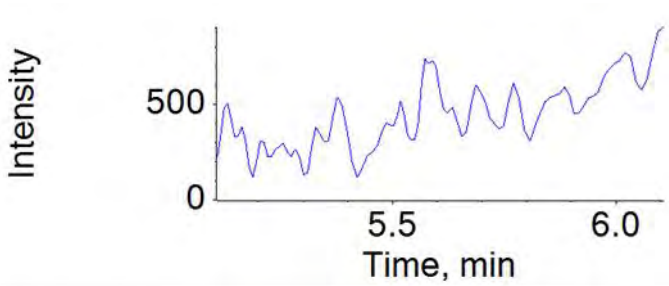
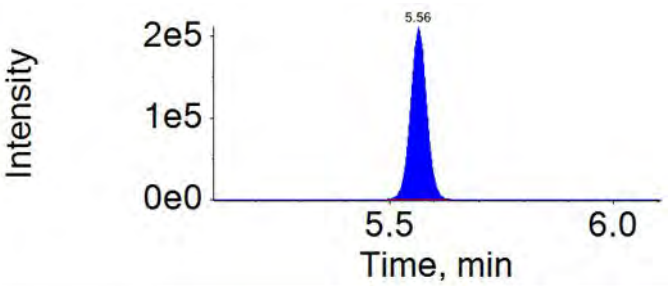
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

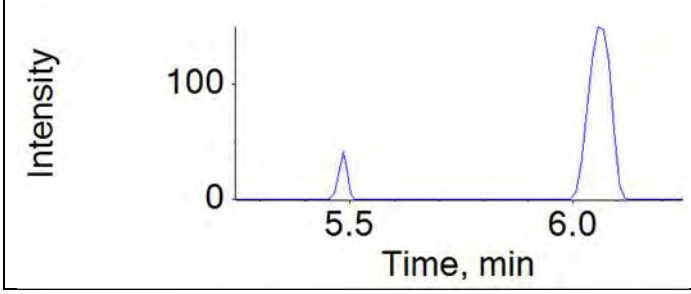
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

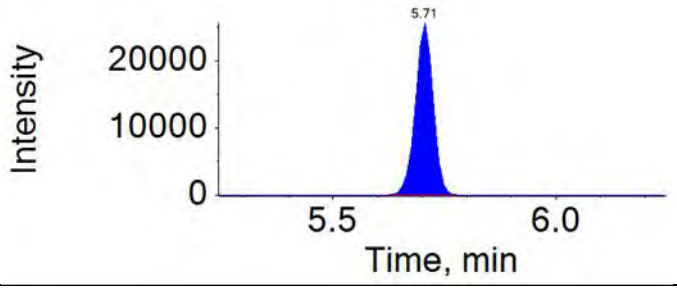
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

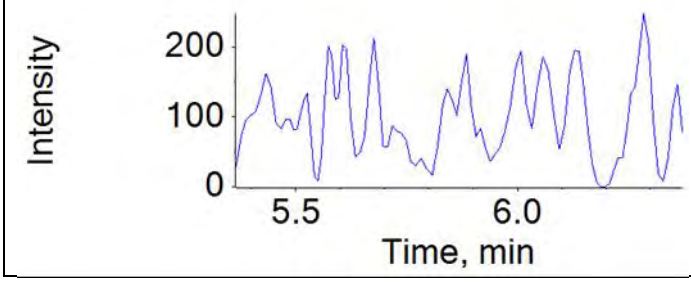
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

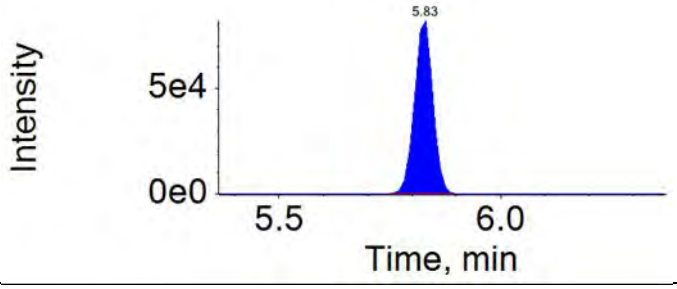
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



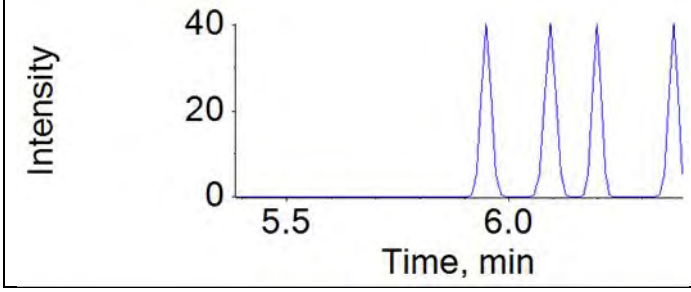


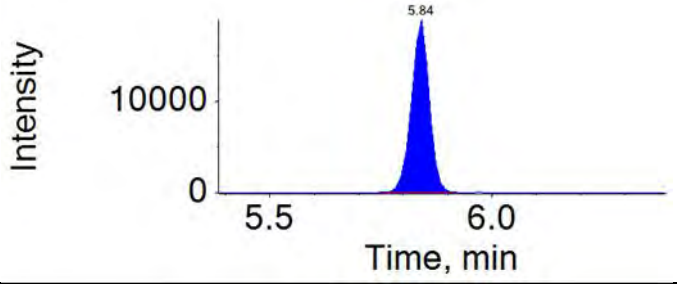
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



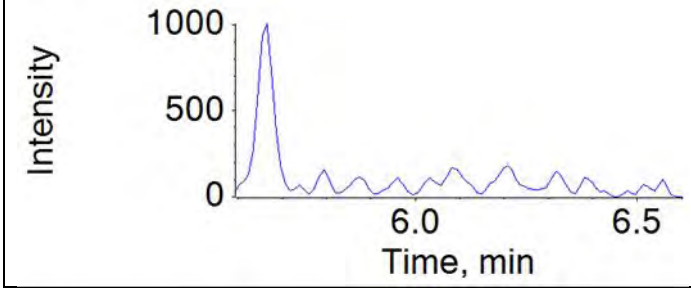


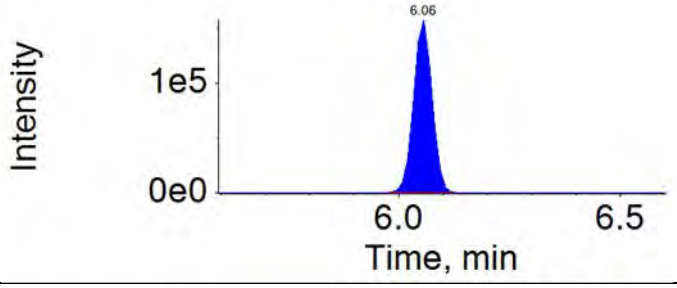
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



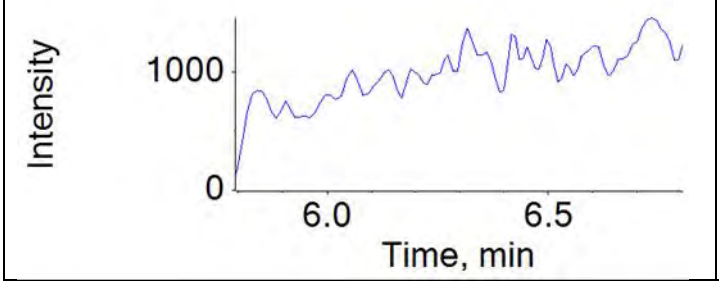


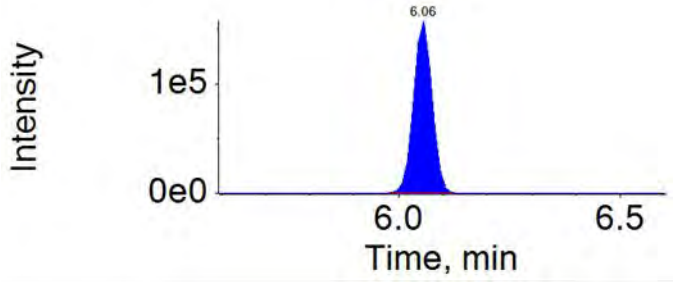
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

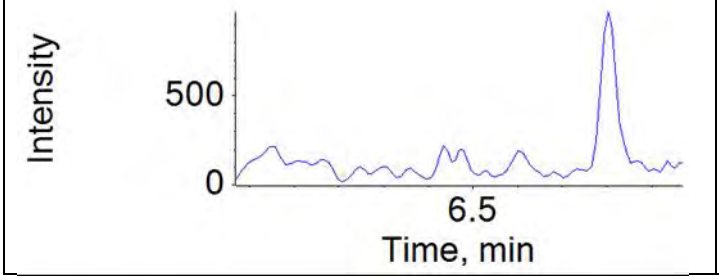
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

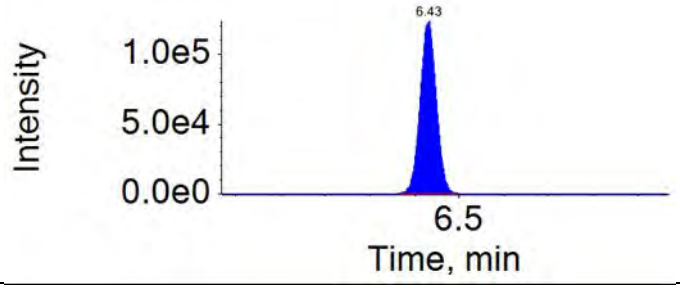
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





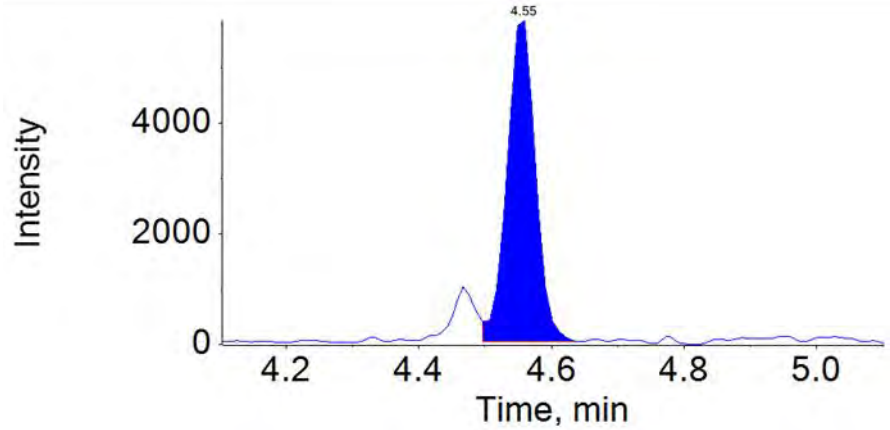
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

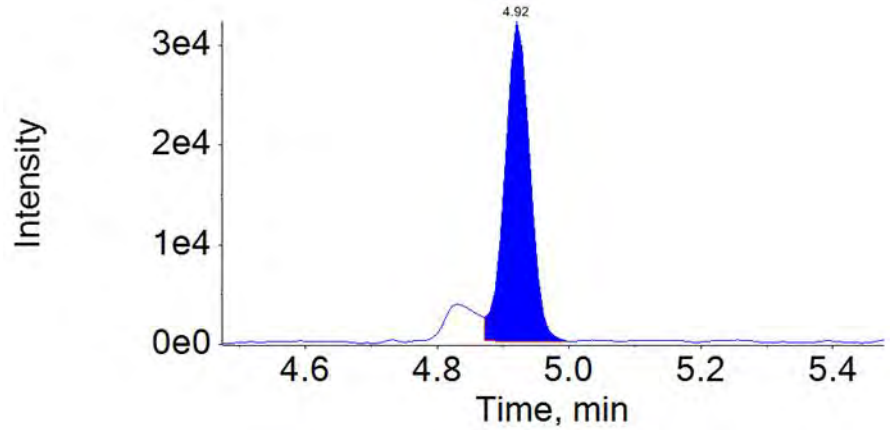
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
17364.6
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-08.wiff
Sample Name:
9881946



Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.92
Peak Area:
84336.4
Mass Range:
413.0 / 369.0
File Name:
18NOV08D-08.wiff
Sample Name:
9881946



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
3983.1
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-08.wiff
Sample Name:
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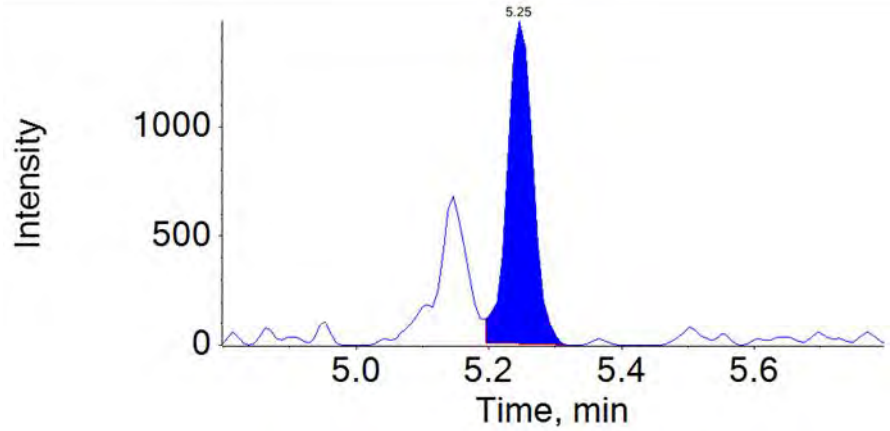


Integration Comment: incorrect integration

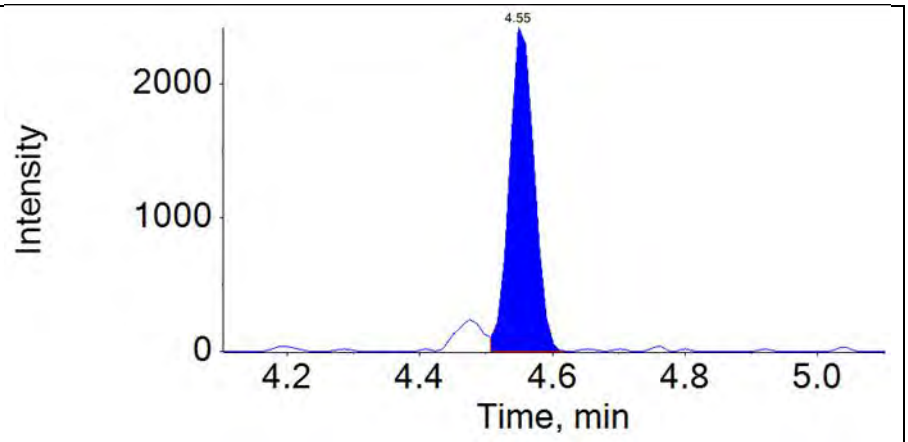
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

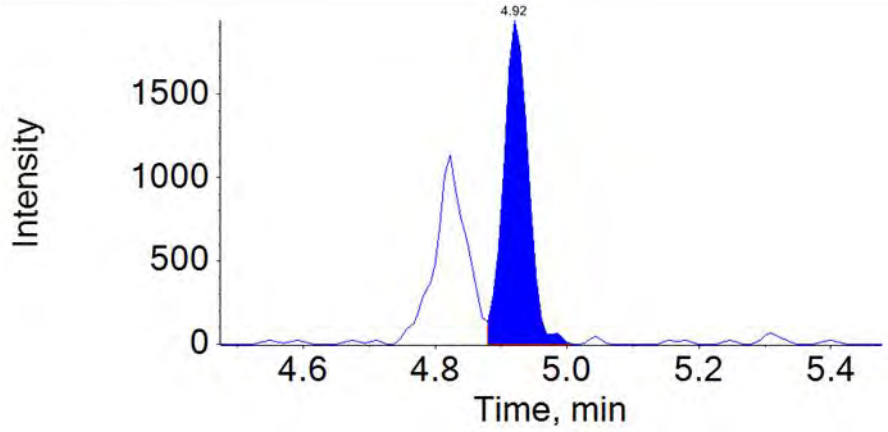
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
6252.9
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-08.wiff
Sample Name:
9881946



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
5046.3
Mass Range:
413.0 / 169.0
File Name:
18NOV08D-08.wiff
Sample Name:
9881946



Integration Comment: incorrect integration

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Ion Ratio Report

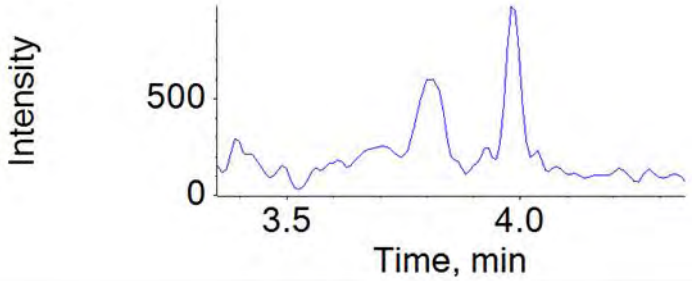
Sample Name: 9881946 **Instrument Name:** LM27631 **File Name:** 18NOV08D-08.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.16	1.00	25845.5	A	N/A	1.0000			
PFHxA_2	4.17	1.00	295.4	A	N/A	0.0114	0	50	
PFHxS	4.55	1.00	19769.9	M	N/A	1.0000			
PFHxS_2	4.55	1.00	6947.3	M	N/A	0.3514	-2	50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	4.92	1.00	98409.6	M	N/A	1.0000			
PFOA_2	4.92	1.00	8824.1	M	N/A	0.0897	41	50	
PFOS	5.25	1.00	6246.8	M	N/A	1.0000			
PFOS_2	5.24	1.00	1344.3	A	N/A	0.2152	-38	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

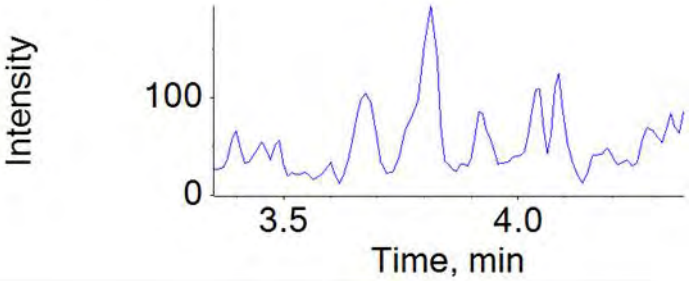
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

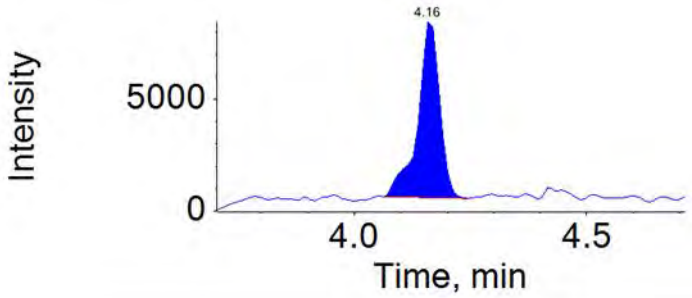
Component: PFBS
Primary Mass: 299.0 / 80.0



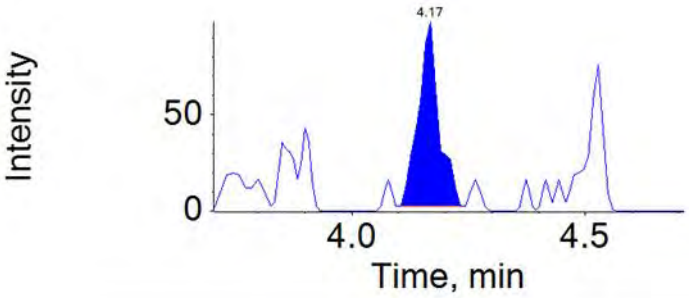
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



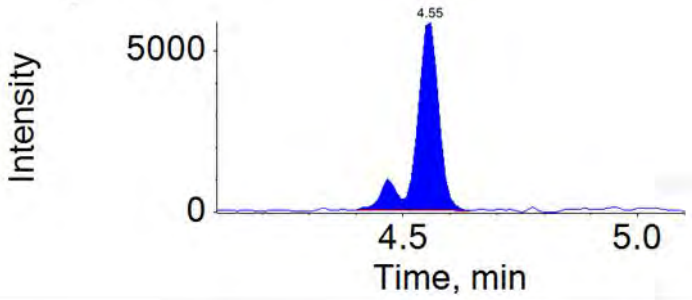
Component: PFHxA
Primary Mass: 313.0 / 269.0



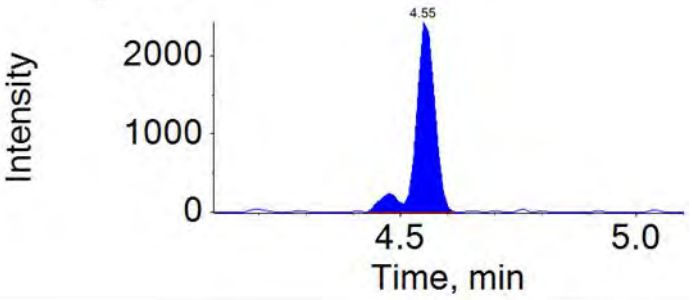
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



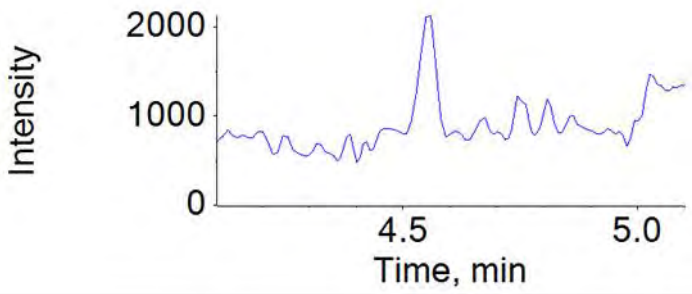
Component: PFHxS
Primary Mass: 399.0 / 80.0



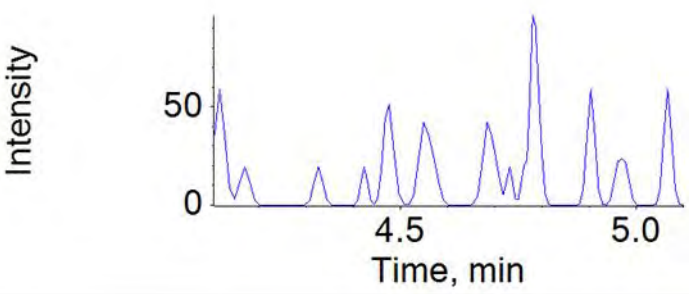
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



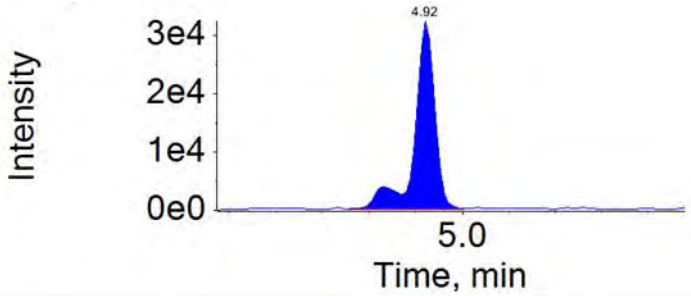
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



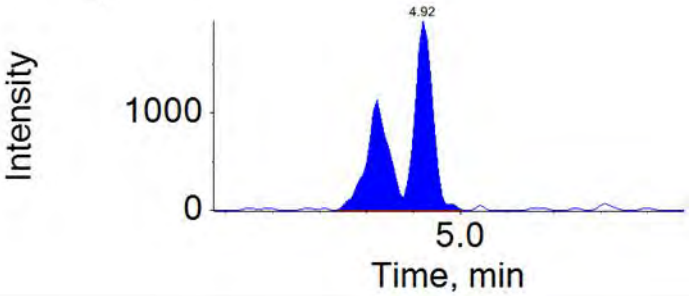
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

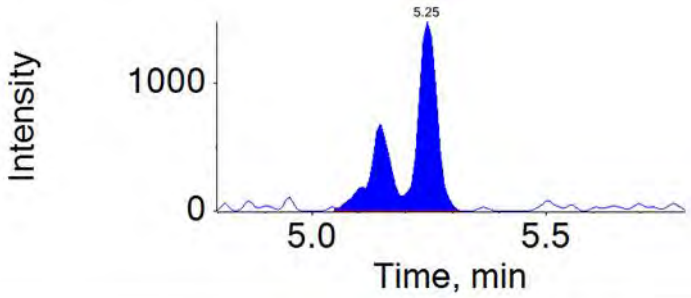
Component: PFOA
Primary Mass: 413.0 / 369.0



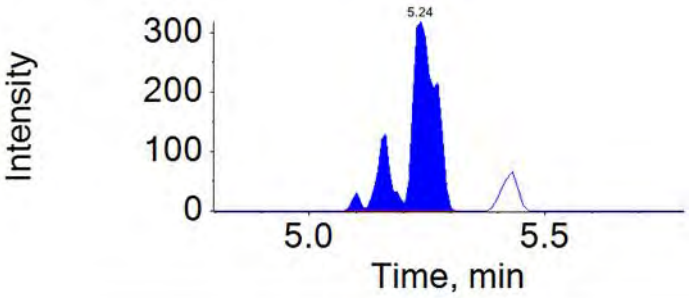
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



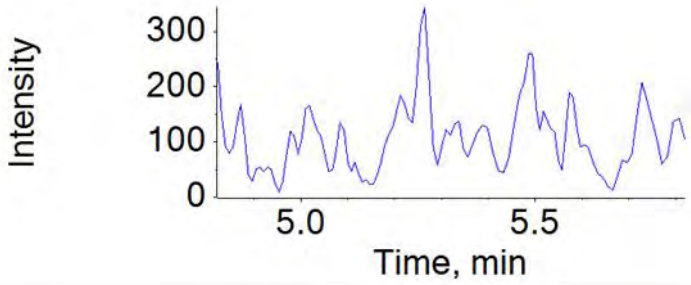
Component: PFOS
Primary Mass: 499.0 / 80.0



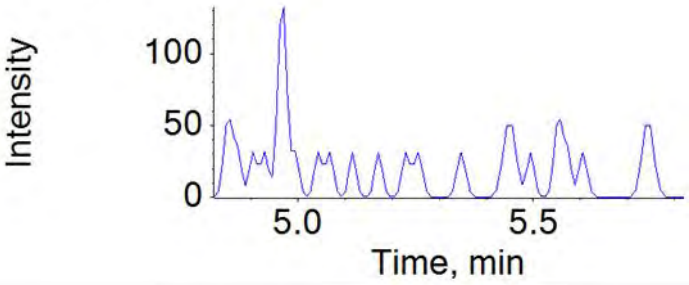
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



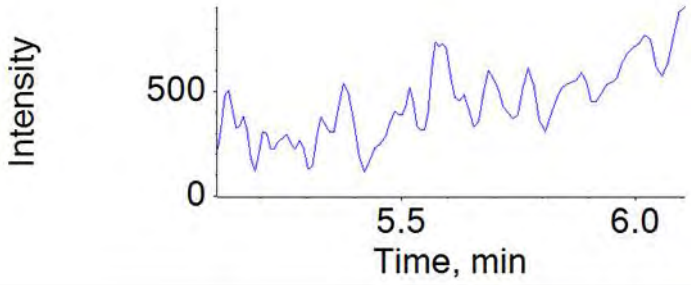
Component: PFNA
Primary Mass: 463.0 / 419.0



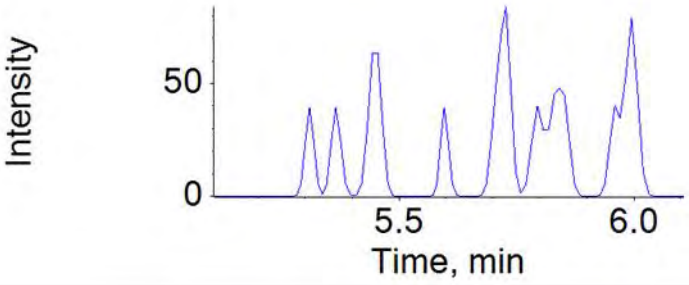
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



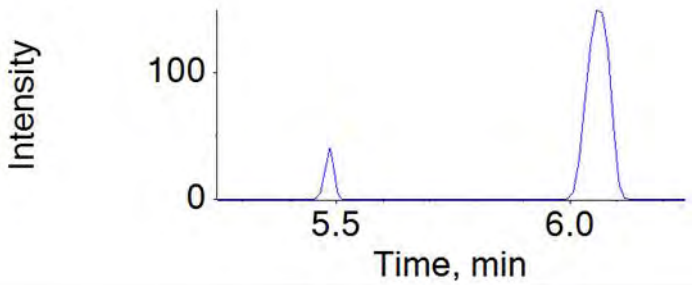
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



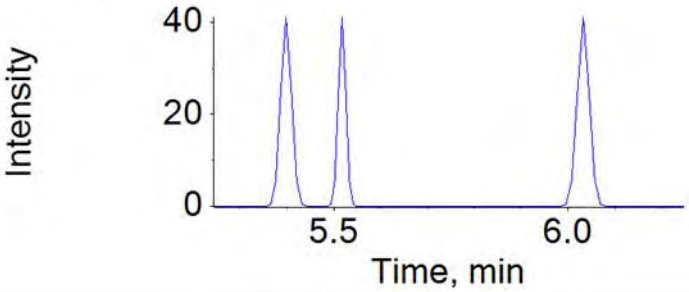
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

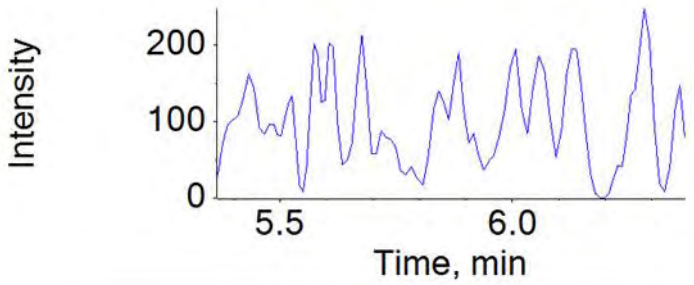
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



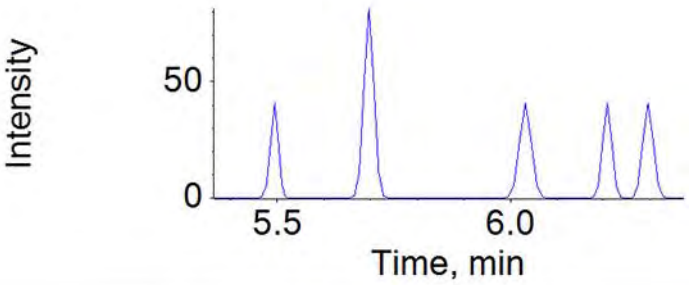
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



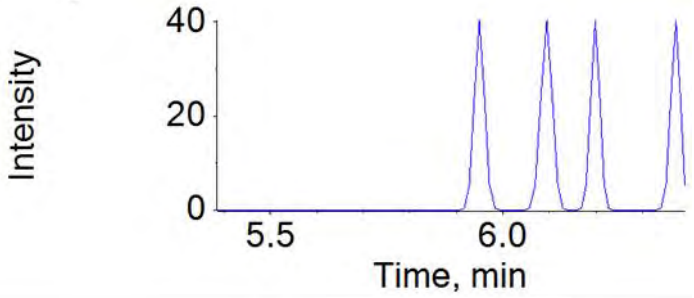
Component: PFUnDA
Primary Mass: 563.0 / 519.0



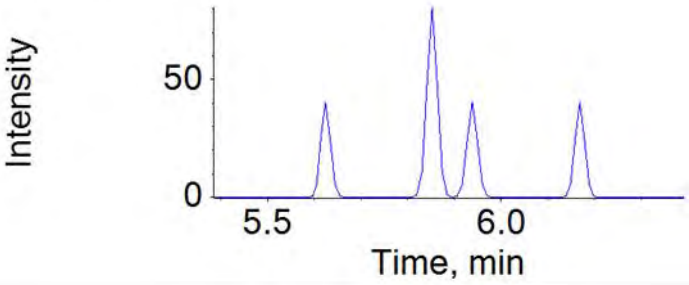
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



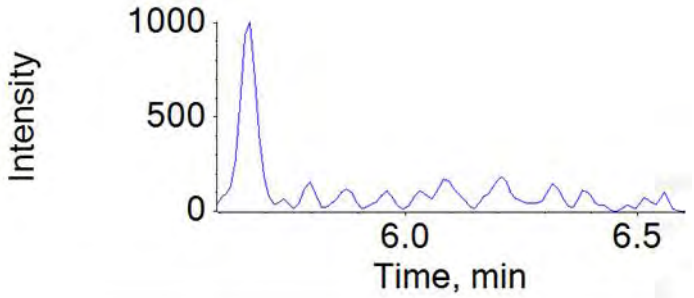
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



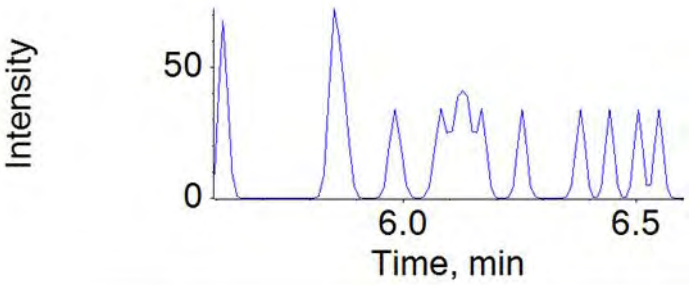
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



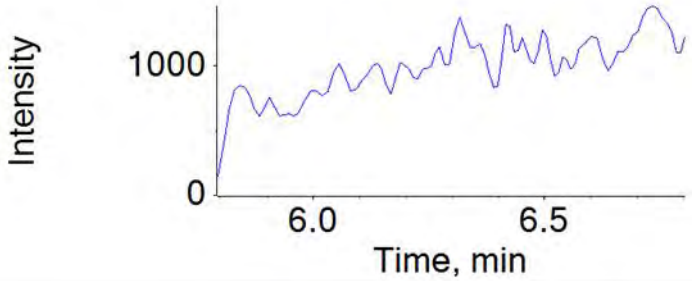
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



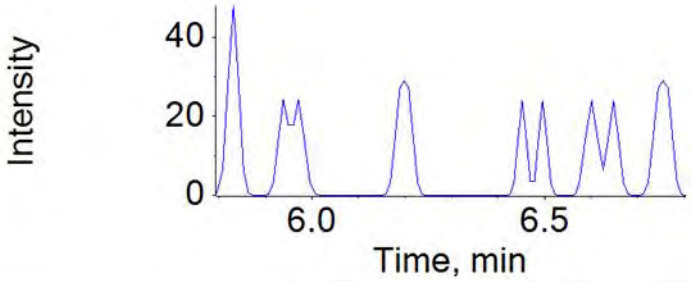
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

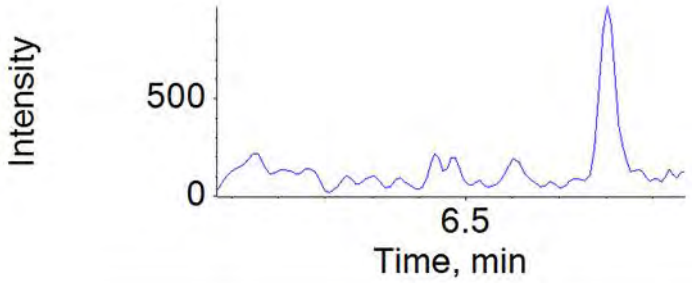
Component: PFTrDA
Primary Mass: 663.0 / 619.0



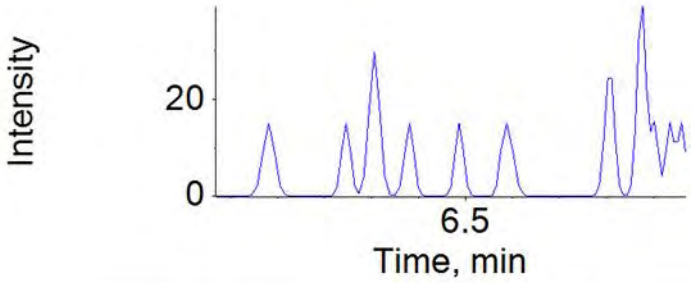
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881947			**Data File:**		18NOV29D-50.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18331014 OU1-CAOC1517-S-02-10 Grab Soil			**Acquis Date:**		2018-11-29T17:19:30
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	31			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18331014
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18331014			**Operator:**		MCD7824
Sample Wt.:	1.09000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1075117.0	906425.4	19	50	
13C2-PFOA	5.0	612503.9	495984.0	23	50	
13C4-PFOS	4.8	366271.6	296261.8	24	50	
13C2-PFDA	5.0	555362.7	451203.0	23	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	373186.4	13C3-PFBA	1075117.0	0.347	8.532	6.076	71	50-150	
E13C5-PFHxA	620661.3	13C2-PFOA	612503.9	1.013	9.174	6.829	74	50-150	
E13C3-PFHxS	306765.4	13C2-PFOA	612503.9	0.501	8.679	7.203	83	50-150	
E13C4-PFHpA	490483.8	13C2-PFOA	612503.9	0.801	9.174	6.751	74	50-150	
E13C8-PFOA	910332.5	13C2-PFOA	612503.9	1.486	9.174	7.506	82	50-150	
E13C8-PFOS	306157.4	13C4-PFOS	366271.6	0.836	8.771	6.923	79	50-150	
E13C9-PFNA	574014.0	13C4-PFOS	366271.6	1.567	9.174	6.316	69	50-150	
E13C6-PFDA	761367.2	13C2-PFDA	555362.7	1.371	9.174	7.092	77	50-150	
Ed3-NMeFOSAA	209243.0	13C2-PFDA	555362.7	0.377	9.174	8.777	96	50-150	
E13C7-PFUnDA	507412.9	13C2-PFDA	555362.7	0.914	9.174	7.085	77	50-150	
Ed5-NEtFOSAA	123838.4	13C2-PFDA	555362.7	0.223	9.174	7.289	79	50-150	
E13C2-PFDoDA	1077661.1	13C2-PFDA	555362.7	1.940	9.174	7.481	82	50-150	
E13C2-PFTeDA	774968.3	13C2-PFDA	555362.7	1.395	9.174	7.085	77	50-150	

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

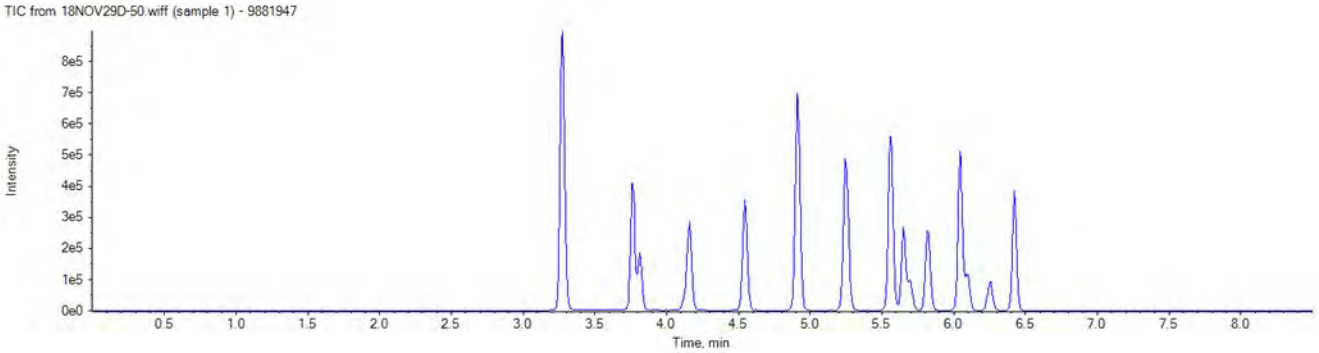
Analyte Quantitation Peak Table

Sample Name: 9881947 **Instrument Name:** LM27631 **File Name:** 18NOV29D-50.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.09000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	373186.4	N/A	
PFHxA	4.16	1.000	12892.0		A	13C5-PFHxA	4.16	620661.3	0.021	0.153
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	490483.8	N/A	
PFHxS	4.55	1.000	4394.1		A	13C3-PFHxS	4.55	306765.4	0.014	0.123
PFOA	4.91	1.000	24570.2		M	13C8-PFOA	4.91	910332.5	0.027	0.256
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	306157.4	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	574014.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	761367.2	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	209243.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	507412.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	123838.4	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	1077661.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	1077661.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	774968.3	N/A	

Total Ion Chromatogram

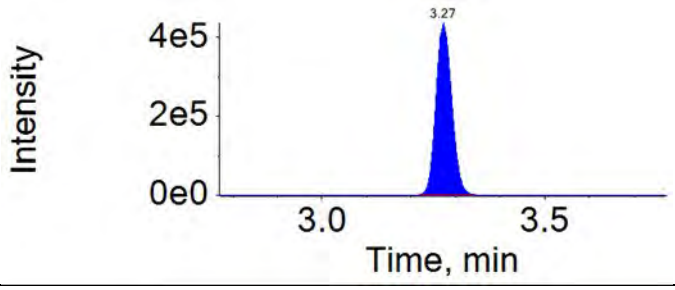


APPROVED
By MCD at 9:12 pm, 11/30/18

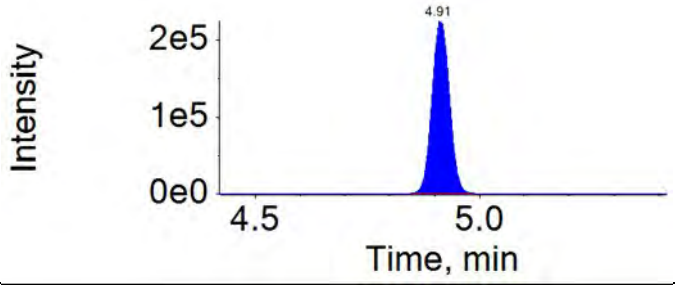
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

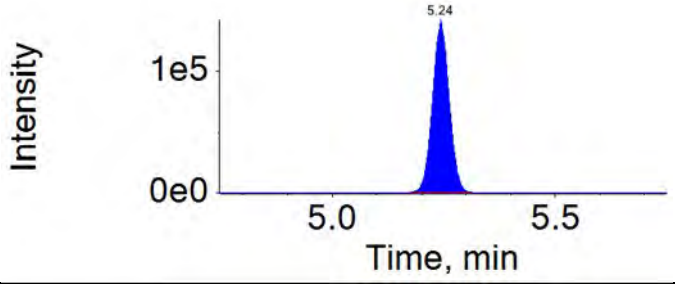
Injection Standard: 13C3-PFBA
216.0 / 172.0



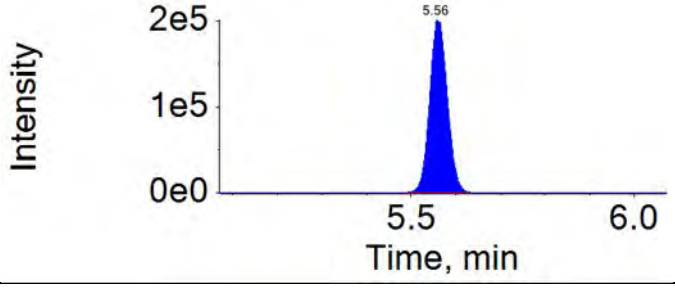
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



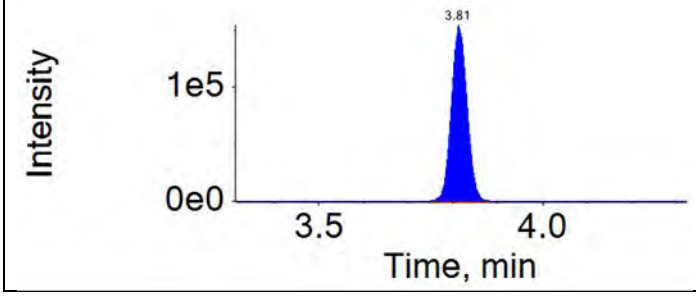
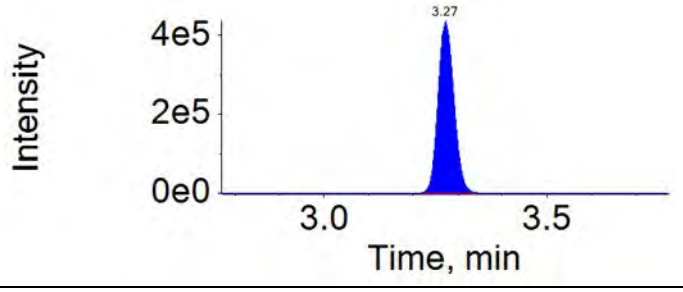
Injection Standard: 13C2-PFDA
515.0 / 470.0

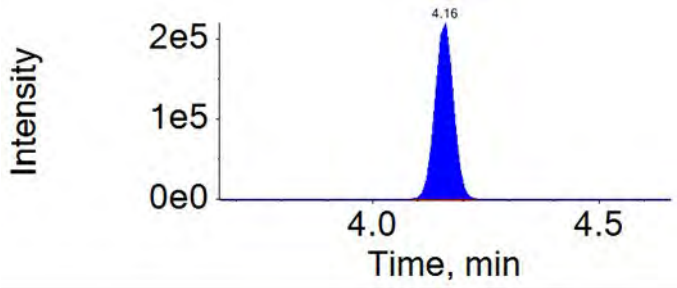
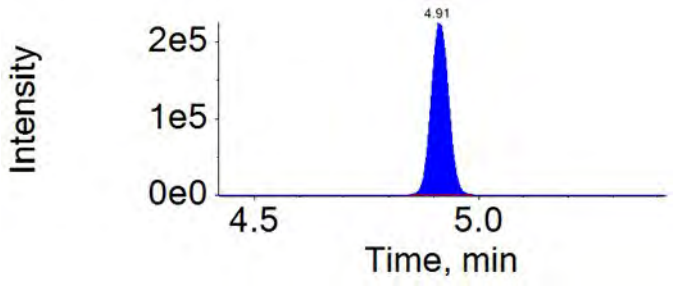


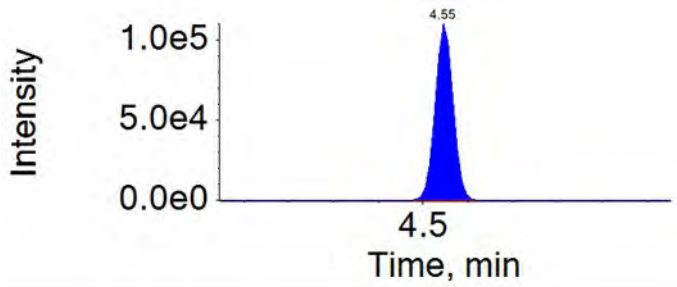
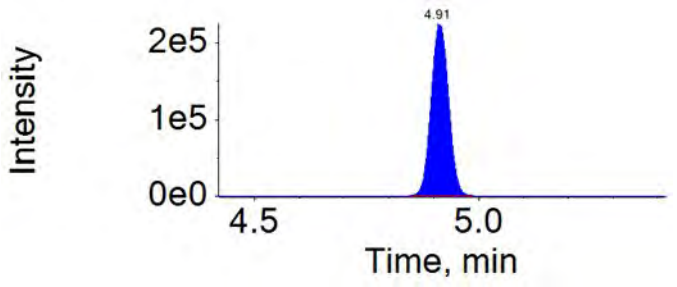
APPROVED
By MCD at 9:12 pm, 11/30/18

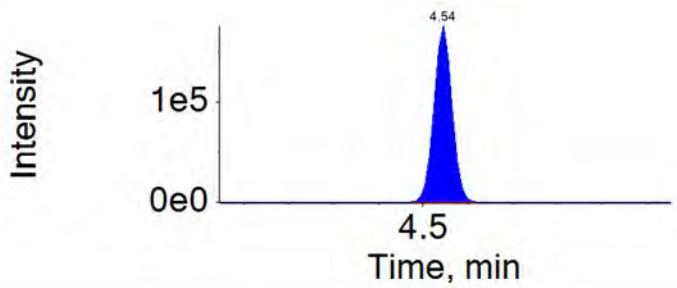
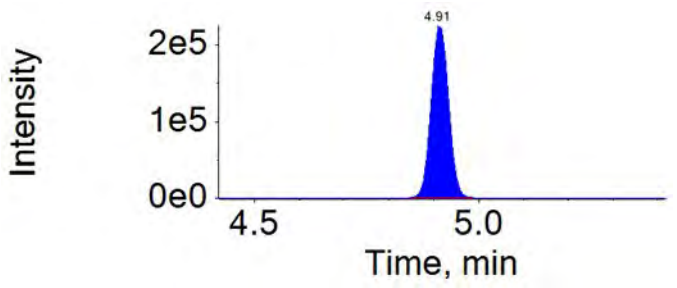
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

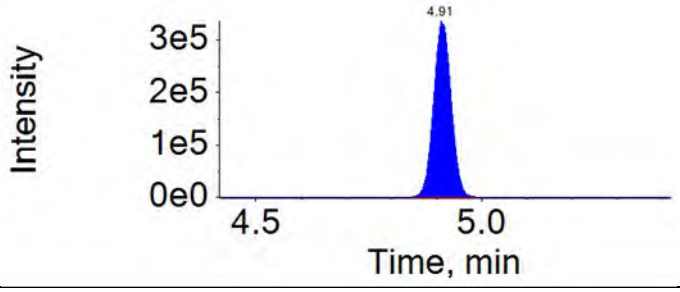
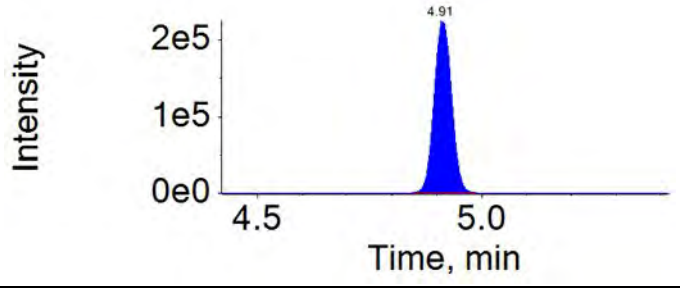
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

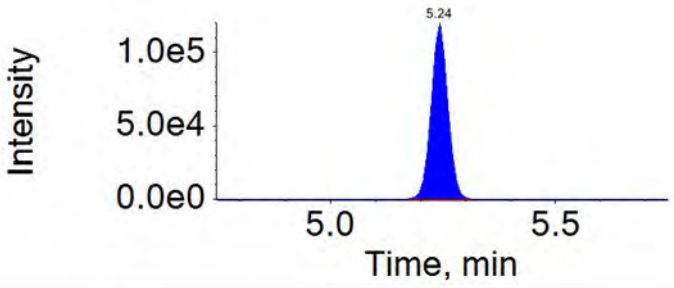
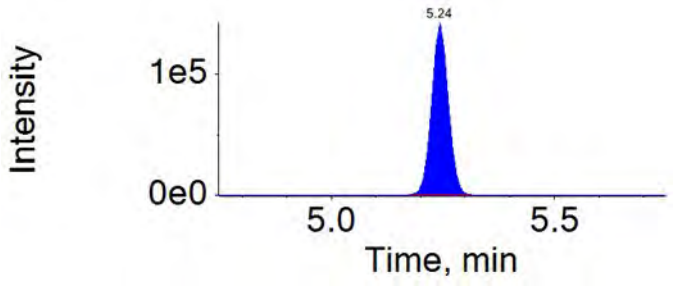
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

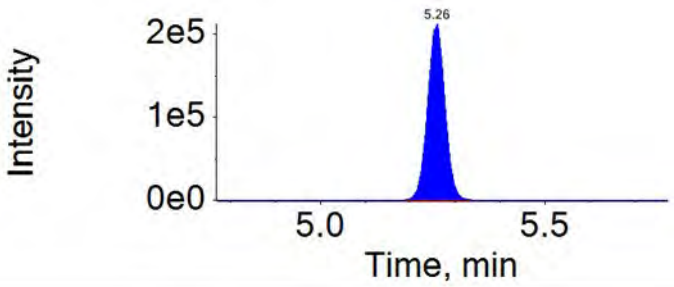
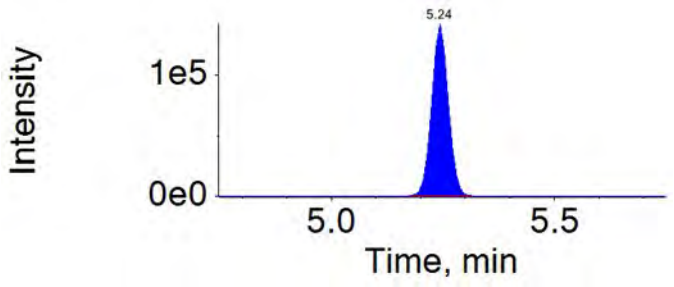
APPROVED
By MCD at 9:12 pm, 11/30/18

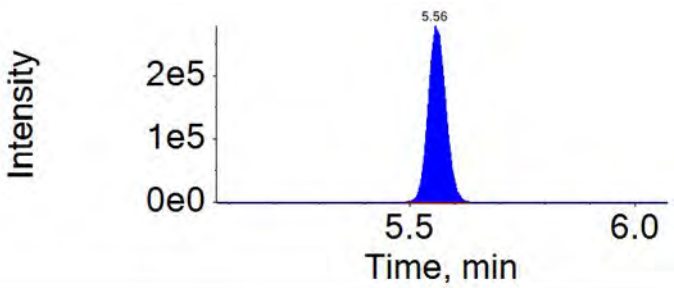
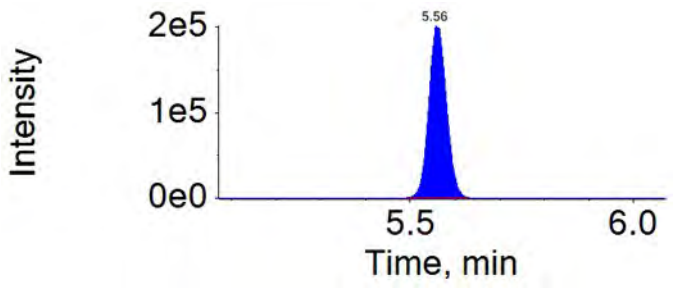
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

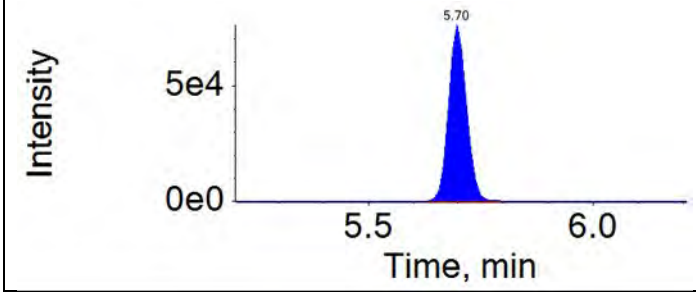
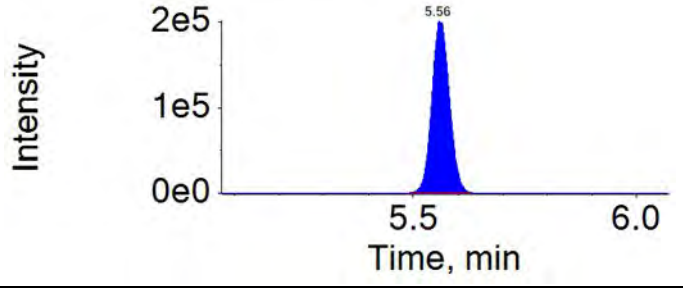
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

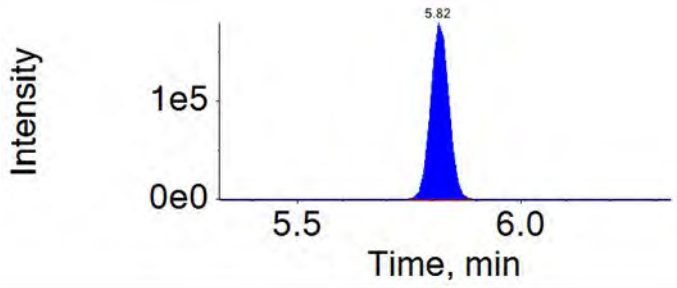
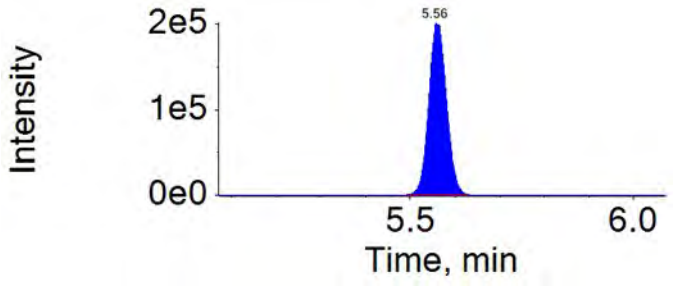
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

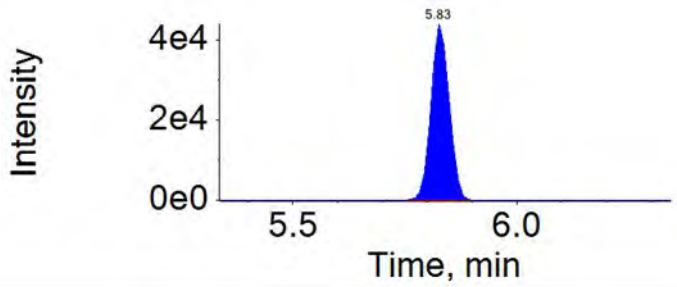
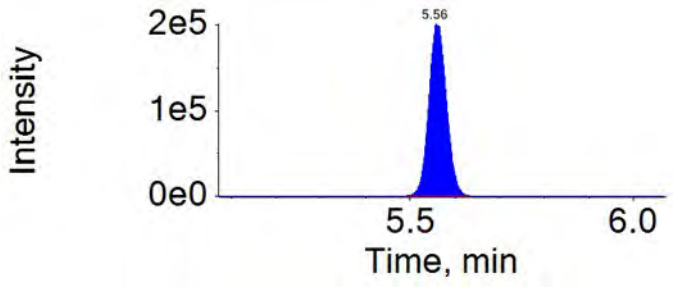
APPROVED
By MCD at 9:12 pm, 11/30/18

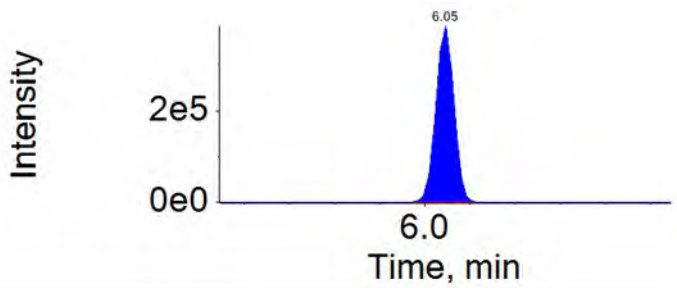
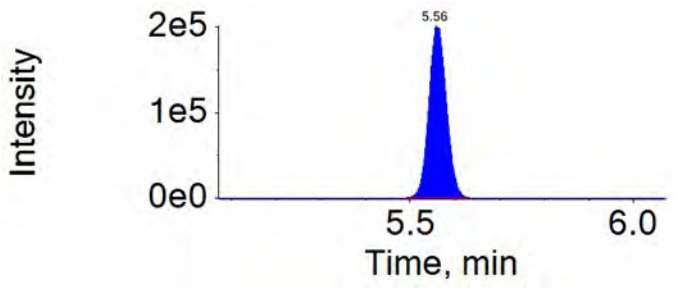
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

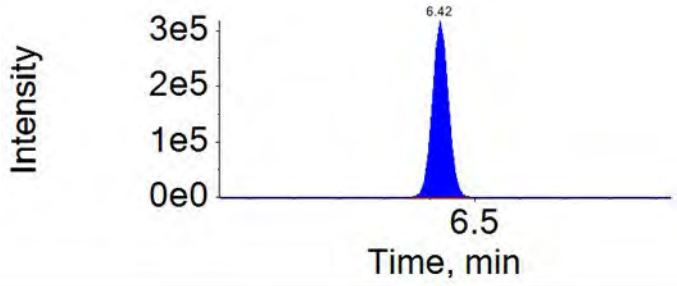
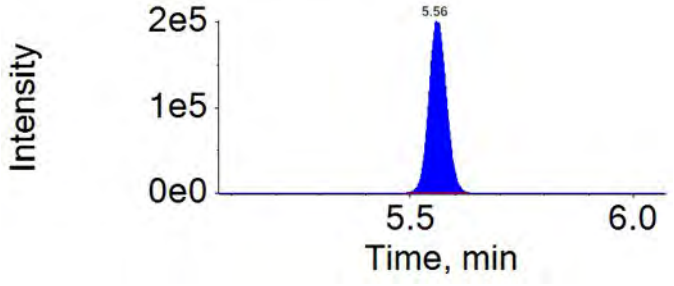
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

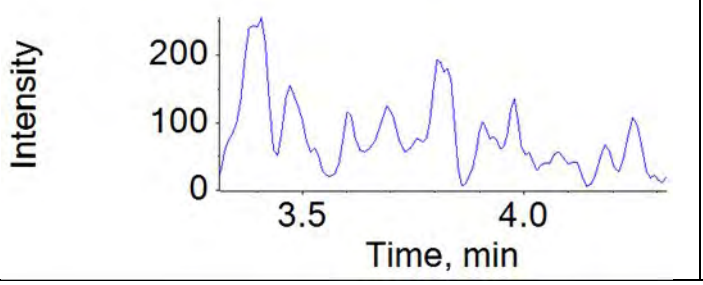
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

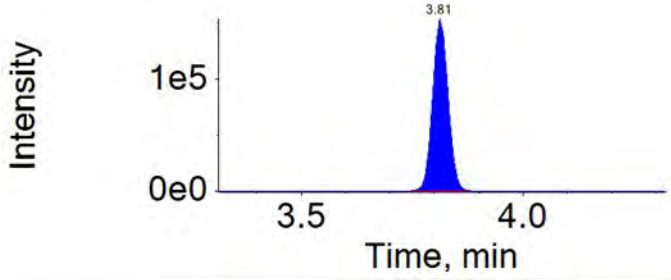
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

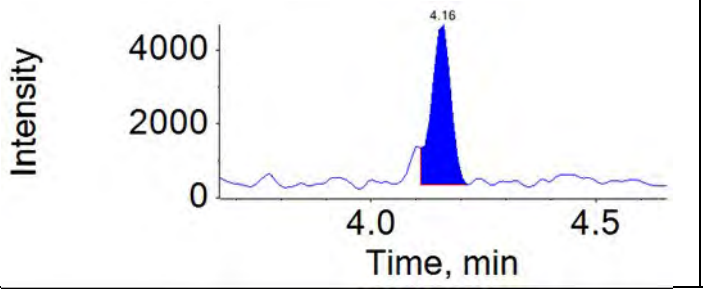
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

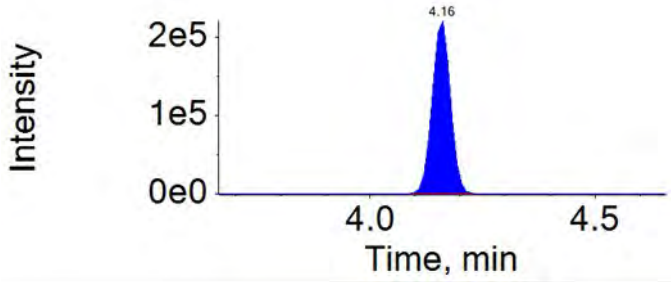
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



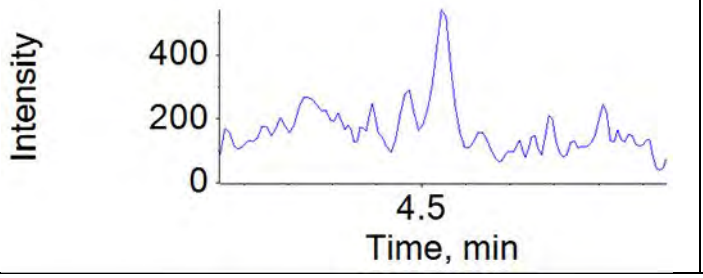


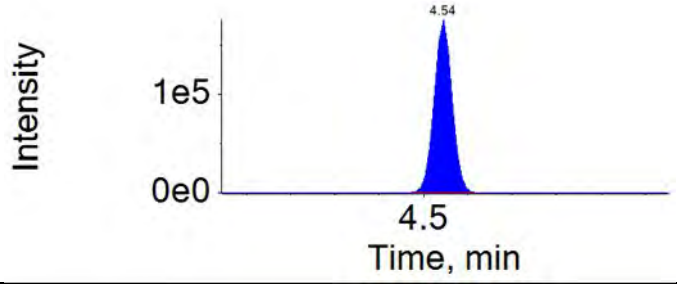
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



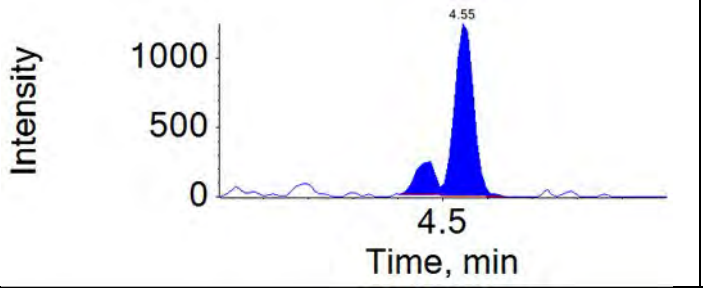


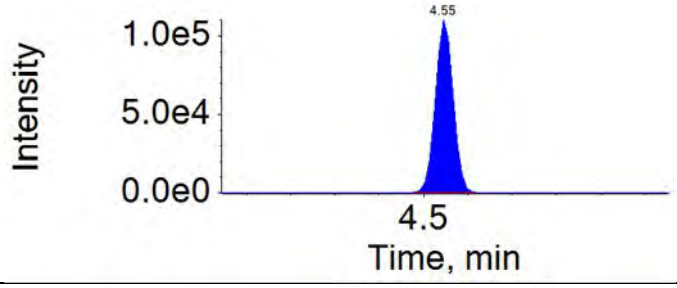
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



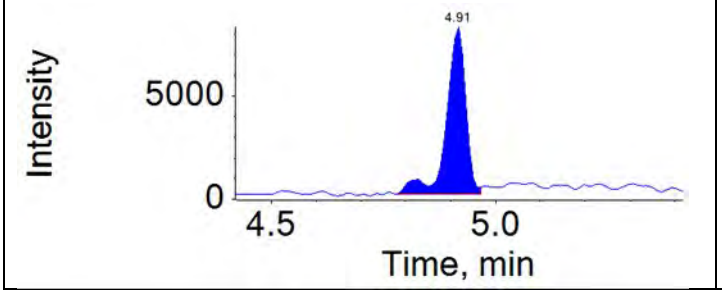


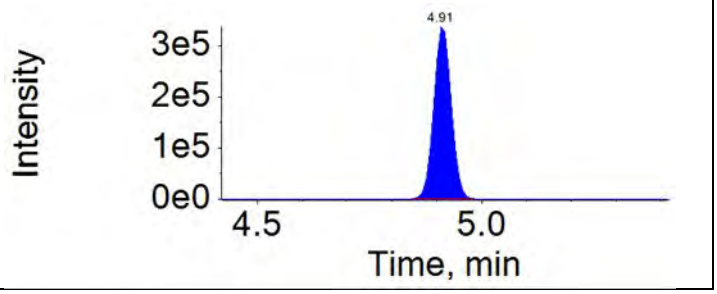
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

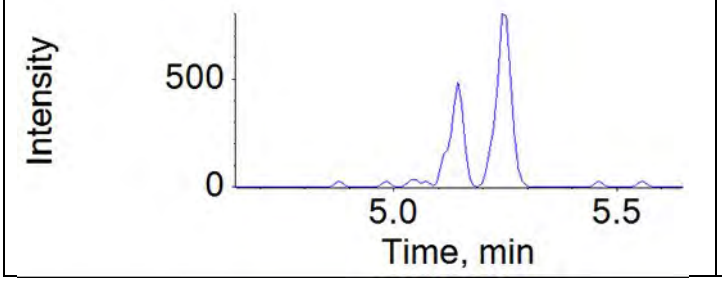
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

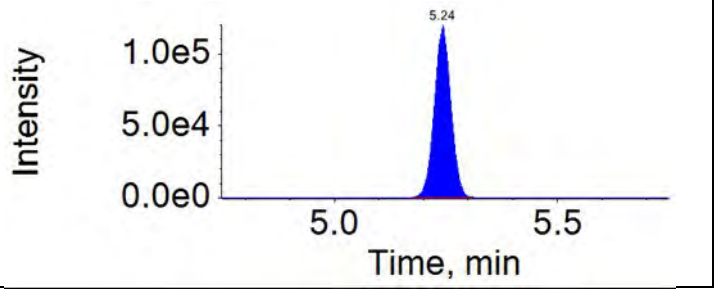
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



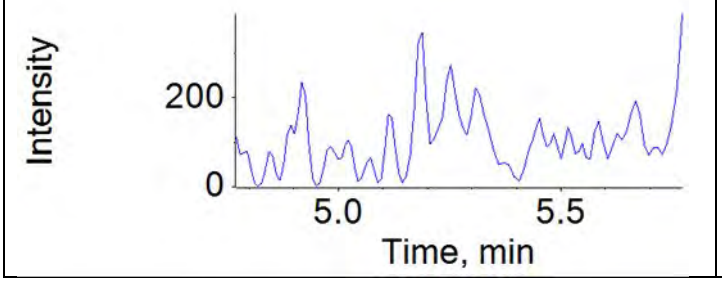


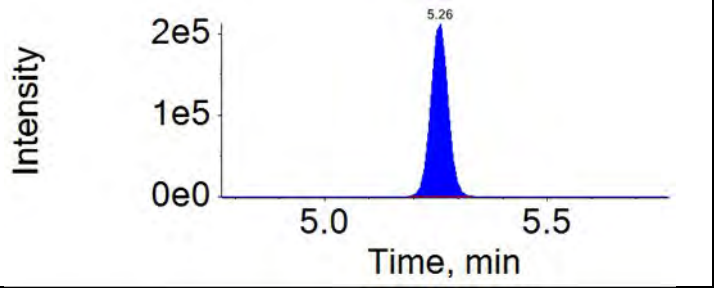
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



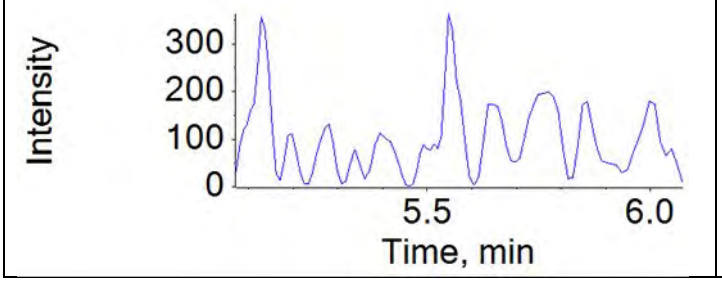


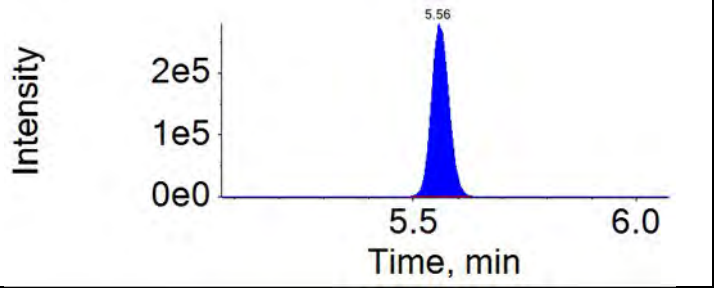
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



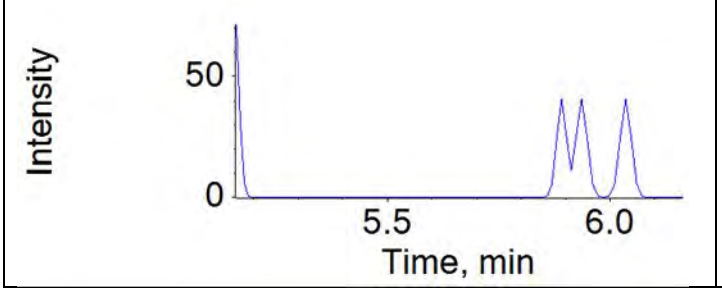


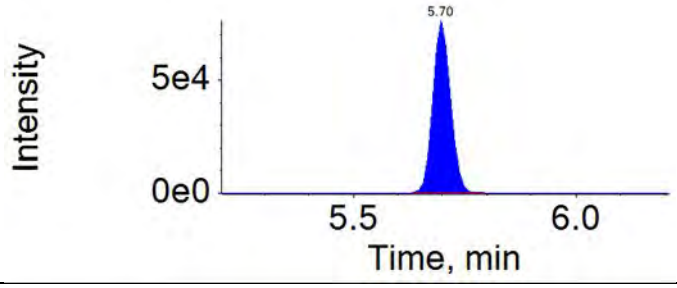
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

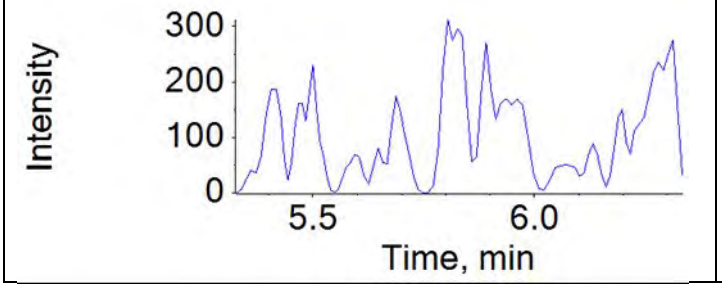
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

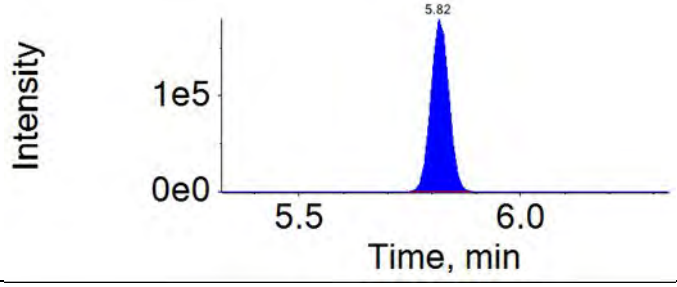
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



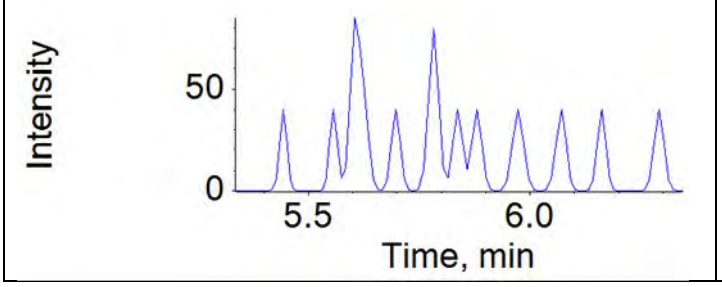


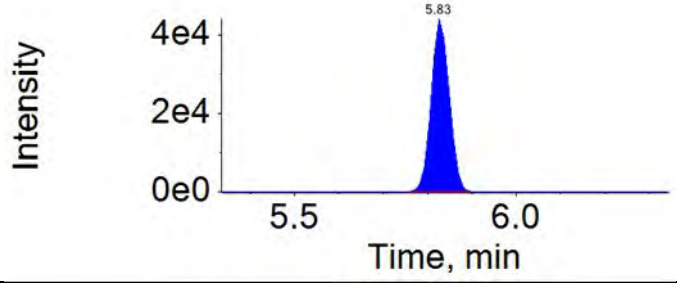
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



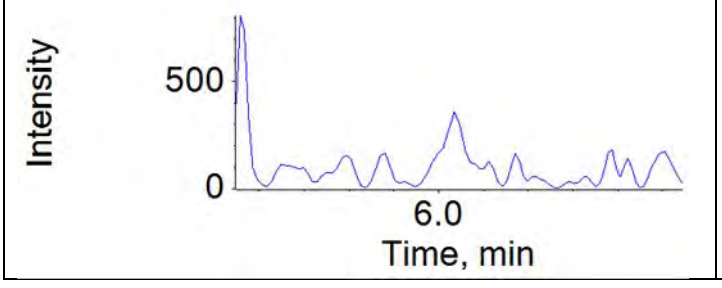


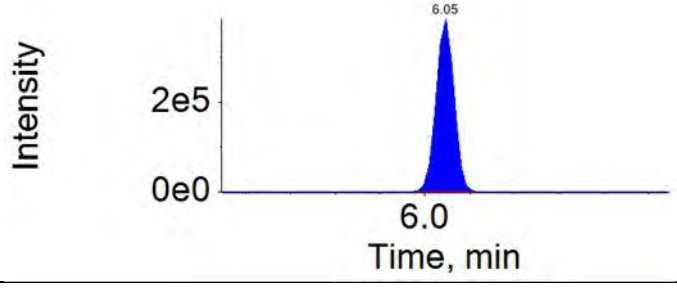
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



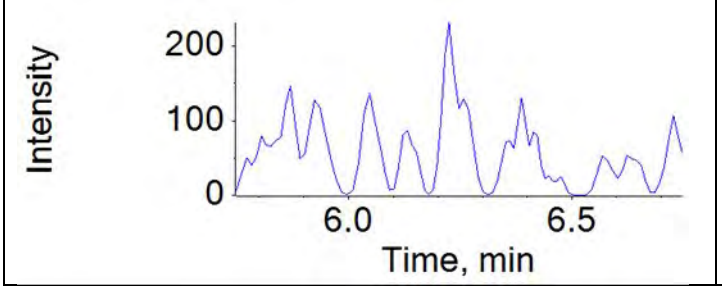


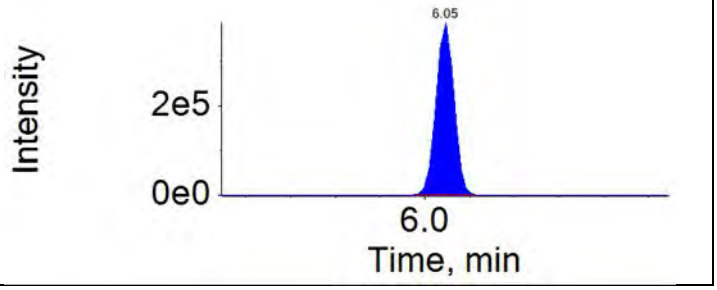
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

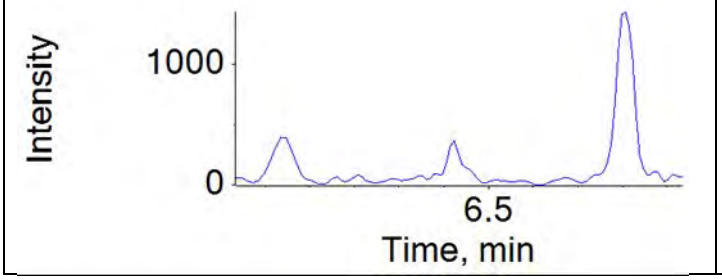
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

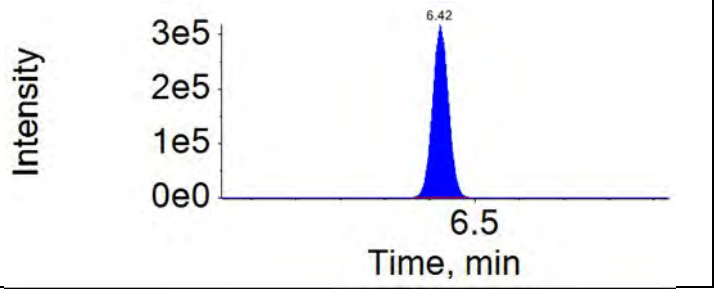
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



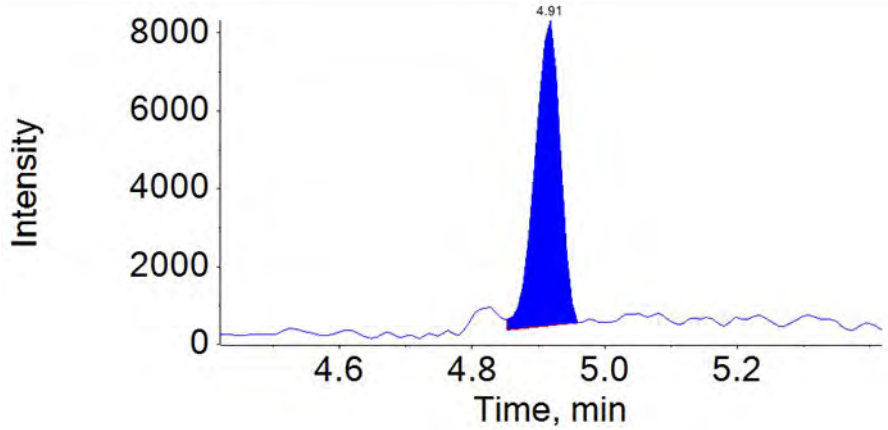


APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

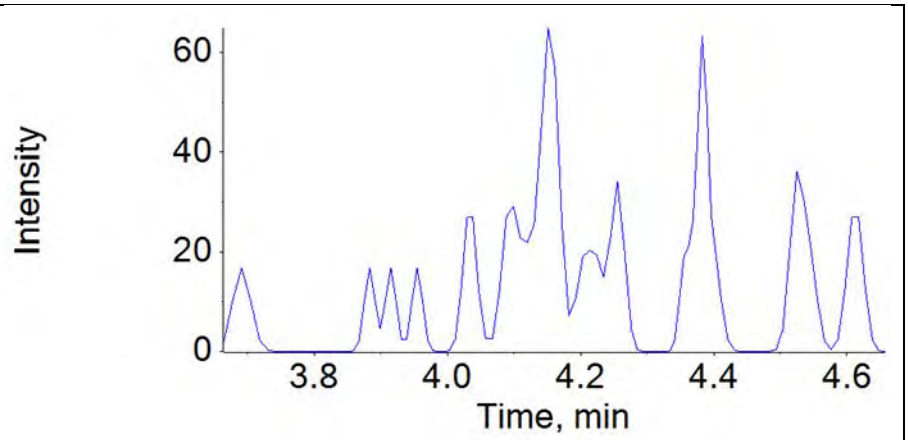
Results Table Name: 18331014
Results Table Date: 11/30/2018 9:03:58 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
20817.0
Mass Range:
413.0 / 369.0
File Name:
18NOV29D-50.wiff
Sample Name:
9881947



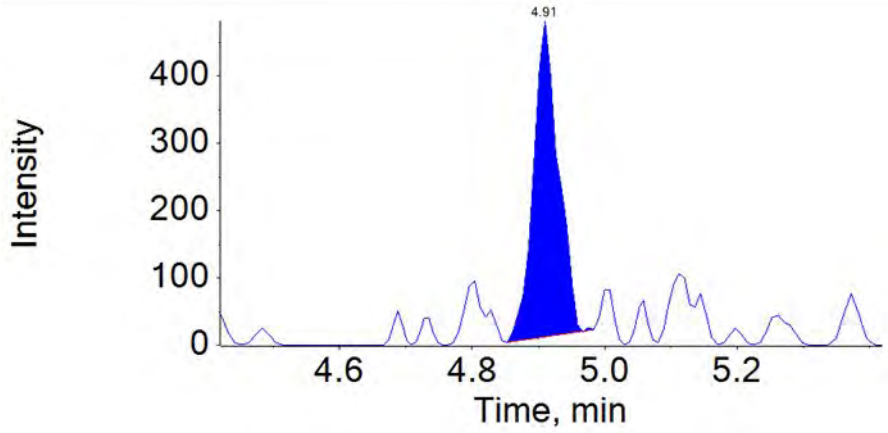
Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
313.0 / 119.0
File Name:
18NOV29D-50.wiff
Sample Name:
9881947



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
1232.0
Mass Range:
413.0 / 169.0
File Name:
18NOV29D-50.wiff
Sample Name:
9881947



Integration Comment: incorrect integration

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Results Table Name: 18331014
Results Table Date: 11/30/2018 9:03:58 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Ion Ratio Report

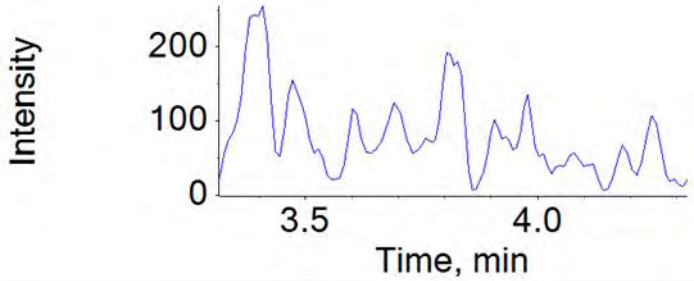
Sample Name: 9881947 **Instrument Name:** LM27631 **File Name:** 18NOV29D-50.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.16	1.00	12892.0	A	N/A	0.0111			
PFHxA_2	4.15	1.00	142.6	M	N/A	0.0111	7	50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	4.55	1.00	4394.1	A	N/A	0.5604			
PFHxS_2	4.55	1.00	2462.5	A	N/A	0.5604	52	50	OOS
PFOA	4.91	1.00	24570.2	M	N/A	0.0625			
PFOA_2	4.91	1.00	1535.0	M	N/A	0.0625	9	50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

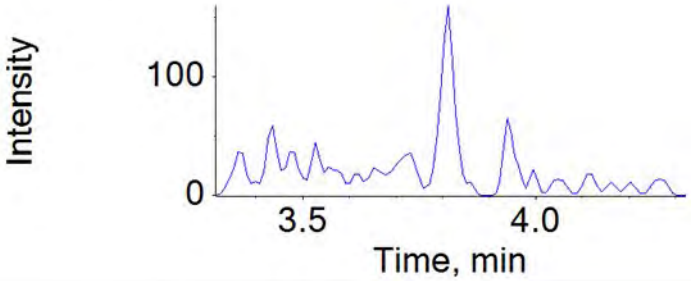
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

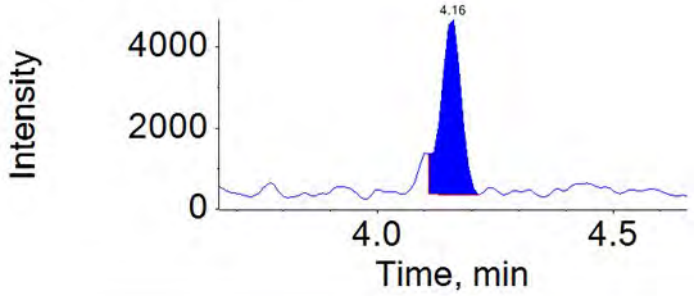
Component: PFBS
Primary Mass: 299.0 / 80.0



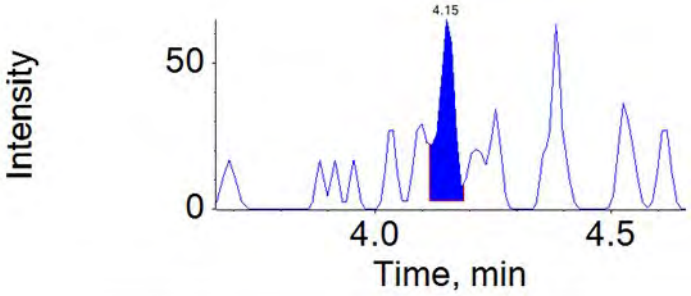
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



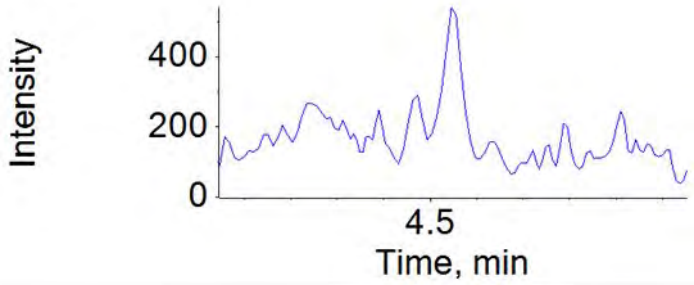
Component: PFHxA
Primary Mass: 313.0 / 269.0



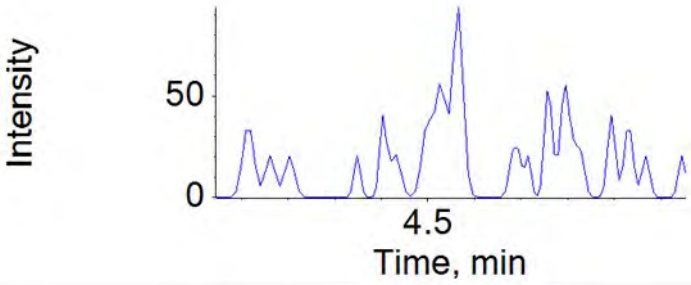
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



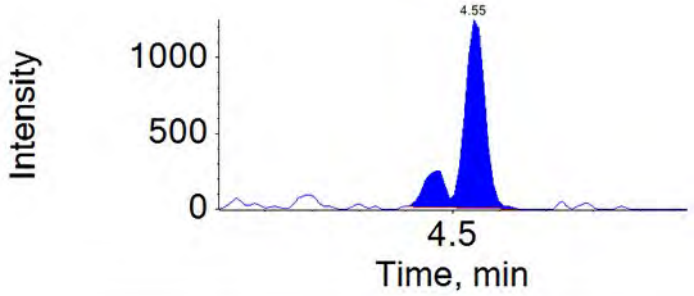
Component: PFHpA
Primary Mass: 363.0 / 319.0



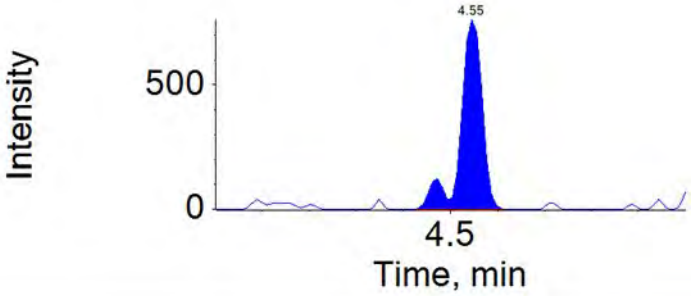
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



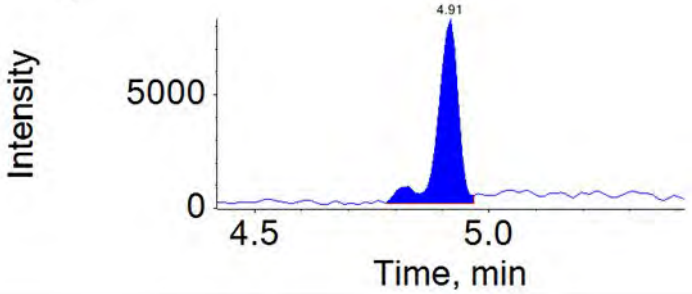
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



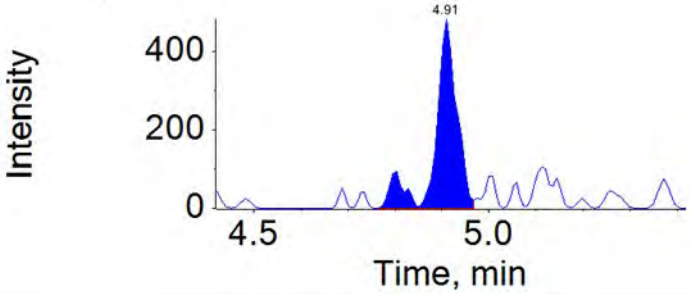
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

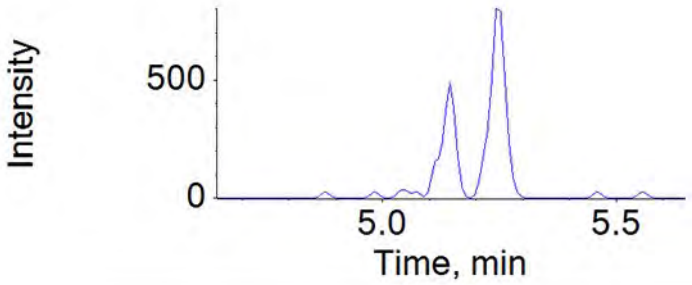
Component: PFOA
Primary Mass: 413.0 / 369.0



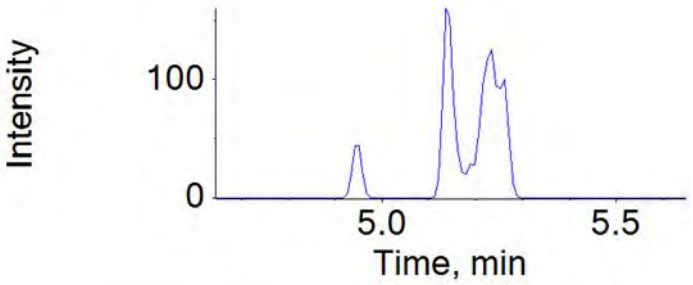
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



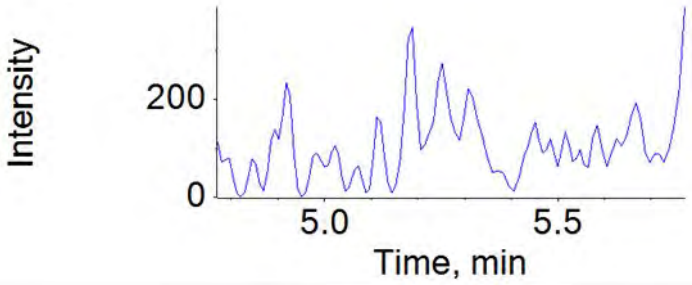
Component: PFOS
Primary Mass: 499.0 / 80.0



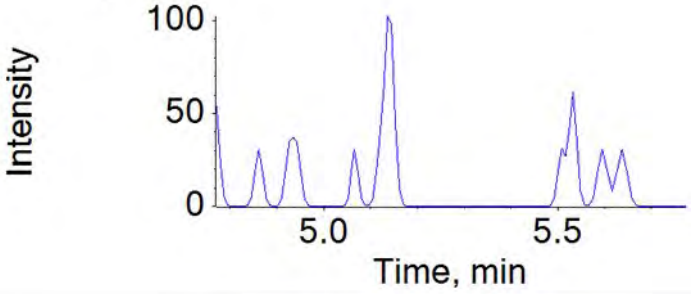
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



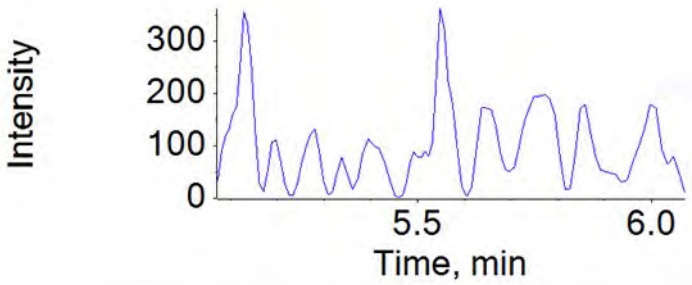
Component: PFNA
Primary Mass: 463.0 / 419.0



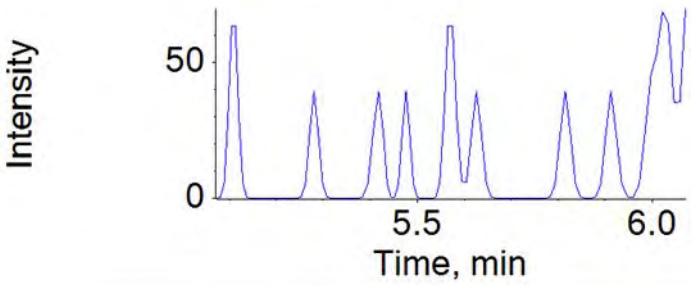
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



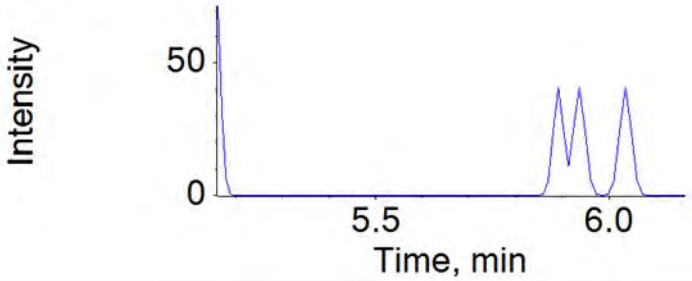
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



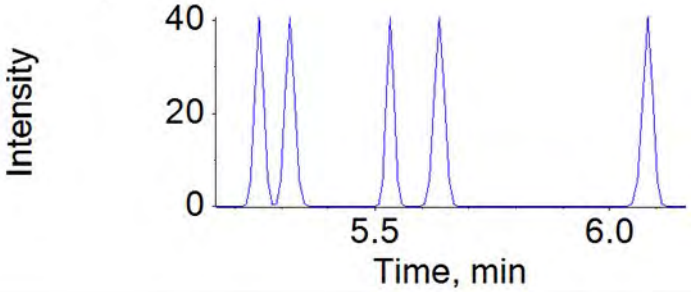
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

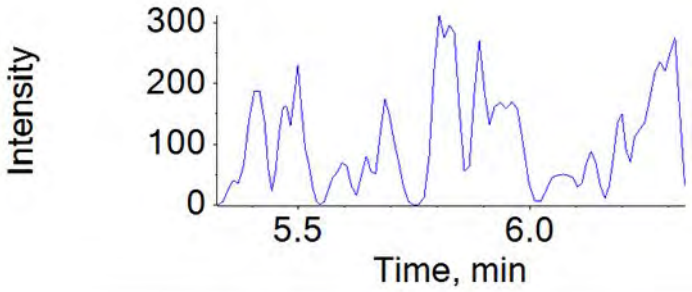
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



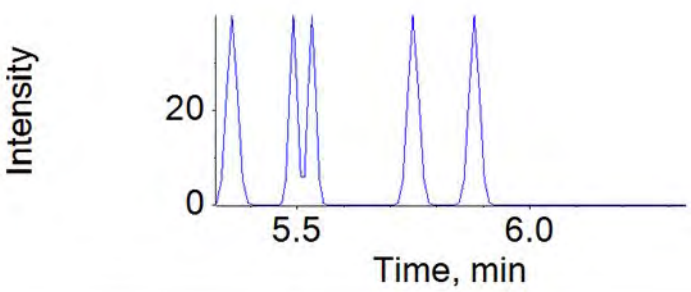
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



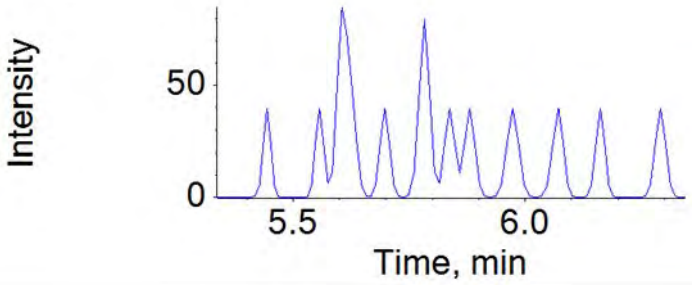
Component: PFUnDA
Primary Mass: 563.0 / 519.0



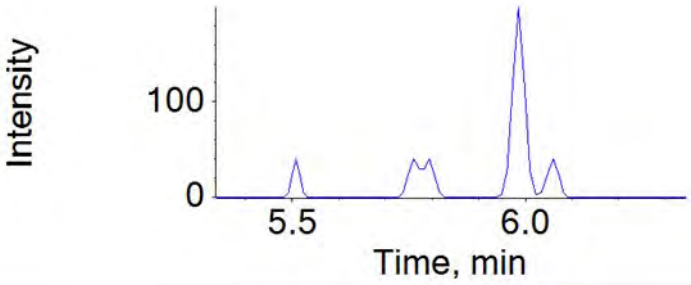
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



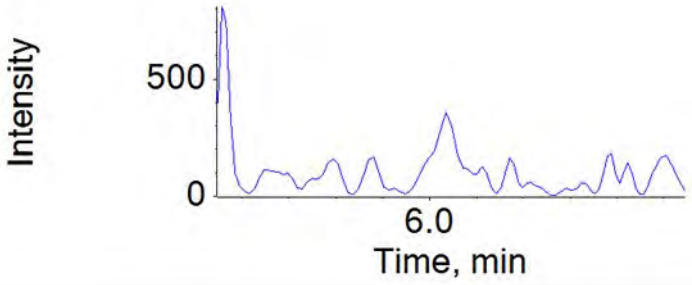
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



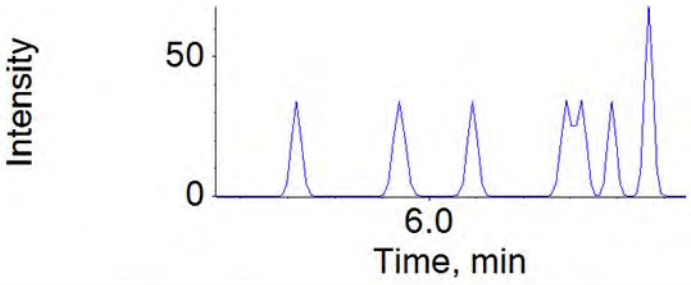
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



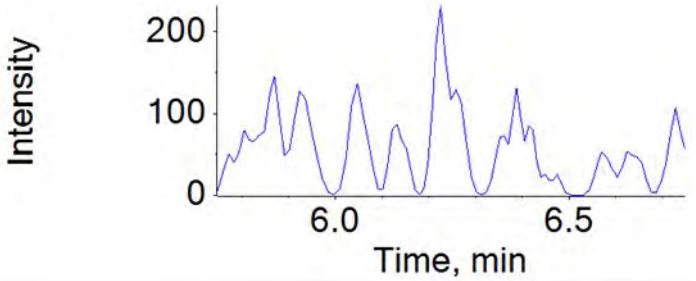
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



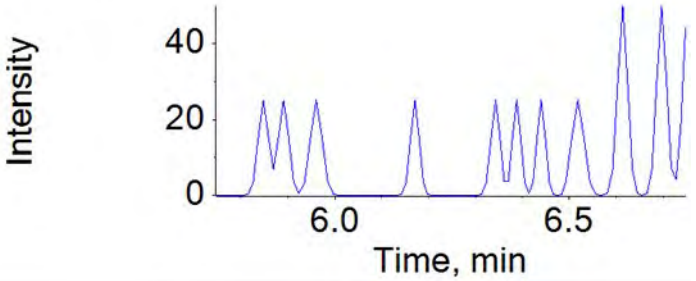
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

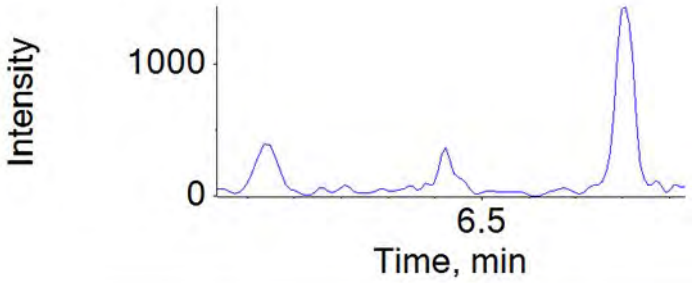
Component: PFTrDA
Primary Mass: 663.0 / 619.0



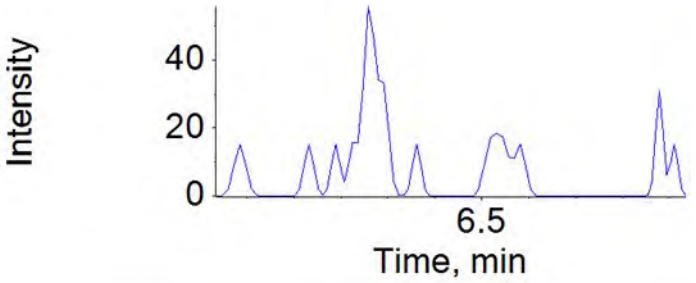
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881948			**Data File:**		18NOV29D-51.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18331014 OU1-CAOC1517-S-02-12 Grab Soil			**Acquis Date:**		2018-11-29T17:28:33
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	32			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18331014
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18331014			**Operator:**		MCD7824
Sample Wt.:	1.06000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1065427.8	906425.4	18	50	
13C2-PFOA	5.0	601243.2	495984.0	21	50	
13C4-PFOS	4.8	358697.3	296261.8	21	50	
13C2-PFDA	5.0	558220.3	451203.0	24	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	407773.2	13C3-PFBA	1065427.8	0.383	8.774	6.889	79	50-150	
E13C5-PFHxA	690121.4	13C2-PFOA	601243.2	1.148	9.434	7.955	84	50-150	
E13C3-PFHxS	327207.0	13C2-PFOA	601243.2	0.544	8.925	8.048	90	50-150	
E13C4-PFHpA	512637.7	13C2-PFOA	601243.2	0.853	9.434	7.392	78	50-150	
E13C8-PFOA	960384.5	13C2-PFOA	601243.2	1.597	9.434	8.296	88	50-150	
E13C8-PFOS	307923.5	13C4-PFOS	358697.3	0.858	9.019	7.312	81	50-150	
E13C9-PFNA	648833.5	13C4-PFOS	358697.3	1.809	9.434	7.496	79	50-150	
E13C6-PFDA	835087.8	13C2-PFDA	558220.3	1.496	9.434	7.958	84	50-150	
Ed3-NMeFOSAA	226993.8	13C2-PFDA	558220.3	0.407	9.434	9.741	103	50-150	
E13C7-PFUnDA	566147.4	13C2-PFDA	558220.3	1.014	9.434	8.087	86	50-150	
Ed5-NEtFOSAA	135935.7	13C2-PFDA	558220.3	0.244	9.434	8.186	87	50-150	
E13C2-PFDoDA	1108914.0	13C2-PFDA	558220.3	1.987	9.434	7.875	83	50-150	
E13C2-PFTeDA	816118.8	13C2-PFDA	558220.3	1.462	9.434	7.633	81	50-150	

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

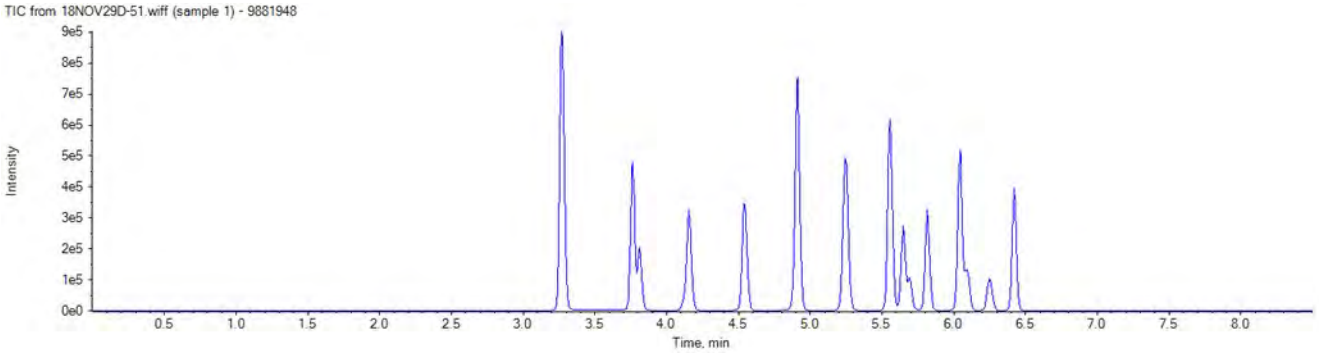
Analyte Quantitation Peak Table

Sample Name: 9881948 **Instrument Name:** LM27631 **File Name:** 18NOV29D-51.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	407773.2	N/A	
PFHxA	4.16	1.000	18170.8		A	13C5-PFHxA	4.16	690121.4	0.026	0.199
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	512637.7	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	327207.0	N/A	
PFOA	4.91	1.000	34034.8		M	13C8-PFOA	4.91	960384.5	0.035	0.346
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	307923.5	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	648833.5	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	835087.8	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	226993.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	566147.4	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	135935.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1108914.0	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1108914.0	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	816118.8	N/A	

Total Ion Chromatogram

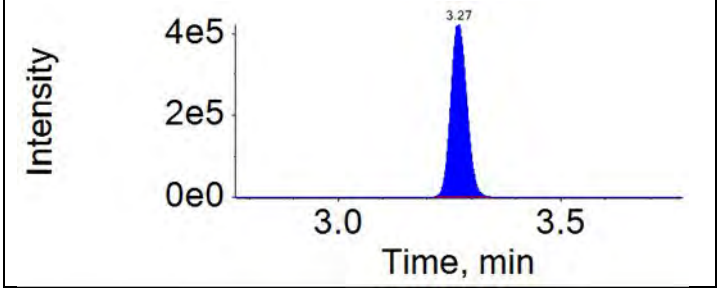


APPROVED
By MCD at 9:12 pm, 11/30/18

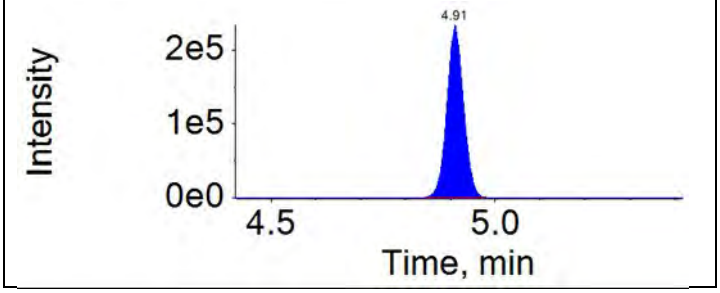
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

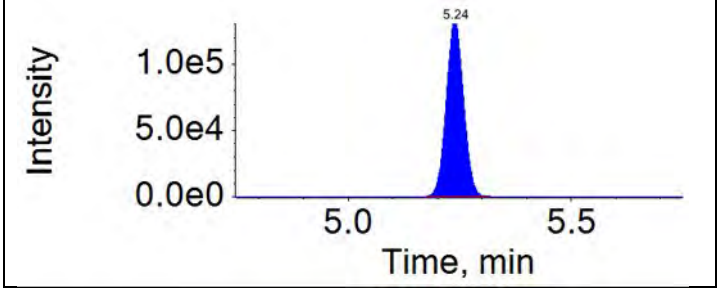
Injection Standard: 13C3-PFBA
216.0 / 172.0



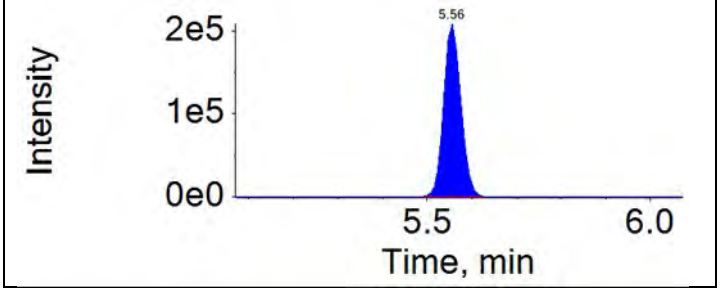
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



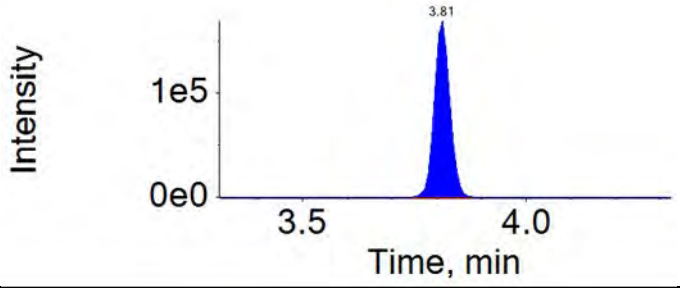
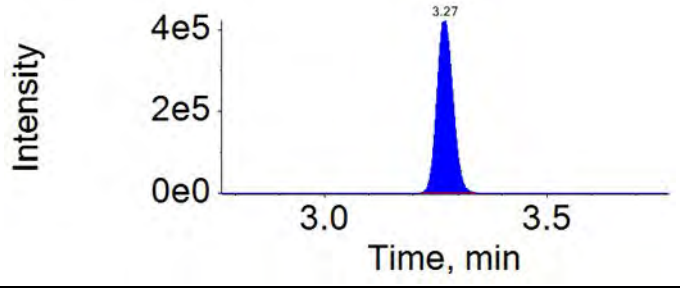
Injection Standard: 13C2-PFDA
515.0 / 470.0

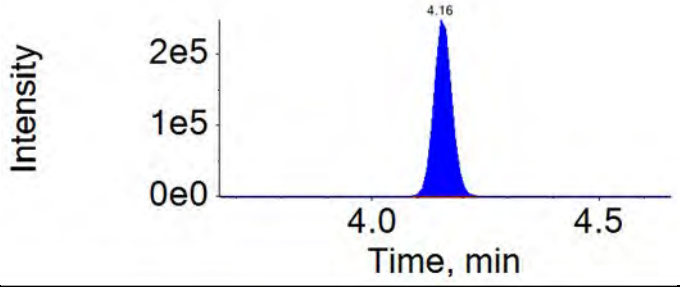
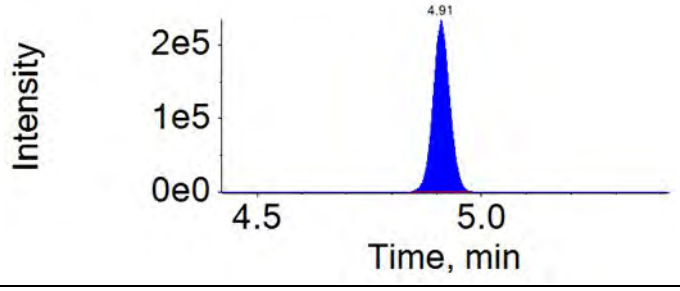


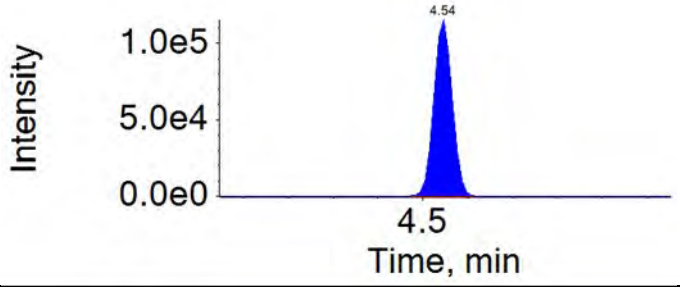
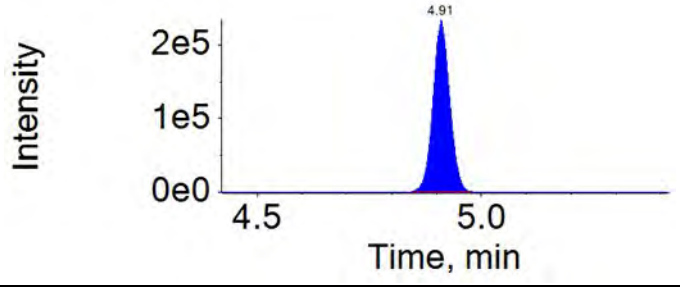
APPROVED
By MCD at 9:12 pm, 11/30/18

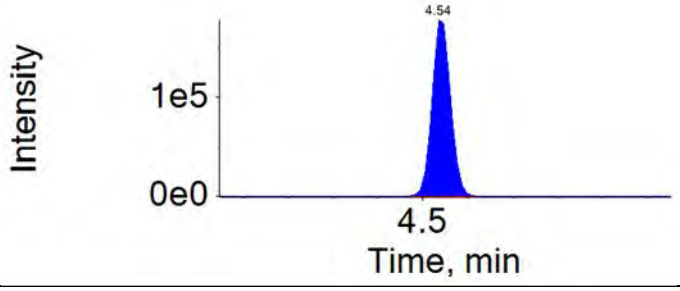
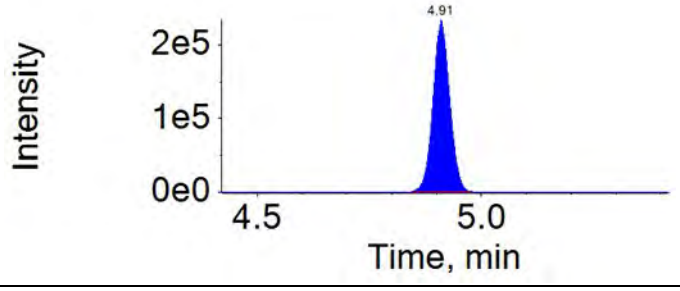
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

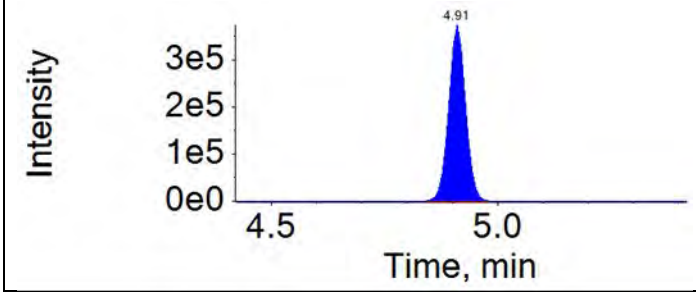
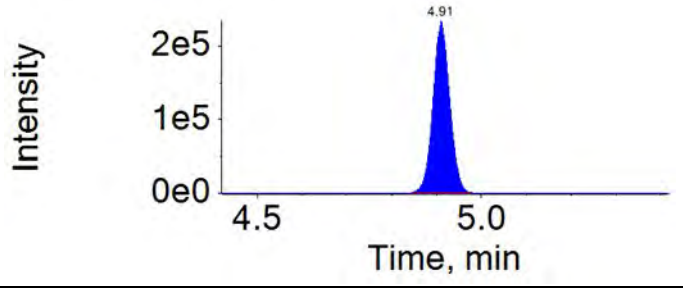
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

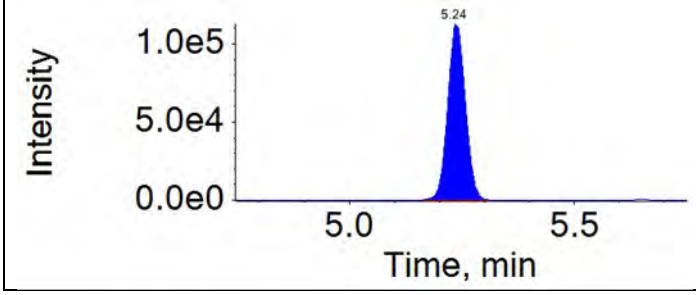
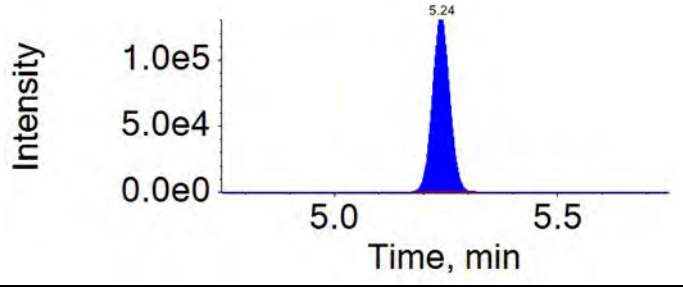
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

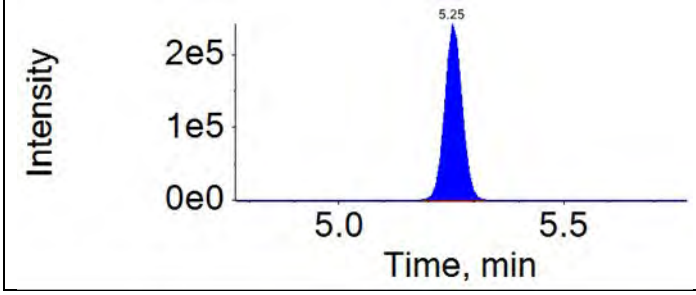
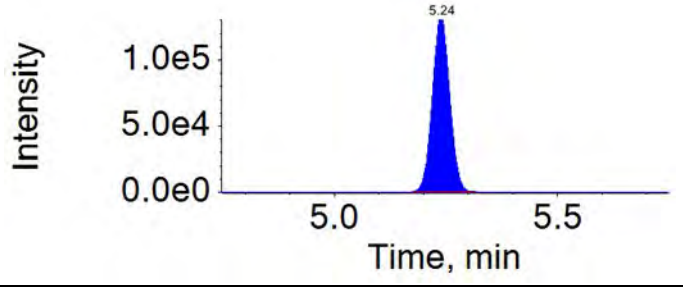
APPROVED
By MCD at 9:12 pm, 11/30/18

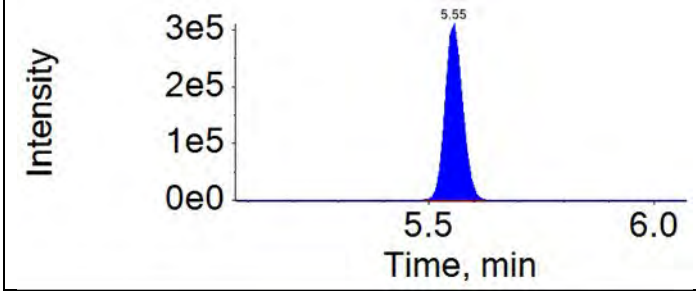
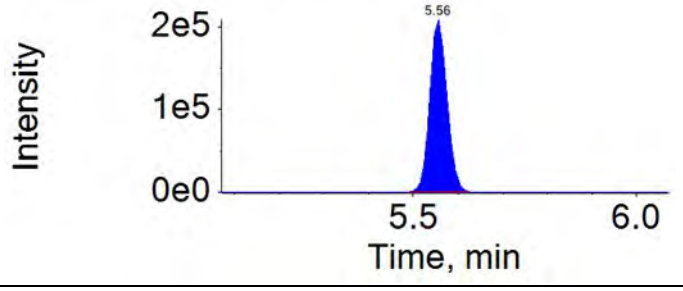
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

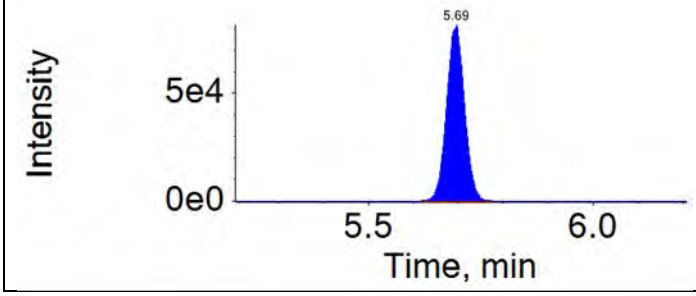
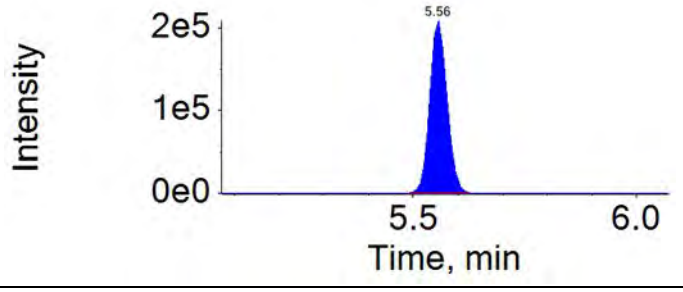
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

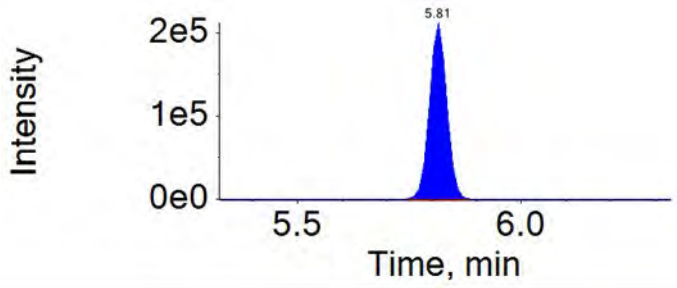
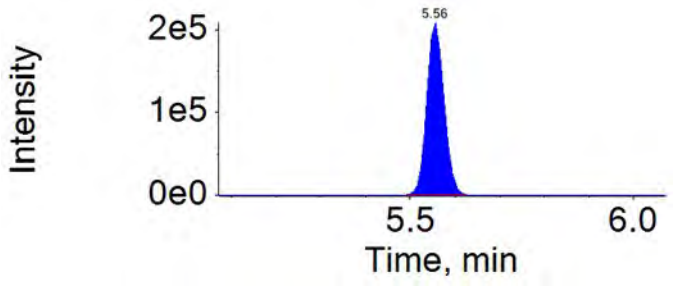
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

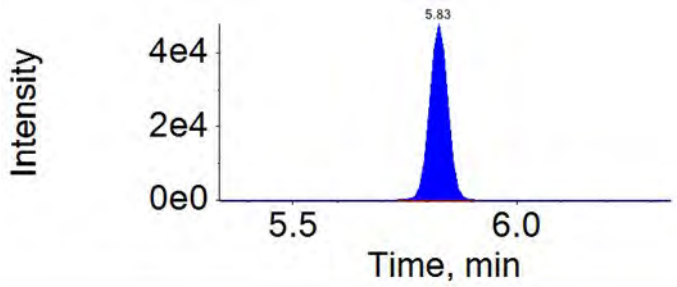
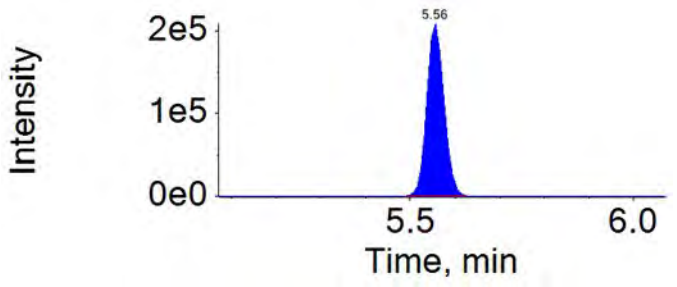
APPROVED
By MCD at 9:12 pm, 11/30/18

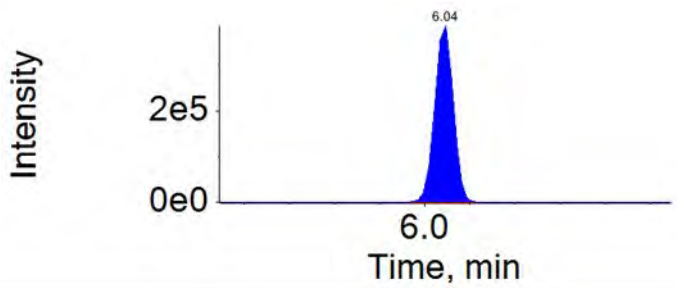
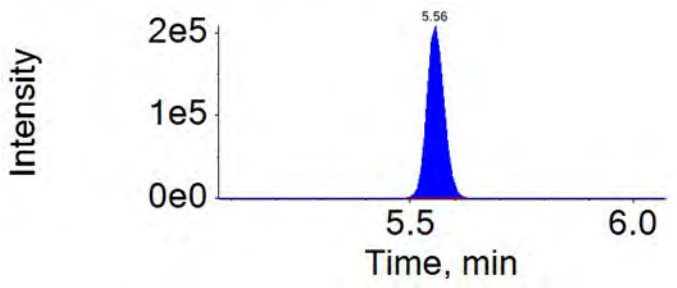
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

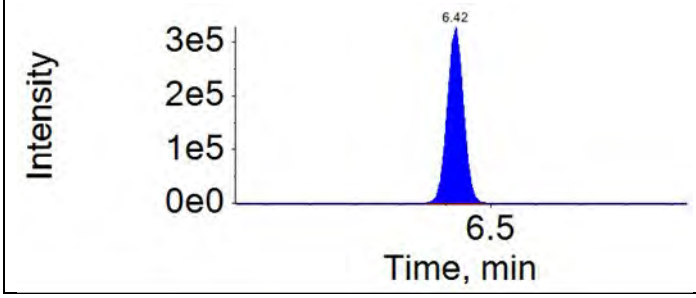
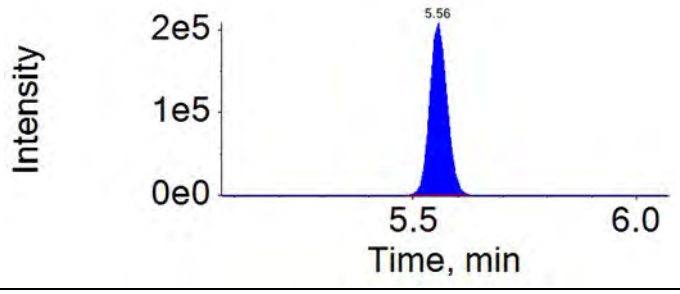
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

APPROVED
By MCD at 9:12 pm, 11/30/18

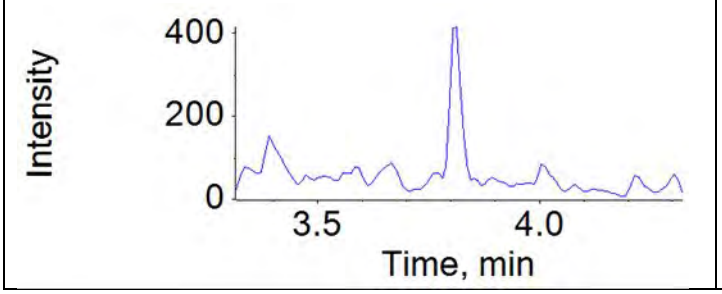
REVIEWED
By HMK at 1:39 pm, 12/6/18

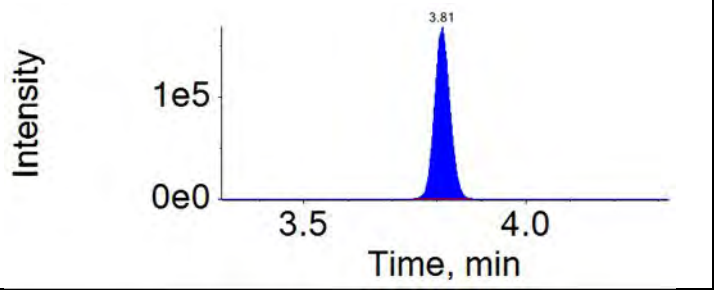
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

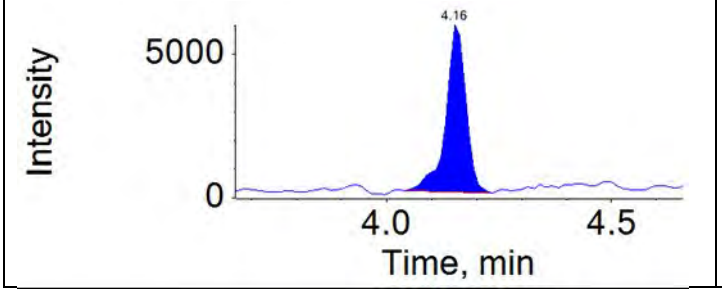
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

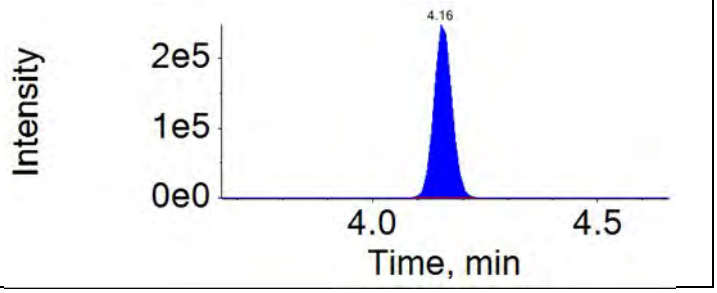
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



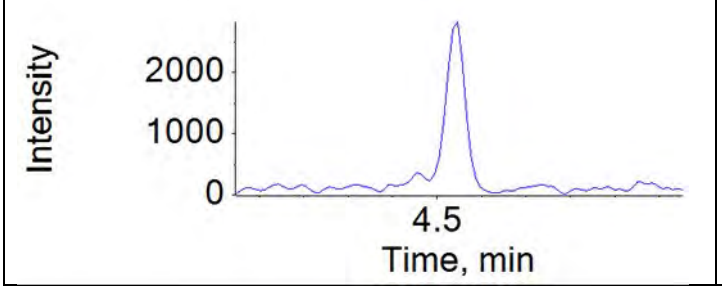


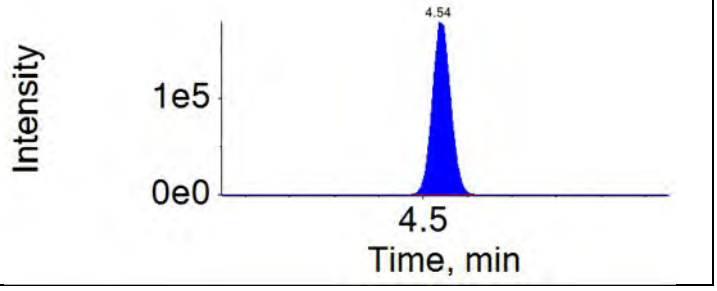
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



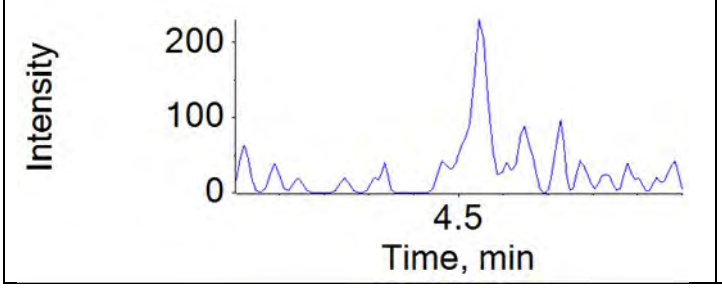


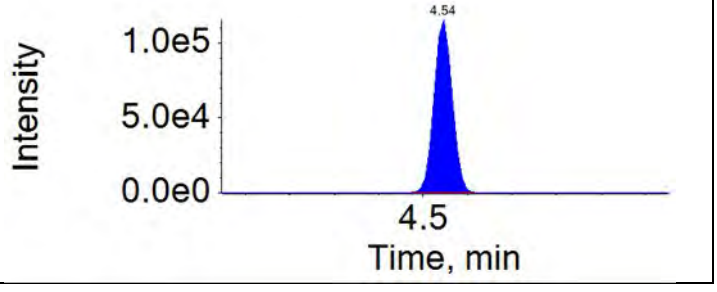
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



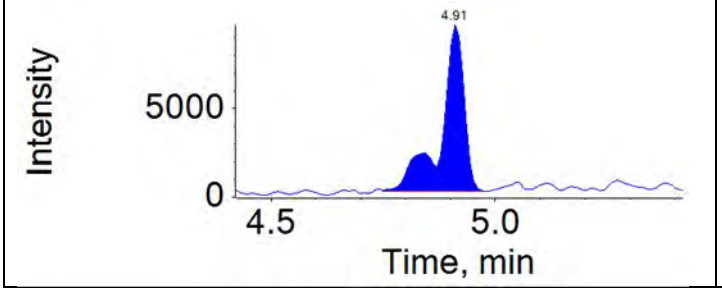


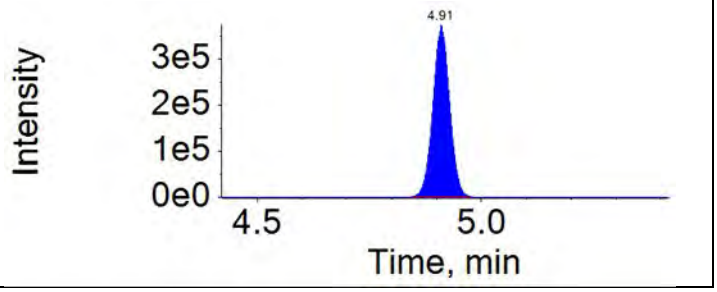
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

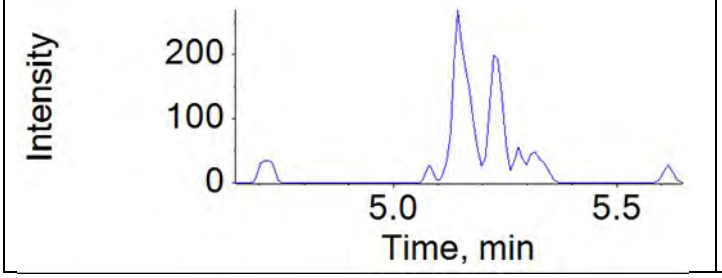
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

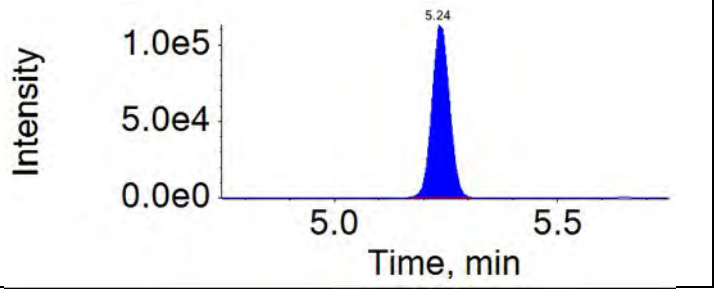
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



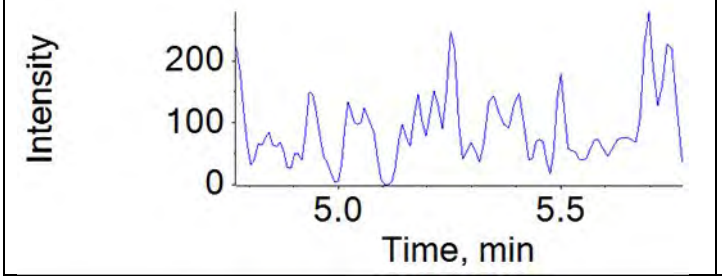


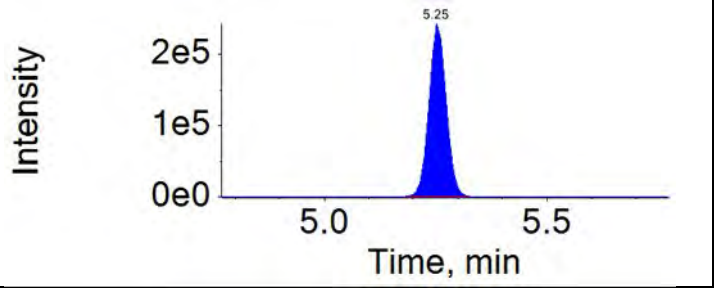
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



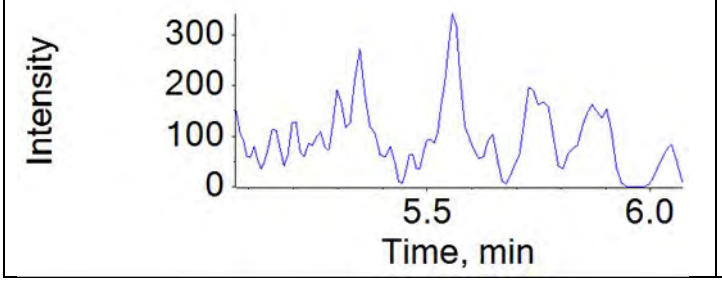


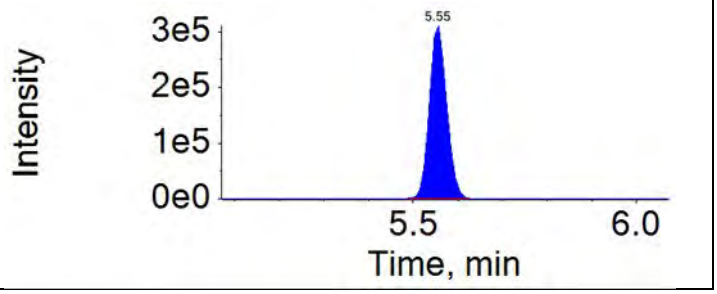
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



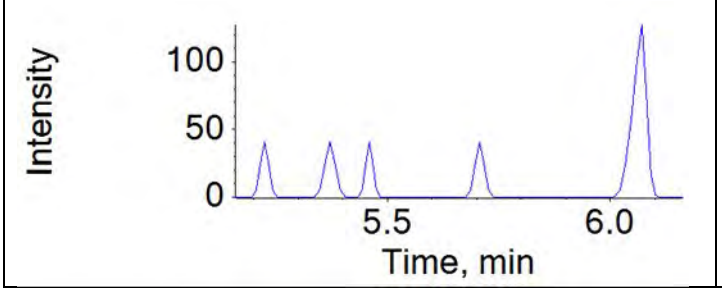


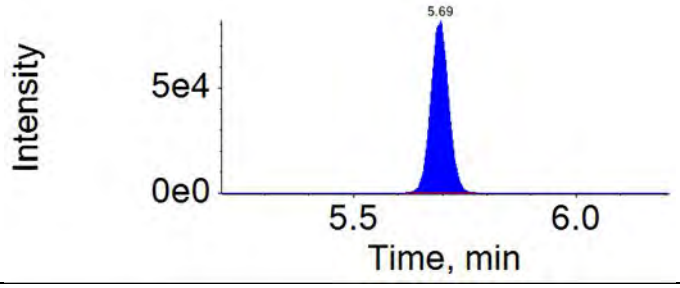
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

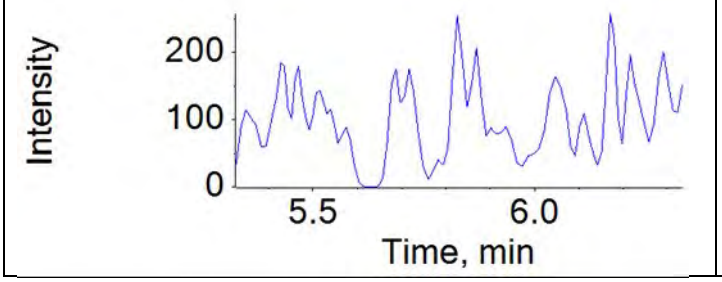
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

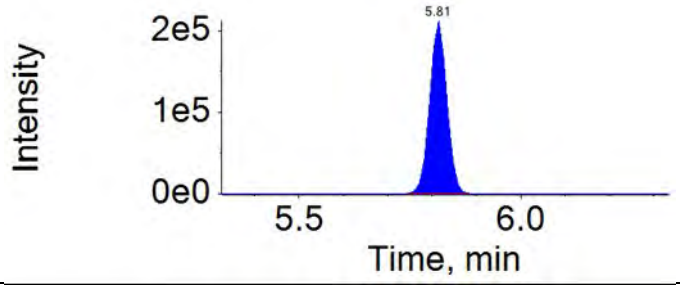
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



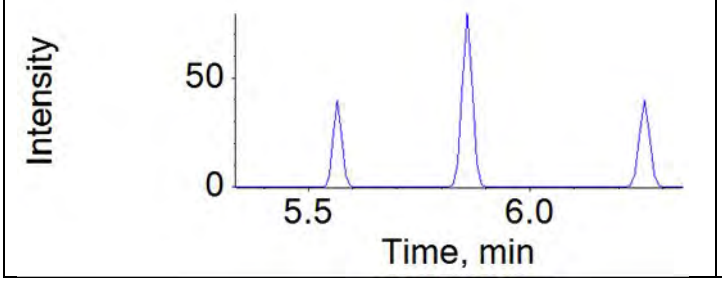


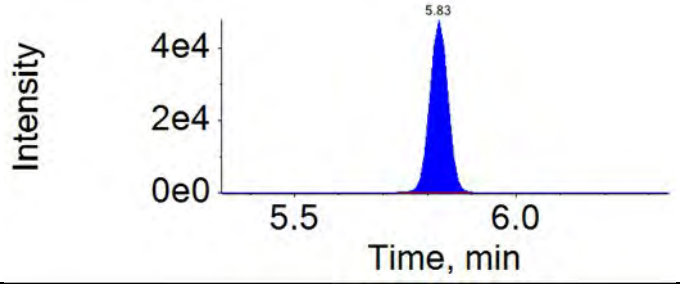
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



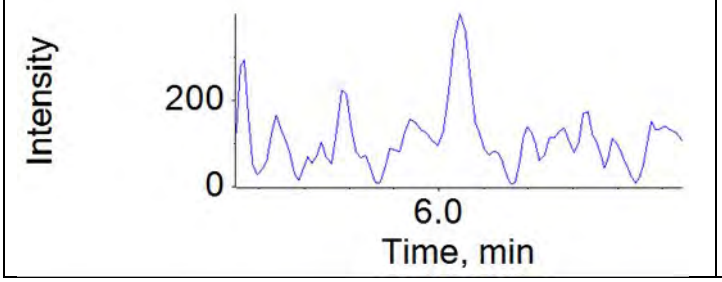


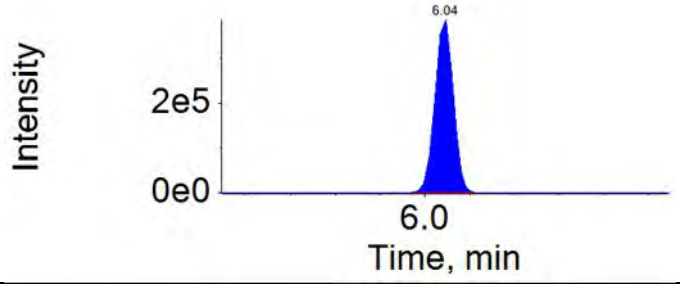
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0

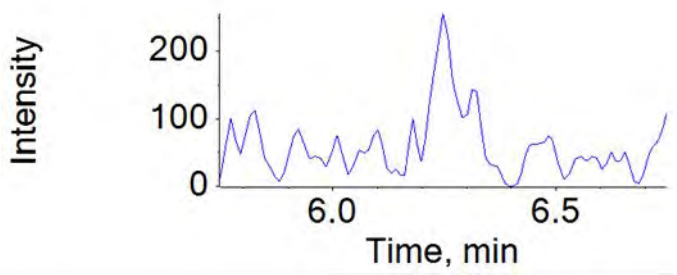
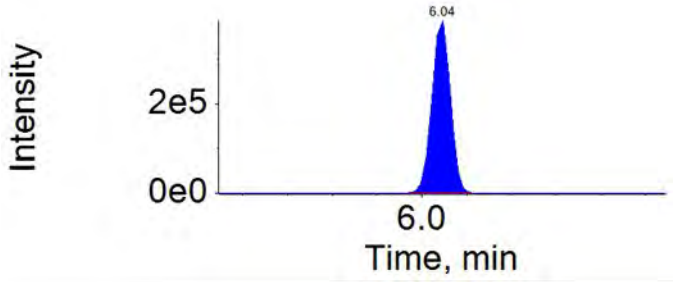


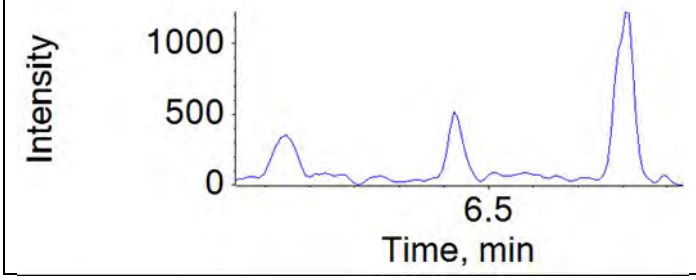
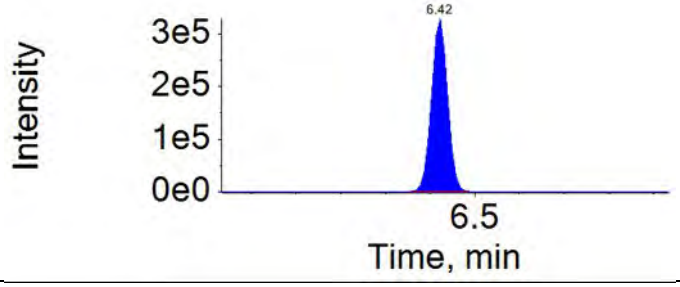


APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

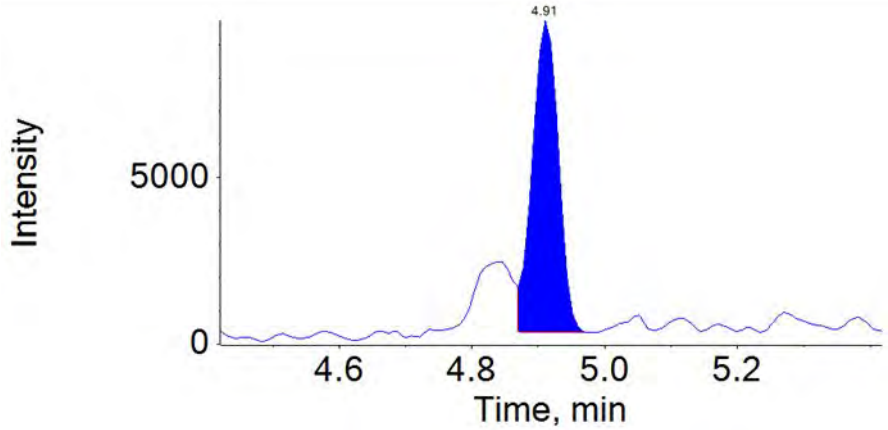
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

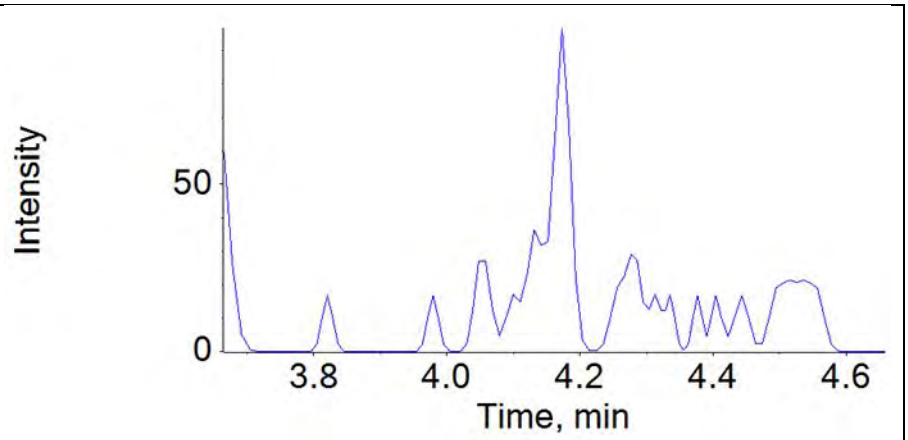
Results Table Name: 18331014
Results Table Date: 11/30/2018 9:03:58 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOA
RT (min.):
4.91
Peak Area:
25444.1
Mass Range:
413.0 / 369.0
File Name:
18NOV29D-51.wiff
Sample Name:
9881948



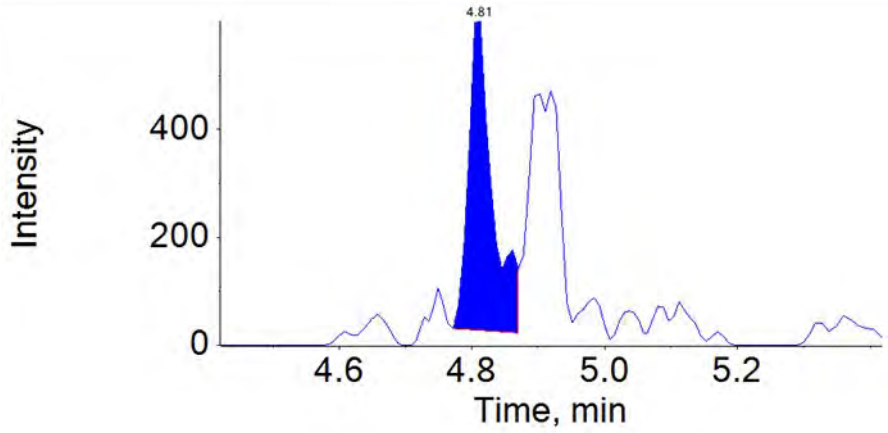
Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
313.0 / 119.0
File Name:
18NOV29D-51.wiff
Sample Name:
9881948



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.81
Peak Area:
1457.2
Mass Range:
413.0 / 169.0
File Name:
18NOV29D-51.wiff
Sample Name:
9881948



Integration Comment: incorrect integration

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Results Table Name: 18331014
Results Table Date: 11/30/2018 9:03:58 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Ion Ratio Report

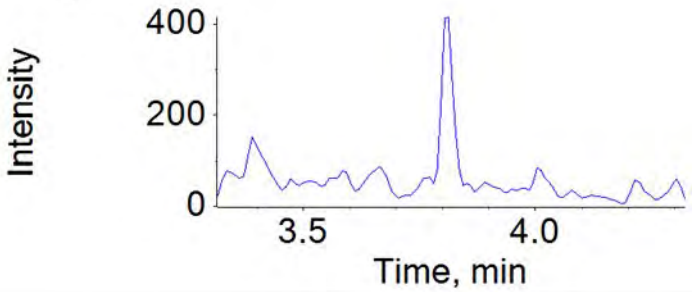
Sample Name: 9881948 **Instrument Name:** LM27631 **File Name:** 18NOV29D-51.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.16	1.00	18170.8	A	N/A	0.0133			
PFHxA_2	4.17	1.00	241.8	M	N/A	0.0133	29	50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	4.91	1.00	34034.8	M	N/A	0.0859			
PFOA_2	4.86	0.99	2924.6	M	N/A	0.0859	50	50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

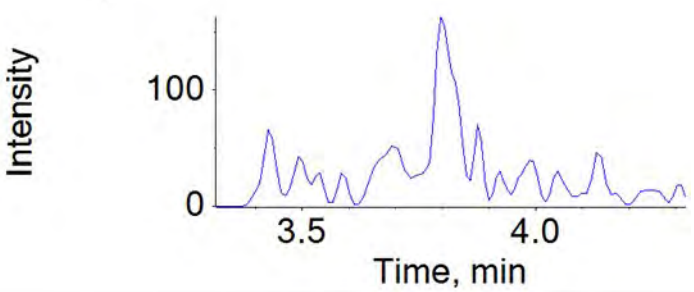
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

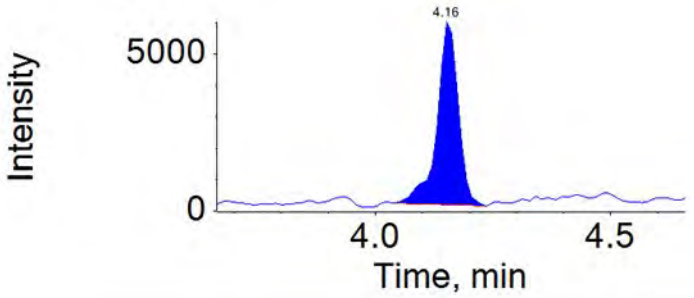
Component: PFBS
Primary Mass: 299.0 / 80.0



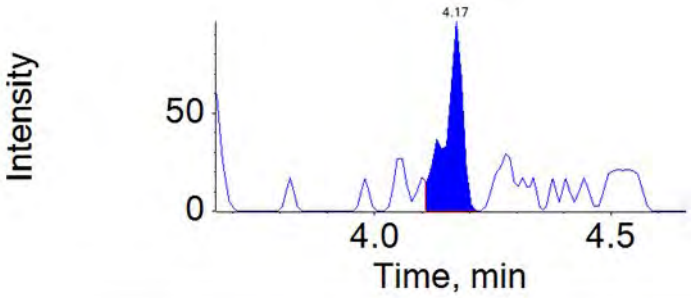
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



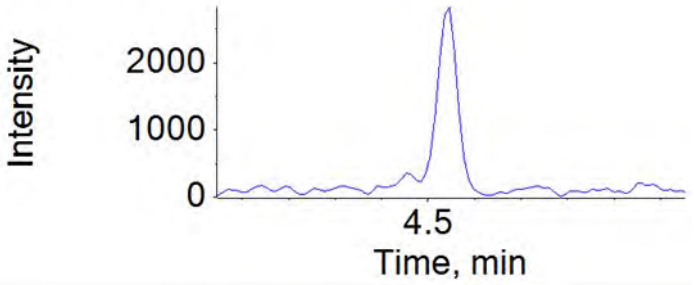
Component: PFHxA
Primary Mass: 313.0 / 269.0



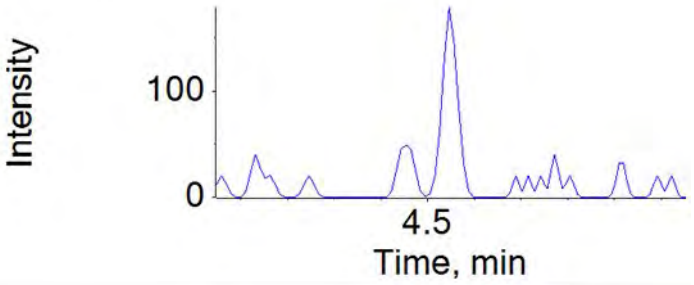
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



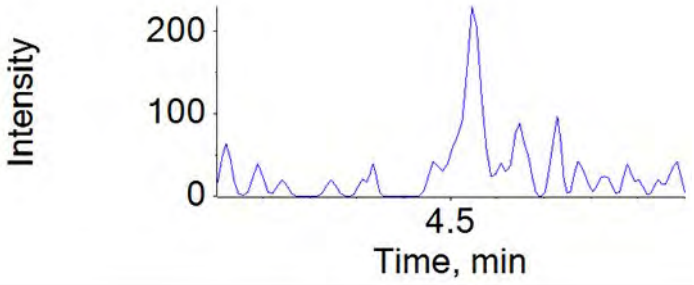
Component: PFHpA
Primary Mass: 363.0 / 319.0



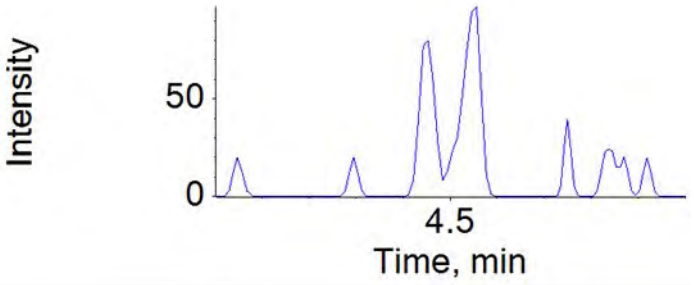
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



Component: PFHxS
Primary Mass: 399.0 / 80.0



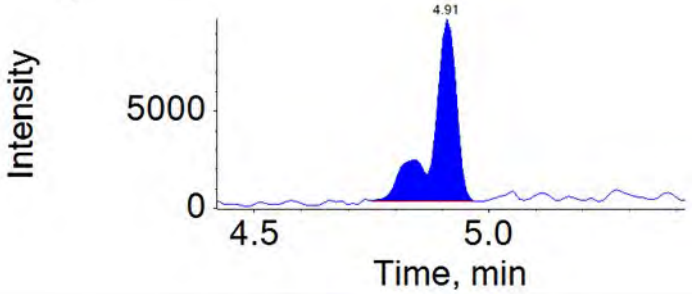
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



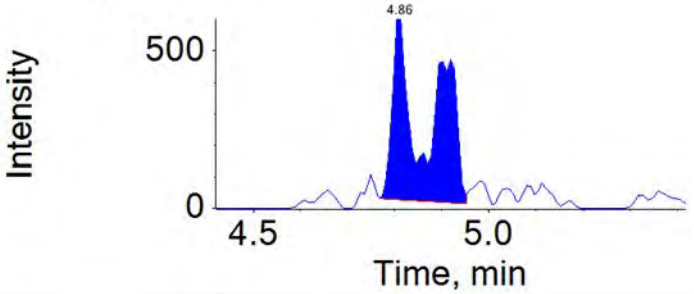
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

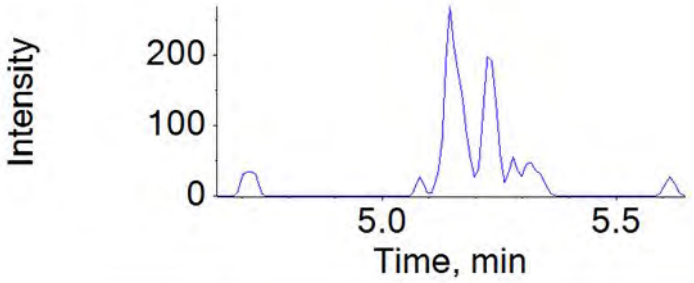
Component: PFOA
Primary Mass: 413.0 / 369.0



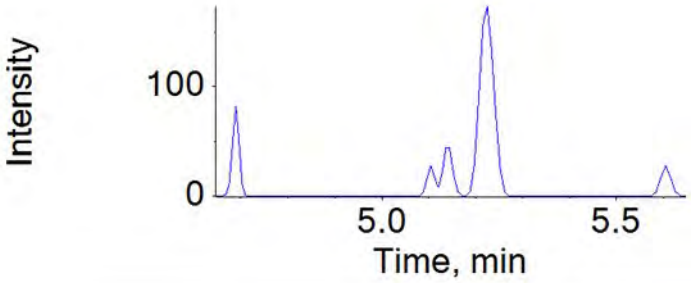
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



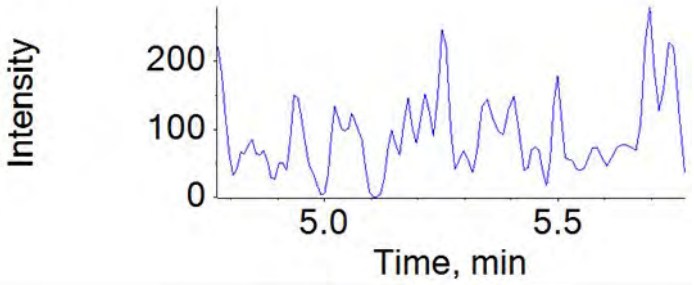
Component: PFOS
Primary Mass: 499.0 / 80.0



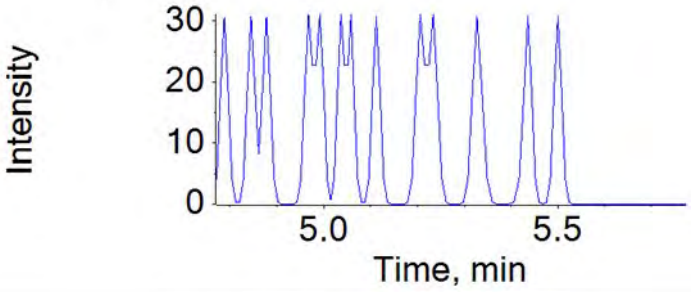
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



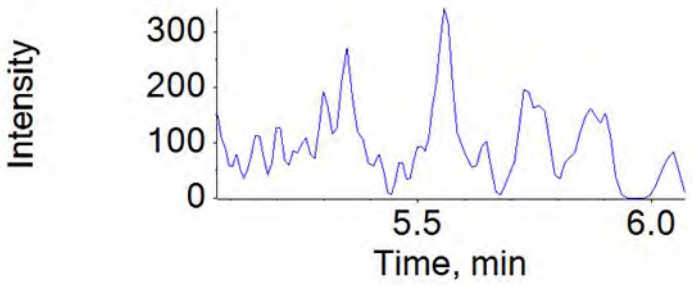
Component: PFNA
Primary Mass: 463.0 / 419.0



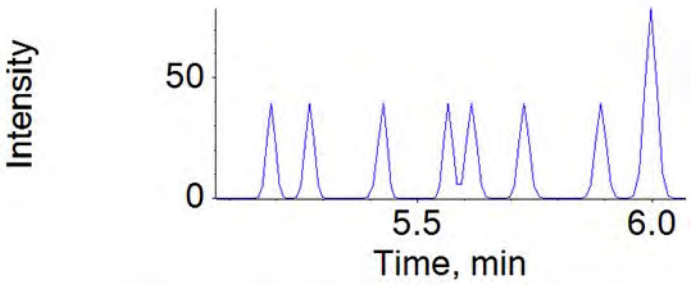
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



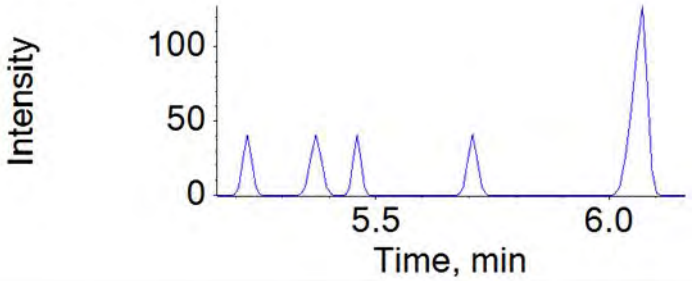
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



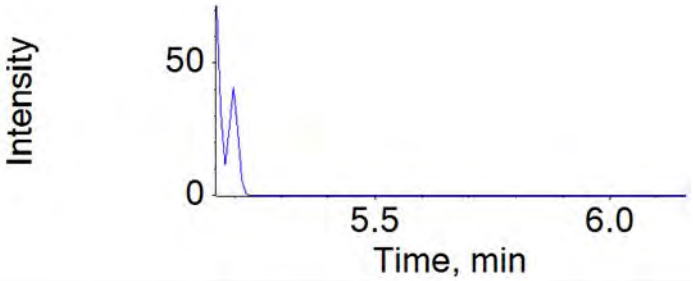
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

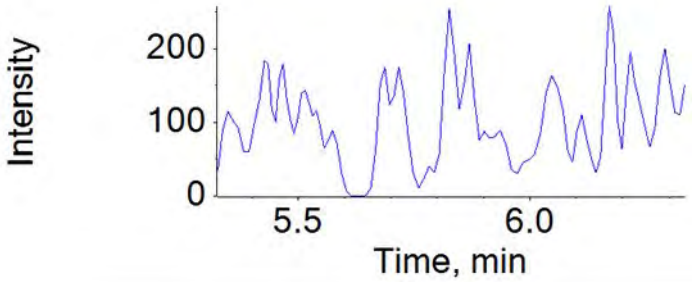
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



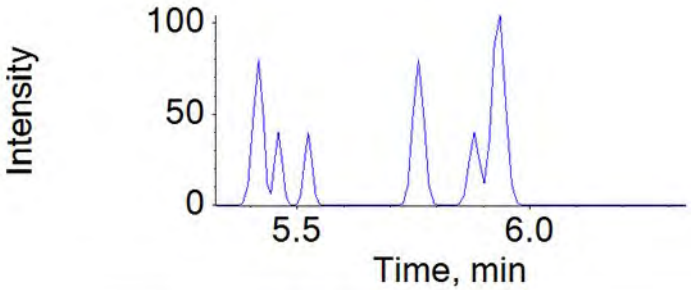
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



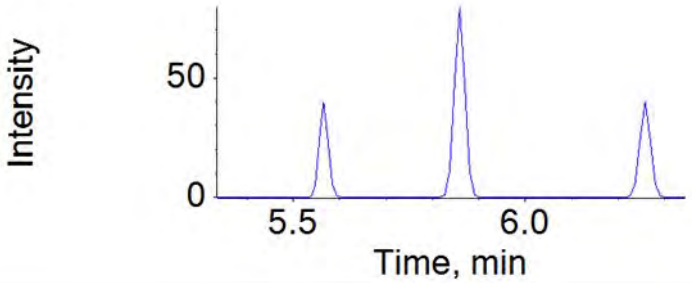
Component: PFUnDA
Primary Mass: 563.0 / 519.0



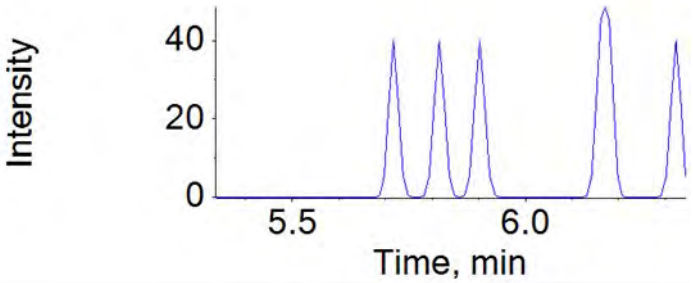
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



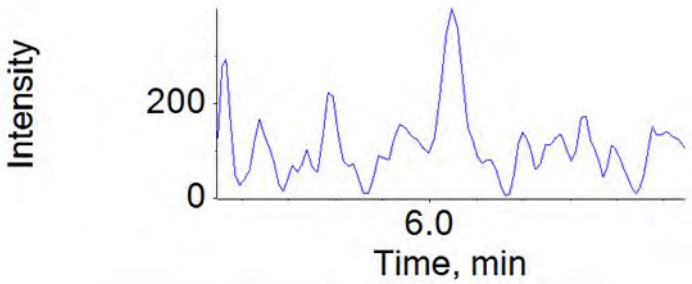
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



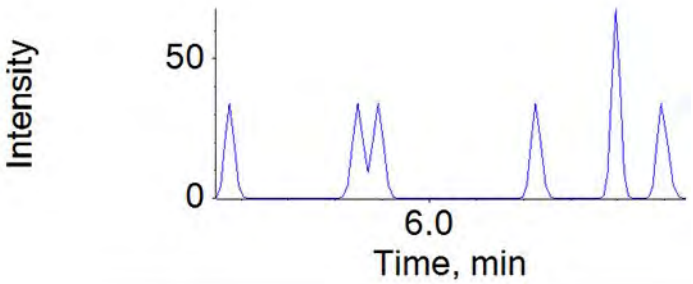
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



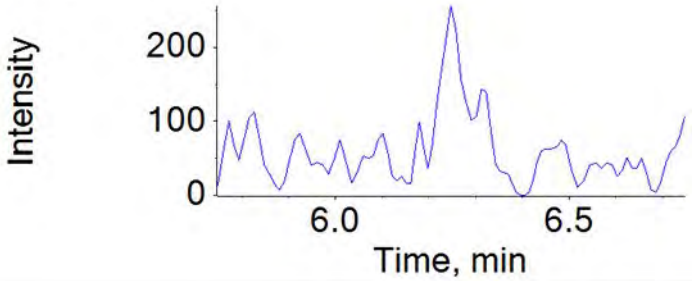
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



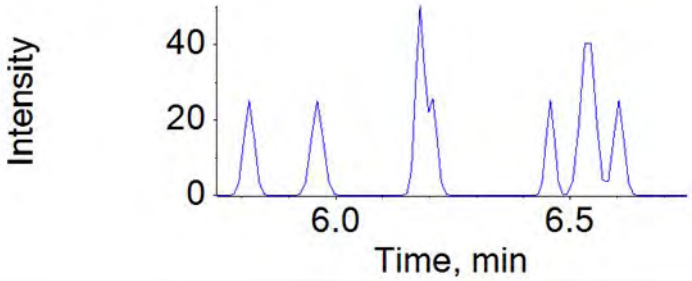
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

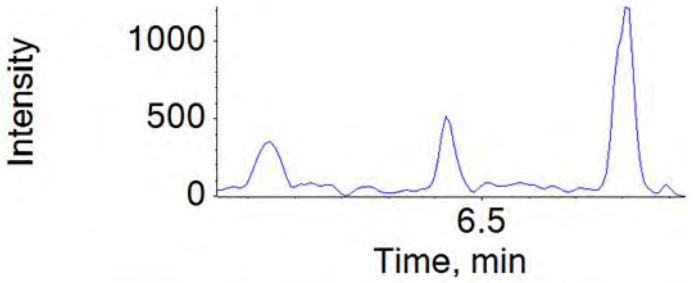
Component: PFTrDA
Primary Mass: 663.0 / 619.0



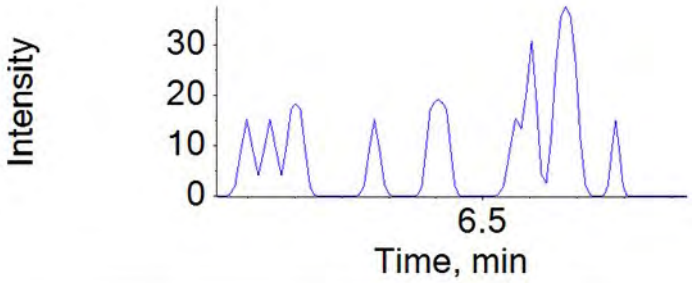
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881949			**Data File:**		18NOV08D-09.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-CAOC1517-S-01-01 Grab Soil			**Acquis Date:**		2018-11-08T13:00:46
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	25			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		JPT12262
Sample Wt.:	1.03000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	804172.7	728839.7	10	50	
13C2-PFOA	5.0	596386.2	491983.1	21	50	
13C4-PFOS	4.8	300218.8	255568.1	17	50	
13C2-PFDA	5.0	352027.8	315407.5	12	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	334387.3	13C3-PFBA	804172.7	0.416	9.029	5.926	66	50-150	
E13C5-PFHxA	561576.1	13C2-PFOA	596386.2	0.942	9.709	6.726	69	50-150	
E13C3-PFHxS	269664.0	13C2-PFOA	596386.2	0.452	9.184	6.303	69	50-150	
E13C4-PFHpA	453190.0	13C2-PFOA	596386.2	0.760	9.709	6.712	69	50-150	
E13C8-PFOA	727453.0	13C2-PFOA	596386.2	1.220	9.709	6.605	68	50-150	
E13C8-PFOS	230224.0	13C4-PFOS	300218.8	0.767	9.282	6.584	71	50-150	
E13C9-PFNA	404537.6	13C4-PFOS	300218.8	1.347	9.709	7.147	74	50-150	
E13C6-PFDA	508311.0	13C2-PFDA	352027.8	1.444	9.709	7.051	73	50-150	
Ed3-NMeFOSAA	60109.4	13C2-PFDA	352027.8	0.171	9.709	6.166	64	50-150	
E13C7-PFUnDA	235972.3	13C2-PFDA	352027.8	0.670	9.709	7.509	77	50-150	
Ed5-NEtFOSAA	45644.1	13C2-PFDA	352027.8	0.130	9.709	5.826	60	50-150	
E13C2-PFDoDA	444542.6	13C2-PFDA	352027.8	1.263	9.709	6.610	68	50-150	
E13C2-PFTeDA	334356.3	13C2-PFDA	352027.8	0.950	9.709	6.639	68	50-150	

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

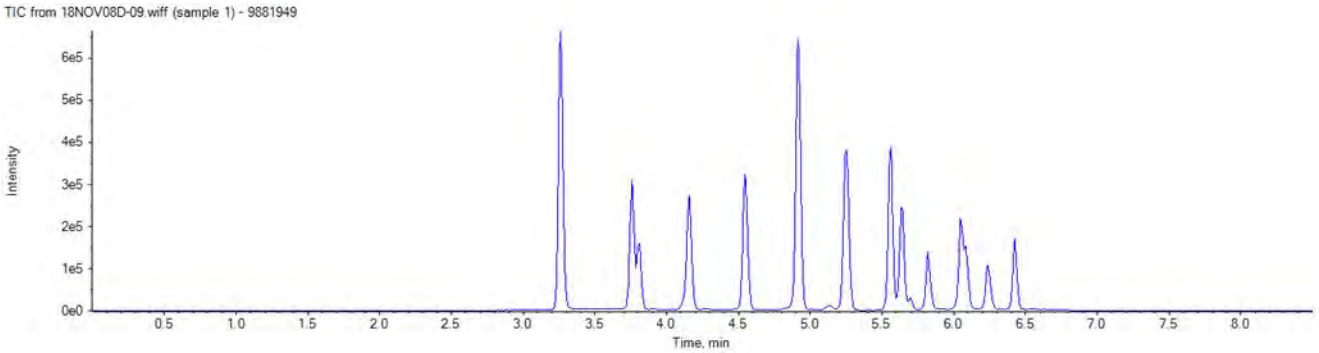
Analyte Quantitation Peak Table

Sample Name: 9881949 **Instrument Name:** LM27631 **File Name:** 18NOV08D-09.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.03000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	3.81	1.000	2869.9		A	13C3-PFBS	3.81	334387.3	0.009	0.084
PFHxA	4.16	1.000	54294.7		A	13C5-PFHxA	4.16	561576.1	0.097	0.805
PFHxS	4.55	1.000	16767.6		M	13C3-PFHxS	4.55	269664.0	0.062	0.612
PFHpA	4.55	1.000	22791.5		M	13C4-PFHpA	4.55	453190.0	0.050	0.328
PFOA	4.92	1.000	166425.4		M	13C8-PFOA	4.92	727453.0	0.229	2.501
PFOS	5.24	1.000	94063.8		M	13C8-PFOS	5.24	230224.0	0.409	4.114
PFNA	5.27	1.000	7287.2		A	13C9-PFNA	5.26	404537.6	0.018	0.131
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	508311.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	60109.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	235972.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	45644.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	444542.6	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	444542.6	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	334356.3	N/A	

Total Ion Chromatogram

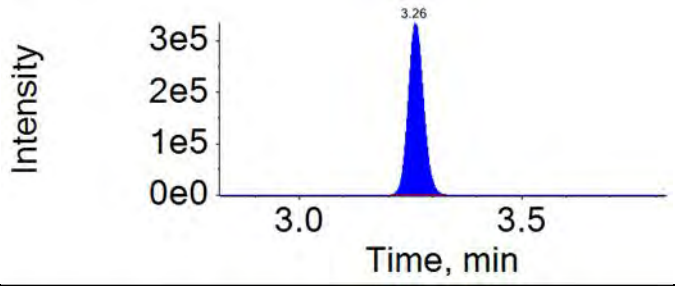


APPROVED
By JPT at 5:11 pm, 11/8/18

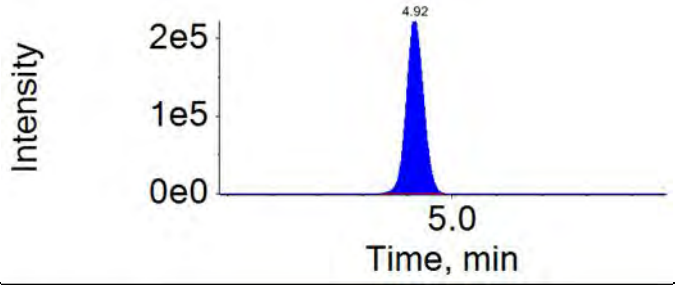
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

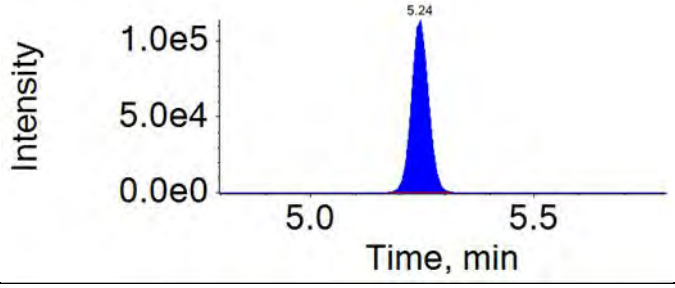
Injection Standard: 13C3-PFBA
216.0 / 172.0



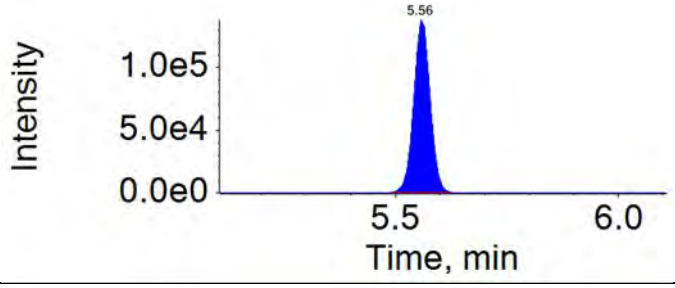
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

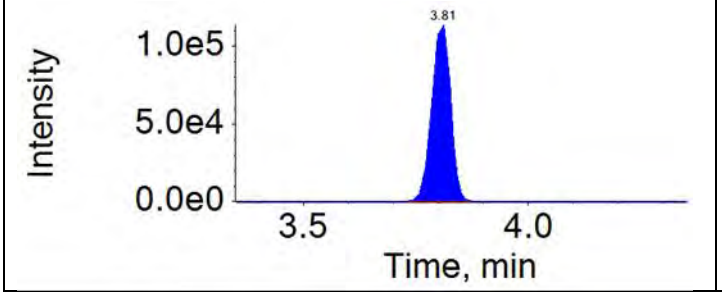


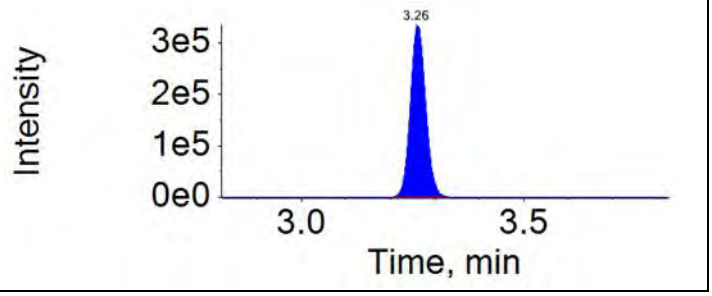
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

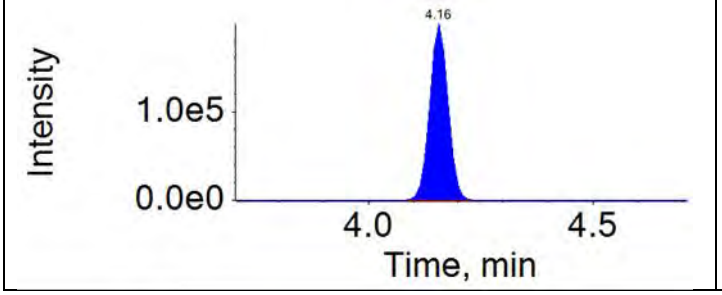
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

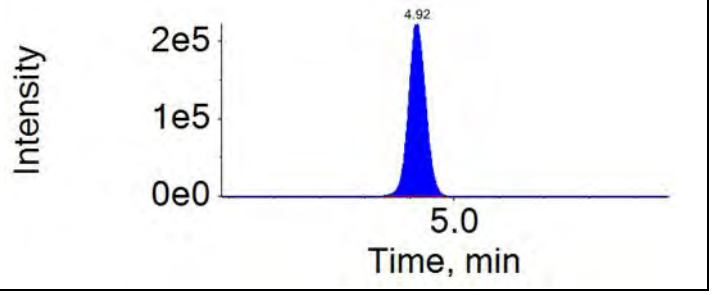
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



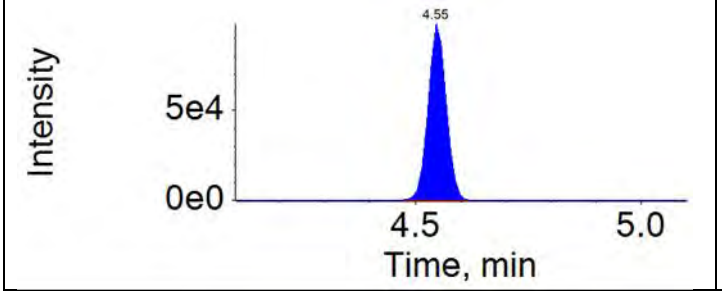


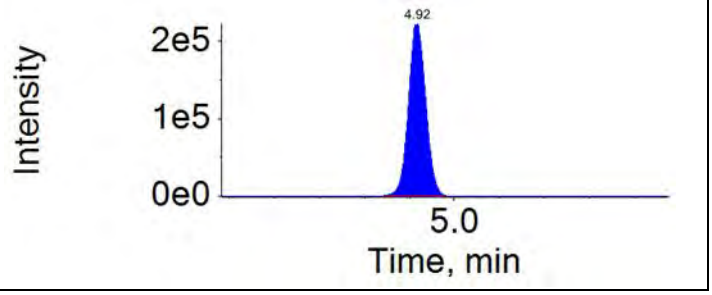
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



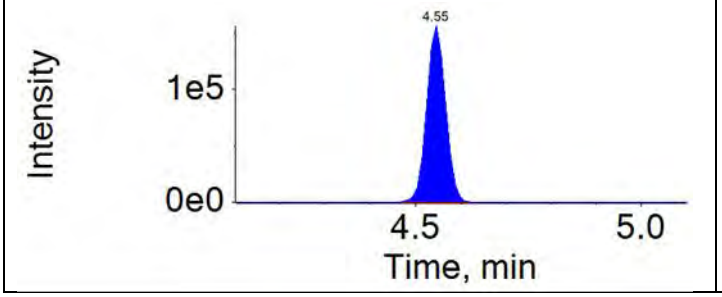


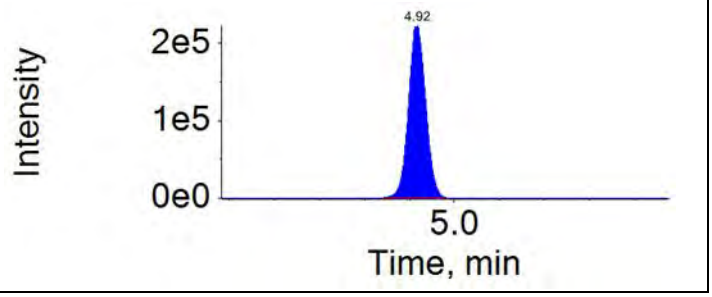
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

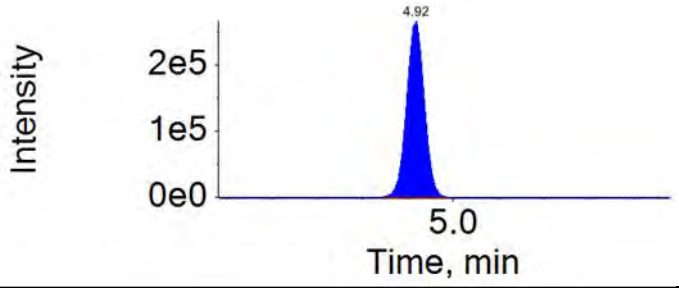
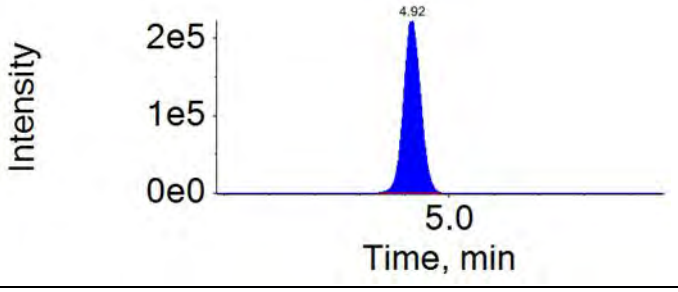


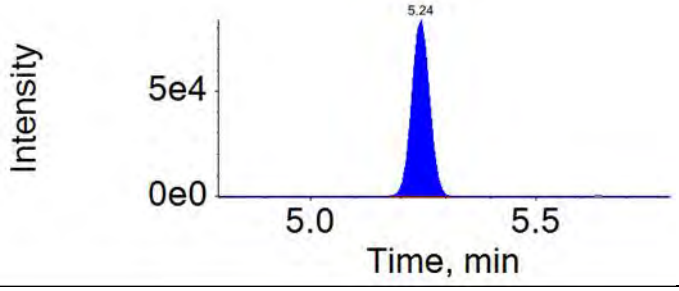
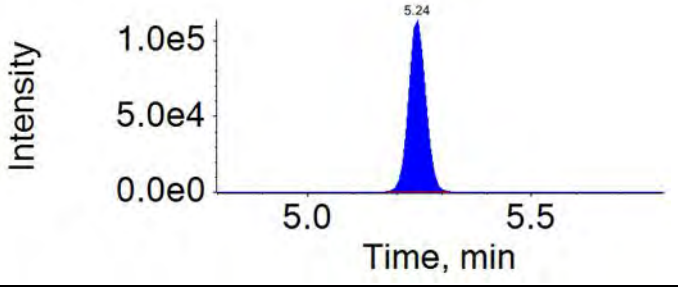


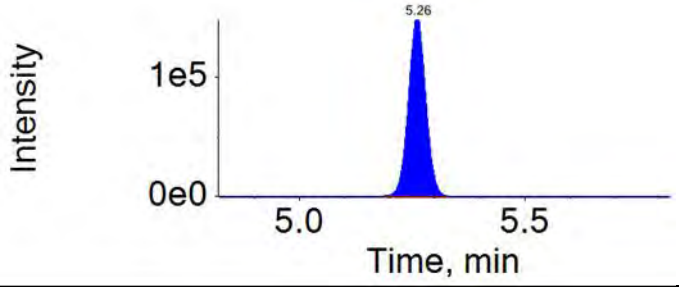
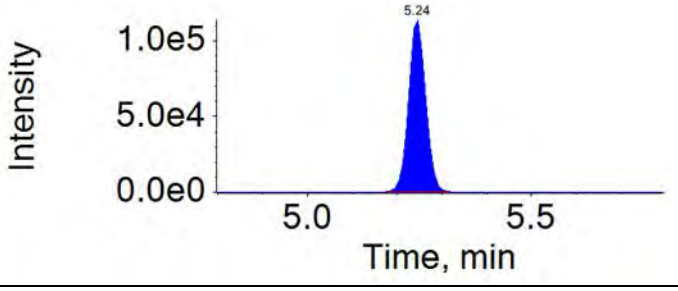
APPROVED
By JPT at 5:11 pm, 11/8/18

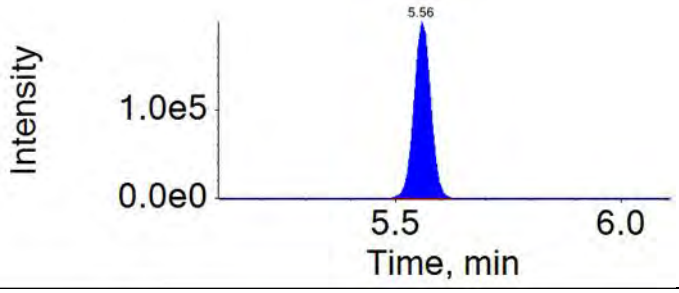
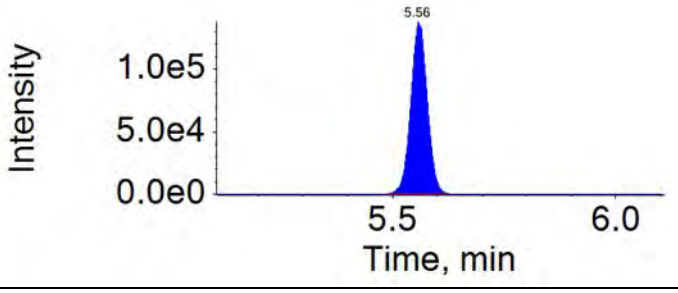
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

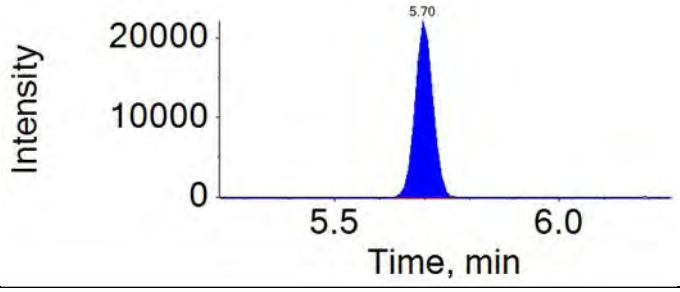
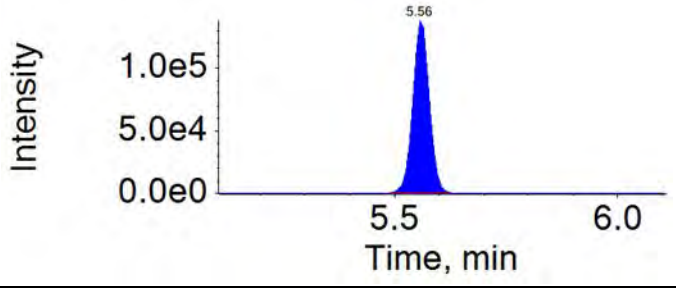
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

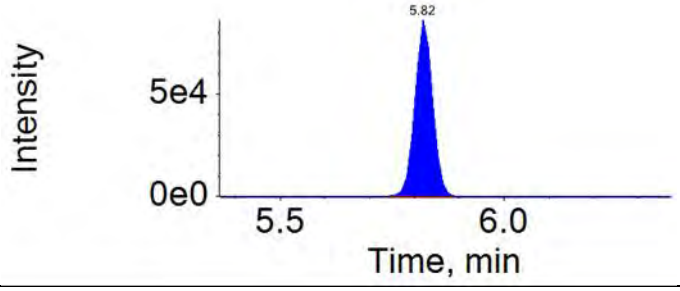
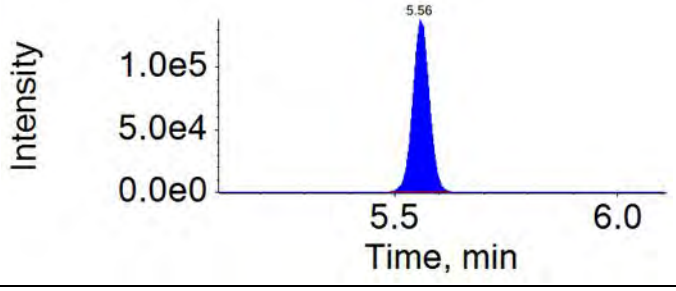
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

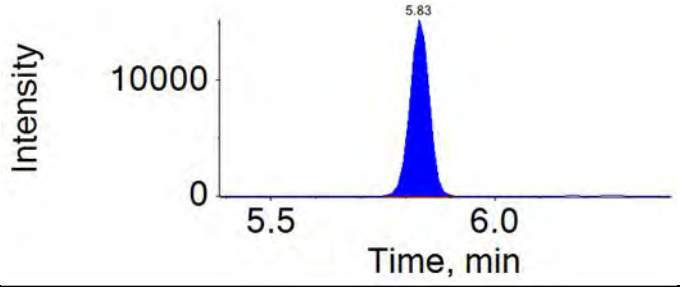
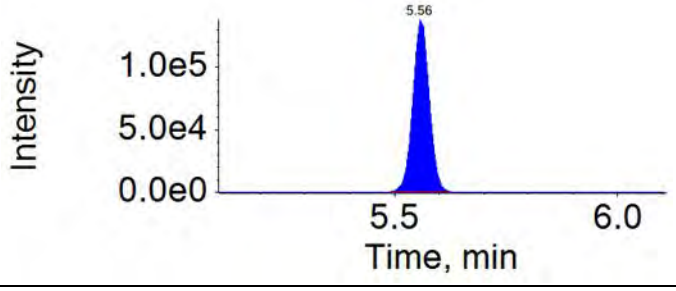
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

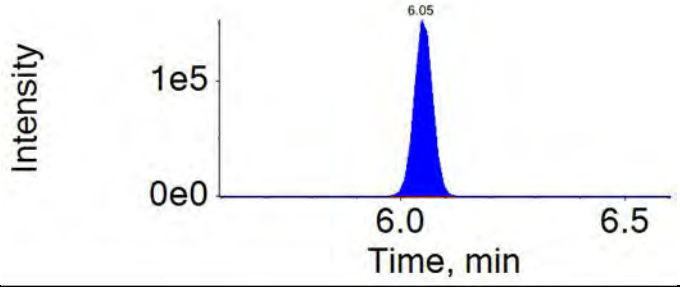
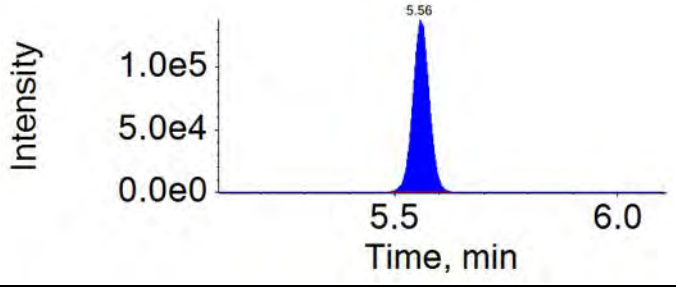
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

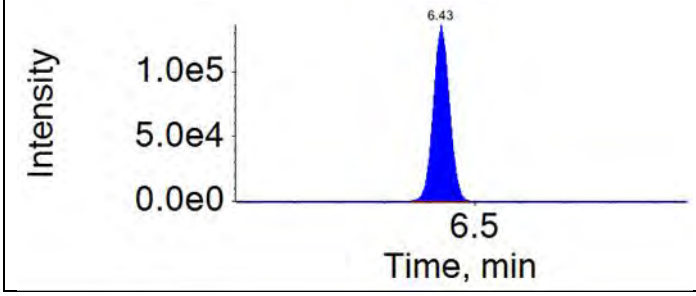
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

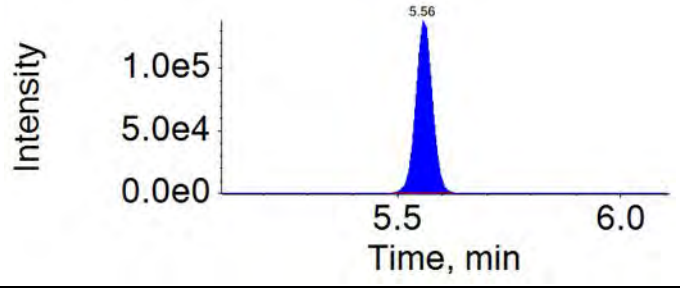
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



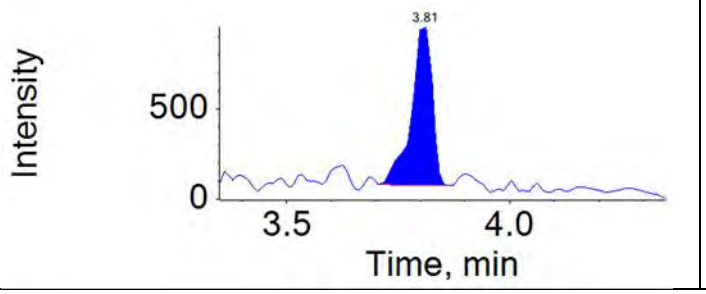


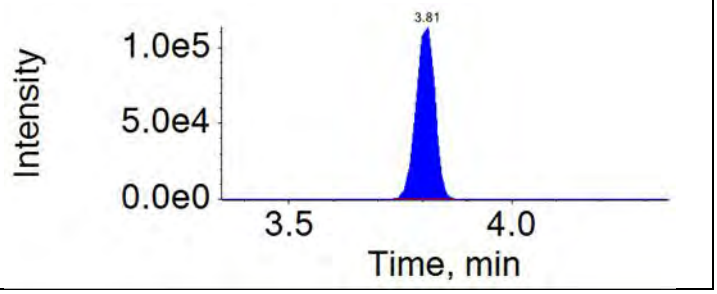
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

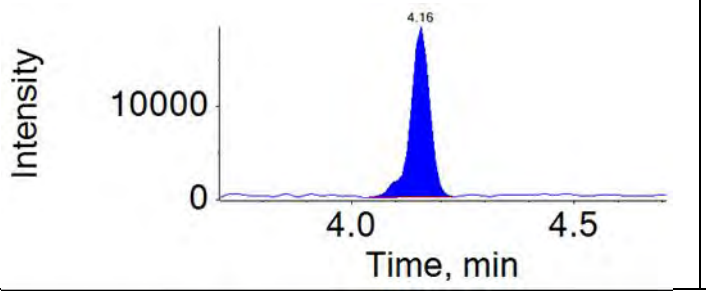
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

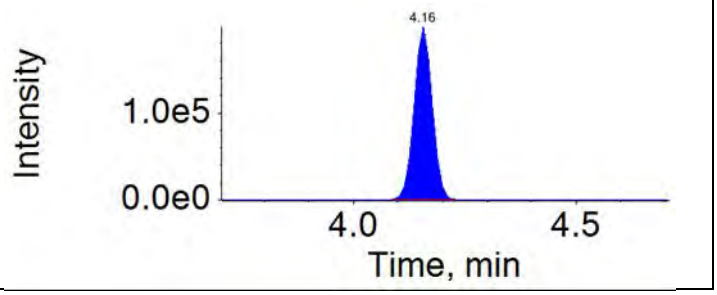
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



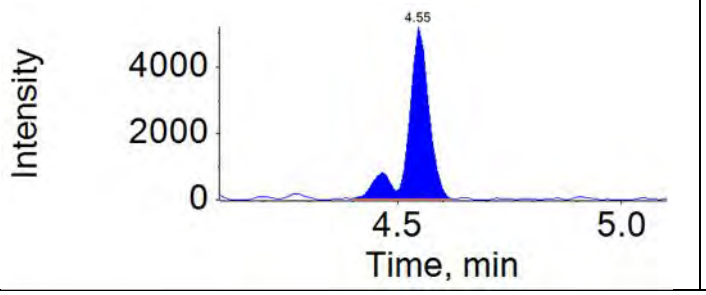


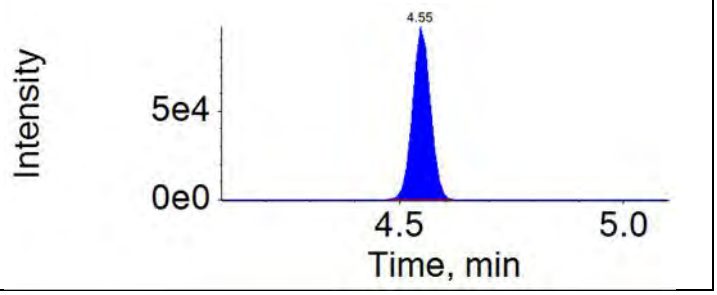
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



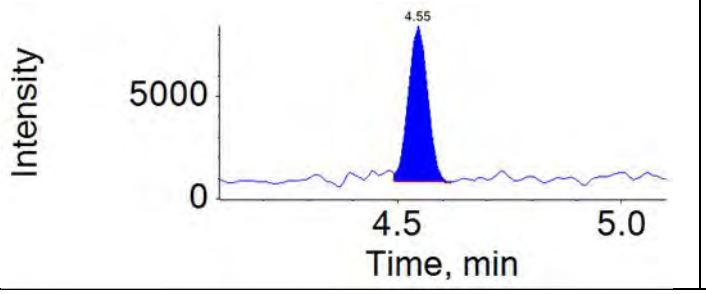


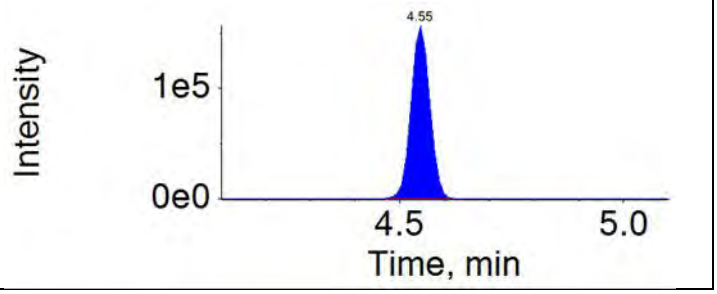
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

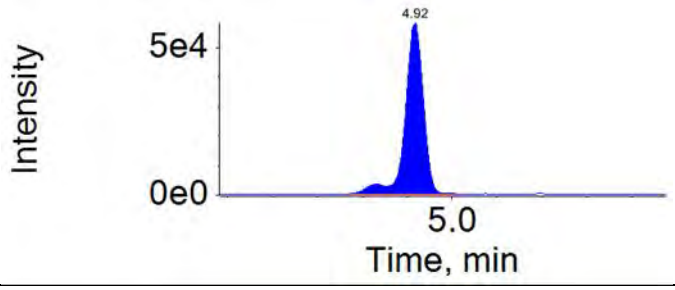
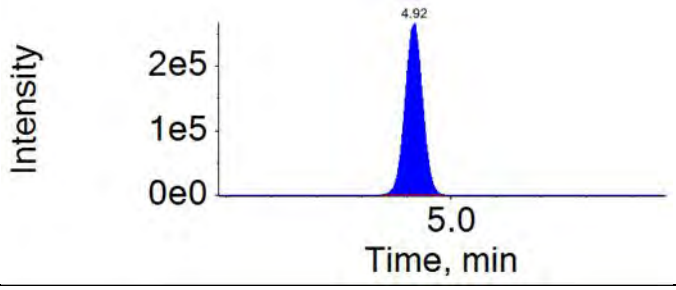


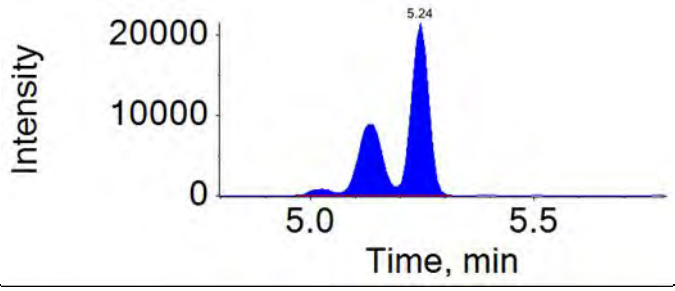
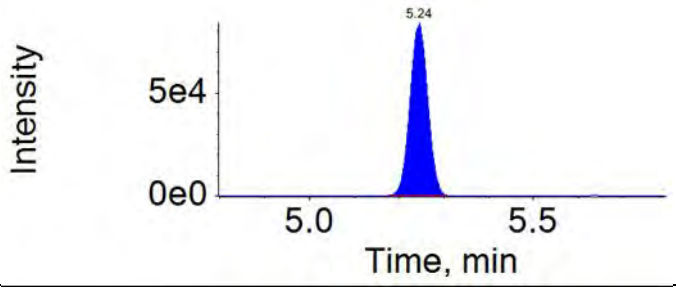


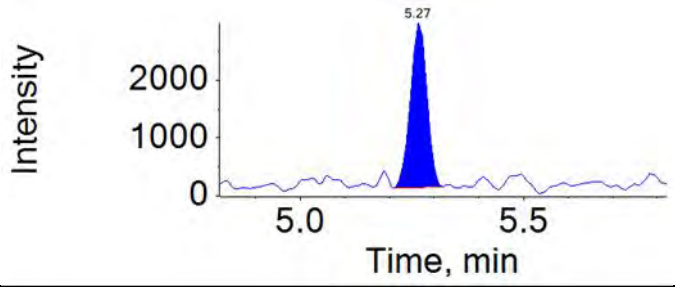
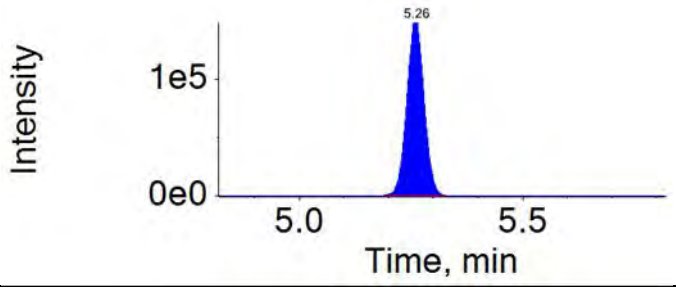
APPROVED
By JPT at 5:11 pm, 11/8/18

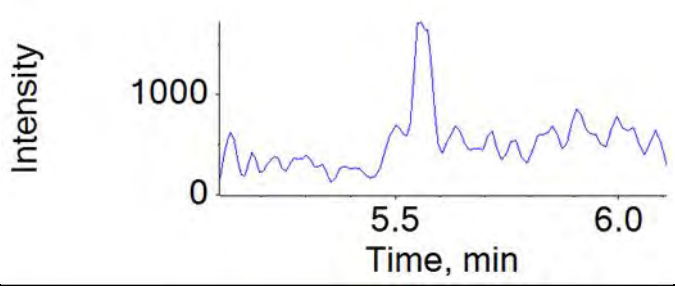
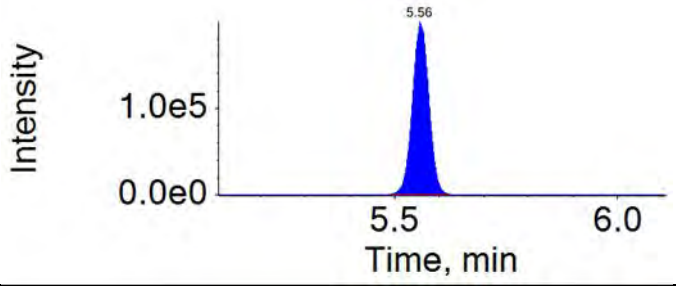
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

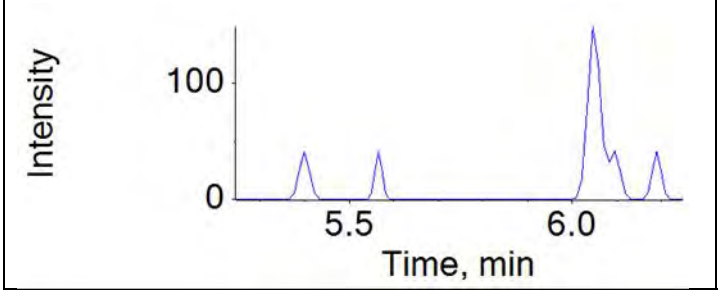
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

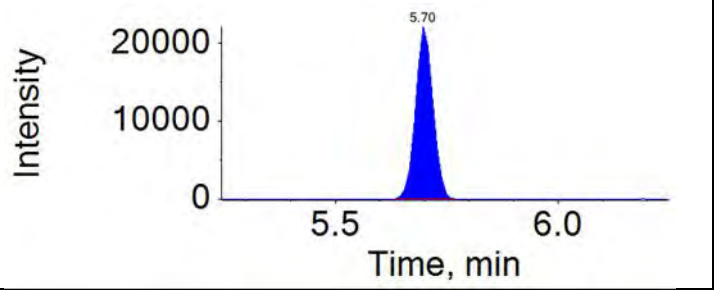
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

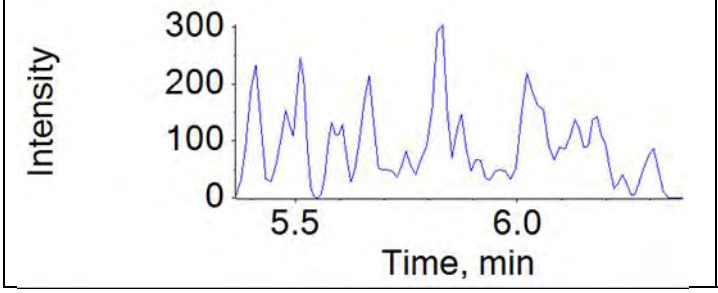
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

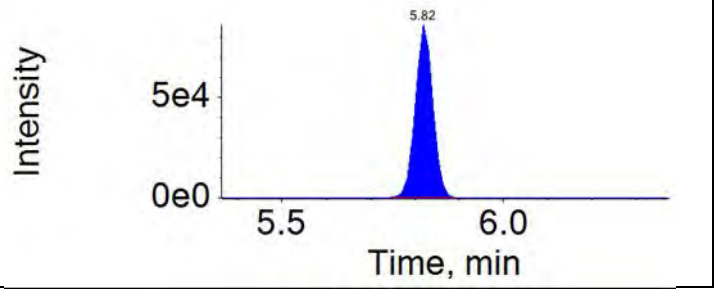
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



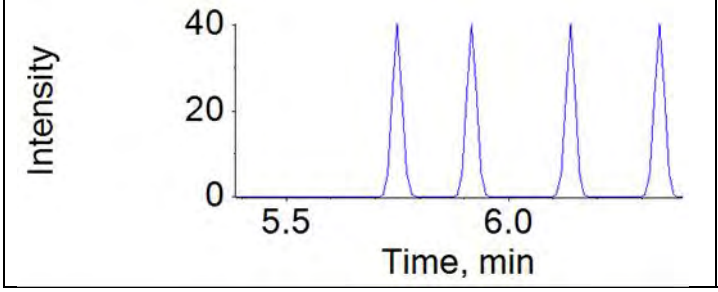


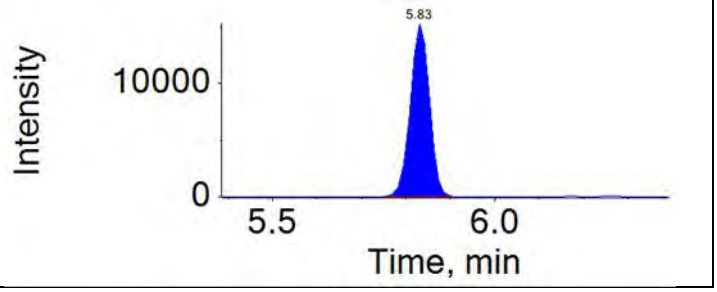
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



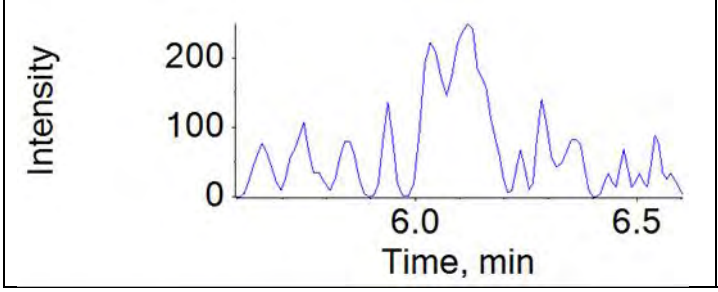


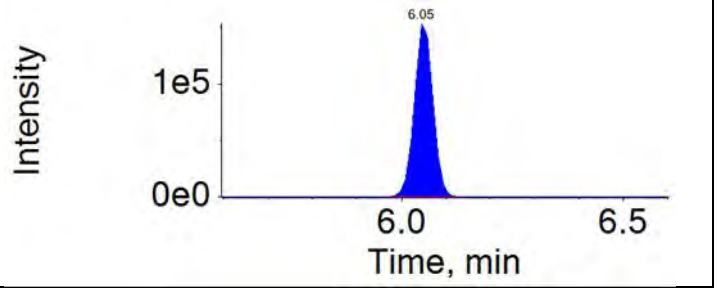
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



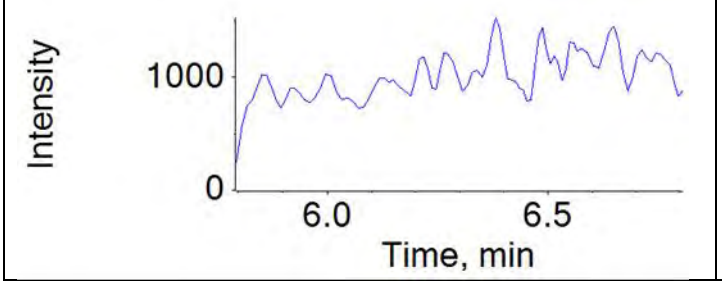


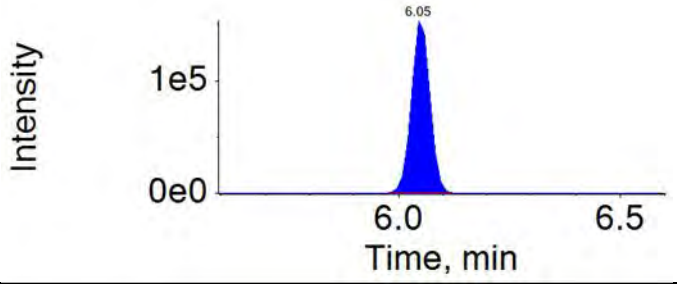
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

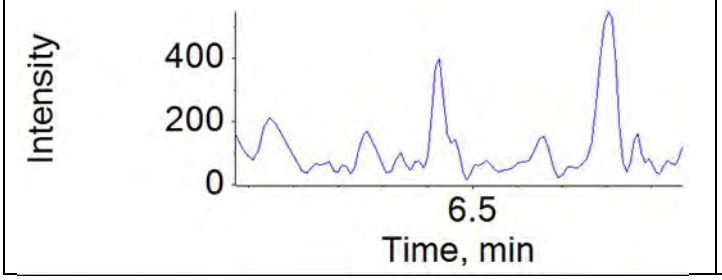
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

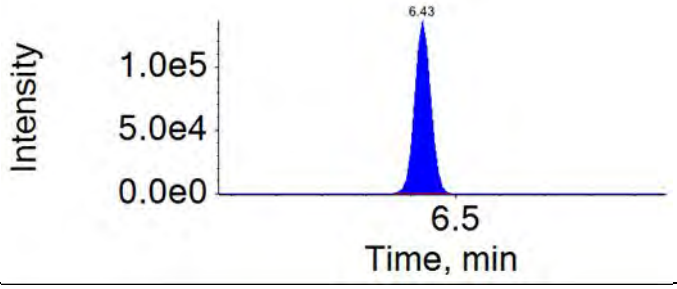
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





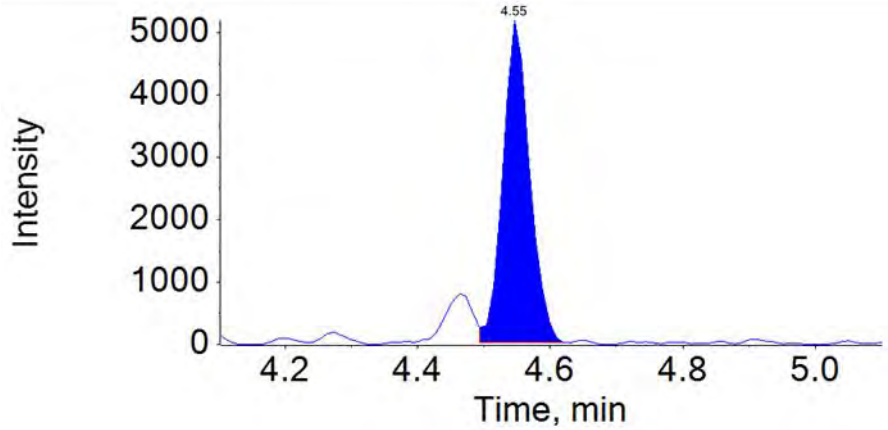
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





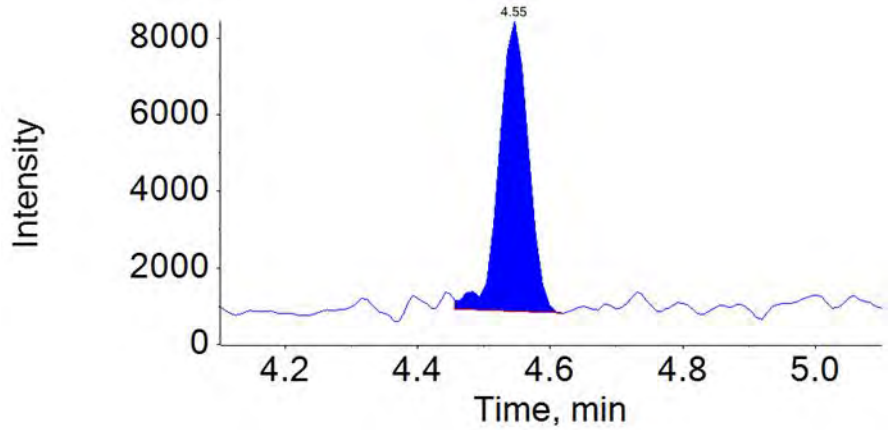
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
14529.3
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-09.wiff
Sample Name:
9881949



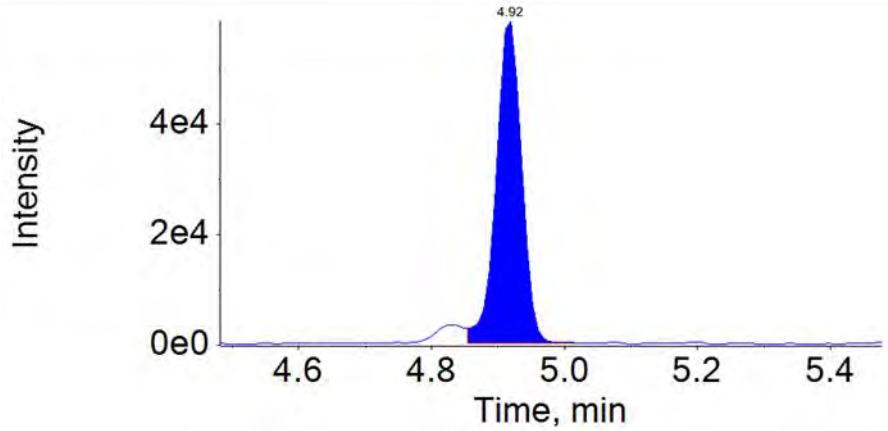
Integration Comment: incorrect integration

Component Name:
PFHpA
RT (min.):
4.55
Peak Area:
23343.7
Mass Range:
363.0 / 319.0
File Name:
18NOV08D-09.wiff
Sample Name:
9881949



Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.92
Peak Area:
156281.1
Mass Range:
413.0 / 369.0
File Name:
18NOV08D-09.wiff
Sample Name:
9881949



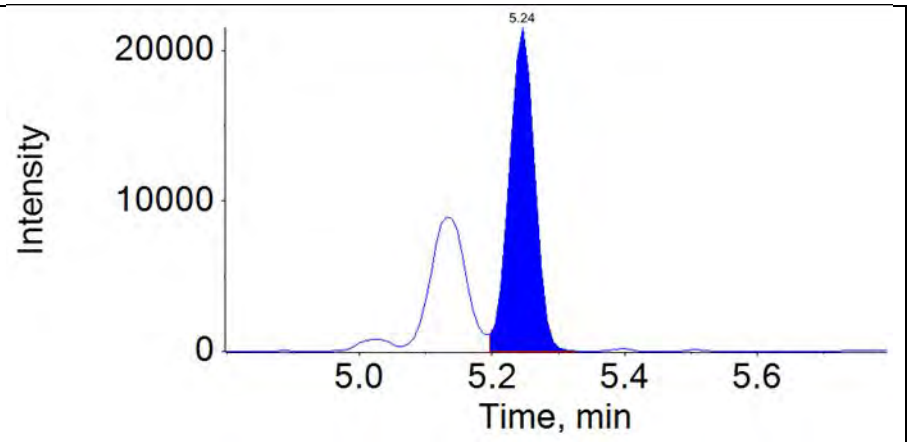
Integration Comment: incorrect integration

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

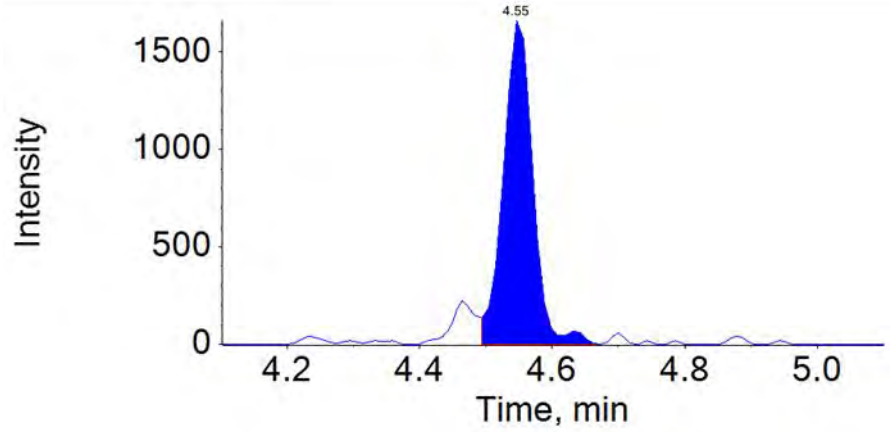
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
57255.8
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-09.wiff
Sample Name:
9881949



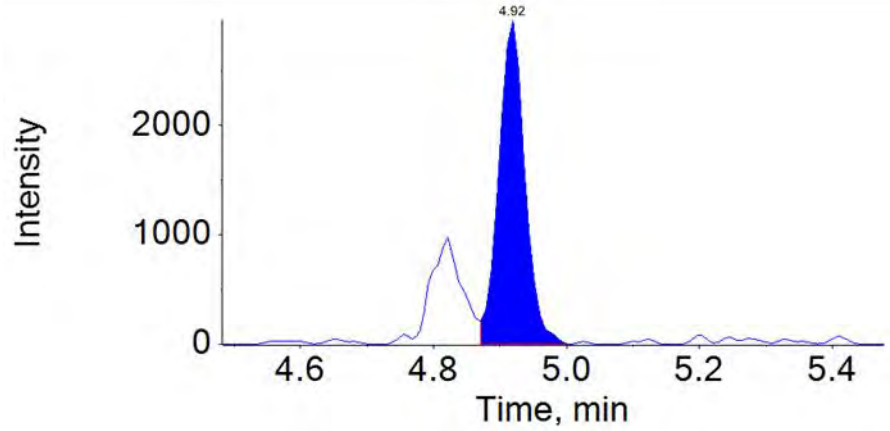
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
5141.9
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-09.wiff
Sample Name:
9881949



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
8079.2
Mass Range:
413.0 / 169.0
File Name:
18NOV08D-09.wiff
Sample Name:
9881949



Integration Comment: incorrect integration

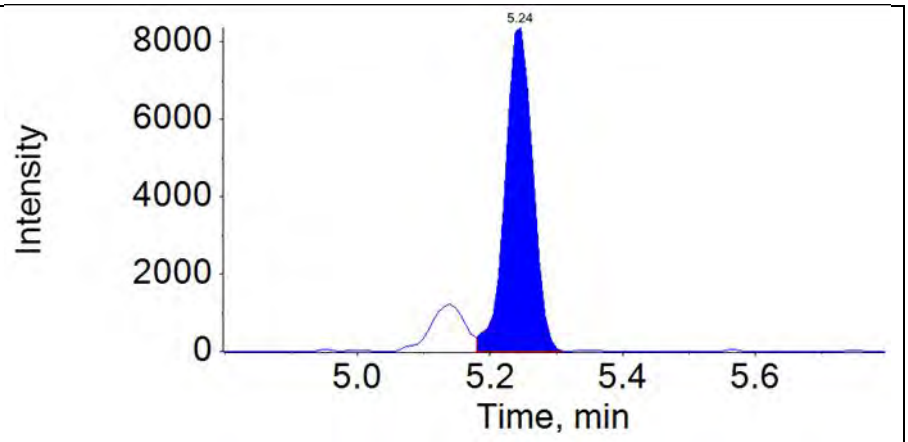
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
24273.4
Mass Range:
499.0 / 99.0
File Name:
18NOV08D-09.wiff
Sample Name:
9881949



Integration Comment: incorrect integration

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Ion Ratio Report

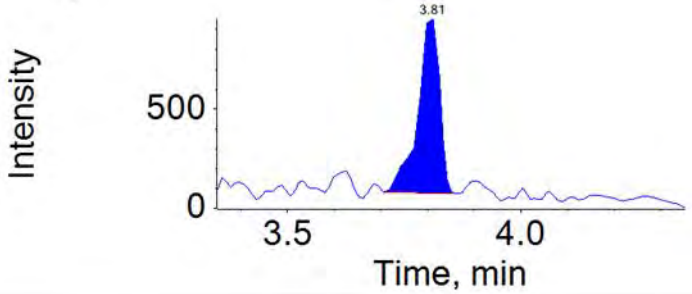
Sample Name: 9881949 **Instrument Name:** LM27631 **File Name:** 18NOV08D-09.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	2869.9	A	N/A	1.0000			
PFBS_2	3.81	1.00	1356.7	A	N/A	0.4727	32	50	
PFHxA	4.16	1.00	54294.7	A	N/A	1.0000			
PFHxA_2	4.16	1.00	737.6	A	N/A	0.0136	18	50	
PFHxS	4.55	1.00	16767.6	M	N/A	1.0000			
PFHxS_2	4.55	1.00	5600.4	M	N/A	0.3340	-6	50	
PFHpA	4.55	1.00	22791.5	M	N/A	1.0000			
PFHpA_2	4.54	1.00	939.1	A	N/A	0.0412	-29	50	
PFOA	4.92	1.00	166425.4	M	N/A	1.0000			
PFOA_2	4.92	1.00	11337.9	M	N/A	0.0681	7	50	
PFOS	5.24	1.00	94063.8	M	N/A	1.0000			
PFOS_2	5.24	1.00	28783.6	M	N/A	0.3060	-12	50	
PFNA	5.27	1.00	7287.2	A	N/A	1.0000			
PFNA_2	5.30	1.01	283.7	A	N/A	0.0389	88	50	OOS
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

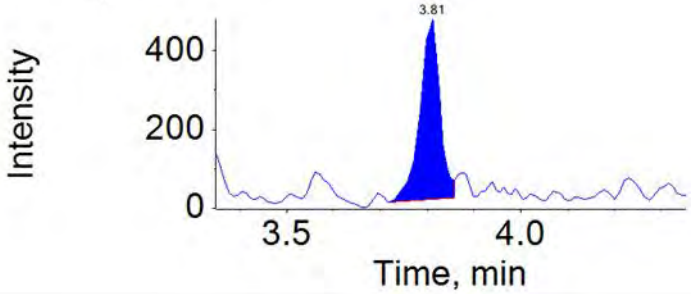
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

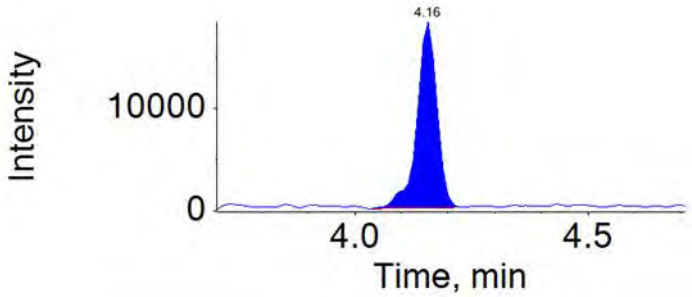
Component: PFBS
Primary Mass: 299.0 / 80.0



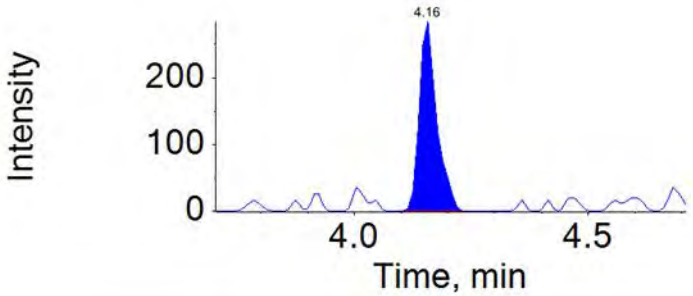
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



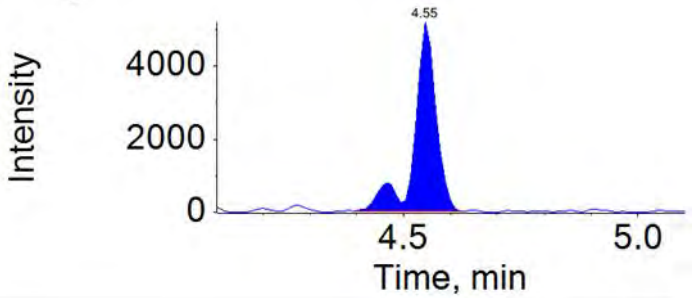
Component: PFHxA
Primary Mass: 313.0 / 269.0



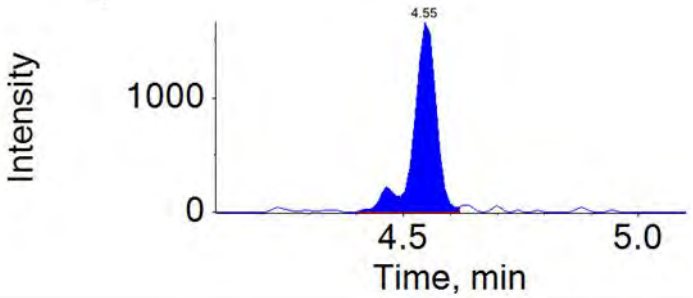
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



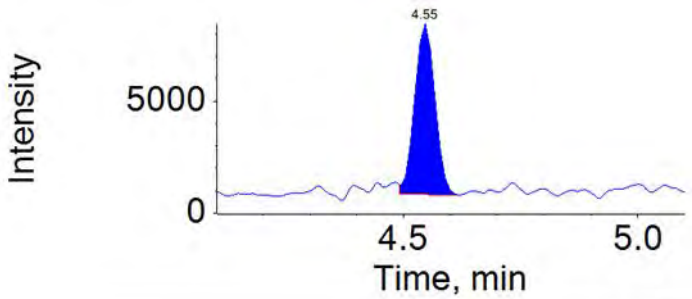
Component: PFHxS
Primary Mass: 399.0 / 80.0



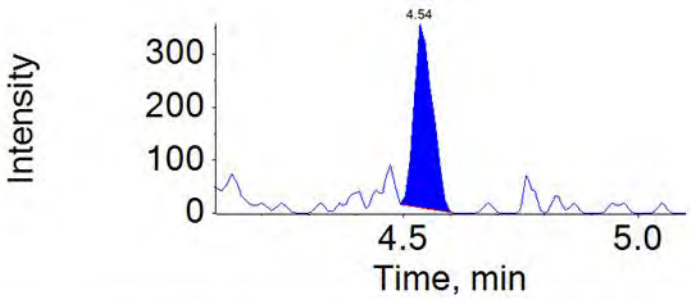
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



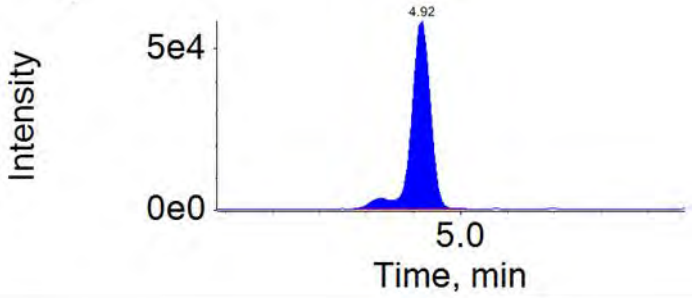
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



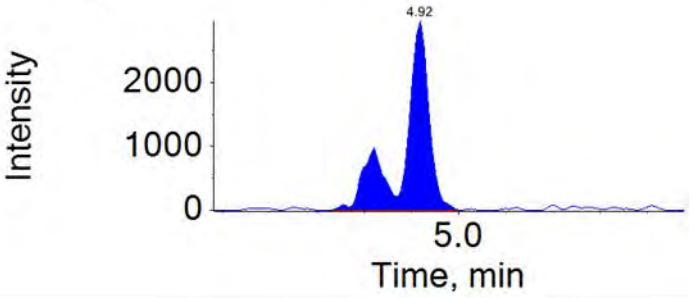
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

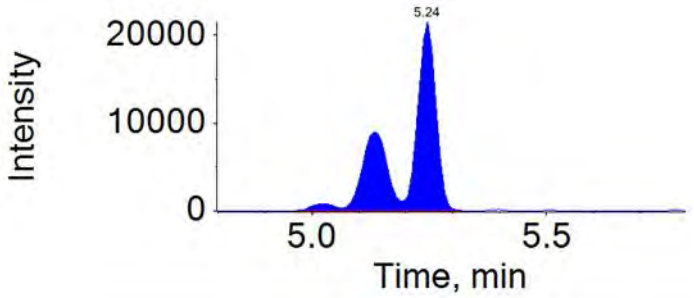
Component: PFOA
Primary Mass: 413.0 / 369.0



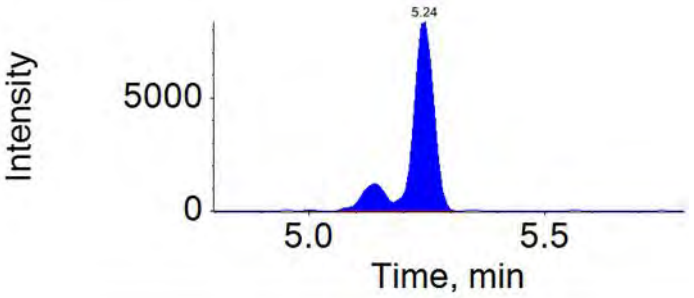
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



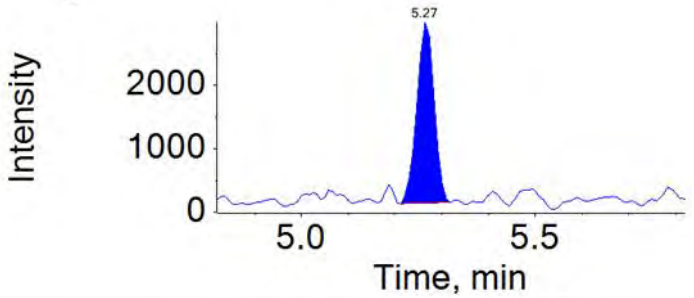
Component: PFOS
Primary Mass: 499.0 / 80.0



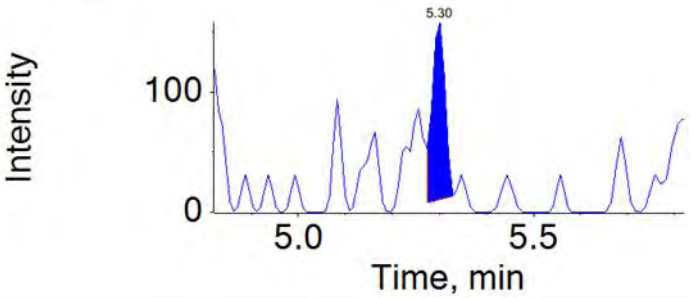
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



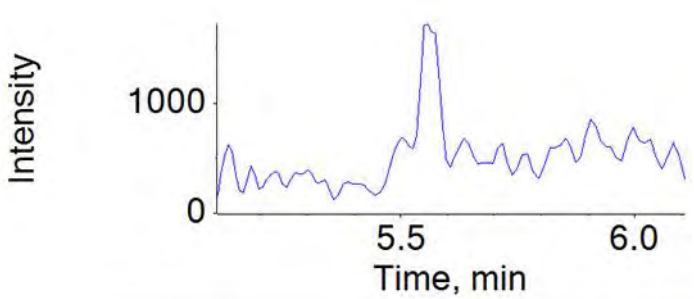
Component: PFNA
Primary Mass: 463.0 / 419.0



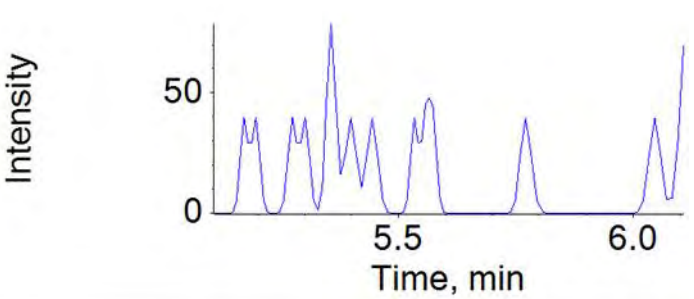
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



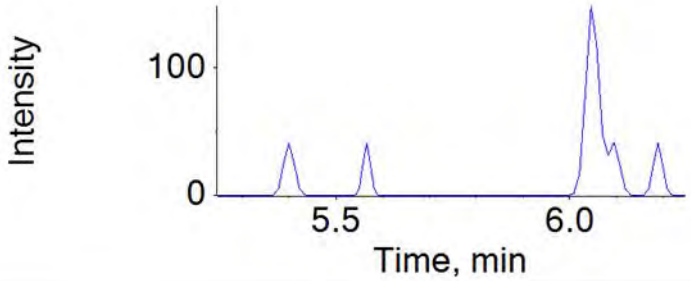
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



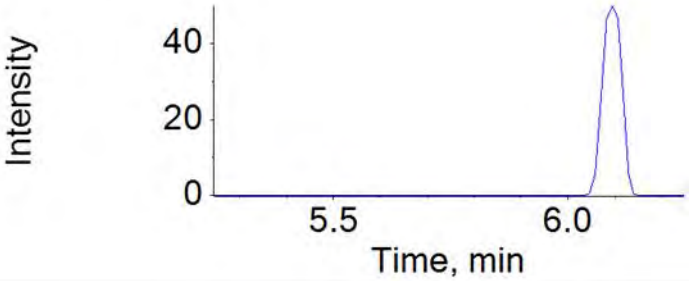
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

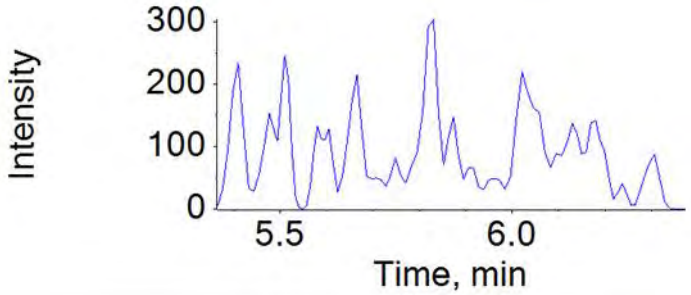
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



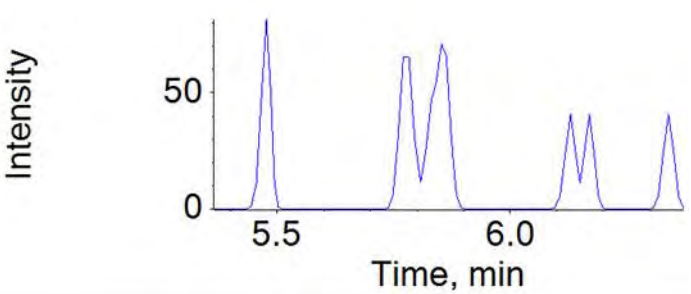
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



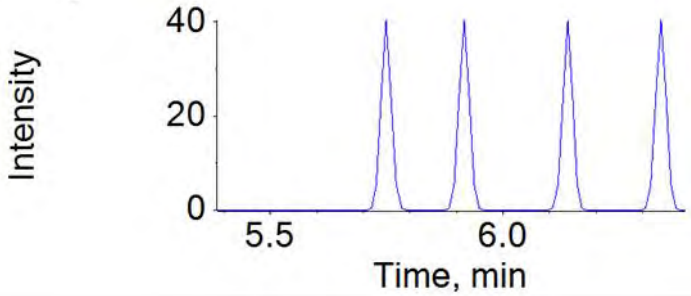
Component: PFUnDA
Primary Mass: 563.0 / 519.0



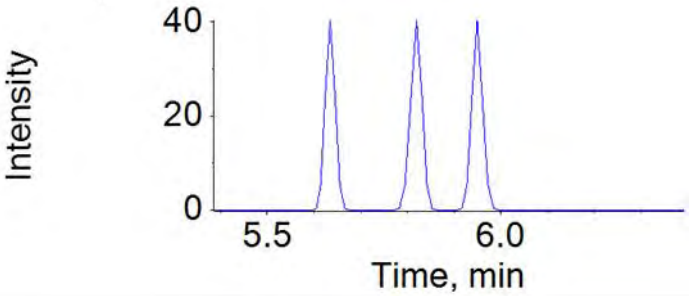
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



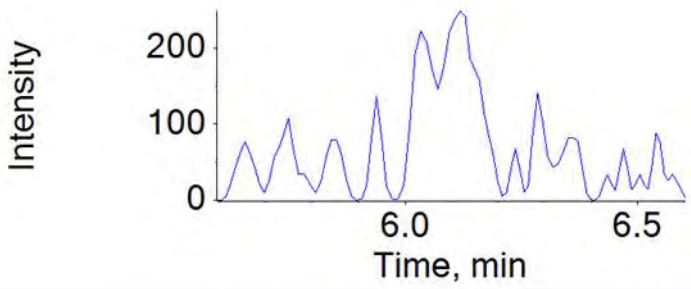
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



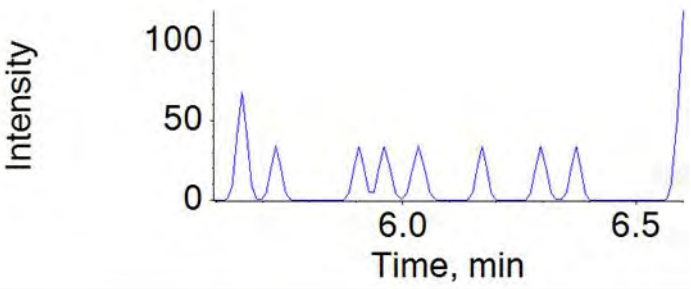
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



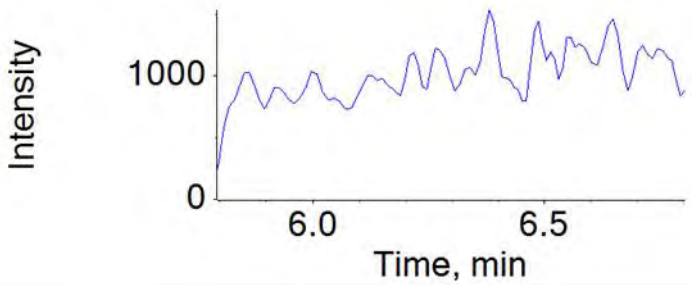
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



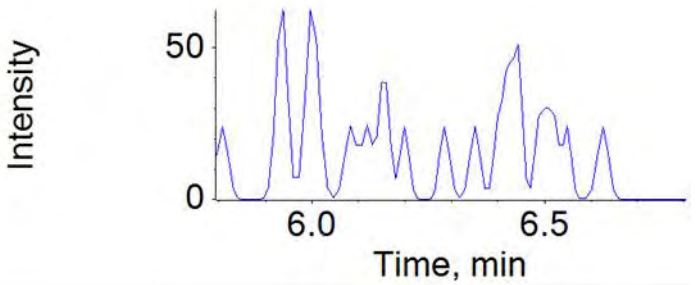
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

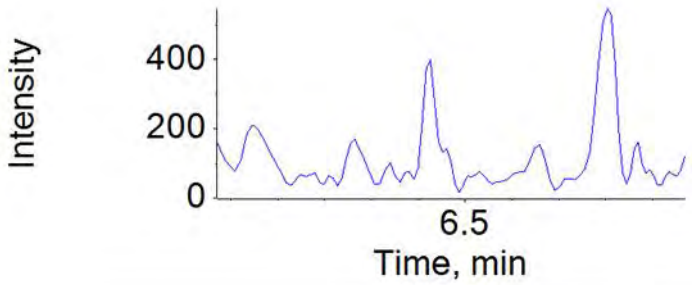
Component: PFTrDA
Primary Mass: 663.0 / 619.0



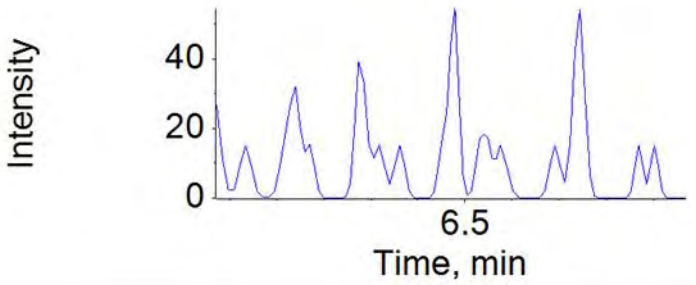
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881950			**Data File:**		18NOV08D-10.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-CAOC1517-S-01-03 Grab Soil			**Acquis Date:**		2018-11-08T13:09:46
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	26			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		JPT12262
Sample Wt.:	1.06000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	804856.4	728839.7	10	50	
13C2-PFOA	5.0	571838.7	491983.1	16	50	
13C4-PFOS	4.8	298506.9	255568.1	17	50	
13C2-PFDA	5.0	355294.2	315407.5	13	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	375273.7	13C3-PFBA	804856.4	0.466	8.774	6.457	74	50-150	
E13C5-PFHxA	631176.0	13C2-PFOA	571838.7	1.104	9.434	7.661	81	50-150	
E13C3-PFHxS	298419.5	13C2-PFOA	571838.7	0.522	8.925	7.069	79	50-150	
E13C4-PFHpA	469615.2	13C2-PFOA	571838.7	0.821	9.434	7.049	75	50-150	
E13C8-PFOA	848946.9	13C2-PFOA	571838.7	1.485	9.434	7.811	83	50-150	
E13C8-PFOS	257119.6	13C4-PFOS	298506.9	0.861	9.019	7.186	80	50-150	
E13C9-PFNA	427058.1	13C4-PFOS	298506.9	1.431	9.434	7.373	78	50-150	
E13C6-PFDA	549252.8	13C2-PFDA	355294.2	1.546	9.434	7.335	78	50-150	
Ed3-NMeFOSAA	77953.4	13C2-PFDA	355294.2	0.219	9.434	7.698	82	50-150	
E13C7-PFUnDA	240559.0	13C2-PFDA	355294.2	0.677	9.434	7.370	78	50-150	
Ed5-NEtFOSAA	52071.5	13C2-PFDA	355294.2	0.147	9.434	6.399	68	50-150	
E13C2-PFDoDA	484547.7	13C2-PFDA	355294.2	1.364	9.434	6.937	74	50-150	
E13C2-PFTeDA	332578.3	13C2-PFDA	355294.2	0.936	9.434	6.358	67	50-150	

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

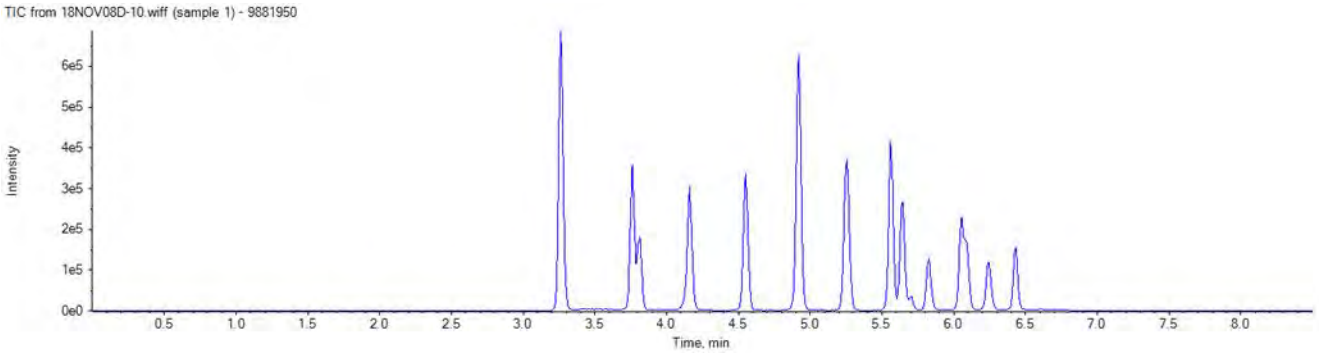
Analyte Quantitation Peak Table

Sample Name: 9881950 **Instrument Name:** LM27631 **File Name:** 18NOV08D-10.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.06000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	375273.7	N/A	
PFHxA	4.16	1.000	21773.8		A	13C5-PFHxA	4.16	631176.0	0.034	0.279
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	298419.5	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	469615.2	N/A	
PFOA	4.92	1.000	17405.1		A	13C8-PFOA	4.92	848946.9	0.021	0.218
PFOS	5.24	1.000	4037.0		M	13C8-PFOS	5.25	257119.6	0.016	0.154
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	427058.1	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	549252.8	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	77953.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	240559.0	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	52071.5	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	484547.7	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	484547.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	332578.3	N/A	

Total Ion Chromatogram

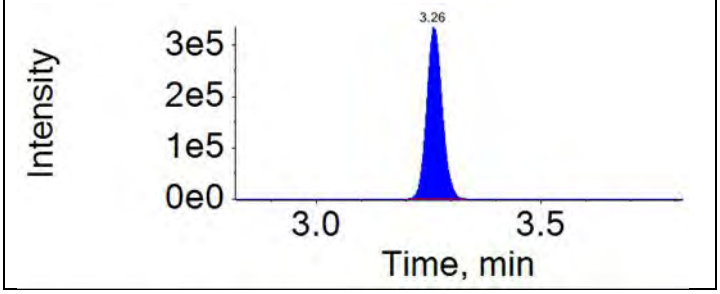


APPROVED
By JPT at 5:11 pm, 11/8/18

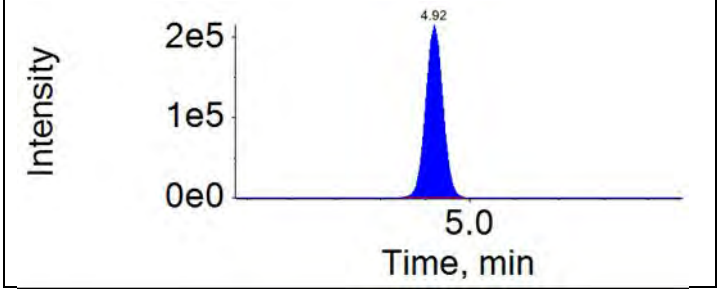
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

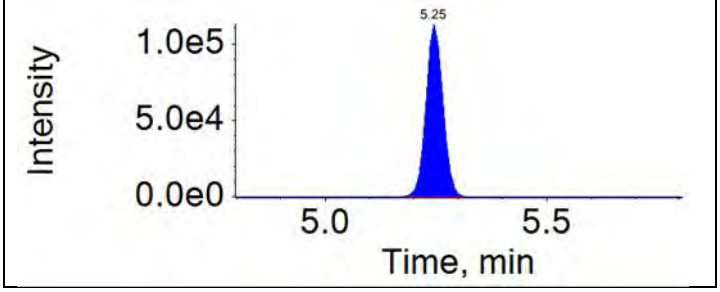
Injection Standard: 13C3-PFBA
216.0 / 172.0



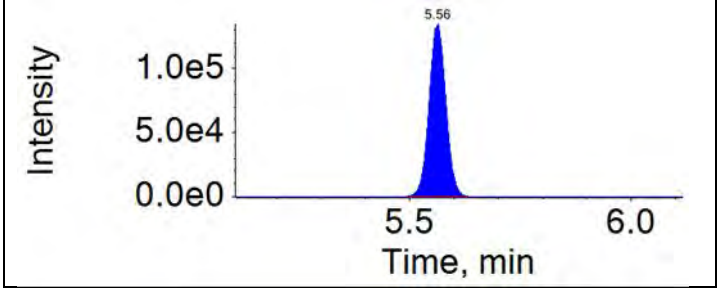
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

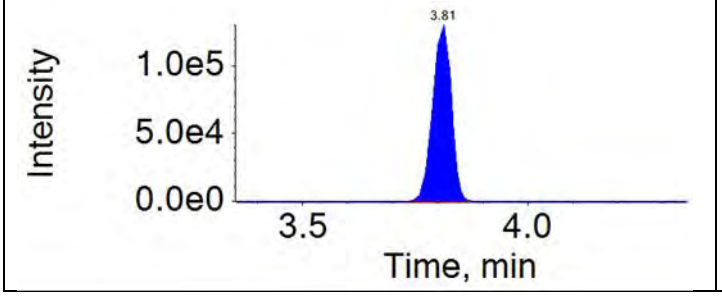


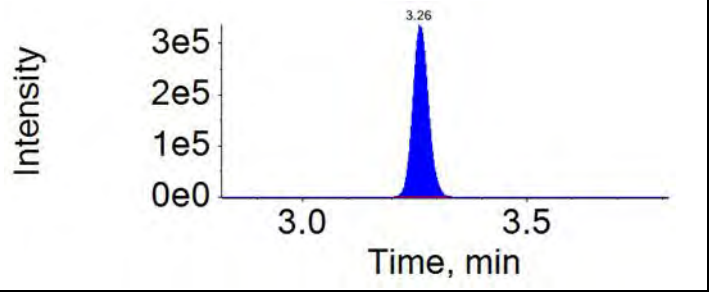
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

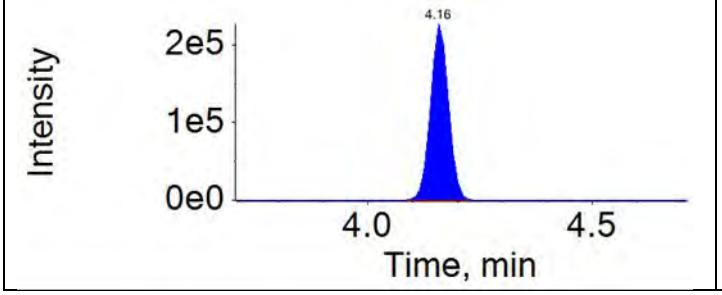
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

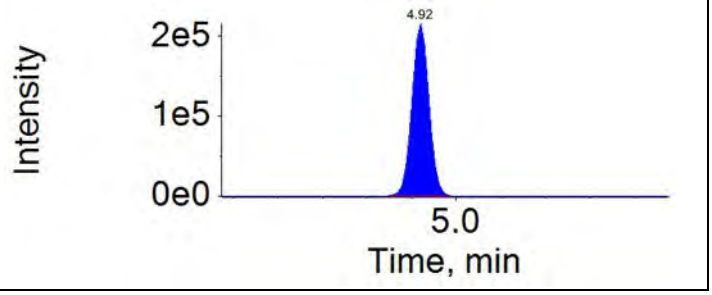
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



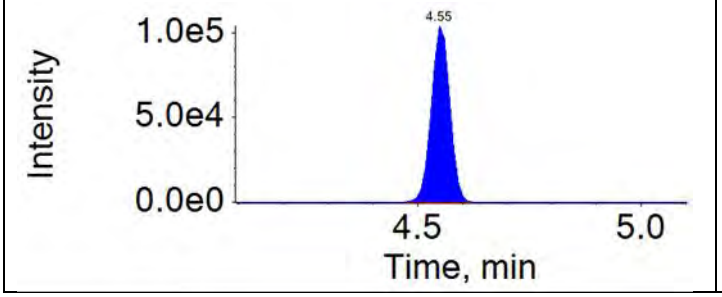


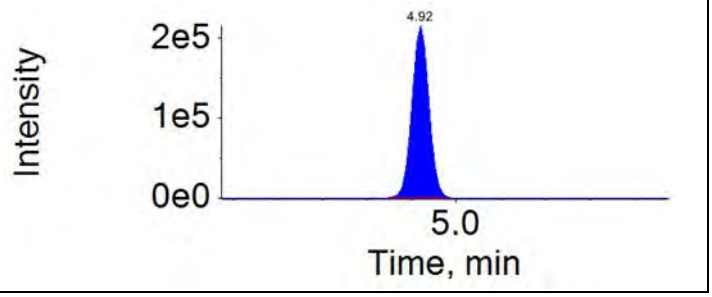
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



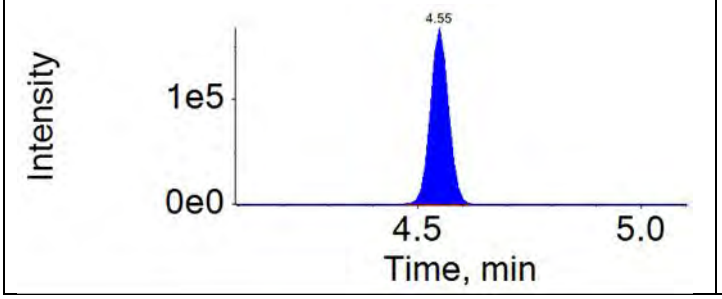


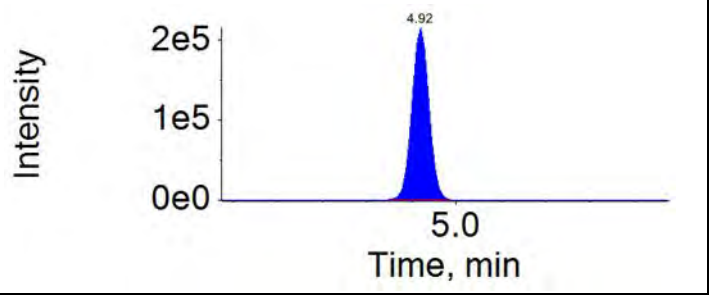
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



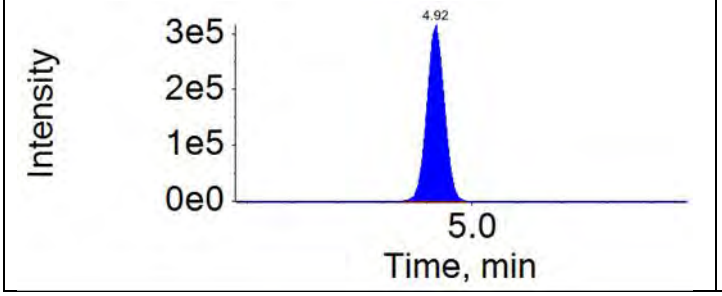


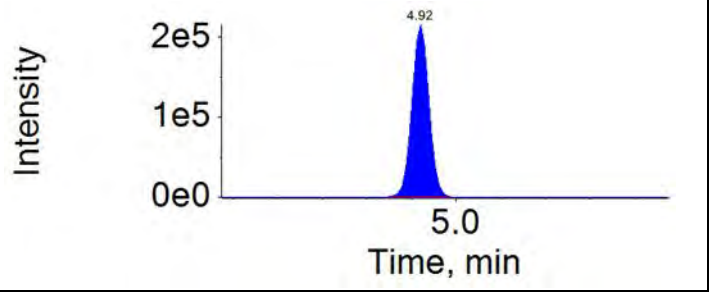
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

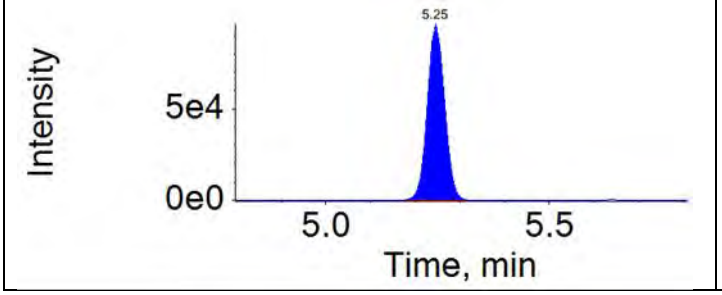
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

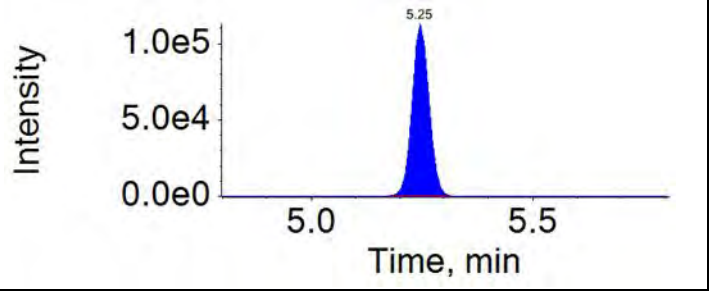
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



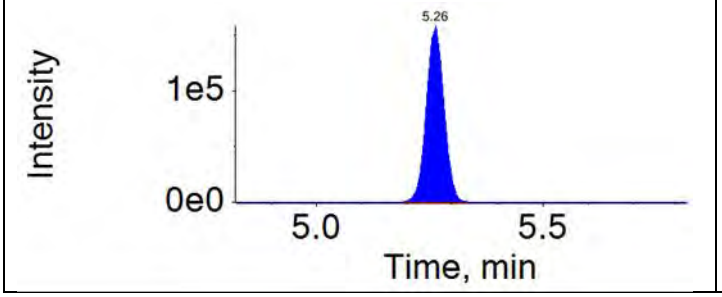


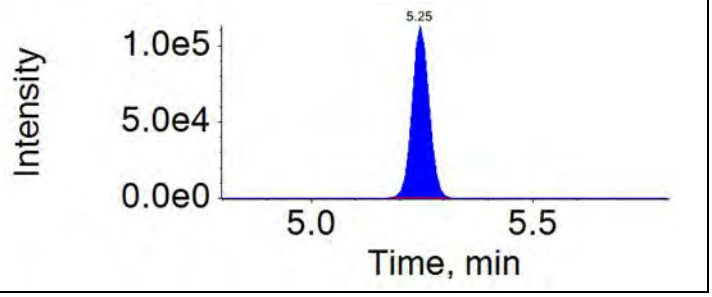
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



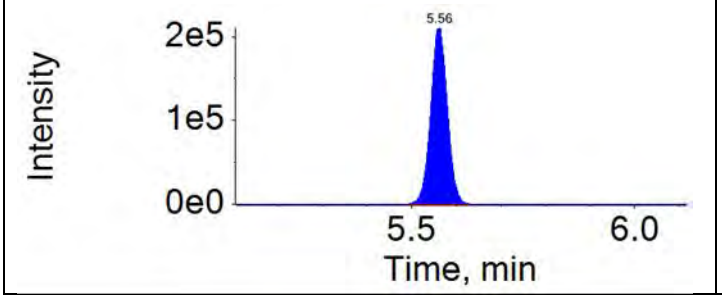


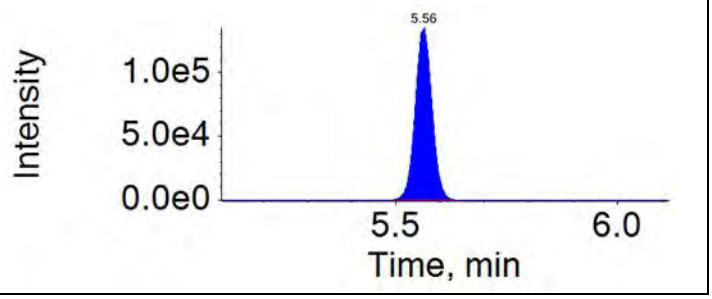
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0



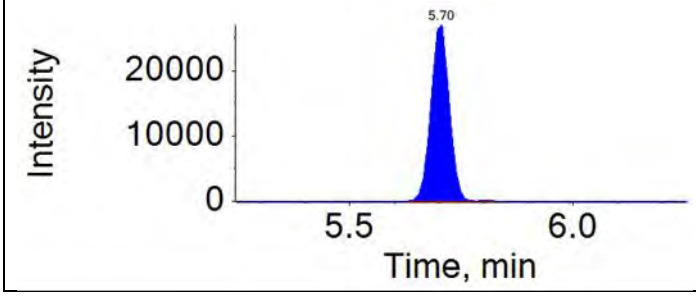
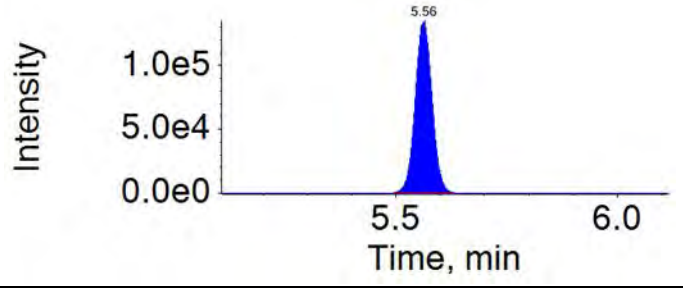


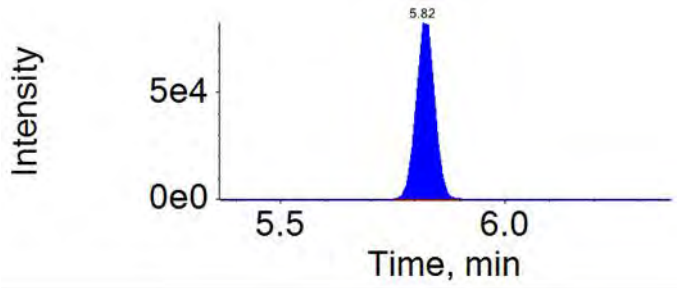
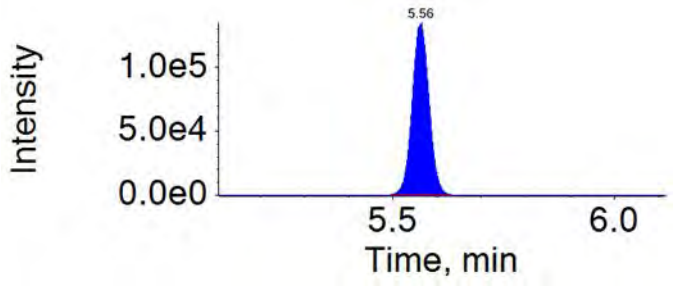
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

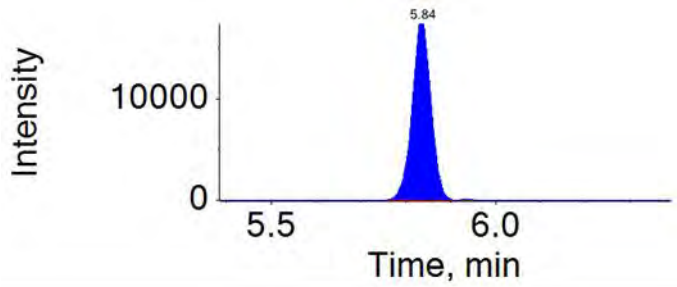
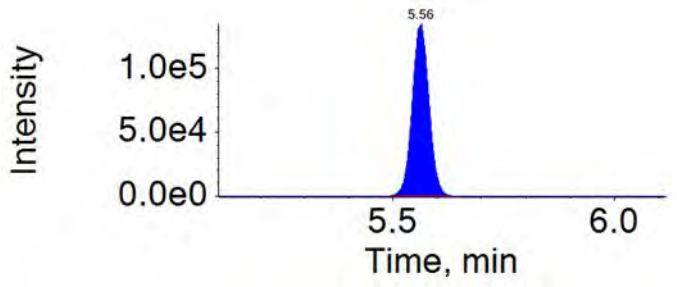


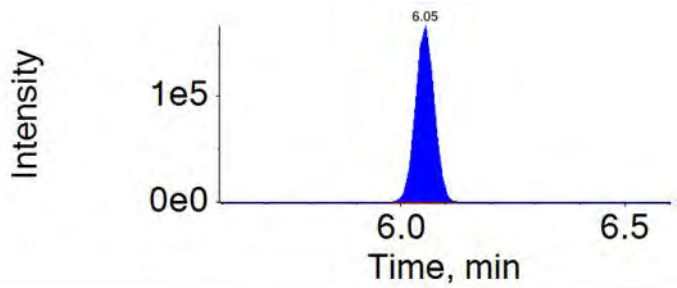
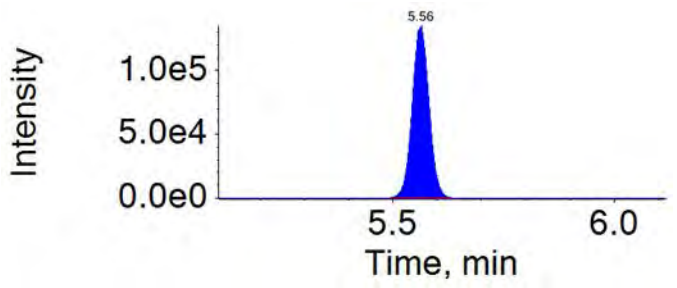


ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

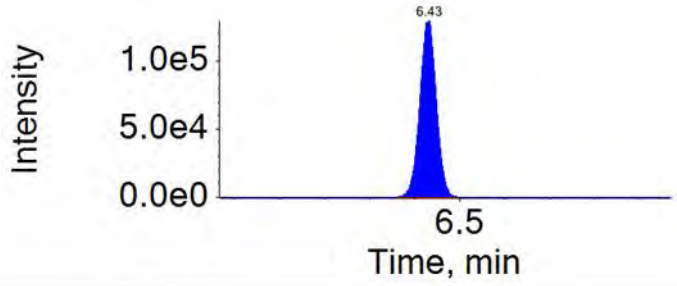
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

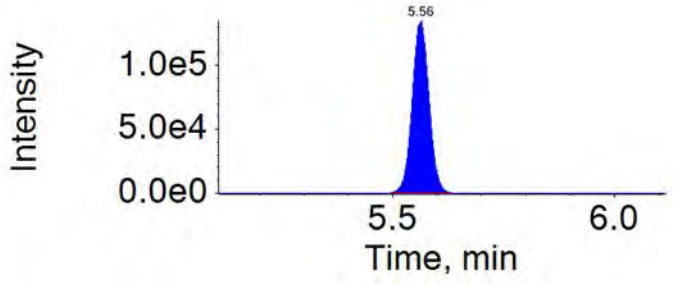
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



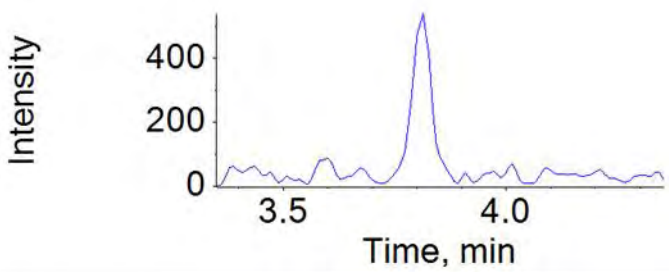


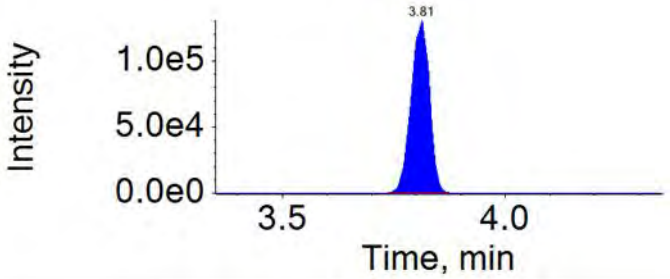
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

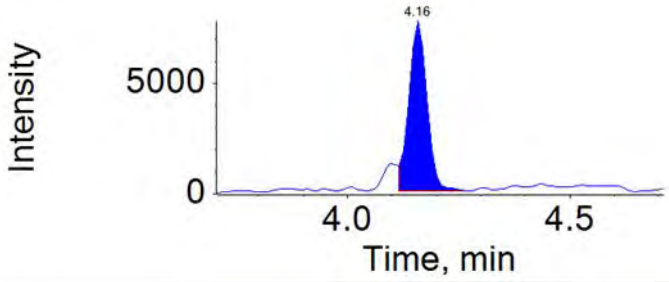
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

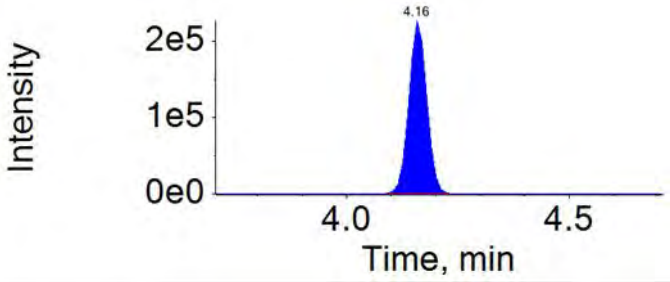
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



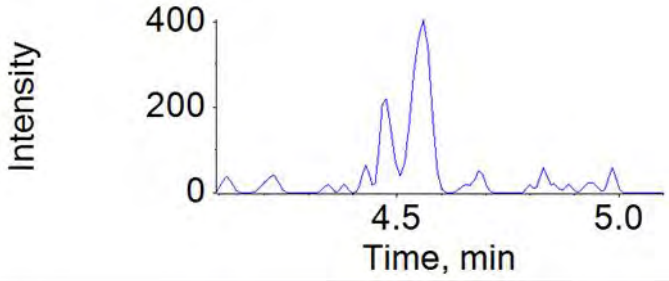


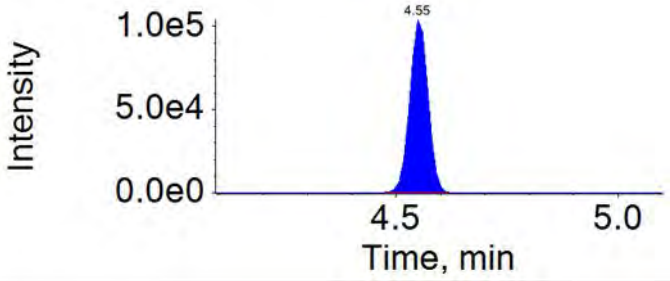
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



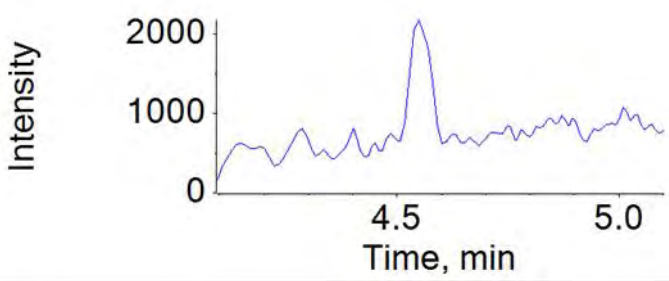


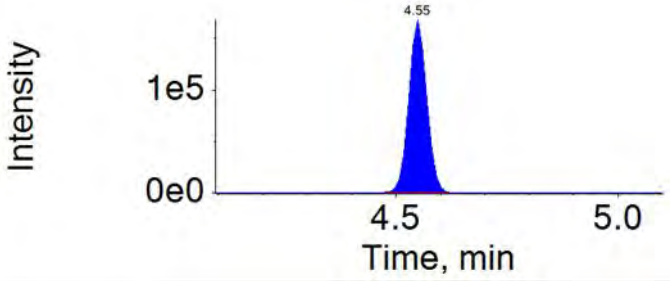
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



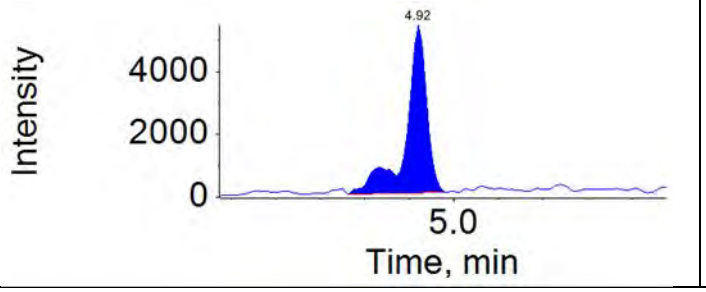


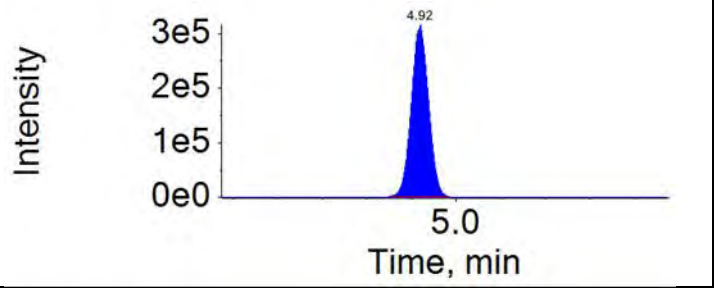
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

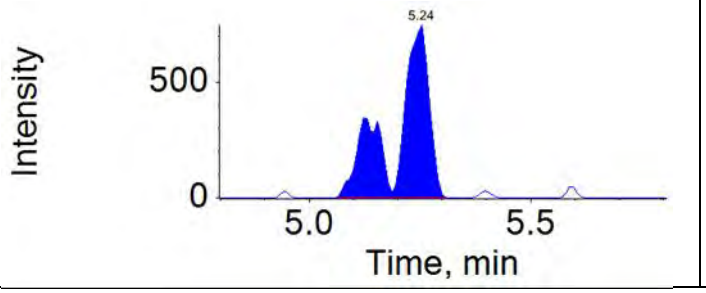
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

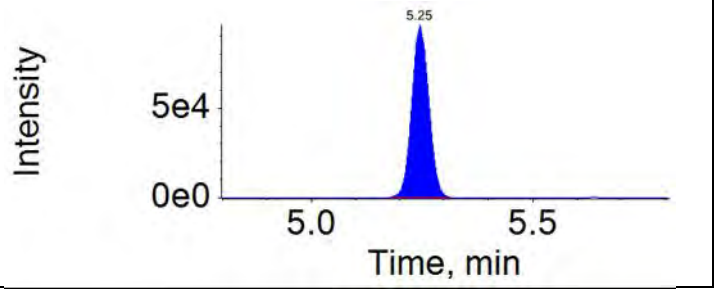
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



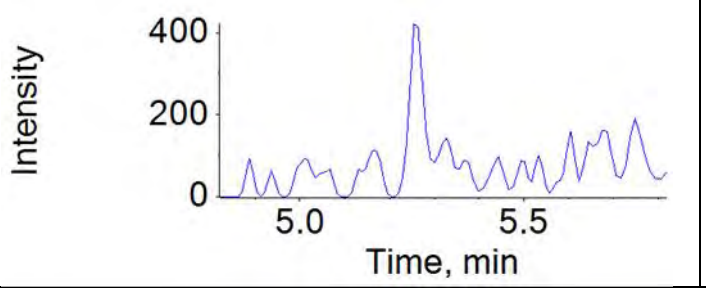


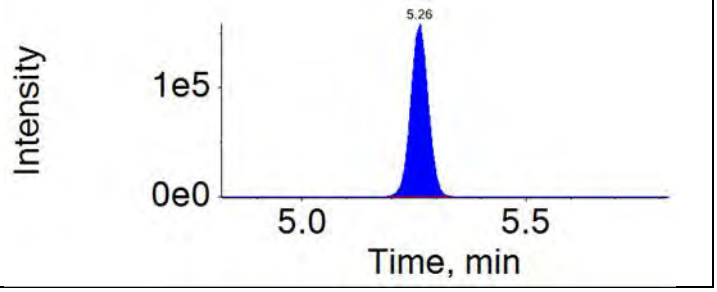
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



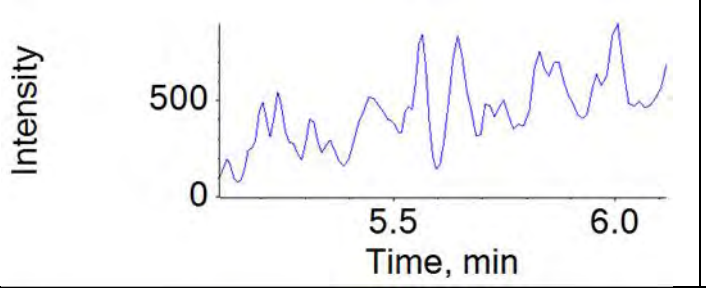


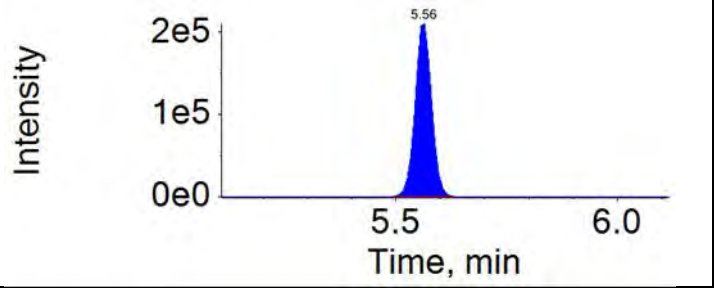
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



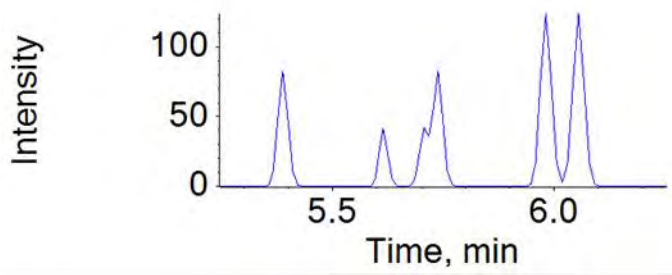


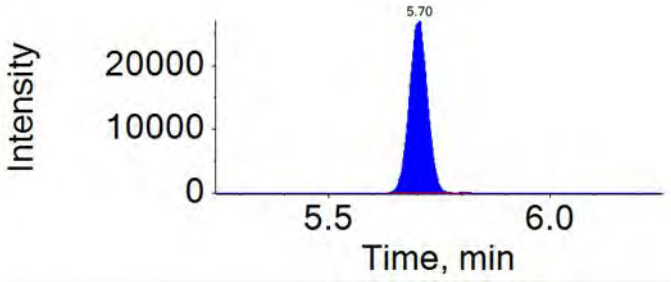
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

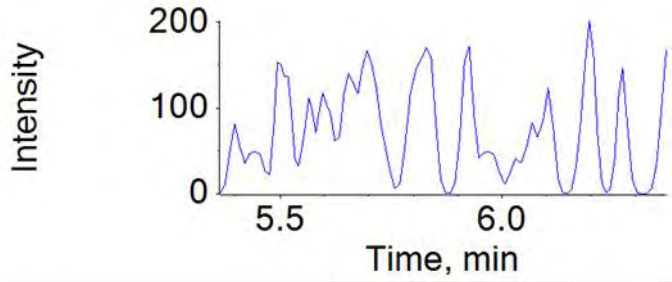
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

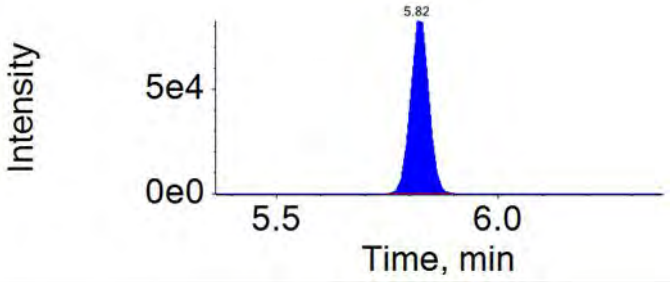
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



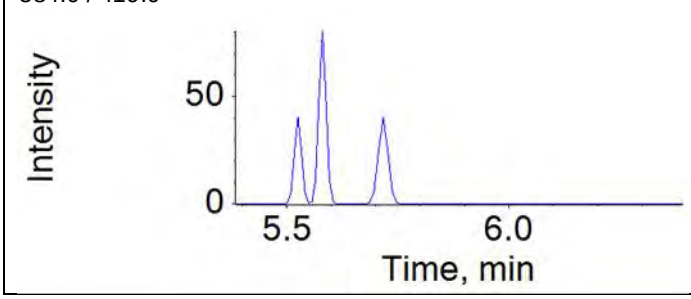


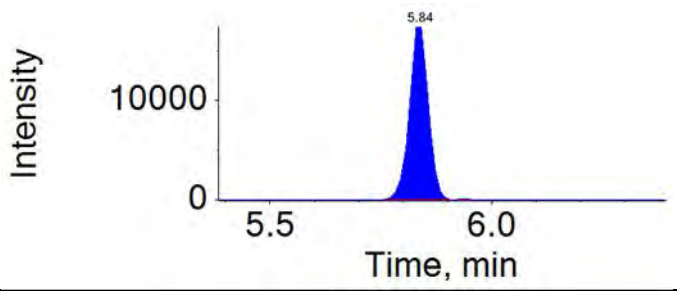
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



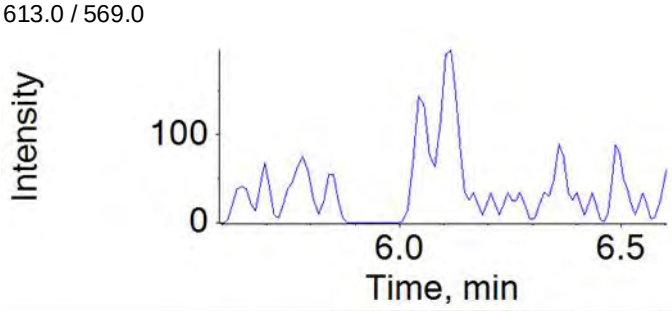


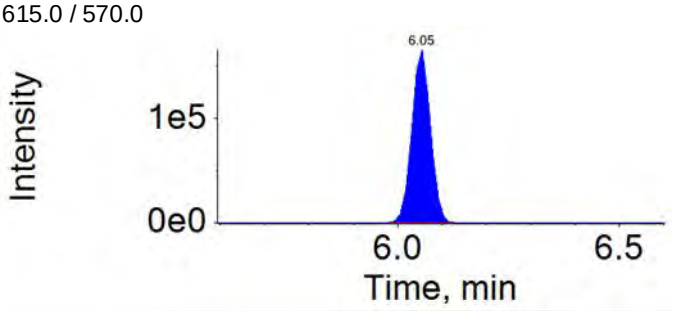
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



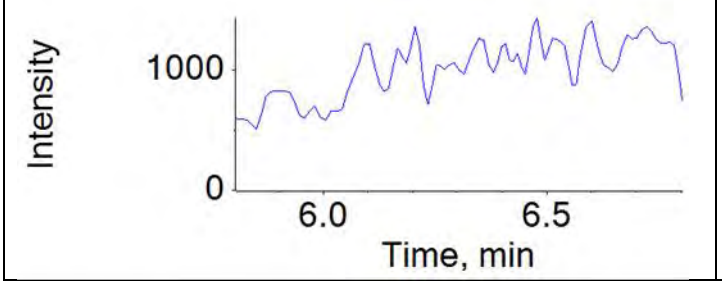


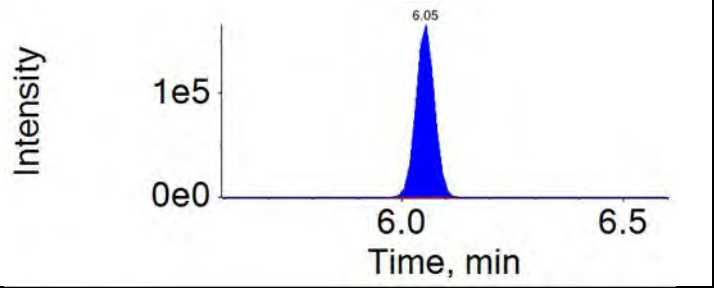
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

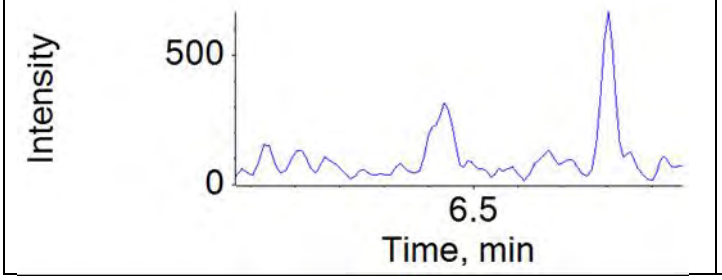
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

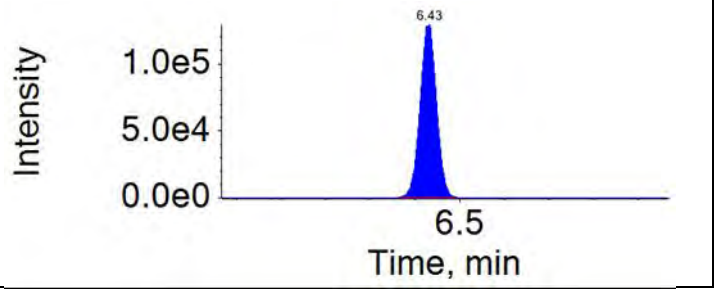
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





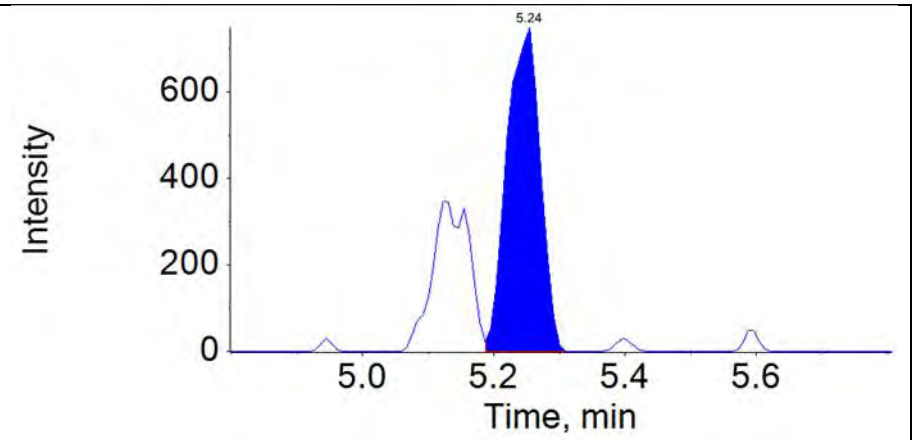
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

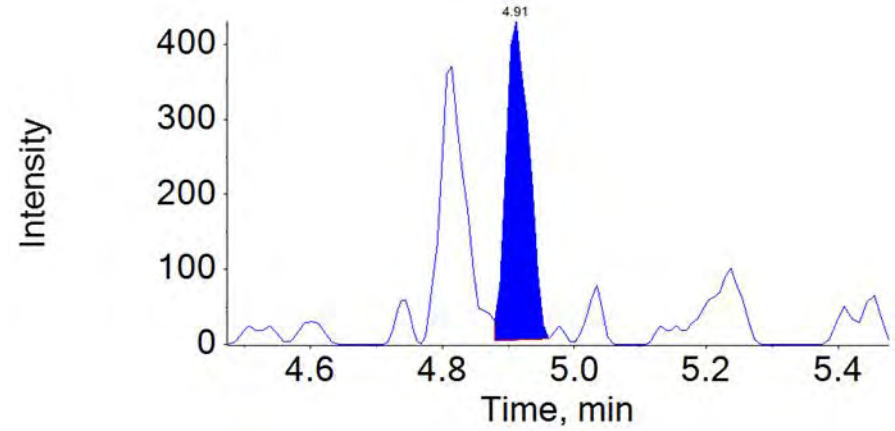
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
2658.0
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-10.wiff
Sample Name:
9881950



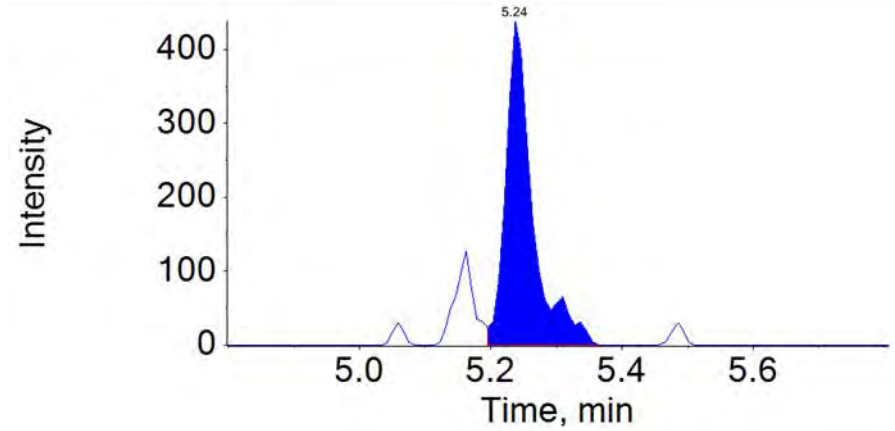
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
1024.2
Mass Range:
413.0 / 169.0
File Name:
18NOV08D-10.wiff
Sample Name:
9881950



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
1253.9
Mass Range:
499.0 / 99.0
File Name:
18NOV08D-10.wiff
Sample Name:
9881950



Integration Comment: incorrect integration

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Ion Ratio Report

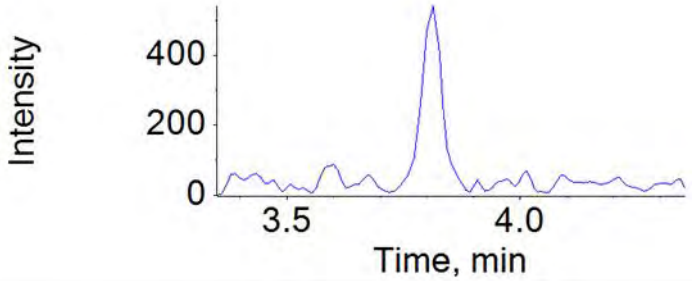
Sample Name: 9881950 **Instrument Name:** LM27631 **File Name:** 18NOV08D-10.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.16	1.00	21773.8	A	N/A	1.0000			
PFHxA_2	4.16	1.00	473.7	A	N/A	0.0218	90	50	OOS
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	4.92	1.00	17405.1	A	N/A	1.0000			
PFOA_2	4.87	0.99	2062.7	M	N/A	0.1185	87	50	OOS
PFOS	5.24	1.00	4037.0	M	N/A	1.0000			
PFOS_2	5.24	1.00	1359.3	M	N/A	0.3367	-4	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

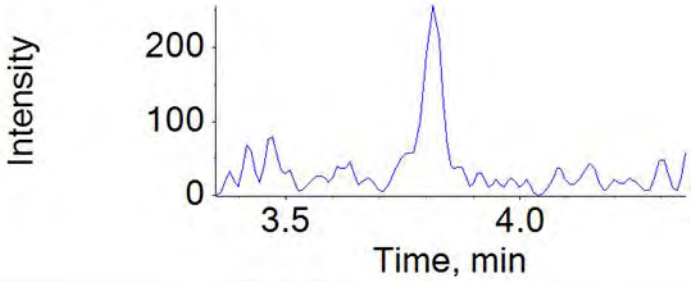
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

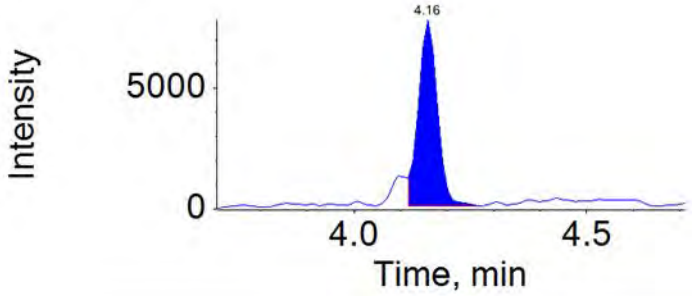
Component: PFBS
Primary Mass: 299.0 / 80.0



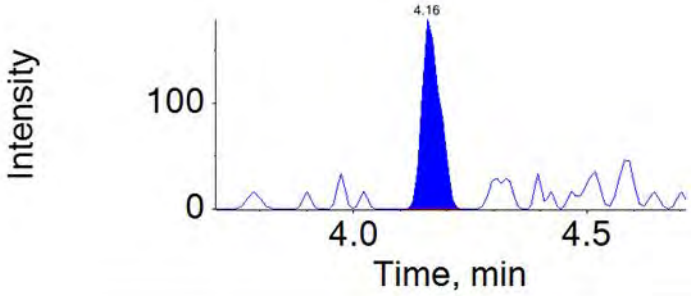
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



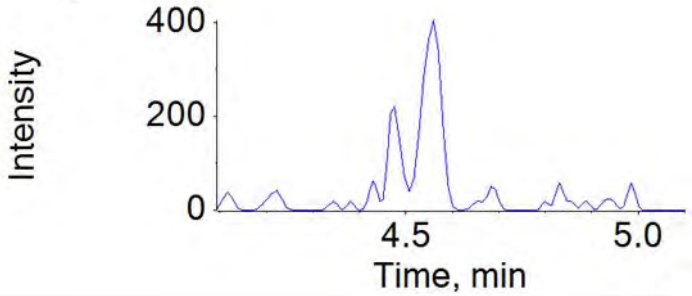
Component: PFHxA
Primary Mass: 313.0 / 269.0



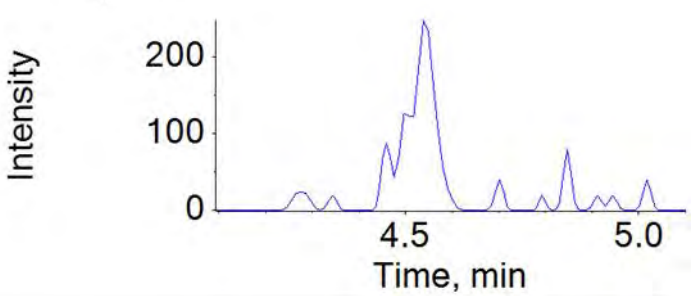
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



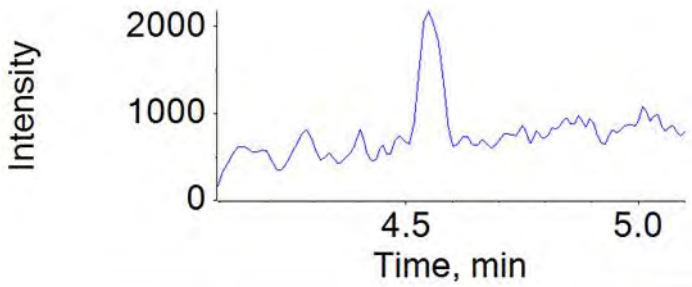
Component: PFHxS
Primary Mass: 399.0 / 80.0



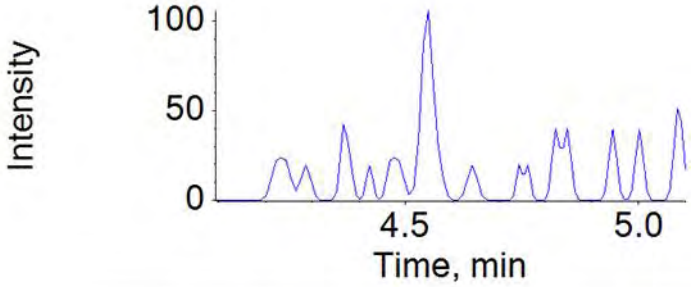
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



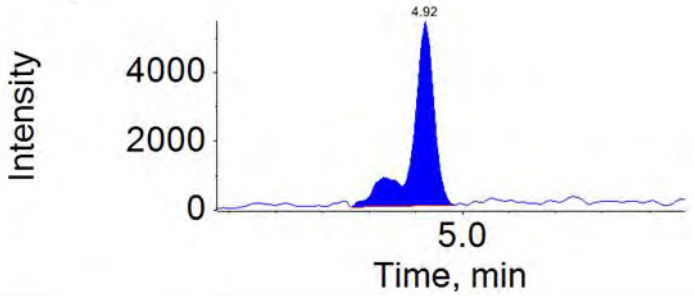
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



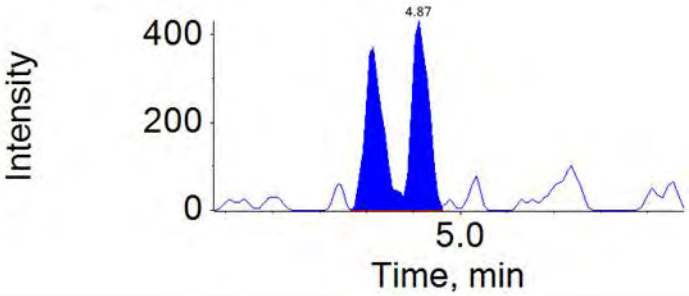
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

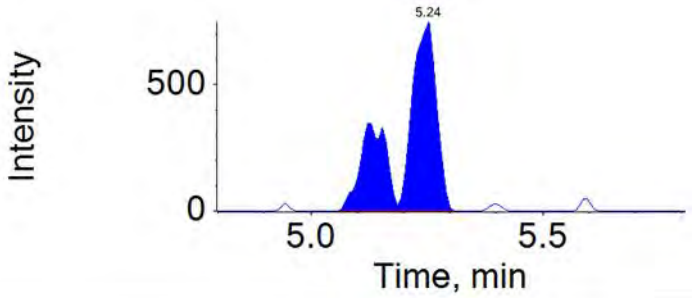
Component: PFOA
Primary Mass: 413.0 / 369.0



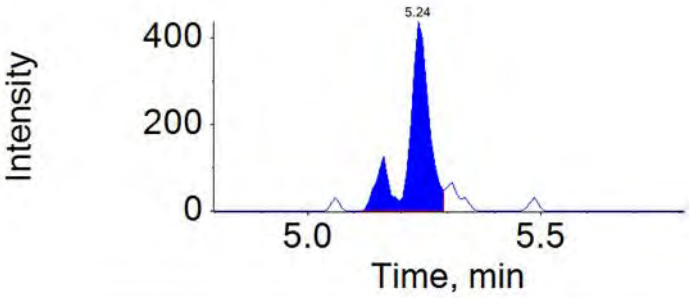
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



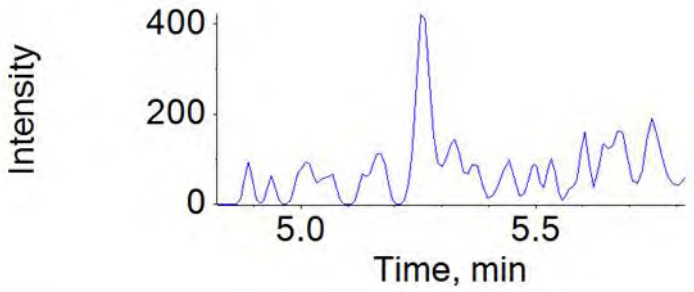
Component: PFOS
Primary Mass: 499.0 / 80.0



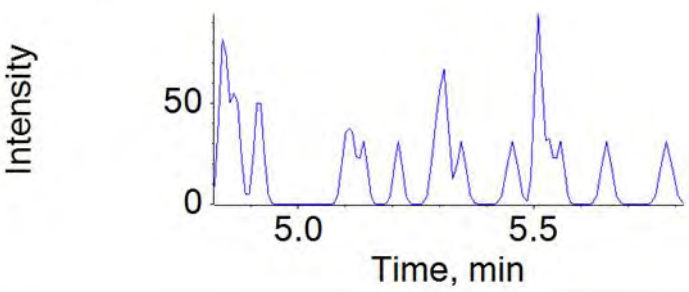
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



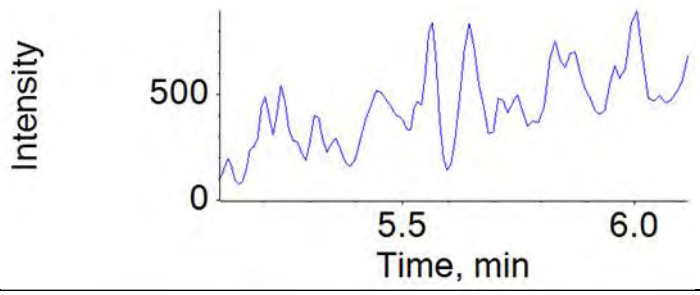
Component: PFNA
Primary Mass: 463.0 / 419.0



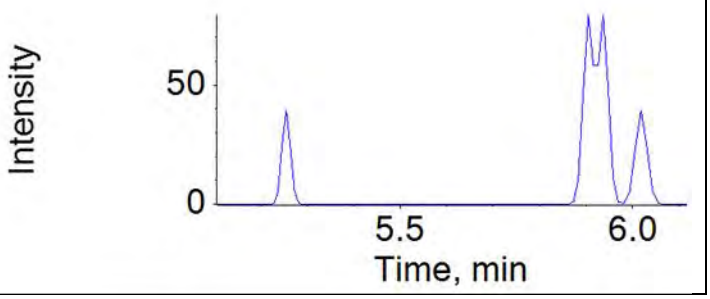
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



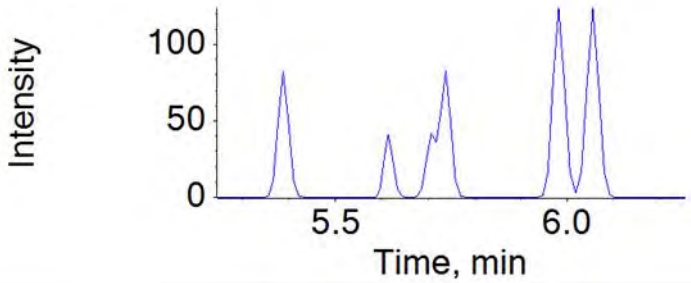
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



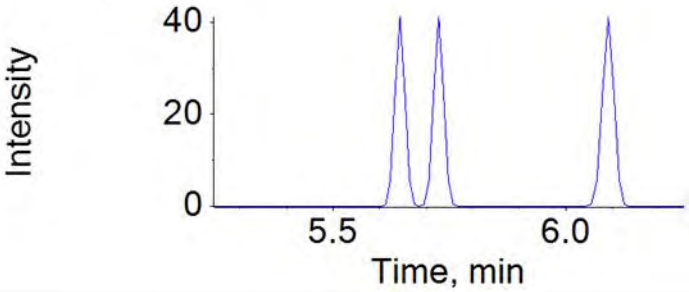
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

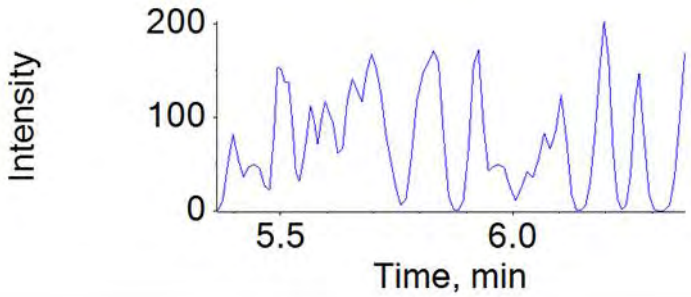
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



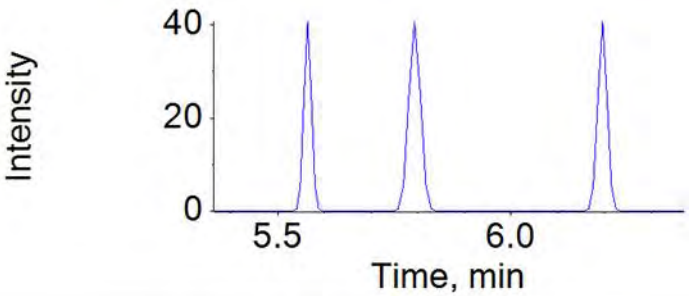
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



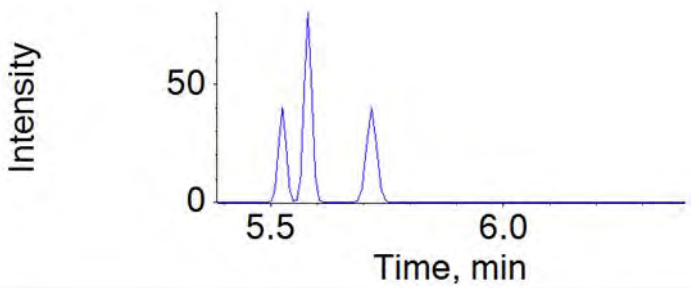
Component: PFUnDA
Primary Mass: 563.0 / 519.0



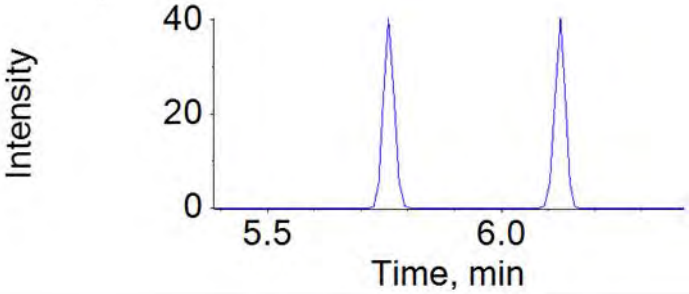
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



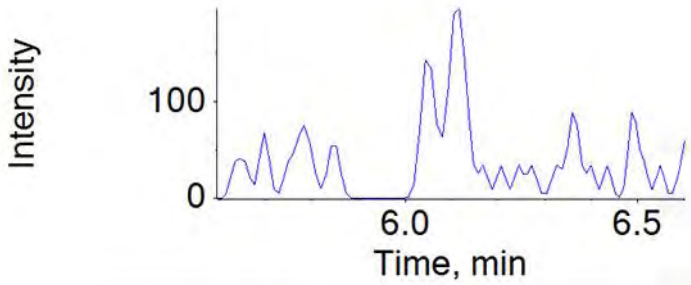
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



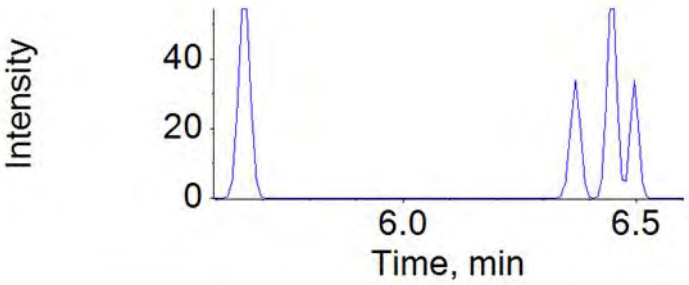
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



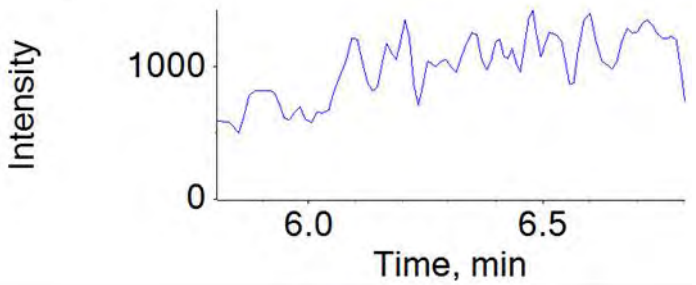
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



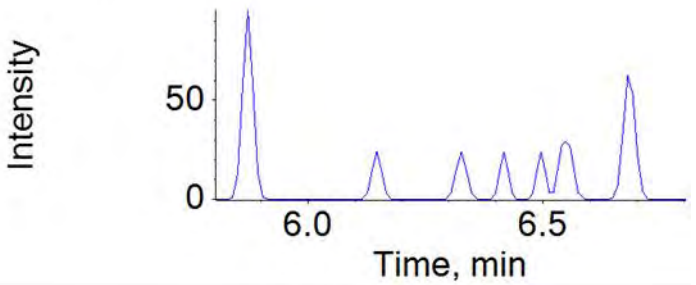
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

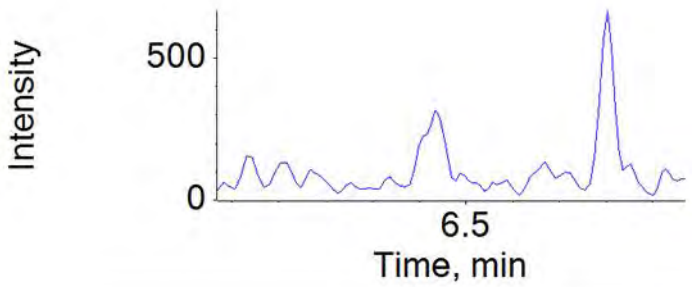
Component: PFTrDA
Primary Mass: 663.0 / 619.0



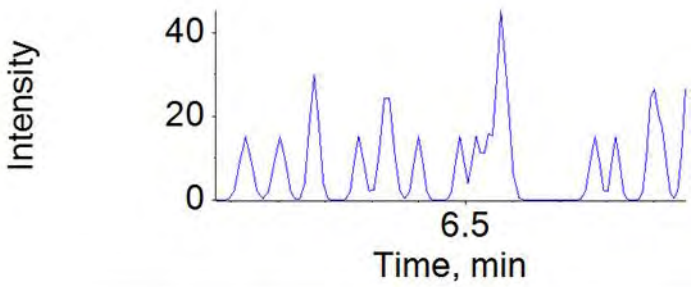
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881951			**Data File:**		18NOV08D-11.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-CAOC1517-S-01-05 Grab Soil			**Acquis Date:**		2018-11-08T13:18:46
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	27			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		JPT12262
Sample Wt.:	1.07000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	819779.9	728839.7	12	50	
13C2-PFOA	5.0	569337.2	491983.1	16	50	
13C4-PFOS	4.8	278528.8	255568.1	9	50	
13C2-PFDA	5.0	350490.1	315407.5	11	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	366852.2	13C3-PFBA	819779.9	0.448	8.692	6.139	71	50-150	
E13C5-PFHxA	571955.5	13C2-PFOA	569337.2	1.005	9.346	6.907	74	50-150	
E13C3-PFHxS	272670.3	13C2-PFOA	569337.2	0.479	8.841	6.426	73	50-150	
E13C4-PFHpA	459886.6	13C2-PFOA	569337.2	0.808	9.346	6.868	73	50-150	
E13C8-PFOA	812159.2	13C2-PFOA	569337.2	1.426	9.346	7.436	80	50-150	
E13C8-PFOS	232600.9	13C4-PFOS	278528.8	0.835	8.935	6.902	77	50-150	
E13C9-PFNA	415651.9	13C4-PFOS	278528.8	1.492	9.346	7.619	82	50-150	
E13C6-PFDA	523409.3	13C2-PFDA	350490.1	1.493	9.346	7.020	75	50-150	
Ed3-NMeFOSAA	67666.2	13C2-PFDA	350490.1	0.193	9.346	6.711	72	50-150	
E13C7-PFUnDA	236682.2	13C2-PFDA	350490.1	0.675	9.346	7.281	78	50-150	
Ed5-NEtFOSAA	56383.9	13C2-PFDA	350490.1	0.161	9.346	6.959	74	50-150	
E13C2-PFDoDA	483774.6	13C2-PFDA	350490.1	1.380	9.346	6.955	74	50-150	
E13C2-PFTeDA	327823.8	13C2-PFDA	350490.1	0.935	9.346	6.294	67	50-150	

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

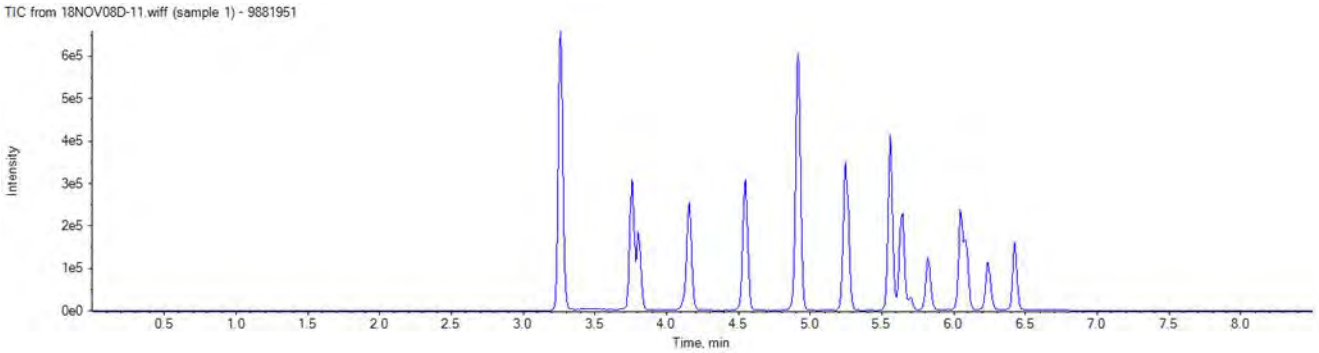
Analyte Quantitation Peak Table

Sample Name: 9881951 **Instrument Name:** LM27631 **File Name:** 18NOV08D-11.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.07000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	366852.2	N/A	
PFHxA	4.16	1.000	17221.4		A	13C5-PFHxA	4.16	571955.6	0.030	0.241
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	272670.3	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	459886.6	N/A	
PFOA	4.92	1.000	25788.9		A	13C8-PFOA	4.91	812159.2	0.032	0.334
PFOS	5.24	1.000	11668.6		M	13C8-PFOS	5.24	232600.9	0.050	0.486
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	415651.9	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	523409.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	67666.2	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	236682.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	56384.0	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	483774.6	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	483774.6	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	327823.8	N/A	

Total Ion Chromatogram

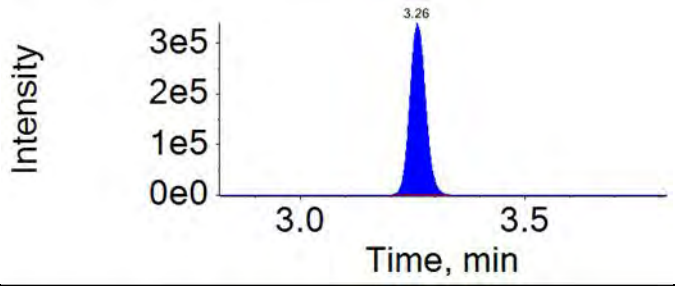


APPROVED
By JPT at 5:11 pm, 11/8/18

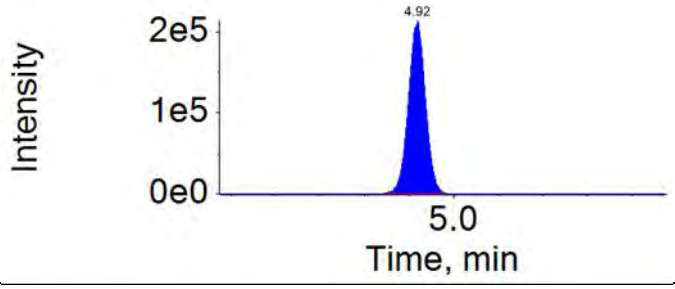
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

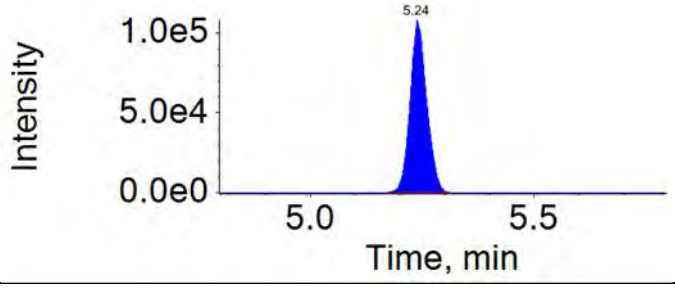
Injection Standard: 13C3-PFBA
216.0 / 172.0



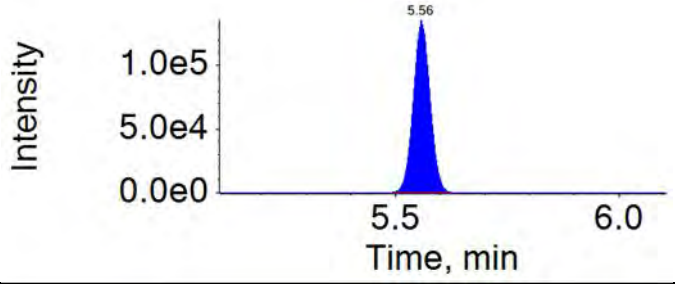
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

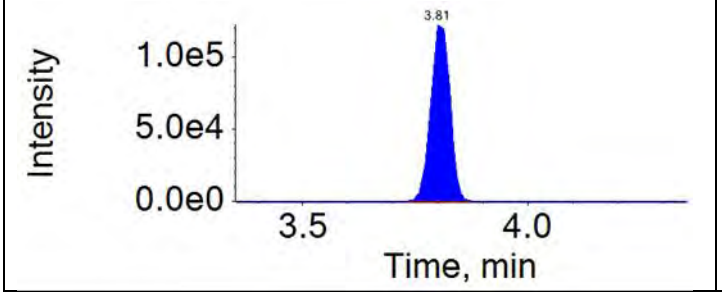


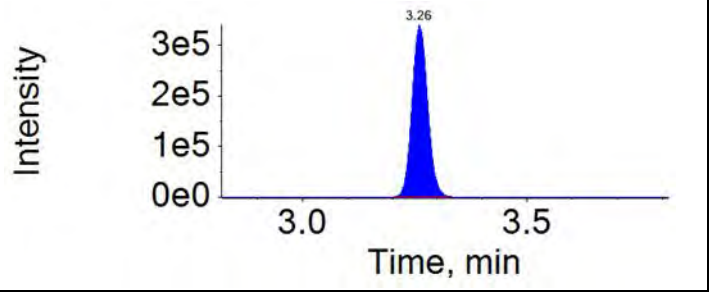
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

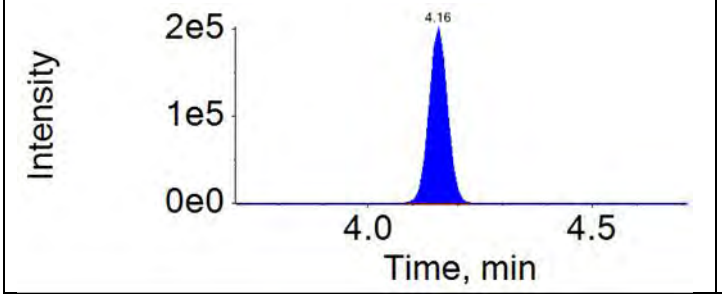
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

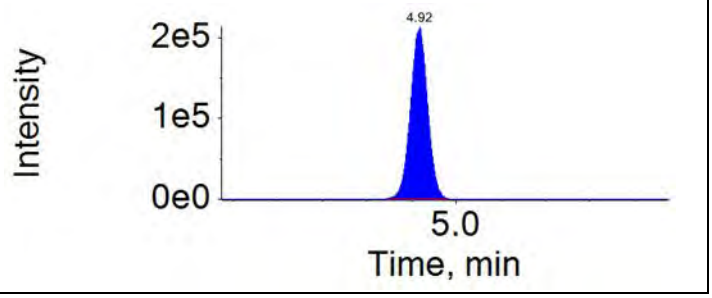
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



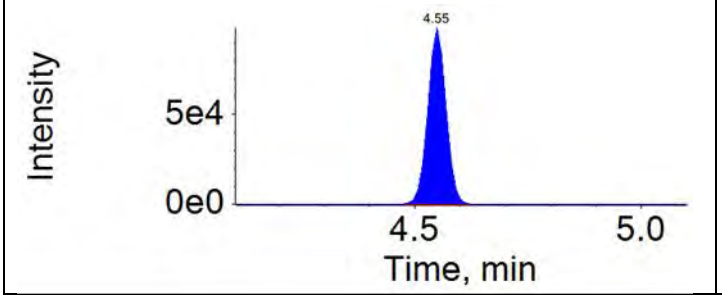


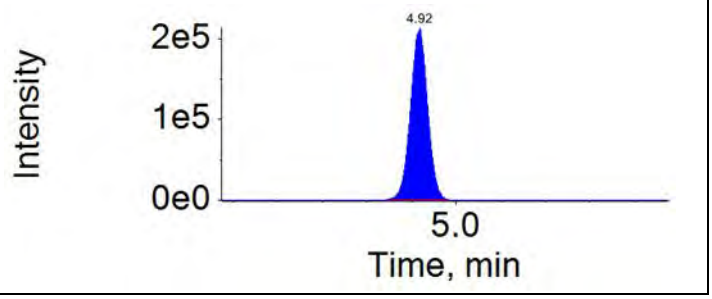
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



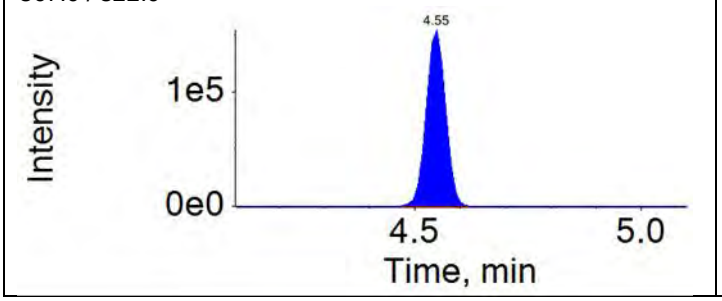


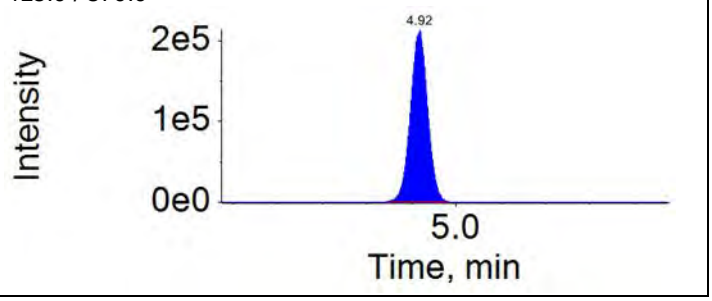
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0

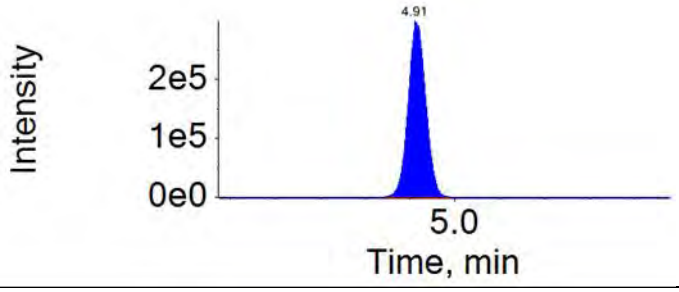
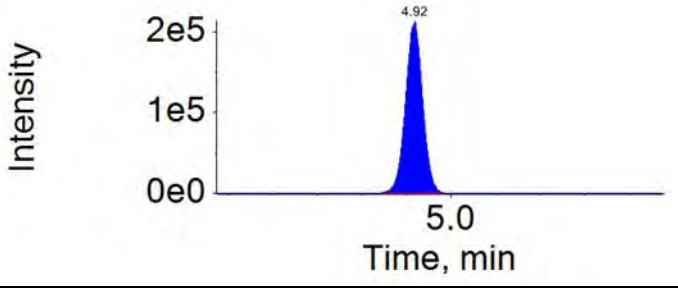


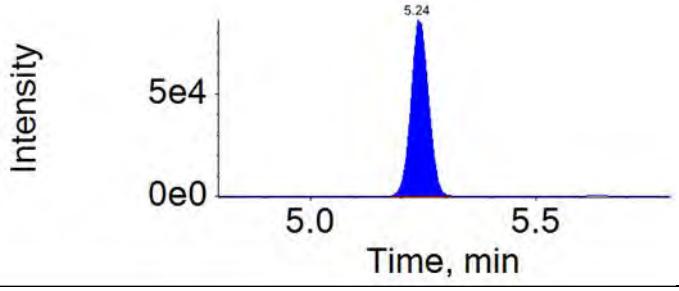
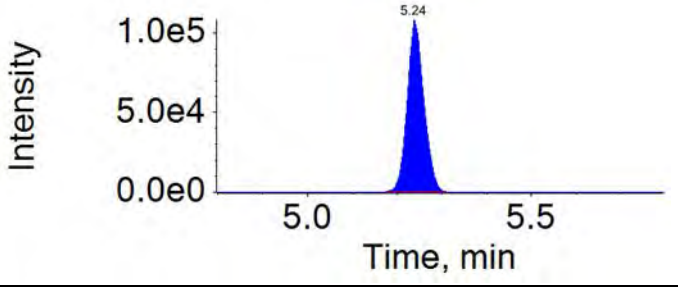


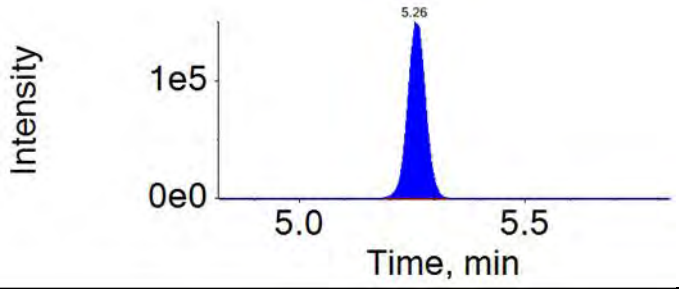
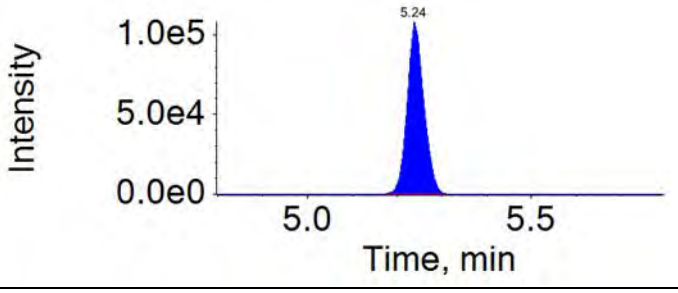
APPROVED
By JPT at 5:11 pm, 11/8/18

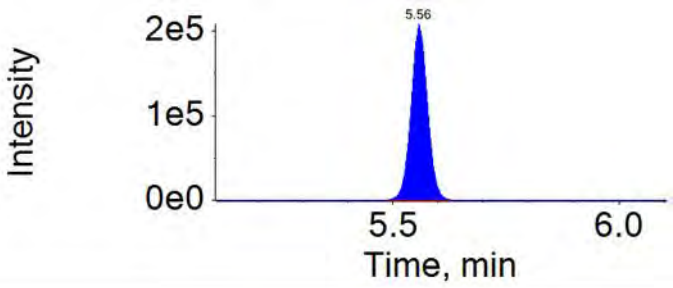
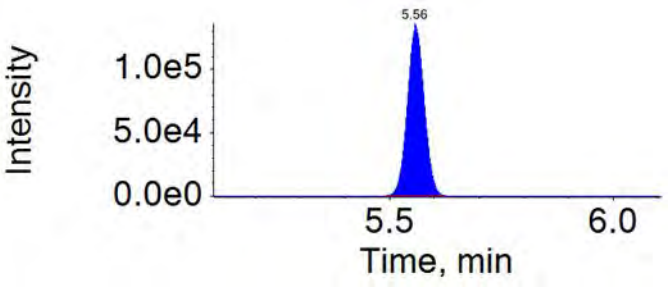
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

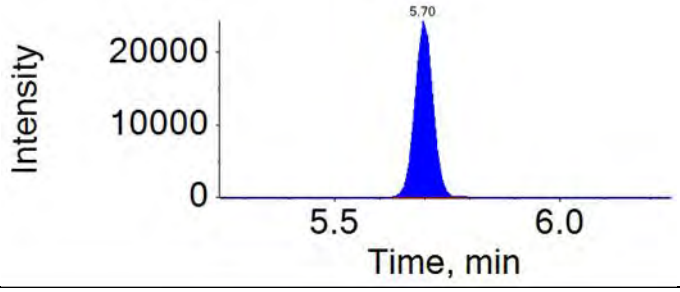
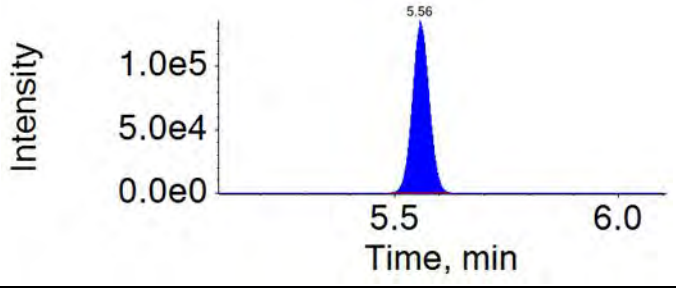
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

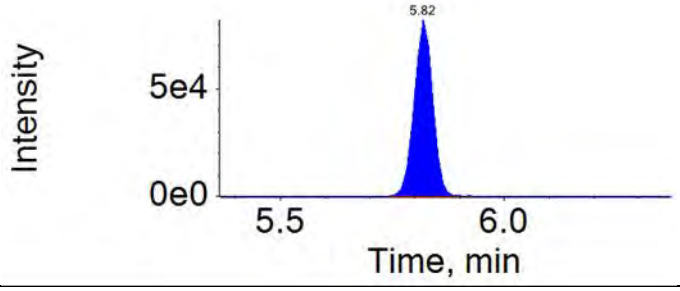
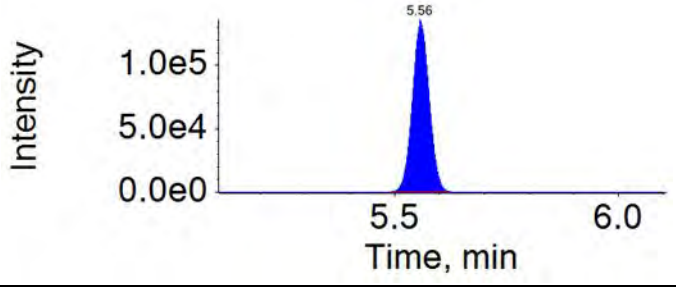
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

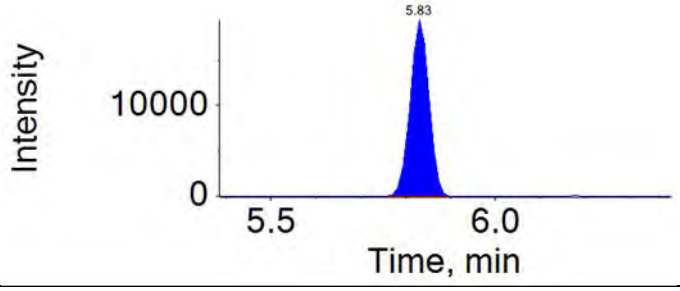
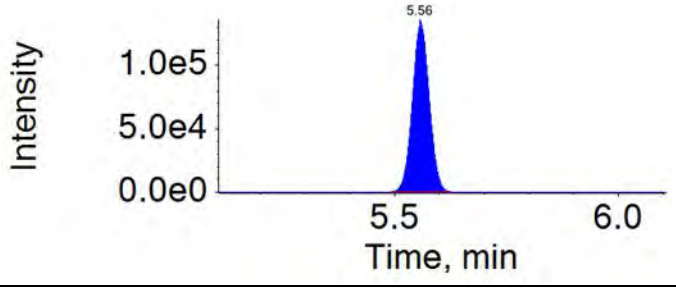
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

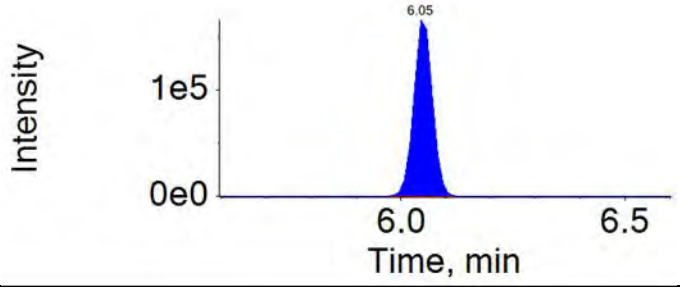
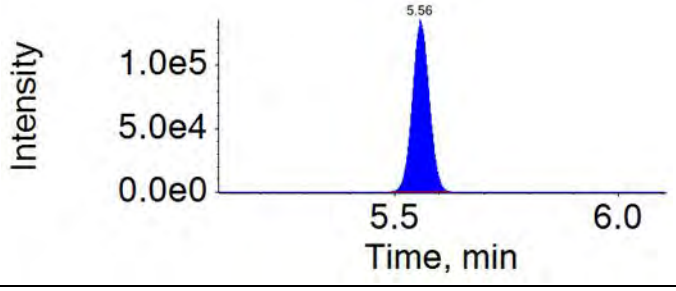
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

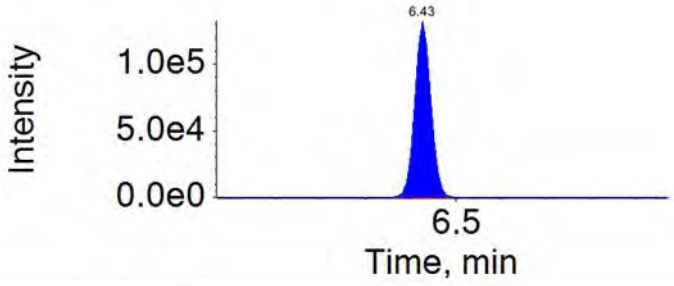
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

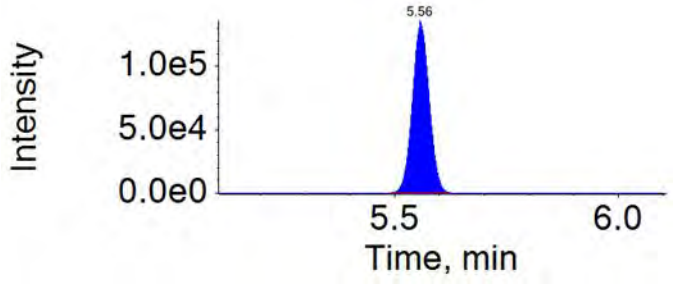
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



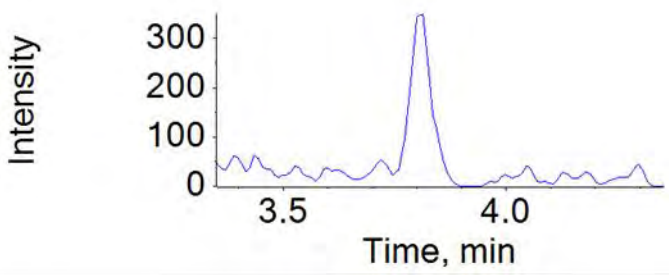


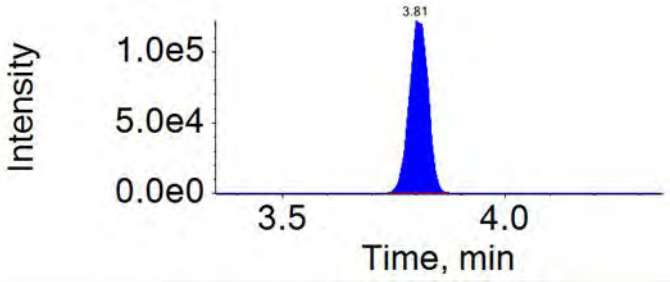
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

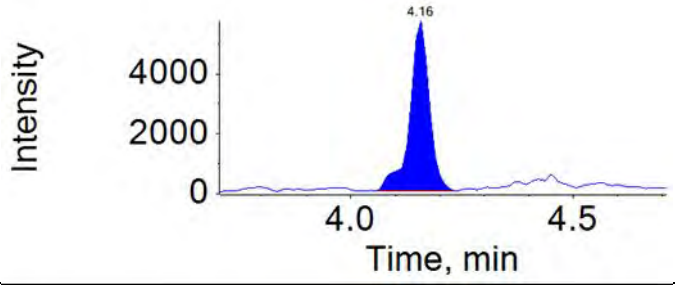
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

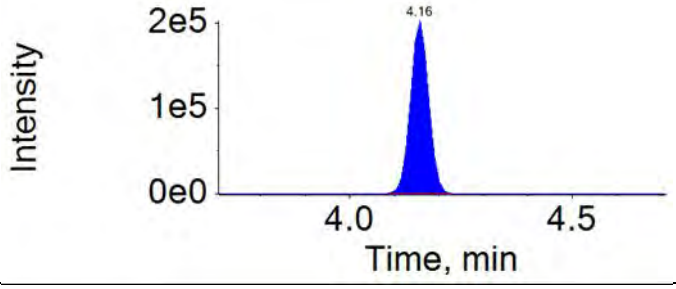
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



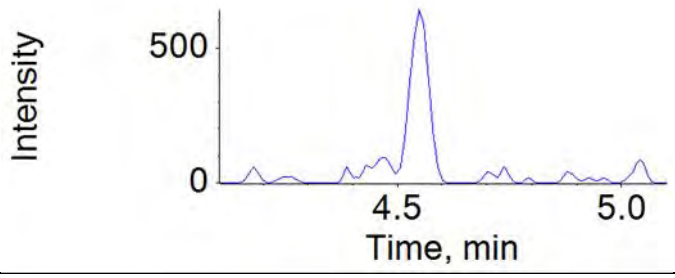


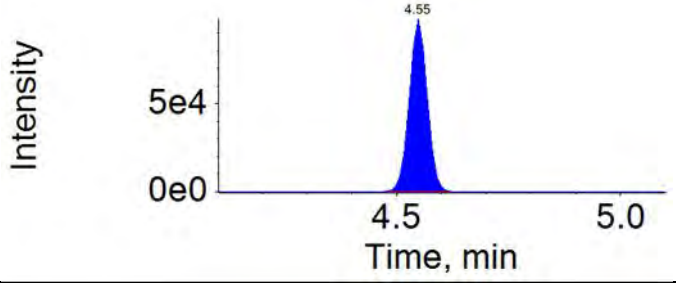
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



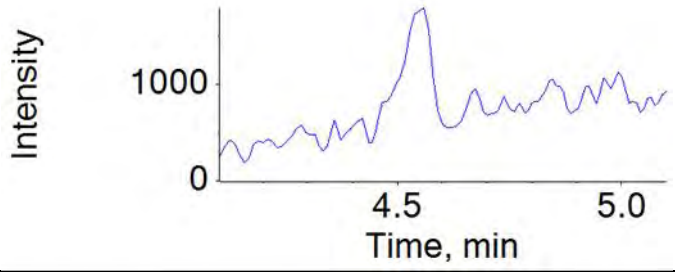


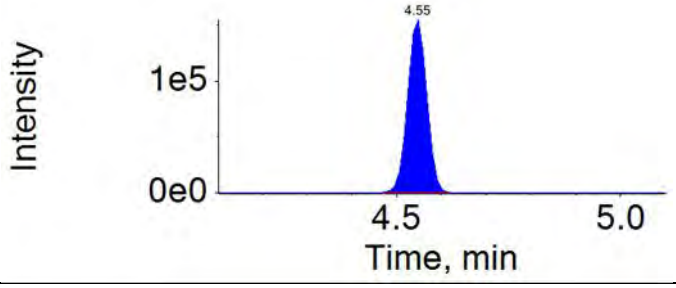
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



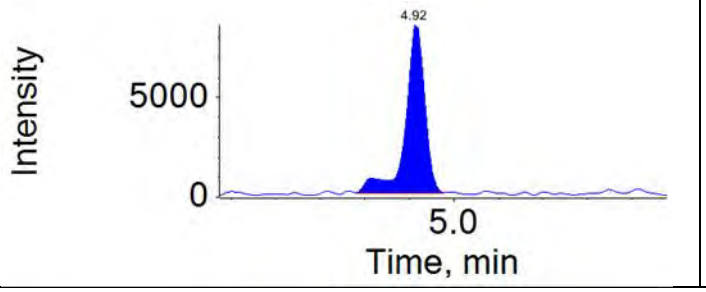


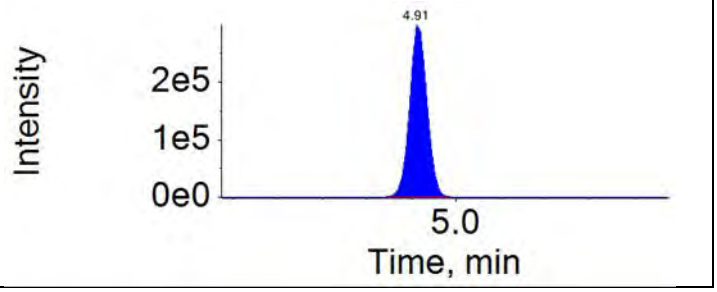
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

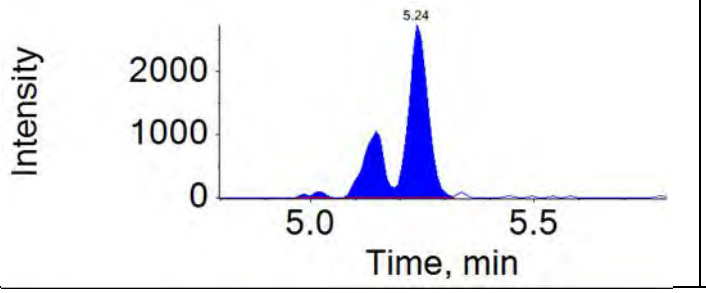
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

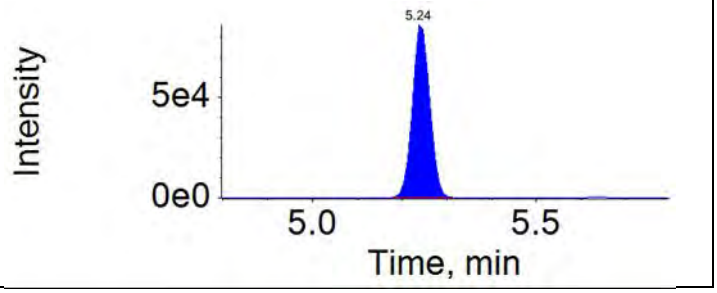
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



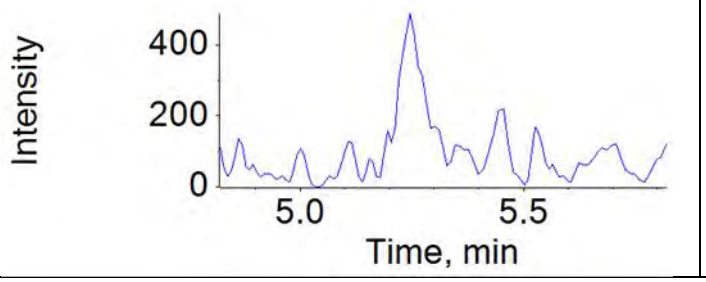


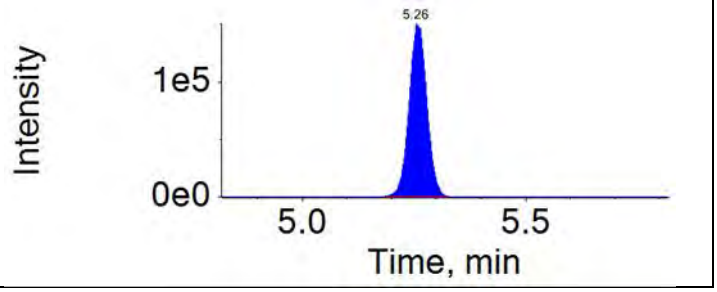
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



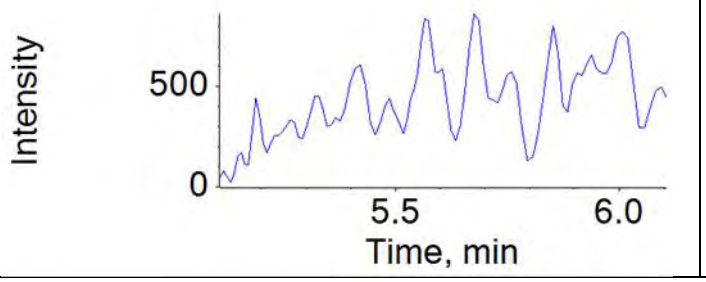


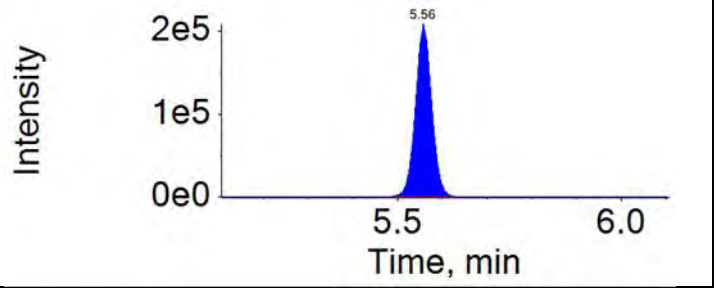
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



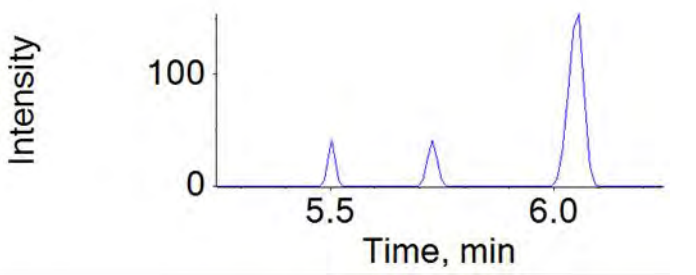


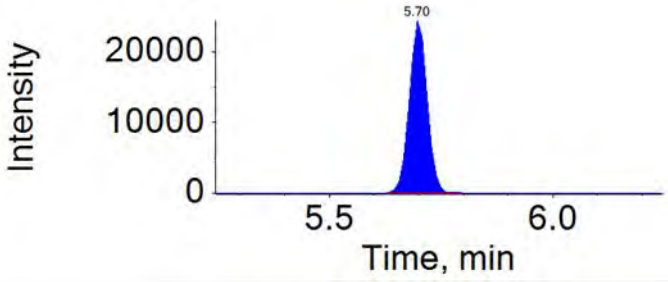
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

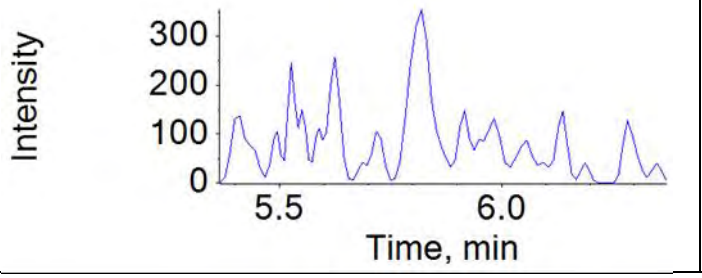
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

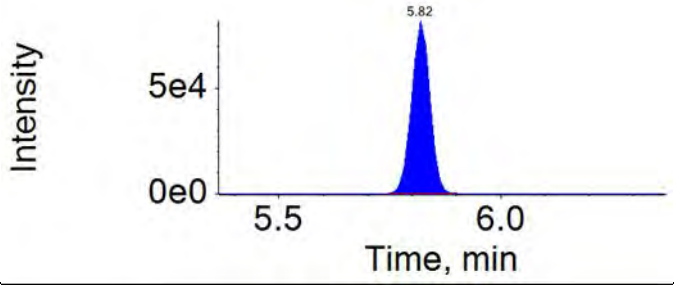
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



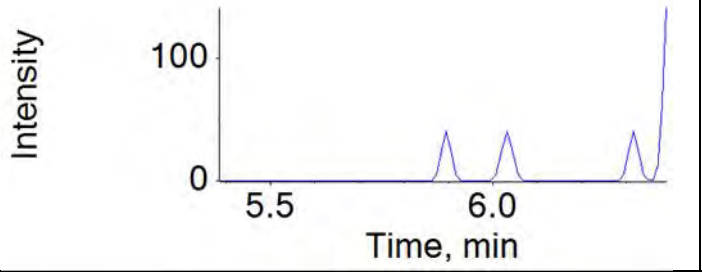


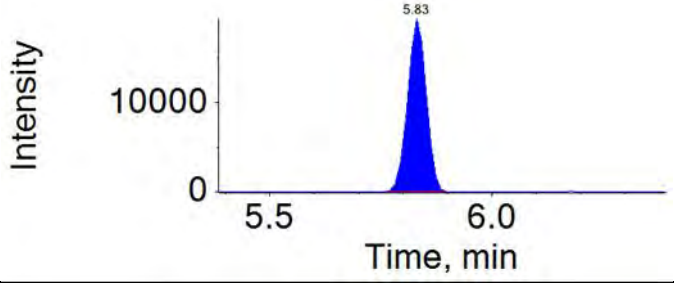
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



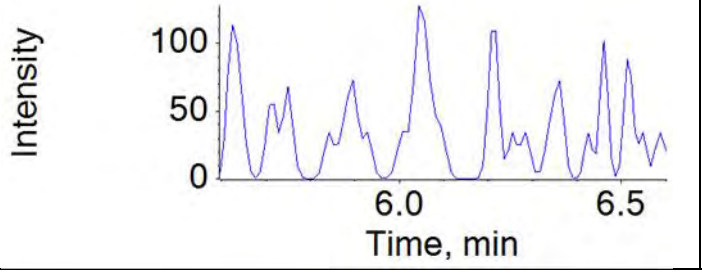


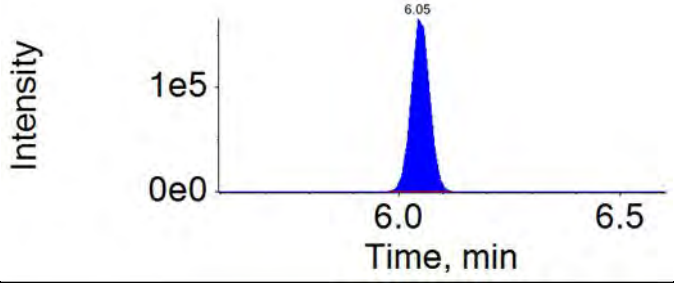
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



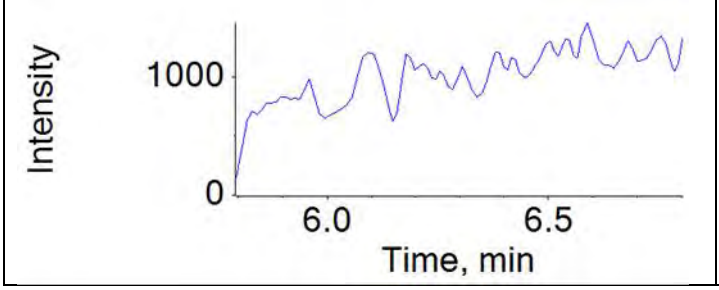


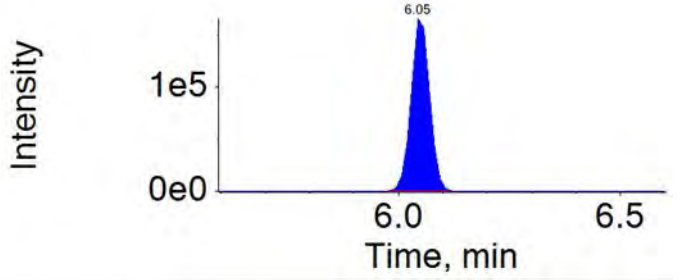
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

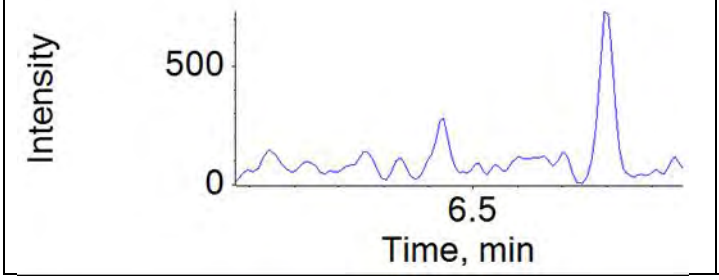
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

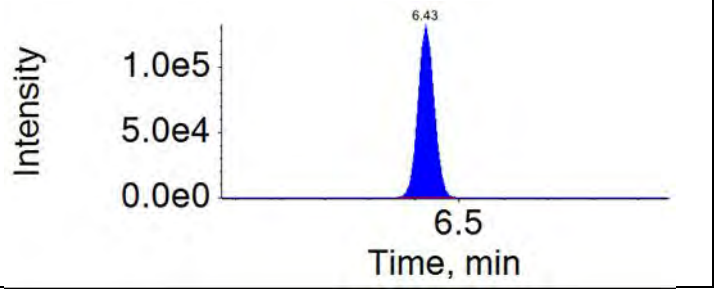
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





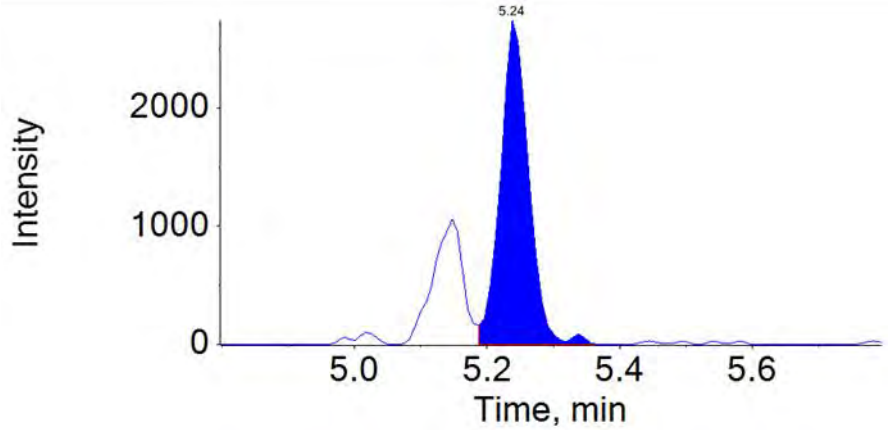
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

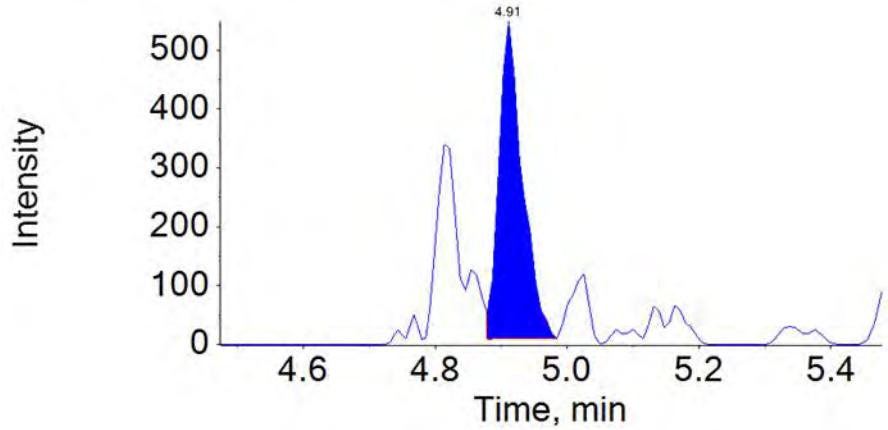
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
8164.7
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-11.wiff
Sample Name:
9881951



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
1336.1
Mass Range:
413.0 / 169.0
File Name:
18NOV08D-11.wiff
Sample Name:
9881951



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
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3591.1
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499.0 / 99.0
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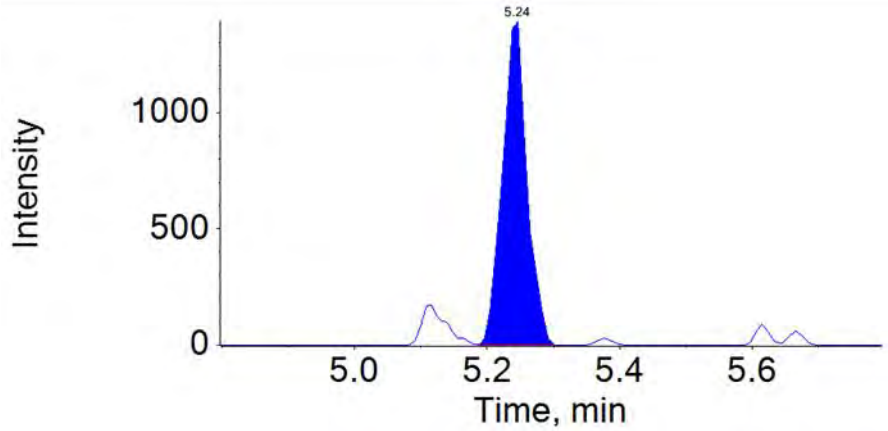
9881951



Integration Comment: incorrect integration

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Ion Ratio Report

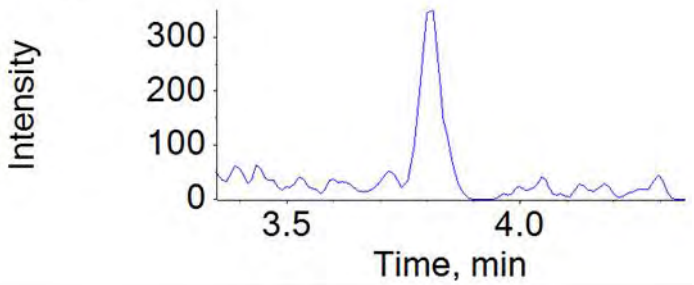
Sample Name: 9881951 **Instrument Name:** LM27631 **File Name:** 18NOV08D-11.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.16	1.00	17221.4	A	N/A	1.0000			
PFHxA_2	4.16	1.00	288.6	A	N/A	0.0168	46	50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	4.92	1.00	25788.9	A	N/A	1.0000			
PFOA_2	4.90	1.00	2297.2	M	N/A	0.0891	40	50	
PFOS	5.24	1.00	11668.6	M	N/A	1.0000			
PFOS_2	5.24	1.00	4026.7	M	N/A	0.3451	-1	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

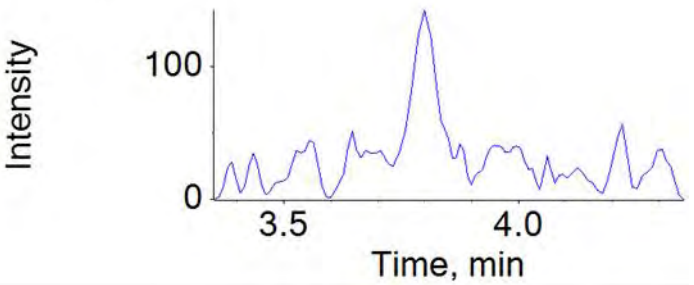
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

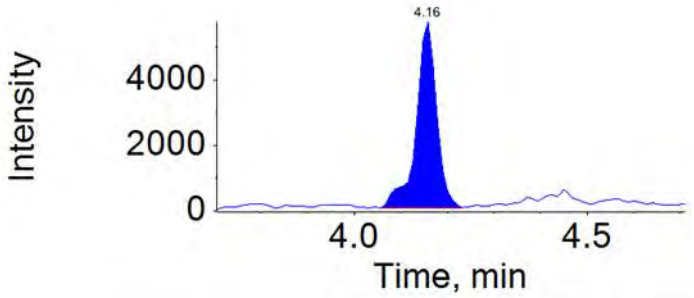
Component: PFBS
Primary Mass: 299.0 / 80.0



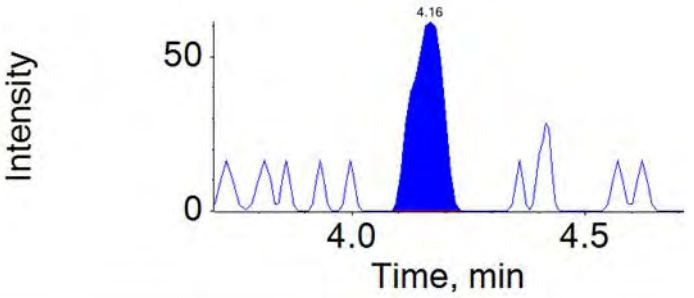
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



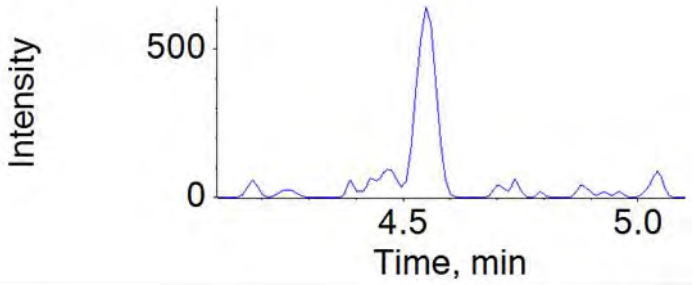
Component: PFHxA
Primary Mass: 313.0 / 269.0



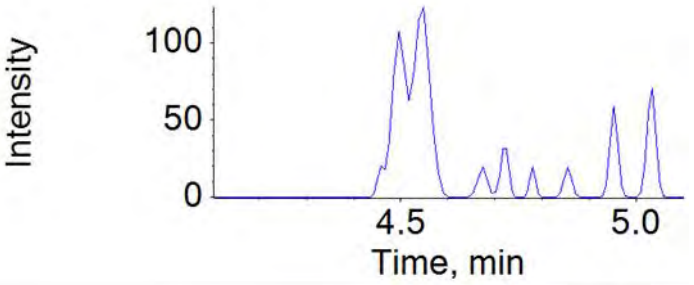
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



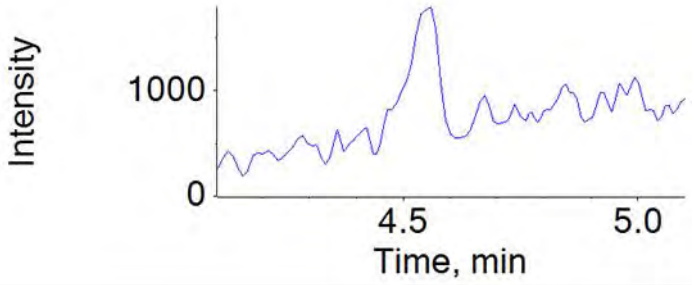
Component: PFHxS
Primary Mass: 399.0 / 80.0



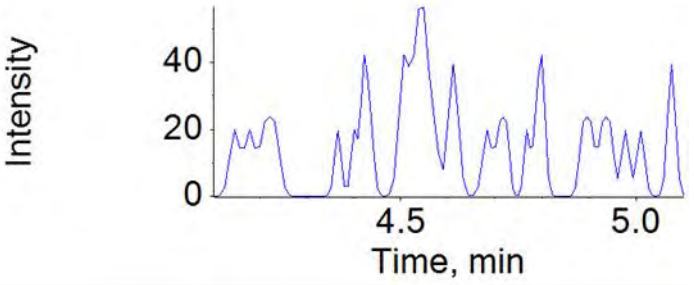
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



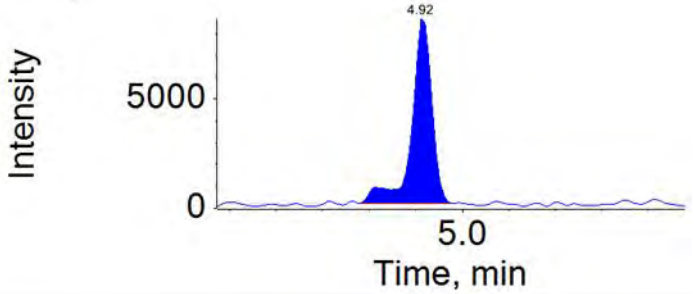
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



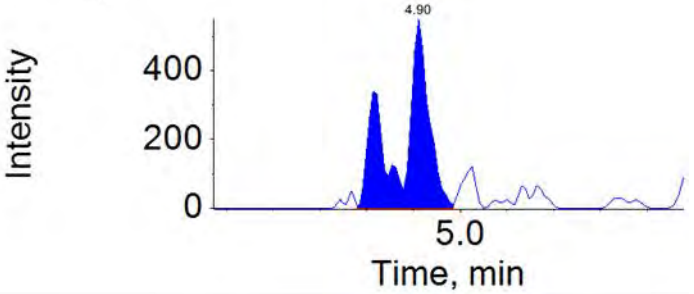
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

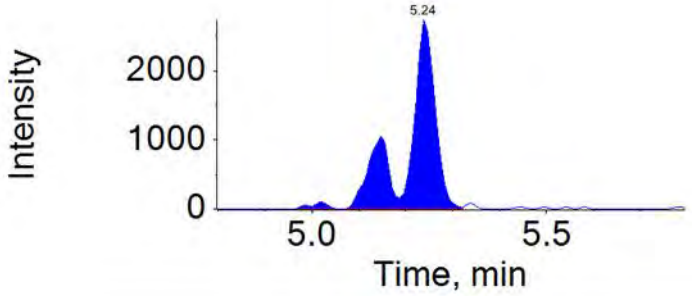
Component: PFOA
Primary Mass: 413.0 / 369.0



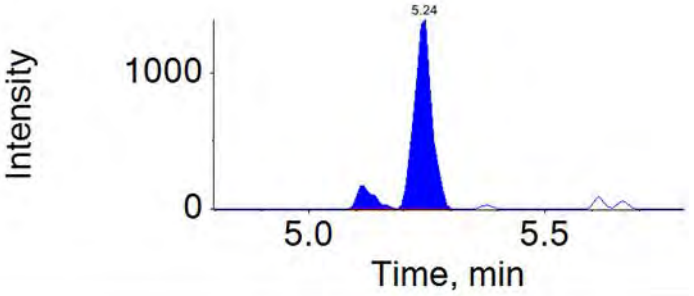
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



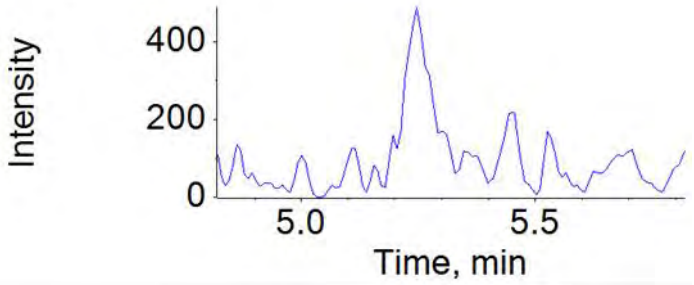
Component: PFOS
Primary Mass: 499.0 / 80.0



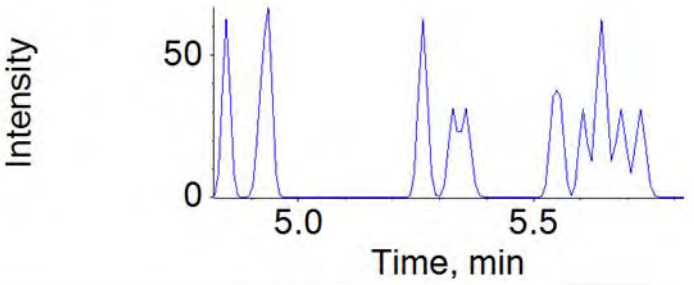
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



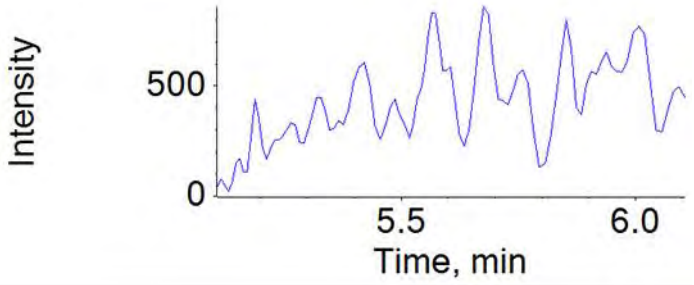
Component: PFNA
Primary Mass: 463.0 / 419.0



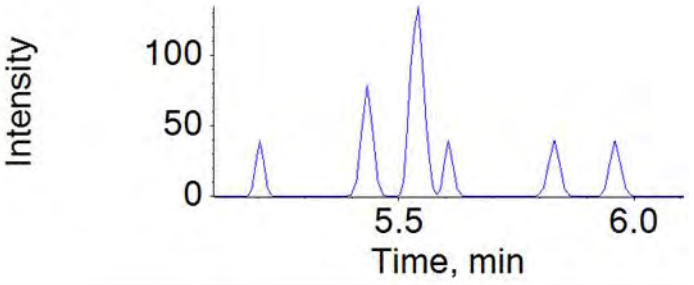
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



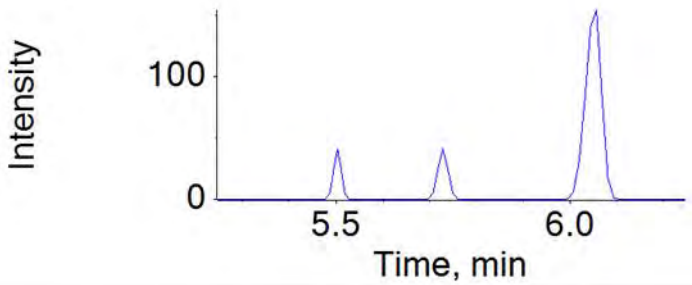
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



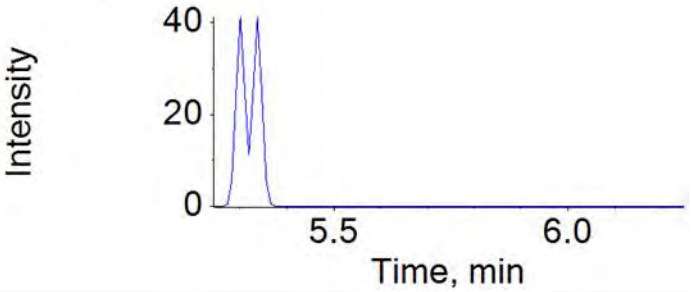
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

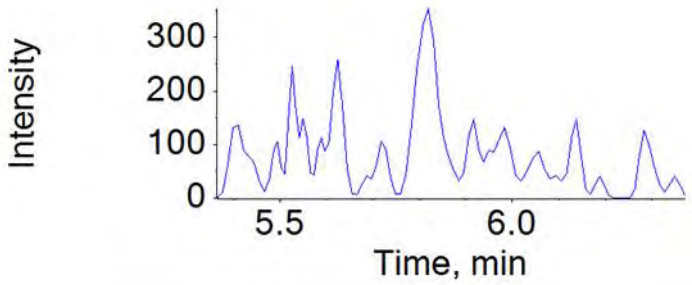
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



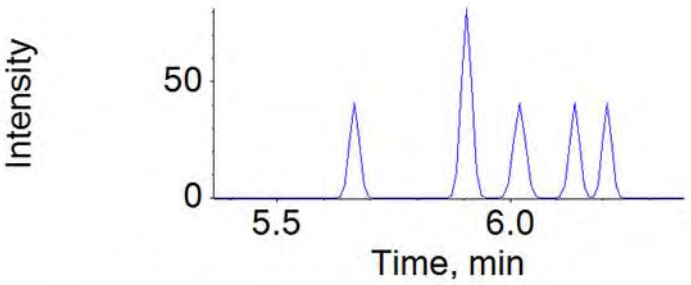
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



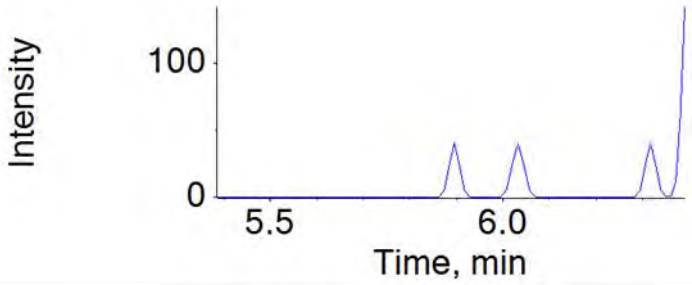
Component: PFUnDA
Primary Mass: 563.0 / 519.0



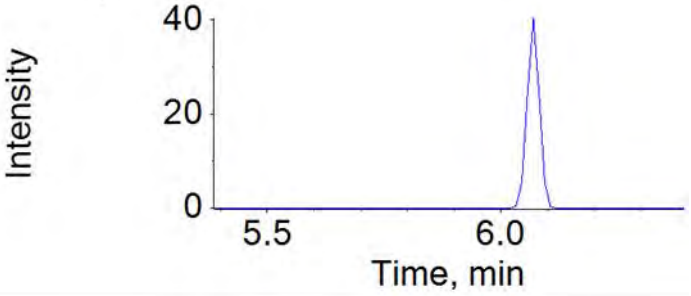
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



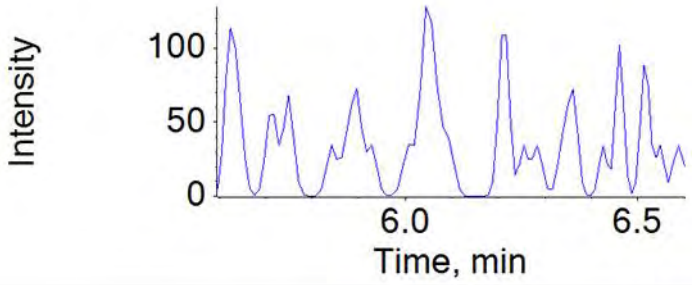
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



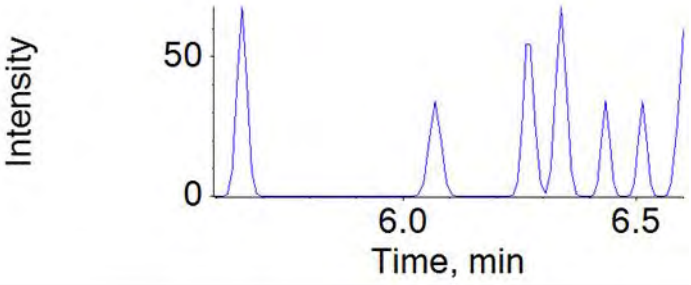
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



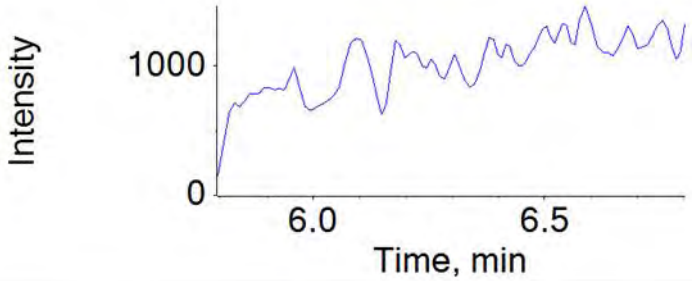
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



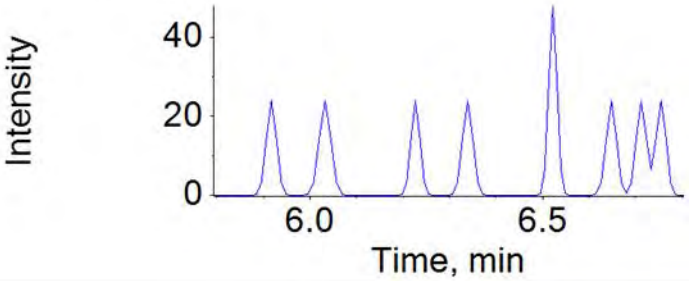
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

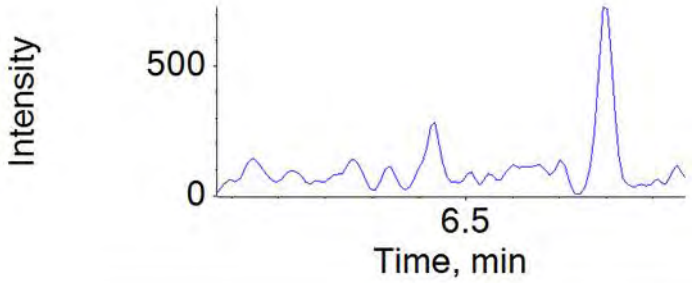
Component: PFTrDA
Primary Mass: 663.0 / 619.0



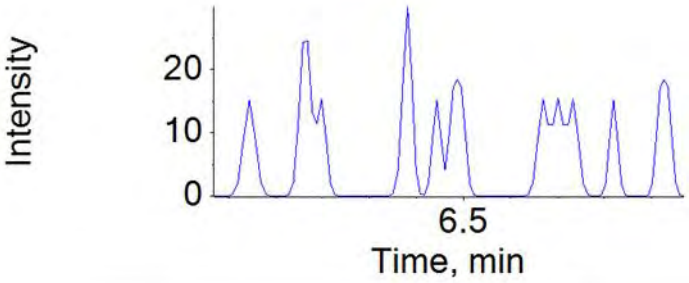
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881952			**Data File:**		18NOV08D-12.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-CAOC1517-S-01-08 Grab Soil			**Acquis Date:**		2018-11-08T13:27:49
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	28			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		JPT12262
Sample Wt.:	1.04000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	797664.2	728839.7	9	50	
13C2-PFOA	5.0	573333.6	491983.1	17	50	
13C4-PFOS	4.8	288015.4	255568.1	13	50	
13C2-PFDA	5.0	343146.5	315407.5	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	383390.8	13C3-PFBA	797664.2	0.481	8.942	6.784	76	50-150	
E13C5-PFHxA	612026.2	13C2-PFOA	573333.6	1.067	9.615	7.551	79	50-150	
E13C3-PFHxS	304755.8	13C2-PFOA	573333.6	0.532	9.096	7.338	81	50-150	
E13C4-PFHpA	498861.0	13C2-PFOA	573333.6	0.870	9.615	7.612	79	50-150	
E13C8-PFOA	860615.6	13C2-PFOA	573333.6	1.501	9.615	8.050	84	50-150	
E13C8-PFOS	261563.3	13C4-PFOS	288015.4	0.908	9.192	7.723	84	50-150	
E13C9-PFNA	445813.6	13C4-PFOS	288015.4	1.548	9.615	8.131	85	50-150	
E13C6-PFDA	603096.7	13C2-PFDA	343146.5	1.758	9.615	8.500	88	50-150	
Ed3-NMeFOSAA	56496.9	13C2-PFDA	343146.5	0.165	9.615	5.888	61	50-150	
E13C7-PFUnDA	254481.3	13C2-PFDA	343146.5	0.742	9.615	8.227	86	50-150	
Ed5-NEtFOSAA	47152.4	13C2-PFDA	343146.5	0.137	9.615	6.115	64	50-150	
E13C2-PFDoDA	493604.7	13C2-PFDA	343146.5	1.438	9.615	7.457	78	50-150	
E13C2-PFTeDA	375915.8	13C2-PFDA	343146.5	1.095	9.615	7.584	79	50-150	

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

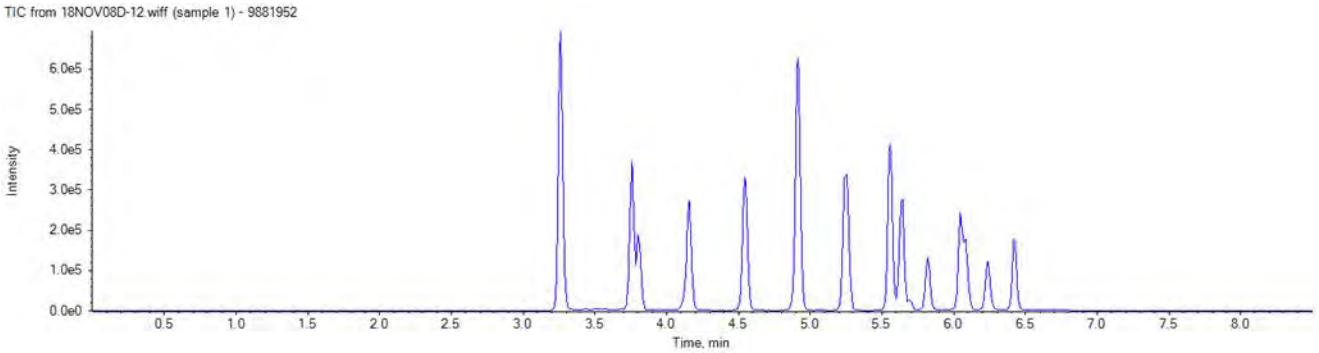
Analyte Quantitation Peak Table

Sample Name: 9881952 **Instrument Name:** LM27631 **File Name:** 18NOV08D-12.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.04000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	383390.8	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	612026.2	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	304755.8	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	498861.0	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	860615.6	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	261563.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	445813.6	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	603096.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	56496.9	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	254481.3	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	47152.4	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	493604.7	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	493604.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	375915.8	N/A	

Total Ion Chromatogram

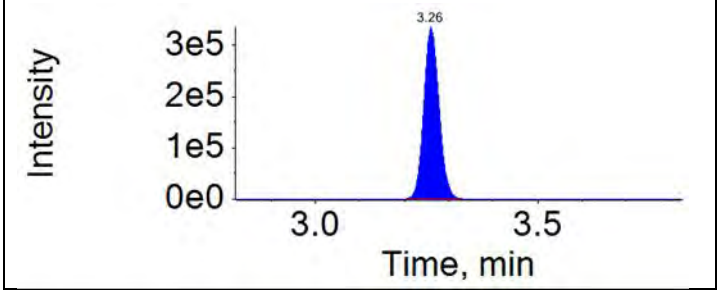


APPROVED
By JPT at 5:11 pm, 11/8/18

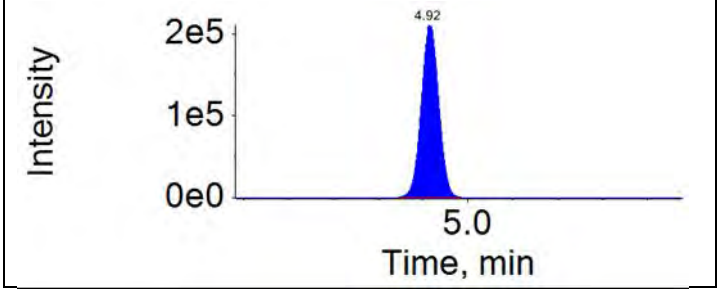
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

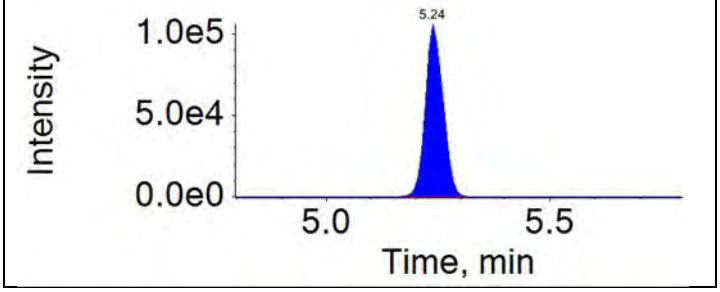
Injection Standard: 13C3-PFBA
216.0 / 172.0



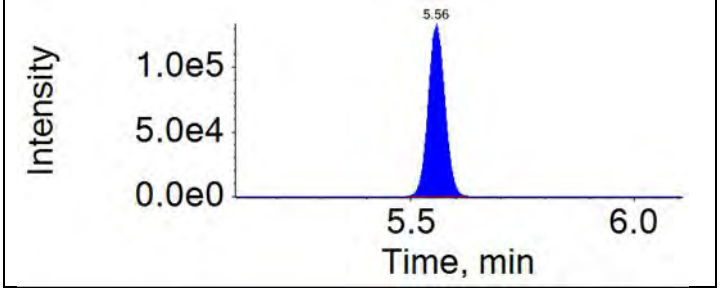
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



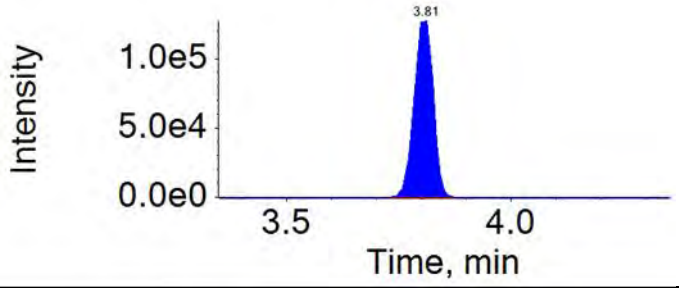
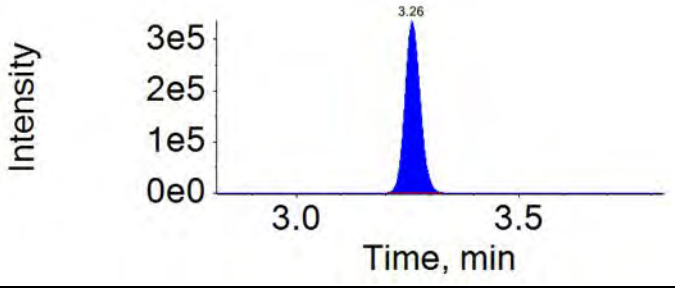
Injection Standard: 13C2-PFDA
515.0 / 470.0

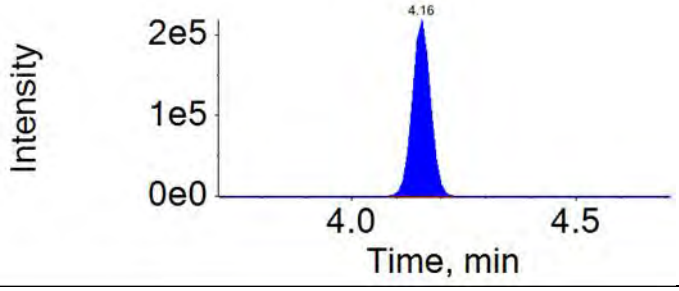
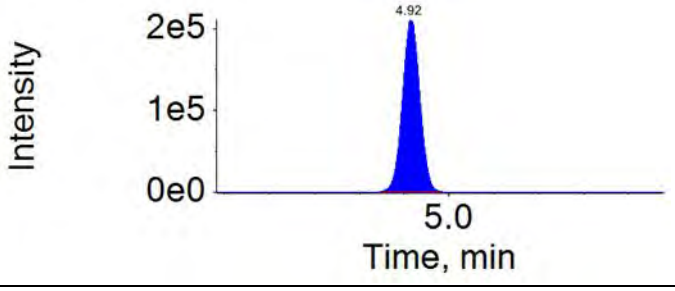


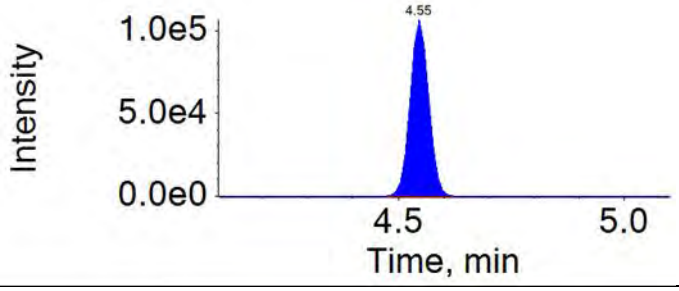
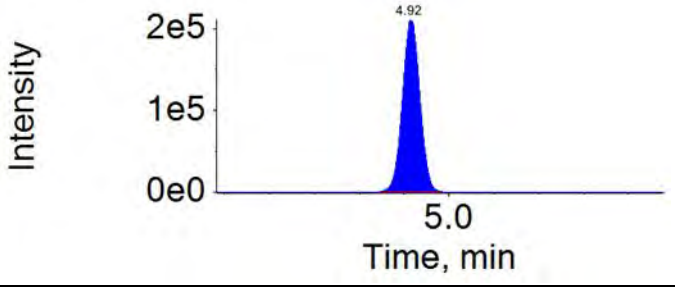
APPROVED
By JPT at 5:11 pm, 11/8/18

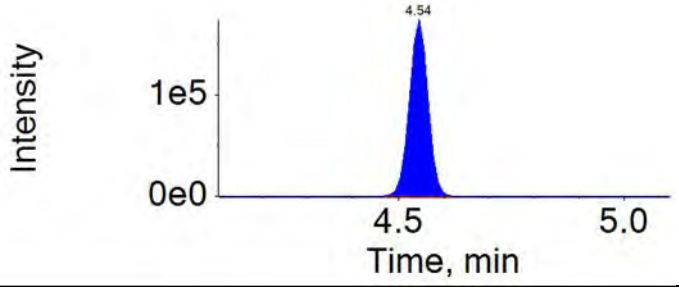
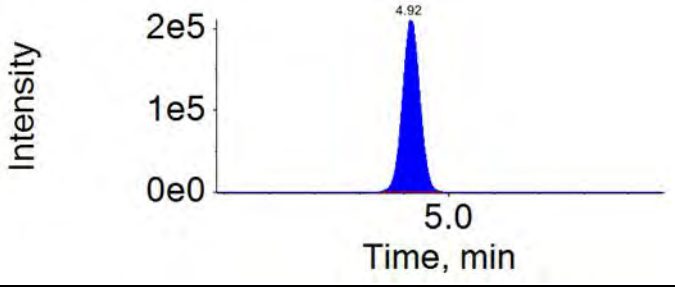
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

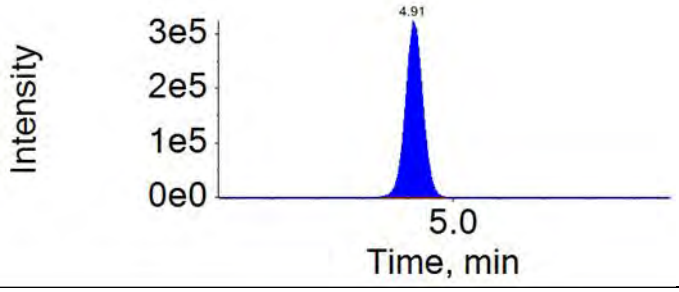
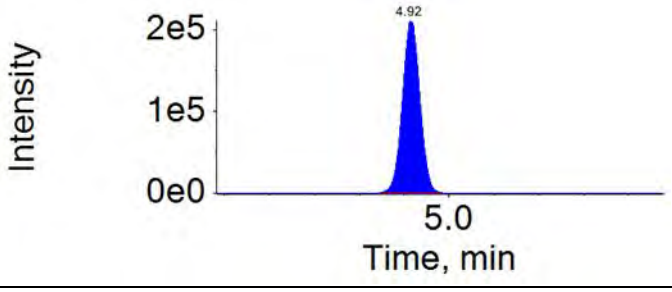
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

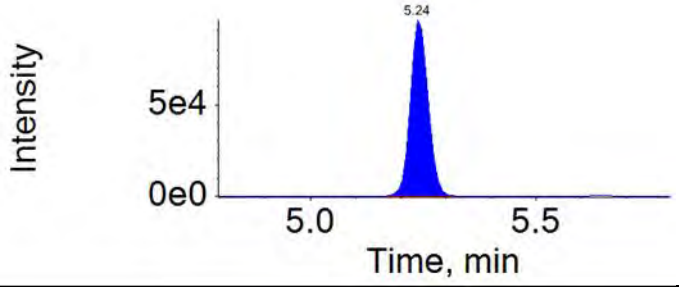
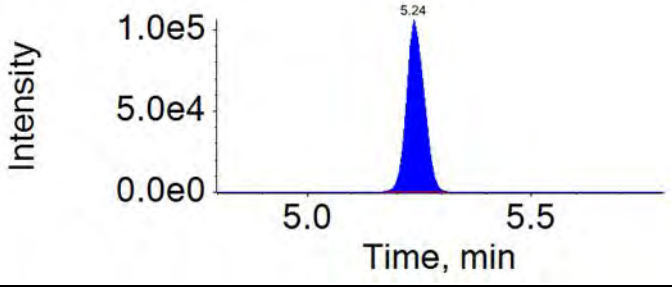
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

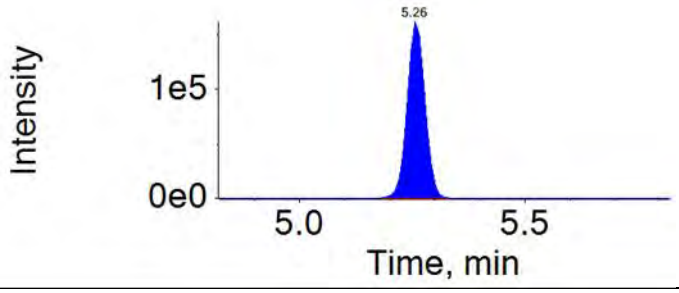
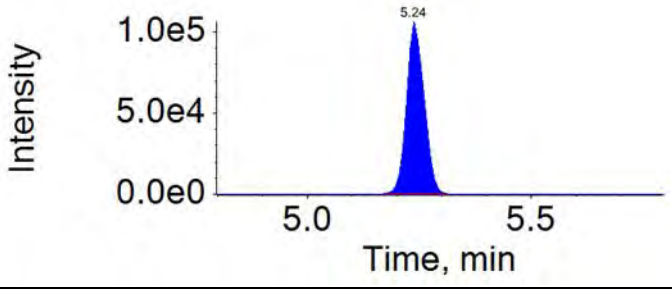
APPROVED
By JPT at 5:11 pm, 11/8/18

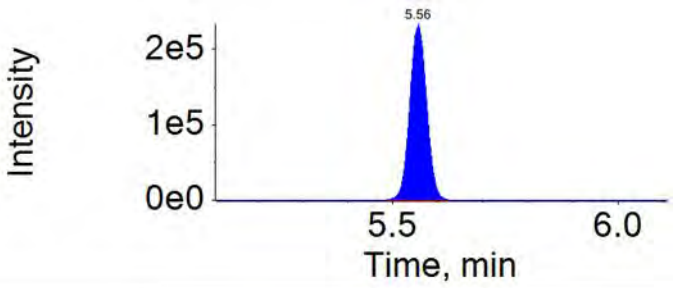
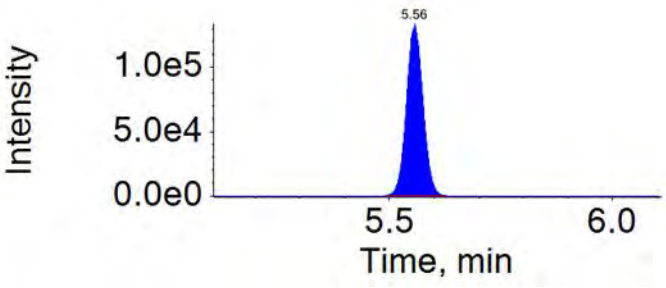
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

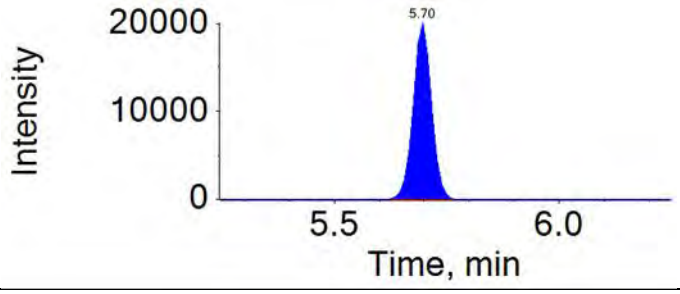
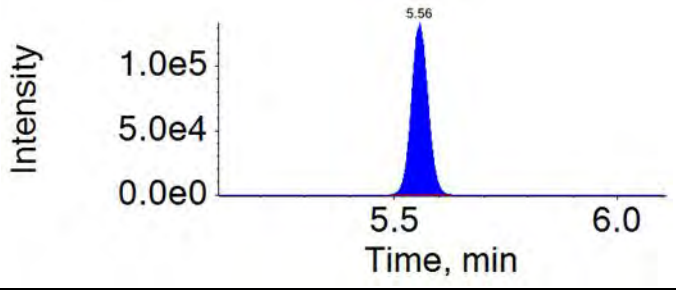
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

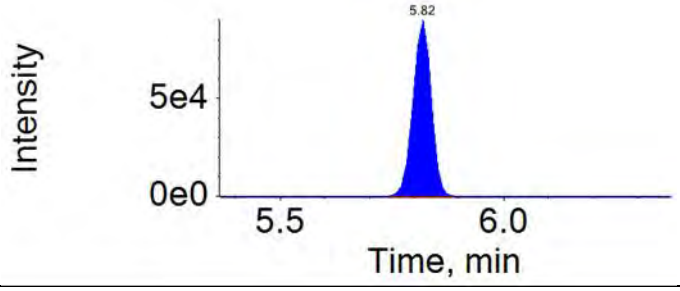
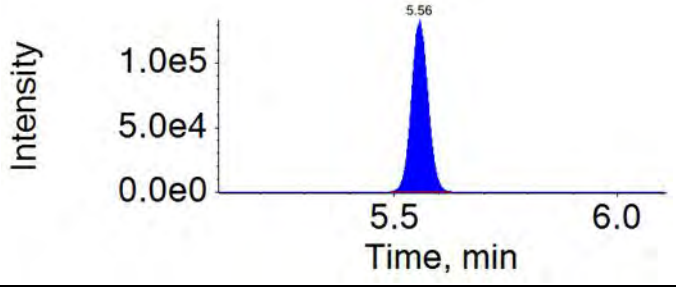
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

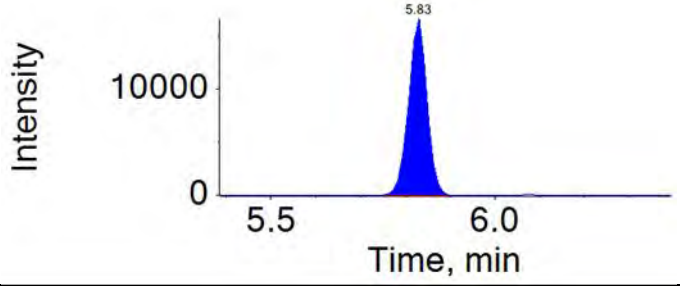
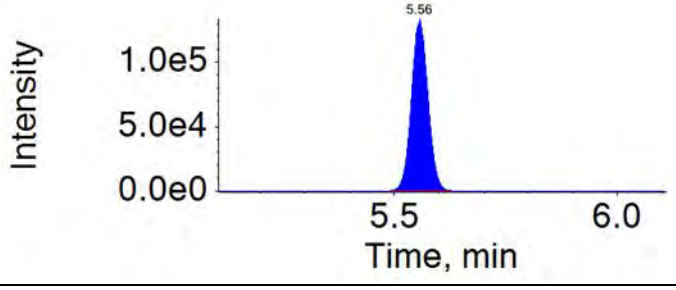
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

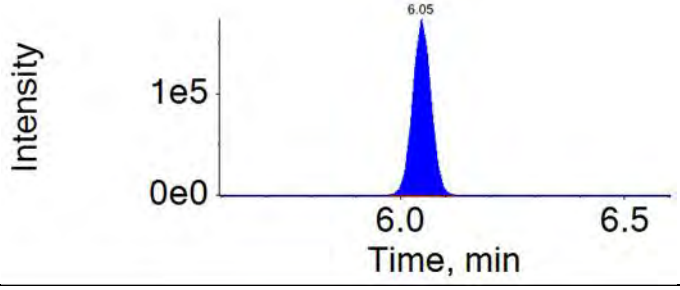
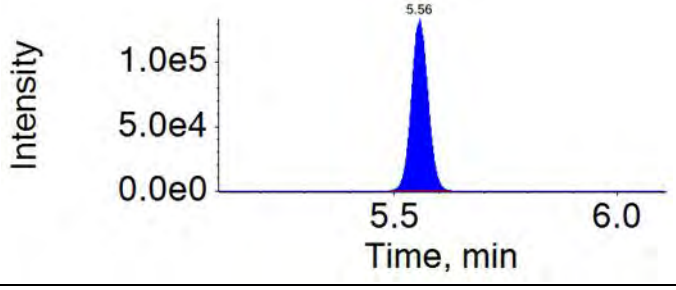
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

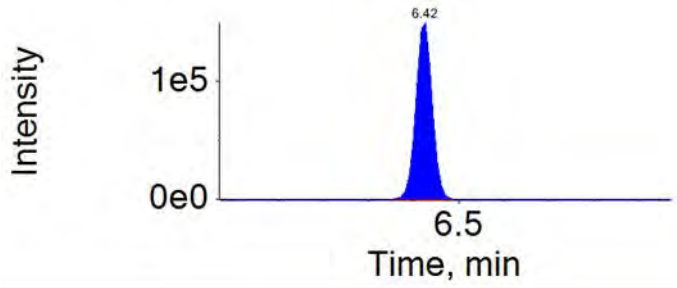
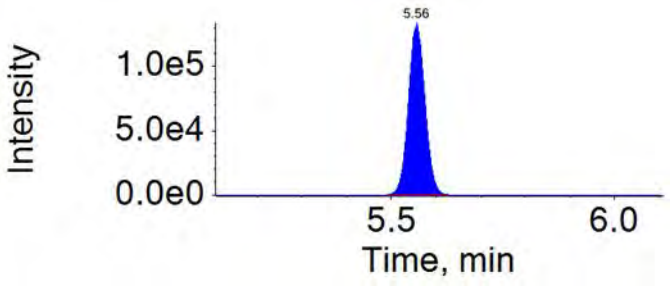
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

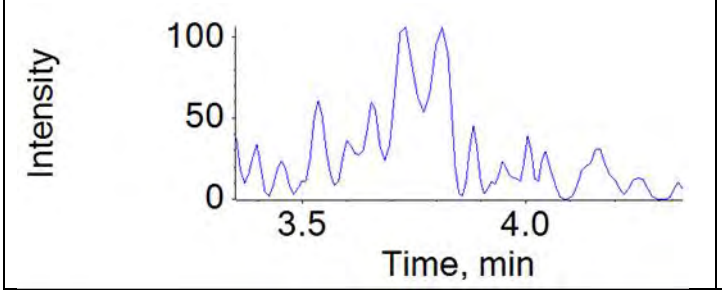
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

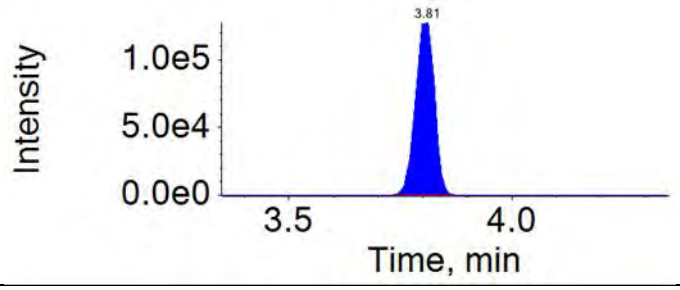
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

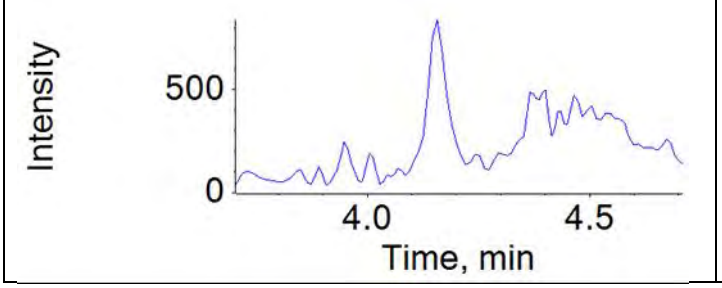
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

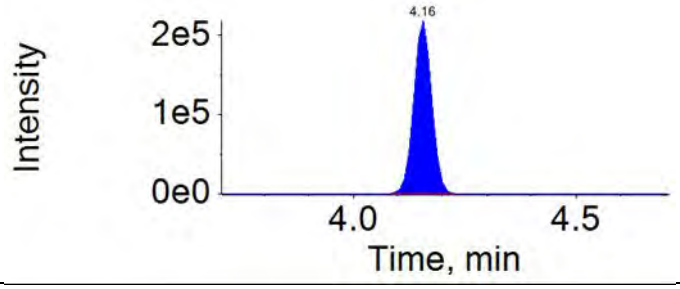
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



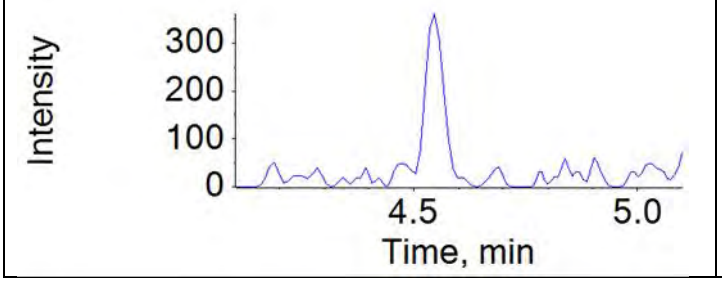


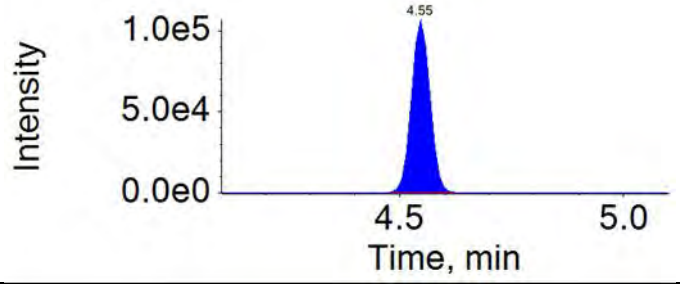
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



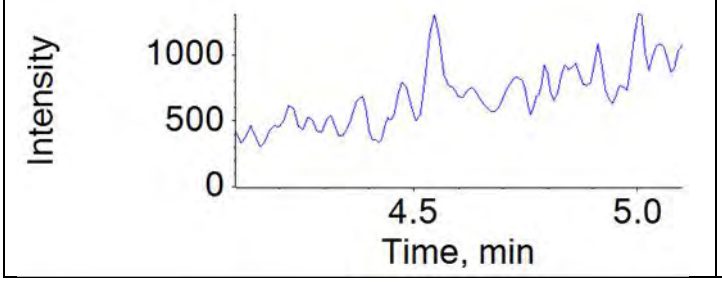


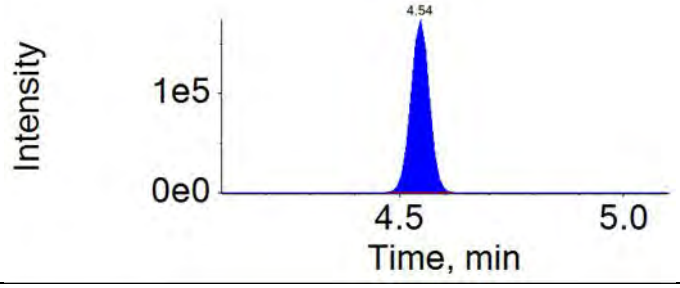
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



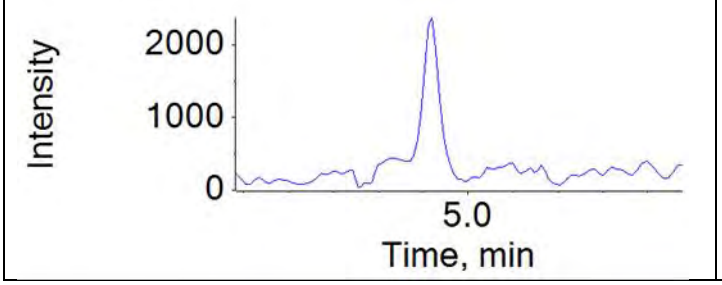


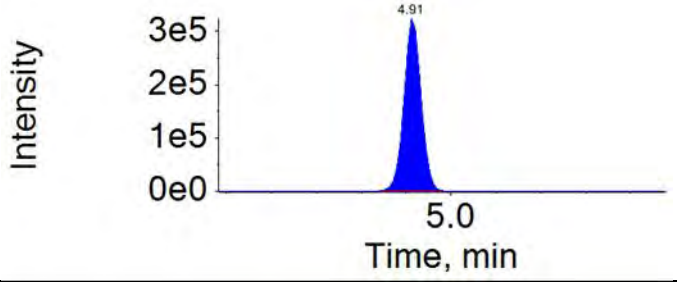
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

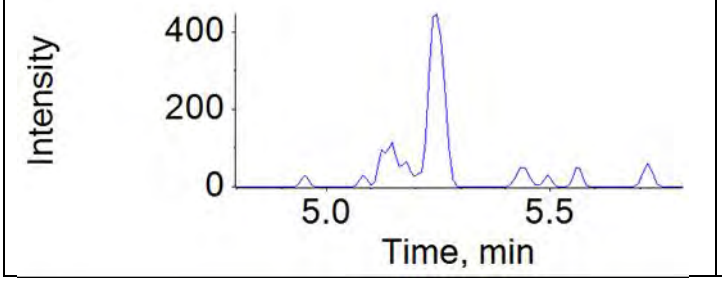
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

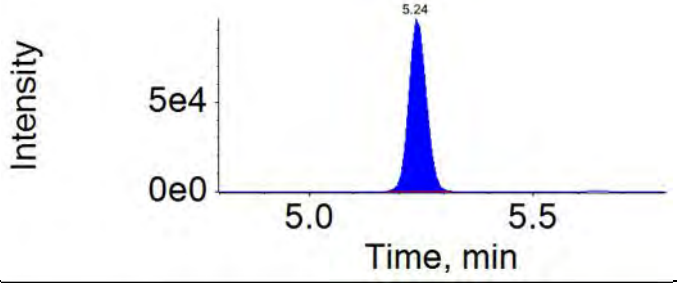
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



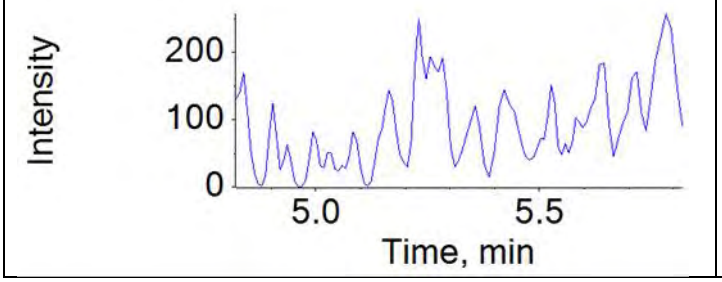


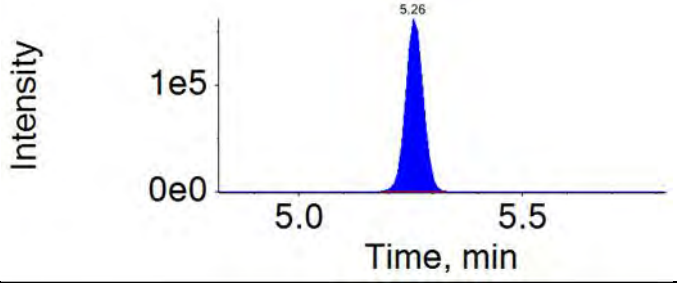
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



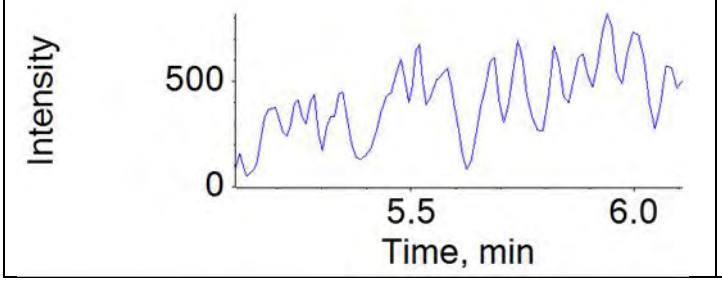


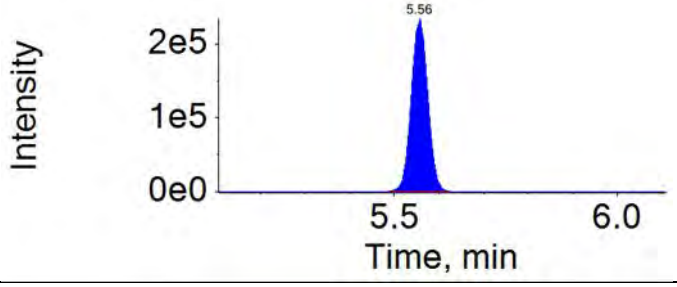
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



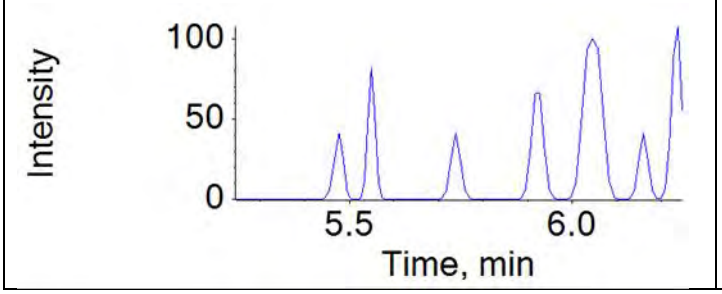


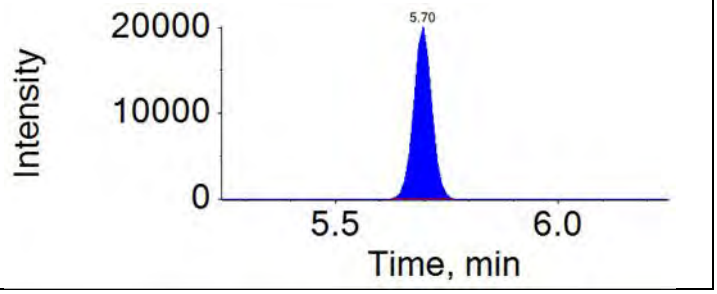
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

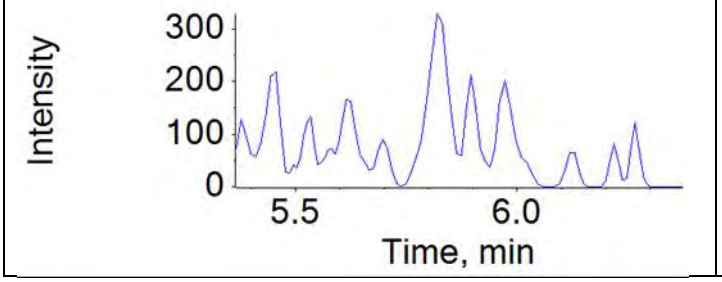
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

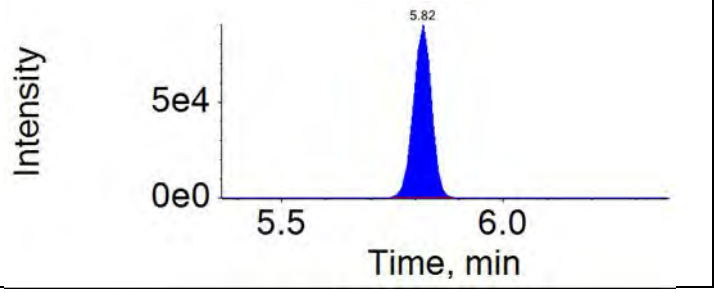
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



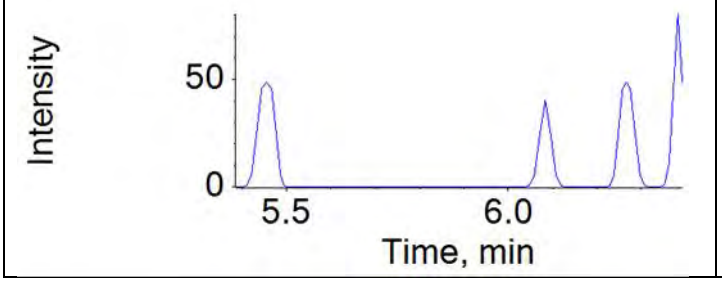


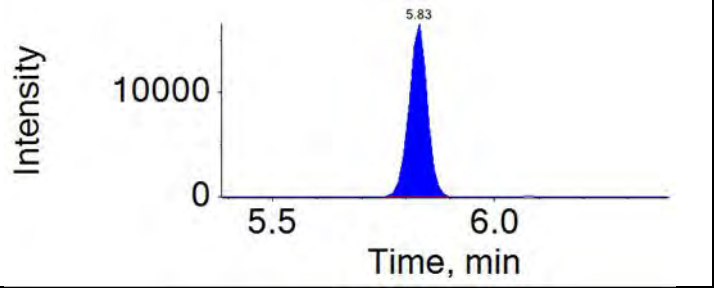
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



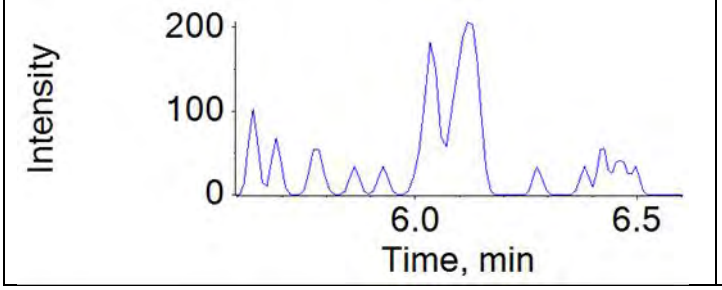


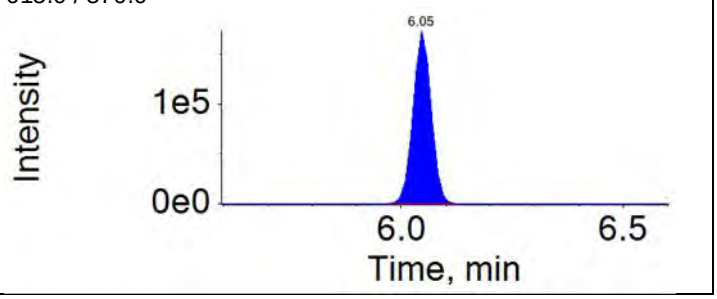
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



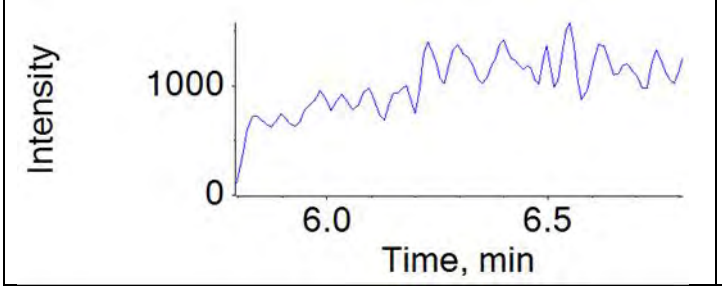


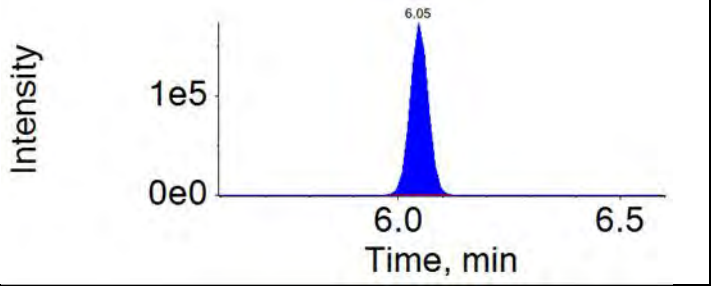
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

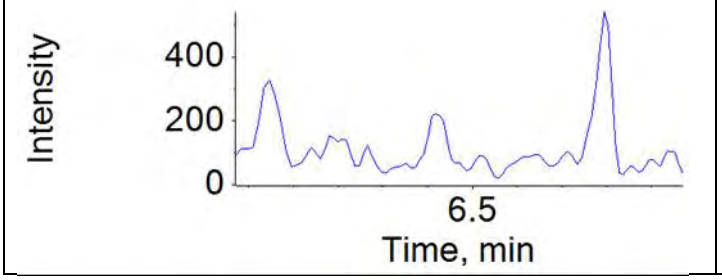
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

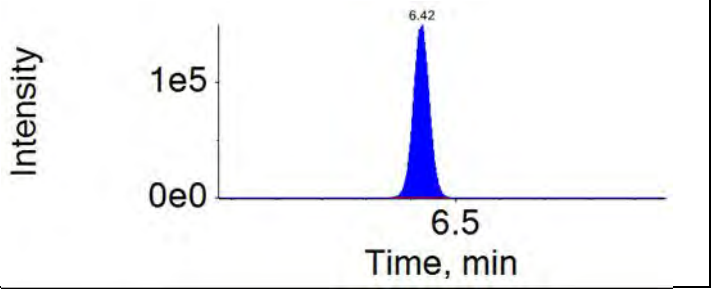
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Ion Ratio Report

Sample Name: 9881952 **Instrument Name:** LM27631 **File Name:** 18NOV08D-12.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

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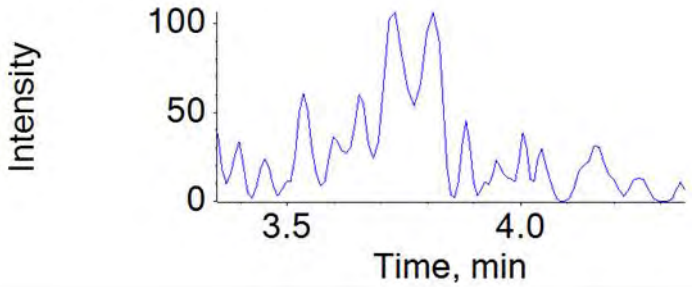
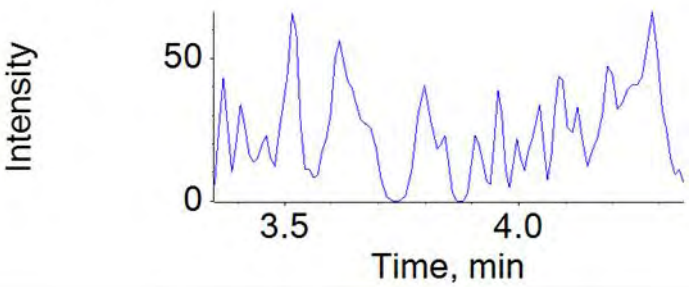
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

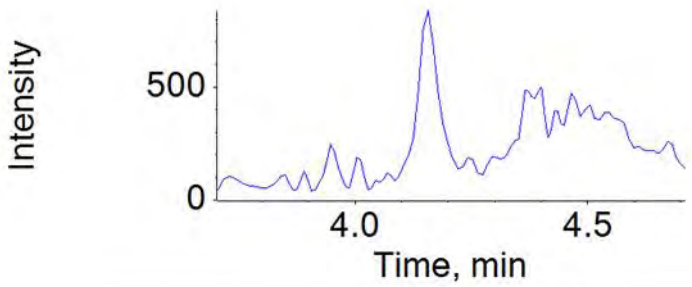
Component: PFBS
Primary Mass: 299.0 / 80.0



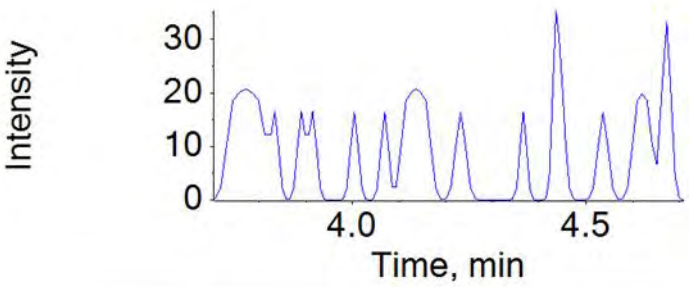
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



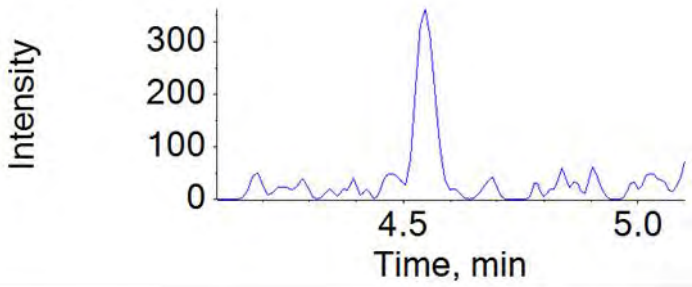
Component: PFHxA
Primary Mass: 313.0 / 269.0



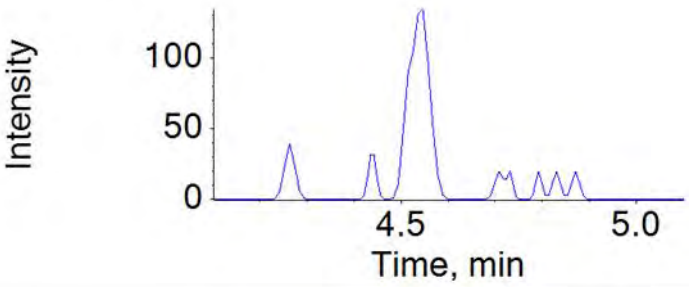
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



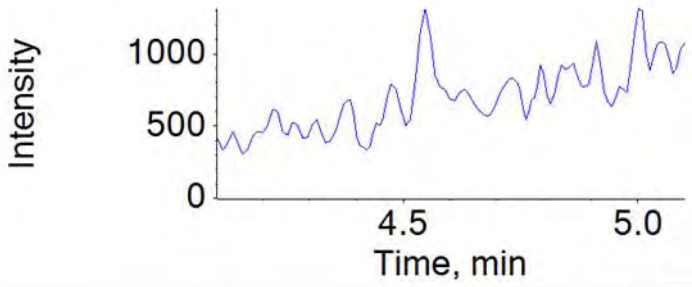
Component: PFHxS
Primary Mass: 399.0 / 80.0



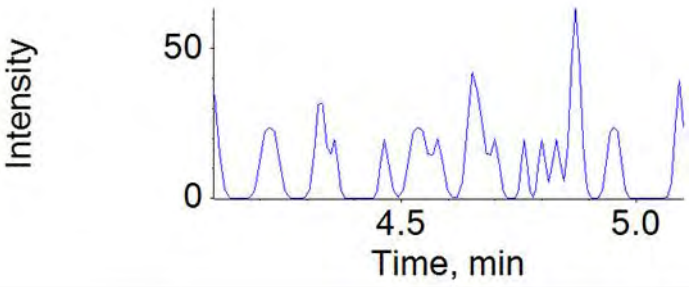
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



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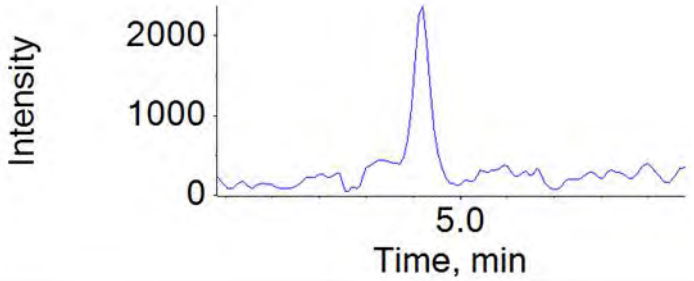
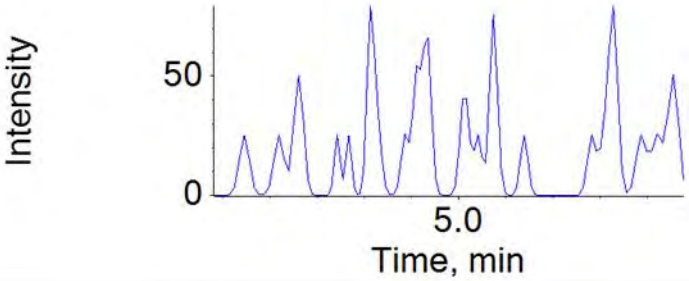
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

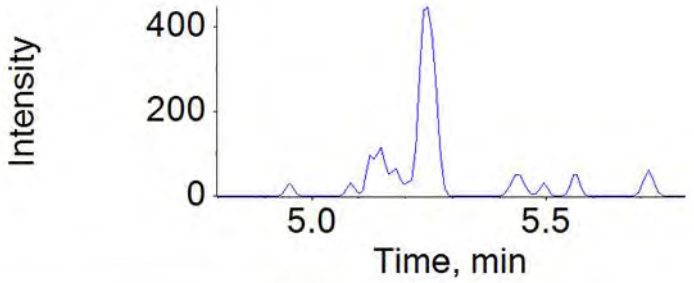
Component: PFOA
Primary Mass: 413.0 / 369.0



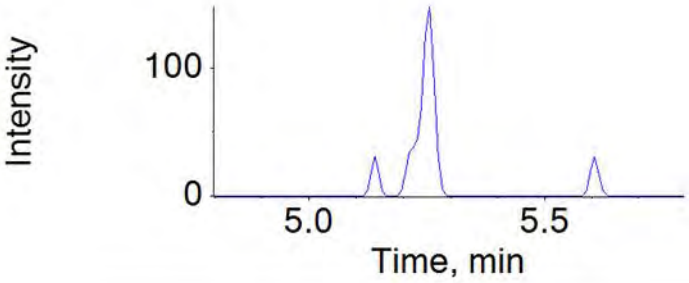
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



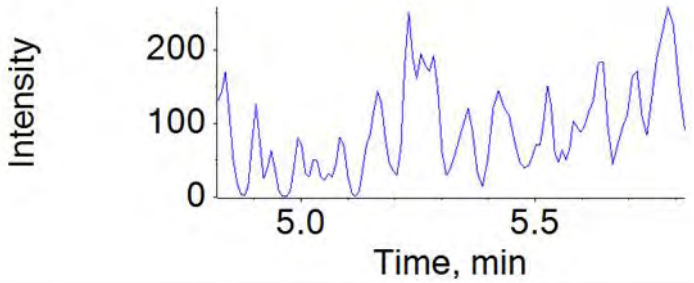
Component: PFOS
Primary Mass: 499.0 / 80.0



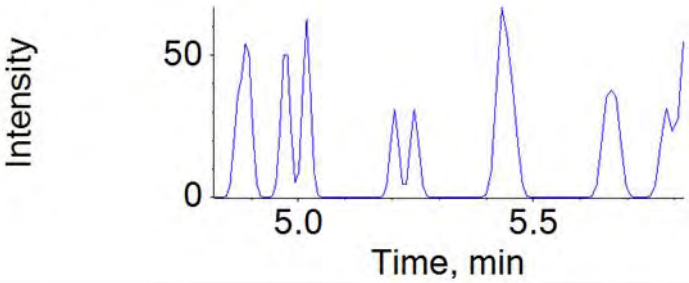
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



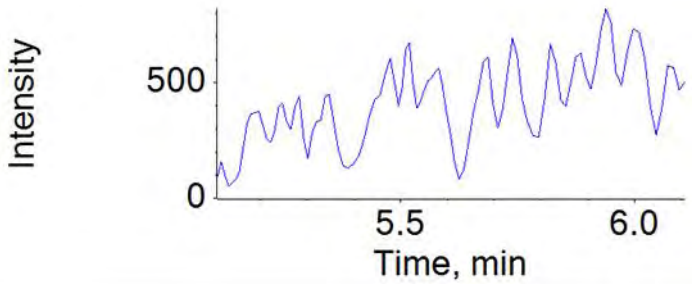
Component: PFNA
Primary Mass: 463.0 / 419.0



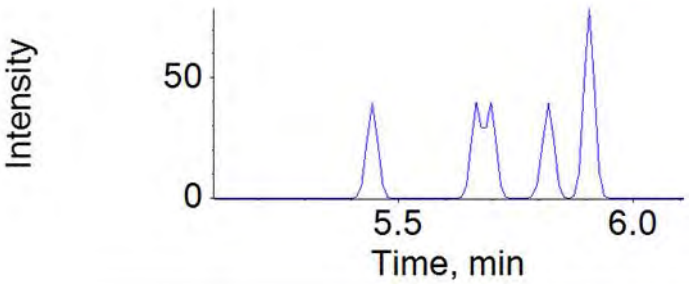
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



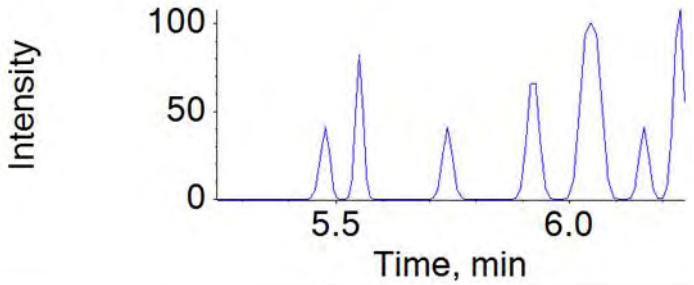
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



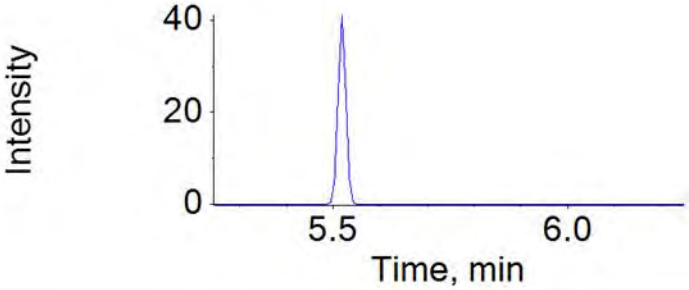
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

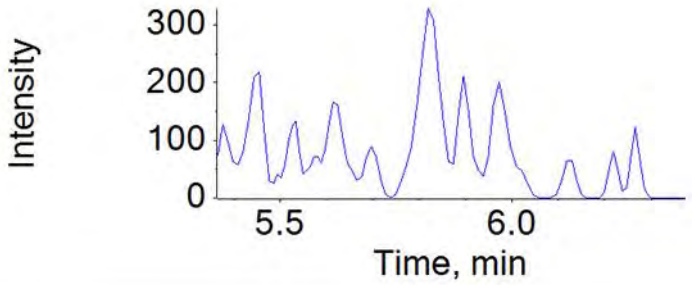
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



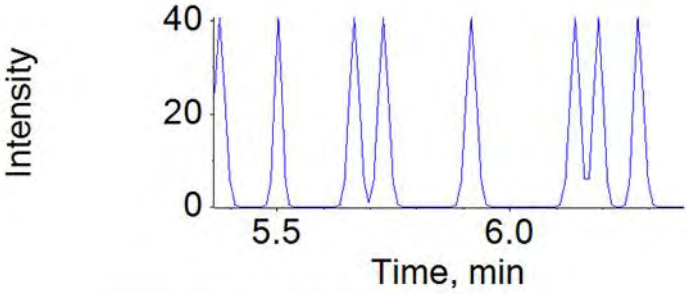
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



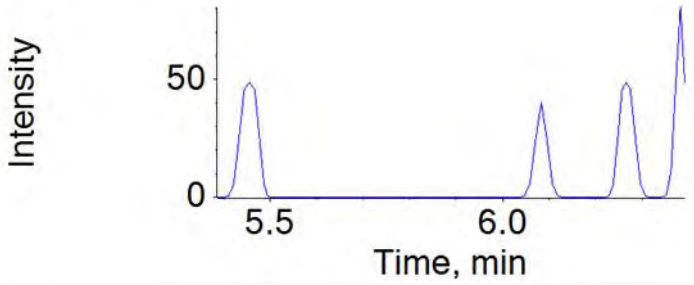
Component: PFUnDA
Primary Mass: 563.0 / 519.0



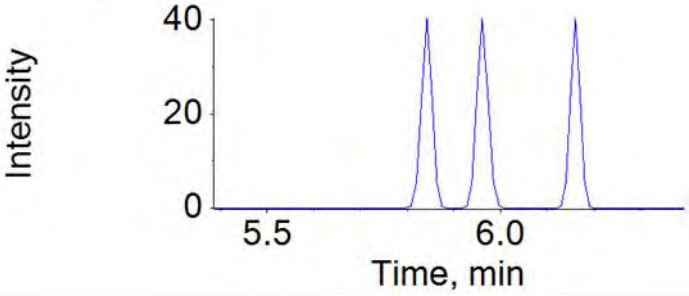
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



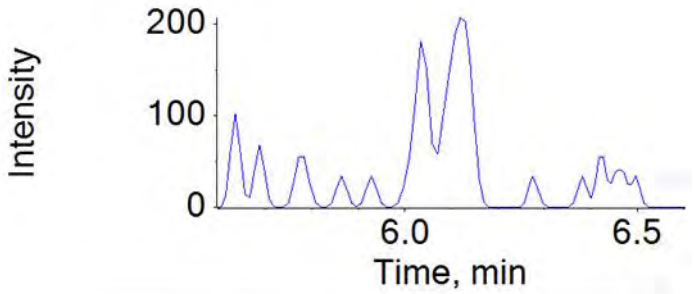
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



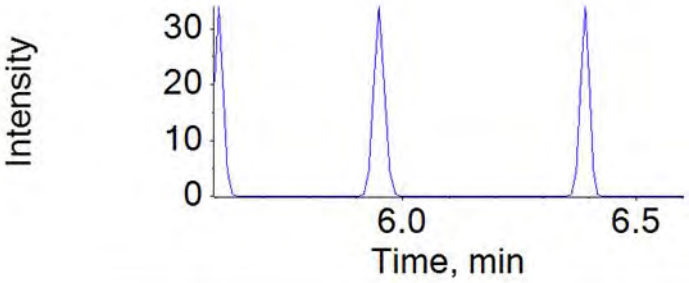
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



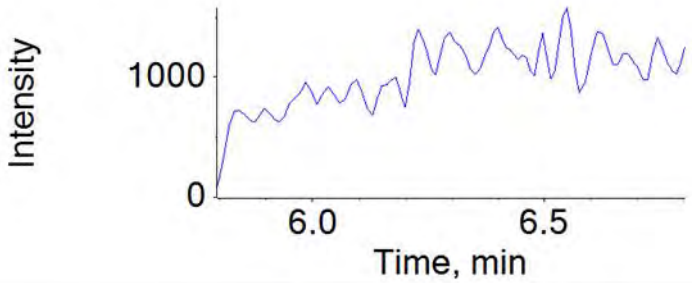
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



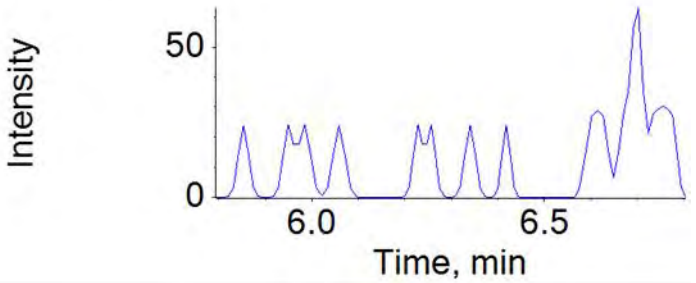
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

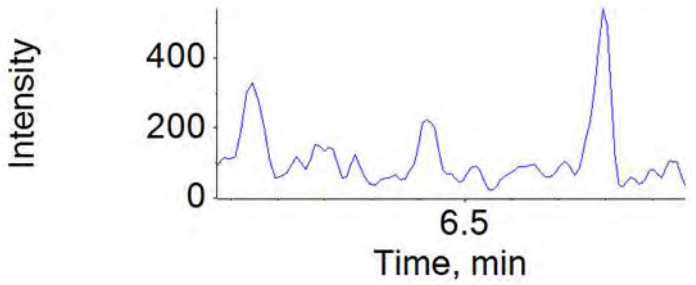
Component: PFTrDA
Primary Mass: 663.0 / 619.0



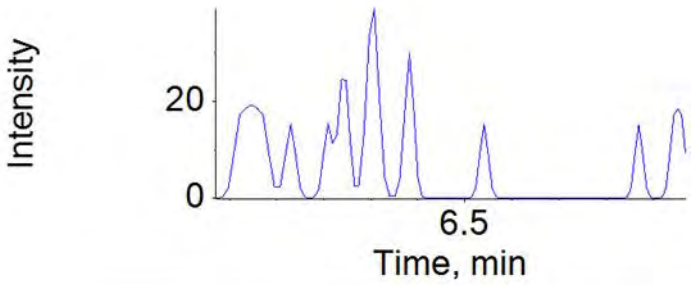
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881955			**Data File:**		18NOV08D-13.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-BLDG573-S-05-01 Grab Soil			**Acquis Date:**		2018-11-08T13:36:52
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	29			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		JPT12262
Sample Wt.:	1.05000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	786663.9	728839.7	8	50	
13C2-PFOA	5.0	562636.2	491983.1	14	50	
13C4-PFOS	4.8	307161.0	255568.1	20	50	
13C2-PFDA	5.0	343916.5	315407.5	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	354556.0	13C3-PFBA	786663.9	0.451	8.857	6.301	71	50-150	
E13C5-PFHxA	544035.0	13C2-PFOA	562636.2	0.967	9.524	6.775	71	50-150	
E13C3-PFHxS	271541.9	13C2-PFOA	562636.2	0.483	9.010	6.599	73	50-150	
E13C4-PFHpA	465148.3	13C2-PFOA	562636.2	0.827	9.524	7.164	75	50-150	
E13C8-PFOA	786503.8	13C2-PFOA	562636.2	1.398	9.524	7.425	78	50-150	
E13C8-PFOS	239534.3	13C4-PFOS	307161.0	0.780	9.105	6.568	72	50-150	
E13C9-PFNA	431537.4	13C4-PFOS	307161.0	1.405	9.524	7.310	77	50-150	
E13C6-PFDA	508344.8	13C2-PFDA	343916.5	1.478	9.524	7.080	74	50-150	
Ed3-NMeFOSAA	71783.0	13C2-PFDA	343916.5	0.209	9.524	7.393	78	50-150	
E13C7-PFUnDA	224519.5	13C2-PFDA	343916.5	0.653	9.524	7.173	75	50-150	
Ed5-NEtFOSAA	54602.2	13C2-PFDA	343916.5	0.159	9.524	6.998	73	50-150	
E13C2-PFDoDA	450676.2	13C2-PFDA	343916.5	1.310	9.524	6.729	71	50-150	
E13C2-PFTeDA	331990.3	13C2-PFDA	343916.5	0.965	9.524	6.619	70	50-150	

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

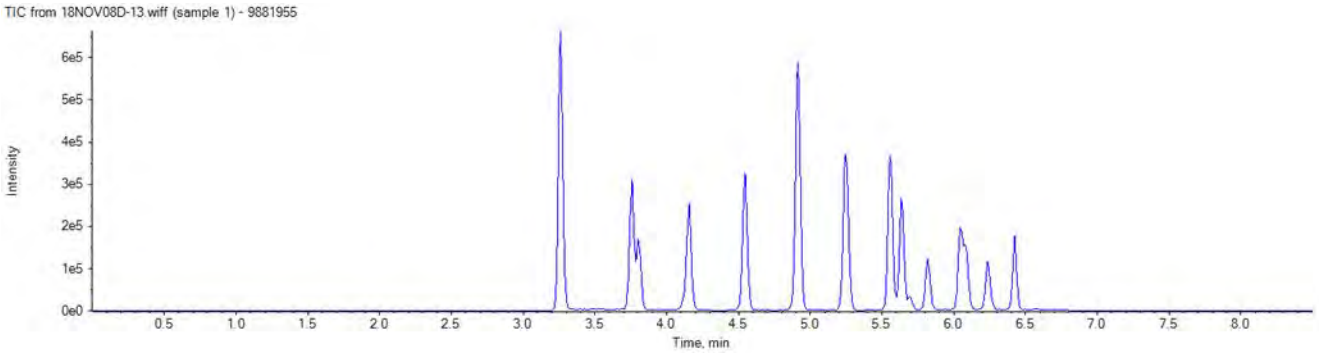
Analyte Quantitation Peak Table

Sample Name: 9881955 **Instrument Name:** LM27631 **File Name:** 18NOV08D-13.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.05000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	354556.0	N/A	
PFHxA	4.16	1.000	14892.6		M	13C5-PFHxA	4.15	544035.0	0.027	0.224
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	271541.9	N/A	
PFHpA	4.54	1.000	11197.4		M	13C4-PFHpA	4.54	465148.3	0.024	0.154
PFOA	4.91	1.000	11810.6		A	13C8-PFOA	4.91	786503.8	0.015	0.161
PFOS	5.24	1.000	10133.4		M	13C8-PFOS	5.24	239534.3	0.042	0.418
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	431537.4	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	508344.8	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	71783.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	224519.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	54602.2	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	450676.2	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	450676.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	331990.3	N/A	

Total Ion Chromatogram

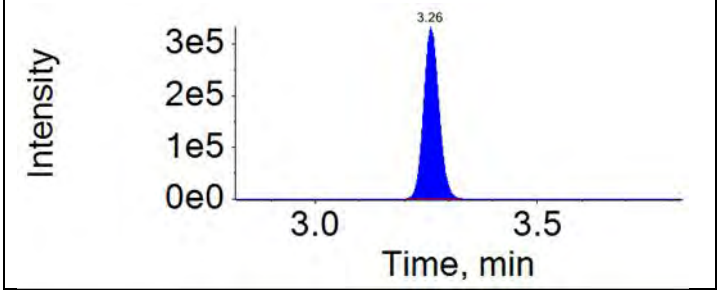


APPROVED
By JPT at 5:11 pm, 11/8/18

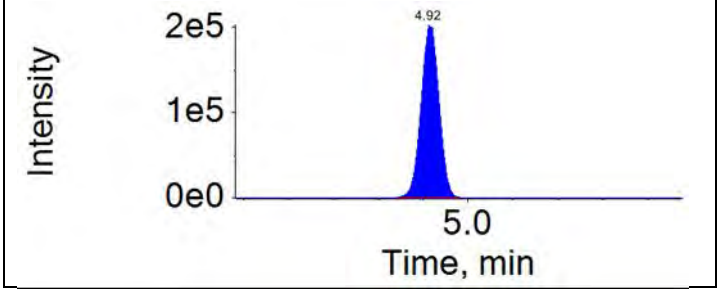
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

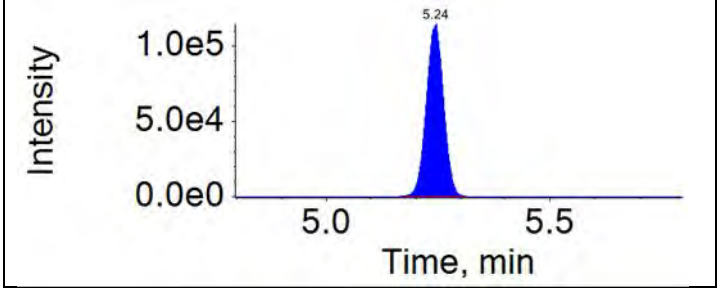
Injection Standard: 13C3-PFBA
216.0 / 172.0



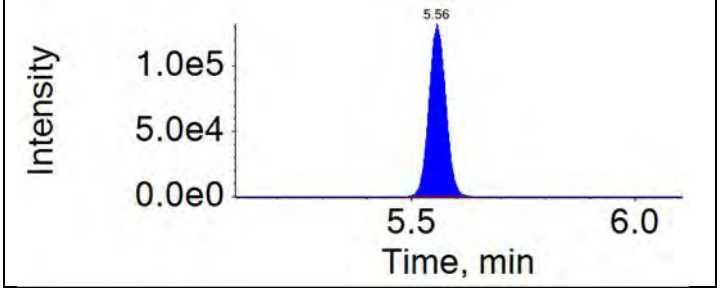
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



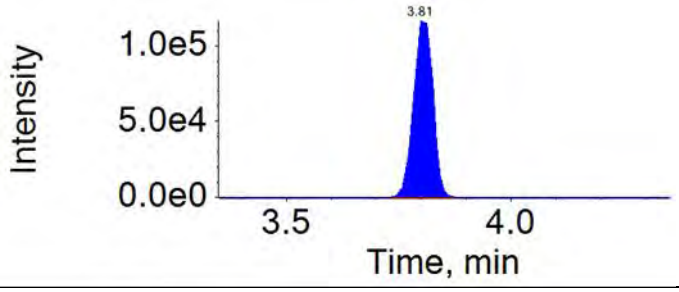
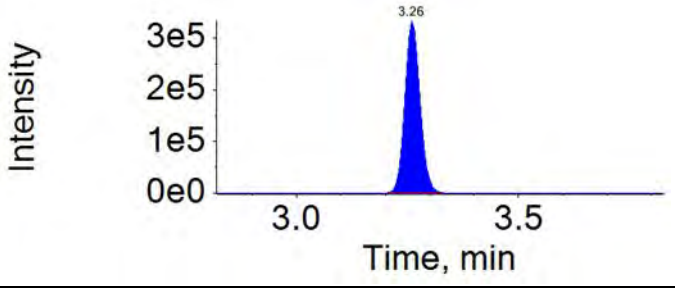
Injection Standard: 13C2-PFDA
515.0 / 470.0

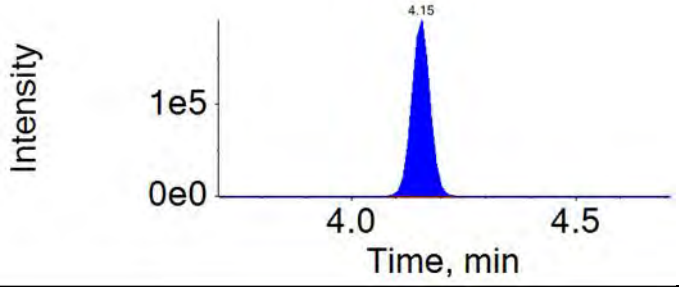
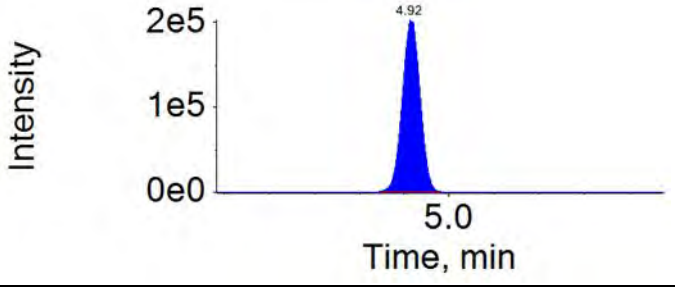


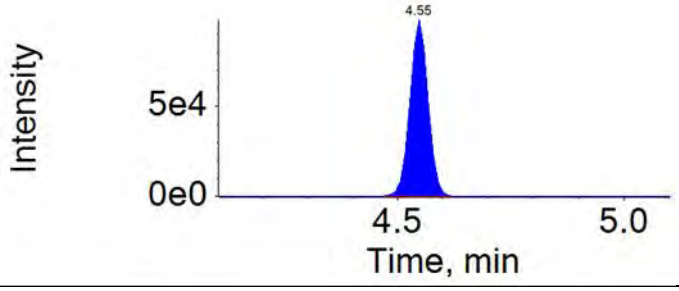
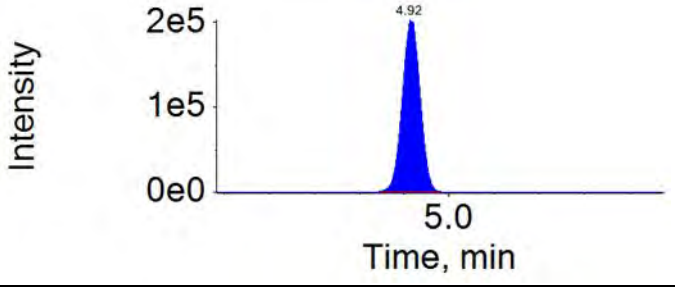
APPROVED
By JPT at 5:11 pm, 11/8/18

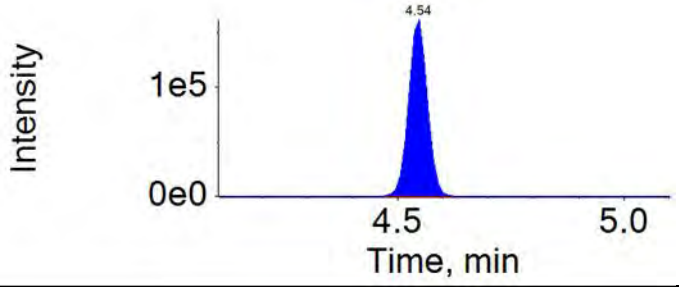
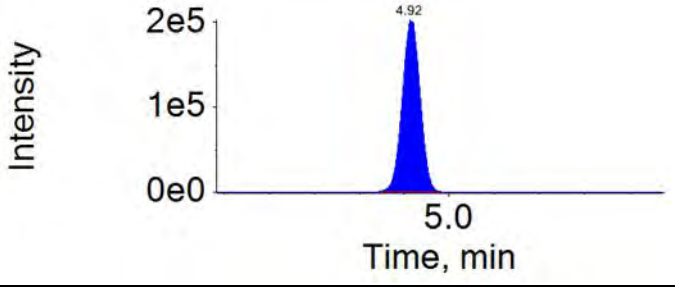
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

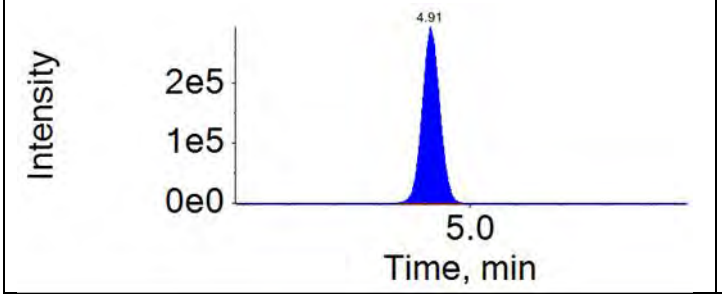
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

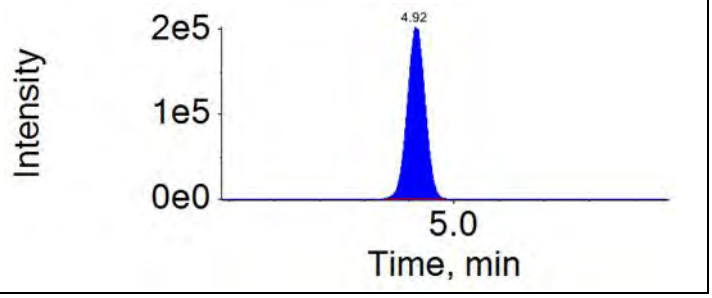
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

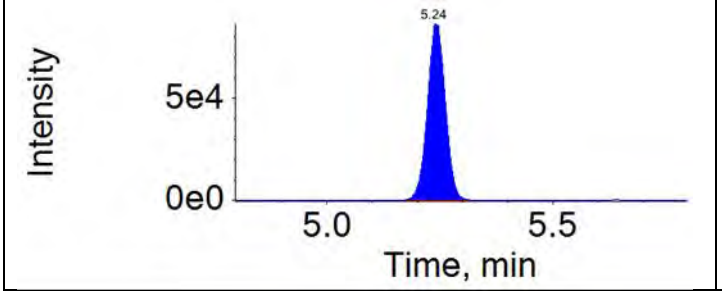
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

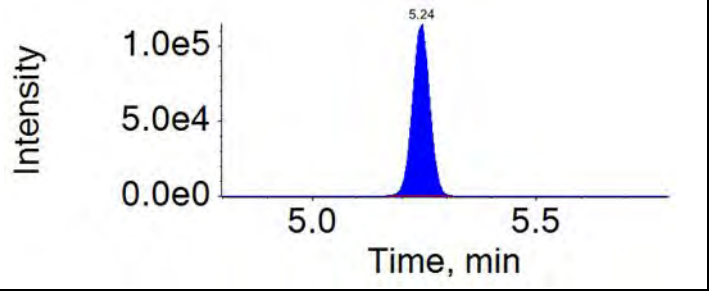
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



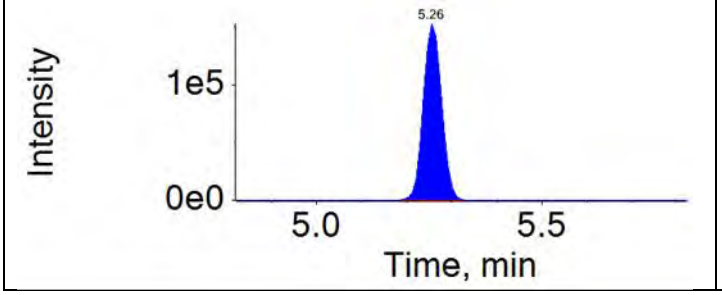


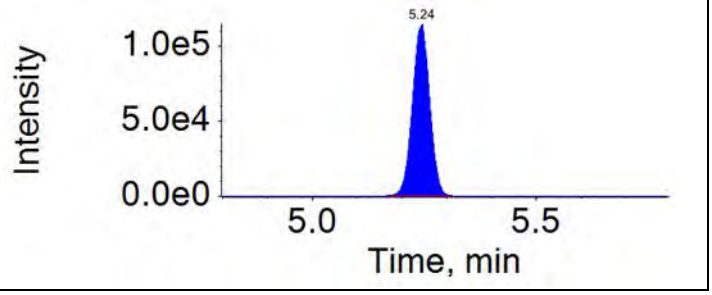
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



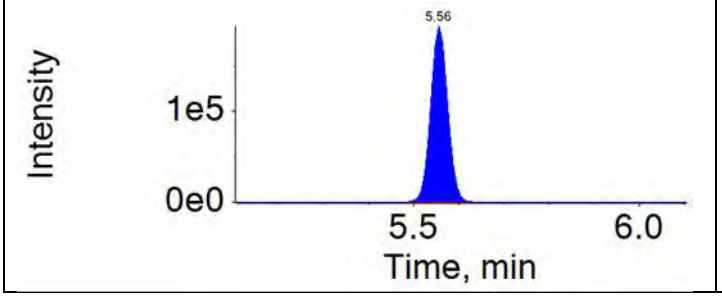


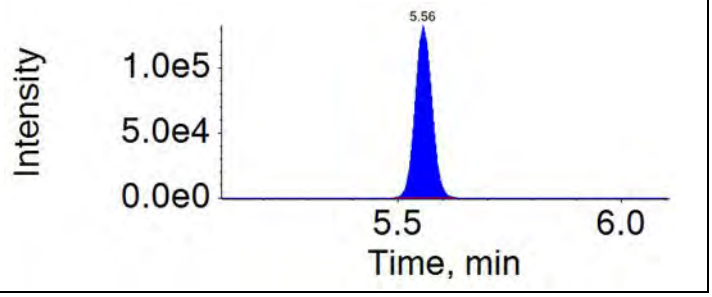
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

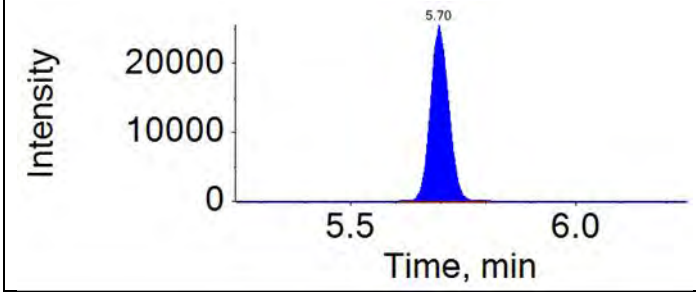
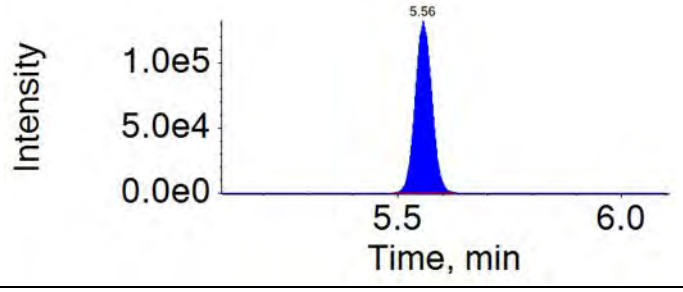


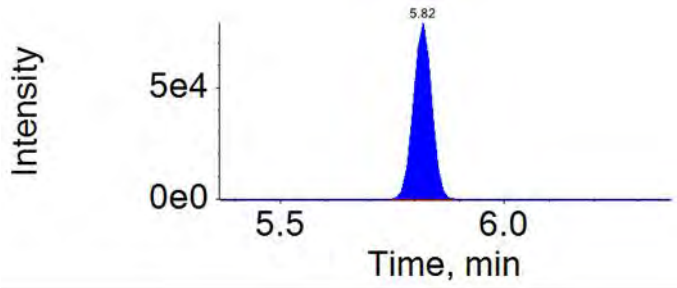
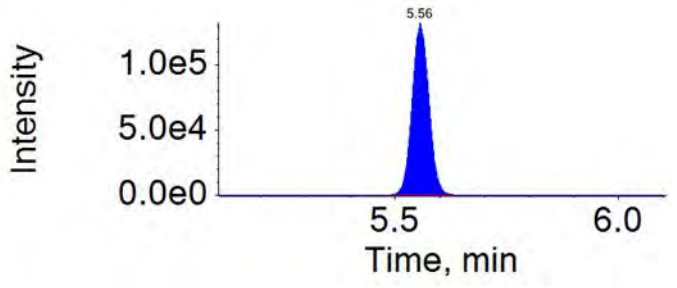


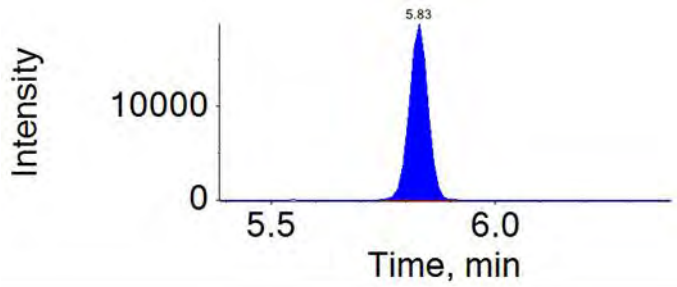
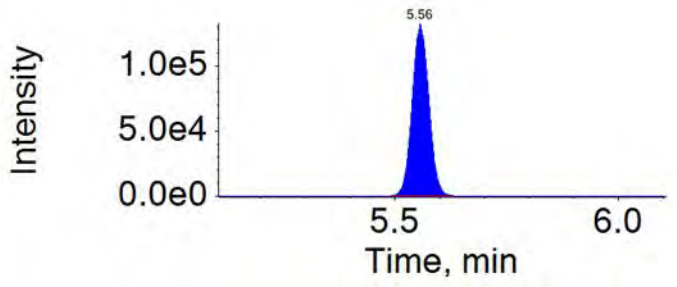
APPROVED
By JPT at 5:11 pm, 11/8/18

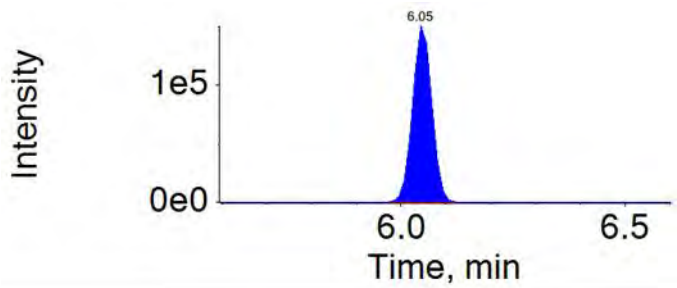
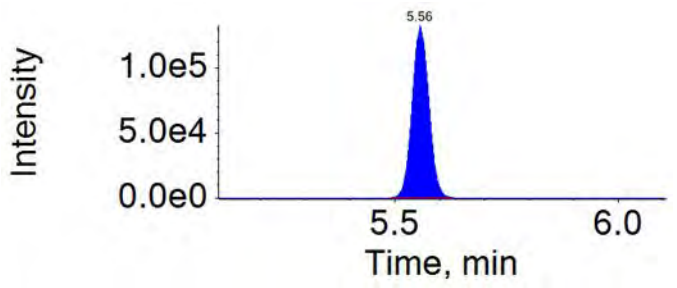
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

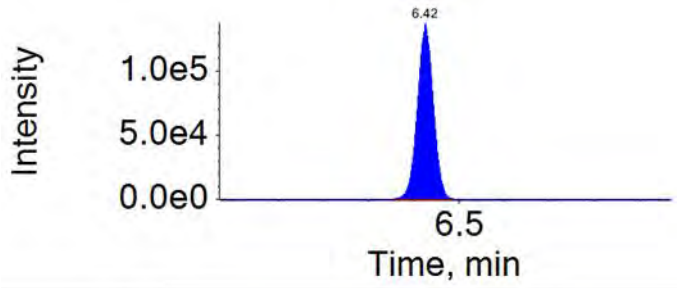
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

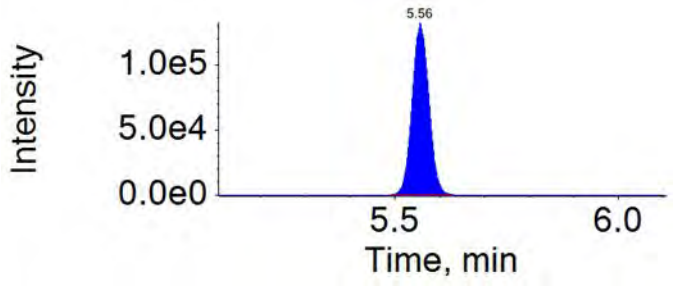
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



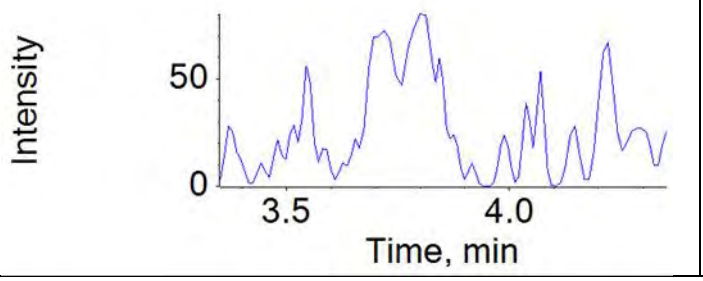


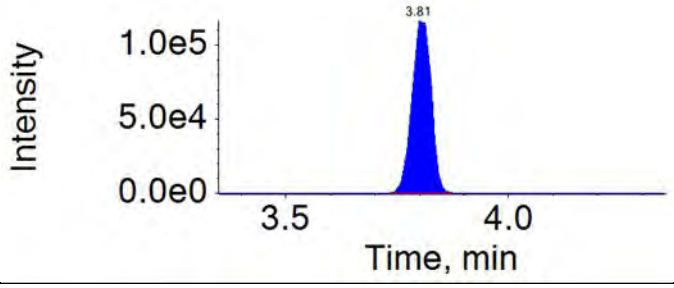
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

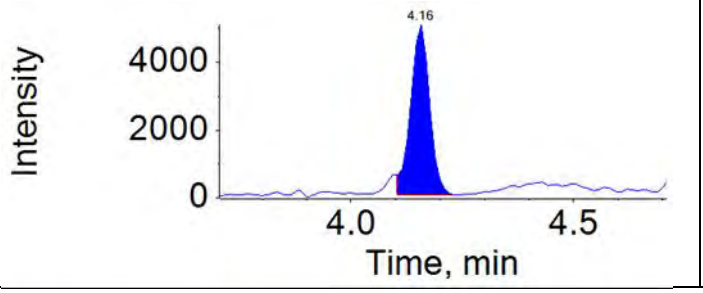
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

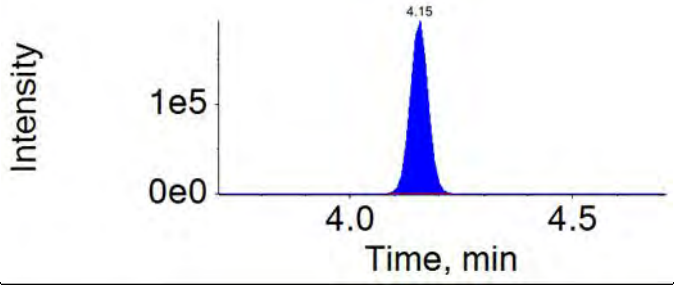
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



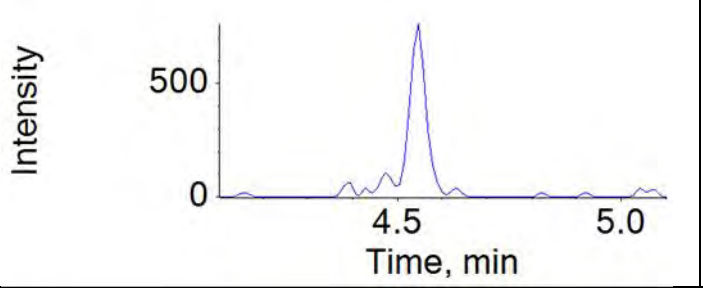


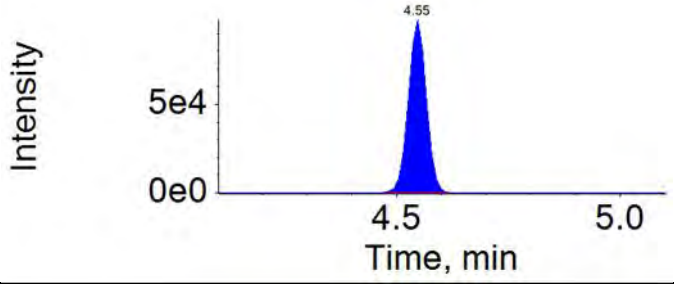
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



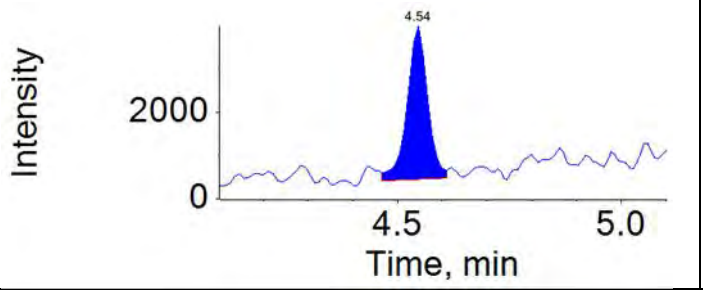


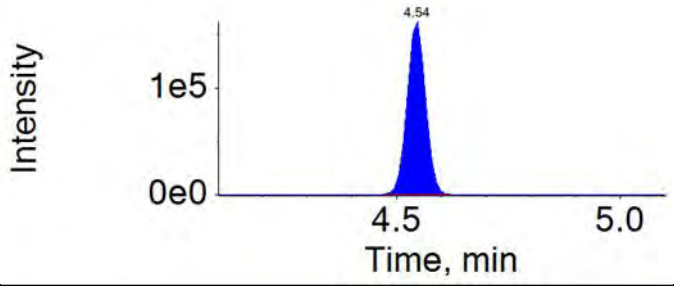
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

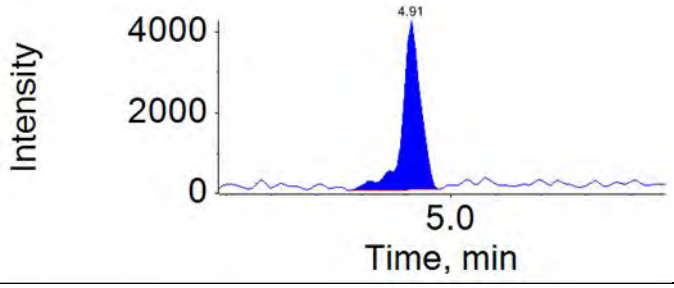
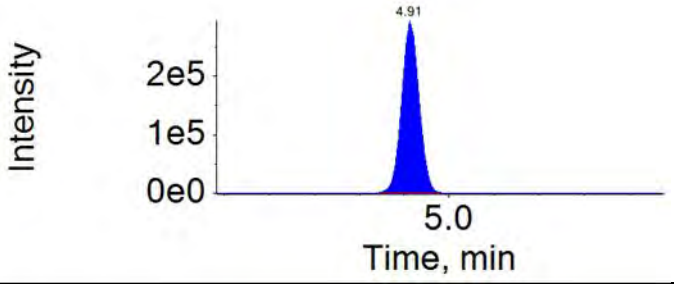


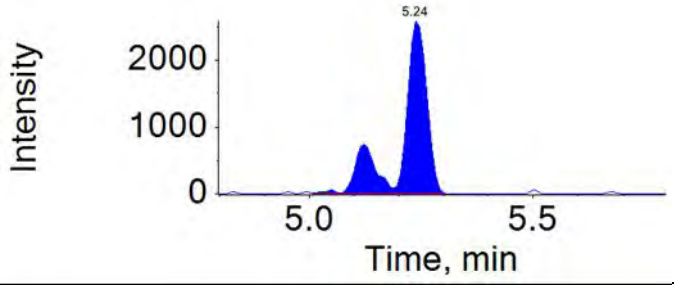
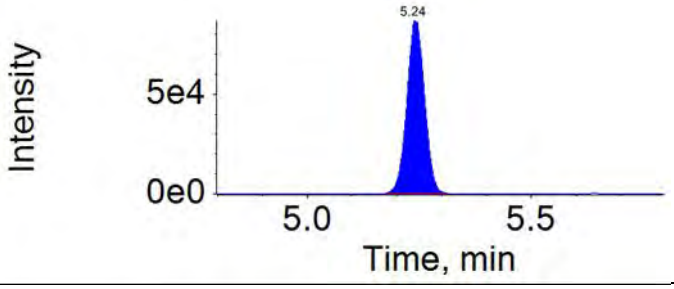


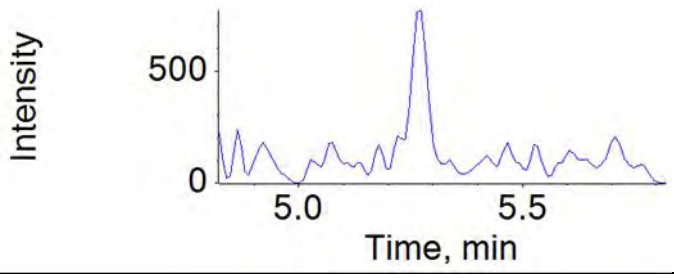
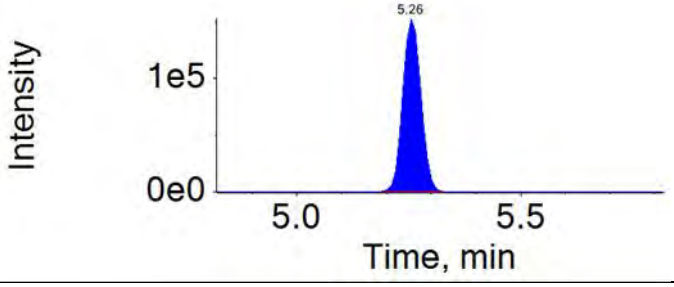
APPROVED
By JPT at 5:11 pm, 11/8/18

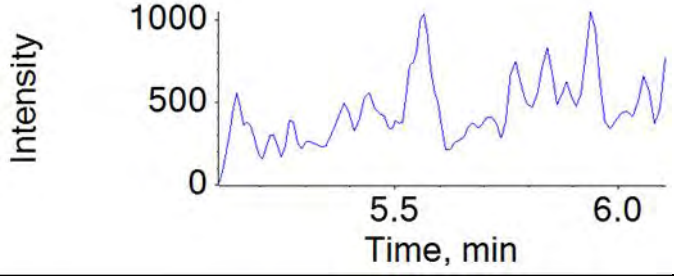
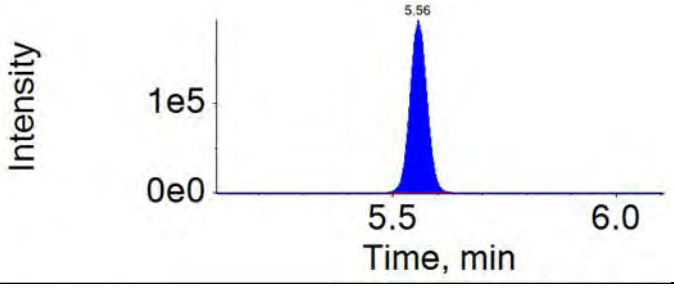
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

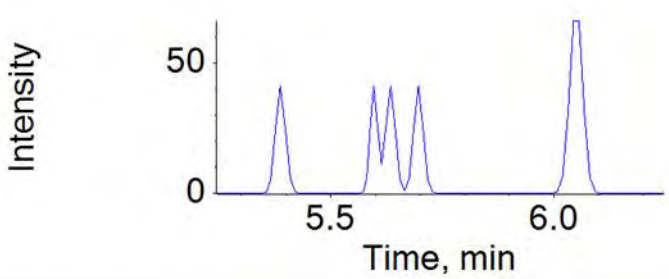
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

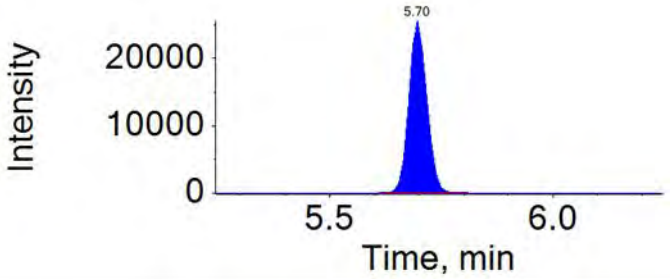
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

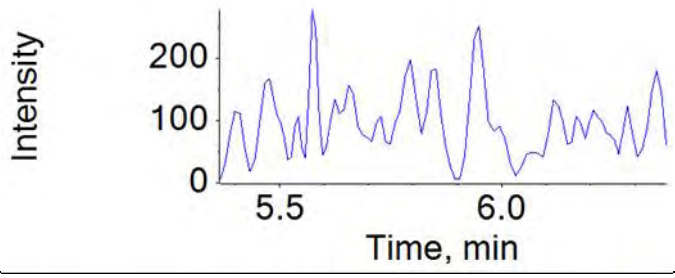
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

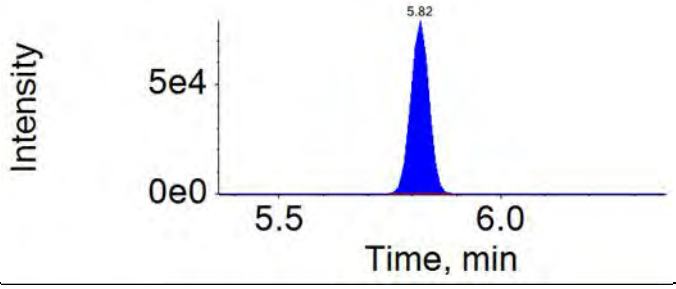
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



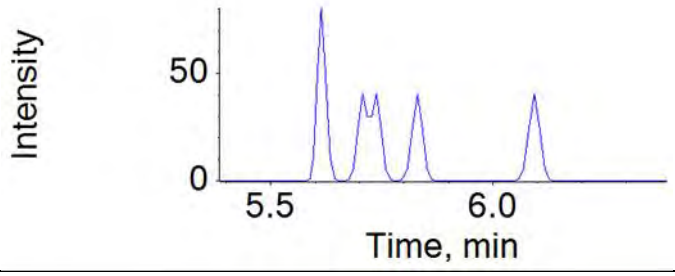


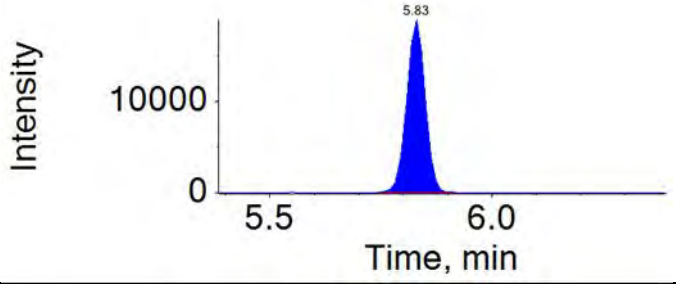
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



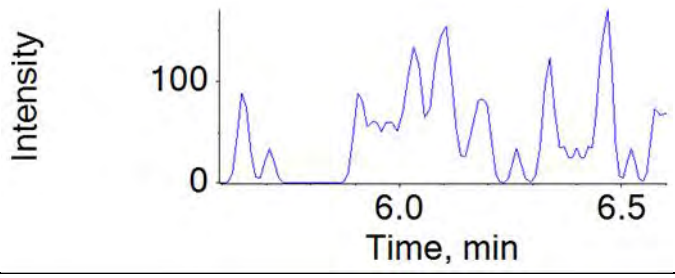


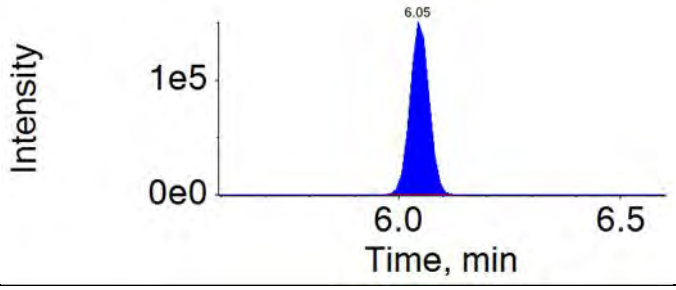
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



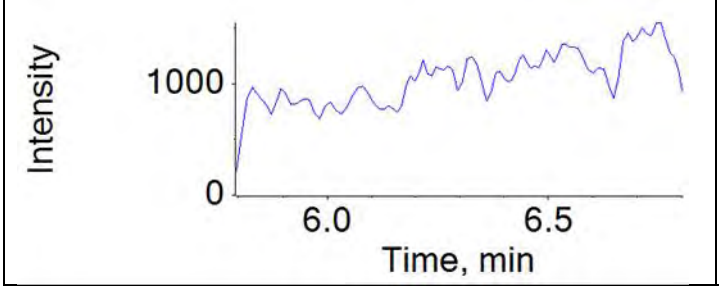


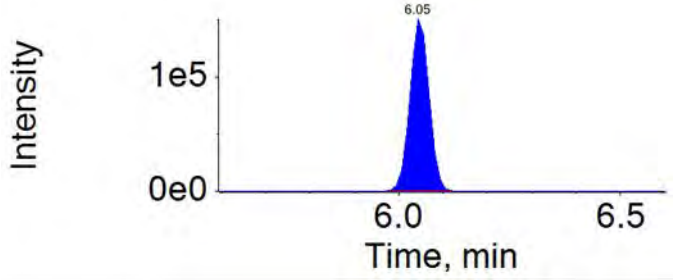
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

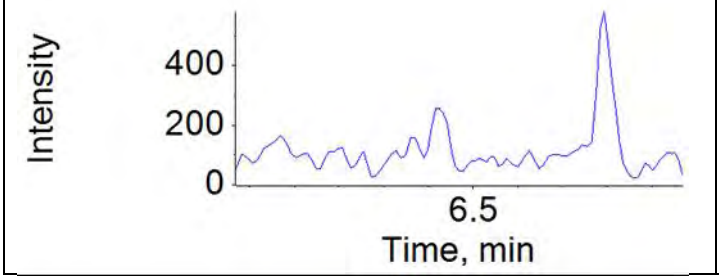
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

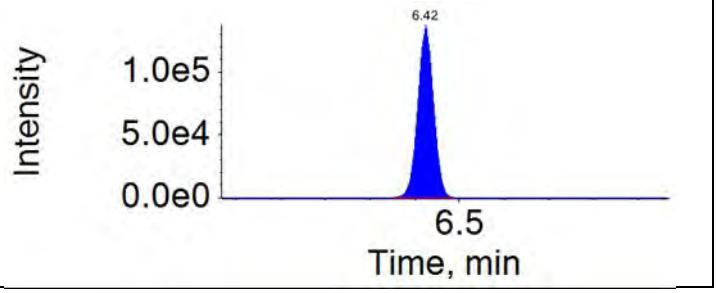
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



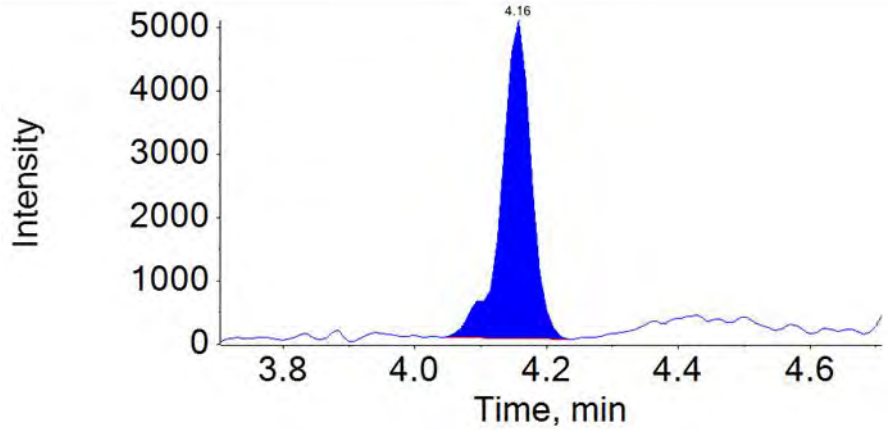


APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

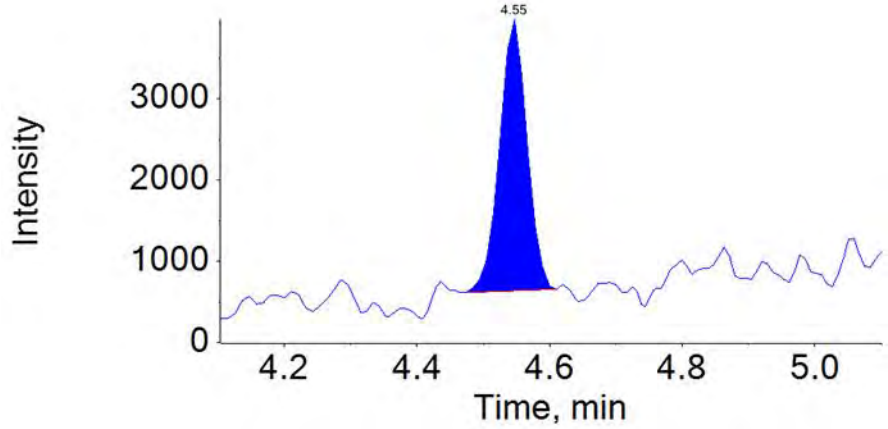
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxA
RT (min.):
4.16
Peak Area:
15787.1
Mass Range:
313.0 / 269.0
File Name:
18NOV08D-13.wiff
Sample Name:
9881955



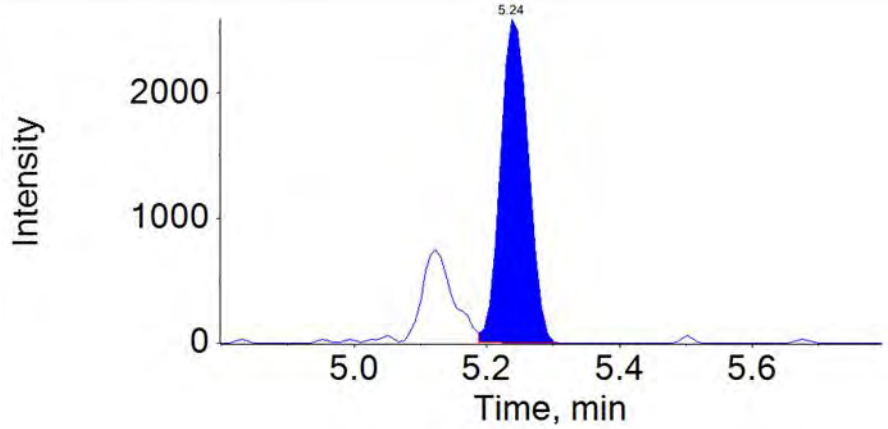
Integration Comment: incorrect integration

Component Name:
PFHpA
RT (min.):
4.55
Peak Area:
9582.9
Mass Range:
363.0 / 319.0
File Name:
18NOV08D-13.wiff
Sample Name:
9881955



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
7556.4
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-13.wiff
Sample Name:
9881955



Integration Comment: incorrect integration

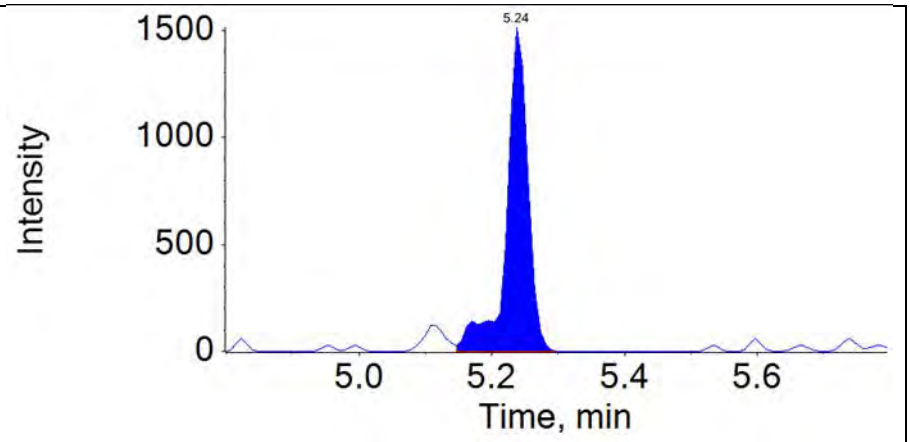
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
3444.0
Mass Range:
499.0 / 99.0
File Name:
18NOV08D-13.wiff
Sample Name:
9881955



Integration Comment: incorrect integration

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Ion Ratio Report

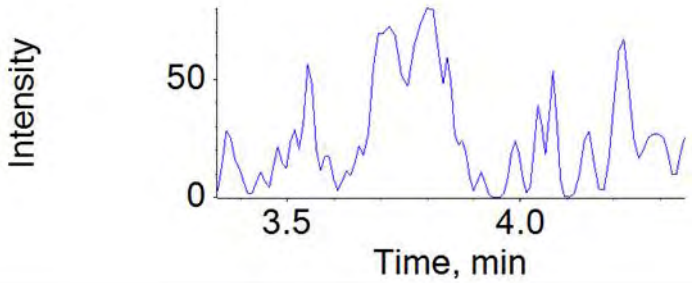
Sample Name: 9881955 **Instrument Name:** LM27631 **File Name:** 18NOV08D-13.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.16	1.00	14892.6	M	N/A	1.0000			
PFHxA_2	4.08	0.98	153.8	A	N/A	0.0103	-10	50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	4.54	1.00	11197.4	M	N/A	1.0000			
PFHpA_2	4.55	1.00	496.4	A	N/A	0.0443	-23	50	
PFOA	4.91	1.00	11810.6	A	N/A	1.0000			
PFOA_2	4.90	1.00	1030.6	A	N/A	0.0873	37	50	
PFOS	5.24	1.00	10133.4	M	N/A	1.0000			
PFOS_2	5.24	1.00	3726.0	M	N/A	0.3677	5	50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	6.22	1.03	68.8	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

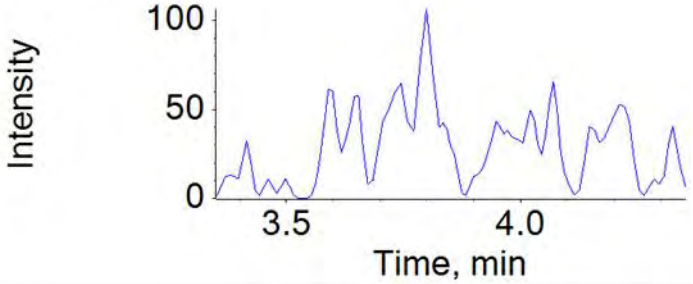
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

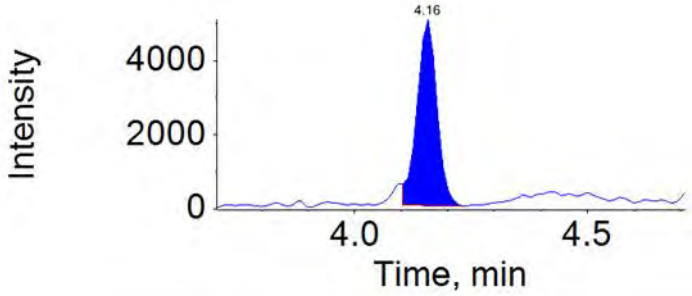
Component: PFBS
Primary Mass: 299.0 / 80.0



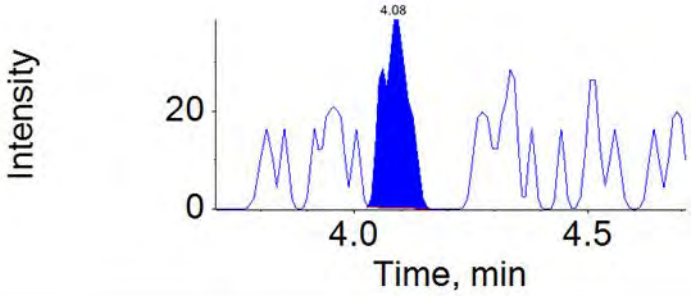
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



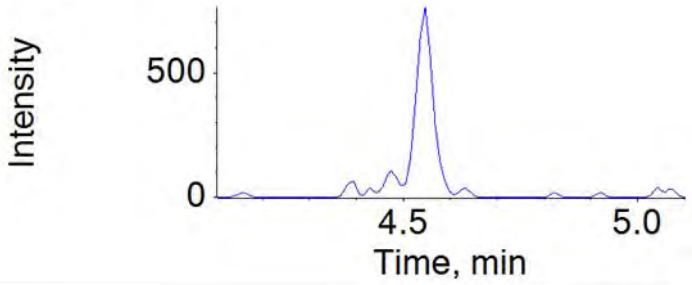
Component: PFHxA
Primary Mass: 313.0 / 269.0



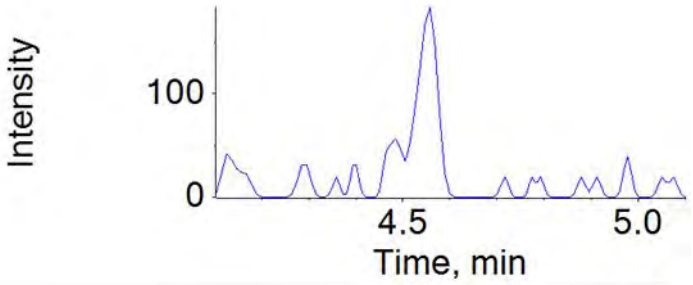
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



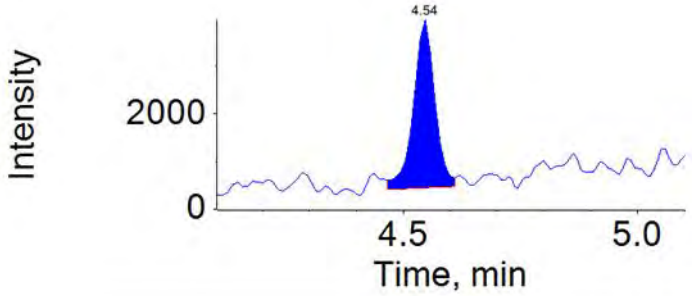
Component: PFHxS
Primary Mass: 399.0 / 80.0



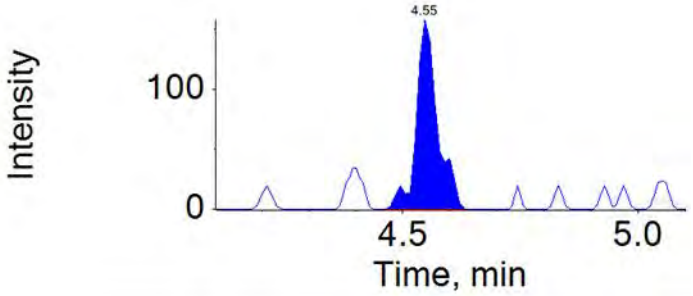
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



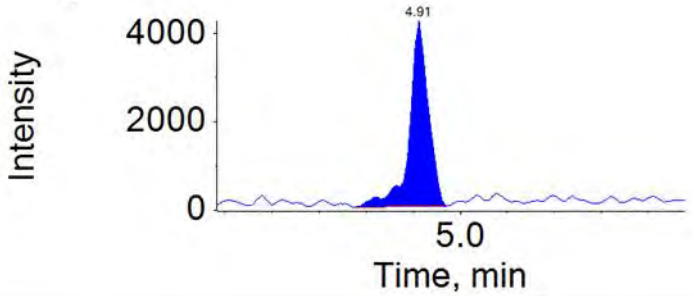
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



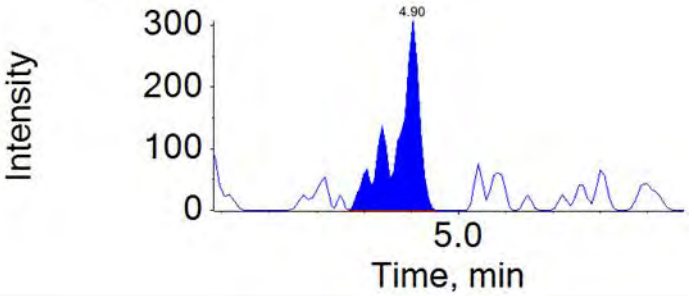
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

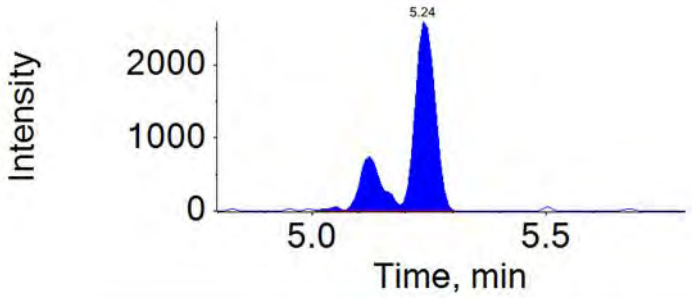
Component: PFOA
Primary Mass: 413.0 / 369.0



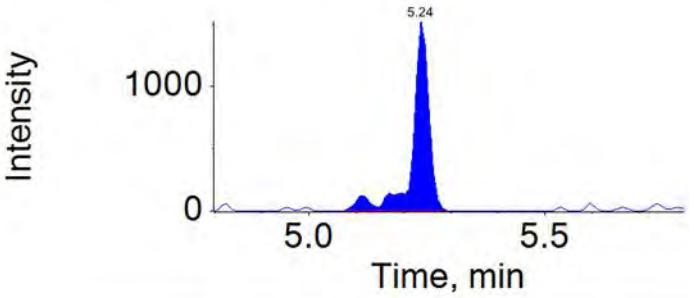
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



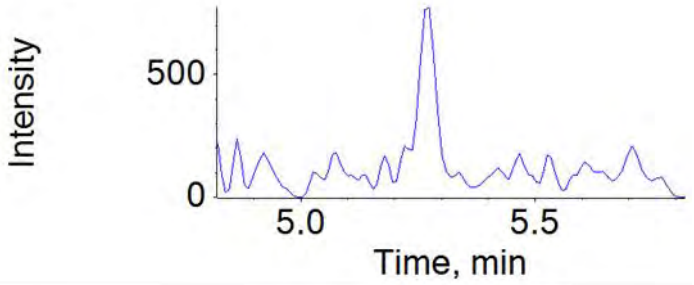
Component: PFOS
Primary Mass: 499.0 / 80.0



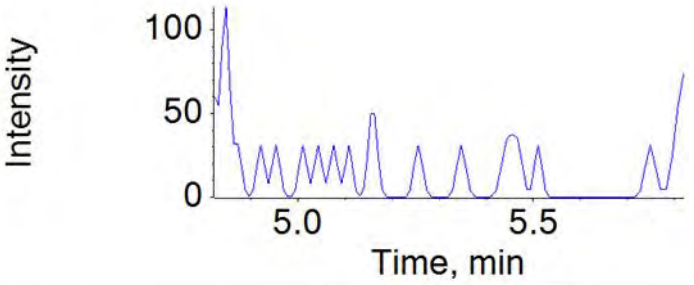
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



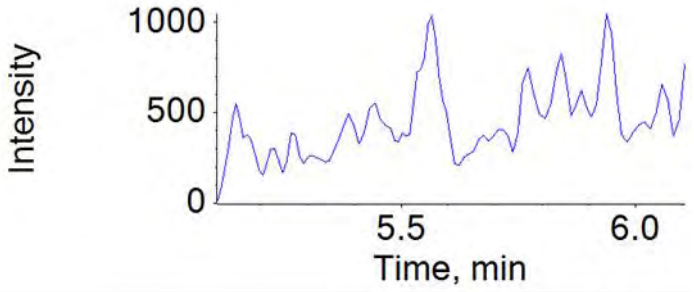
Component: PFNA
Primary Mass: 463.0 / 419.0



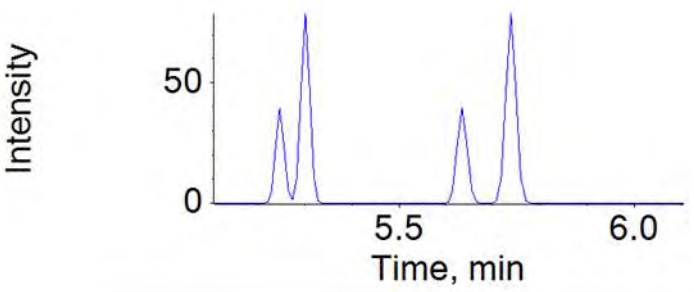
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



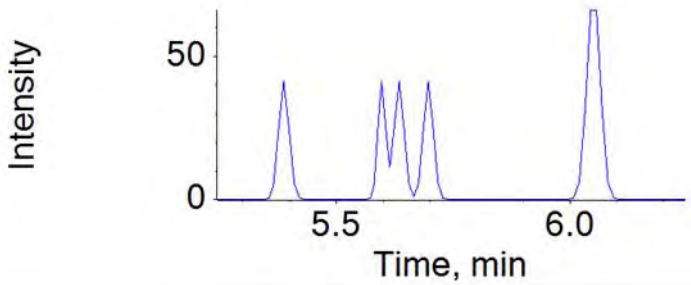
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



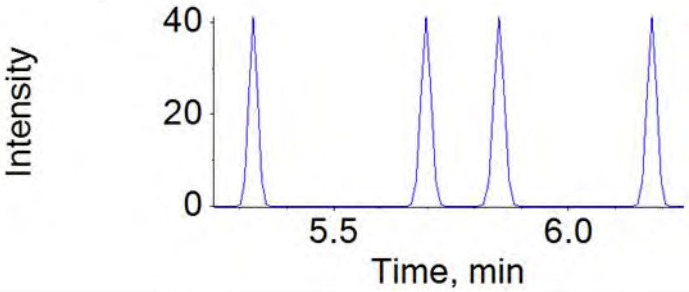
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

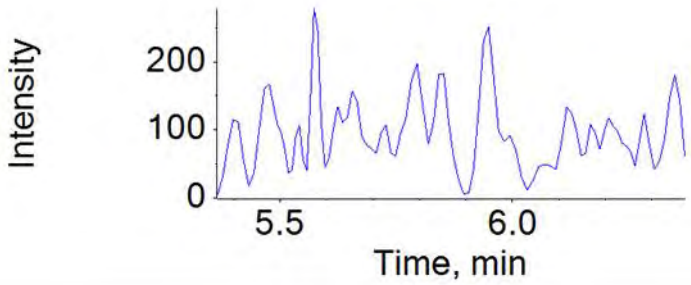
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



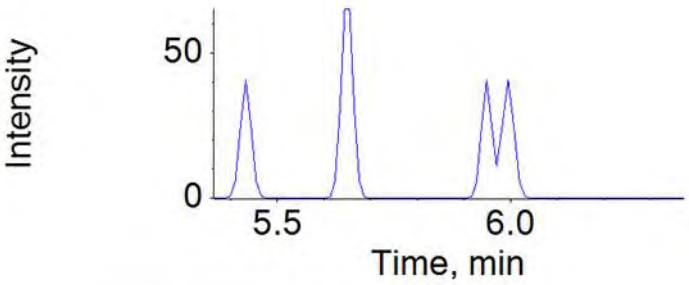
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



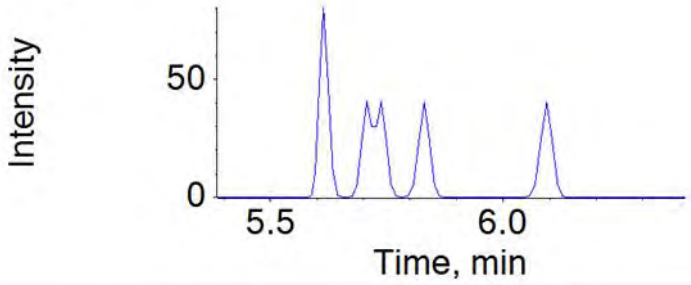
Component: PFUnDA
Primary Mass: 563.0 / 519.0



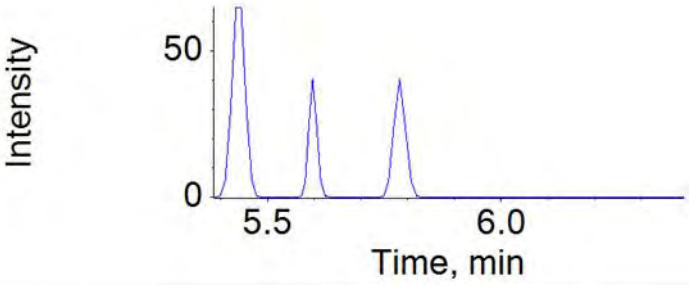
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



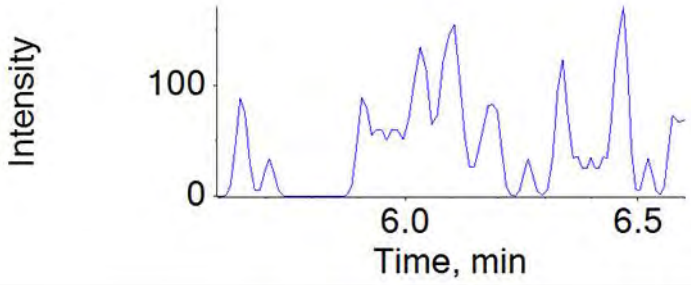
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



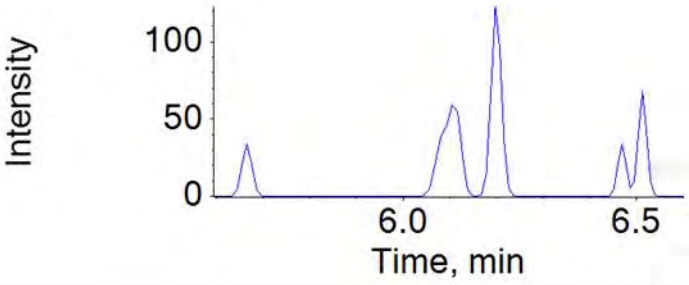
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



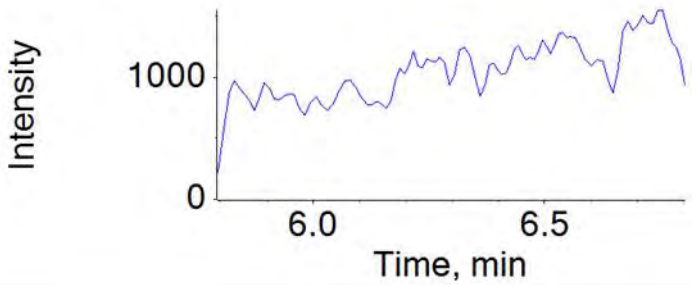
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



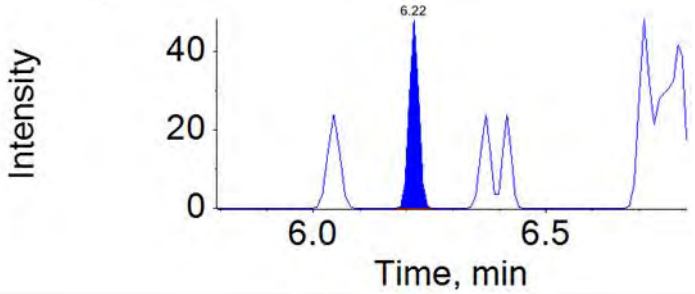
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

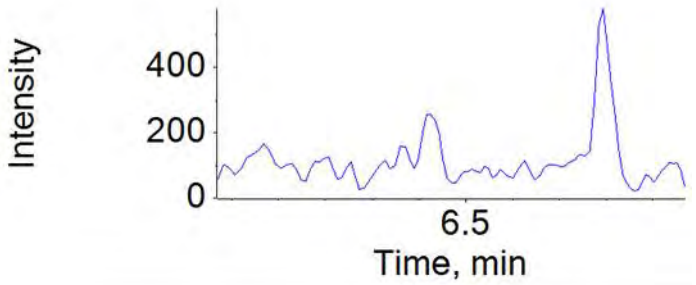
Component: PFTrDA
Primary Mass: 663.0 / 619.0



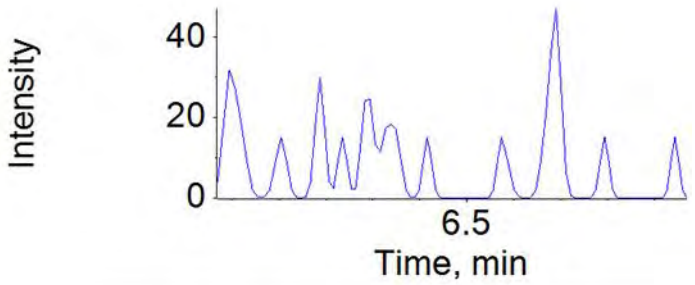
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:49:48 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	9881956			**Data File:**		18NOV08D-14.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-BLDG573-S-05-03 Grab Soil			**Acquis Date:**		2018-11-08T13:45:52
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	30			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		JPT12262
Sample Wt.:	1.03000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	809613.4	728839.7	11	50	
13C2-PFOA	5.0	565205.5	491983.1	15	50	
13C4-PFOS	4.8	295889.4	255568.1	16	50	
13C2-PFDA	5.0	342275.1	315407.5	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	339205.5	13C3-PFBA	809613.4	0.419	9.029	5.971	66	50-150	
E13C5-PFHxA	519470.0	13C2-PFOA	565205.5	0.919	9.709	6.565	68	50-150	
E13C3-PFHxS	270898.2	13C2-PFOA	565205.5	0.479	9.184	6.681	73	50-150	
E13C4-PFHpA	438574.0	13C2-PFOA	565205.5	0.776	9.709	6.854	71	50-150	
E13C8-PFOA	755244.9	13C2-PFOA	565205.5	1.336	9.709	7.235	75	50-150	
E13C8-PFOS	235933.6	13C4-PFOS	295889.4	0.797	9.282	6.846	74	50-150	
E13C9-PFNA	395434.3	13C4-PFOS	295889.4	1.336	9.709	7.088	73	50-150	
E13C6-PFDA	491164.5	13C2-PFDA	342275.1	1.435	9.709	7.007	72	50-150	
Ed3-NMeFOSAA	65200.5	13C2-PFDA	342275.1	0.190	9.709	6.878	71	50-150	
E13C7-PFUnDA	221158.2	13C2-PFDA	342275.1	0.646	9.709	7.238	75	50-150	
Ed5-NEtFOSAA	52726.9	13C2-PFDA	342275.1	0.154	9.709	6.922	71	50-150	
E13C2-PFDoDA	461729.3	13C2-PFDA	342275.1	1.349	9.709	7.062	73	50-150	
E13C2-PFTeDA	322567.4	13C2-PFDA	342275.1	0.942	9.709	6.588	68	50-150	

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

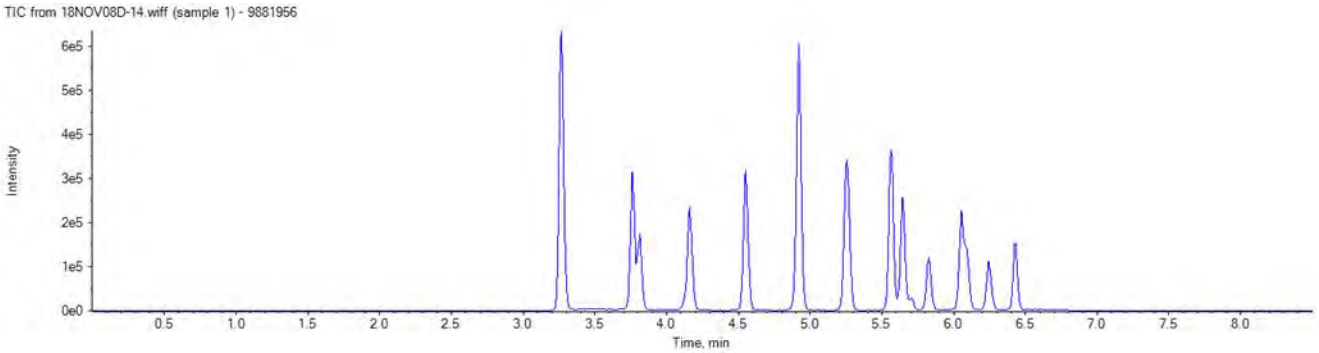
Analyte Quantitation Peak Table

Sample Name: 9881956 **Instrument Name:** LM27631 **File Name:** 18NOV08D-14.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.03000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	339205.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	519470.0	N/A	
PFHxS	4.56	1.000	5187.1		M	13C3-PFHxS	4.55	270898.2	0.019	0.188
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	438574.0	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	755244.9	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	235933.6	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	395434.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	491164.5	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	65200.5	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	221158.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	52726.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	461729.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	461729.3	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	322567.4	N/A	

Total Ion Chromatogram

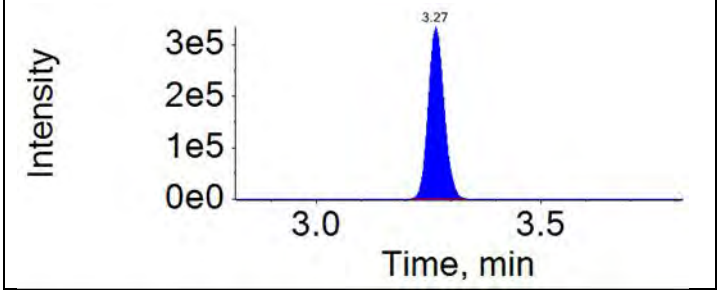


APPROVED
By JPT at 5:11 pm, 11/8/18

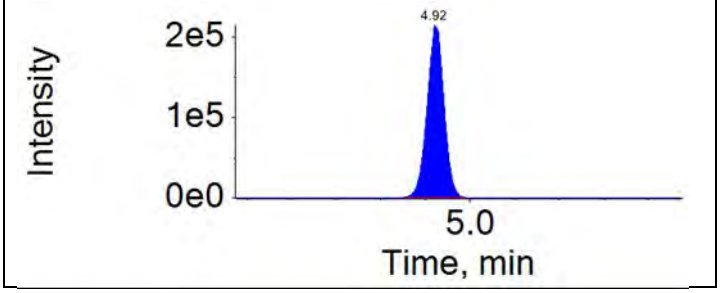
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

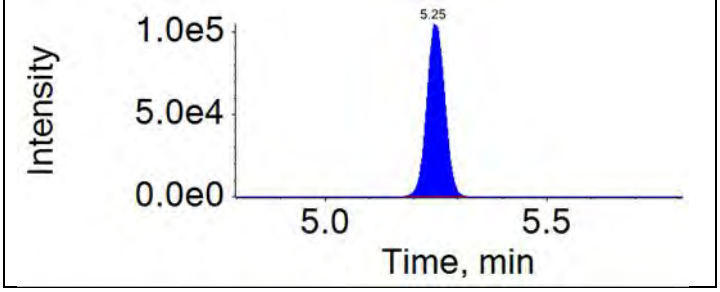
Injection Standard: 13C3-PFBA
216.0 / 172.0



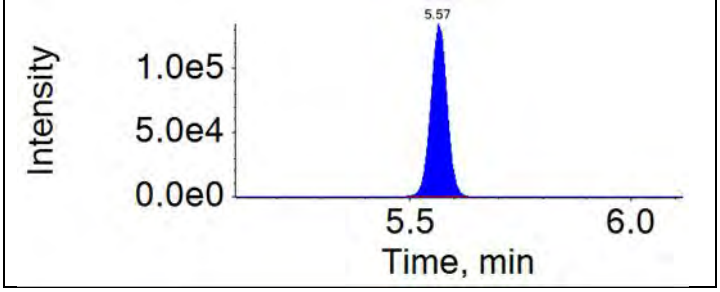
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



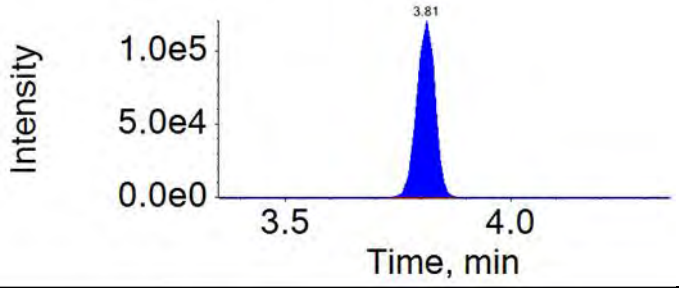
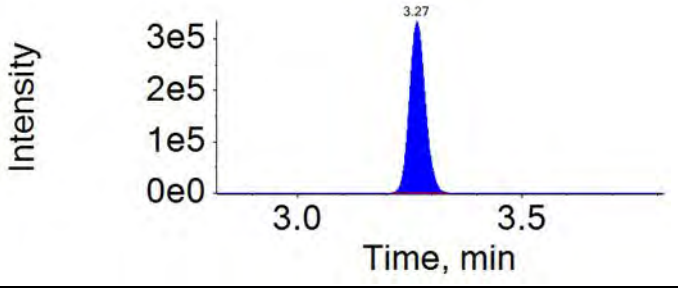
Injection Standard: 13C2-PFDA
515.0 / 470.0

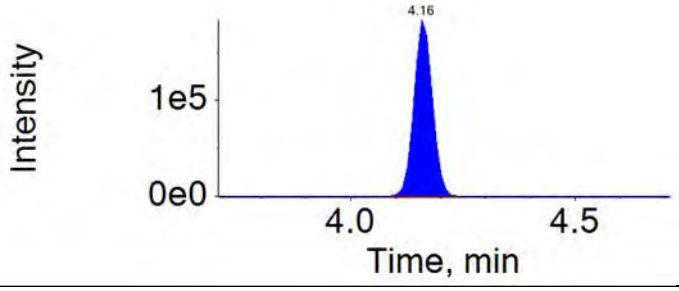
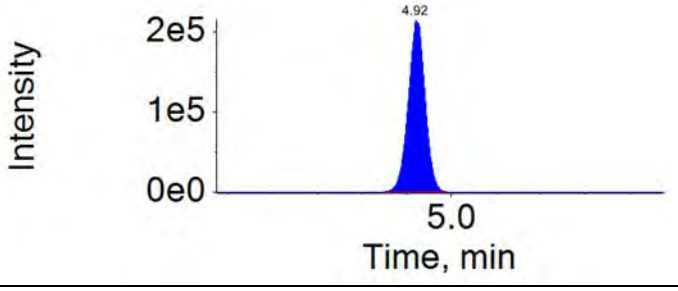


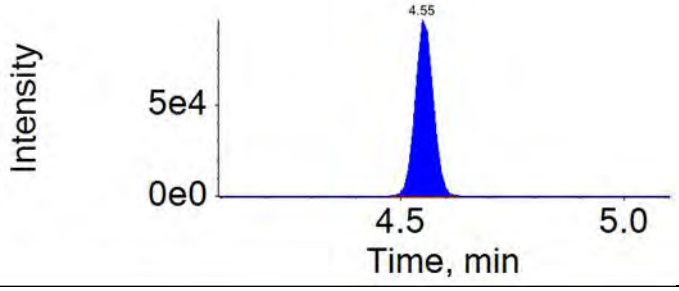
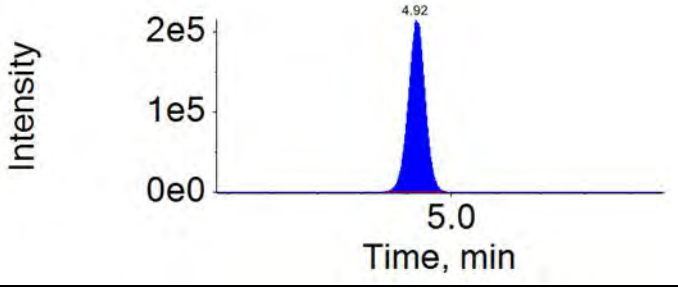
APPROVED
By JPT at 5:11 pm, 11/8/18

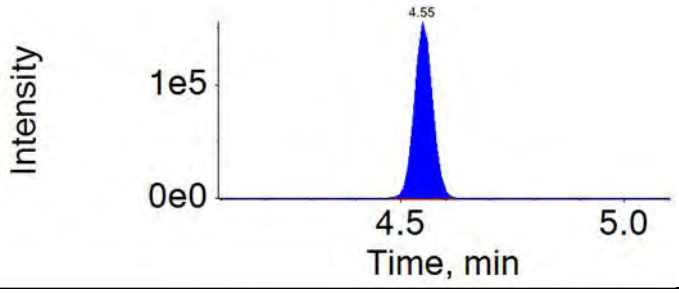
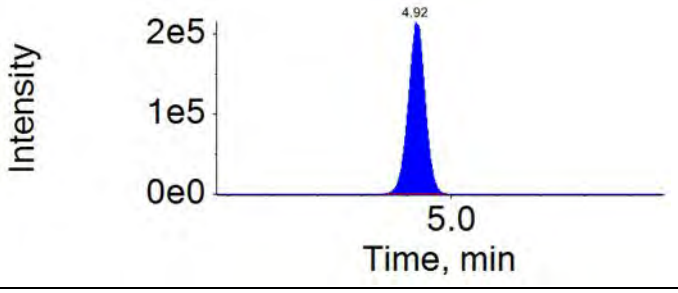
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

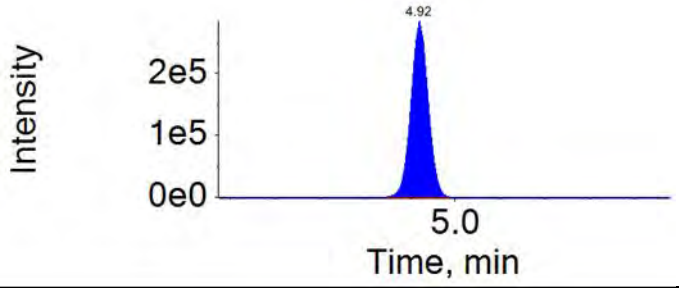
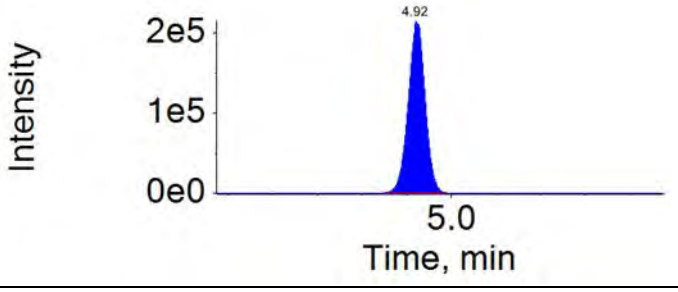
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

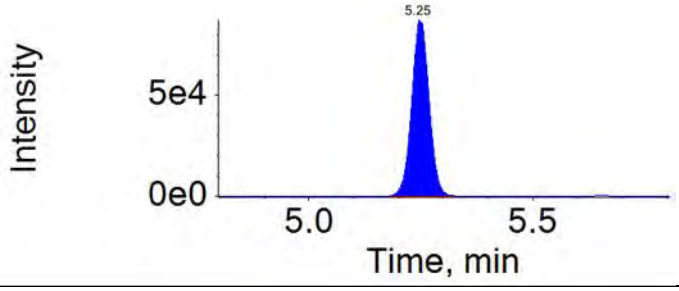
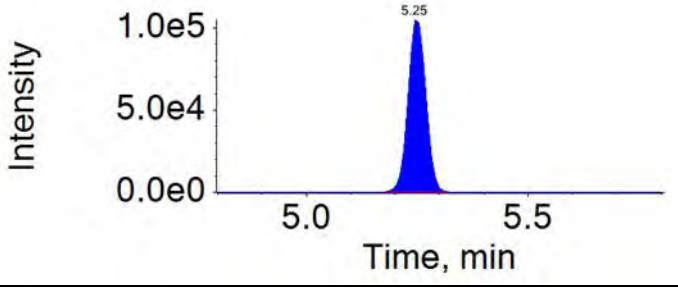
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

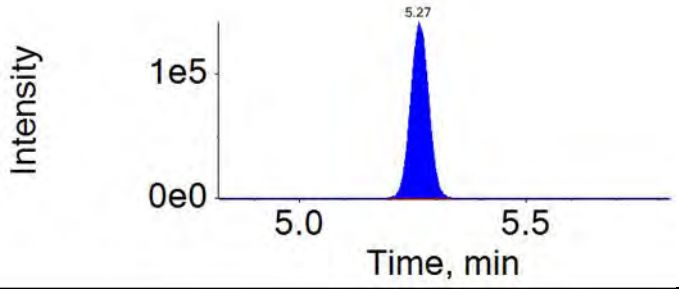
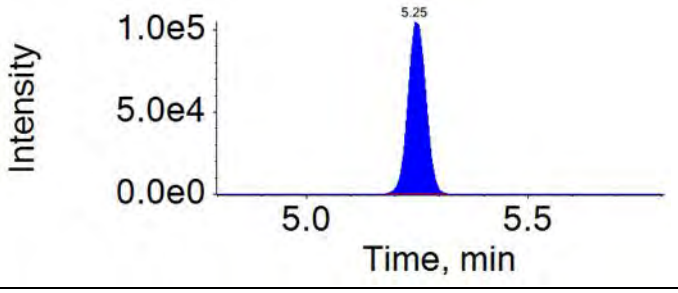
APPROVED
By JPT at 5:11 pm, 11/8/18

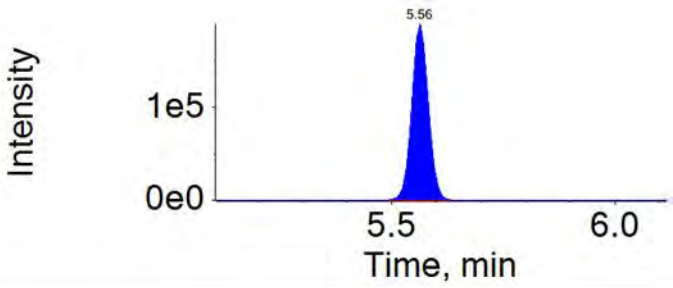
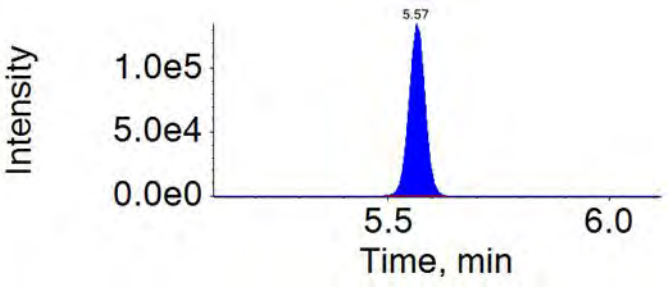
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

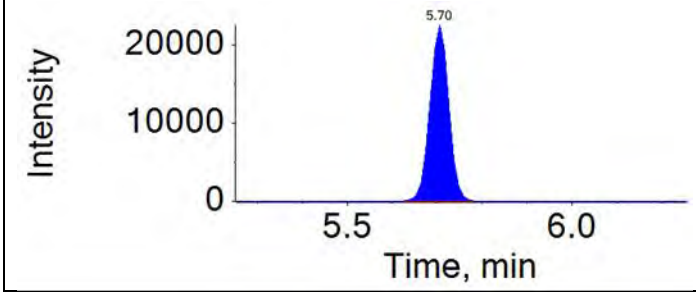
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

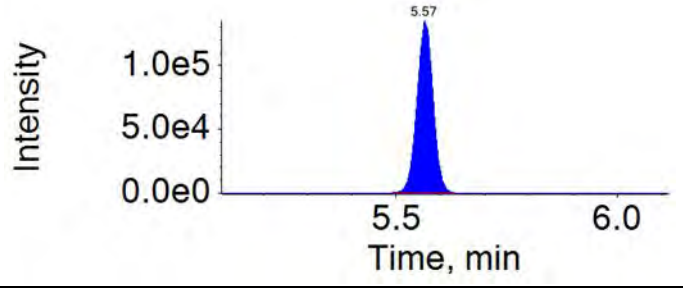
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

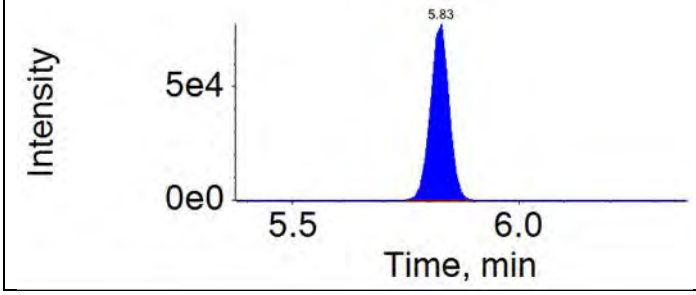
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

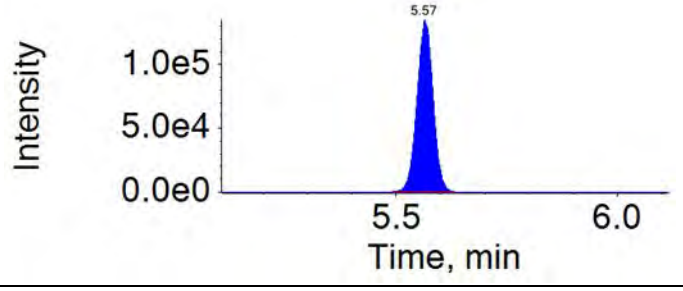
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



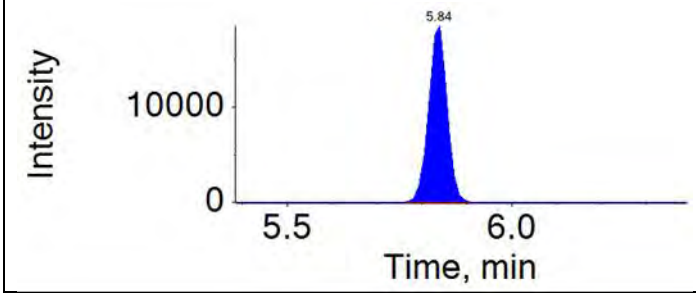


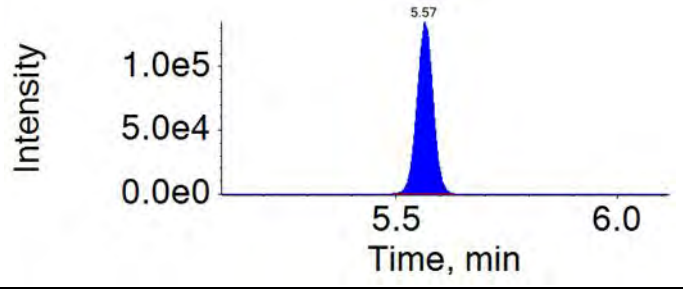
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



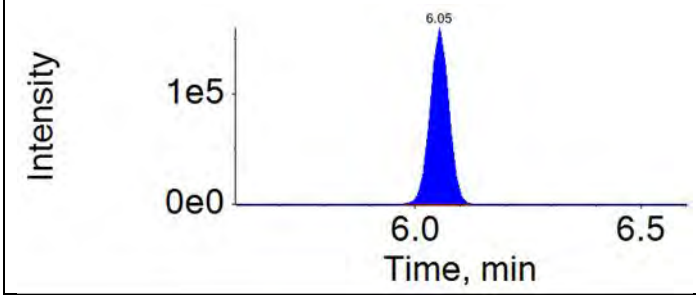


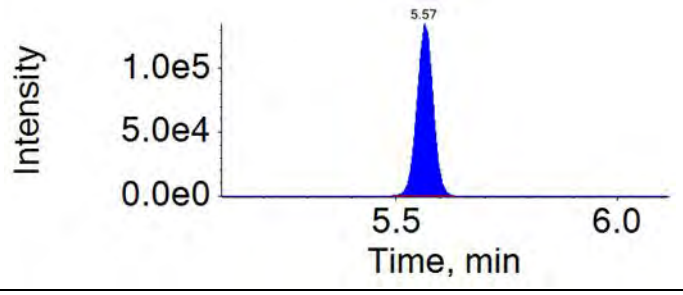
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



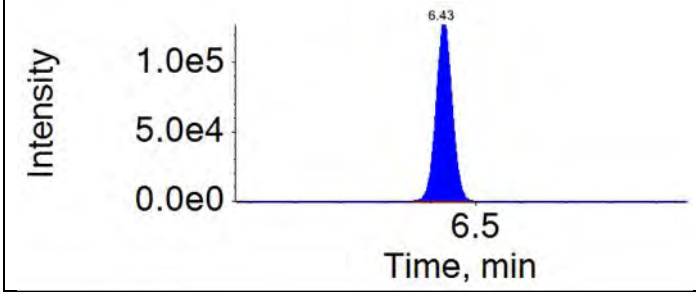


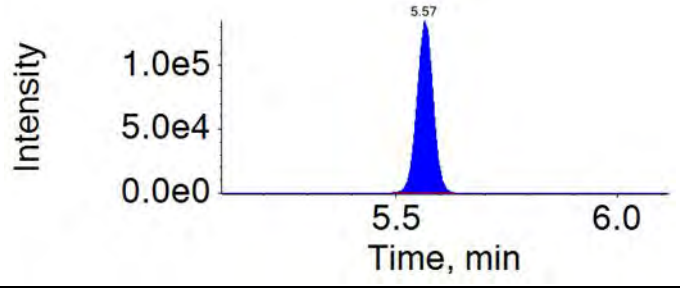
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



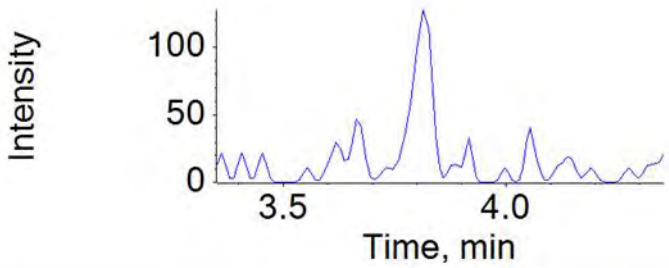


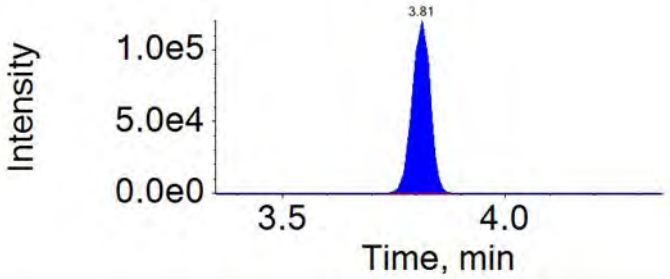
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

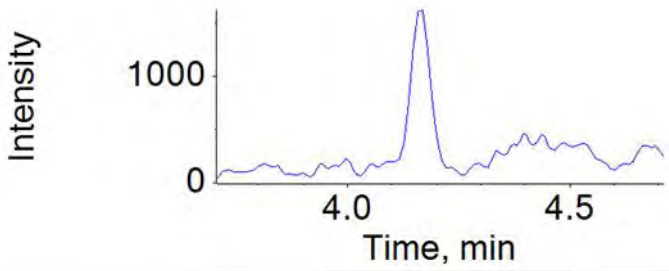
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

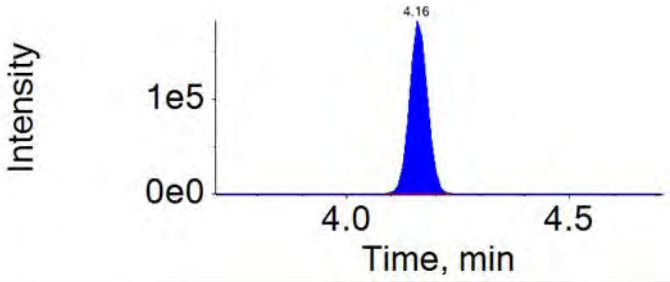
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



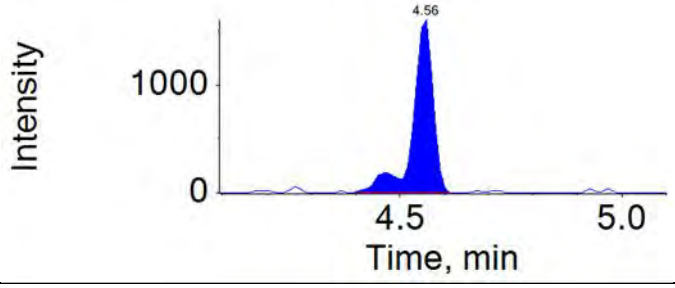


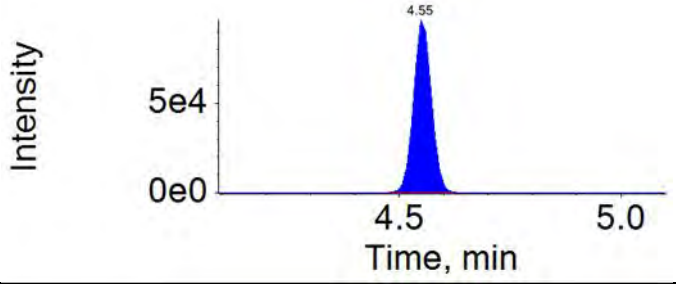
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



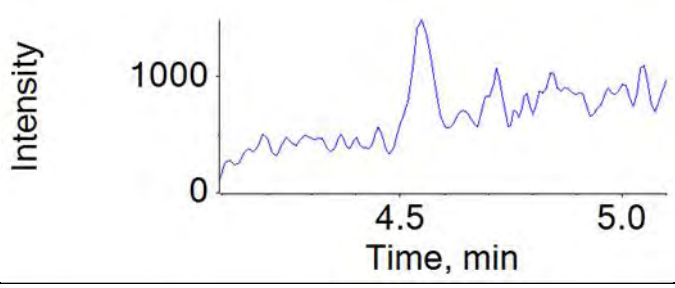


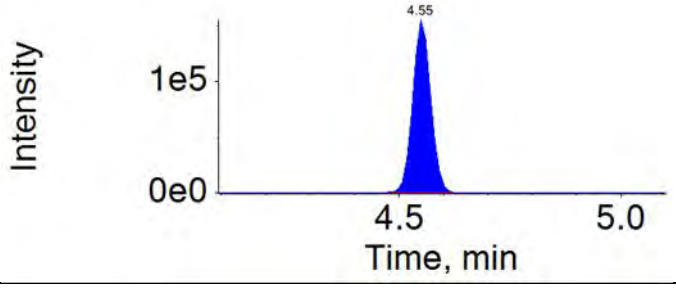
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



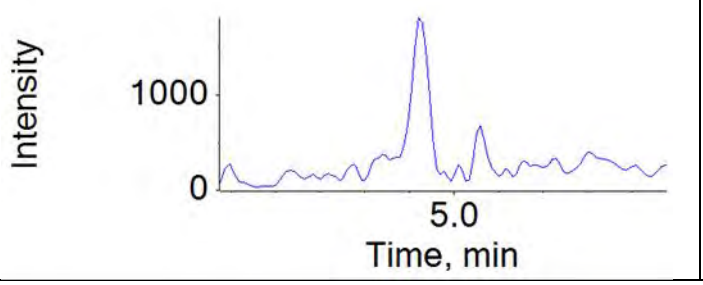


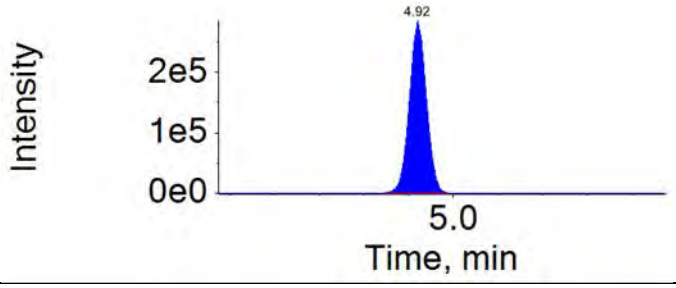
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

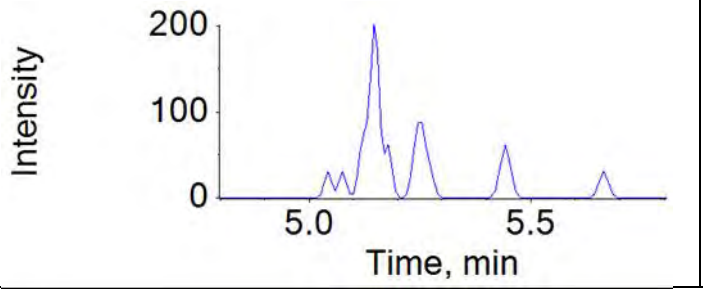
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

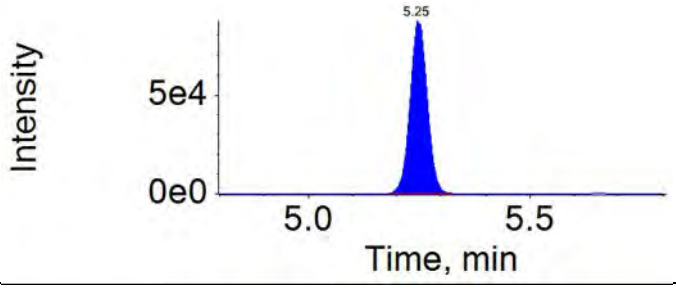
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



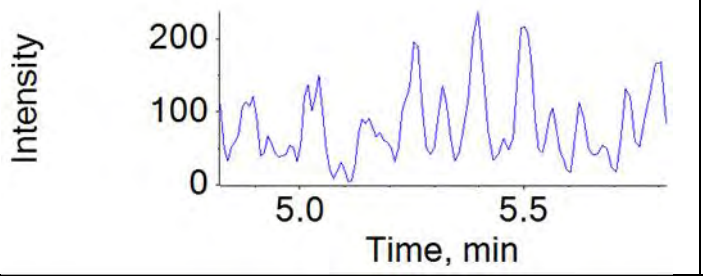


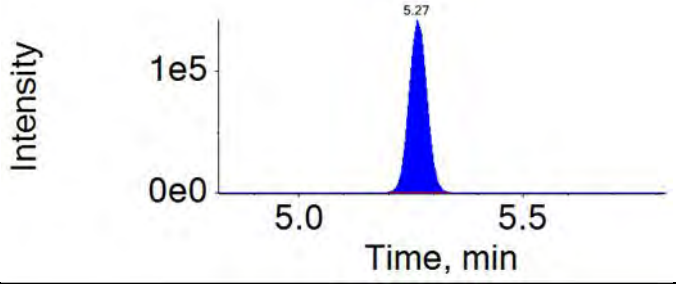
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



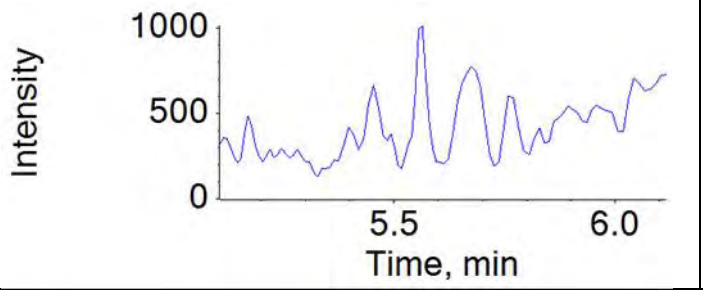


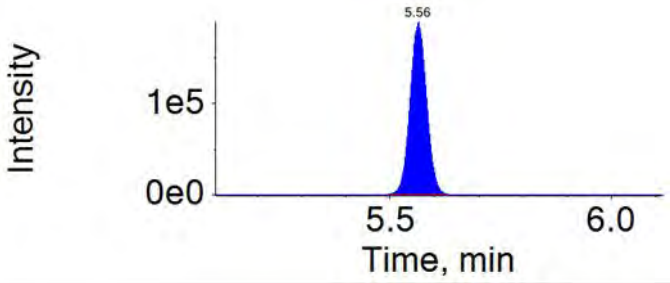
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



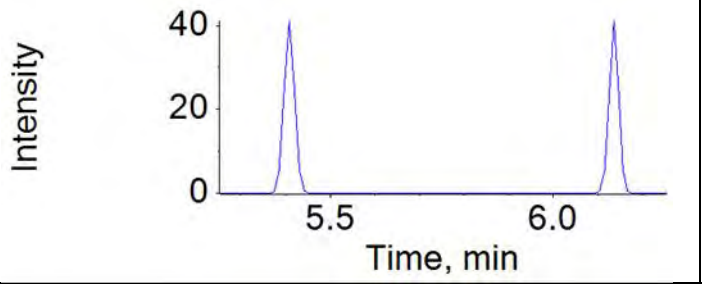


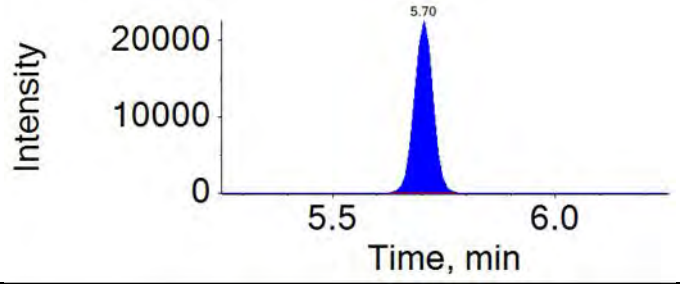
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

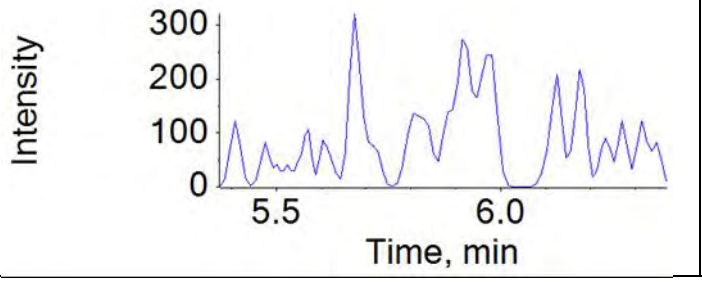
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

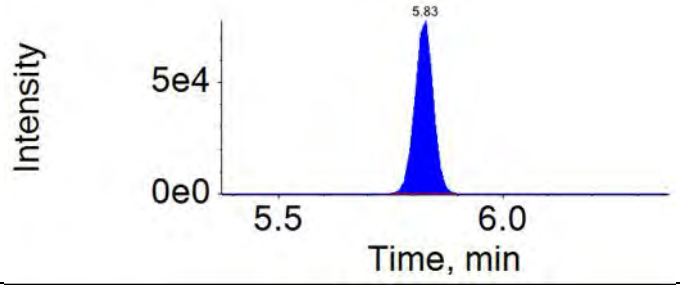
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



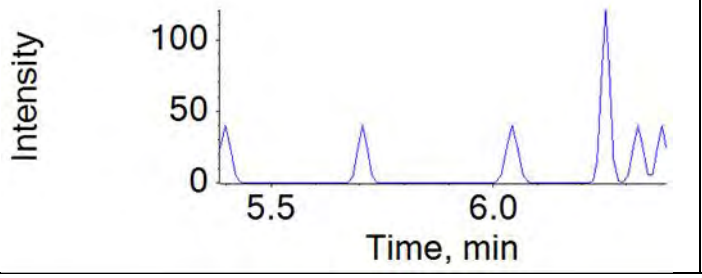


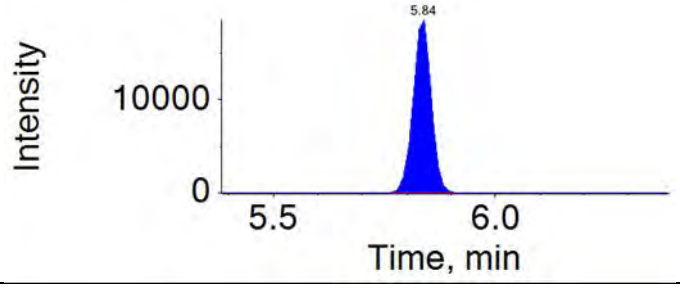
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



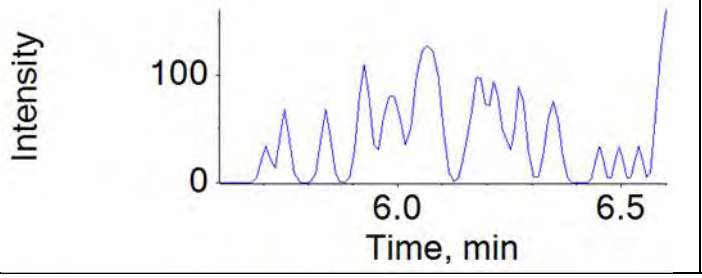


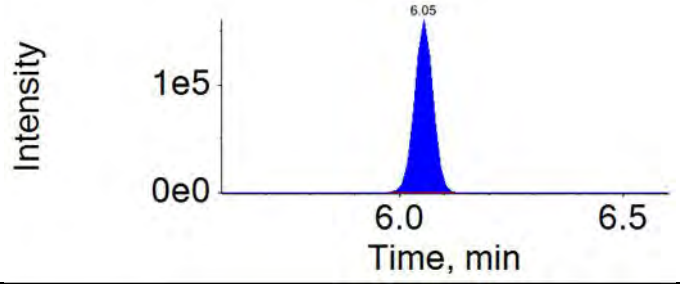
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



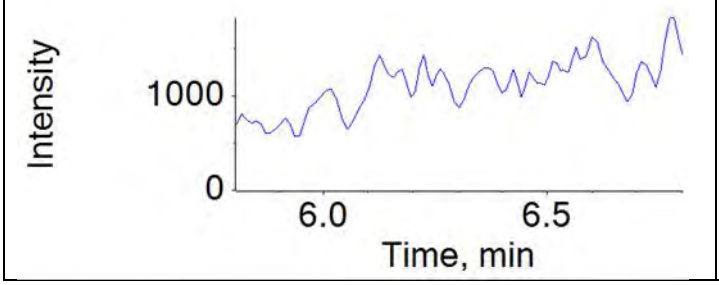


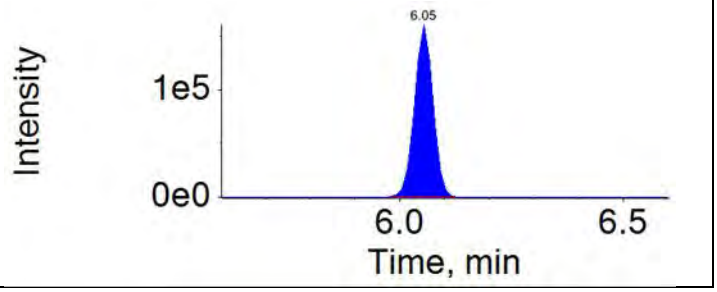
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

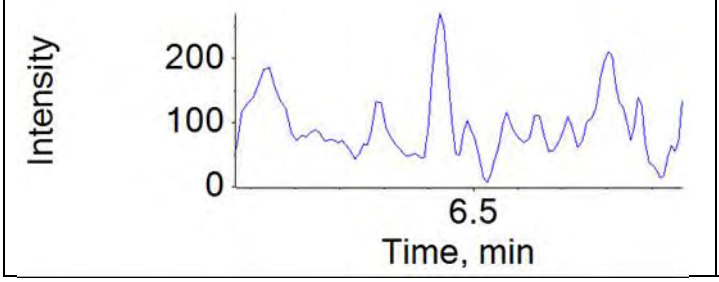
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

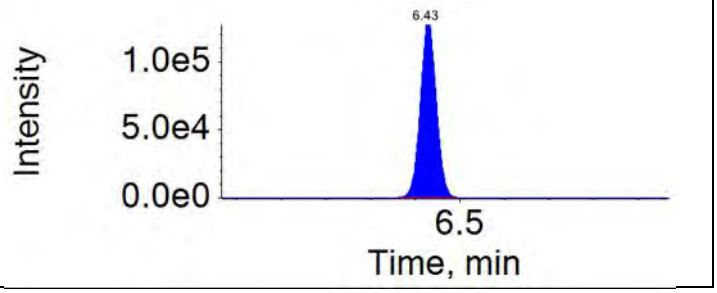
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





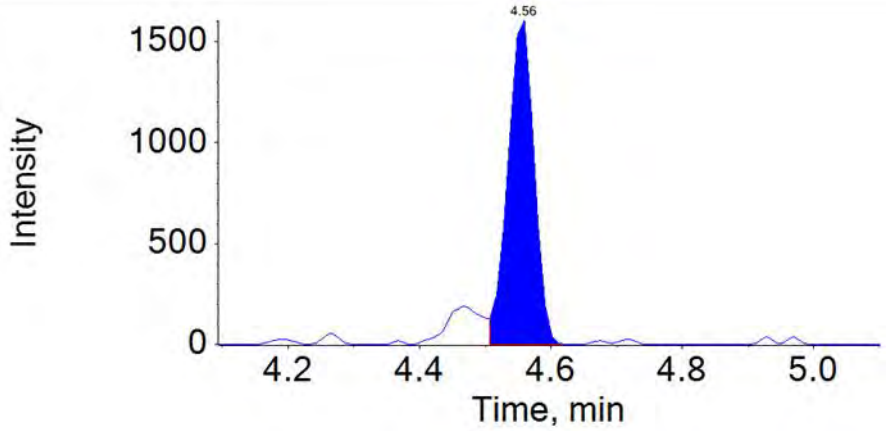
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

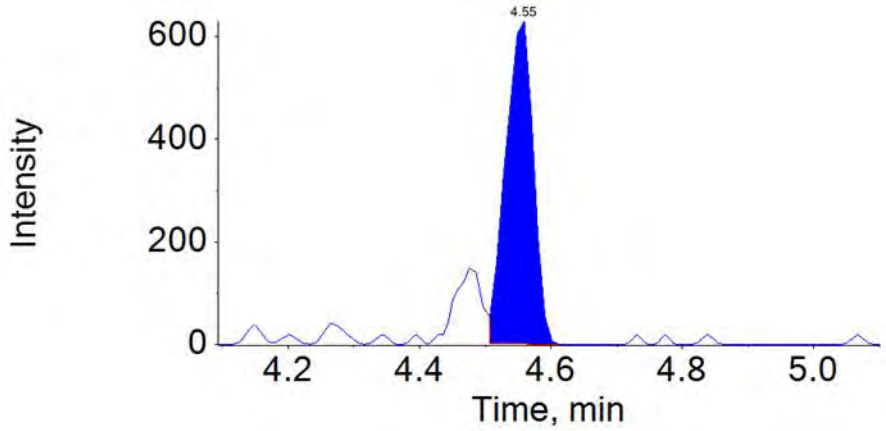
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
4462.9
Mass Range:
399.0 / 80.0
File Name:
18NOV08D-14.wiff
Sample Name:
9881956



Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
1849.4
Mass Range:
399.0 / 99.0
File Name:
18NOV08D-14.wiff
Sample Name:
9881956



Integration Comment: incorrect integration

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:49:48 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Ion Ratio Report

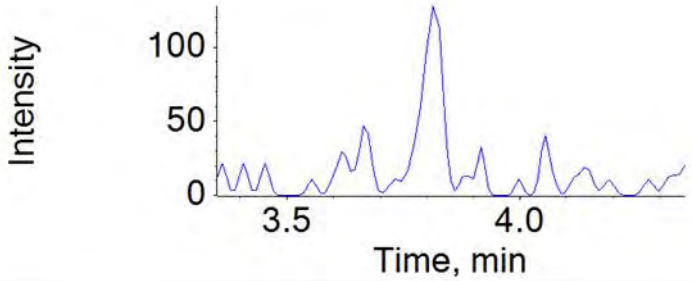
Sample Name: 9881956 **Instrument Name:** LM27631 **File Name:** 18NOV08D-14.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	4.56	1.00	5187.1	M	N/A	1.0000			
PFHxS_2	4.55	1.00	2287.2	M	N/A	0.4409	24	50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	6.11	1.01	117.8	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

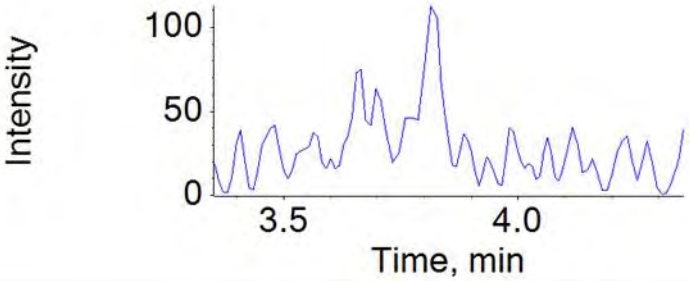
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

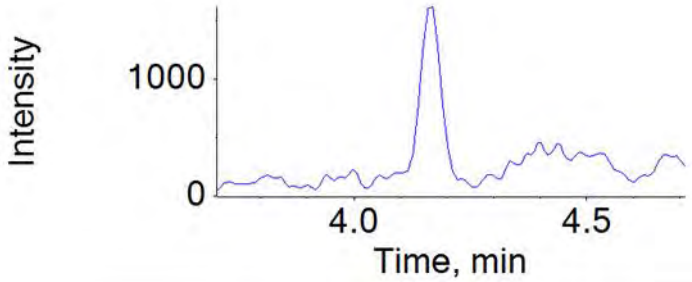
Component: PFBS
Primary Mass: 299.0 / 80.0



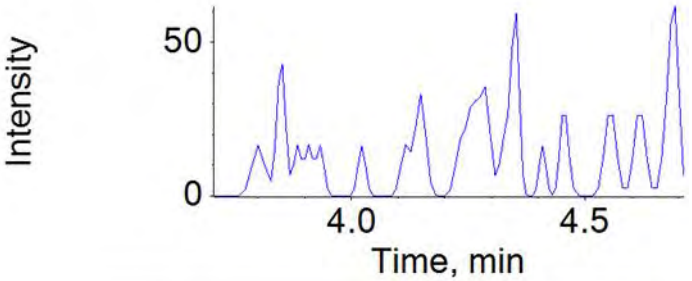
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



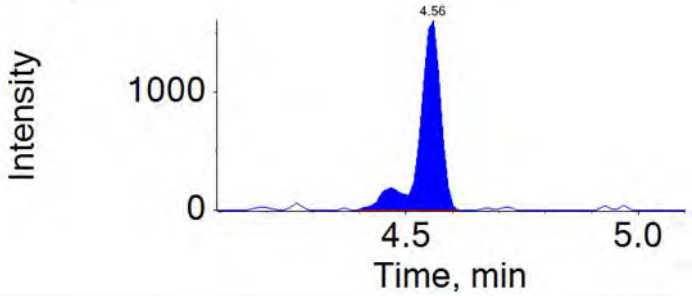
Component: PFHxA
Primary Mass: 313.0 / 269.0



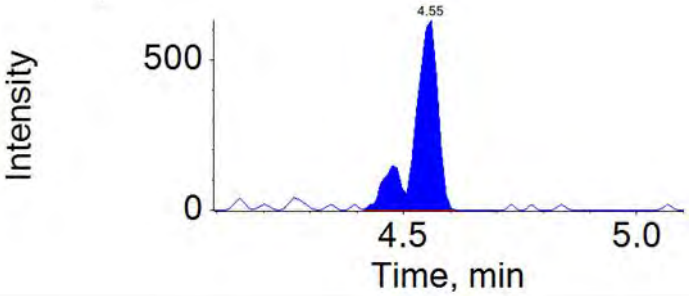
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



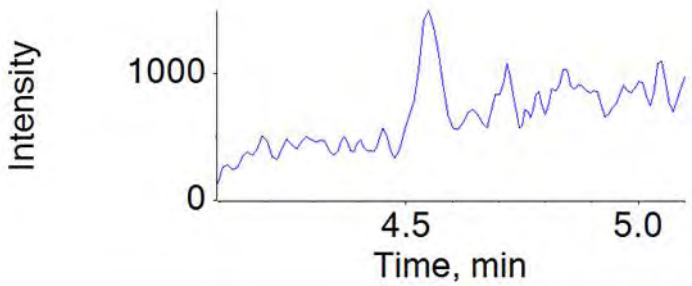
Component: PFHxS
Primary Mass: 399.0 / 80.0



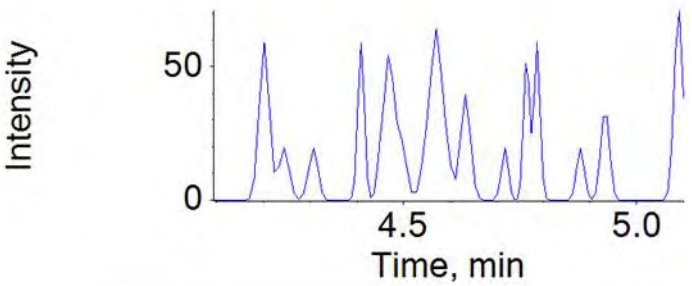
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



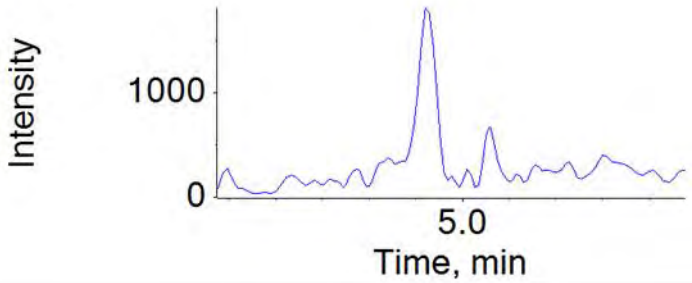
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



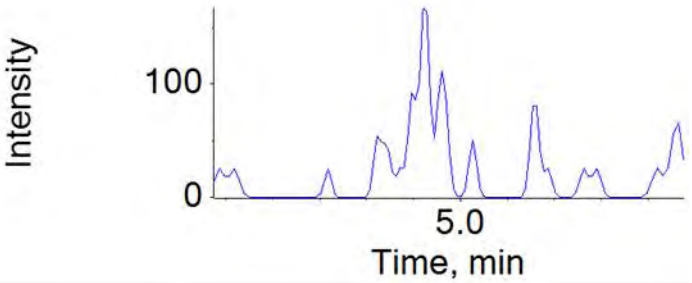
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

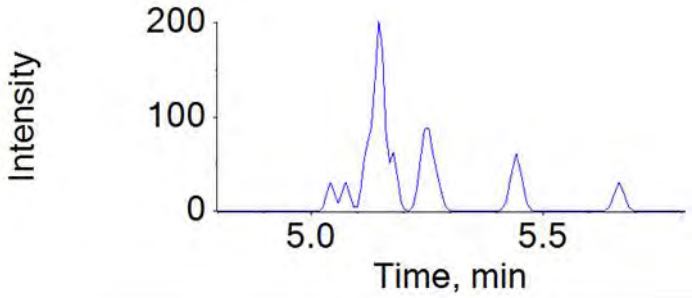
Component: PFOA
Primary Mass: 413.0 / 369.0



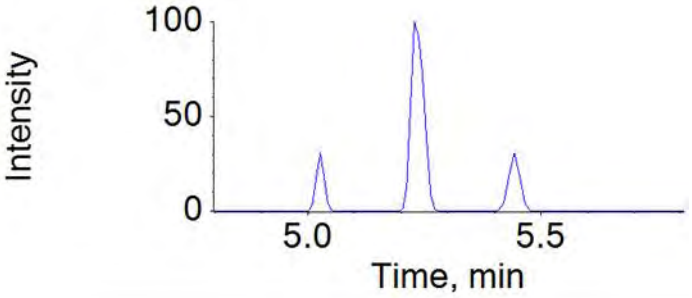
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



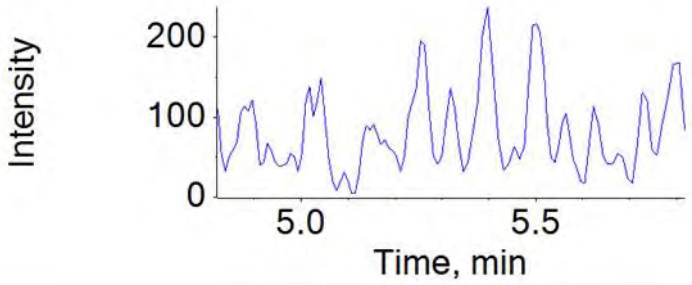
Component: PFOS
Primary Mass: 499.0 / 80.0



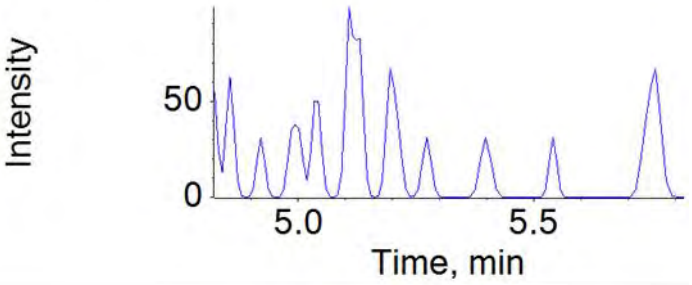
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



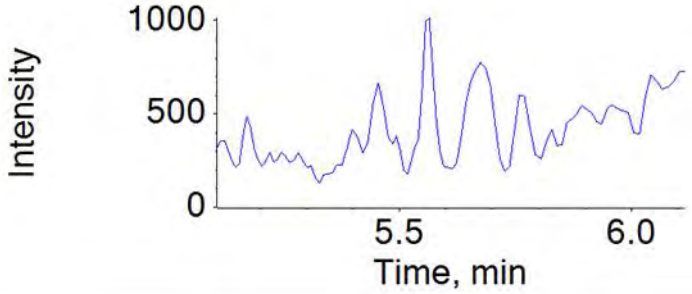
Component: PFNA
Primary Mass: 463.0 / 419.0



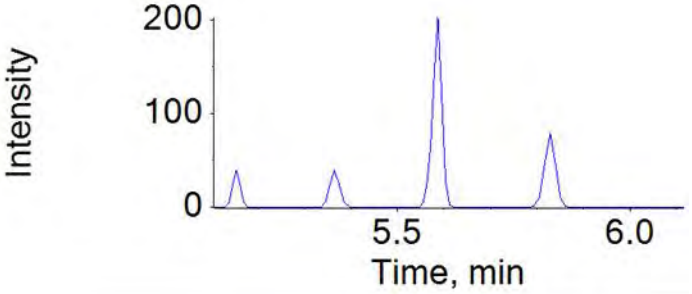
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



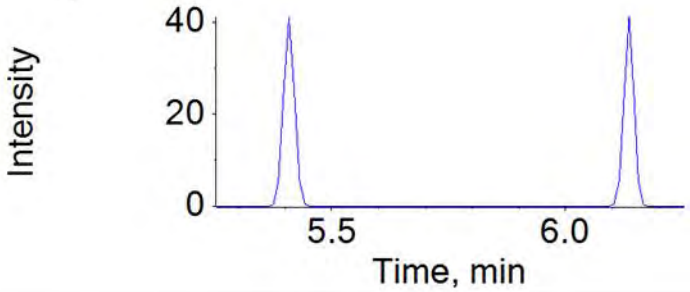
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



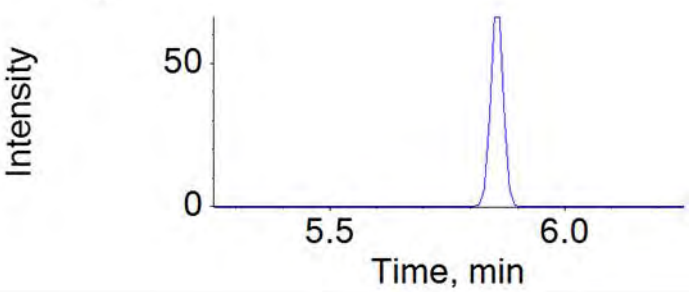
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

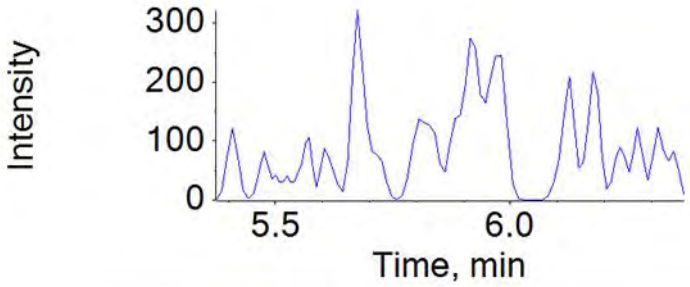
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



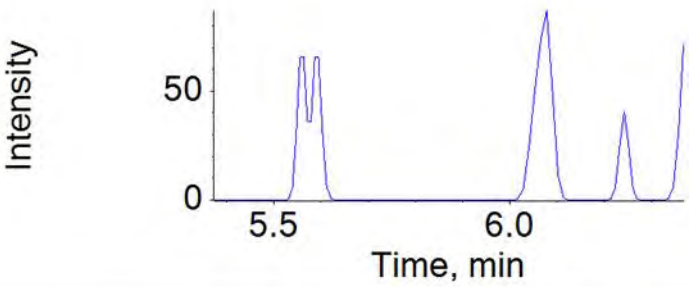
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



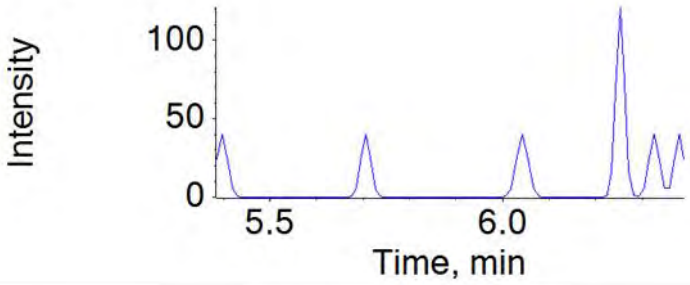
Component: PFUnDA
Primary Mass: 563.0 / 519.0



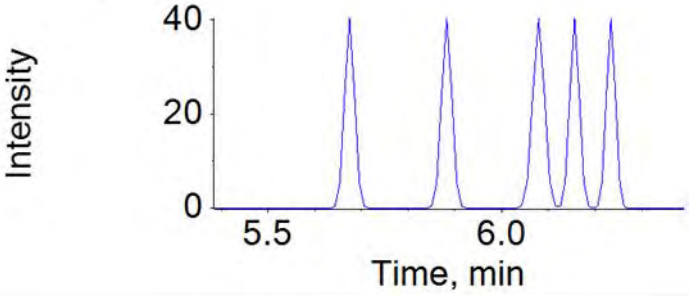
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



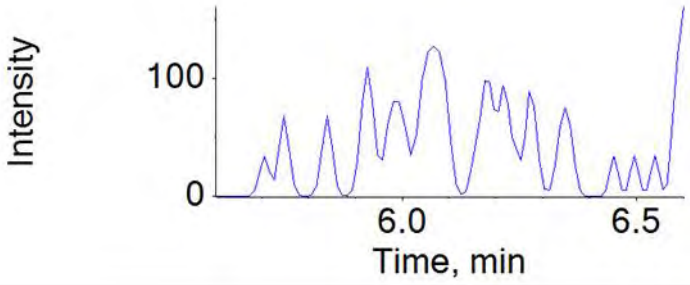
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



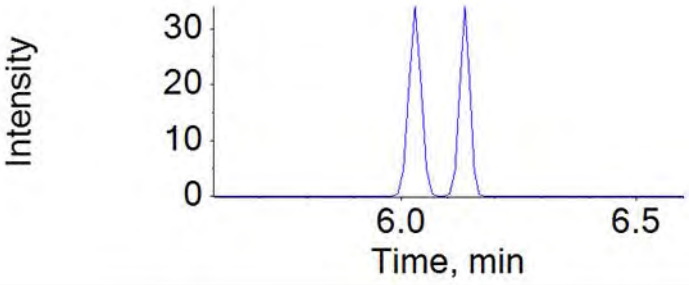
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



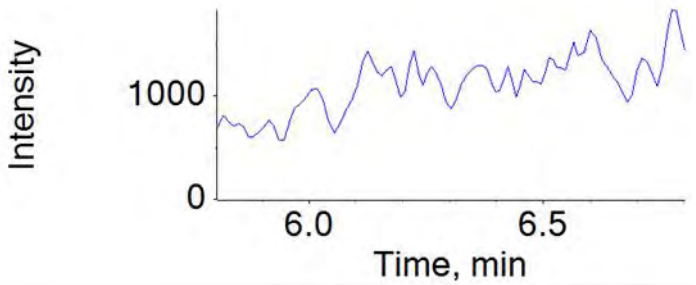
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



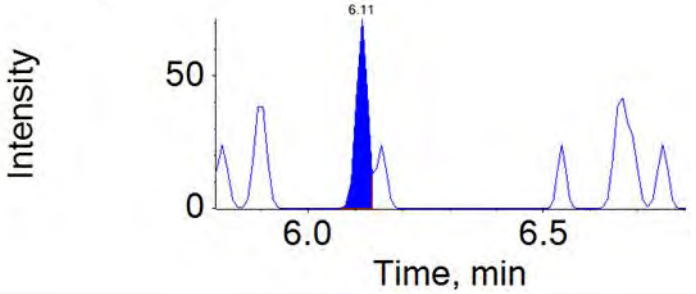
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

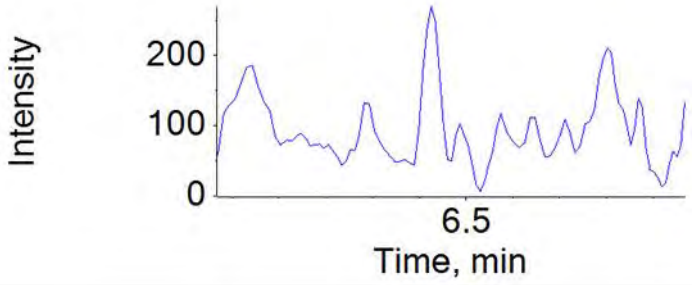
Component: PFTrDA
Primary Mass: 663.0 / 619.0



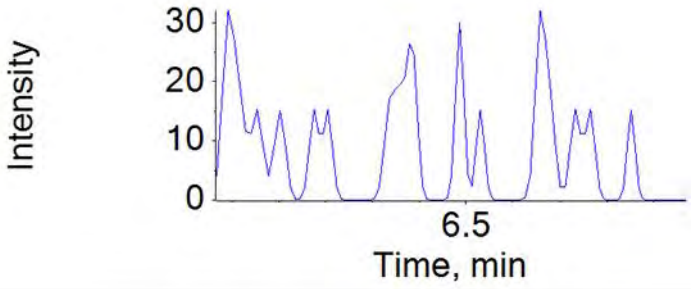
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881957			**Data File:**		18NOV08D-15.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-BLDG573-S-05-05 Grab Soil			**Acquis Date:**		2018-11-08T13:54:52
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	31			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		JPT12262
Sample Wt.:	1.04000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	783689.1	728839.7	8	50	
13C2-PFOA	5.0	539990.9	491983.1	10	50	
13C4-PFOS	4.8	299617.6	255568.1	17	50	
13C2-PFDA	5.0	332869.0	315407.5	6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	346786.4	13C3-PFBA	783689.1	0.443	8.942	6.245	70	50-150	
E13C5-PFHxA	570208.7	13C2-PFOA	539990.9	1.056	9.615	7.470	78	50-150	
E13C3-PFHxS	275041.0	13C2-PFOA	539990.9	0.509	9.096	7.032	77	50-150	
E13C4-PFHpA	437158.7	13C2-PFOA	539990.9	0.810	9.615	7.082	74	50-150	
E13C8-PFOA	777955.9	13C2-PFOA	539990.9	1.441	9.615	7.726	80	50-150	
E13C8-PFOS	258563.4	13C4-PFOS	299617.6	0.863	9.192	7.338	80	50-150	
E13C9-PFNA	415809.2	13C4-PFOS	299617.6	1.388	9.615	7.290	76	50-150	
E13C6-PFDA	524857.7	13C2-PFDA	332869.0	1.577	9.615	7.626	79	50-150	
Ed3-NMeFOSAA	72296.9	13C2-PFDA	332869.0	0.217	9.615	7.767	81	50-150	
E13C7-PFUnDA	226792.6	13C2-PFDA	332869.0	0.681	9.615	7.559	79	50-150	
Ed5-NEtFOSAA	54205.4	13C2-PFDA	332869.0	0.163	9.615	7.247	75	50-150	
E13C2-PFDoDA	465823.8	13C2-PFDA	332869.0	1.399	9.615	7.255	75	50-150	
E13C2-PFTeDA	329445.1	13C2-PFDA	332869.0	0.990	9.615	6.852	71	50-150	

APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

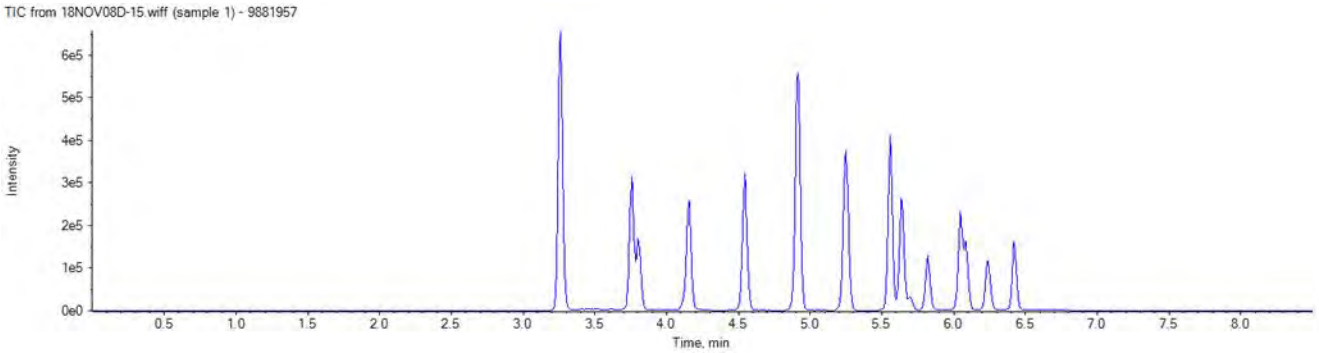
Analyte Quantitation Peak Table

Sample Name: 9881957 **Instrument Name:** LM27631 **File Name:** 18NOV08D-15.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.04000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	346786.4	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	570208.7	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	275041.0	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	437158.7	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	777955.9	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	258563.4	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	415809.2	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	524857.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	72296.9	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	226792.6	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	54205.4	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	465823.8	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	465823.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	329445.1	N/A	

Total Ion Chromatogram

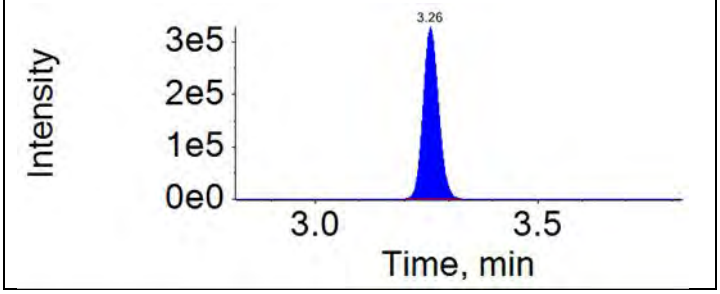


APPROVED
By JPT at 5:11 pm, 11/8/18

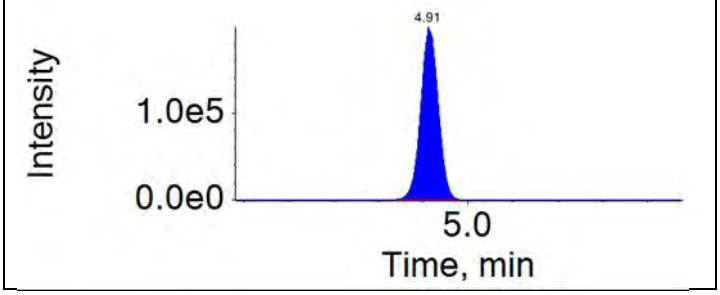
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

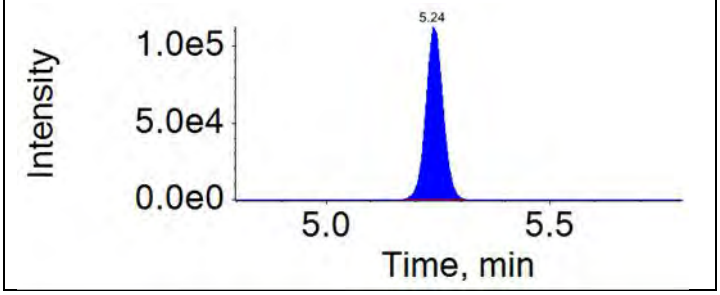
Injection Standard: 13C3-PFBA
216.0 / 172.0



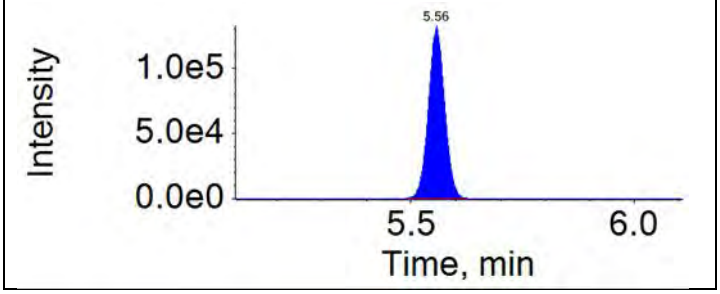
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



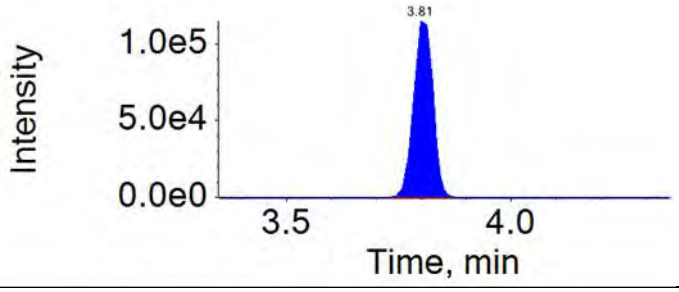
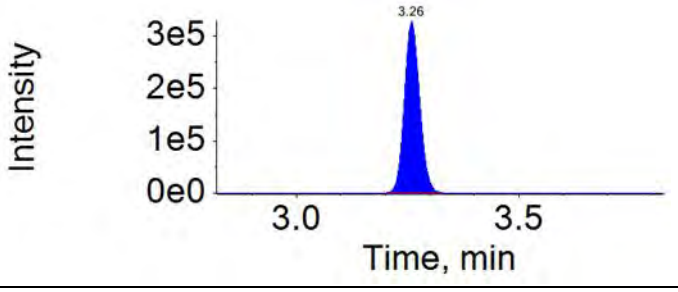
Injection Standard: 13C2-PFDA
515.0 / 470.0

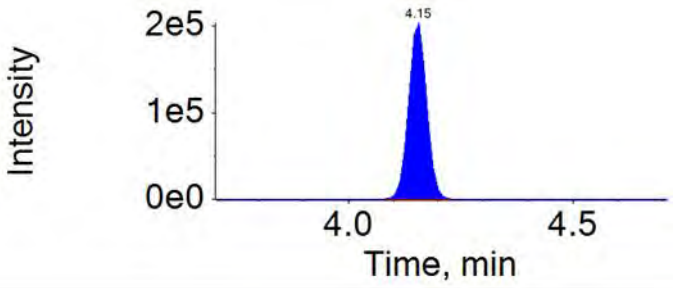
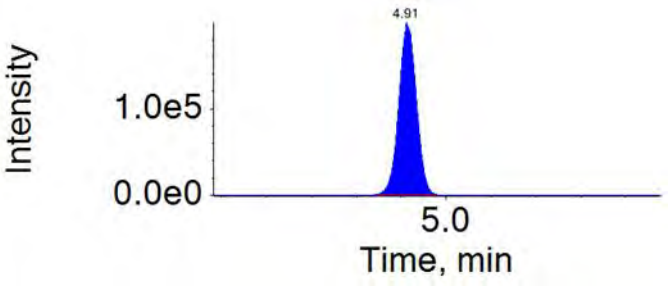


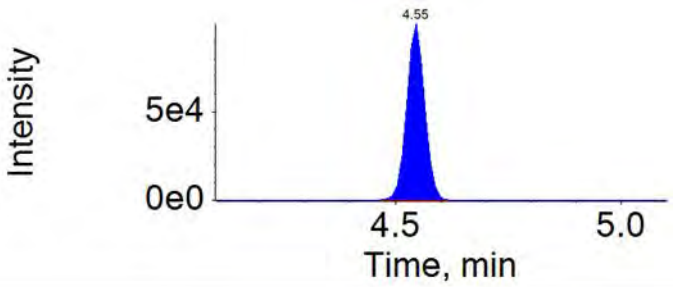
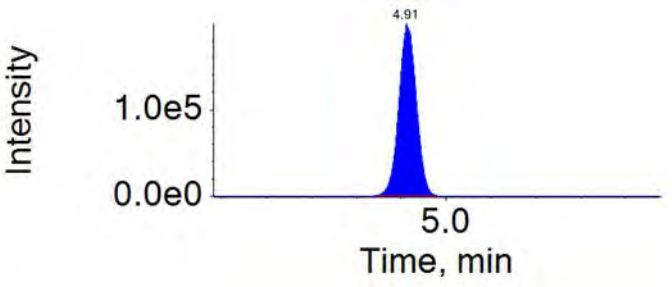
APPROVED
By JPT at 5:11 pm, 11/8/18

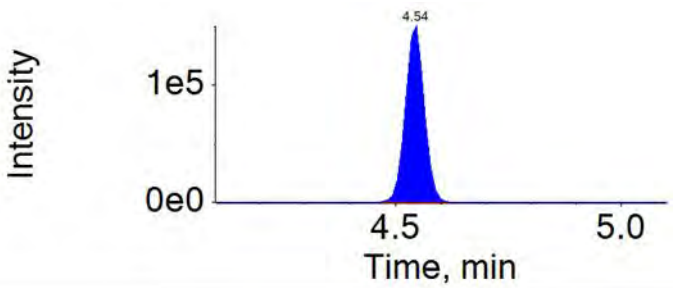
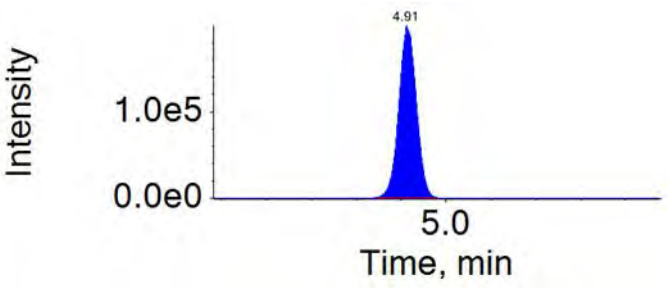
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

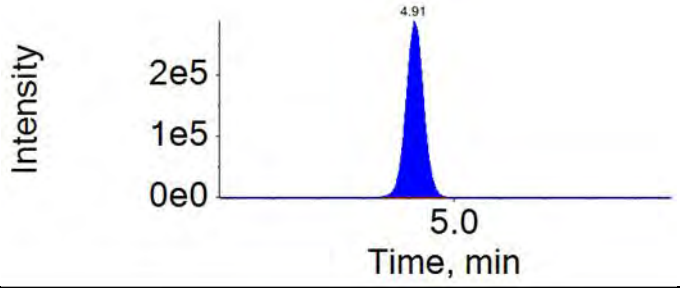
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

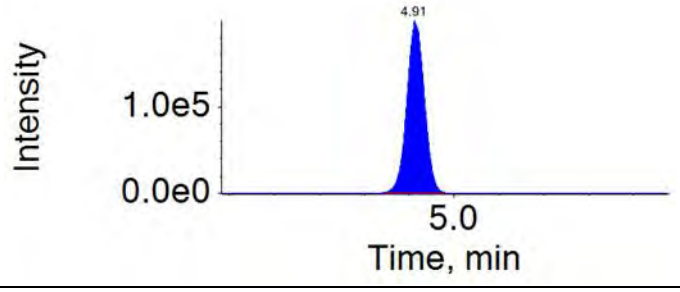
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

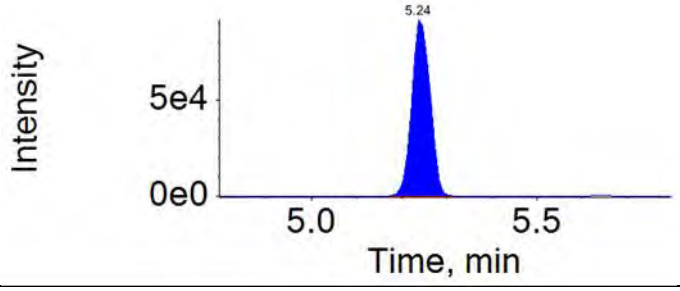
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

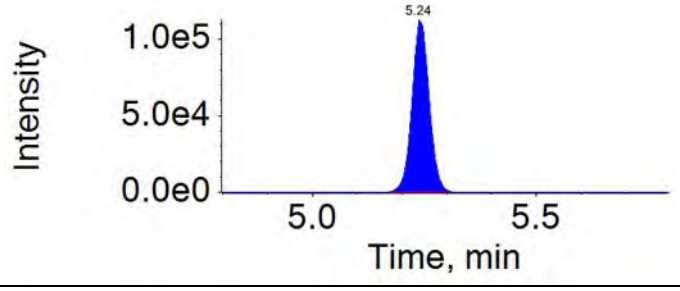
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



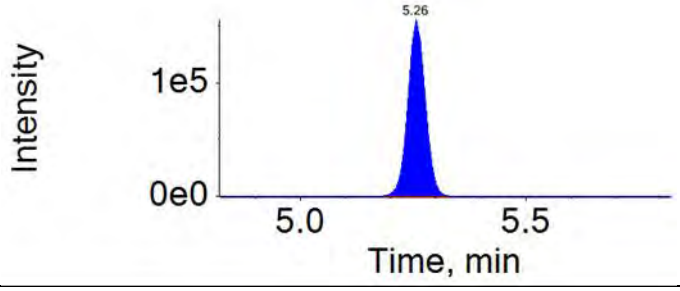


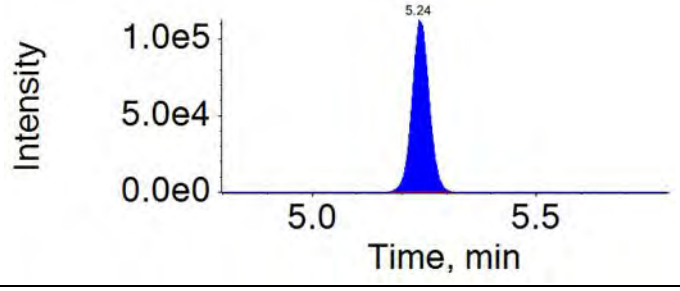
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



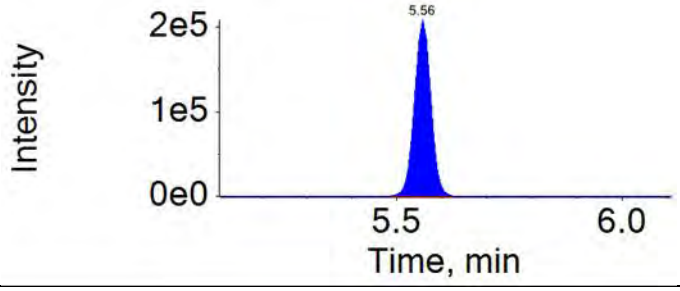


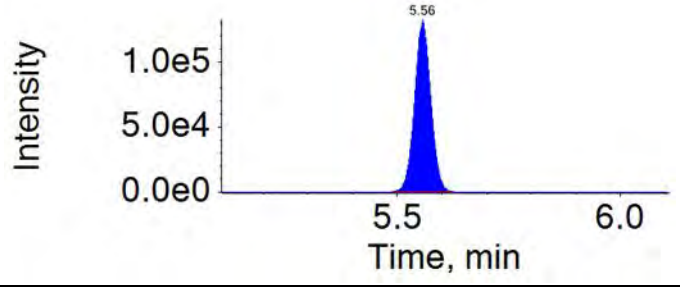
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0



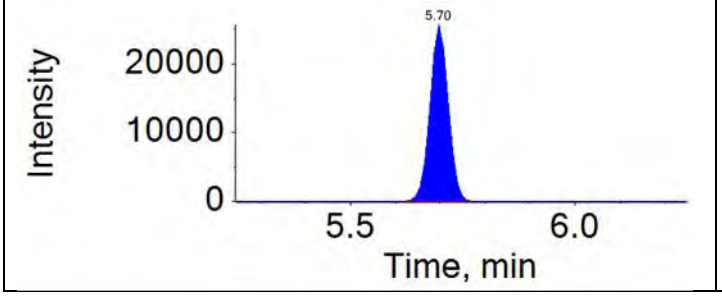


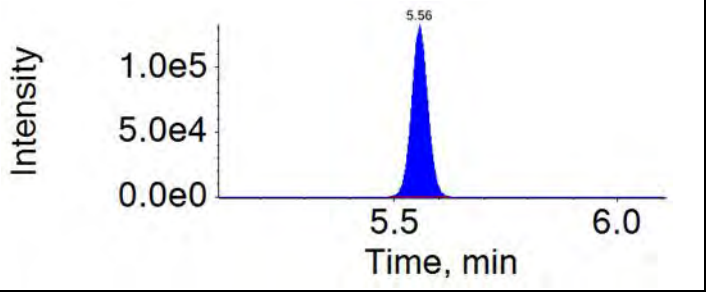
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

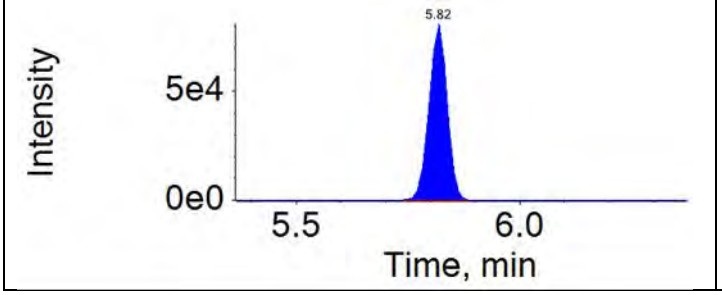
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

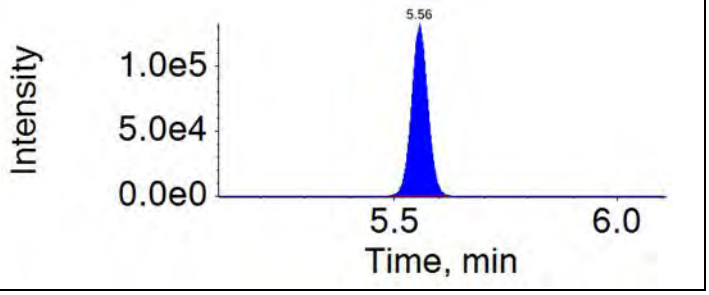
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



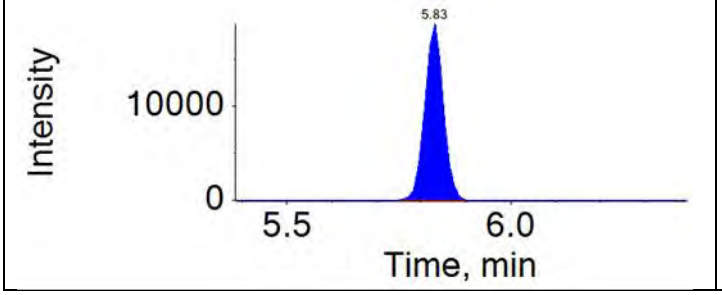


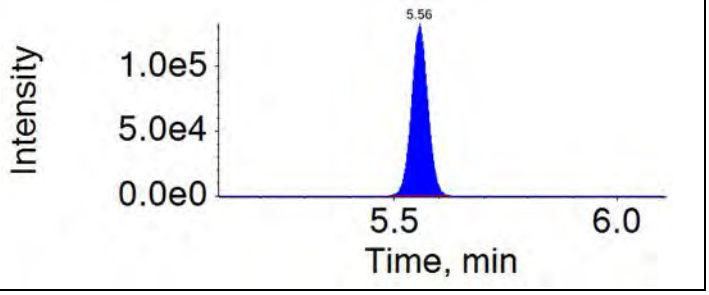
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



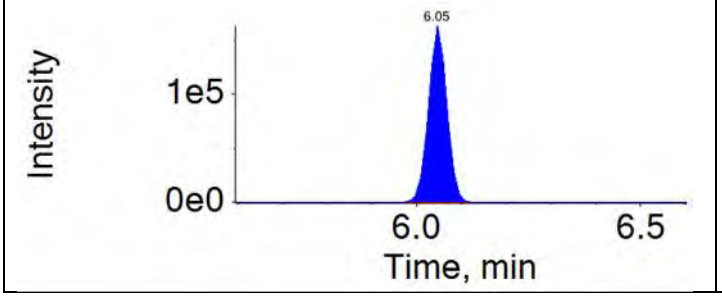


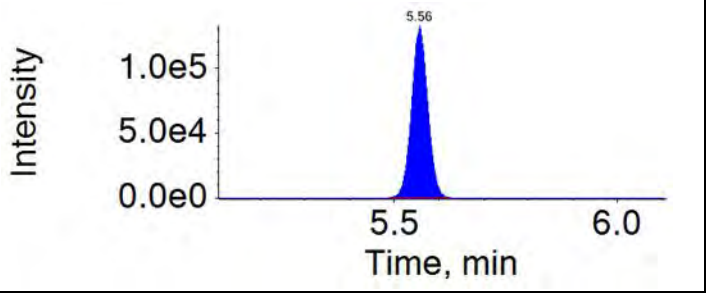
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0

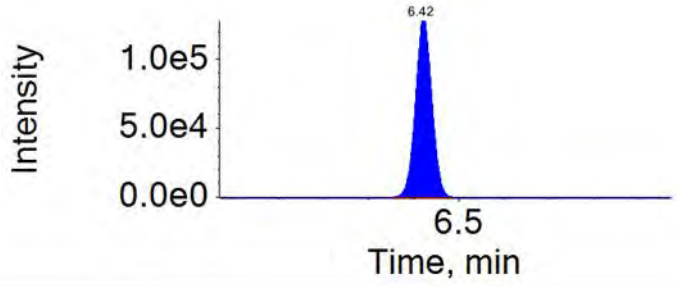
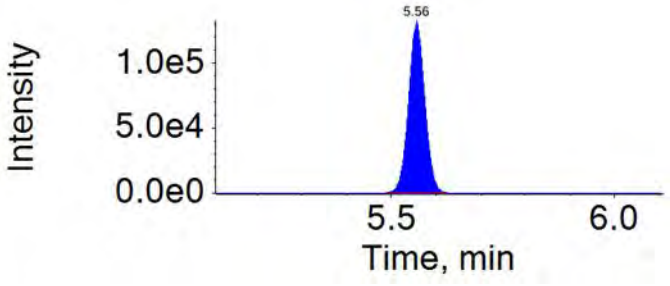




APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

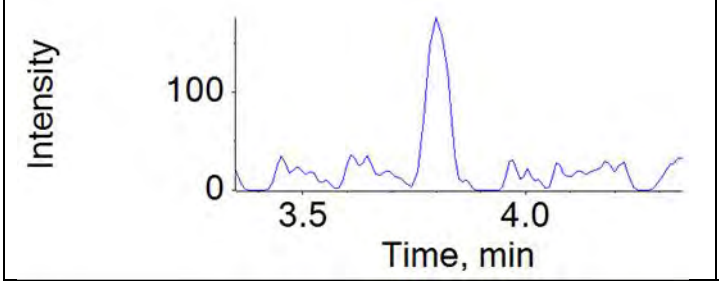
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

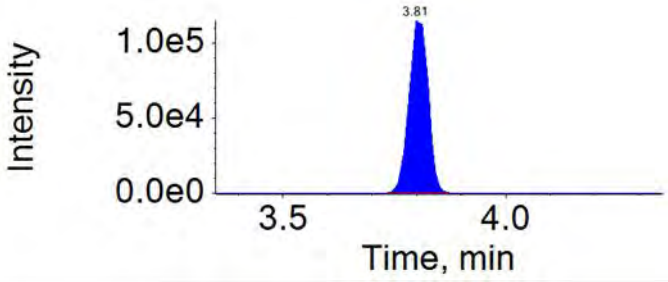
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

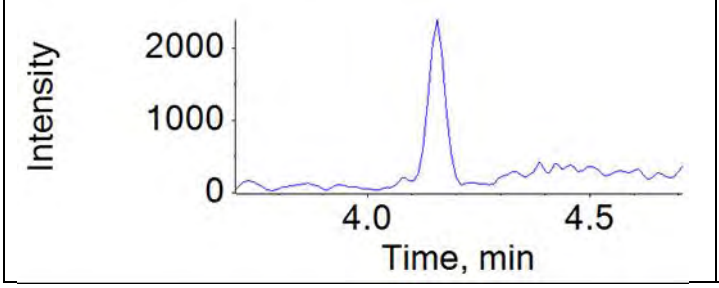
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

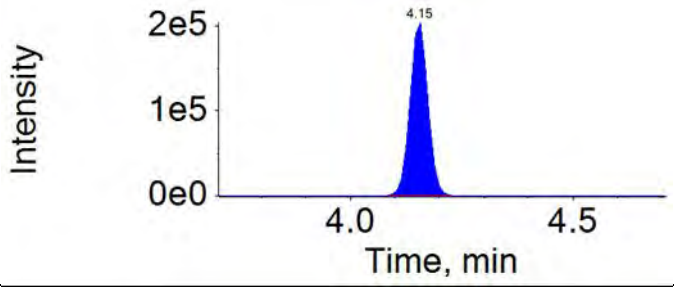
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



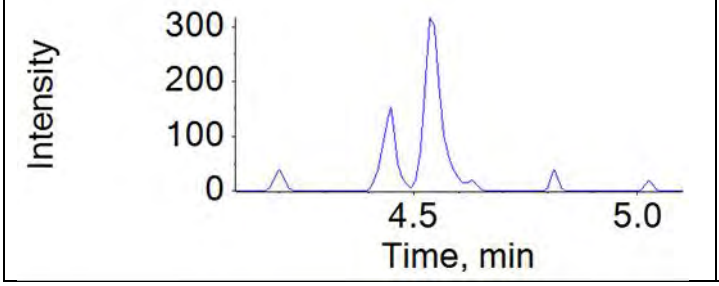


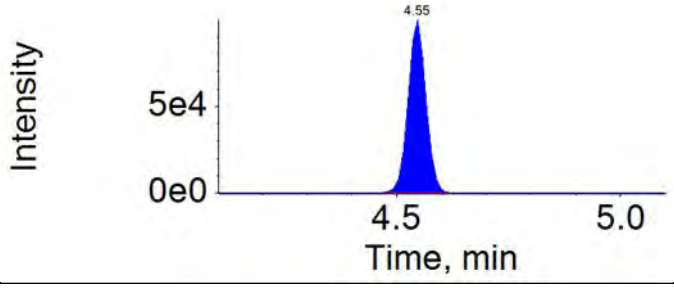
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



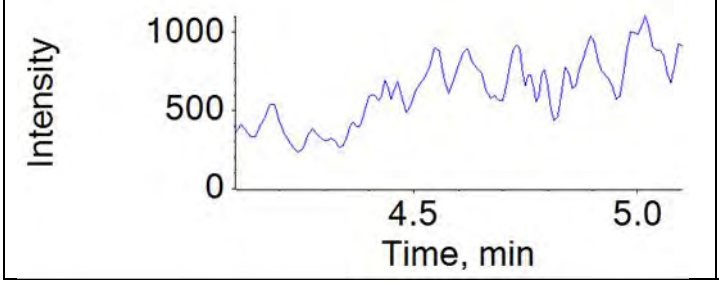


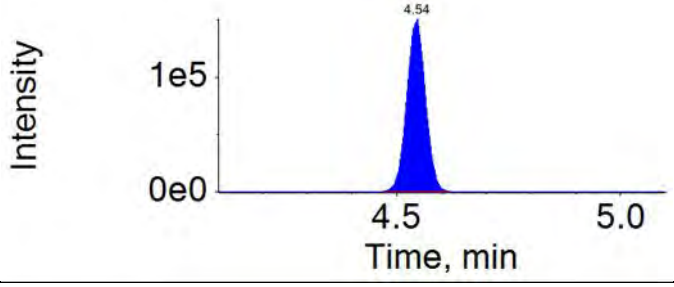
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



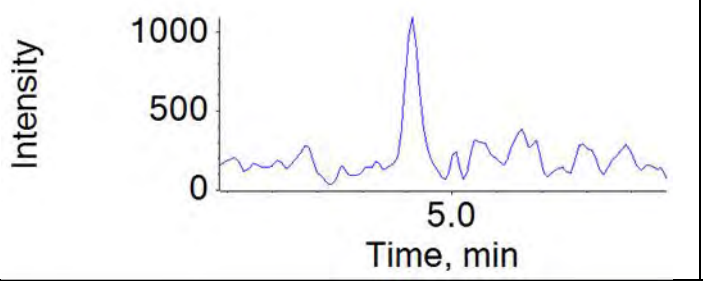


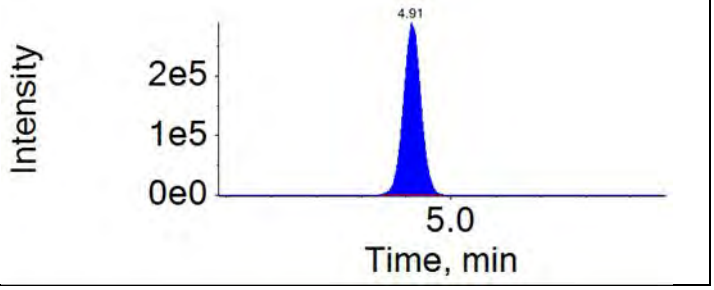
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

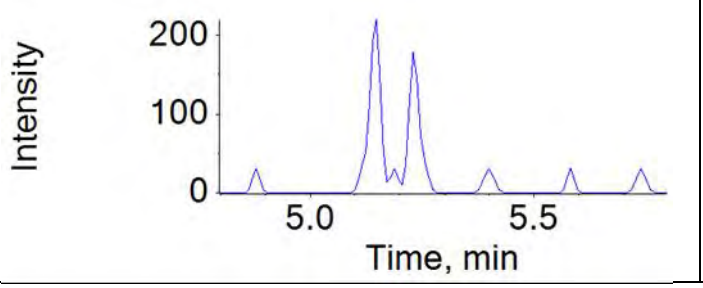
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

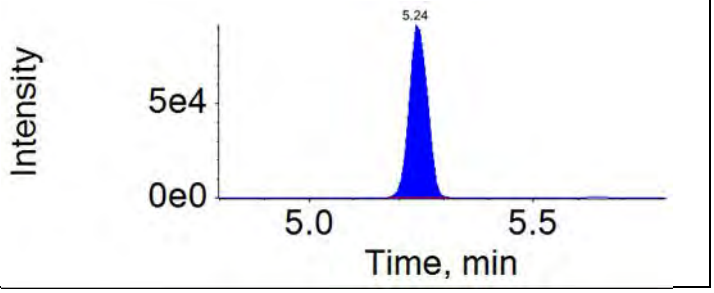
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



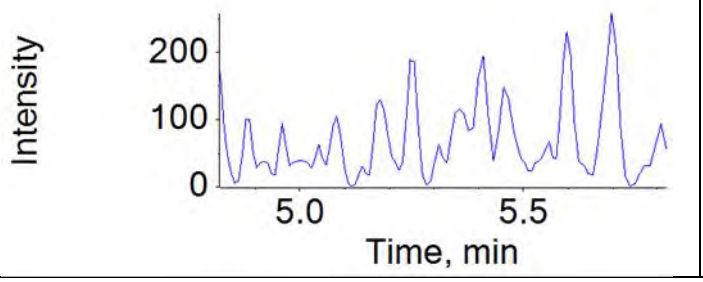


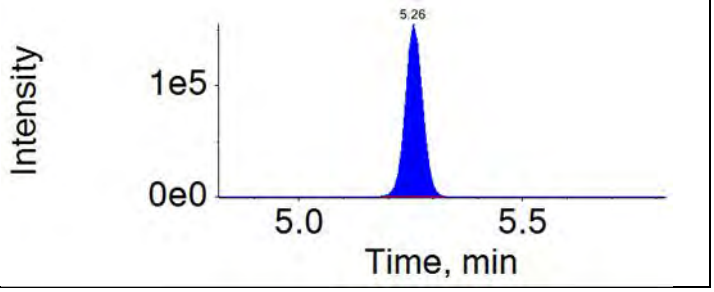
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



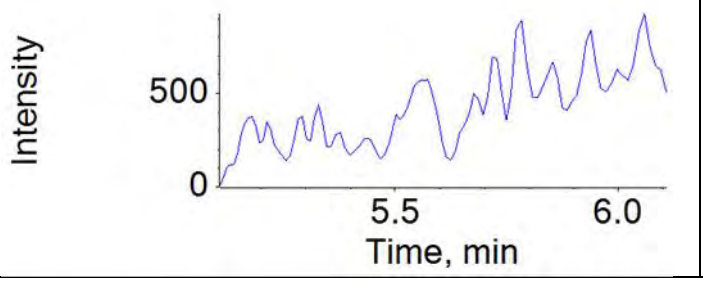


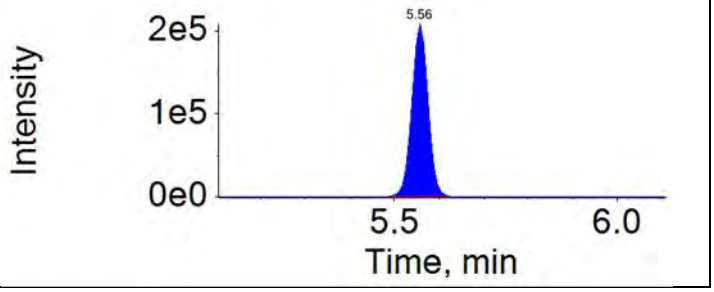
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



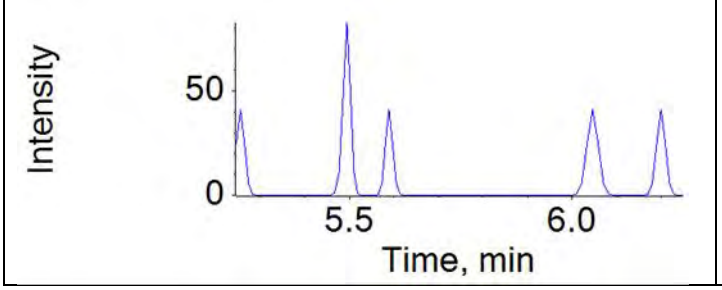


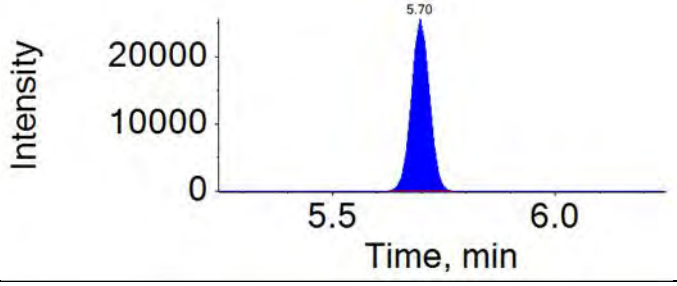
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

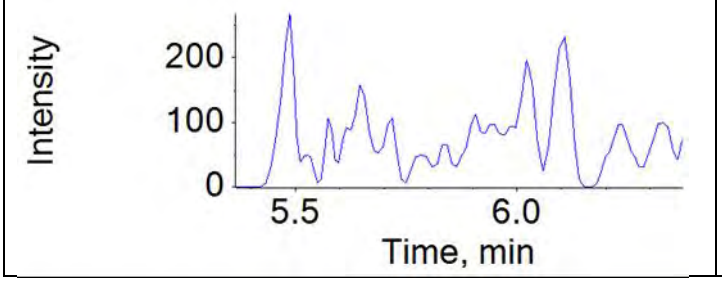
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

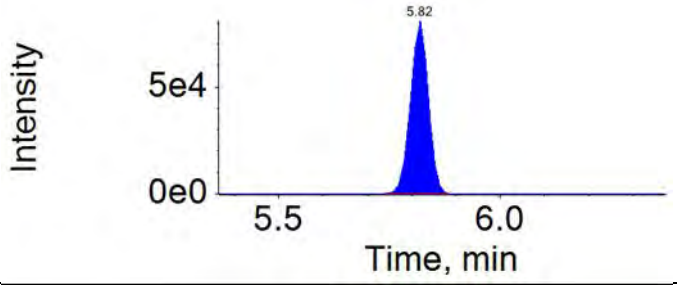
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



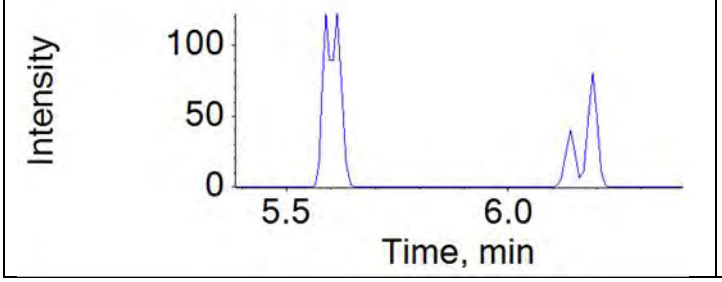


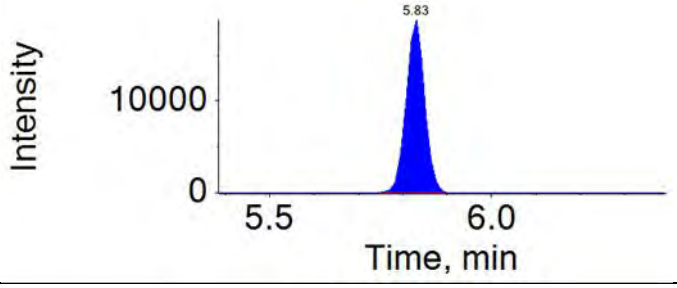
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



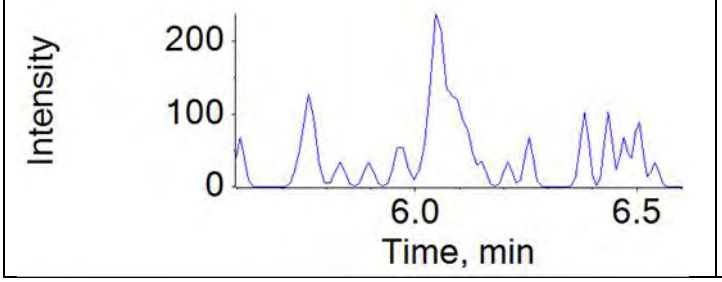


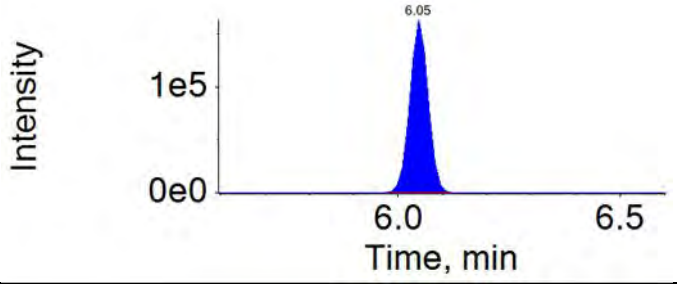
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



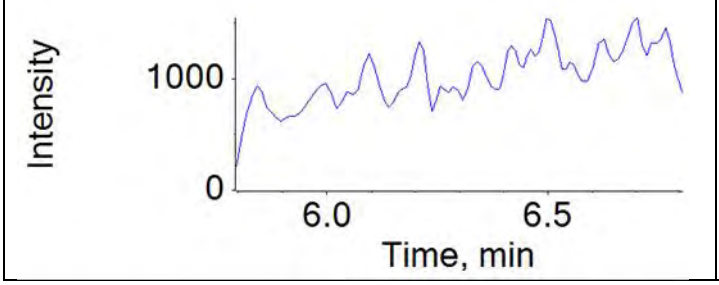


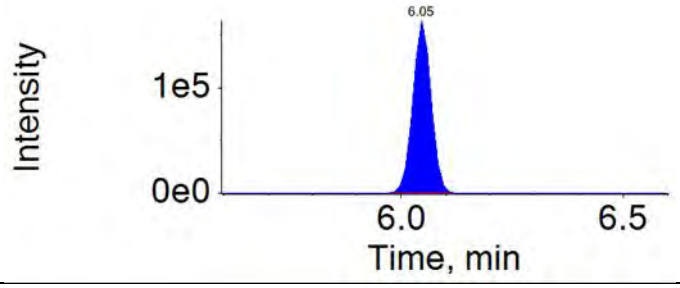
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

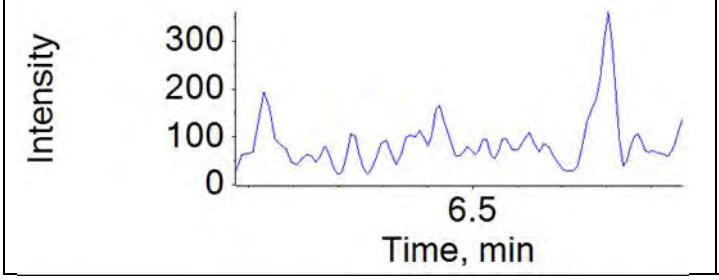
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

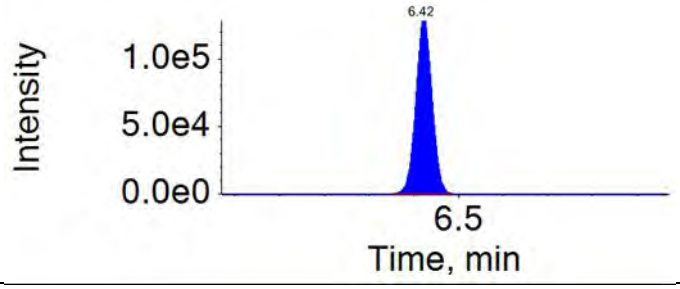
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





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By JPT at 5:11 pm, 11/8/18

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By umar at 2:46 pm, 11/12/18

Ion Ratio Report

Sample Name: 9881957 **Instrument Name:** LM27631 **File Name:** 18NOV08D-15.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

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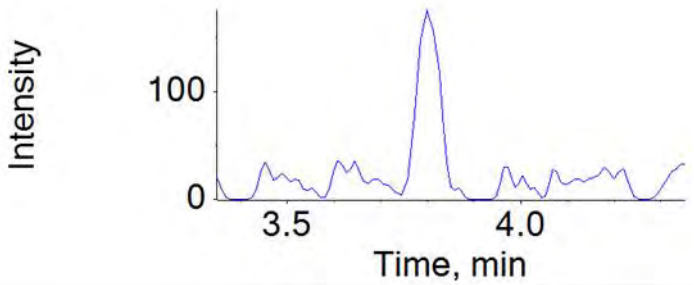
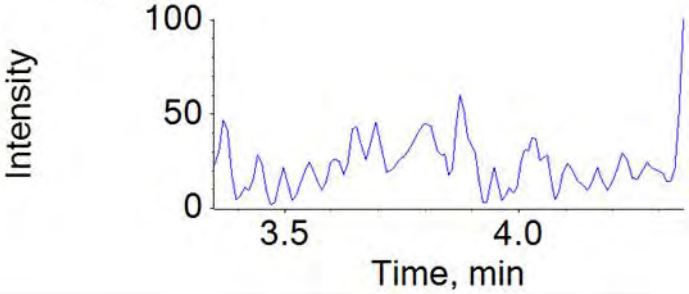
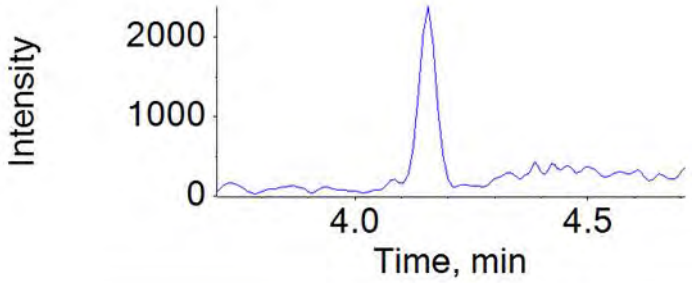
Component: PFBS
Primary Mass: 299.0 / 80.0



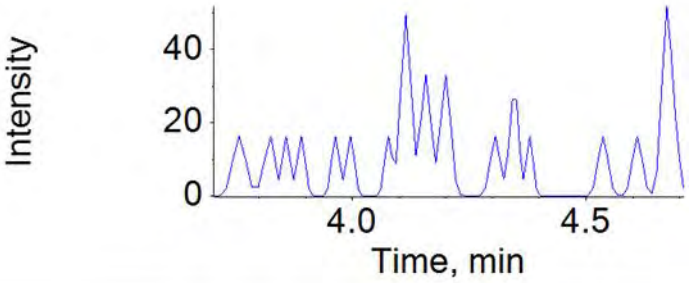
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



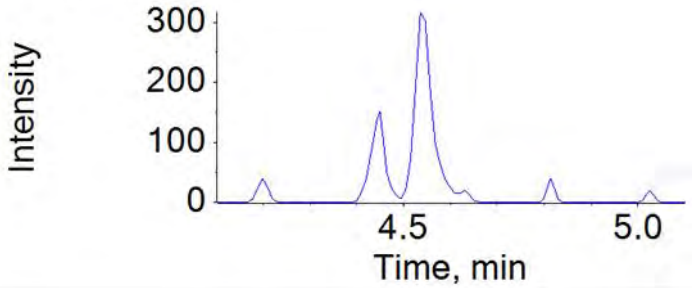
Component: PFHxA
Primary Mass: 313.0 / 269.0



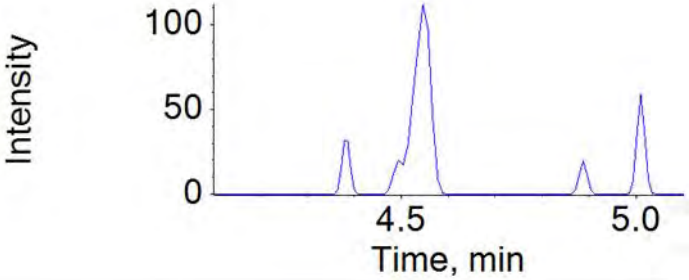
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



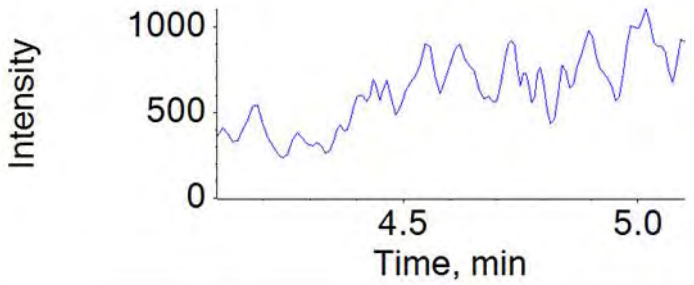
Component: PFHxS
Primary Mass: 399.0 / 80.0



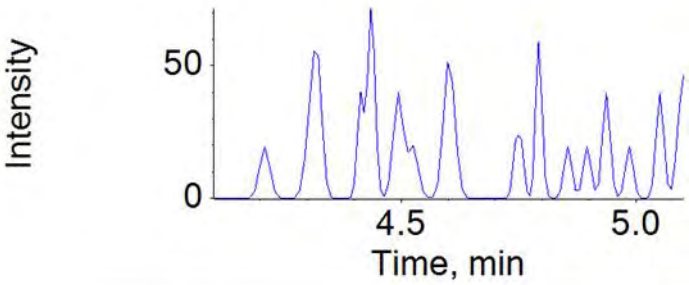
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



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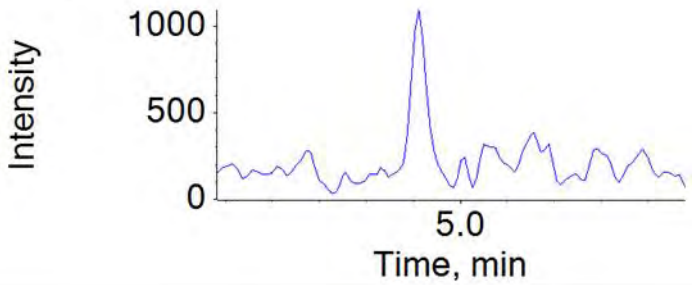
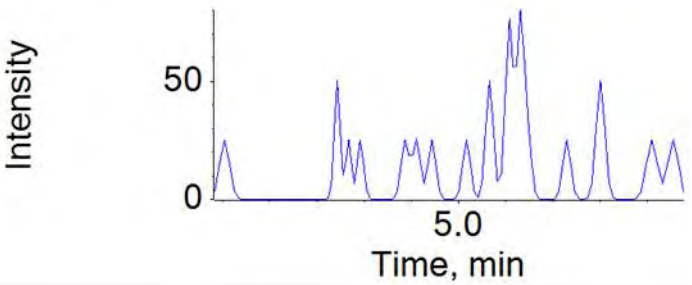
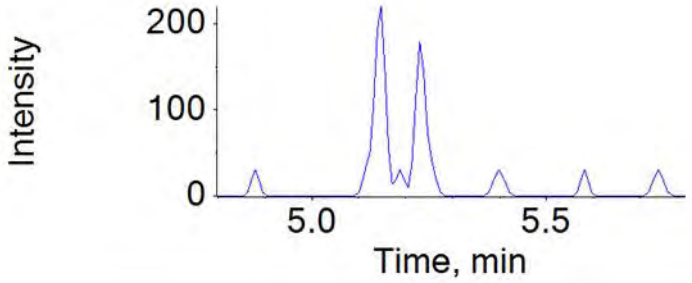
Component: PFOA
Primary Mass: 413.0 / 369.0



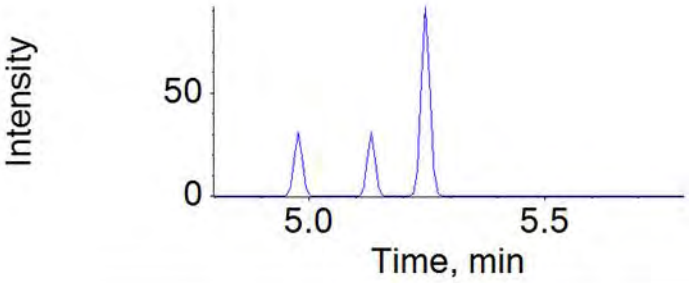
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



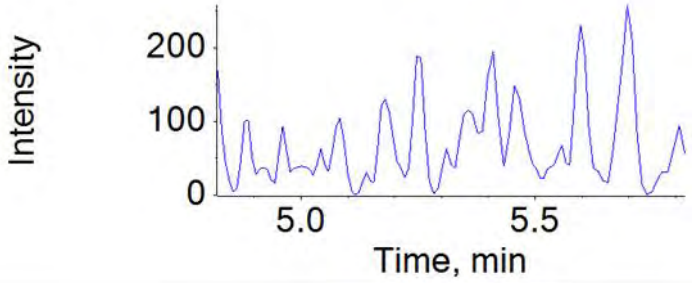
Component: PFOS
Primary Mass: 499.0 / 80.0



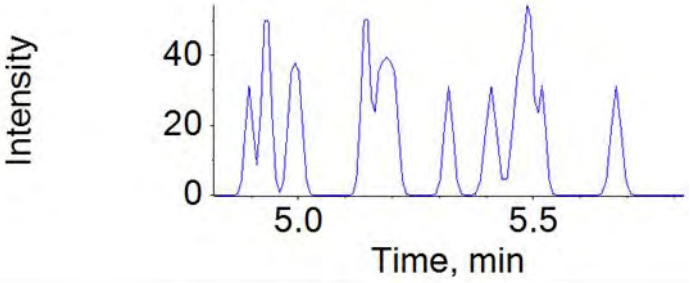
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



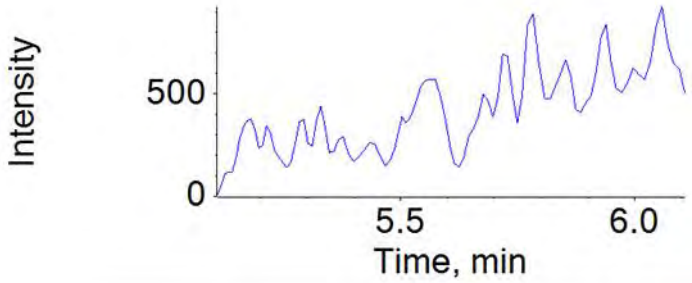
Component: PFNA
Primary Mass: 463.0 / 419.0



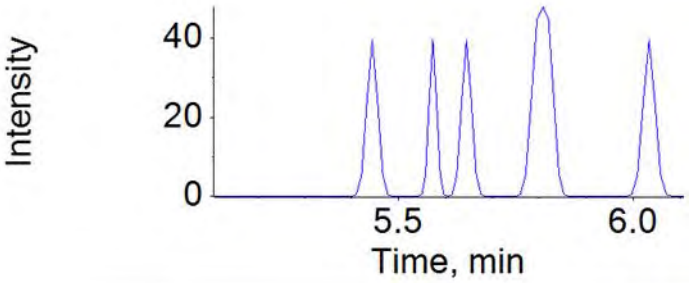
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



Component: PFDA_2
Secondary Mass: 513.0 / 169.0



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By JPT at 5:11 pm, 11/8/18

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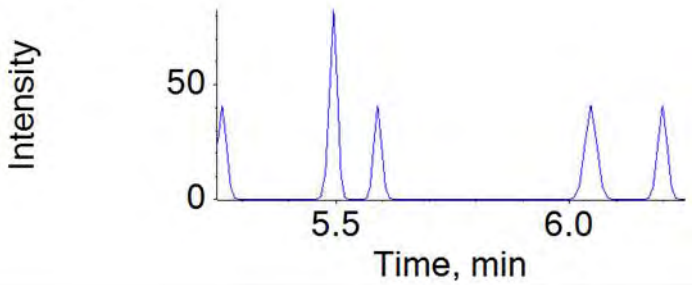
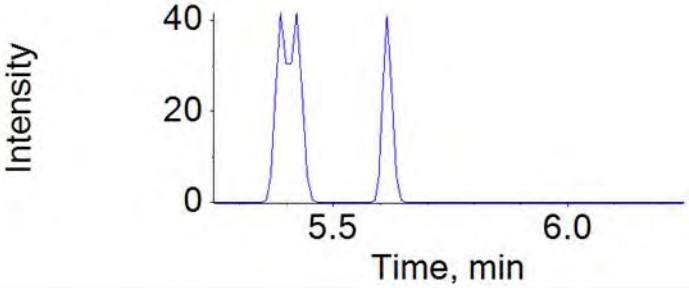
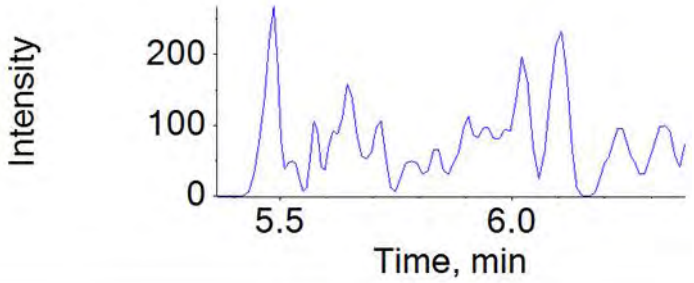
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



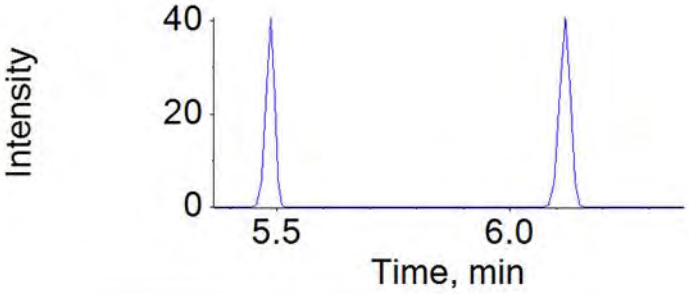
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



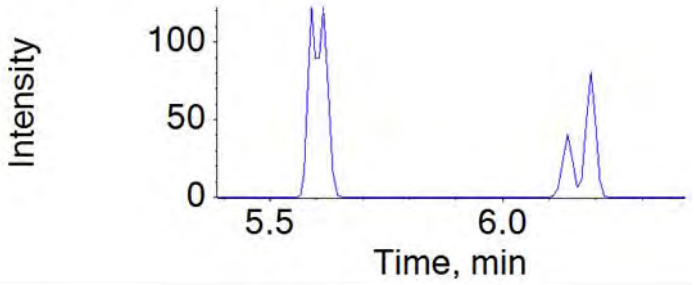
Component: PFUnDA
Primary Mass: 563.0 / 519.0



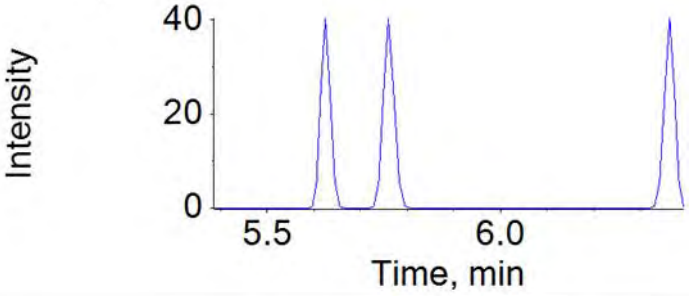
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



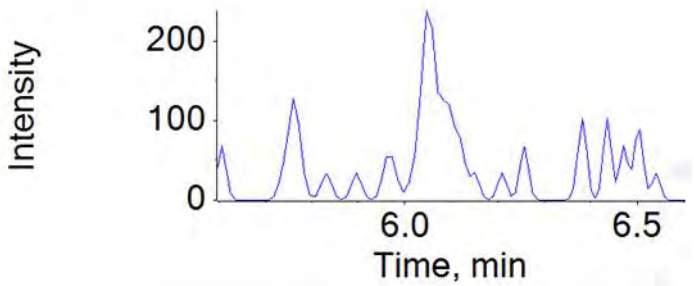
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



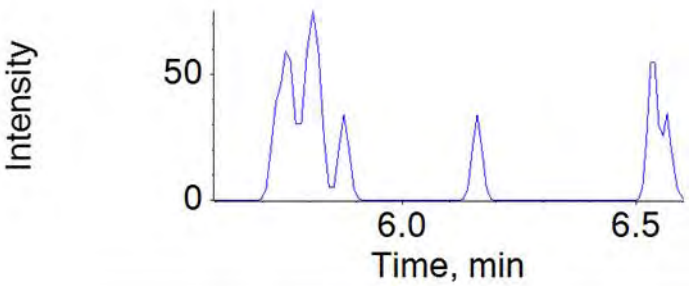
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



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By JPT at 5:11 pm, 11/8/18

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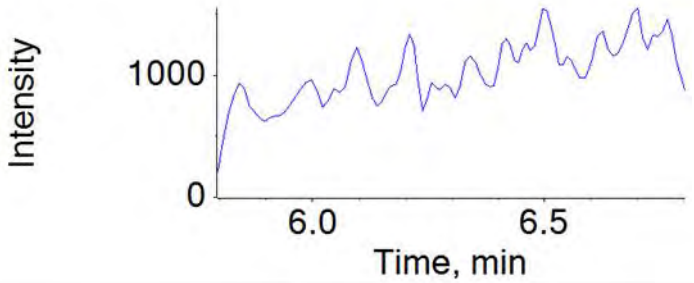
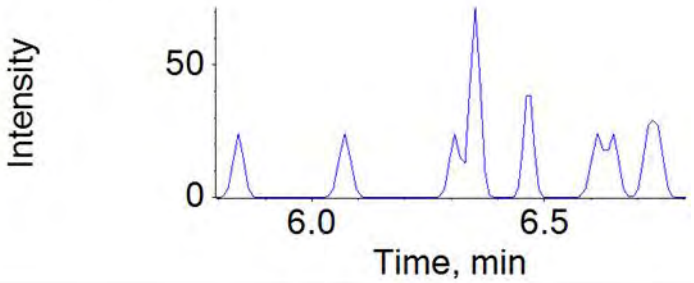
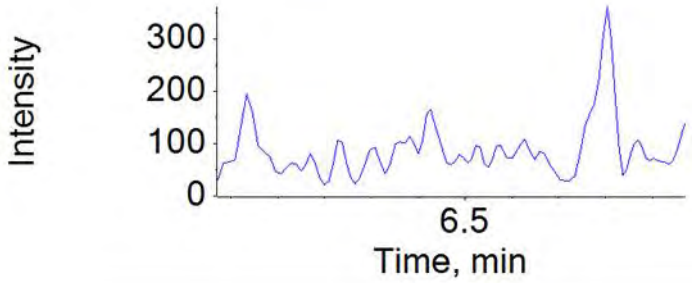
Component: PFTrDA
Primary Mass: 663.0 / 619.0



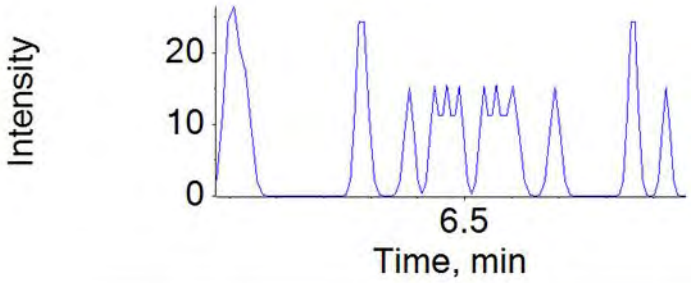
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881958			**Data File:**		18NOV08D-16.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-BLDG573-S-05-08 Grab Soil			**Acquis Date:**		2018-11-08T14:03:52
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	32			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		JPT12262
Sample Wt.:	1.01000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	792563.9	728839.7	9	50	
13C2-PFOA	5.0	548235.3	491983.1	11	50	
13C4-PFOS	4.8	297999.0	255568.1	17	50	
13C2-PFDA	5.0	363381.6	315407.5	15	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	365994.9	13C3-PFBA	792563.9	0.462	9.208	6.711	73	50-150	
E13C5-PFHxA	584723.1	13C2-PFOA	548235.3	1.067	9.901	7.769	78	50-150	
E13C3-PFHxS	276738.3	13C2-PFOA	548235.3	0.505	9.366	7.176	77	50-150	
E13C4-PFHpA	451221.1	13C2-PFOA	548235.3	0.823	9.901	7.414	75	50-150	
E13C8-PFOA	788466.8	13C2-PFOA	548235.3	1.438	9.901	7.942	80	50-150	
E13C8-PFOS	241747.8	13C4-PFOS	297999.0	0.811	9.465	7.103	75	50-150	
E13C9-PFNA	414406.9	13C4-PFOS	297999.0	1.391	9.901	7.522	76	50-150	
E13C6-PFDA	524012.0	13C2-PFDA	363381.6	1.442	9.901	7.181	73	50-150	
Ed3-NMeFOSAA	67169.3	13C2-PFDA	363381.6	0.185	9.901	6.807	69	50-150	
E13C7-PFUnDA	239103.5	13C2-PFDA	363381.6	0.658	9.901	7.517	76	50-150	
Ed5-NEtFOSAA	53214.0	13C2-PFDA	363381.6	0.146	9.901	6.711	68	50-150	
E13C2-PFDoDA	469731.0	13C2-PFDA	363381.6	1.293	9.901	6.901	70	50-150	
E13C2-PFTeDA	331901.6	13C2-PFDA	363381.6	0.913	9.901	6.511	66	50-150	

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By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

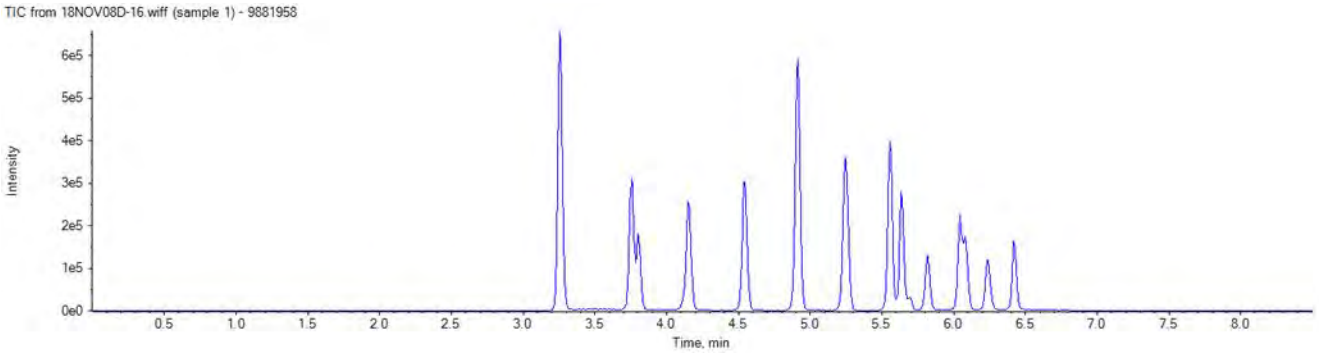
Analyte Quantitation Peak Table

Sample Name: 9881958 **Instrument Name:** LM27631 **File Name:** 18NOV08D-16.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.01000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	365994.9	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	584723.1	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	276738.3	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	451221.1	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	788466.8	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	241747.8	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	414406.9	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	524012.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	67169.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	239103.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	53214.0	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	469731.0	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	469731.0	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	331901.6	N/A	

Total Ion Chromatogram

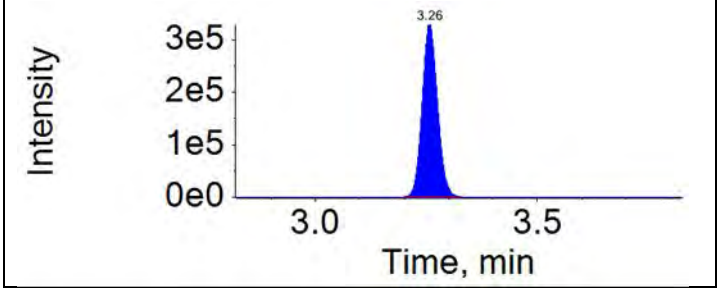


APPROVED
By JPT at 5:11 pm, 11/8/18

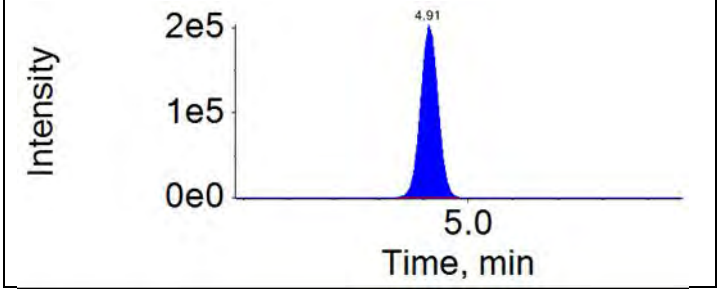
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

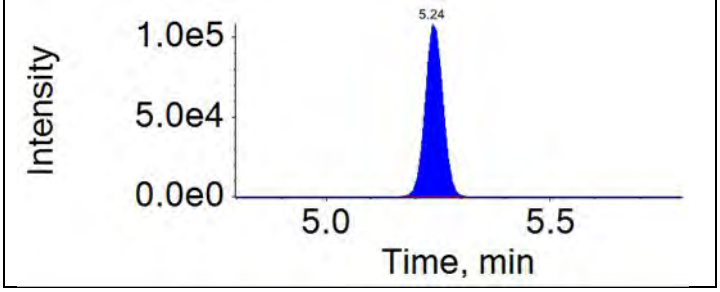
Injection Standard: 13C3-PFBA
216.0 / 172.0



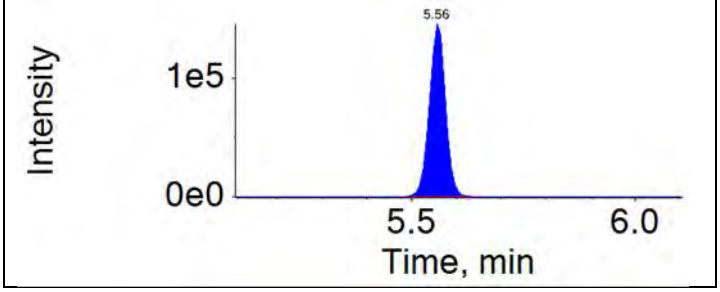
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

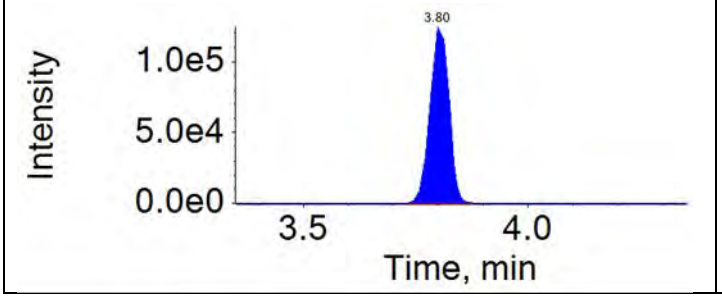


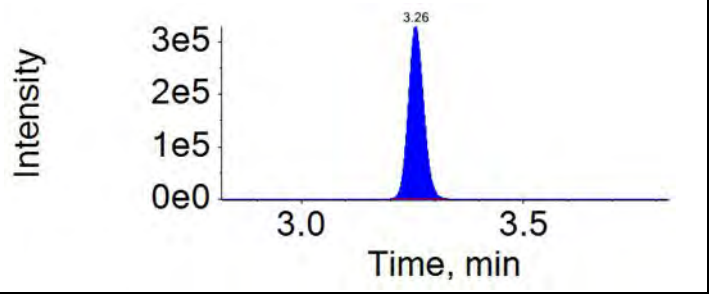
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

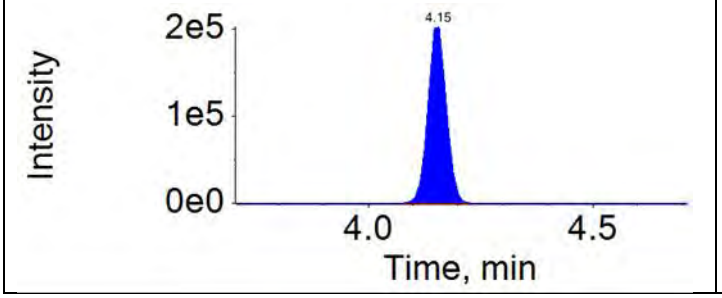
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

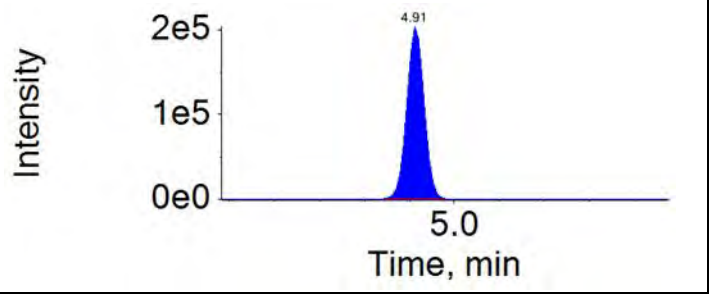
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



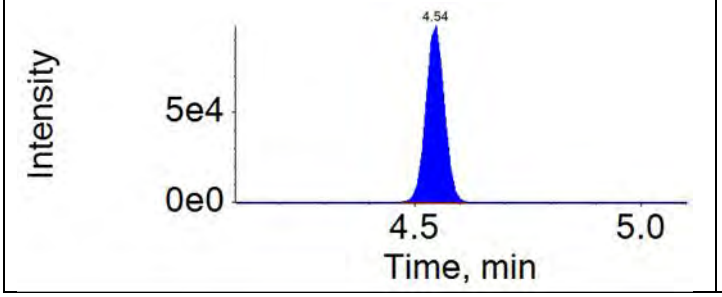


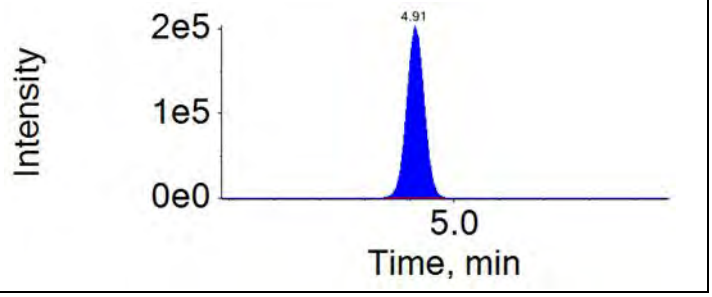
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



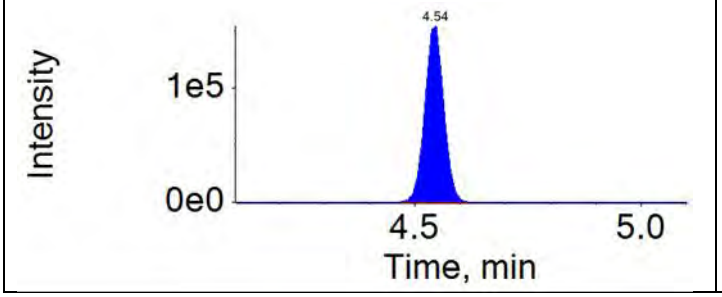


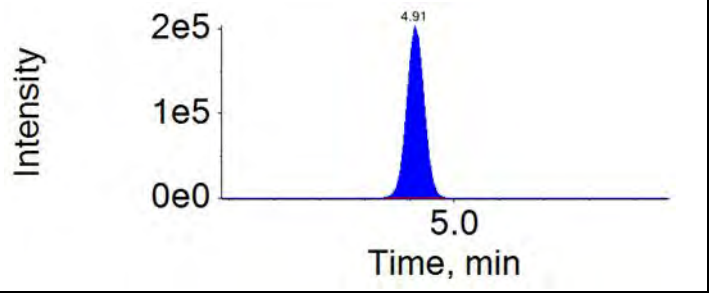
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



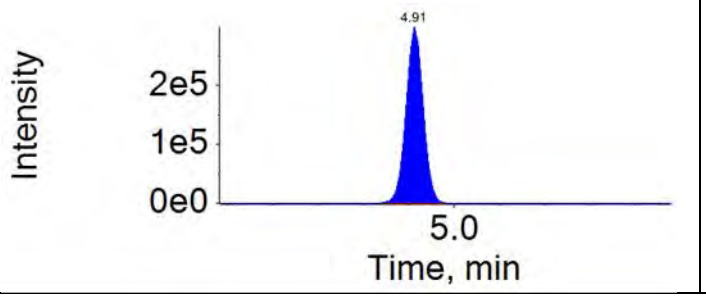


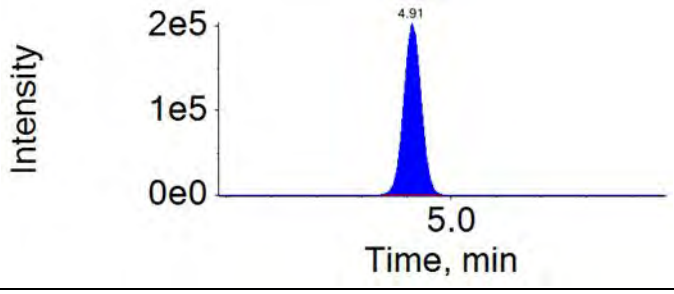
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

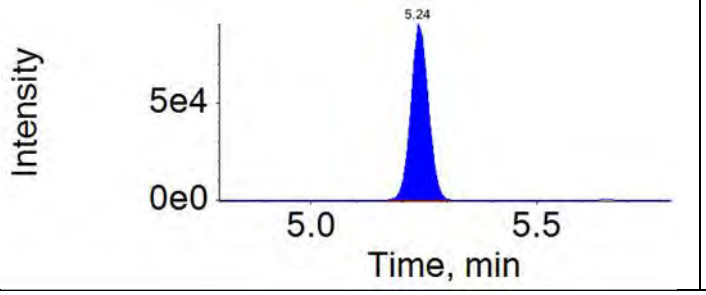
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

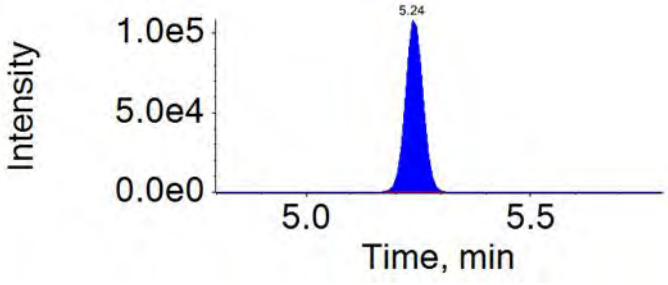
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



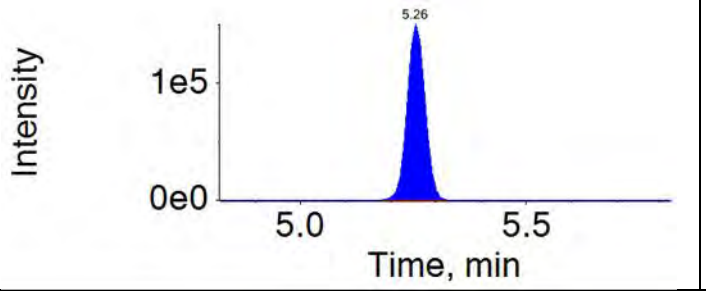


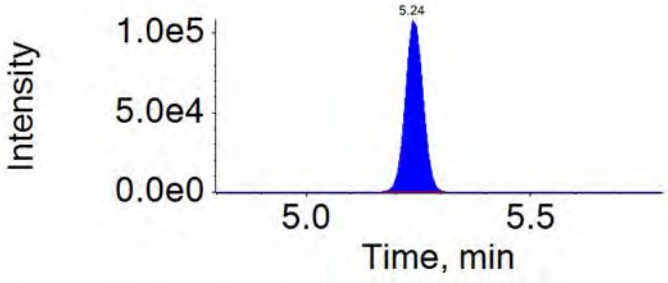
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



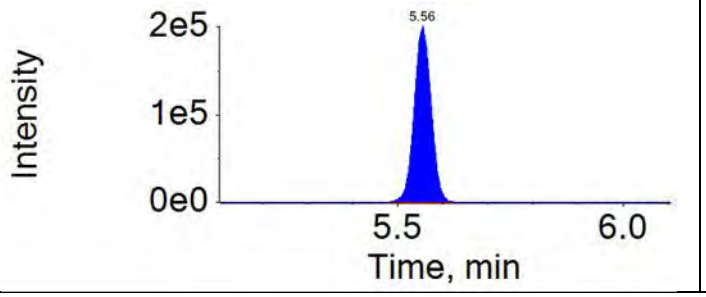


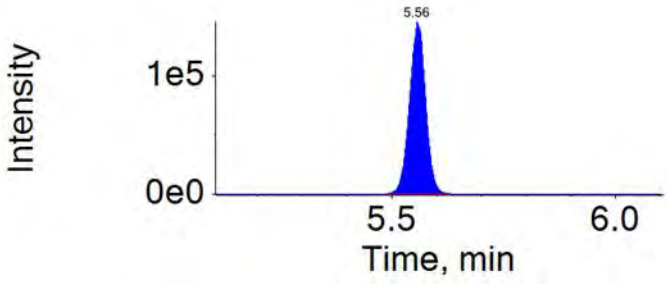
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

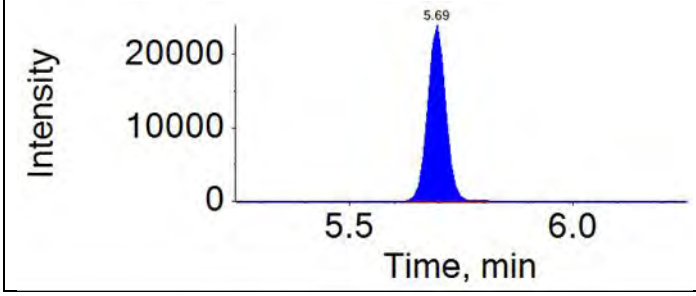
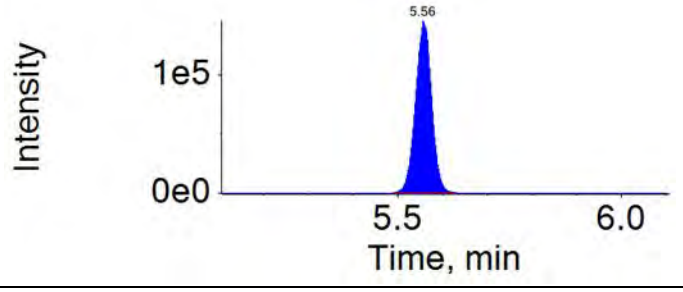


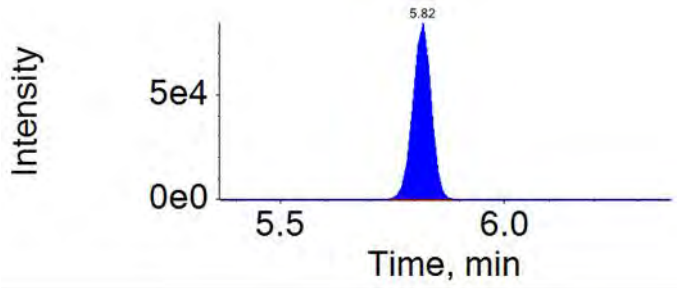
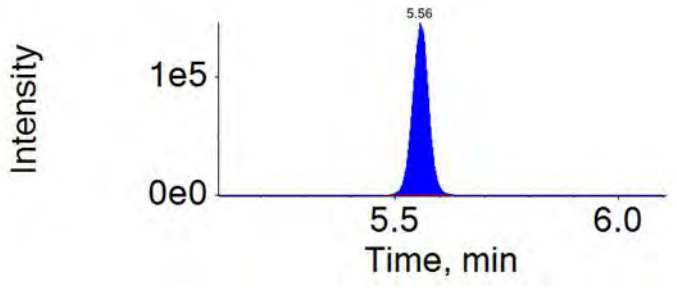


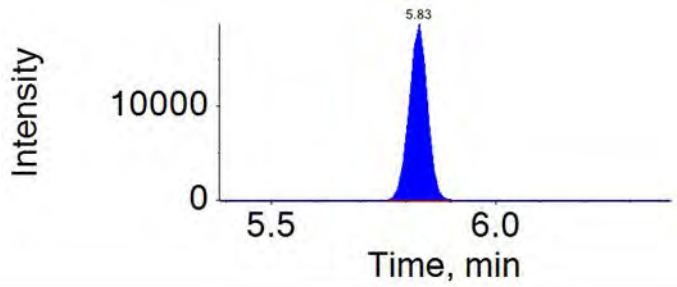
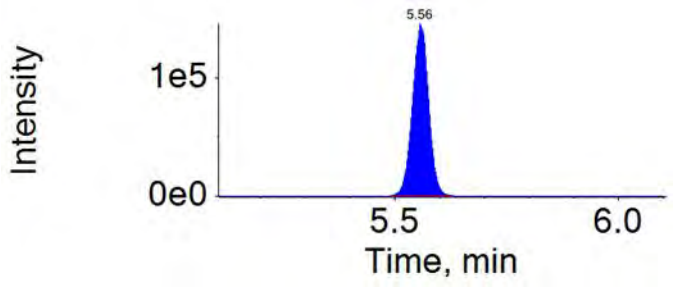
APPROVED
By JPT at 5:11 pm, 11/8/18

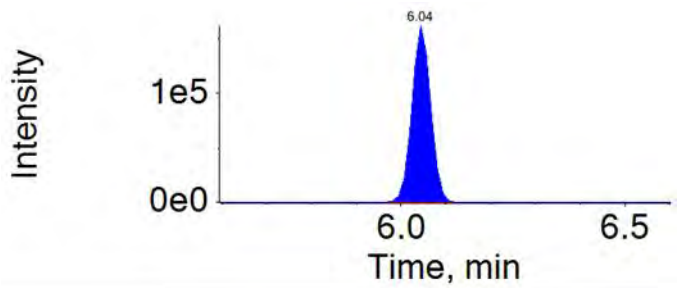
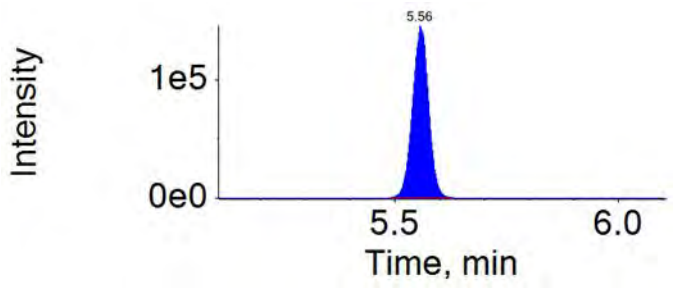
REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

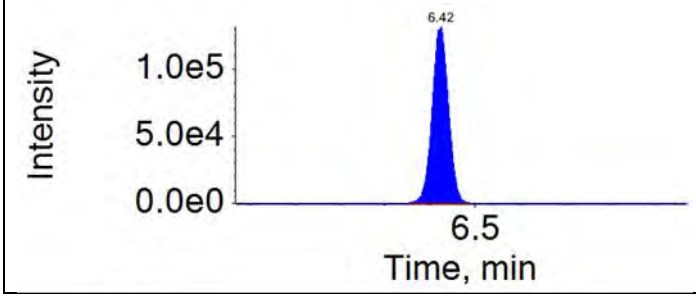
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

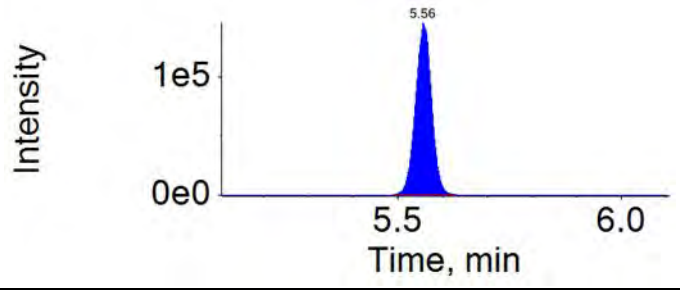
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



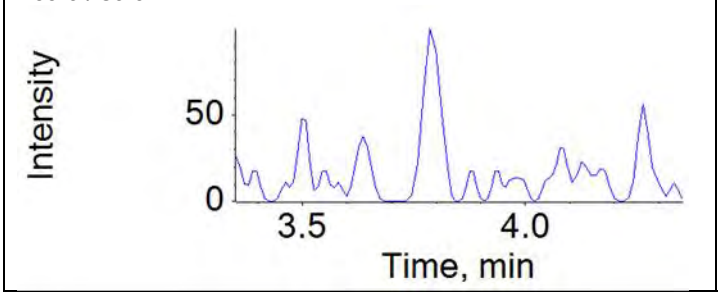


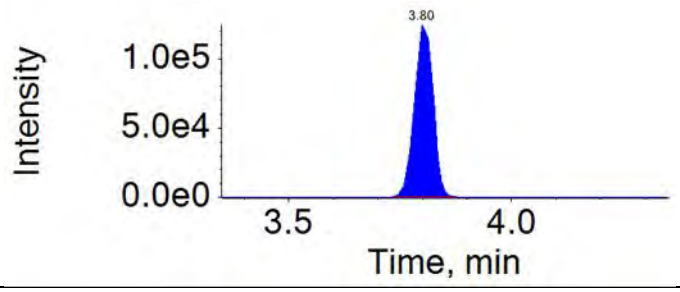
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

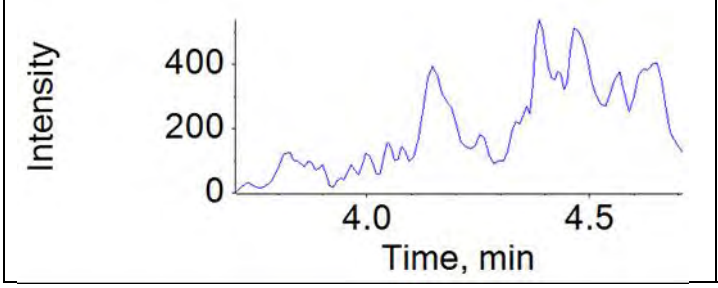
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

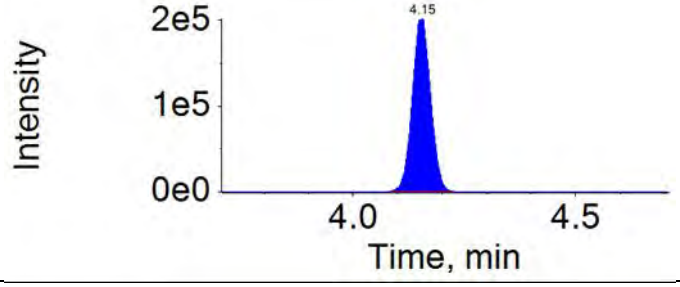
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



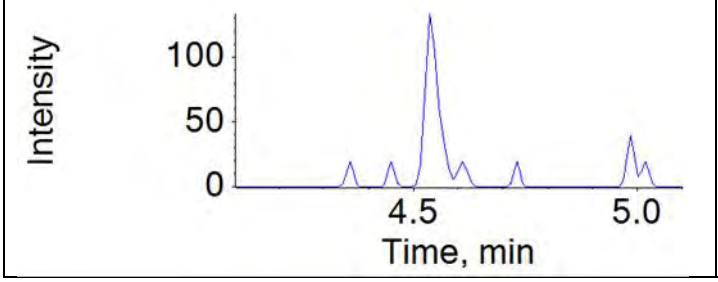


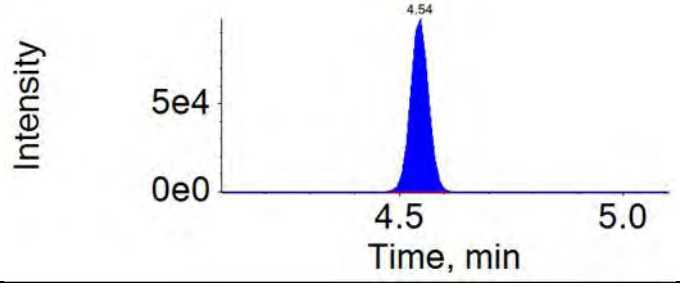
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



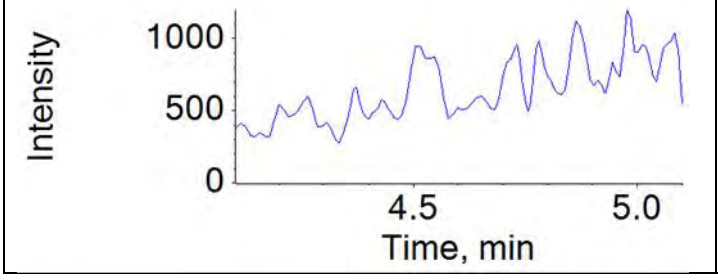


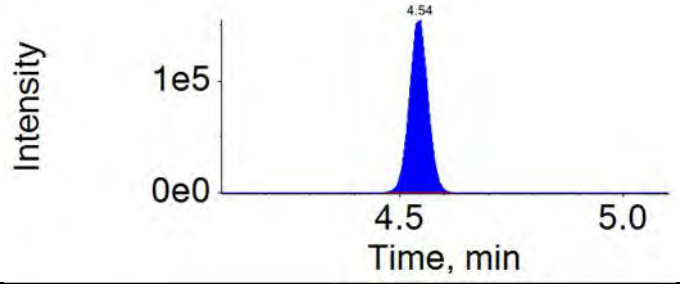
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



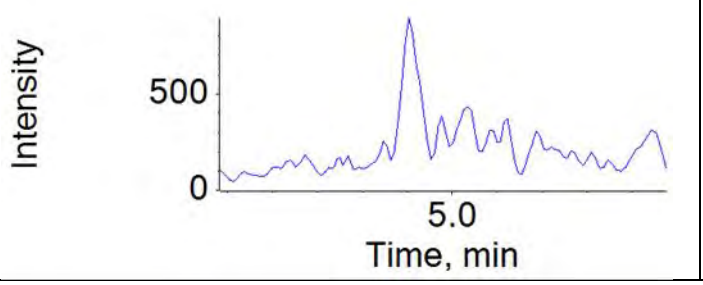


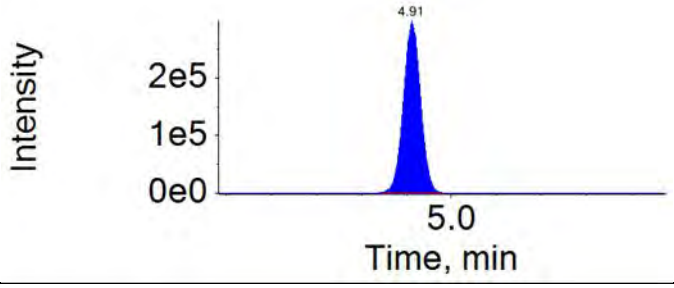
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

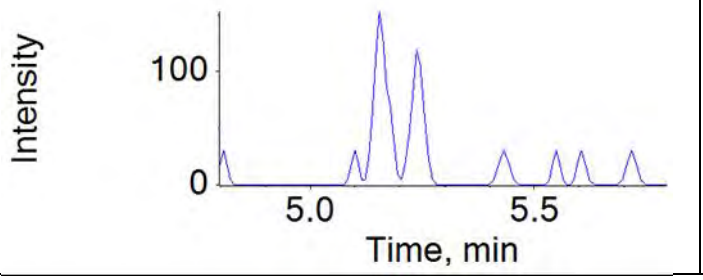
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

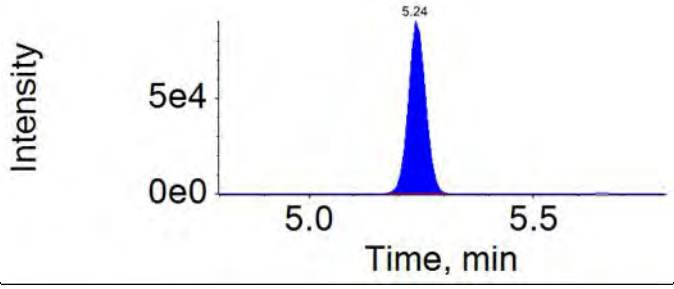
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



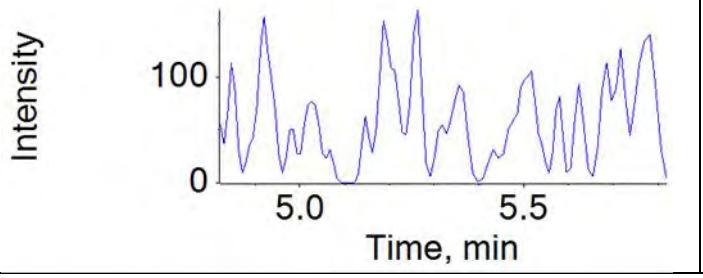


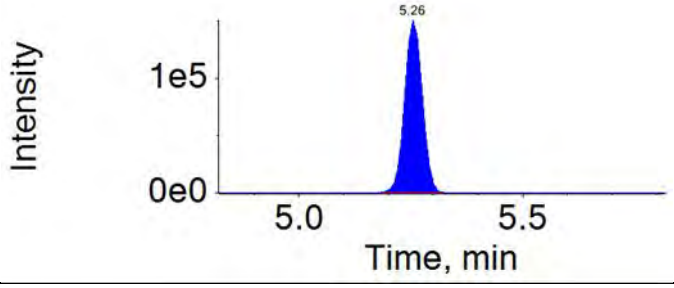
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



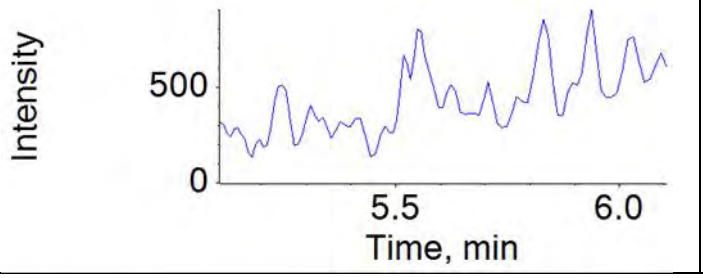


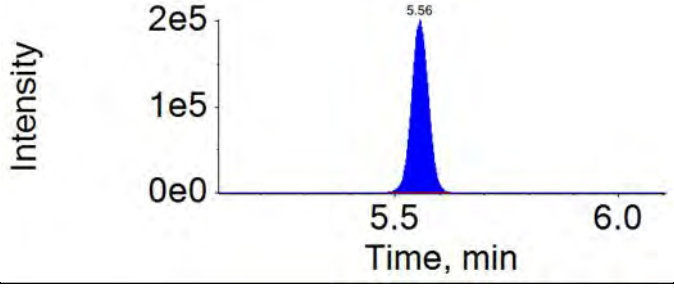
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



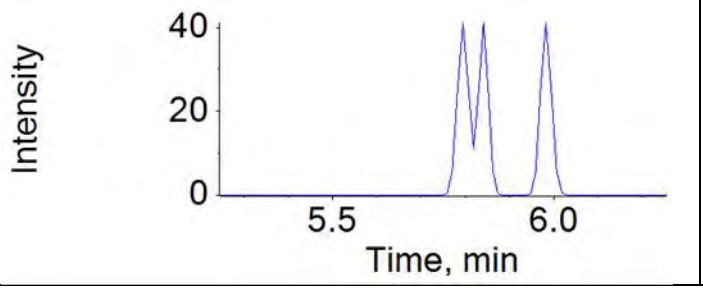


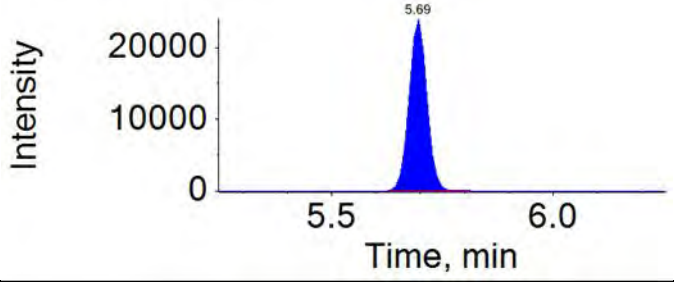
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

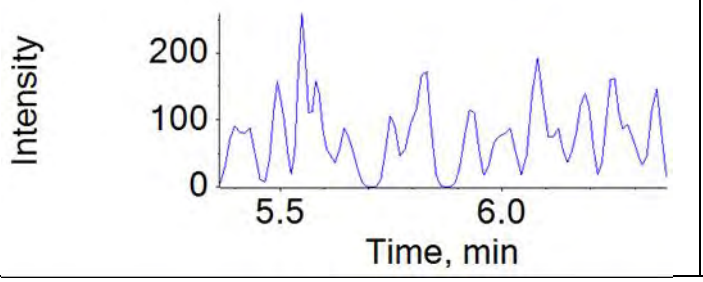
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

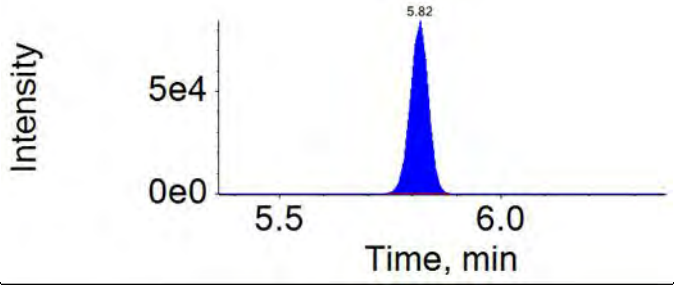
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



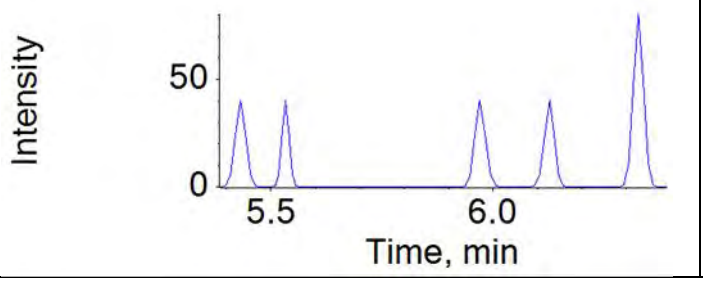


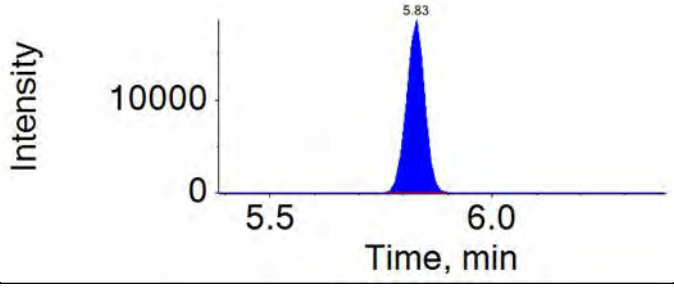
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



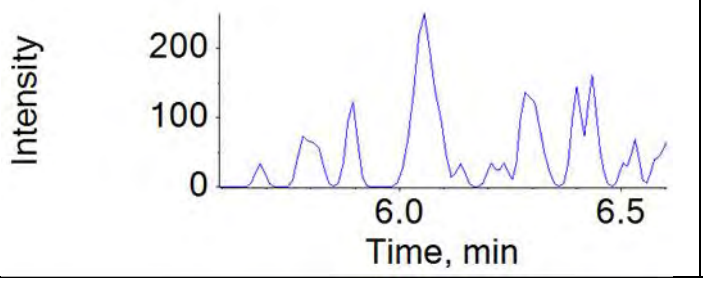


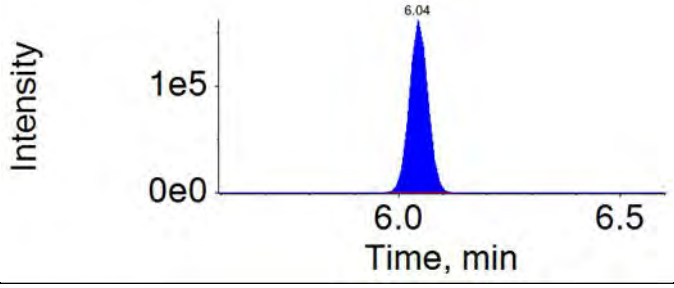
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



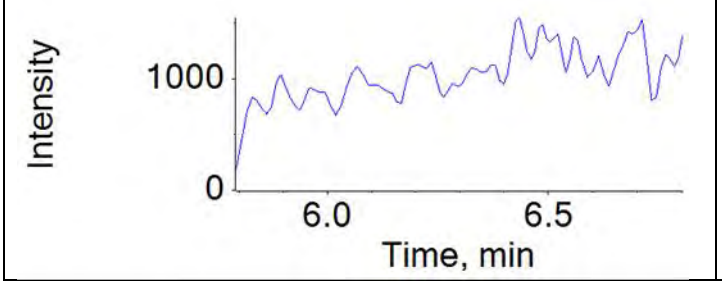


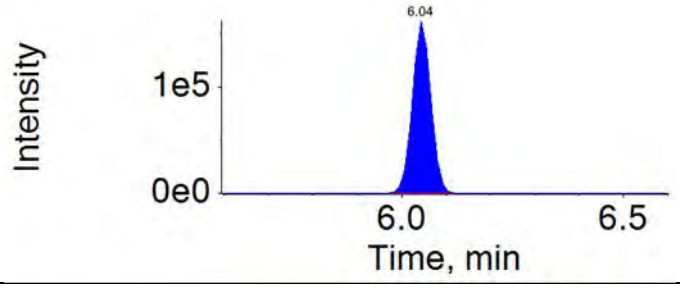
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

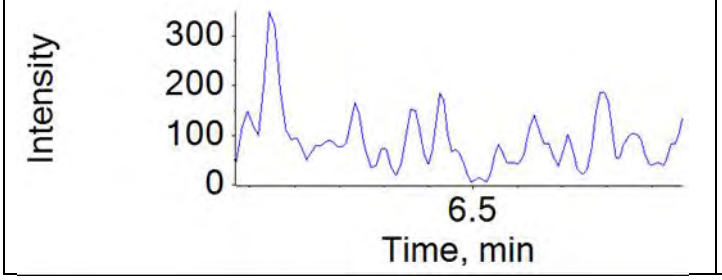
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:49:48 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

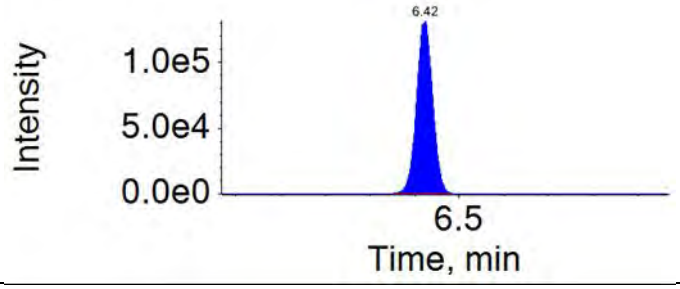
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

Ion Ratio Report

Sample Name: 9881958 **Instrument Name:** LM27631 **File Name:** 18NOV08D-16.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

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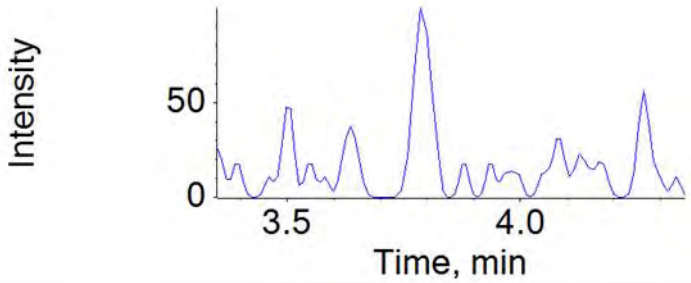
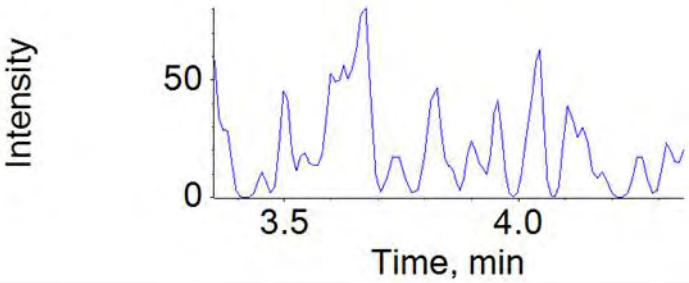
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

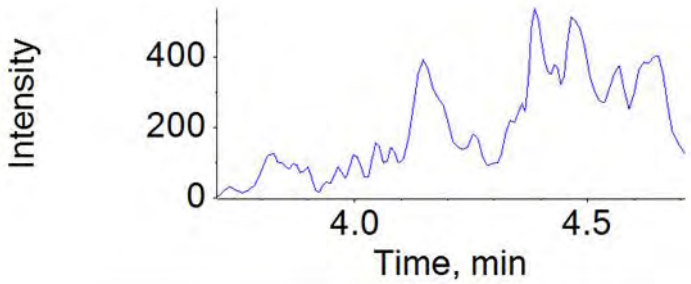
Component: PFBS
Primary Mass: 299.0 / 80.0



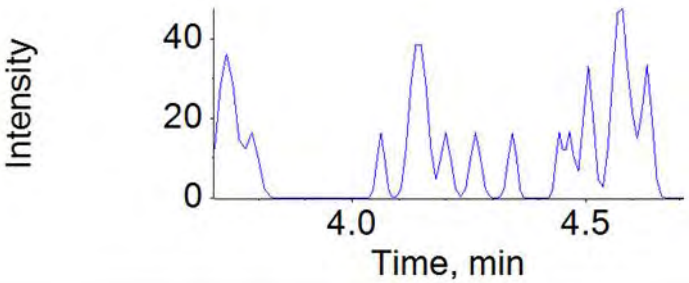
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



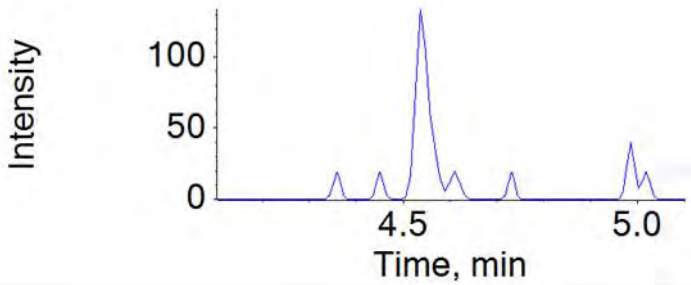
Component: PFHxA
Primary Mass: 313.0 / 269.0



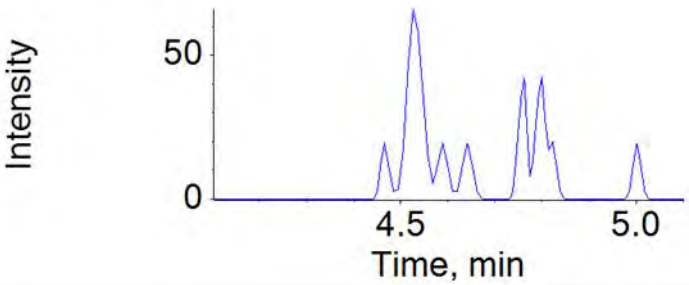
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



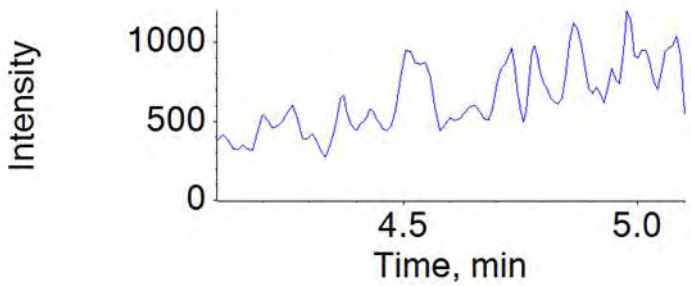
Component: PFHxS
Primary Mass: 399.0 / 80.0



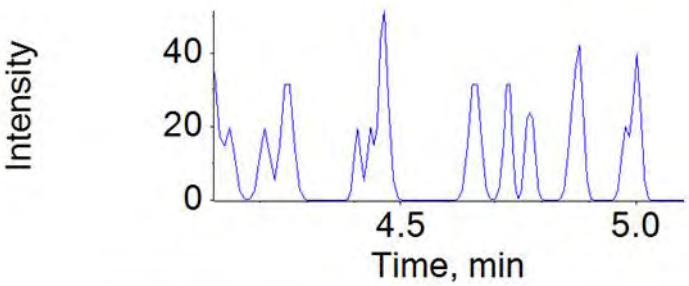
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



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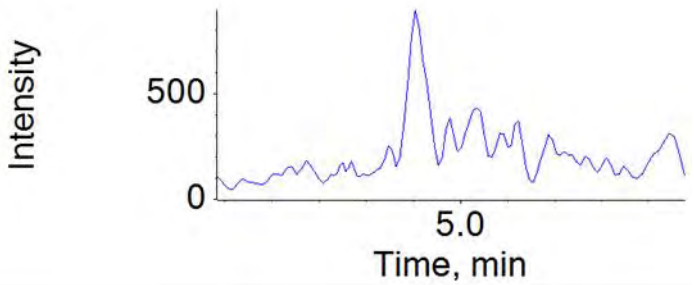
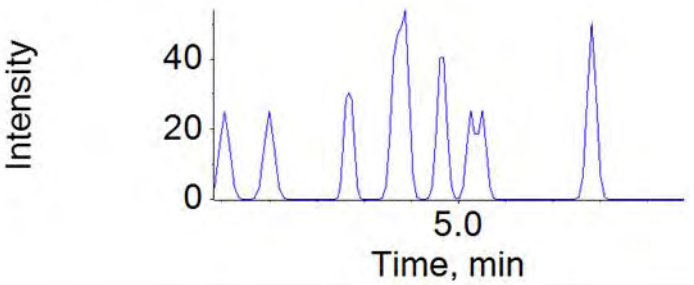
By umar at 2:46 pm, 11/12/18

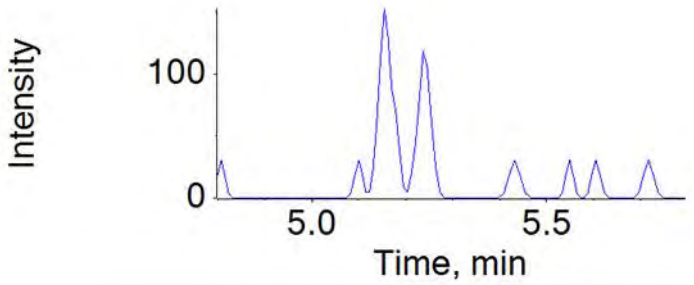
Component: PFOA
Primary Mass: 413.0 / 369.0



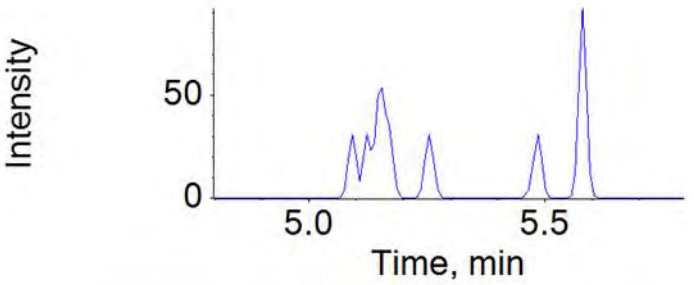
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



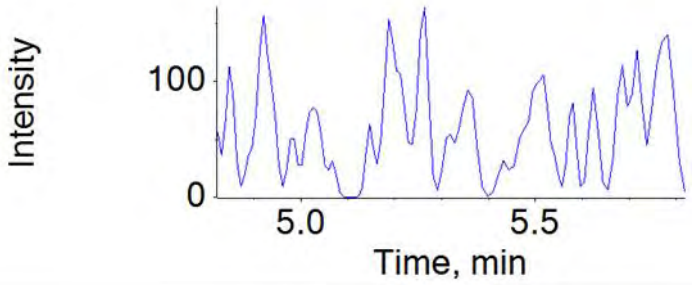
Component: PFOS
Primary Mass: 499.0 / 80.0



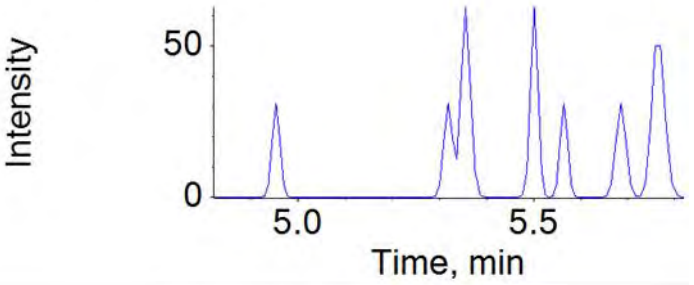
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



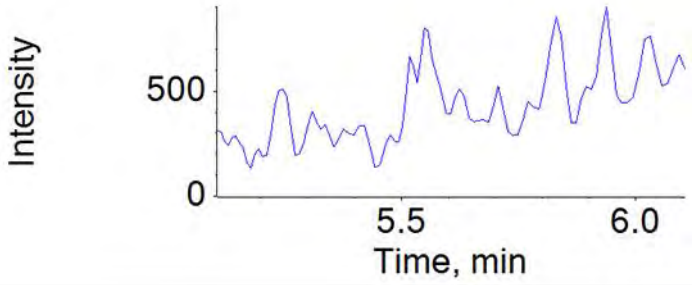
Component: PFNA
Primary Mass: 463.0 / 419.0



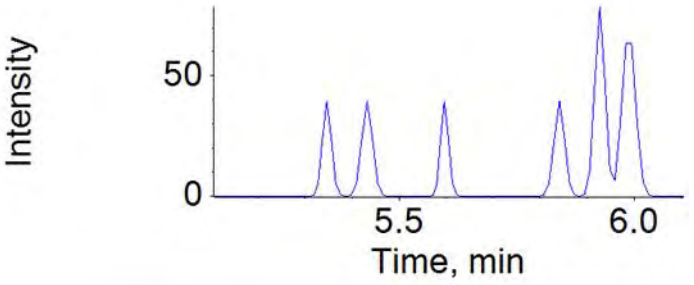
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



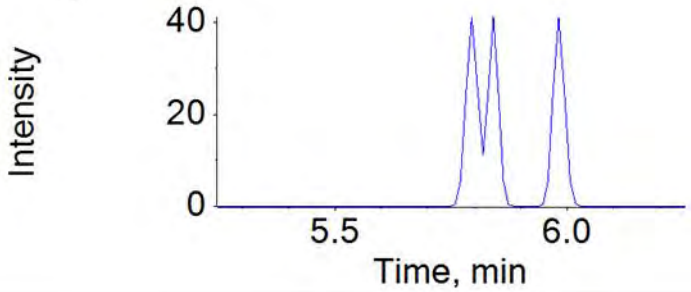
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



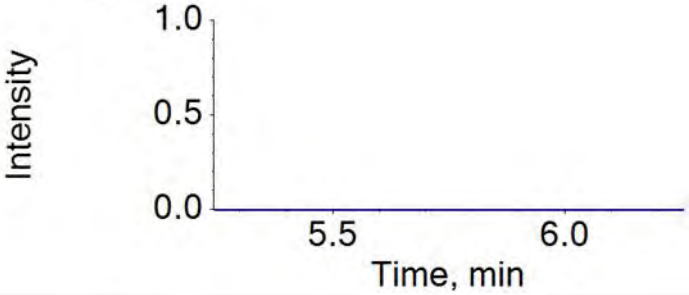
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

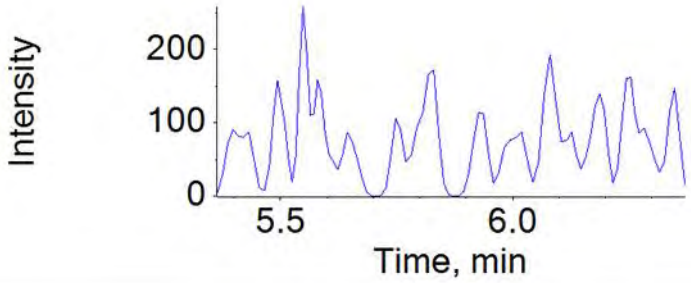
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



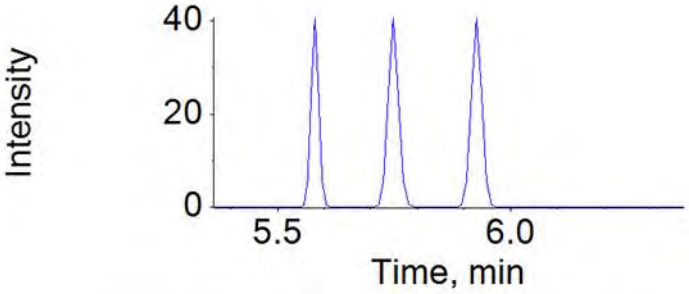
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



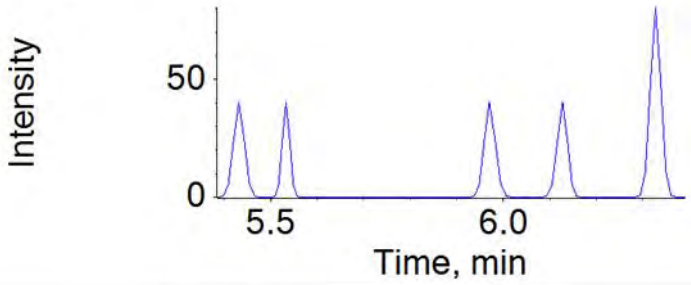
Component: PFUnDA
Primary Mass: 563.0 / 519.0



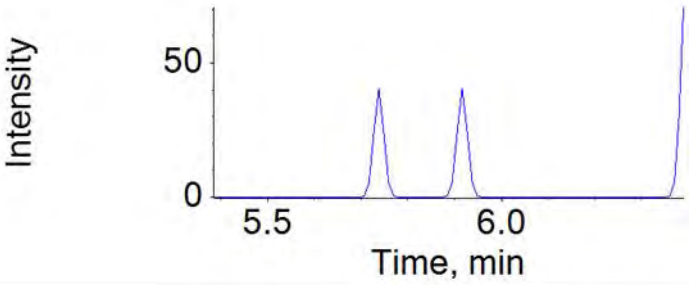
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



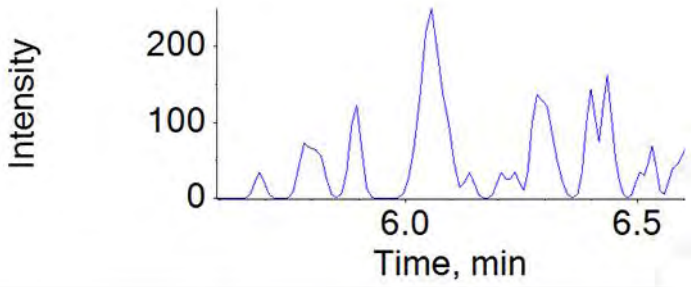
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



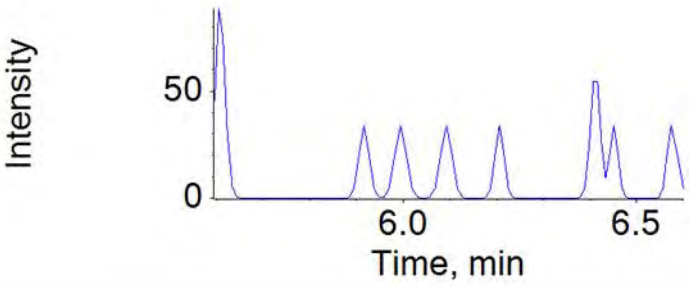
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



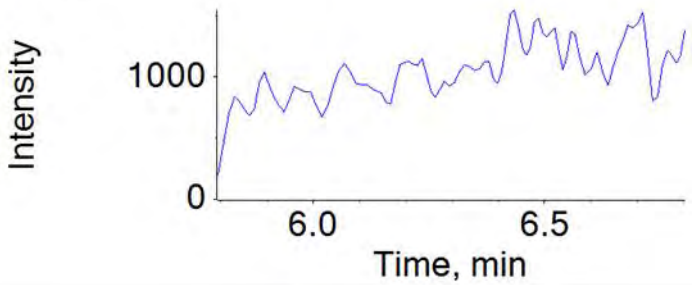
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



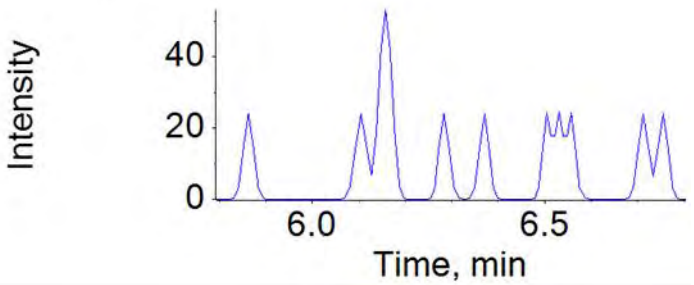
APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

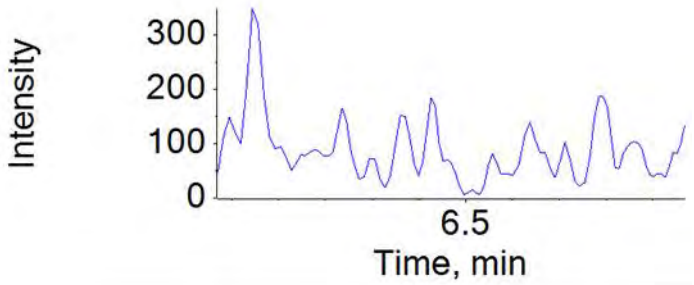
Component: PFTrDA
Primary Mass: 663.0 / 619.0



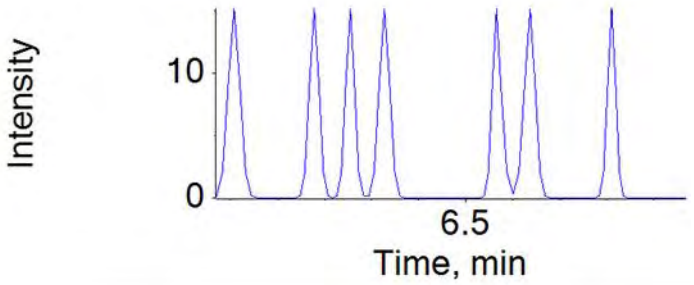
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By JPT at 5:11 pm, 11/8/18

REVIEWED
By umar at 2:46 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881961			**Data File:**		18NOV07D-63.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-BLDG573-S-04-01 Grab Soil			**Acquis Date:**		2018-11-07T20:43:09
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	33			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.02000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	794060.7	730410.6	9	50	
13C2-PFOA	5.0	590090.1	524423.6	13	50	
13C4-PFOS	4.8	301539.8	274061.7	10	50	
13C2-PFDA	5.0	382178.4	311442.1	23	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	345360.3	13C3-PFBA	794060.7	0.435	9.118	6.259	69	50-150	
E13C5-PFHxA	562076.7	13C2-PFOA	590090.1	0.953	9.804	6.870	70	50-150	
E13C3-PFHxS	282337.6	13C2-PFOA	590090.1	0.478	9.275	6.735	73	50-150	
E13C4-PFHpA	458614.3	13C2-PFOA	590090.1	0.777	9.804	6.932	71	50-150	
E13C8-PFOA	765520.9	13C2-PFOA	590090.1	1.297	9.804	7.094	72	50-150	
E13C8-PFOS	240987.6	13C4-PFOS	301539.8	0.799	9.373	6.929	74	50-150	
E13C9-PFNA	416252.4	13C4-PFOS	301539.8	1.380	9.804	7.394	75	50-150	
E13C6-PFDA	521449.3	13C2-PFDA	382178.4	1.364	9.804	6.728	69	50-150	
Ed3-NMeFOSAA	69699.5	13C2-PFDA	382178.4	0.182	9.804	6.650	68	50-150	
E13C7-PFUnDA	231514.9	13C2-PFDA	382178.4	0.606	9.804	6.852	70	50-150	
Ed5-NEtFOSAA	53748.7	13C2-PFDA	382178.4	0.141	9.804	6.382	65	50-150	
E13C2-PFDoDA	492591.8	13C2-PFDA	382178.4	1.289	9.804	6.813	69	50-150	
E13C2-PFTeDA	342695.5	13C2-PFDA	382178.4	0.897	9.804	6.330	65	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

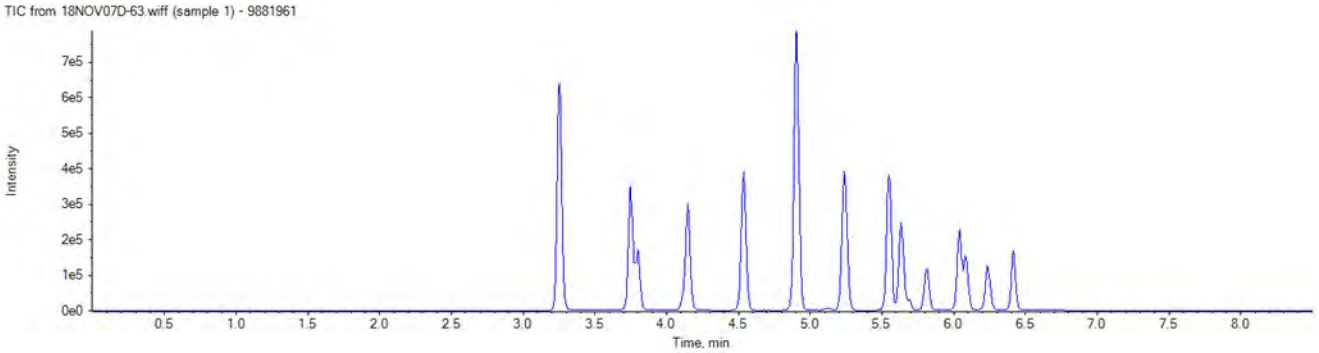
Analyte Quantitation Peak Table

Sample Name: 9881961 **Instrument Name:** LM27631 **File Name:** 18NOV07D-63.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.02000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	345360.3	N/A	
PFHxA	4.15	1.000	105187.5		A	13C5-PFHxA	4.15	562076.7	0.187	1.574
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	282337.6	N/A	
PFHpA	4.53	1.000	172169.1		A	13C4-PFHpA	4.53	458614.3	0.375	2.476
PFOA	4.90	1.000	451128.1		A	13C8-PFOA	4.90	765520.9	0.589	6.506
PFOS	5.23	1.000	55031.1		M	13C8-PFOS	5.23	240987.6	0.228	2.322
PFNA	5.25	1.000	25090.6		A	13C9-PFNA	5.25	416252.4	0.060	0.442
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	521449.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	69699.5	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	231514.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	53748.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	492591.8	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	492591.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	342695.5	N/A	

Total Ion Chromatogram

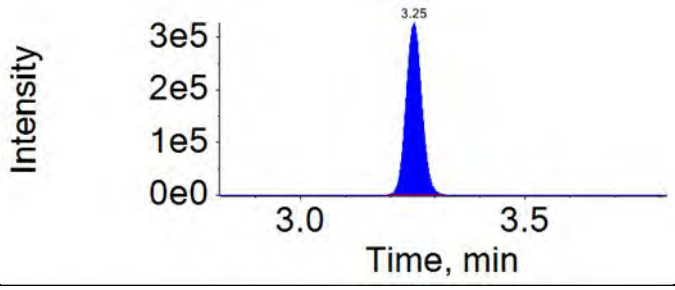


APPROVED
By MCD at 4:42 pm, 11/8/18

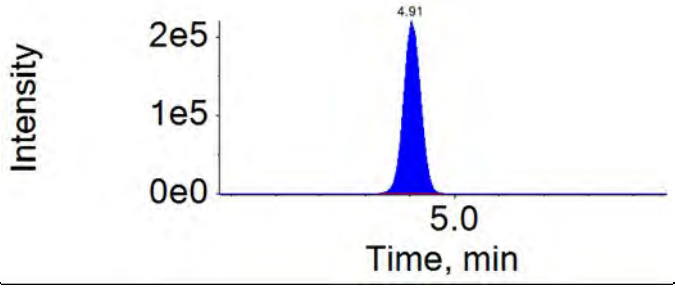
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

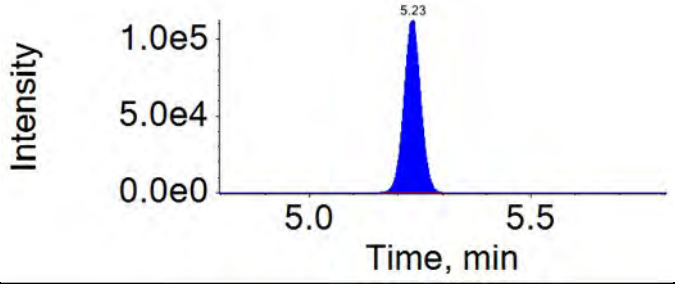
Injection Standard: 13C3-PFBA
216.0 / 172.0



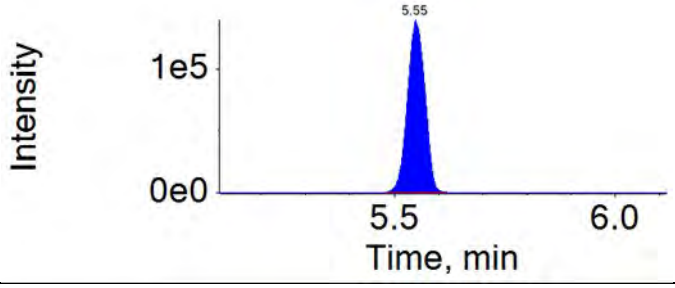
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

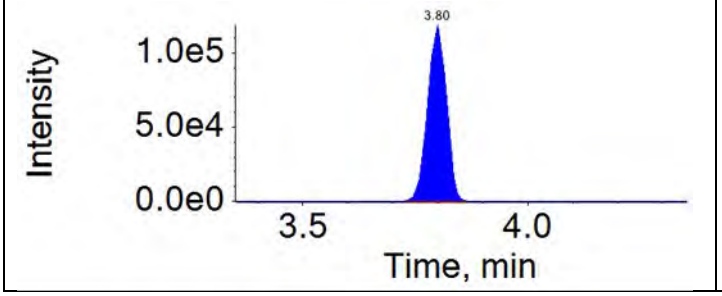


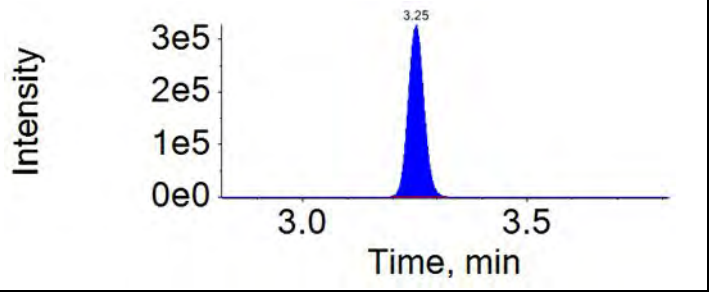
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

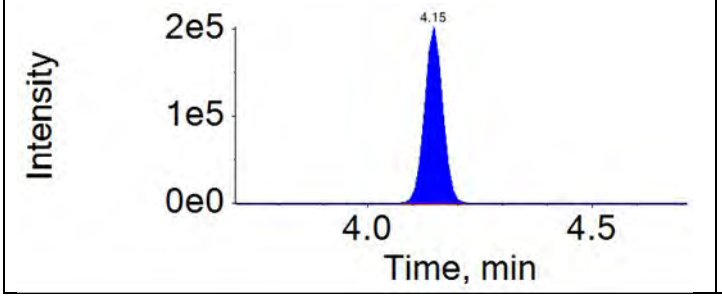
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

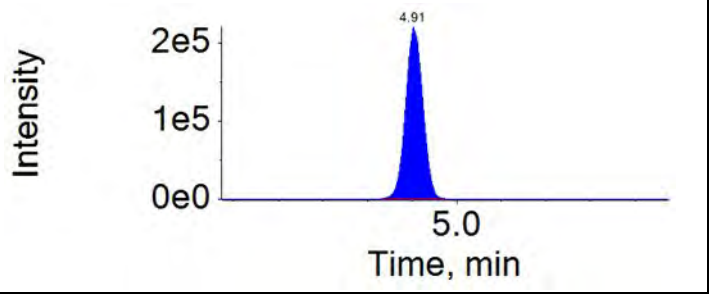
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



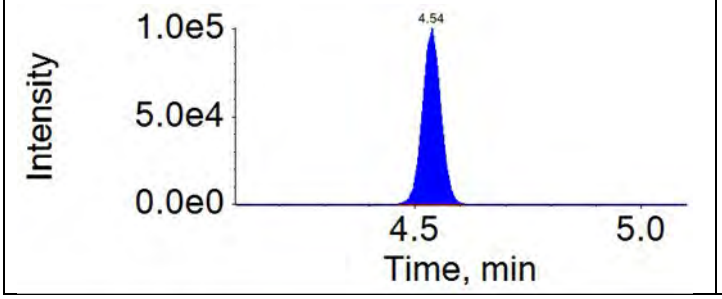


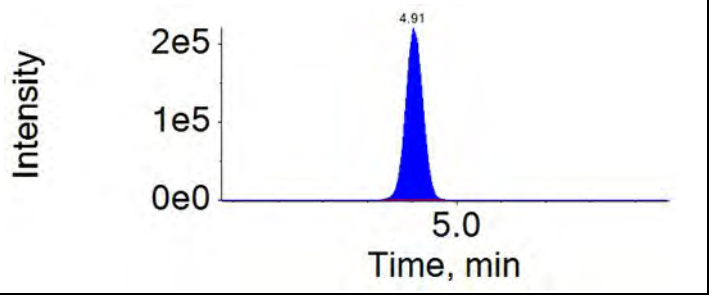
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



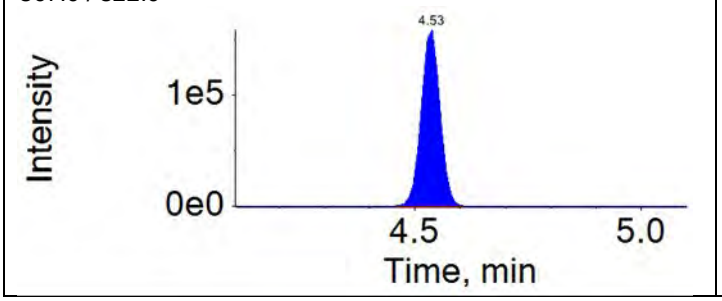


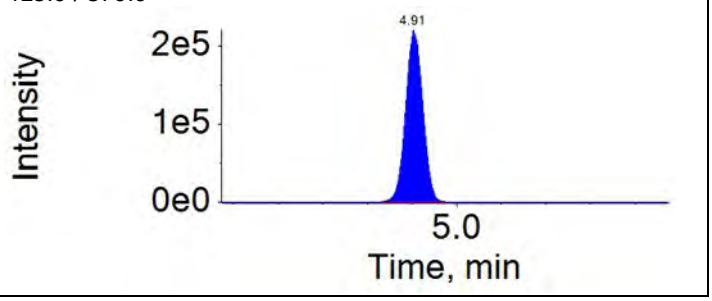
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0





Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



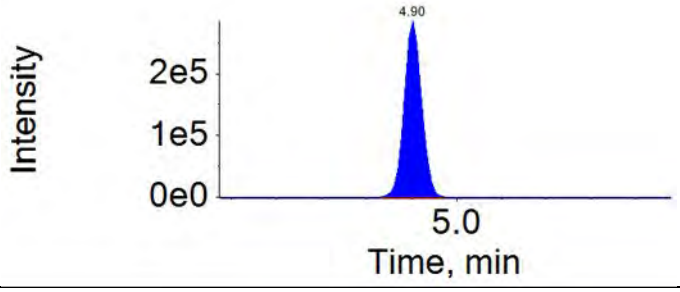


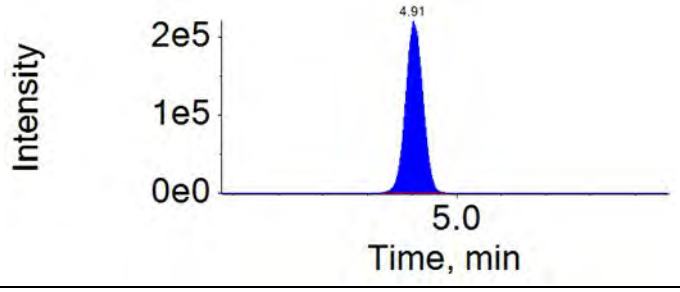
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

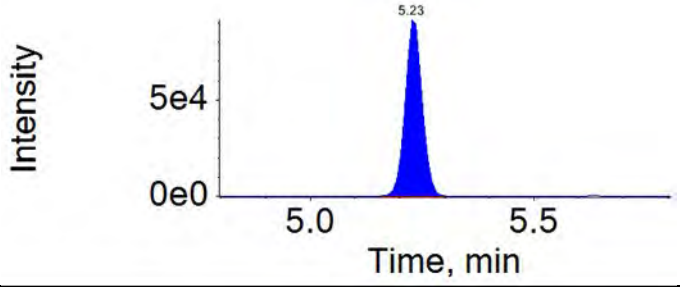
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

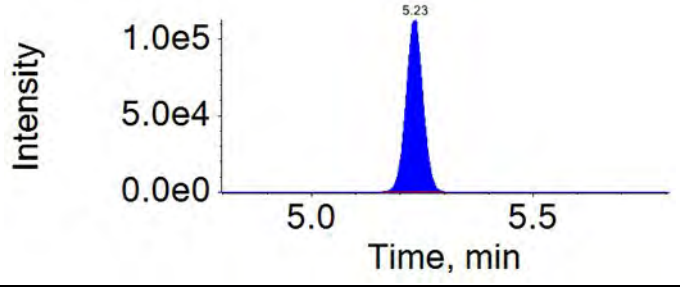
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



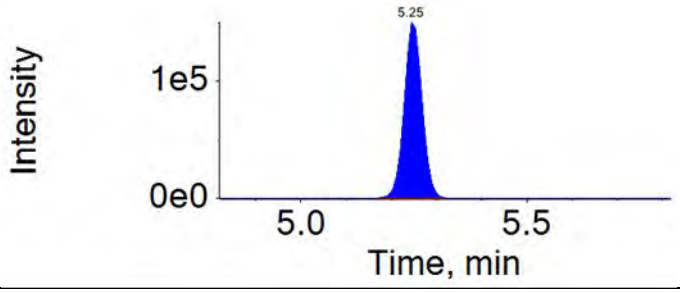


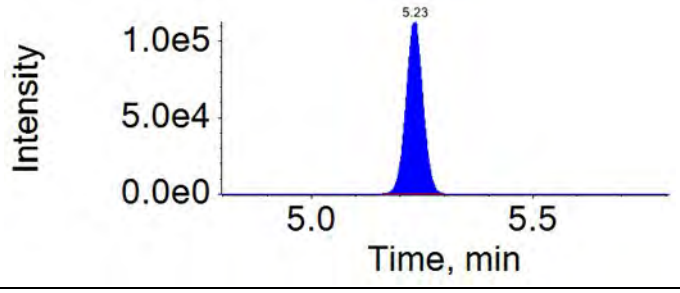
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



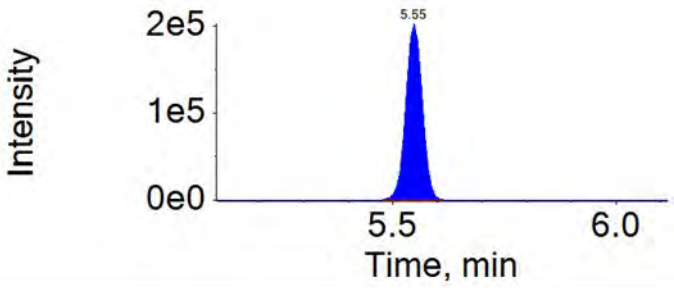


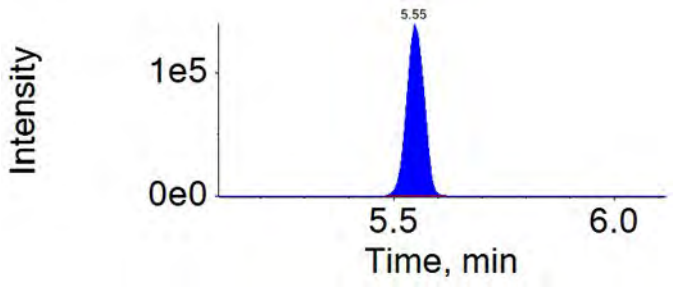
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

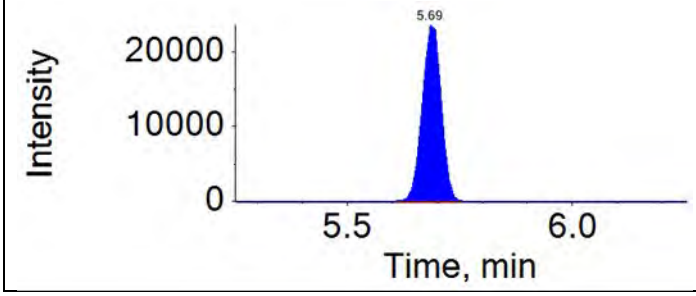
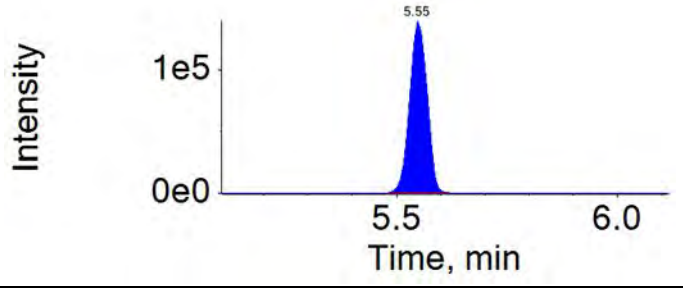


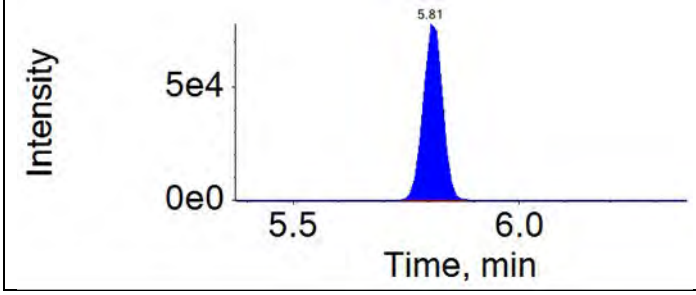
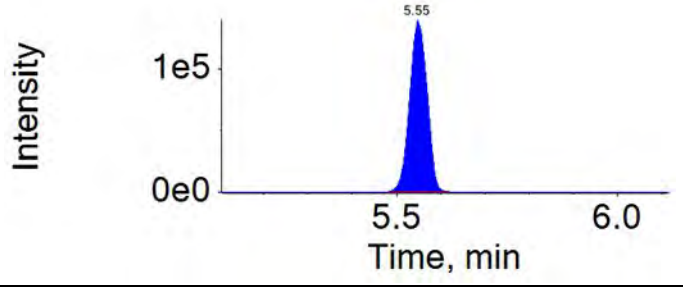


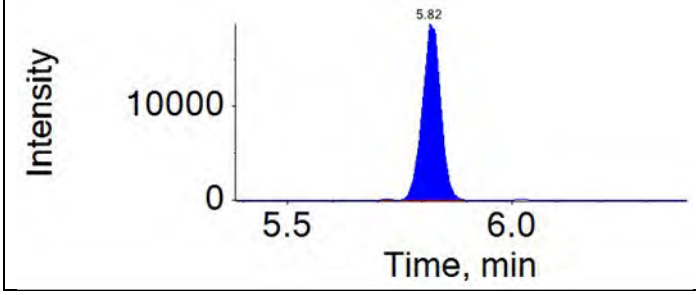
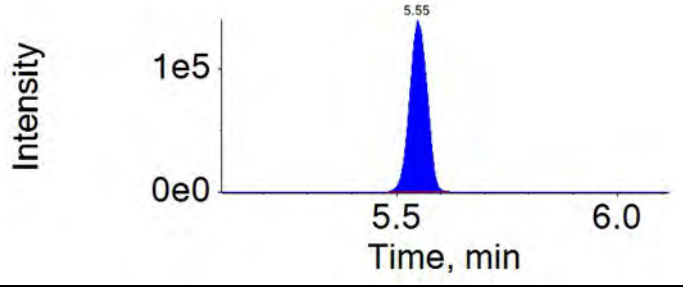
APPROVED
By MCD at 4:42 pm, 11/8/18

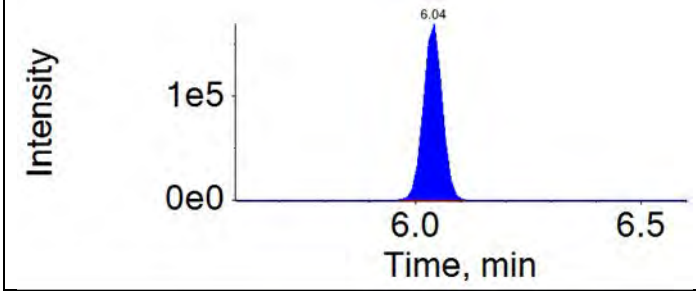
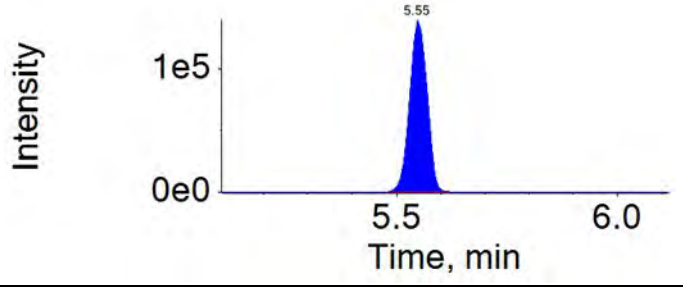
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

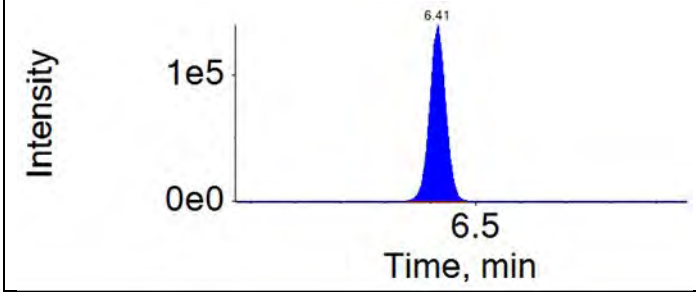
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

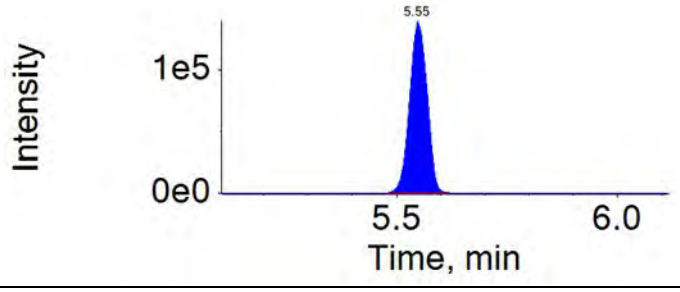
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



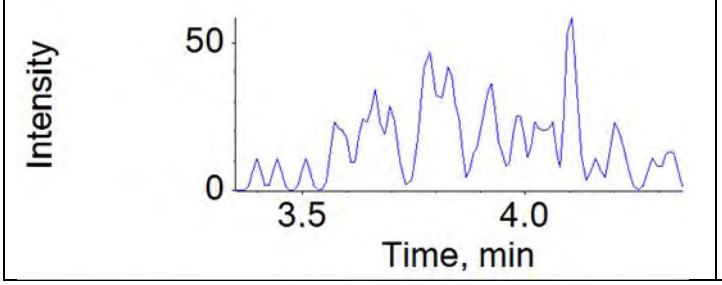


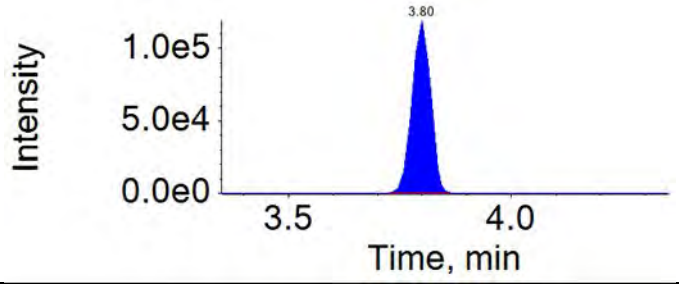
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

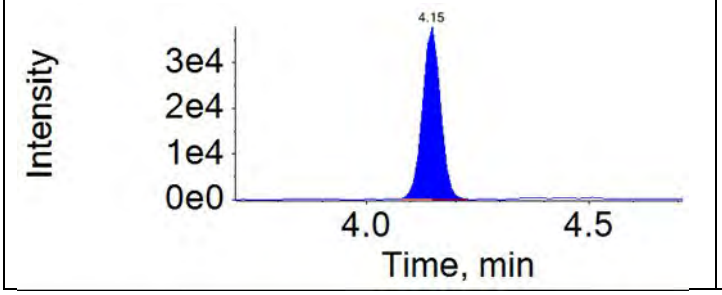
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

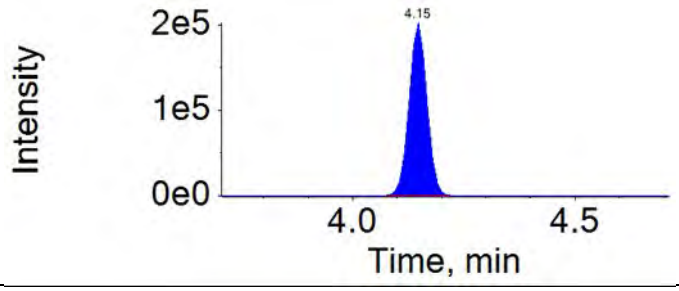
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



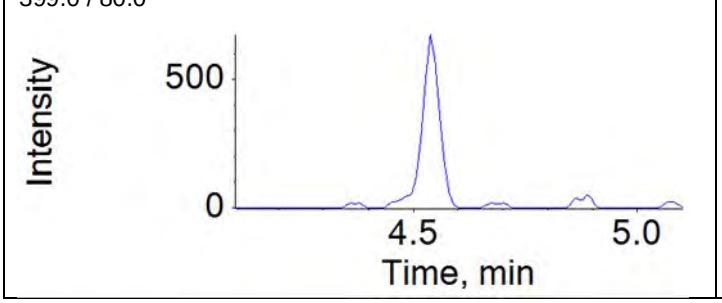


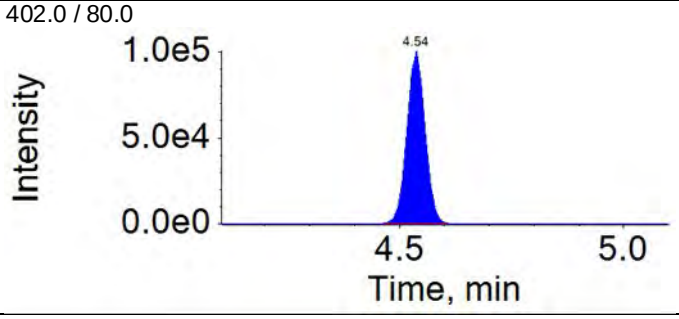
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



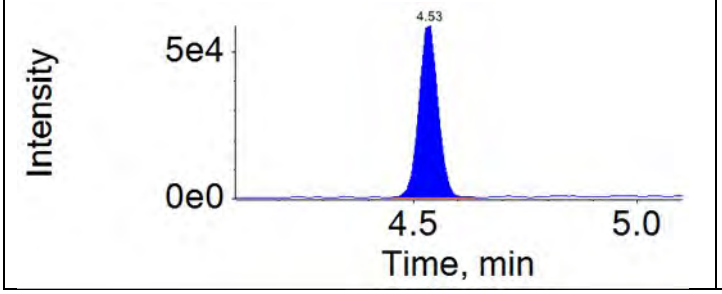


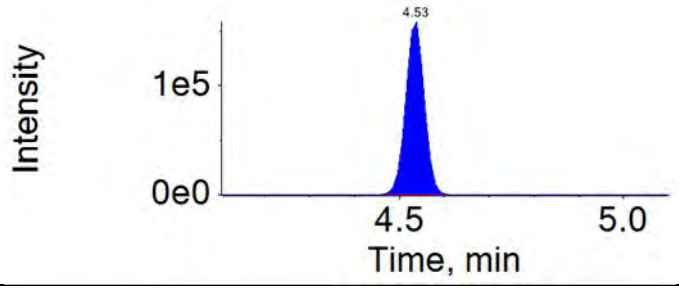
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



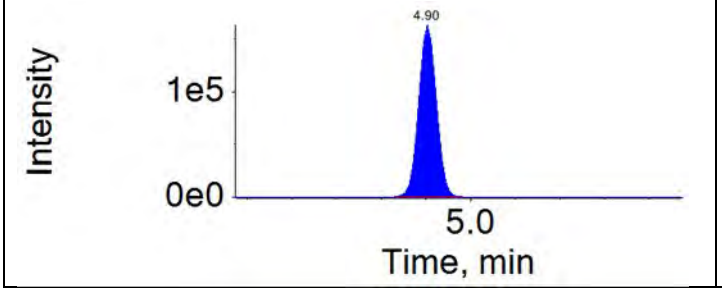


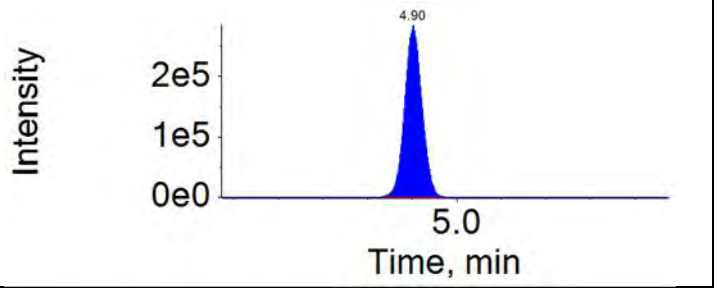
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

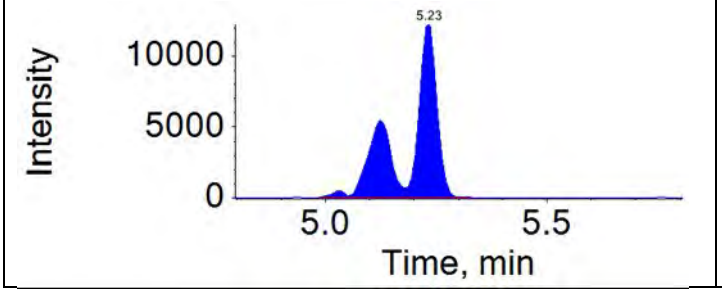
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

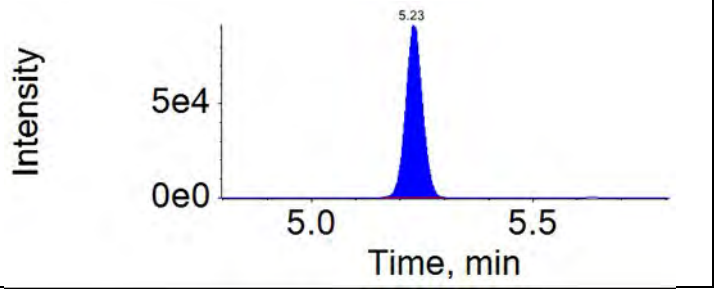
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



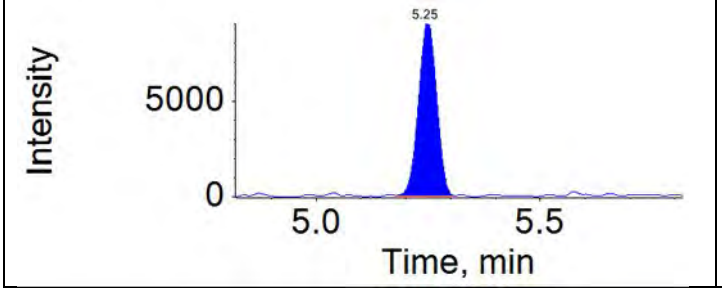


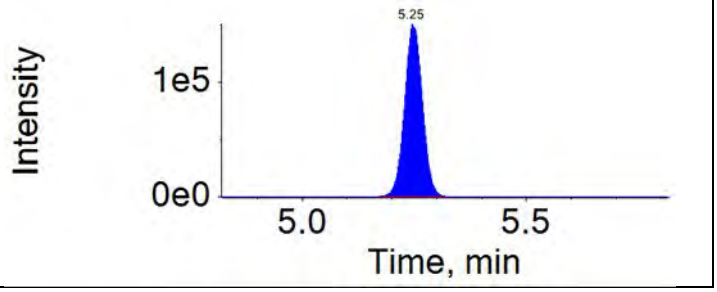
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



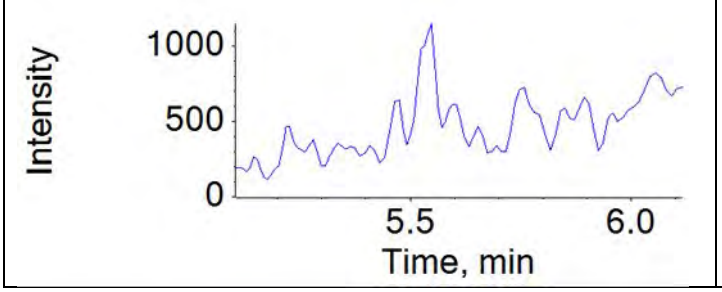


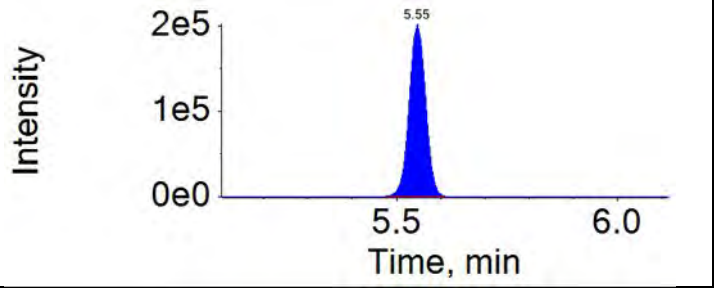
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



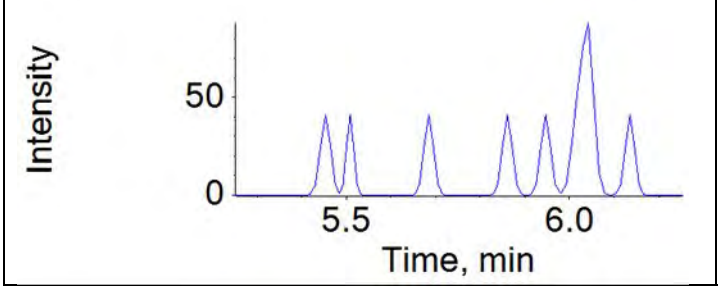


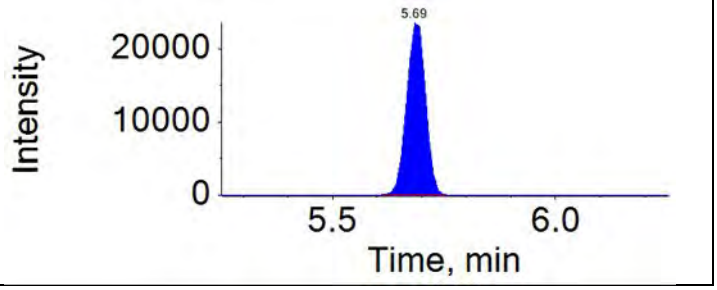
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

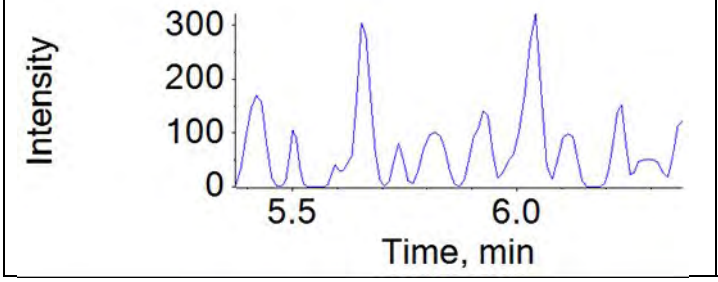
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

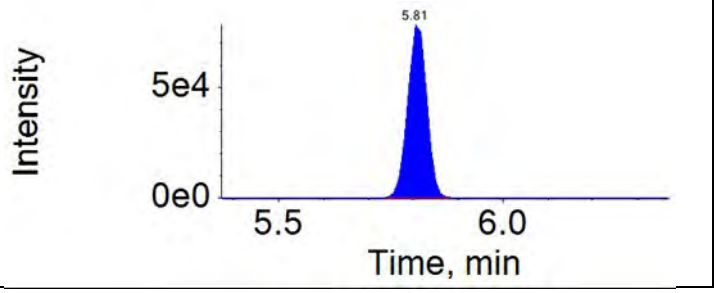
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



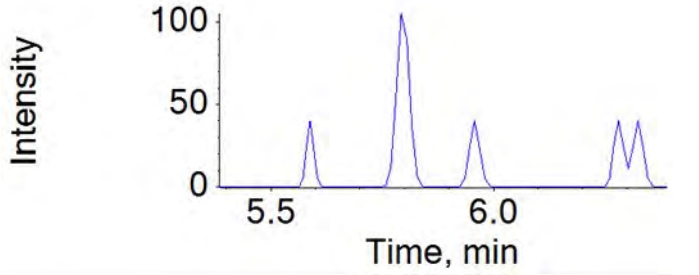


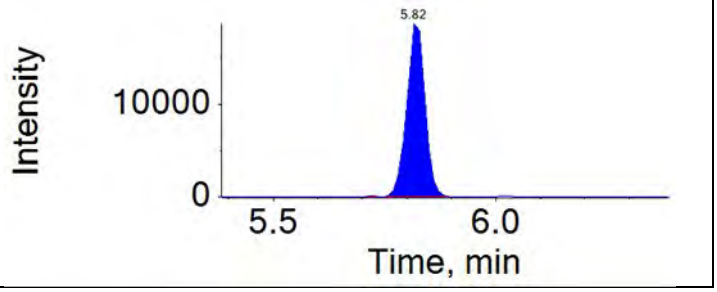
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



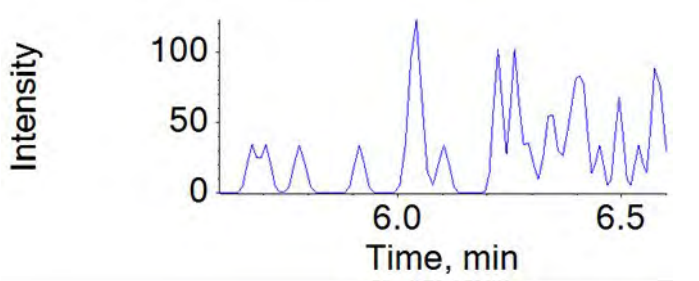


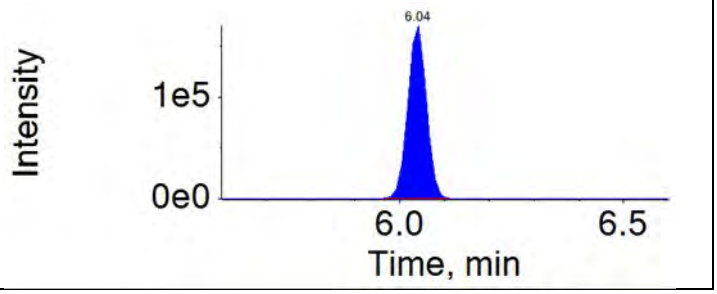
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



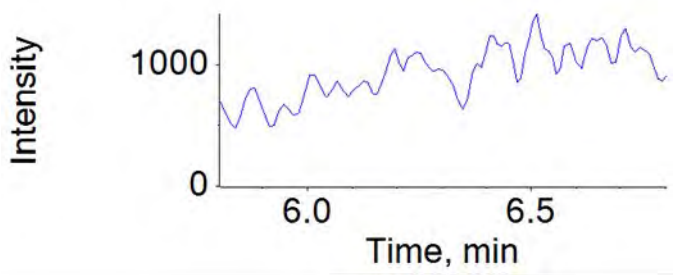


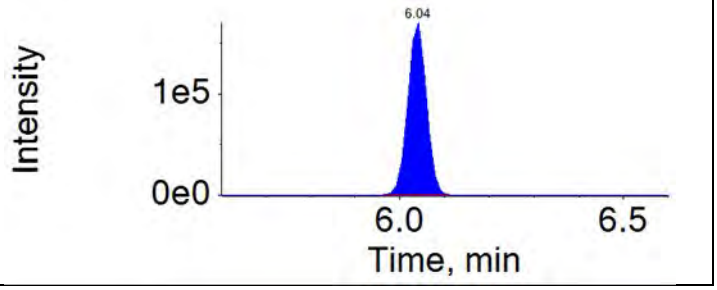
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

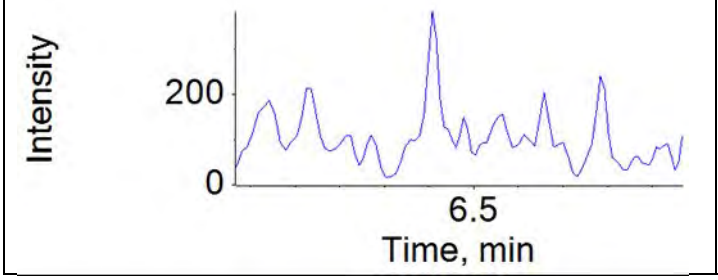
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

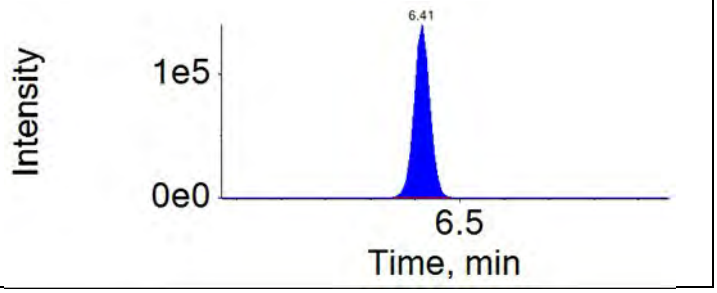
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





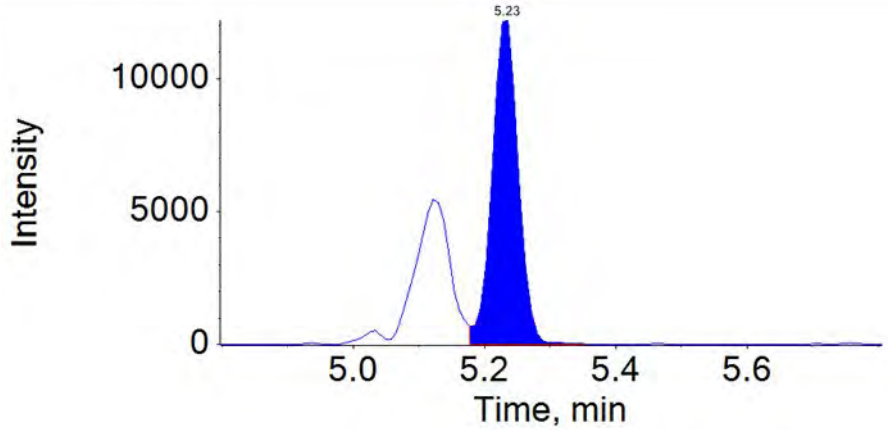
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

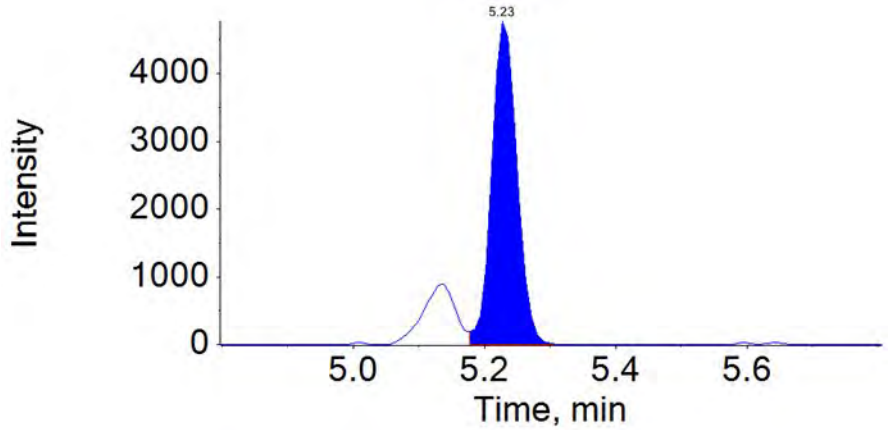
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
33965.3
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-63.wiff
Sample Name:
9881961



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.23
Peak Area:
12727.1
Mass Range:
499.0 / 99.0
File Name:
18NOV07D-63.wiff
Sample Name:
9881961



Integration Comment: incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Ion Ratio Report

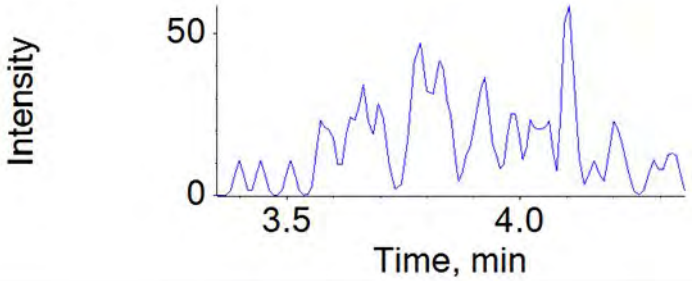
Sample Name: 9881961 **Instrument Name:** LM27631 **File Name:** 18NOV07D-63.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.15	1.00	105187.5	A	N/A	0.0089			
PFHxA_2	4.15	1.00	933.4	A	N/A	0.0089	-21	50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	4.53	1.00	172169.1	A	N/A	0.0566			
PFHpA_2	4.53	1.00	9743.8	A	N/A	0.0566	-2	50	
PFOA	4.90	1.00	451128.1	A	N/A	0.0556			
PFOA_2	4.90	1.00	25067.1	A	N/A	0.0556	-13	50	
PFOS	5.23	1.00	55031.1	M	N/A	0.2883			
PFOS_2	5.23	1.00	15865.6	M	N/A	0.2883	-18	50	
PFNA	5.25	1.00	25090.6	A	N/A	0.0180			
PFNA_2	5.25	1.00	452.8	A	N/A	0.0180	-12	50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

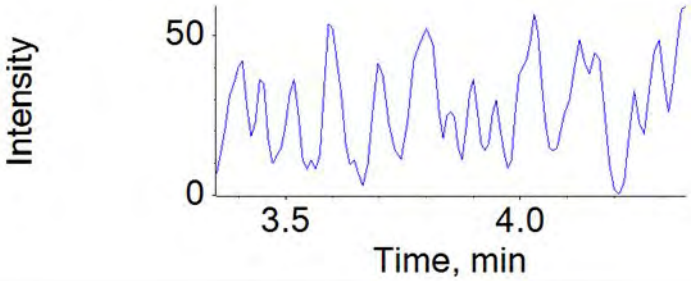
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

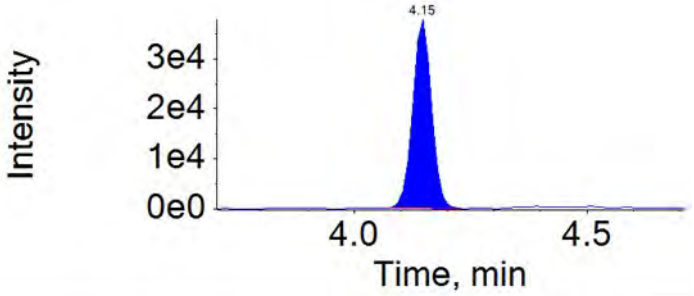
Component: PFBS
Primary Mass: 299.0 / 80.0



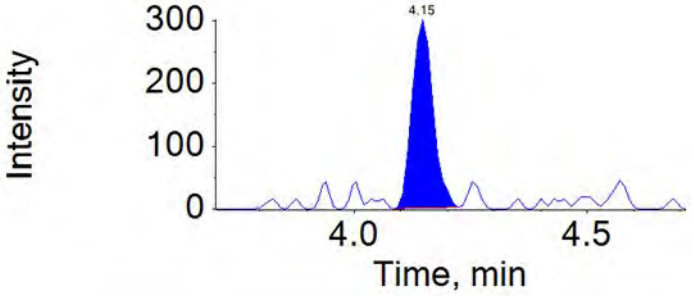
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



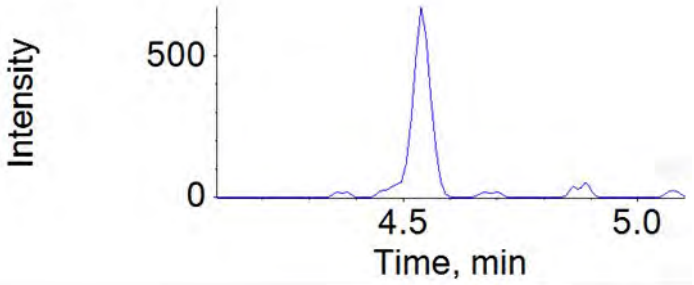
Component: PFHxA
Primary Mass: 313.0 / 269.0



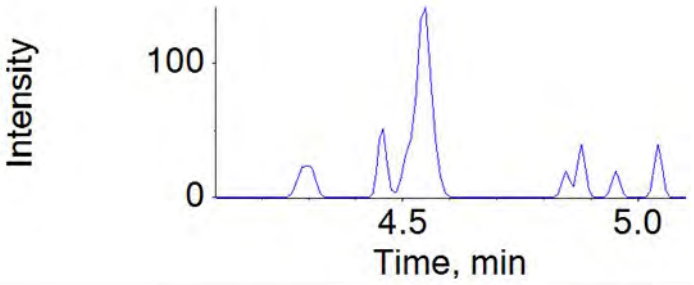
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



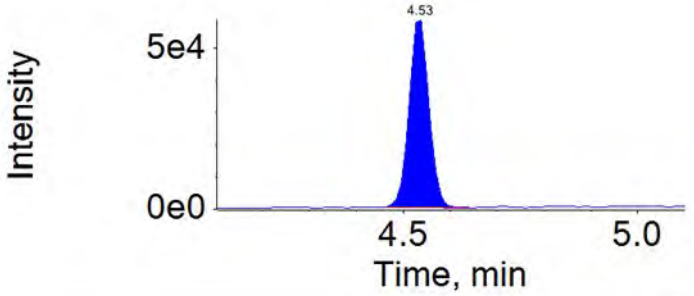
Component: PFHxS
Primary Mass: 399.0 / 80.0



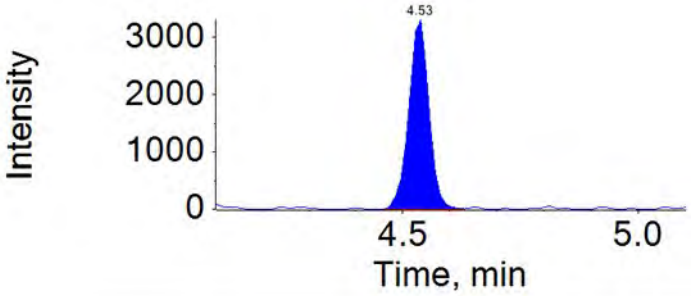
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



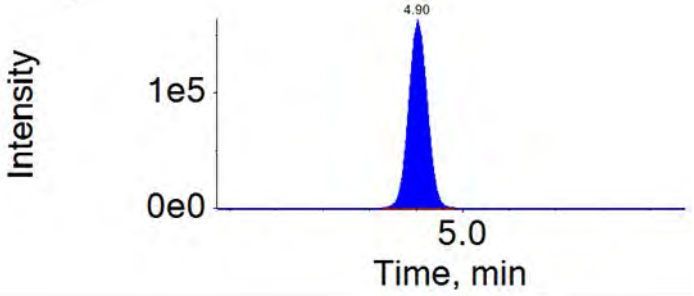
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



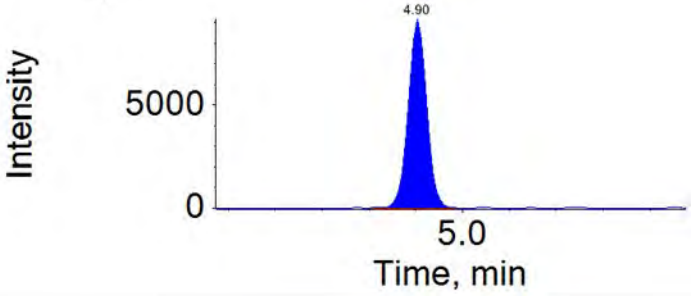
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

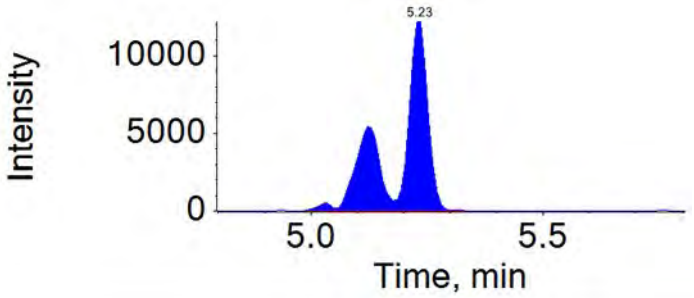
Component: PFOA
Primary Mass: 413.0 / 369.0



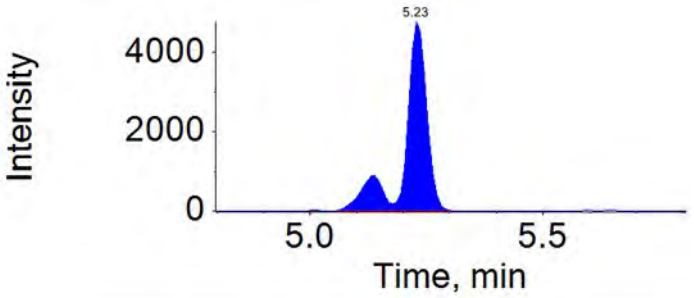
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



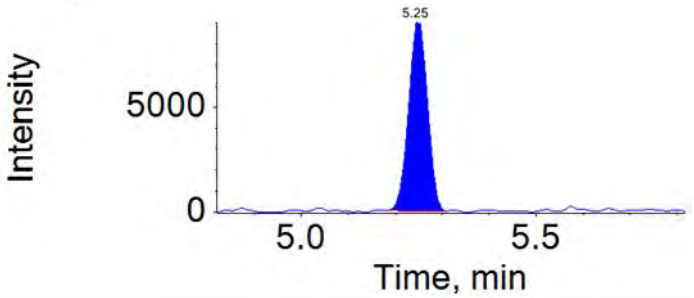
Component: PFOS
Primary Mass: 499.0 / 80.0



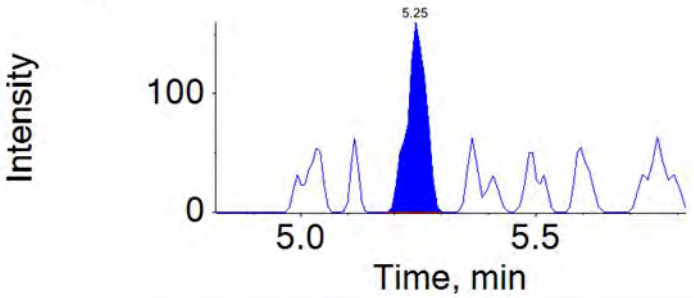
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



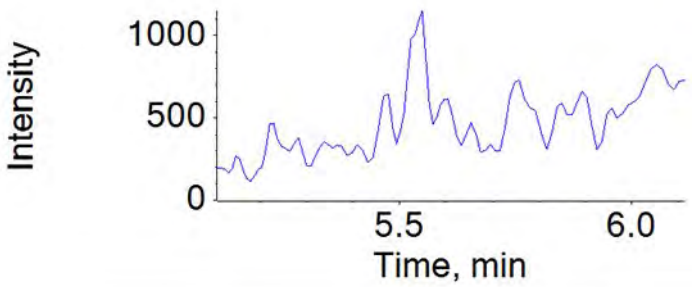
Component: PFNA
Primary Mass: 463.0 / 419.0



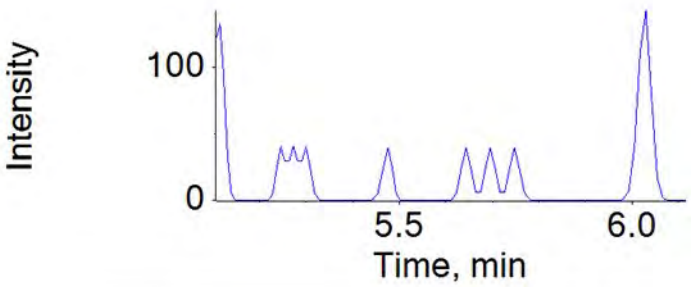
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



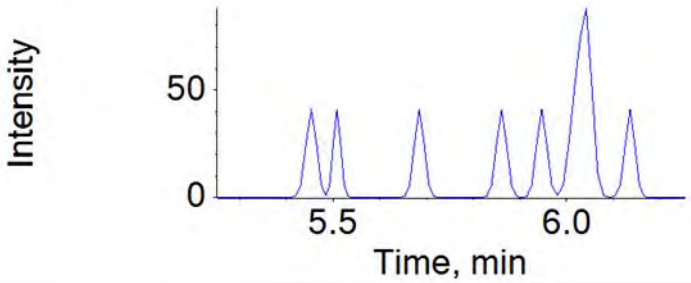
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



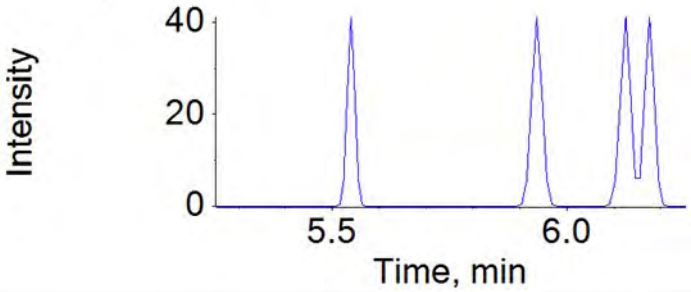
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

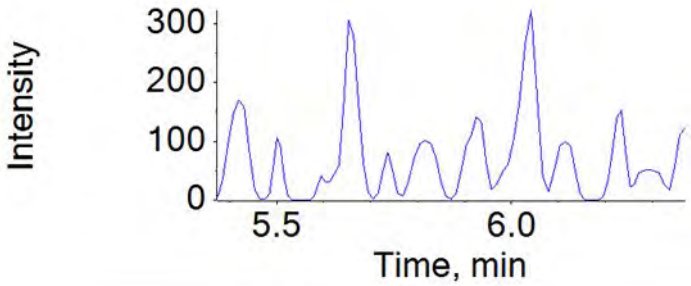
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



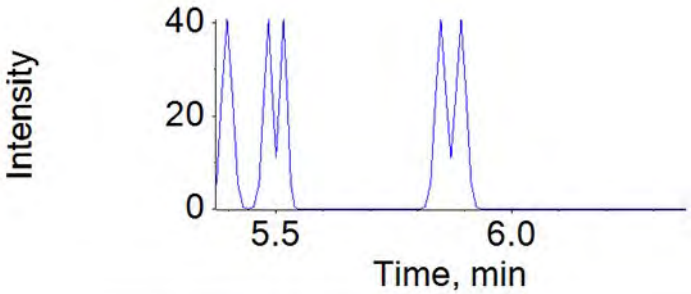
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



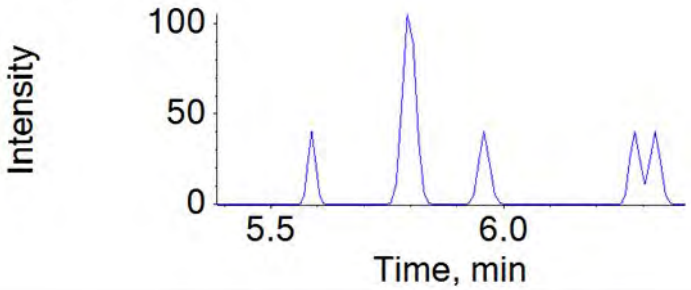
Component: PFUnDA
Primary Mass: 563.0 / 519.0



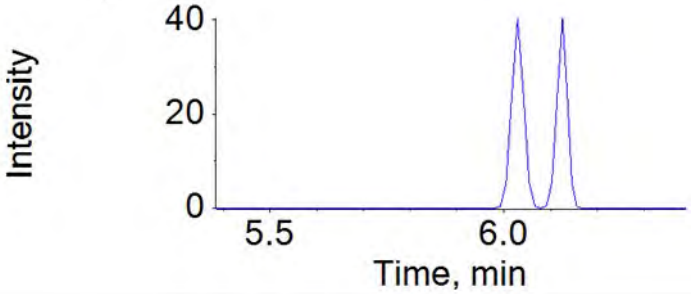
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



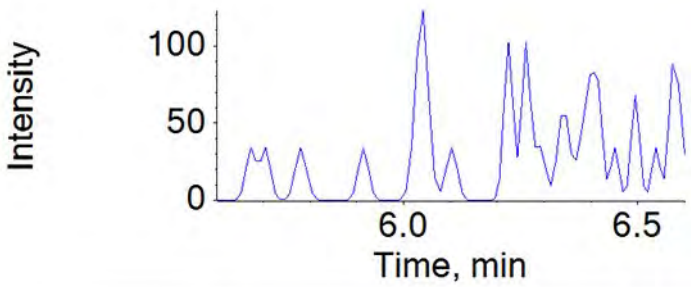
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



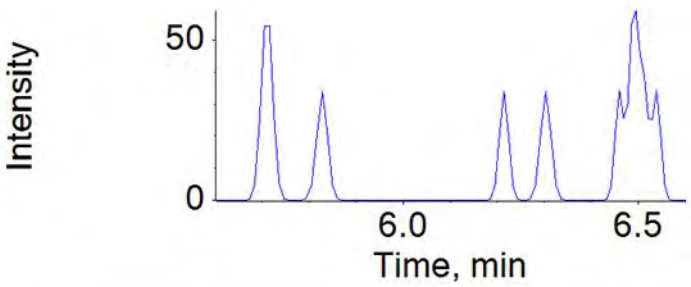
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



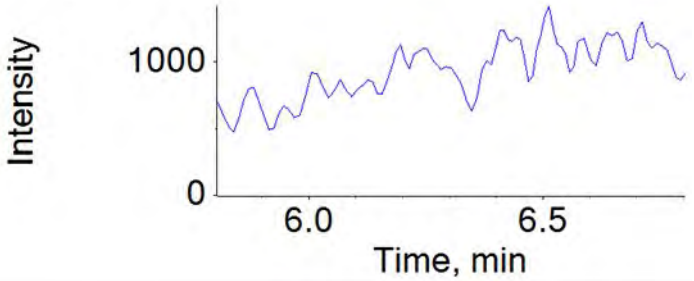
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



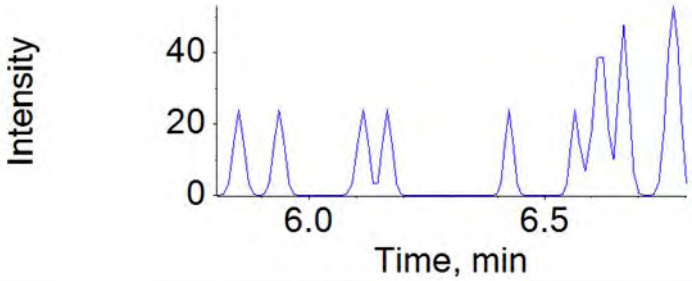
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

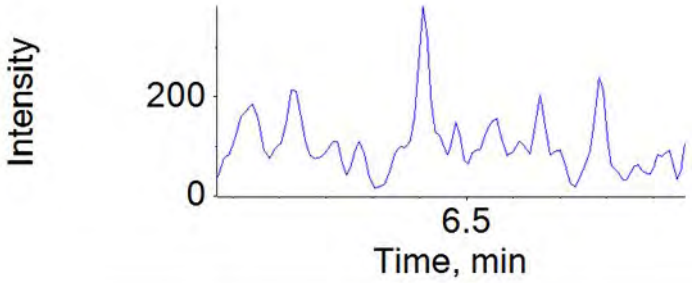
Component: PFTrDA
Primary Mass: 663.0 / 619.0



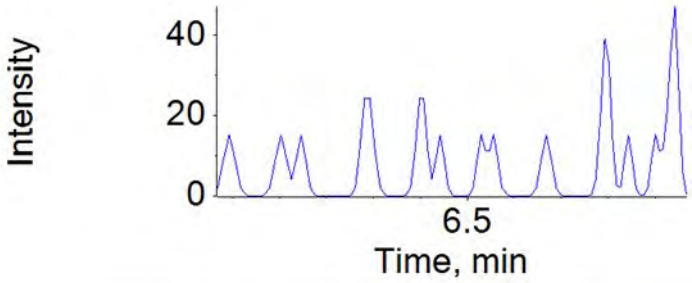
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	9881962			**Data File:**		18NOV07D-64.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005 OU1-BLDG573-S-04-03 Grab Soil			**Acquis Date:**		2018-11-07T20:52:09
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	34			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.08000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	794586.9	730410.6	9	50	
13C2-PFOA	5.0	542840.7	524423.6	4	50	
13C4-PFOS	4.8	296027.1	274061.7	8	50	
13C2-PFDA	5.0	343540.0	311442.1	10	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C3-PFBS	373080.4	13C3-PFBA	794586.9	0.470	8.611	6.381	74	50-150	
E13C5-PFHxA	626178.1	13C2-PFOA	542840.7	1.154	9.259	7.858	85	50-150	
E13C3-PFHxS	287937.3	13C2-PFOA	542840.7	0.530	8.759	7.052	81	50-150	
E13C4-PFHpA	477733.2	13C2-PFOA	542840.7	0.880	9.259	7.414	80	50-150	
E13C8-PFOA	852221.2	13C2-PFOA	542840.7	1.570	9.259	8.107	88	50-150	
E13C8-PFOS	240231.7	13C4-PFOS	296027.1	0.812	8.852	6.645	75	50-150	
E13C9-PFNA	431979.1	13C4-PFOS	296027.1	1.459	9.259	7.382	80	50-150	
E13C6-PFDA	560686.5	13C2-PFDA	343540.0	1.632	9.259	7.601	82	50-150	
Ed3-NMeFOSAA	71440.2	13C2-PFDA	343540.0	0.208	9.259	7.161	77	50-150	
E13C7-PFUnDA	258597.8	13C2-PFDA	343540.0	0.753	9.259	8.042	87	50-150	
Ed5-NEtFOSAA	55882.9	13C2-PFDA	343540.0	0.163	9.259	6.971	75	50-150	
E13C2-PFDoDA	477320.8	13C2-PFDA	343540.0	1.389	9.259	6.936	75	50-150	
E13C2-PFTeDA	353524.1	13C2-PFDA	343540.0	1.029	9.259	6.860	74	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

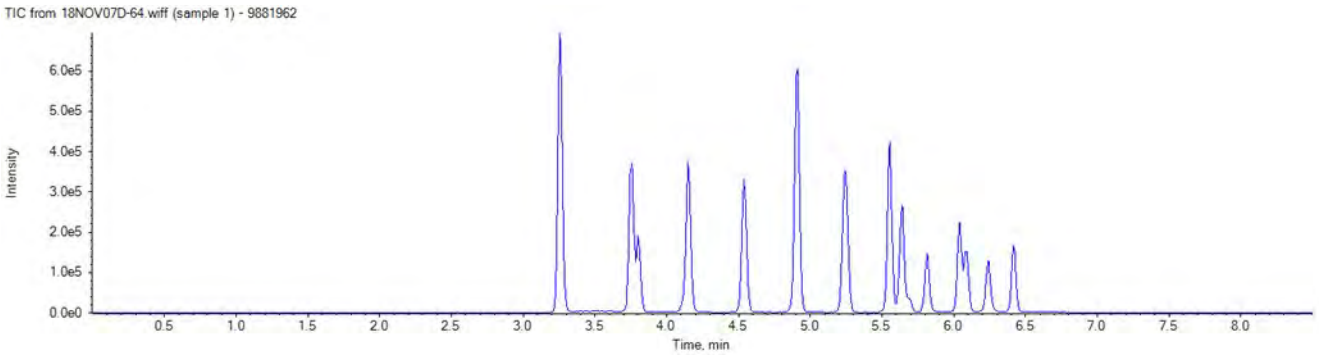
Analyte Quantitation Peak Table

Sample Name: 9881962 **Instrument Name:** LM27631 **File Name:** 18NOV07D-64.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.08000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	373080.4	N/A	
PFHxA	4.15	1.000	204494.1		A	13C5-PFHxA	4.15	626178.1	0.327	2.594
PFHxS	4.54	1.000	4335.9		M	13C3-PFHxS	4.54	287937.3	0.015	0.141
PFHpA	4.54	1.000	17877.0		A	13C4-PFHpA	4.54	477733.2	0.037	0.233
PFOA	4.91	1.000	14990.7		A	13C8-PFOA	4.91	852221.2	0.018	0.183
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	240231.7	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	431979.1	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	560686.5	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	71440.2	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	258597.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	55882.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	477320.8	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	477320.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	353524.1	N/A	

Total Ion Chromatogram

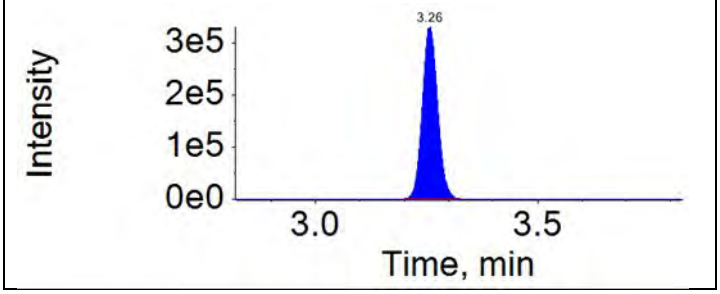


APPROVED
By MCD at 4:42 pm, 11/8/18

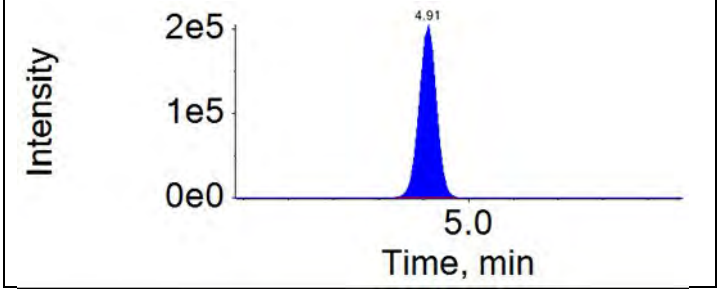
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

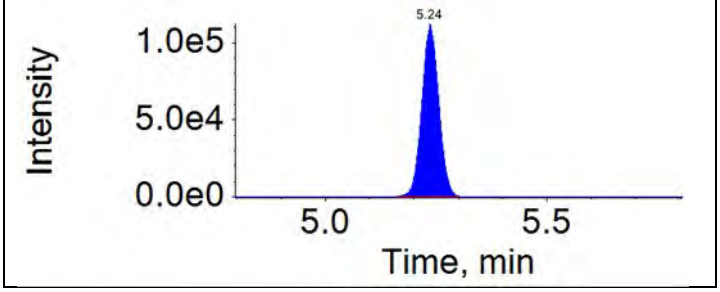
Injection Standard: 13C3-PFBA
216.0 / 172.0



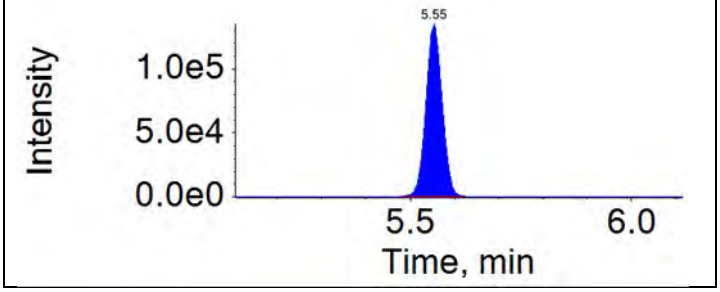
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



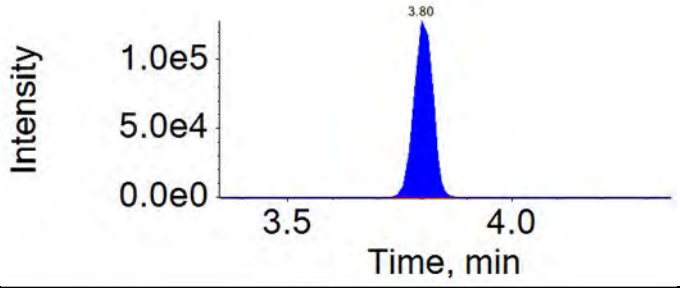
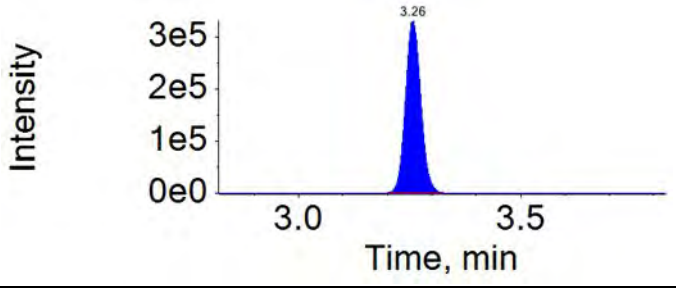
Injection Standard: 13C2-PFDA
515.0 / 470.0

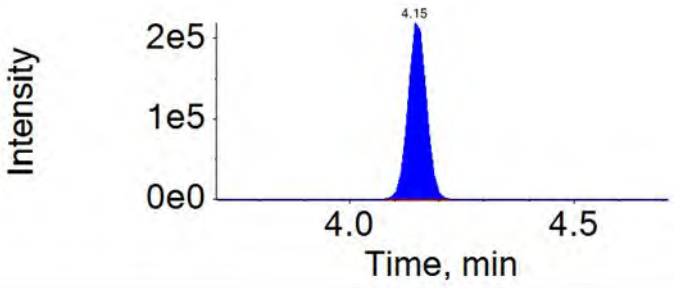
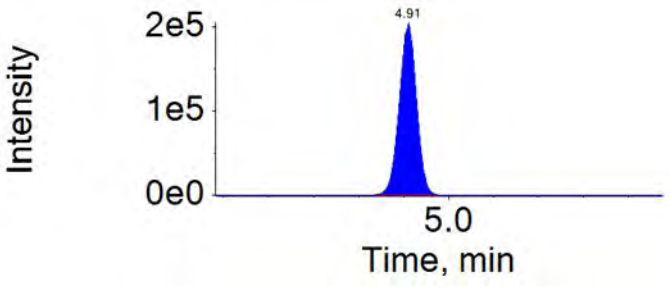


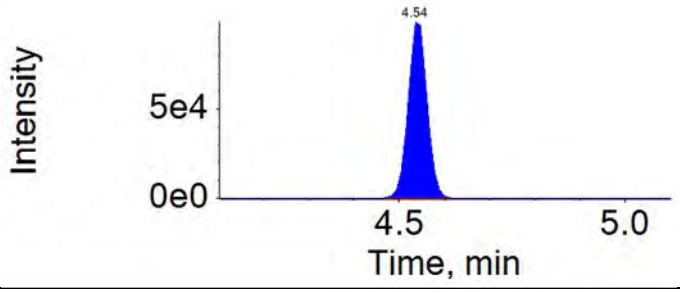
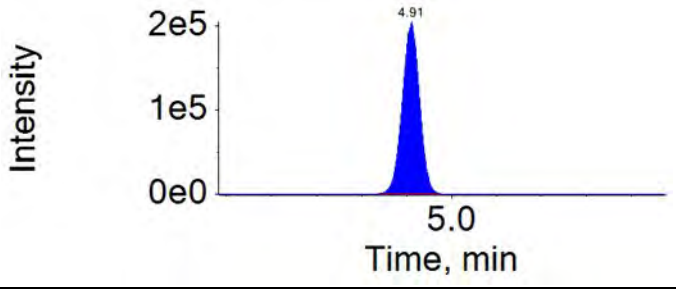
APPROVED
By MCD at 4:42 pm, 11/8/18

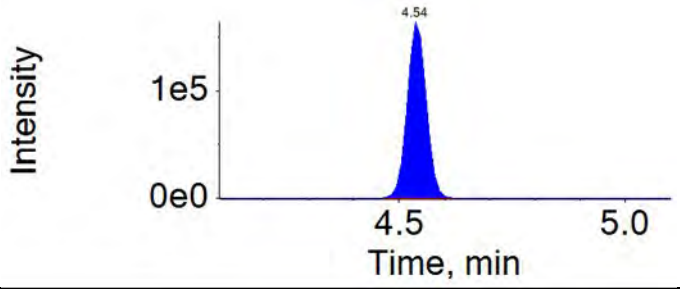
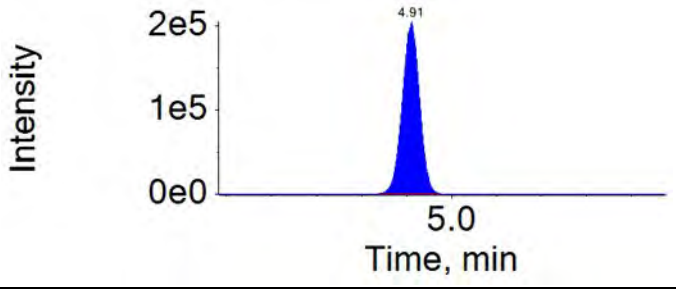
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

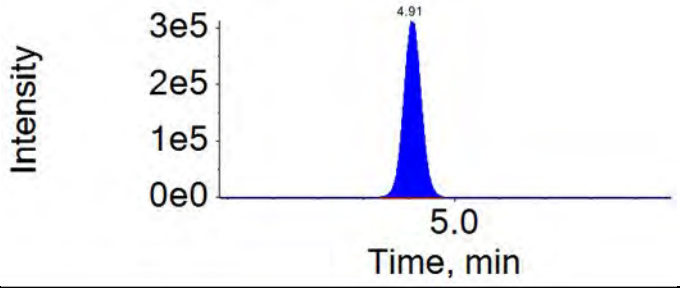
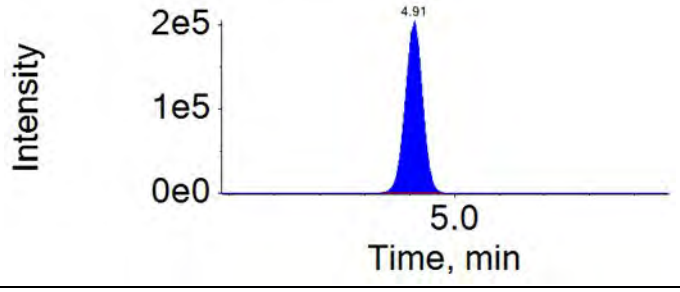
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

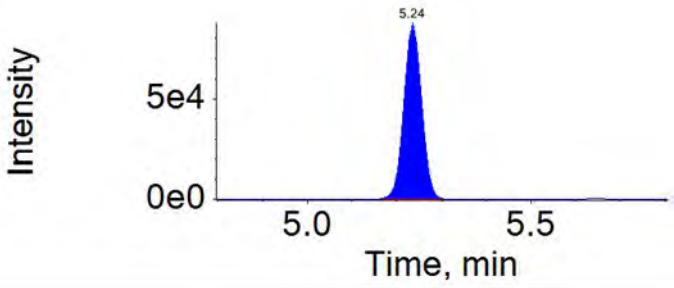
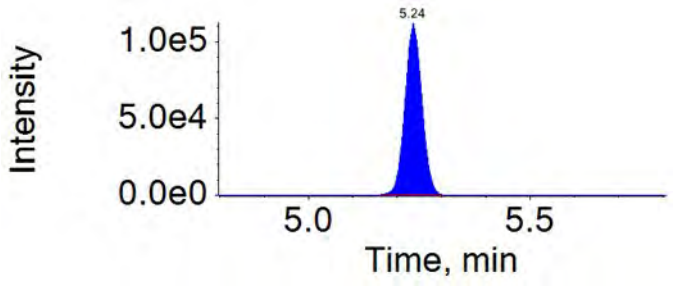
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

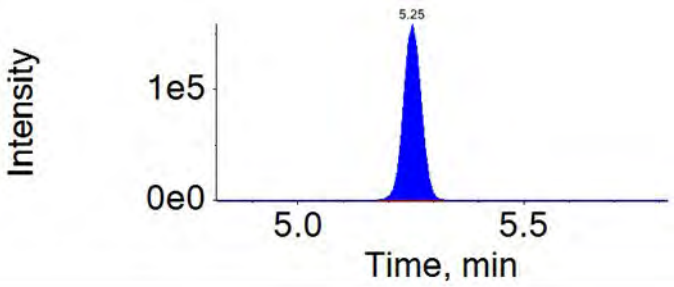
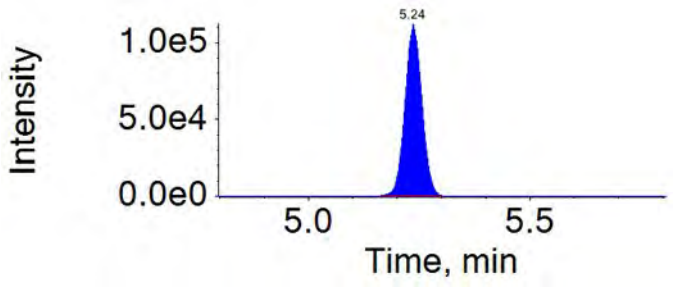
APPROVED
By MCD at 4:42 pm, 11/8/18

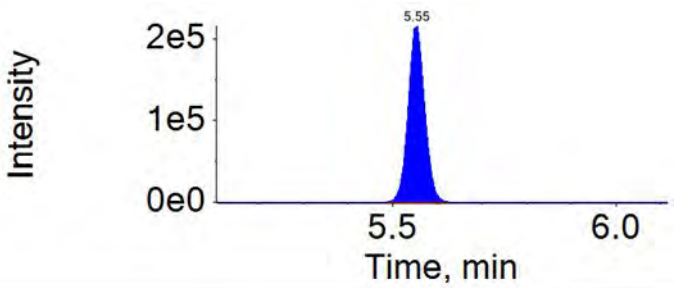
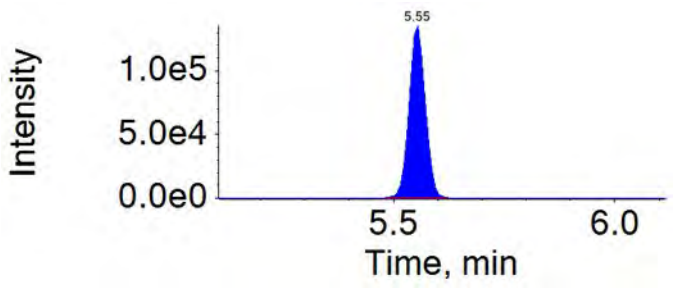
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

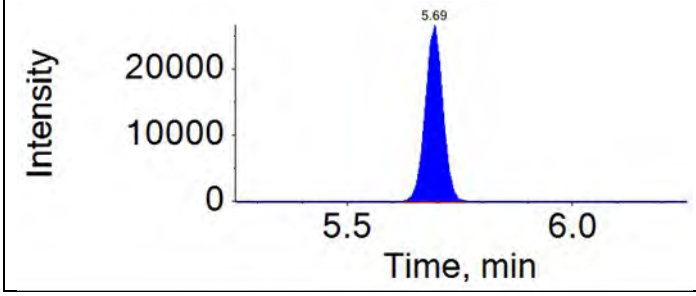
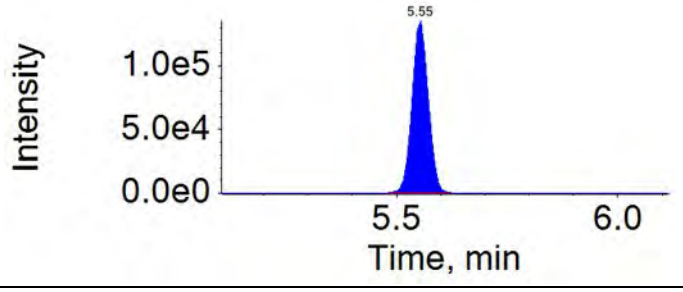
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

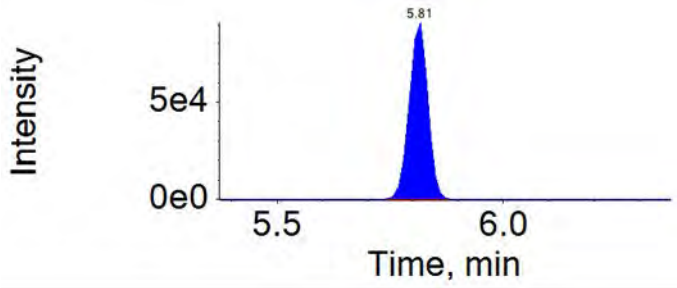
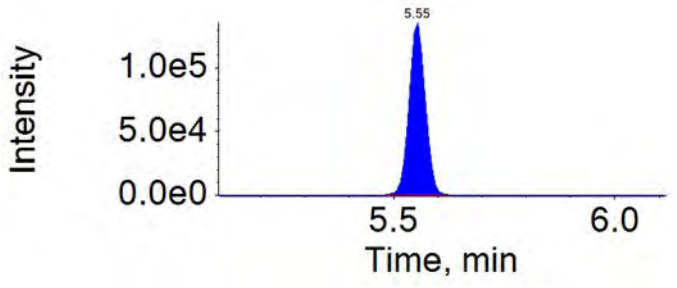
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

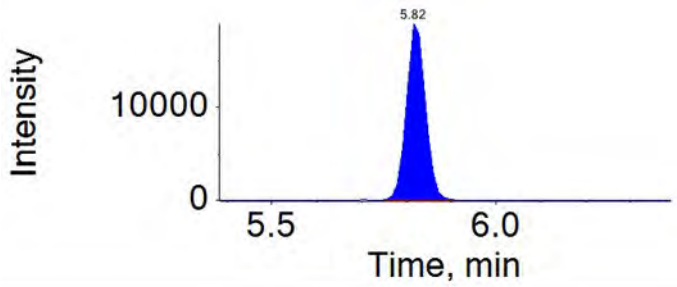
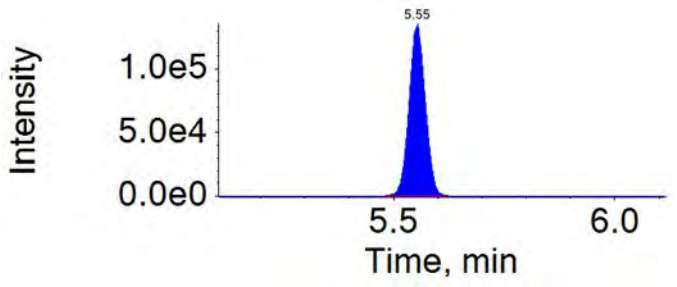
APPROVED
By MCD at 4:42 pm, 11/8/18

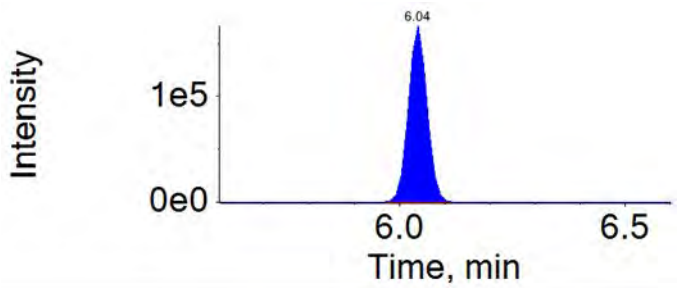
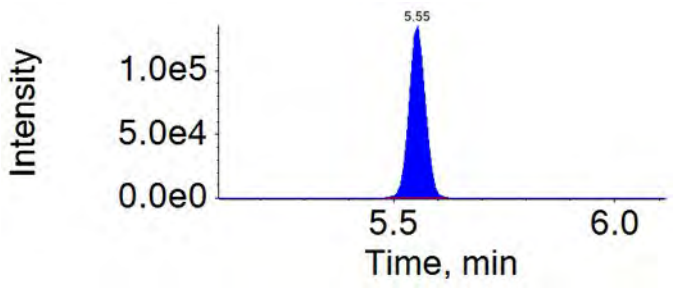
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

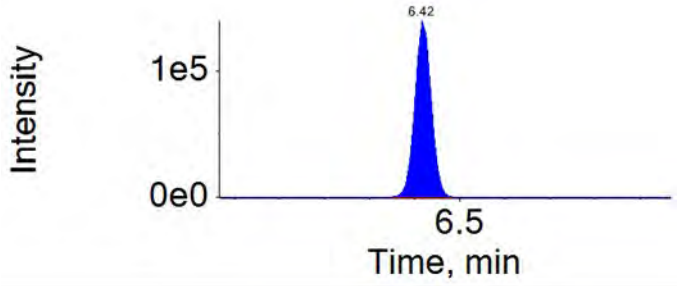
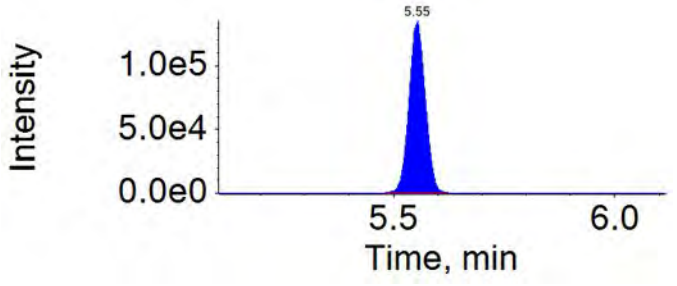
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

APPROVED
By MCD at 4:42 pm, 11/8/18

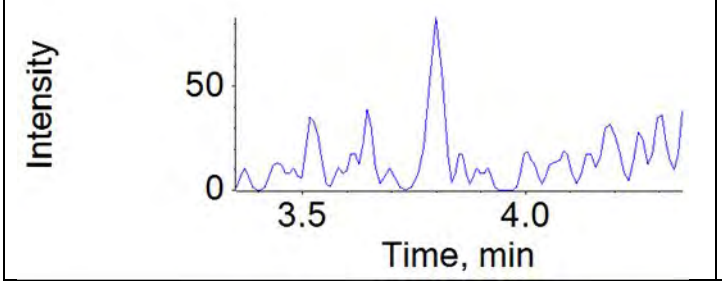
REVIEWED
By umar at 2:36 pm, 11/12/18

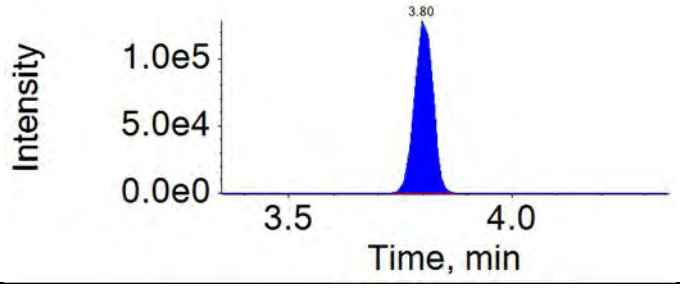
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0
	

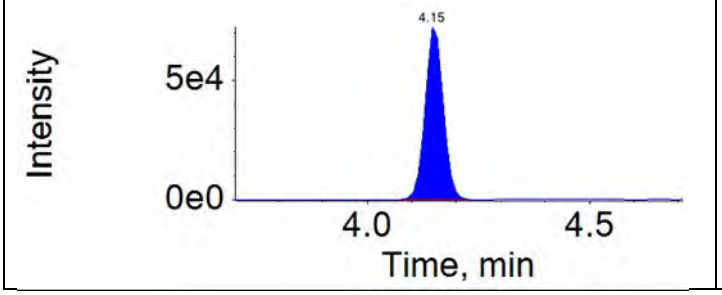
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

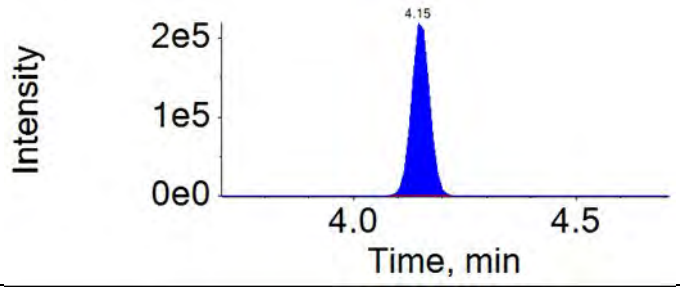
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0



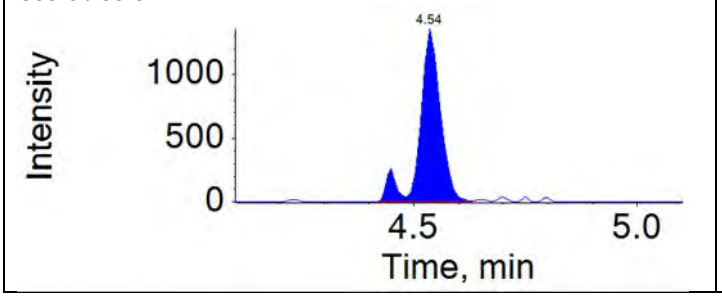


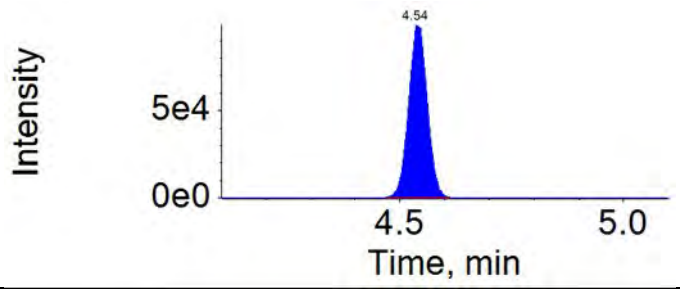
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



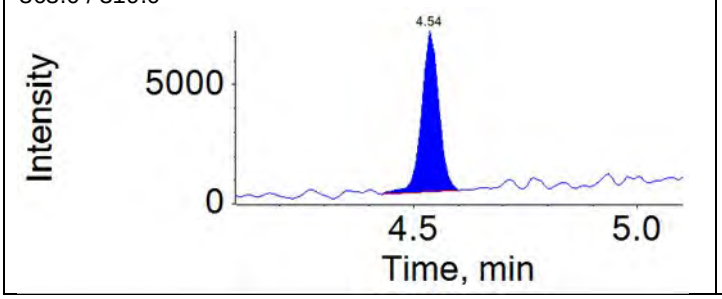


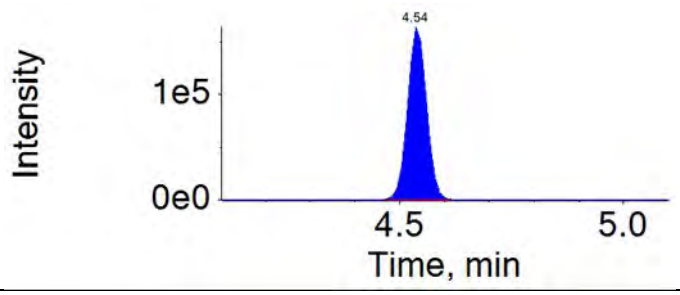
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



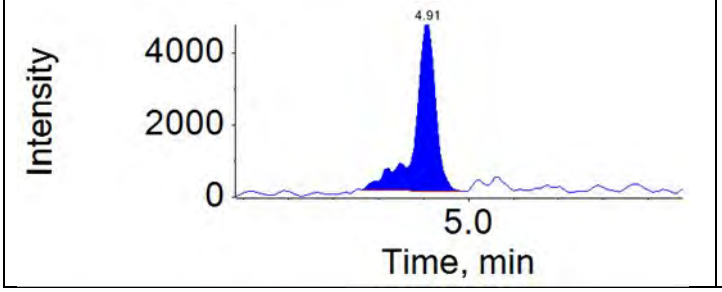


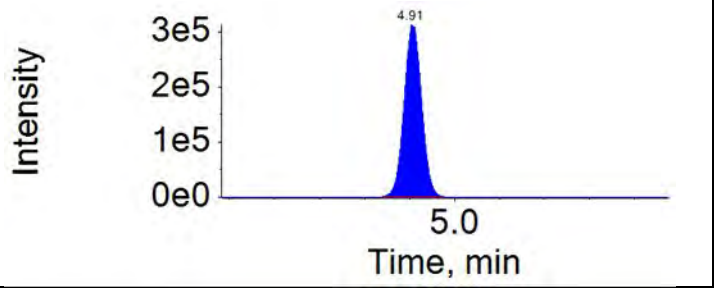
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

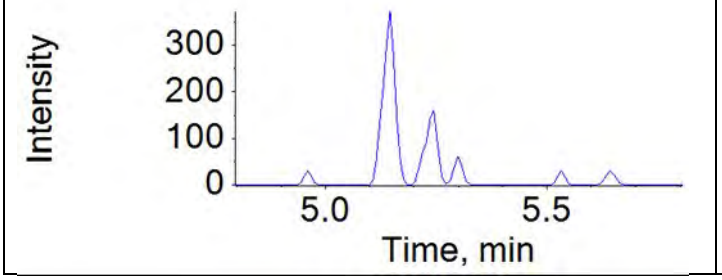
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

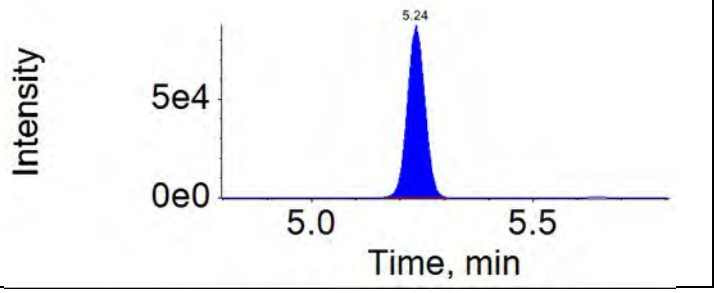
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0



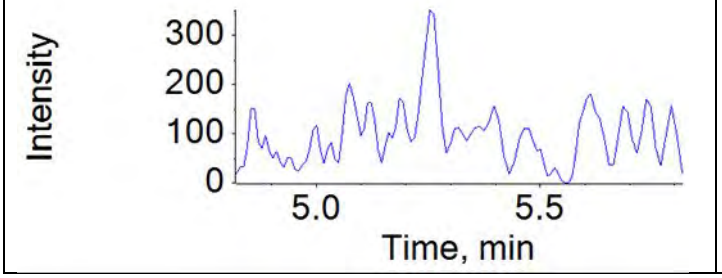


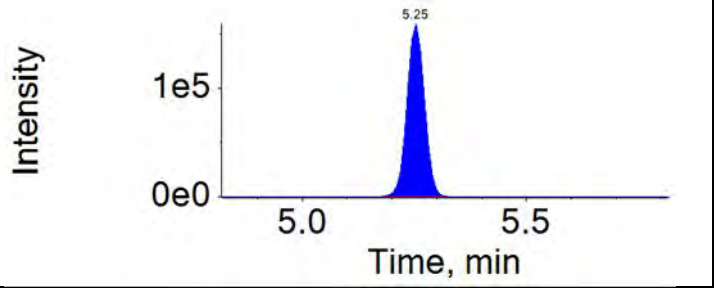
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



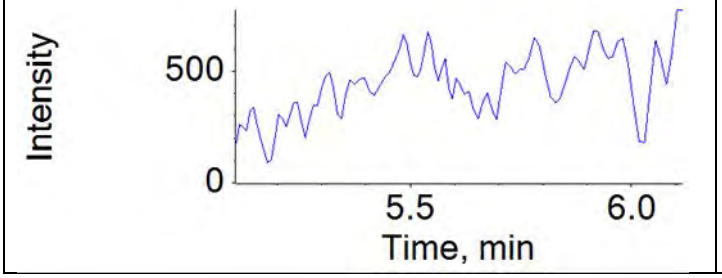


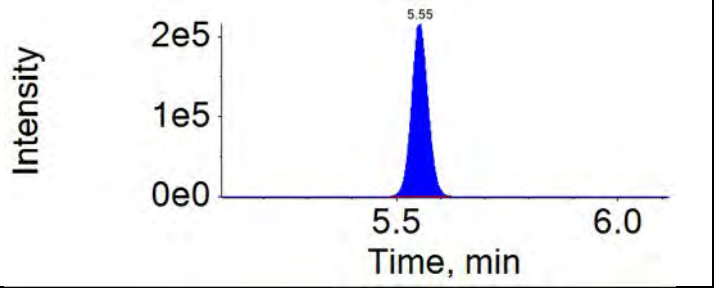
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0





Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0



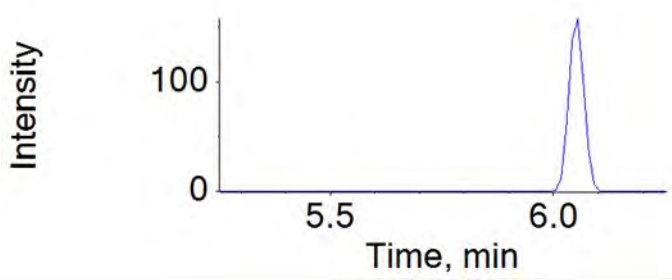


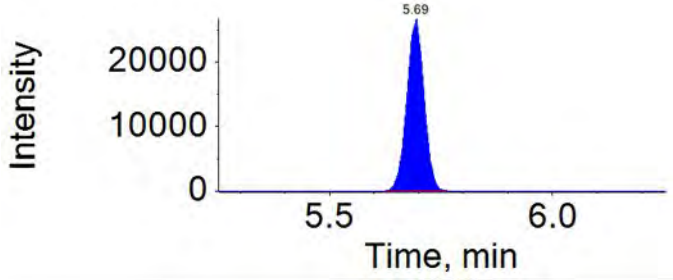
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

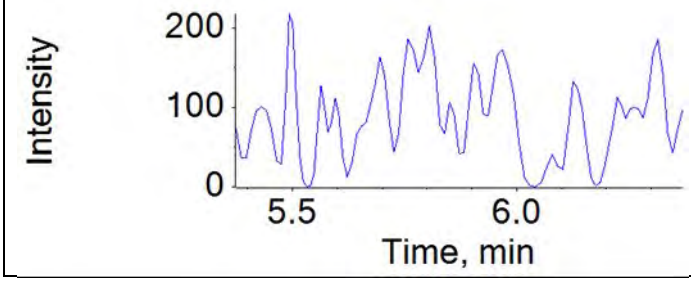
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

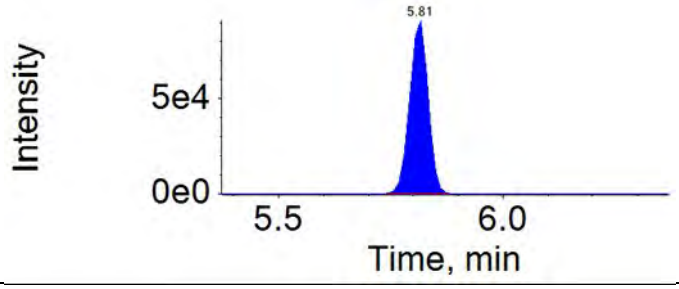
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



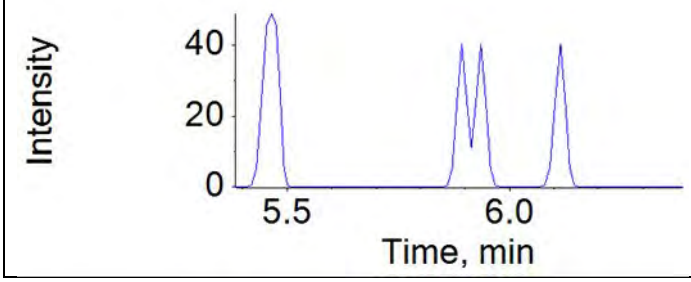


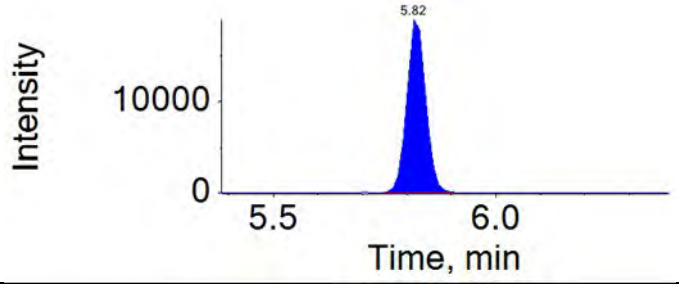
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



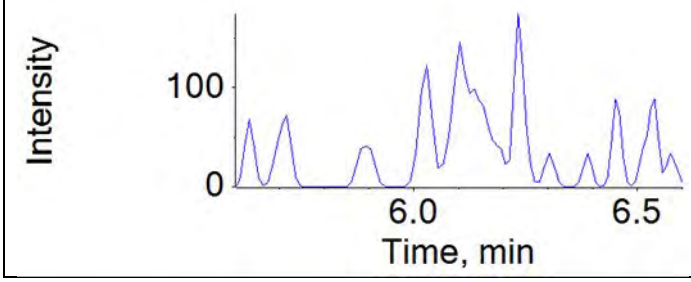


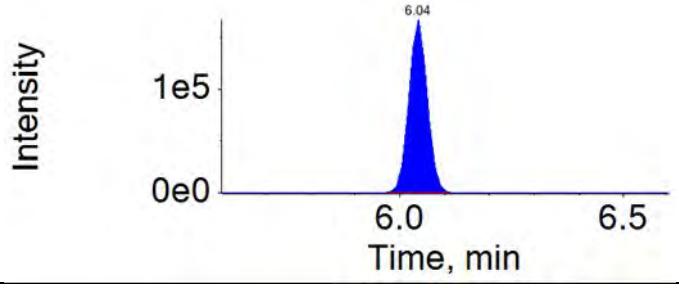
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0





Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



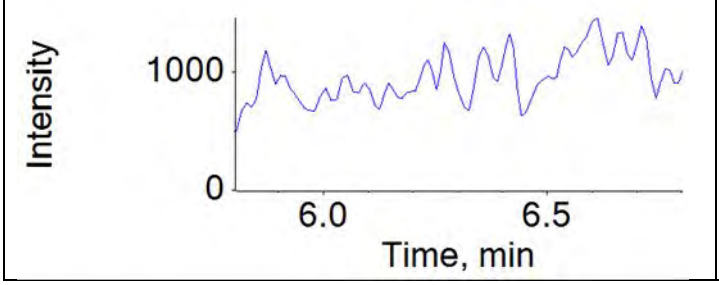


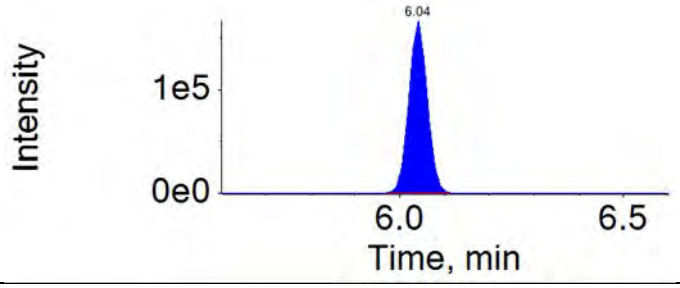
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

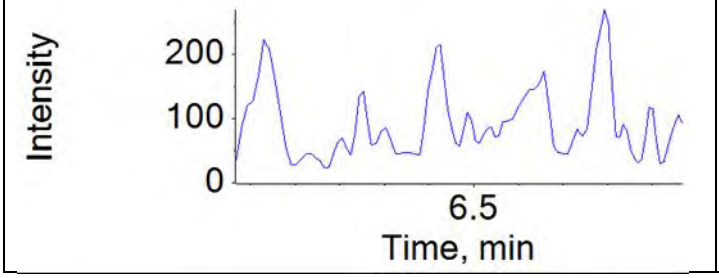
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

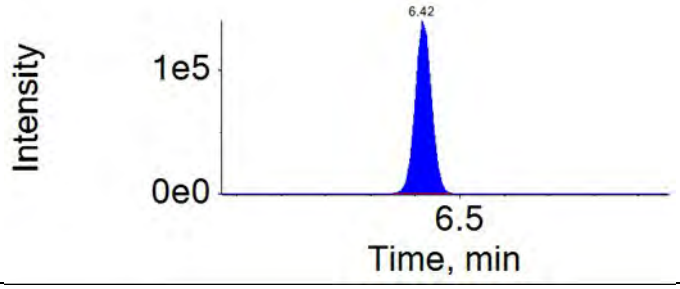
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0





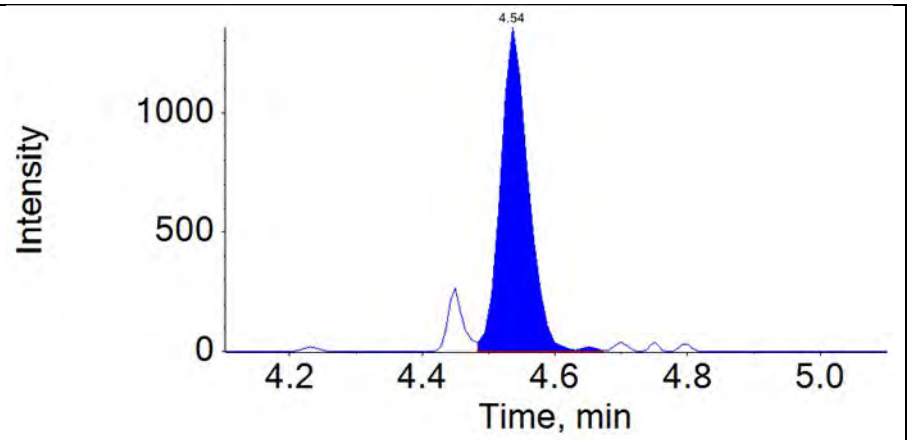
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0





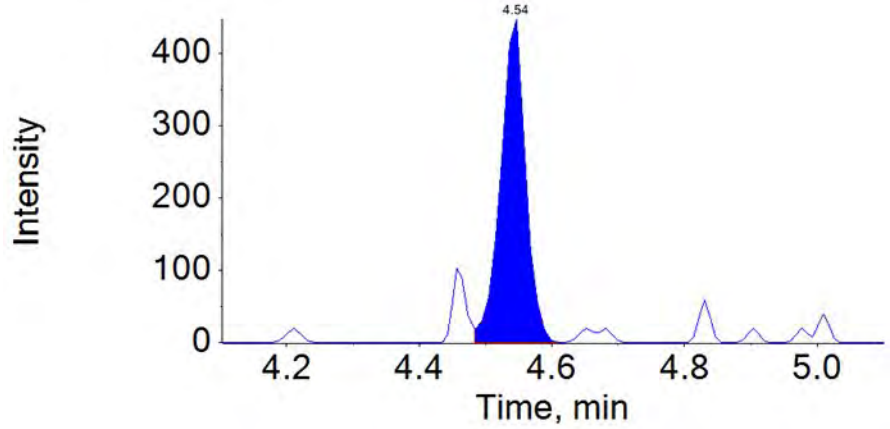
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
3943.2
Mass Range:
399.0 / 80.0
File Name:
18NOV07D-64.wiff
Sample Name:
9881962



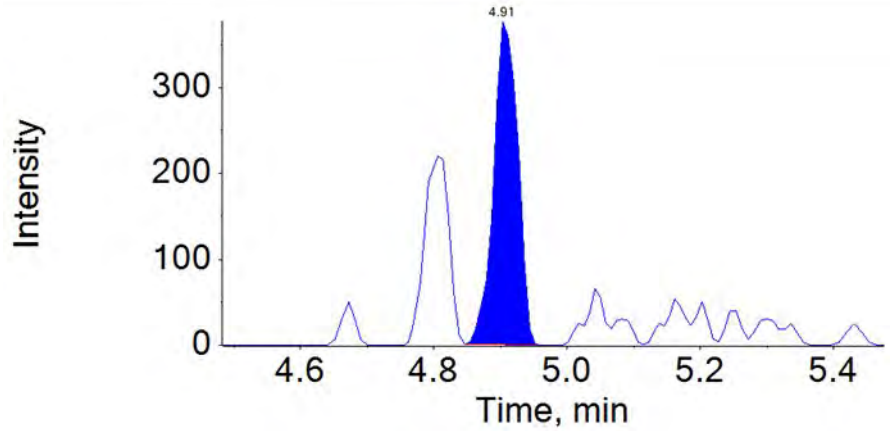
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
1175.6
Mass Range:
399.0 / 99.0
File Name:
18NOV07D-64.wiff
Sample Name:
9881962



Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.91
Peak Area:
953.9
Mass Range:
413.0 / 169.0
File Name:
18NOV07D-64.wiff
Sample Name:
9881962



Integration Comment: incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Ion Ratio Report

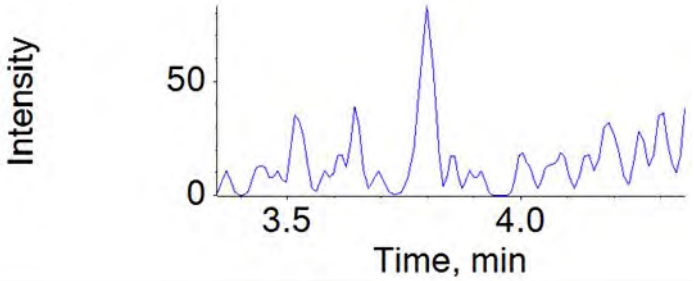
Sample Name: 9881962 **Instrument Name:** LM27631 **File Name:** 18NOV07D-64.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	4.15	1.00	204494.1	A	N/A	0.0121			
PFHxA_2	4.15	1.00	2477.0	A	N/A	0.0121	7	50	
PFHxS	4.54	1.00	4335.9	M	N/A	0.3050			
PFHxS_2	4.54	1.00	1322.3	M	N/A	0.3050	-15	50	
PFHpA	4.54	1.00	17877.0	A	N/A	0.0556			
PFHpA_2	4.54	1.00	994.3	A	N/A	0.0556	-4	50	
PFOA	4.91	1.00	14990.7	A	N/A	0.1019			
PFOA_2	4.90	1.00	1528.0	M	N/A	0.1019	60	50	OOS
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	

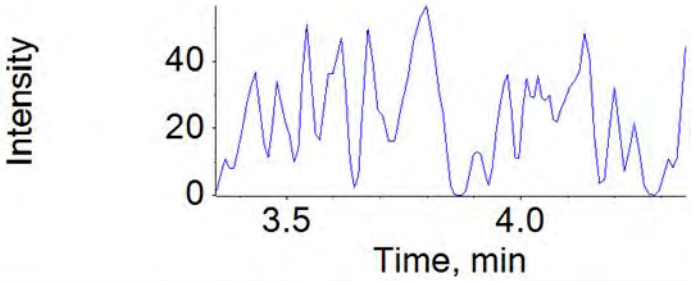
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

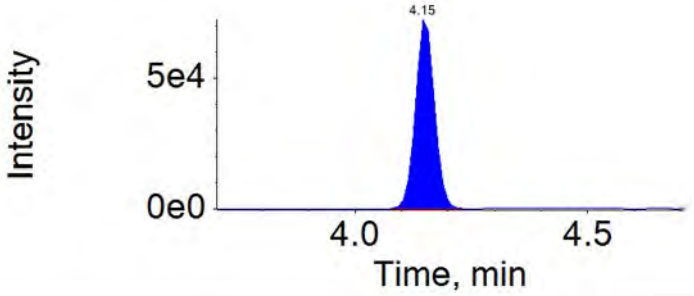
Component: PFBS
Primary Mass: 299.0 / 80.0



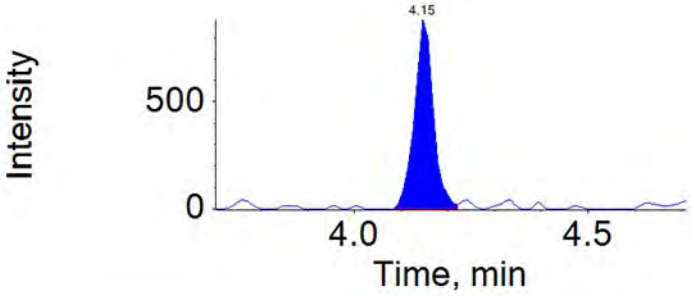
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



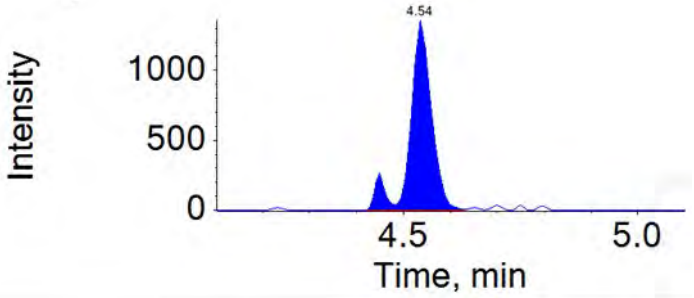
Component: PFHxA
Primary Mass: 313.0 / 269.0



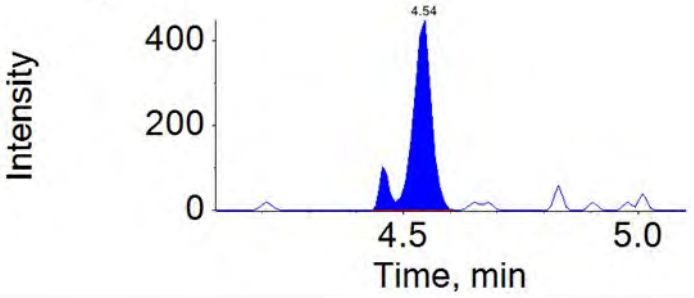
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



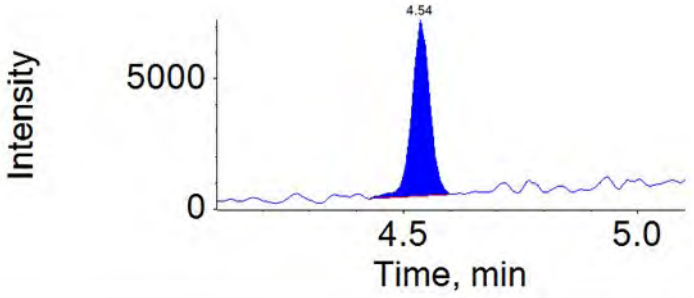
Component: PFHxS
Primary Mass: 399.0 / 80.0



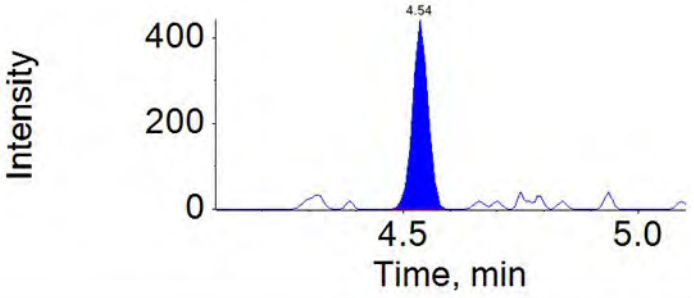
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



Component: PFHpA
Primary Mass: 363.0 / 319.0



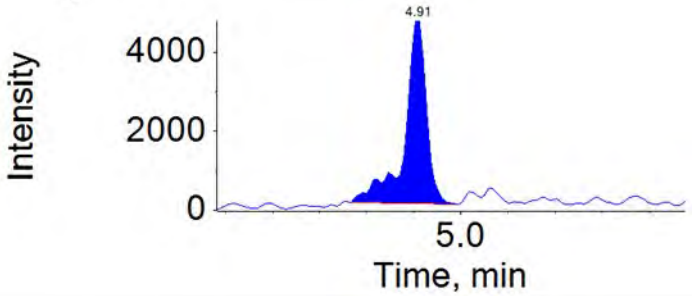
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



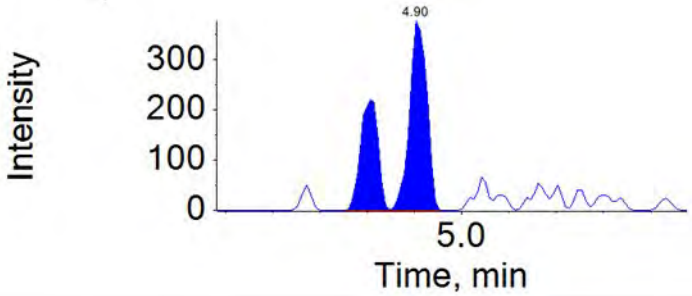
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

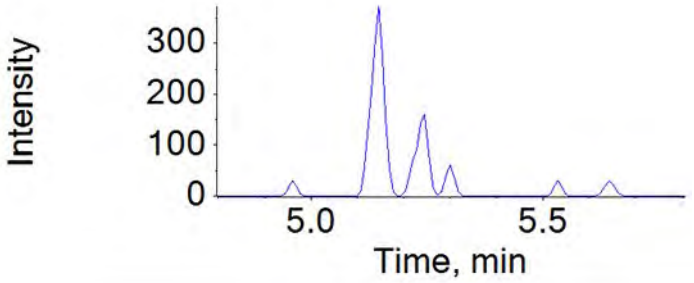
Component: PFOA
Primary Mass: 413.0 / 369.0



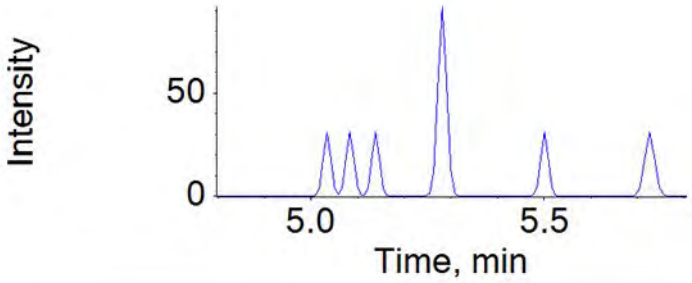
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



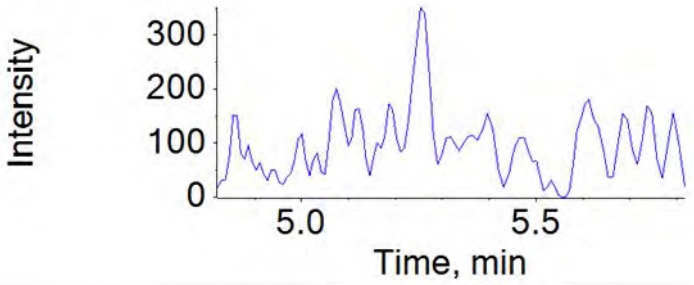
Component: PFOS
Primary Mass: 499.0 / 80.0



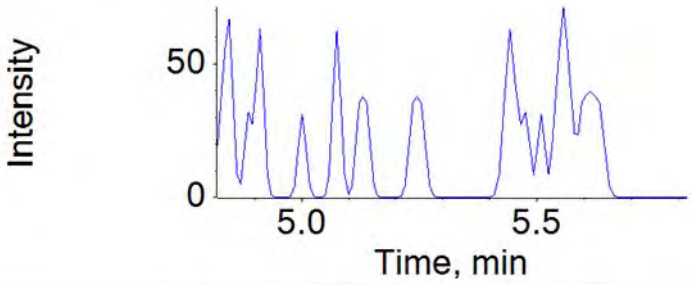
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



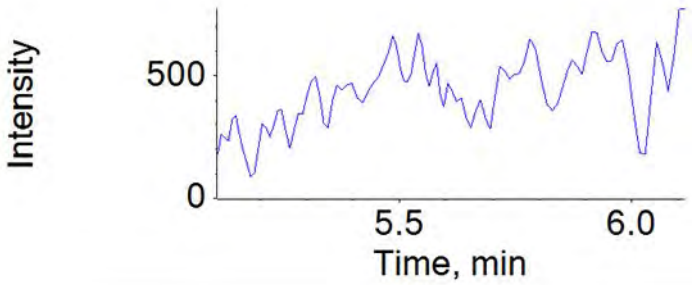
Component: PFNA
Primary Mass: 463.0 / 419.0



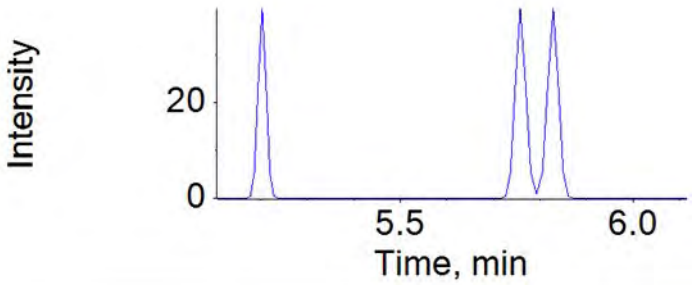
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFDA
Primary Mass: 513.0 / 469.0



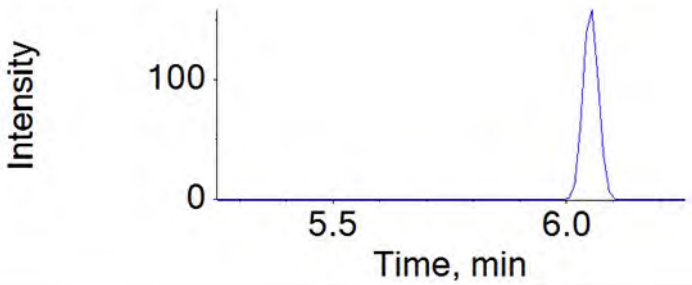
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



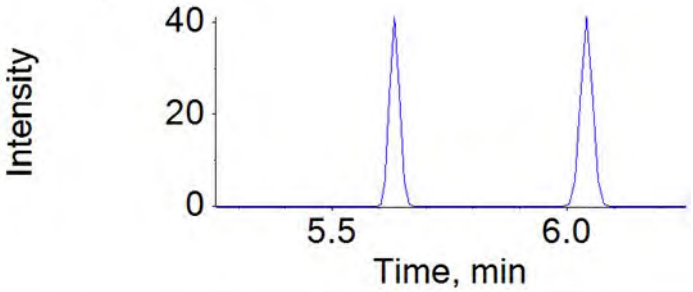
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

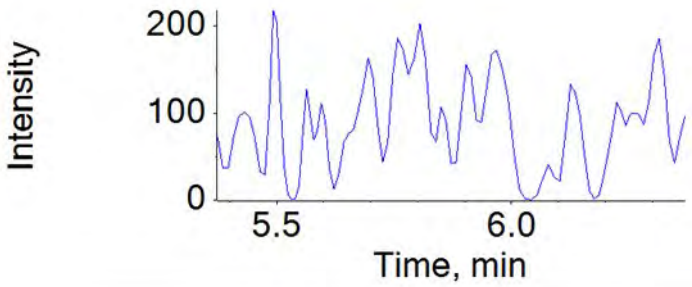
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



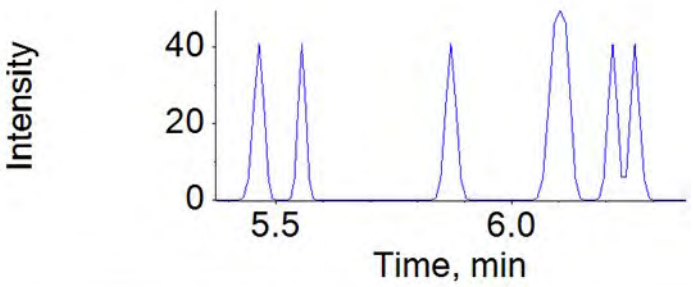
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



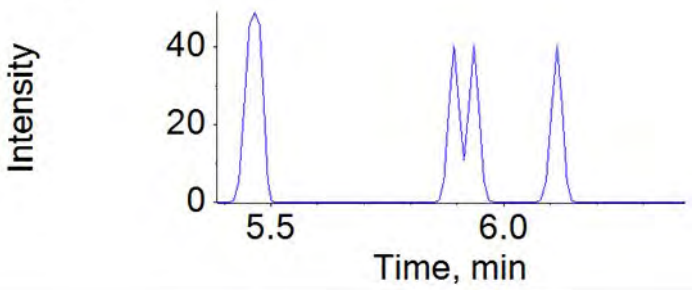
Component: PFUnDA
Primary Mass: 563.0 / 519.0



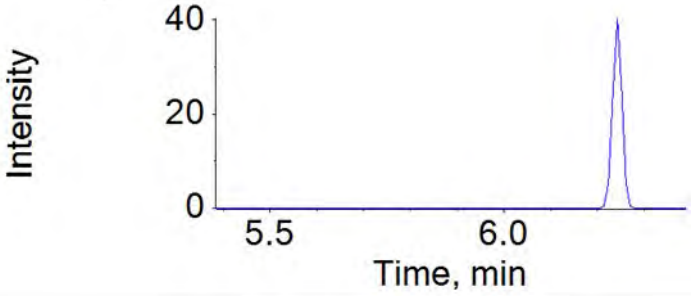
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



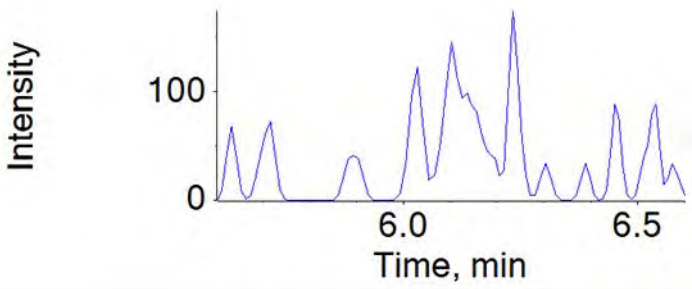
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



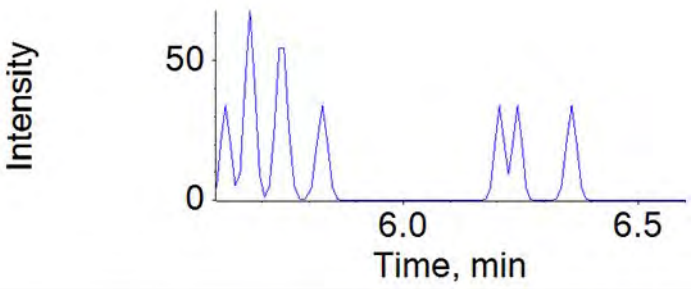
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



Component: PFDoDA
Primary Mass: 613.0 / 569.0



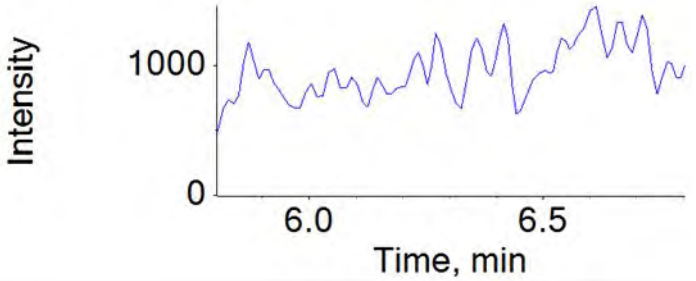
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



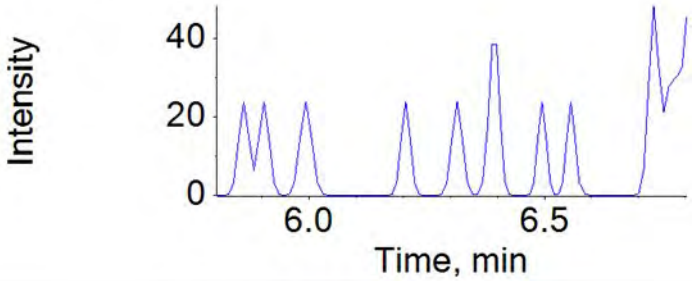
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

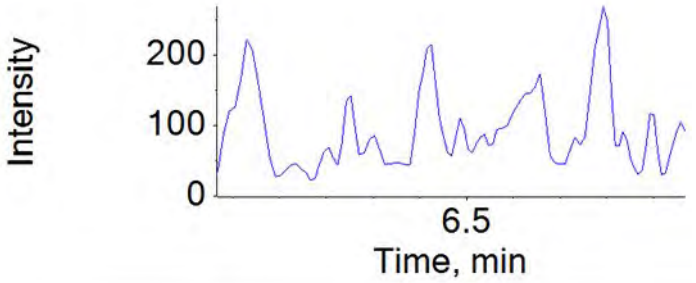
Component: PFTrDA
Primary Mass: 663.0 / 619.0



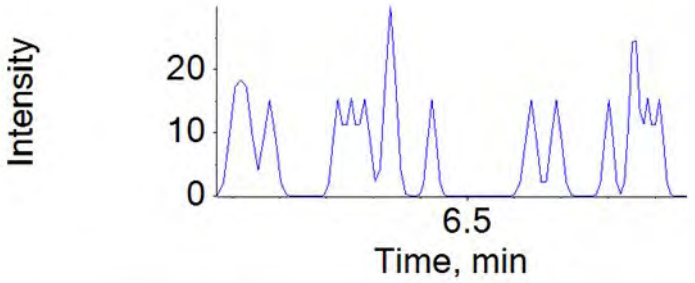
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



Component: PFTeDA
Primary Mass: 713.0 / 669.0



Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Standards Data

PFAS by LC/MS/MS

Instrument Name: LM27631

Data File Name	Sample ID	Batch No	Analysis Date/Time
18NOV07DCAL-09.wiff	MDL	N/A	11/7/2018 9:30:56 AM
18NOV07DCAL-10.wiff	CAL1	N/A	11/7/2018 9:39:56 AM
18NOV07DCAL-11.wiff	CAL2	N/A	11/7/2018 9:48:56 AM
18NOV07DCAL-12.wiff	CAL3	N/A	11/7/2018 9:57:56 AM
18NOV07DCAL-13.wiff	CAL4	N/A	11/7/2018 10:06:59 AM
18NOV07DCAL-14.wiff	CAL5	N/A	11/7/2018 10:15:59 AM
18NOV07DCAL-15.wiff	CAL6	N/A	11/7/2018 10:24:59 AM
18NOV07DCAL-16.wiff	CAL7	N/A	11/7/2018 10:33:59 AM
18NOV07DCAL-17.wiff	Instrument Blank	N/A	11/7/2018 10:42:59 AM
18NOV07DCAL-18.wiff	ICV	N/A	11/7/2018 10:51:59 AM
18NOV07DCAL-19.wiff	L+B CAL3	N/A	11/7/2018 11:00:59 AM
18NOV07DCAL-20.wiff	CCV1_CAL3	N/A	11/7/2018 11:09:59 AM
18NOV07D-01.wiff	solvent	N/A	11/7/2018 11:20:42 AM
18NOV07D-02.wiff	Tape Test A	18310020	11/7/2018 11:29:44 AM
18NOV07D-03.wiff	Tape Test B	18310020	11/7/2018 11:38:44 AM
18NOV07D-04.wiff	solvent	N/A	11/7/2018 11:47:44 AM
18NOV07D-05.wiff	CCV1_ISC_CAL2	N/A	11/7/2018 11:56:44 AM
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18NOV07D-09.wiff	LCSDA	18308002	11/7/2018 12:32:47 PM
18NOV07D-10.wiff	9878747	18308002	11/7/2018 12:41:47 PM
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18NOV07D-18.wiff	9881938MS	18309005	11/7/2018 1:54:00 PM
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18NOV07D-21.wiff	9881941	18309005	11/7/2018 2:21:00 PM
18NOV07D-22.wiff	9881943	18309005	11/7/2018 2:30:00 PM
18NOV07D-23.wiff	9881944	18309005	11/7/2018 2:39:00 PM
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18NOV07D-25.wiff	9881945	18309005	11/7/2018 2:57:00 PM
18NOV07D-26.wiff	9881946	18309005	11/7/2018 3:06:00 PM
18NOV07D-27.wiff	9881949	18309005	11/7/2018 3:15:00 PM
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18NOV07D-41.wiff	9881869	18309011	11/7/2018 5:21:21 PM
18NOV07D-42.wiff	9881870	18309011	11/7/2018 5:30:21 PM
18NOV07D-43.wiff	9881871BKG	18309011	11/7/2018 5:39:21 PM
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18NOV07D-45.wiff	9881873MSD	18309011	11/7/2018 5:57:24 PM

APPROVED
By MCD at 7:15 pm, 11/8/18

Instrument Name: LM27631

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18NOV07D-47.wiff	CCV5_CAL3	N/A	11/7/2018 6:15:30 PM
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18NOV07D-49.wiff	9881936	18309011	11/7/2018 6:33:33 PM
18NOV07D-50.wiff	9881937	18309011	11/7/2018 6:42:36 PM
18NOV07D-51.wiff	CCV6_CAL4	N/A	11/7/2018 6:51:39 PM
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18NOV07D-61.wiff	9881958	18309005	11/7/2018 8:25:06 PM
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18NOV07D-69.wiff	9881870	18309011	11/7/2018 9:37:12 PM
18NOV07D-70.wiff	9881871BKG	18309011	11/7/2018 9:46:15 PM
18NOV07D-71.wiff	9881872MS	18309011	11/7/2018 9:55:15 PM
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18NOV07D-89.wiff	solvent	N/A	11/8/2018 12:37:30 AM
18NOV07D-90.wiff	BLK310002	18310002	11/8/2018 12:46:33 AM
18NOV07D-91.wiff	LCS310002	18310002	11/8/2018 12:55:33 AM
18NOV07D-92.wiff	LCSDA	18310002	11/8/2018 1:04:36 AM
18NOV07D-93.wiff	9881534	18310002	11/8/2018 1:13:36 AM
18NOV07D-94.wiff	9881535	18310002	11/8/2018 1:22:36 AM
18NOV07D-95.wiff	9881579	18310002	11/8/2018 1:31:36 AM
18NOV07D-96.wiff	9881580	18310002	11/8/2018 1:40:36 AM
18NOV07D-97.wiff	9881925	18310002	11/8/2018 1:49:36 AM
18NOV07D-98.wiff	CCV10_CAL3	N/A	11/8/2018 1:58:36 AM
18NOV07D-99.wiff	9881942	18310002	11/8/2018 2:07:36 AM
18NOV07D-100.wiff	9881979	18310002	11/8/2018 2:16:36 AM
18NOV07D-101.wiff	9881980	18310002	11/8/2018 2:25:36 AM
18NOV07D-102.wiff	CCV11_CAL4	N/A	11/8/2018 2:34:36 AM
18NOV07D-103.wiff	solvent	N/A	11/8/2018 10:32:10 AM

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Instrument Name: LM27631

18NOV07D-104.wiff	solvent	N/A	11/8/2018 10:41:10 AM
18NOV07D-105.wiff	solvent	N/A	11/8/2018 10:50:13 AM

20 mM Ammonium Acetate in H2O: 782411021833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 782411021833B

Instrument Name: LM27631

Data File Name	Sample ID	Batch No	Analysis Date/Time
18NOV07DCAL-09.wiff	MDL	N/A	11/7/2018 9:30:56 AM
18NOV07DCAL-10.wiff	CAL1	N/A	11/7/2018 9:39:56 AM
18NOV07DCAL-11.wiff	CAL2	N/A	11/7/2018 9:48:56 AM
18NOV07DCAL-12.wiff	CAL3	N/A	11/7/2018 9:57:56 AM
18NOV07DCAL-13.wiff	CAL4	N/A	11/7/2018 10:06:59 AM
18NOV07DCAL-14.wiff	CAL5	N/A	11/7/2018 10:15:59 AM
18NOV07DCAL-15.wiff	CAL6	N/A	11/7/2018 10:24:59 AM
18NOV07DCAL-16.wiff	CAL7	N/A	11/7/2018 10:33:59 AM
18NOV07DCAL-17.wiff	Instrument Blank	N/A	11/7/2018 10:42:59 AM
18NOV07DCAL-18.wiff	ICV	N/A	11/7/2018 10:51:59 AM
18NOV07DCAL-19.wiff	L+B CAL3	N/A	11/7/2018 11:00:59 AM
18NOV07DCAL-20.wiff	CCV1_CAL3	N/A	11/7/2018 11:09:59 AM
18NOV08D-01.wiff	solvent	N/A	11/8/2018 11:48:33 AM
18NOV08D-02.wiff	solvent	N/A	11/8/2018 11:57:34 AM
18NOV08D-03.wiff	solvent	N/A	11/8/2018 12:06:37 PM
18NOV08D-04.wiff	solvent	N/A	11/8/2018 12:15:40 PM
18NOV08D-05.wiff	CCV1_ISC_CAL2	N/A	11/8/2018 12:24:40 PM
18NOV08D-06.wiff	INBLK	N/A	11/8/2018 12:33:40 PM
18NOV08D-07.wiff	9881945	18309005	11/8/2018 12:42:43 PM
18NOV08D-08.wiff	9881946	18309005	11/8/2018 12:51:43 PM
18NOV08D-09.wiff	9881949	18309005	11/8/2018 1:00:46 PM
18NOV08D-10.wiff	9881950	18309005	11/8/2018 1:09:46 PM
18NOV08D-11.wiff	9881951	18309005	11/8/2018 1:18:46 PM
18NOV08D-12.wiff	9881952	18309005	11/8/2018 1:27:49 PM
18NOV08D-13.wiff	9881955	18309005	11/8/2018 1:36:52 PM
18NOV08D-14.wiff	9881956	18309005	11/8/2018 1:45:52 PM
18NOV08D-15.wiff	9881957	18309005	11/8/2018 1:54:52 PM
18NOV08D-16.wiff	9881958	18309005	11/8/2018 2:03:52 PM
18NOV08D-17.wiff	CCV2_CAL3	N/A	11/8/2018 2:12:52 PM
18NOV08D-18.wiff	9881931	18309011	11/8/2018 2:21:52 PM
18NOV08D-19.wiff	9881936	18309011	11/8/2018 2:30:55 PM
18NOV08D-20.wiff	9881937	18309011	11/8/2018 2:39:58 PM
18NOV08D-21.wiff	solvent	N/A	11/8/2018 2:48:58 PM
18NOV08D-22.wiff	BLK310003	18310003	11/8/2018 2:58:01 PM
18NOV08D-23.wiff	LCS310003	18310003	11/8/2018 3:07:01 PM
18NOV08D-24.wiff	9881926	18310003	11/8/2018 3:16:01 PM
18NOV08D-25.wiff	9881927	18310003	11/8/2018 3:25:01 PM
18NOV08D-26.wiff	9881928BKG	18310003	11/8/2018 3:34:01 PM
18NOV08D-27.wiff	9881929MS	18310003	11/8/2018 3:43:04 PM
18NOV08D-28.wiff	9881930MSD	18310003	11/8/2018 3:52:04 PM
18NOV08D-29.wiff	CCV3_CAL4	N/A	11/8/2018 4:01:07 PM
18NOV08D-30.wiff	9881963	18310003	11/8/2018 4:10:10 PM
18NOV08D-31.wiff	9881964	18310003	11/8/2018 4:19:13 PM
18NOV08D-32.wiff	9881967	18310003	11/8/2018 4:28:13 PM
18NOV08D-33.wiff	9881968	18310003	11/8/2018 4:37:16 PM
18NOV08D-34.wiff	9881969	18310003	11/8/2018 4:46:19 PM
18NOV08D-35.wiff	9881970	18310003	11/8/2018 4:55:19 PM
18NOV08D-36.wiff	9881973	18310003	11/8/2018 5:04:22 PM
18NOV08D-37.wiff	9881974	18310003	11/8/2018 5:13:22 PM
18NOV08D-38.wiff	9881975	18310003	11/8/2018 5:22:23 PM
18NOV08D-39.wiff	9881976	18310003	11/8/2018 5:31:22 PM
18NOV08D-40.wiff	CCV4_ISC_CAL2	N/A	11/8/2018 5:40:25 PM
18NOV08D-41.wiff	solvent	N/A	11/8/2018 5:49:25 PM
18NOV08D-42.wiff	BLK311003	18311003	11/8/2018 5:58:28 PM
18NOV08D-43.wiff	LCS311003	18311003	11/8/2018 6:07:28 PM
18NOV08D-44.wiff	9881573	18311003	11/8/2018 6:16:28 PM
18NOV08D-45.wiff	9881574	18311003	11/8/2018 6:25:28 PM

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Instrument Name: LM27631

18NOV08D-46.wiff	9881575	18311003	11/8/2018 6:34:31 PM
18NOV08D-47.wiff	9881576	18311003	11/8/2018 6:43:31 PM
18NOV08D-48.wiff	9881581	18311003	11/8/2018 6:52:32 PM
18NOV08D-49.wiff	9881582	18311003	11/8/2018 7:01:34 PM
18NOV08D-50.wiff	9881583BKG	18311003	11/8/2018 7:10:34 PM
18NOV08D-51.wiff	9881584MS	18311003	11/8/2018 7:19:34 PM
18NOV08D-52.wiff	CCV5_CAL3	N/A	11/8/2018 7:28:37 PM
18NOV08D-53.wiff	9881585MSD	18311003	11/8/2018 7:37:37 PM
18NOV08D-54.wiff	9881586	18311003	11/8/2018 7:46:40 PM
18NOV08D-55.wiff	9881589	18311003	11/8/2018 7:55:43 PM
18NOV08D-56.wiff	9881590	18311003	11/8/2018 8:04:46 PM
18NOV08D-57.wiff	9881591	18311003	11/8/2018 8:13:46 PM
18NOV08D-58.wiff	9881592	18311003	11/8/2018 8:22:46 PM
18NOV08D-59.wiff	9881594	18311003	11/8/2018 8:31:46 PM
18NOV08D-60.wiff	9881595	18311003	11/8/2018 8:40:46 PM
18NOV08D-61.wiff	9881596	18311003	11/8/2018 8:49:46 PM
18NOV08D-62.wiff	CCV6_CAL4	N/A	11/8/2018 8:58:46 PM
18NOV08D-63.wiff	9885111	18311003	11/8/2018 9:07:46 PM
18NOV08D-64.wiff	9885112	18311003	11/8/2018 9:16:46 PM
18NOV08D-65.wiff	9885113	18311003	11/8/2018 9:25:49 PM
18NOV08D-66.wiff	solvent	N/A	11/8/2018 9:34:50 PM
18NOV08D-67.wiff	9878747DL	18308002	11/8/2018 9:43:53 PM
18NOV08D-68.wiff	solvent	N/A	11/8/2018 9:52:55 PM
18NOV08D-69.wiff	BLK310012	18310012	11/8/2018 10:01:55 PM
18NOV08D-70.wiff	LCS310012	18310012	11/8/2018 10:10:58 PM
18NOV08D-71.wiff	9881902	18310012	11/8/2018 10:20:02 PM
18NOV08D-72.wiff	9881903	18310012	11/8/2018 10:29:05 PM
18NOV08D-73.wiff	9881904	18310012	11/8/2018 10:38:07 PM
18NOV08D-74.wiff	9881907BKG	18310012	11/8/2018 10:47:07 PM
18NOV08D-75.wiff	CCV7_ISC_CAL2	N/A	11/8/2018 10:56:07 PM
18NOV08D-76.wiff	Instrument Blank	N/A	11/8/2018 11:05:11 PM
18NOV08D-77.wiff	9881908MS	18310012	11/8/2018 11:14:11 PM
18NOV08D-78.wiff	9881909MSD	18310012	11/8/2018 11:23:13 PM
18NOV08D-79.wiff	9881910	18310012	11/8/2018 11:32:16 PM
18NOV08D-80.wiff	9881911	18310012	11/8/2018 11:41:16 PM
18NOV08D-81.wiff	9881912	18310012	11/8/2018 11:50:20 PM
18NOV08D-82.wiff	9881915	18310012	11/8/2018 11:59:23 PM
18NOV08D-83.wiff	9881916	18310012	11/9/2018 12:08:25 AM
18NOV08D-84.wiff	9881917	18310012	11/9/2018 12:17:25 AM
18NOV08D-85.wiff	9881918	18310012	11/9/2018 12:26:28 AM
18NOV08D-86.wiff	CCV8_CAL3	N/A	11/9/2018 12:35:31 AM
18NOV08D-87.wiff	solvent	N/A	11/9/2018 12:44:31 AM
18NOV08D-88.wiff	BLK311004	18311004	11/9/2018 12:53:31 AM
18NOV08D-89.wiff	LCS311004	18311004	11/9/2018 1:02:32 AM
18NOV08D-90.wiff	9881536	18311004	11/9/2018 1:11:34 AM
18NOV08D-91.wiff	9881537BKG	18311004	11/9/2018 1:20:35 AM
18NOV08D-92.wiff	9881538MS	18311004	11/9/2018 1:29:35 AM
18NOV08D-93.wiff	9881539MSD	18311004	11/9/2018 1:38:35 AM
18NOV08D-94.wiff	9881540	18311004	11/9/2018 1:47:35 AM
18NOV08D-95.wiff	9881541	18311004	11/9/2018 1:56:35 AM
18NOV08D-96.wiff	9881544	18311004	11/9/2018 2:05:35 AM
18NOV08D-97.wiff	9881545	18311004	11/9/2018 2:14:38 AM
18NOV08D-98.wiff	CCV9_CAL4	N/A	11/9/2018 2:23:41 AM
18NOV08D-99.wiff	9883380	18311004	11/9/2018 2:32:44 AM
18NOV08D-100.wiff	9883381	18311004	11/9/2018 2:41:47 AM
18NOV08D-101.wiff	9883386	18311004	11/9/2018 2:50:50 AM
18NOV08D-102.wiff	9883387	18311004	11/9/2018 2:59:50 AM
18NOV08D-103.wiff	9883388	18311004	11/9/2018 3:08:53 AM

APPROVED
By MCD at 7:07 pm, 11/13/18

Instrument Name: LM27631

18NOV08D-104.wiff	9883389	18311004	11/9/2018 3:17:53 AM
18NOV08D-105.wiff	9883392	18311004	11/9/2018 3:26:56 AM
18NOV08D-106.wiff	9883393	18311004	11/9/2018 3:35:56 AM
18NOV08D-107.wiff	9883394	18311004	11/9/2018 3:44:56 AM
18NOV08D-108.wiff	9883395	18311004	11/9/2018 3:53:59 AM
18NOV08D-109.wiff	CCV10_ISC_CAL2	N/A	11/9/2018 4:02:59 AM
18NOV08D-110.wiff	9885114	18311004	11/9/2018 4:11:59 AM
18NOV08D-111.wiff	9885117	18311004	11/9/2018 4:20:59 AM
18NOV08D-112.wiff	CCV11_CAL3	N/A	11/9/2018 4:29:59 AM

20 mM Ammonium Acetate in H2O: 782411021833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 782411021833B

Instrument Name: LM27631

Data File Name	Sample ID	Batch No	Analysis Date/Time
18NOV28DCAL-05.wiff	MDL	N/A	11/28/2018 1:33:07 PM
18NOV28DCAL-06.wiff	CAL1	N/A	11/28/2018 1:42:10 PM
18NOV28DCAL-07.wiff	CAL2	N/A	11/28/2018 1:51:13 PM
18NOV28DCAL-08.wiff	CAL3	N/A	11/28/2018 2:00:13 PM
18NOV28DCAL-09.wiff	CAL4	N/A	11/28/2018 2:09:13 PM
18NOV28DCAL-10.wiff	CAL5	N/A	11/28/2018 2:18:16 PM
18NOV28DCAL-11.wiff	CAL6	N/A	11/28/2018 2:27:16 PM
18NOV28DCAL-12.wiff	CAL7	N/A	11/28/2018 2:36:16 PM
18NOV28DCAL-13.wiff	Instrument Blank	N/A	11/28/2018 2:45:19 PM
18NOV28DCAL-14.wiff	ICV	N/A	11/28/2018 2:54:22 PM
18NOV28DCAL-15.wiff	L+B CAL3	N/A	11/28/2018 3:03:22 PM
18NOV28DCAL-16.wiff	CCV1_CAL3	N/A	11/28/2018 3:12:25 PM
18NOV29D-01.wiff	solvent	N/A	11/29/2018 9:57:32 AM
18NOV29D-02.wiff	solvent	N/A	11/29/2018 10:06:32 AM
18NOV29D-03.wiff	solvent	N/A	11/29/2018 10:15:35 AM
18NOV29D-04.wiff	solvent	N/A	11/29/2018 10:24:35 AM
18NOV29D-05.wiff	CCV1_ISC_CAL2	N/A	11/29/2018 10:33:38 AM
18NOV29D-06.wiff	Instrument Blank	N/A	11/29/2018 10:42:38 AM
18NOV29D-07.wiff	BLK331005	18331005	11/29/2018 10:51:41 AM
18NOV29D-08.wiff	LCS331005	18331005	11/29/2018 11:00:41 AM
18NOV29D-09.wiff	9911369	18331005	11/29/2018 11:09:41 AM
18NOV29D-10.wiff	9911370	18331005	11/29/2018 11:18:41 AM
18NOV29D-11.wiff	9911371	18331005	11/29/2018 11:27:41 AM
18NOV29D-12.wiff	9911372	18331005	11/29/2018 11:36:41 AM
18NOV29D-13.wiff	9911373BKG	18331005	11/29/2018 11:45:44 AM
18NOV29D-14.wiff	9911376	18331005	11/29/2018 11:54:47 AM
18NOV29D-15.wiff	9911377	18331005	11/29/2018 12:03:47 PM
18NOV29D-16.wiff	9911378	18331005	11/29/2018 12:12:50 PM
18NOV29D-17.wiff	CCV2_CAL3	N/A	11/29/2018 12:21:50 PM
18NOV29D-18.wiff	solvent	N/A	11/29/2018 12:30:50 PM
18NOV29D-19.wiff	BLK331006	18331006	11/29/2018 12:39:54 PM
18NOV29D-20.wiff	LCS331006	18331006	11/29/2018 12:48:53 PM
18NOV29D-21.wiff	9911416	18331006	11/29/2018 12:57:56 PM
18NOV29D-22.wiff	9911417	18331006	11/29/2018 1:06:56 PM
18NOV29D-23.wiff	9911418	18331006	11/29/2018 1:15:56 PM
18NOV29D-24.wiff	9911419	18331006	11/29/2018 1:24:56 PM
18NOV29D-25.wiff	9911420BKG	18331006	11/29/2018 1:33:59 PM
18NOV29D-26.wiff	9911423	18331006	11/29/2018 1:42:59 PM
18NOV29D-27.wiff	9911424	18331006	11/29/2018 1:51:59 PM
18NOV29D-28.wiff	9911425	18331006	11/29/2018 2:01:02 PM
18NOV29D-29.wiff	CCV3_CAL4	N/A	11/29/2018 2:10:02 PM
18NOV29D-30.wiff	9911426	18331006	11/29/2018 2:19:02 PM
18NOV29D-31.wiff	9911427	18331006	11/29/2018 2:28:02 PM
18NOV29D-32.wiff	9911428	18331006	11/29/2018 2:37:02 PM
18NOV29D-33.wiff	9911429	18331006	11/29/2018 2:46:03 PM
18NOV29D-34.wiff	9911430	18331006	11/29/2018 2:55:03 PM
18NOV29D-35.wiff	9911431	18331006	11/29/2018 3:04:03 PM
18NOV29D-36.wiff	9911432	18331006	11/29/2018 3:13:03 PM
18NOV29D-37.wiff	9911433	18331006	11/29/2018 3:22:03 PM
18NOV29D-38.wiff	9911434	18331006	11/29/2018 3:31:06 PM
18NOV29D-39.wiff	9911421MS	18331006	11/29/2018 3:40:06 PM
18NOV29D-40.wiff	CCV4_ISC_CAL2	N/A	11/29/2018 3:49:06 PM
18NOV29D-41.wiff	9911422MSD	18331006	11/29/2018 3:58:06 PM
18NOV29D-42.wiff	solvent	N/A	11/29/2018 4:07:08 PM
18NOV29D-43.wiff	BLK331014	18331014	11/29/2018 4:16:09 PM
18NOV29D-44.wiff	LCS331014	18331014	11/29/2018 4:25:12 PM
18NOV29D-45.wiff	LCSDA	18331014	11/29/2018 4:34:15 PM

APPROVED
By MCD at 11:04 pm, 11/30/18

Instrument Name: LM27631

18NOV29D-46.wiff	9881899	18331014	11/29/2018 4:43:18 PM
18NOV29D-47.wiff	9881900	18331014	11/29/2018 4:52:21 PM
18NOV29D-48.wiff	9881932	18331014	11/29/2018 5:01:24 PM
18NOV29D-49.wiff	9881933BKG	18331014	11/29/2018 5:10:27 PM
18NOV29D-50.wiff	9881947	18331014	11/29/2018 5:19:30 PM
18NOV29D-51.wiff	9881948	18331014	11/29/2018 5:28:33 PM
18NOV29D-52.wiff	CCV5_CAL3	N/A	11/29/2018 5:37:36 PM
18NOV29D-53.wiff	9881899MS	18331014	11/29/2018 5:46:36 PM
18NOV29D-54.wiff	solvent	N/A	11/29/2018 5:55:39 PM
18NOV29D-55.wiff	BLK332003	18332003	11/29/2018 6:04:39 PM
18NOV29D-56.wiff	LCS332003	18332003	11/29/2018 6:13:39 PM
18NOV29D-57.wiff	9881542	18332003	11/29/2018 6:22:39 PM
18NOV29D-58.wiff	9881543	18332003	11/29/2018 6:31:39 PM
18NOV29D-59.wiff	9883382BKG	18332003	11/29/2018 6:40:42 PM
18NOV29D-60.wiff	9883385	18332003	11/29/2018 6:49:45 PM
18NOV29D-61.wiff	9883396	18332003	11/29/2018 6:58:45 PM
18NOV29D-62.wiff	9883397	18332003	11/29/2018 7:07:45 PM
18NOV29D-63.wiff	9885076	18332003	11/29/2018 7:16:48 PM
18NOV29D-64.wiff	CCV6_CAL4	N/A	11/29/2018 7:25:48 PM
18NOV29D-65.wiff	9885077	18332003	11/29/2018 7:34:51 PM
18NOV29D-66.wiff	9885091	18332003	11/29/2018 7:43:54 PM
18NOV29D-67.wiff	9885133	18332003	11/29/2018 7:52:57 PM
18NOV29D-68.wiff	9885134	18332003	11/29/2018 8:02:00 PM
18NOV29D-69.wiff	9885151	18332003	11/29/2018 8:11:03 PM
18NOV29D-70.wiff	9883383MS	18332003	11/29/2018 8:20:03 PM
18NOV29D-71.wiff	9883384MSD	18332003	11/29/2018 8:29:03 PM
18NOV29D-72.wiff	CCV7_ISC_CAL2	N/A	11/29/2018 8:38:03 PM
18NOV29D-73.wiff	Instrument Blank	N/A	11/29/2018 8:47:06 PM
18NOV29D-74.wiff	9911358	18330003	11/29/2018 8:56:09 PM
18NOV29D-75.wiff	9911366	18330003	11/29/2018 9:05:09 PM
18NOV29D-76.wiff	9911367	18330003	11/29/2018 9:14:09 PM
18NOV29D-77.wiff	9909757	18330013	11/29/2018 9:23:09 PM
18NOV29D-78.wiff	9909762	18330013	11/29/2018 9:32:09 PM
18NOV29D-79.wiff	CCV8_CAL3	N/A	11/29/2018 9:41:09 PM
18NOV29D-80.wiff	BLK332013	18332013	11/29/2018 9:50:12 PM
18NOV29D-81.wiff	LCS332013	18332013	11/29/2018 9:59:15 PM
18NOV29D-82.wiff	9909732	18332013	11/29/2018 10:08:18 PM
18NOV29D-83.wiff	9909733	18332013	11/29/2018 10:17:21 PM
18NOV29D-84.wiff	9909734BKG	18332013	11/29/2018 10:26:24 PM
18NOV29D-85.wiff	9909735	18332013	11/29/2018 10:35:27 PM
18NOV29D-86.wiff	9909736	18332013	11/29/2018 10:44:30 PM
18NOV29D-87.wiff	9909737	18332013	11/29/2018 10:53:33 PM
18NOV29D-88.wiff	9909738	18332013	11/29/2018 11:02:33 PM
18NOV29D-89.wiff	9909739	18332013	11/29/2018 11:11:36 PM
18NOV29D-90.wiff	CCV9_CAL4	N/A	11/29/2018 11:20:36 PM
18NOV29D-91.wiff	9909740	18332013	11/29/2018 11:29:36 PM
18NOV29D-92.wiff	9909741	18332013	11/29/2018 11:38:36 PM
18NOV29D-93.wiff	9909742	18332013	11/29/2018 11:47:36 PM
18NOV29D-94.wiff	9909743MS	18332013	11/29/2018 11:56:36 PM
18NOV29D-95.wiff	9909744MSD	18332013	11/30/2018 12:05:36 AM

20 mM Ammonium Acetate in H2O: 2615711261833A
20 mM Ammonium Acetate in 0.5% H2O\Methanol: 2615711261833B

APPROVED
By MCD at 11:04 pm, 11/30/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample File Name	Acquisition Date	Sample ID	Sample Name
18NOV07DCAL-10.wiff	11/7/2018 9:39:56 AM	CALMOD11833G	CAL1
18NOV07DCAL-11.wiff	11/7/2018 9:48:56 AM	CALMOD21833F	CAL2
18NOV07DCAL-12.wiff	11/7/2018 9:57:56 AM	CALMOD31833F	CAL3
18NOV07DCAL-13.wiff	11/7/2018 10:06:59 AM	CALMOD41833F	CAL4
18NOV07DCAL-14.wiff	11/7/2018 10:15:59 AM	CALMOD51833F	CAL5
18NOV07DCAL-15.wiff	11/7/2018 10:24:59 AM	CALMOD61833E	CAL6
18NOV07DCAL-16.wiff	11/7/2018 10:33:59 AM	CALMOD71833E	CAL7

CAL3 Injection Standard Areas

Sample Name	Injection Std Name	Injection Std Area
CAL3	13C3-PFBA	730410.6
CAL3	13C2-PFOA	524423.6
CAL3	13C4-PFOS	274061.7
CAL3	13C2-PFDA	311442.1

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Response Factor Table

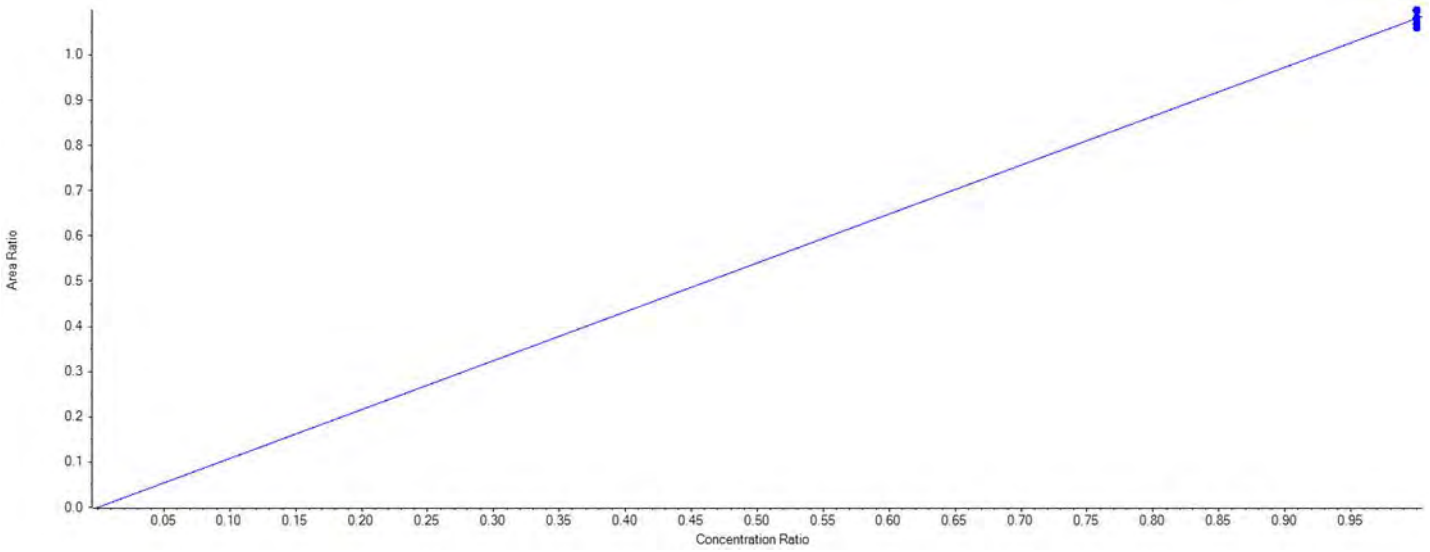
Analyte Name	CAL 1	CAL 2	CAL 3	CAL 4	CAL 5	CAL 6	CAL 7	%RSD	Limit	OOS	r^2	OOS
PFBA	1.018	0.931	0.905	0.934	0.936	0.881	0.816	6	20		0.997	
PFPeA	0.983	0.897	0.863	0.883	0.914	0.858	0.814	6	20		0.998	
PFBS	1.158	0.984	0.907	0.979	0.951	0.960	0.893	8	20		0.999	
4:2-FTS	1.777	1.830	1.827	1.860	1.869	1.731	1.702	3	20		0.999	
PFHxA	1.369	1.233	1.246	1.275	1.253	1.109	N/A	6	20		0.996	
PFPeS	0.454	0.467	0.444	0.498	0.474	0.471	0.470	3	20		1.000	
PFHxS	0.955	0.955	0.893	0.948	0.948	0.935	0.929	2	20		1.000	
PFHpA	1.634	1.603	1.590	1.563	1.579	1.432	N/A	4	20		0.998	
6:2-FTS	1.464	2.292	2.080	2.004	2.131	1.864	1.866	13	20		0.998	
PFHpS	0.984	0.904	0.893	0.946	0.924	0.891	0.903	3	20		1.000	
PFOA	0.969	0.972	0.946	0.995	0.956	0.913	0.852	5	20		0.998	
PFOS	0.998	0.997	0.938	0.958	0.930	0.927	0.914	3	20		1.000	
PFNA	1.571	1.383	1.459	1.439	1.491	1.379	1.276	6	20		0.997	
PFNS	0.553	0.609	0.611	0.650	0.603	0.625	0.588	5	20		0.999	
PFDA	0.980	0.945	0.957	0.980	1.004	0.925	0.875	4	20		0.998	
8:2-FTS	2.603	2.513	2.112	2.184	2.222	2.072	N/A	9	20		0.999	
PFOSA	0.896	0.979	0.964	0.988	0.831	0.967	0.917	6	20		0.998	
NMeFOSAA	0.867	1.180	0.991	1.053	1.044	0.948	0.962	9	20		0.999	
PFDS	0.528	0.545	0.492	0.534	0.504	0.495	0.500	4	20		1.000	
PFUnDA	1.982	1.865	1.891	1.818	1.849	1.776	1.696	5	20		0.999	
NEtFOSAA	1.063	1.102	1.103	1.149	1.294	1.132	1.156	6	20		0.998	
PFDoDA	1.032	1.006	0.944	0.916	0.972	0.902	N/A	5	20		0.999	
10:2-FTS	1.769	1.760	1.607	1.411	1.601	1.578	1.513	7	20		0.999	
NMePFOSAE	1.362	1.238	1.132	1.225	1.231	1.175	1.053	7	20		0.996	
NMePFOSA	0.899	1.015	0.938	0.855	0.985	0.914	0.866	6	20		0.998	
PFDoS	0.247	0.249	0.266	0.257	0.245	0.243	0.249	3	20		1.000	
NEtPFOSAE	1.848	1.807	1.624	1.689	1.741	1.603	1.488	7	20		0.997	
NEtPFOSA	1.082	0.962	0.983	1.069	1.170	1.145	1.133	7	20		1.000	
PFTrDA	0.992	0.824	0.844	0.816	0.844	0.766	N/A	8	20		0.998	
PFTeDA	0.989	0.821	0.895	0.892	0.889	0.857	0.837	6	20		0.999	
PFHxDA	0.475	0.422	0.418	0.420	0.425	0.395	0.400	6	20		0.999	
PFODA	0.385	0.357	0.356	0.356	0.370	0.340	0.348	4	20		0.999	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFBA

y = 1.08045 x (std. dev. = 0.01457) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFBA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	794718.9	750779.984	True	5.00	1.059	3.27	1.000	5.000	4.899	-2	30	
CAL2	782732.8	723209.911	True	5.00	1.082	3.27	1.000	5.000	5.009	0	30	
CAL3	787180.2	730410.641	True	5.00	1.078	3.27	1.000	5.000	4.987	0	30	
CAL4	771359.1	721806.781	True	5.00	1.069	3.27	1.000	5.000	4.945	-1	30	
CAL5	728925.1	664213.611	True	5.00	1.097	3.27	1.000	5.000	5.079	2	30	
CAL6	647849.6	600246.701	True	5.00	1.079	3.26	1.000	5.000	4.995	0	30	
CAL7	609686.1	554647.432	True	5.00	1.099	3.26	1.000	5.000	5.087	2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

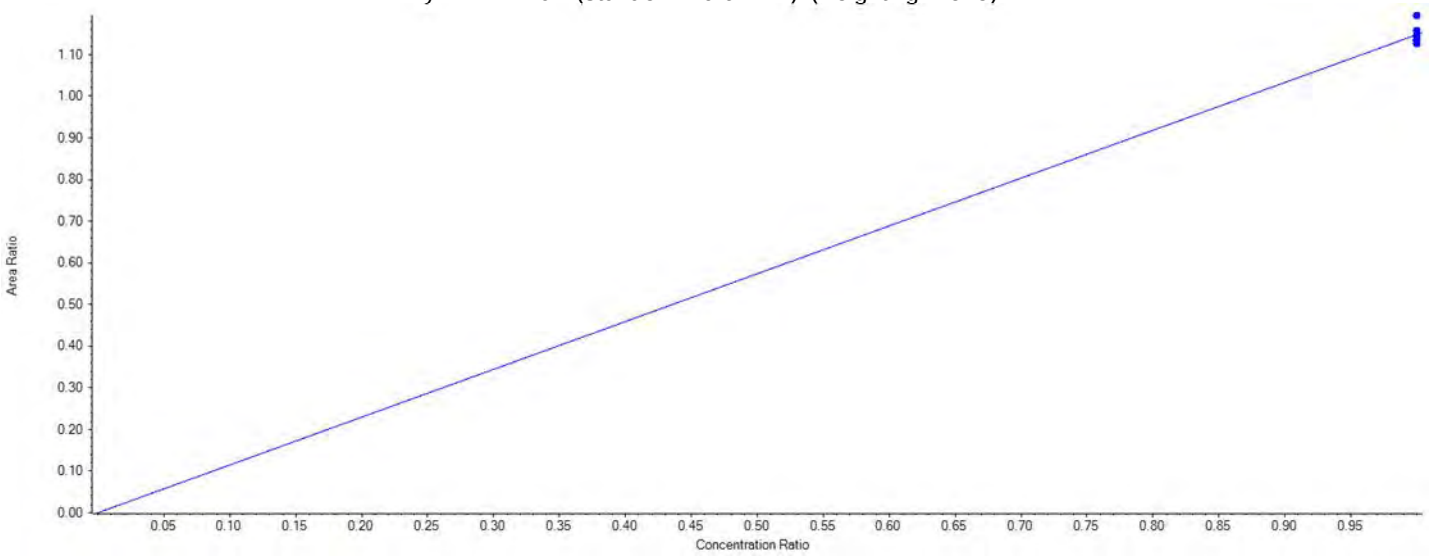
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFPeA

y = 1.14776 x (std. dev. = 0.02271) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C5-PFPeA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	844850.2	750779.984	True	5.00	1.125	3.77	1.150	5.000	4.902	-2	30	
CAL2	863262.8	723209.911	True	5.00	1.194	3.77	1.150	5.000	5.200	4	30	
CAL3	829978.5	730410.641	True	5.00	1.136	3.77	1.150	5.000	4.950	-1	30	
CAL4	824842.8	721806.781	True	5.00	1.143	3.77	1.150	5.000	4.978	0	30	
CAL5	768958.1	664213.611	True	5.00	1.158	3.77	1.150	5.000	5.043	1	30	
CAL6	687796.7	600246.701	True	5.00	1.146	3.76	1.150	5.000	4.992	0	30	
CAL7	628265.5	554647.432	True	5.00	1.133	3.76	1.150	5.000	4.935	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

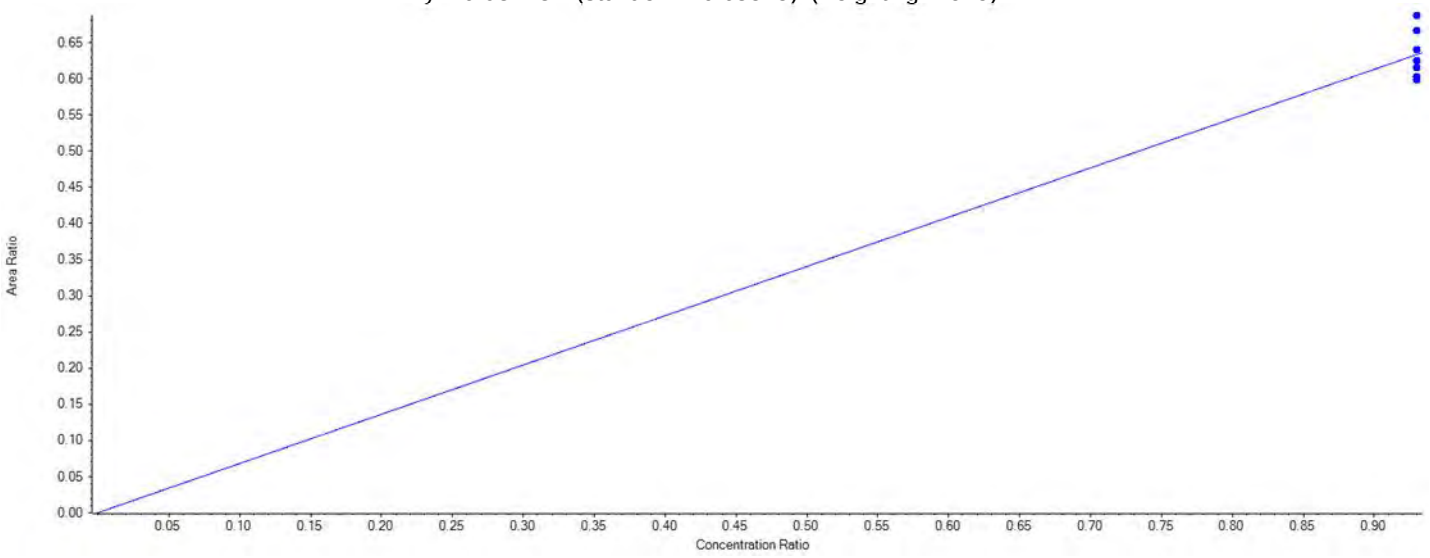
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFBS

y = 0.68128 x (std. dev. = 0.03575) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C3-PFBS Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	449266.3	750779.984	True	5.00	0.598	3.82	1.170	4.650	4.392	-6	30	
CAL2	444721.3	723209.911	True	5.00	0.615	3.82	1.170	4.650	4.513	-3	30	
CAL3	456815.2	730410.641	True	5.00	0.625	3.82	1.170	4.650	4.590	-1	30	
CAL4	434938.9	721806.781	True	5.00	0.603	3.81	1.170	4.650	4.422	-5	30	
CAL5	442479.7	664213.611	True	5.00	0.666	3.82	1.170	4.650	4.889	5	30	
CAL6	384220.8	600246.701	True	5.00	0.640	3.81	1.170	4.650	4.698	1	30	
CAL7	381345.5	554647.432	True	5.00	0.688	3.81	1.170	4.650	5.046	9	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

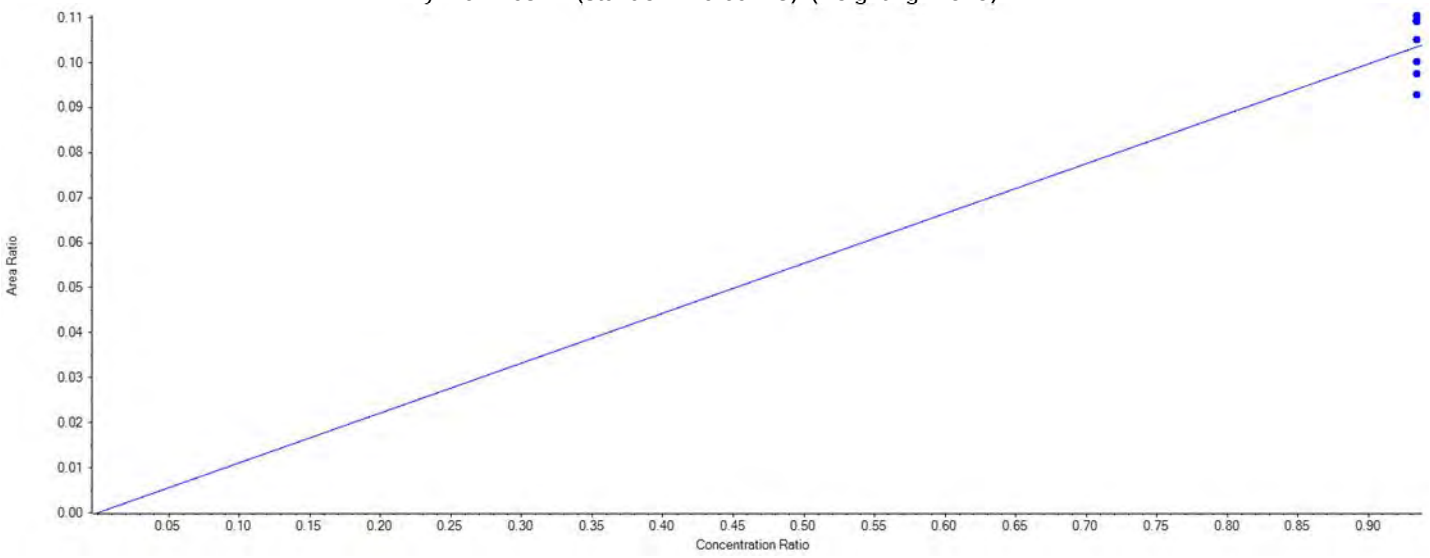
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-4:2-FTS

y = 0.11081 x (std. dev. = 0.00728) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-4:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	58330.9	534171.859	True	5.00	0.109	4.13	0.840	4.670	4.927	6	30	
CAL2	54234.1	516360.932	True	5.00	0.105	4.13	0.840	4.670	4.739	1	30	
CAL3	48706.0	524423.602	True	5.00	0.093	4.13	0.840	4.670	4.191	-10	30	
CAL4	51520.6	528557.819	True	5.00	0.097	4.13	0.840	4.670	4.398	-6	30	
CAL5	48869.9	488019.600	True	5.00	0.100	4.13	0.840	4.670	4.519	-3	30	
CAL6	50041.3	457854.860	True	5.00	0.109	4.12	0.840	4.670	4.932	6	30	
CAL7	46334.2	419465.882	True	5.00	0.110	4.13	0.840	4.670	4.984	7	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

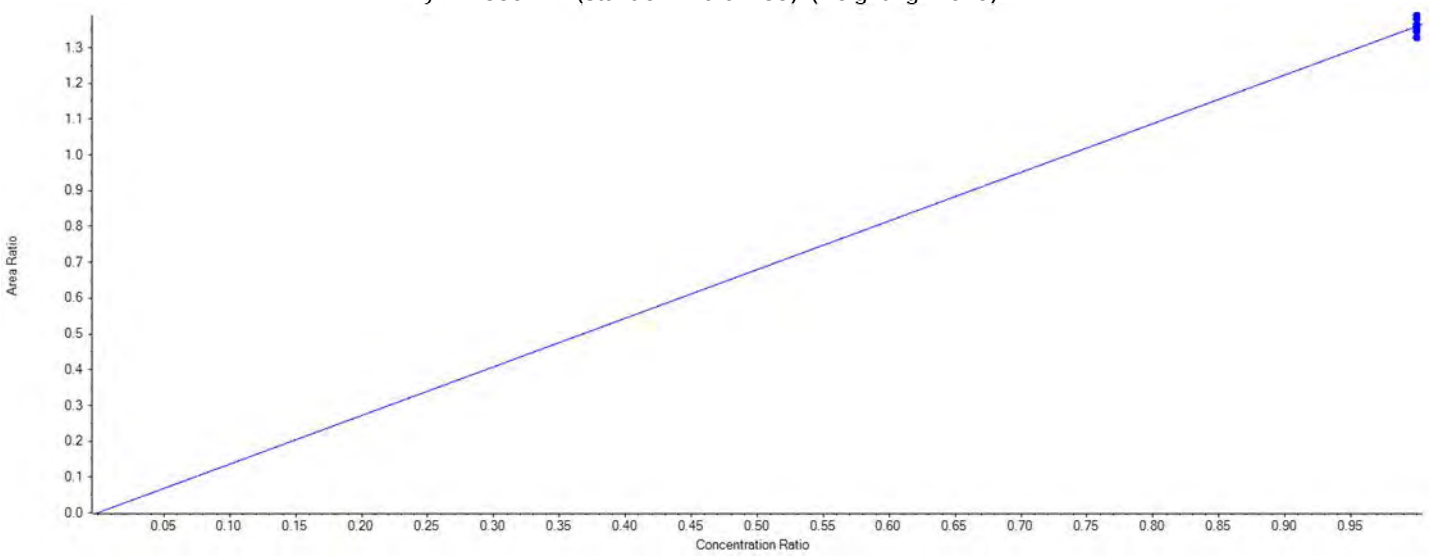
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFHxA

y = 1.35927 x (std. dev. = 0.02135) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C5-PFHxA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	725432.0	534171.859	True	5.00	1.358	4.17	0.850	5.000	4.996	0	30	
CAL2	717434.9	516360.932	True	5.00	1.389	4.17	0.850	5.000	5.111	2	30	
CAL3	705369.0	524423.602	True	5.00	1.345	4.17	0.850	5.000	4.948	-1	30	
CAL4	713446.3	528557.819	True	5.00	1.350	4.16	0.850	5.000	4.965	-1	30	
CAL5	674375.4	488019.600	True	5.00	1.382	4.17	0.850	5.000	5.083	2	30	
CAL6	607820.1	457854.860	True	5.00	1.328	4.16	0.850	5.000	4.883	-2	30	
CAL7	571807.5	419465.882	True	5.00	1.363	4.16	0.850	5.000	5.014	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

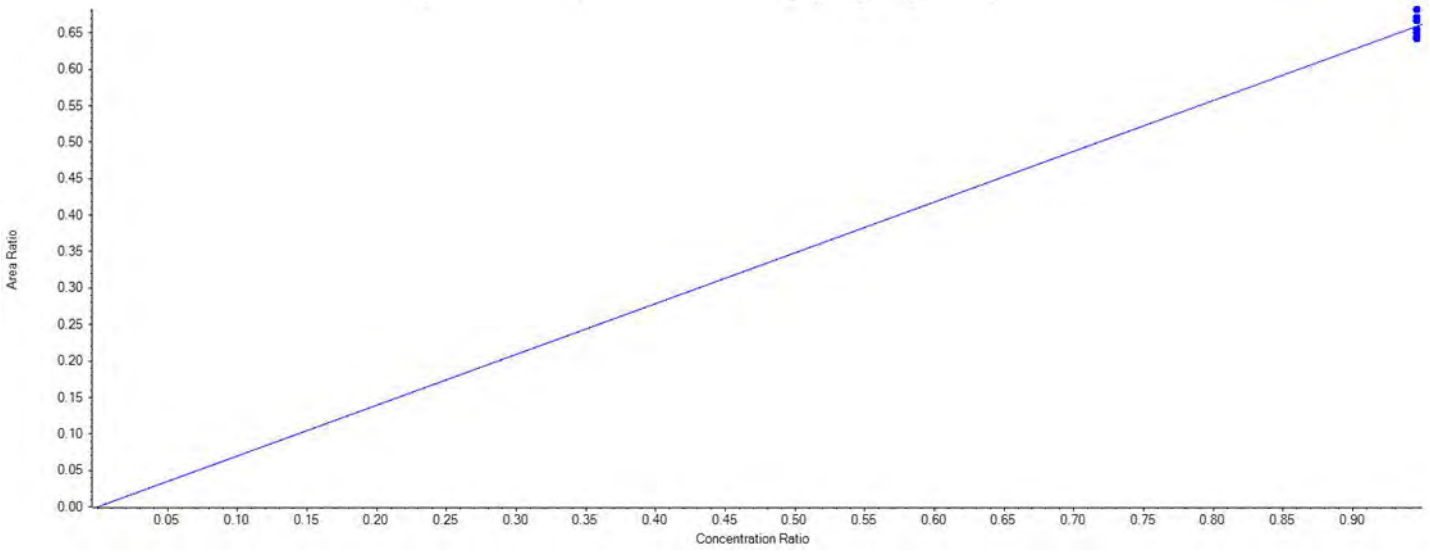
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFHxS

y = 0.69649 x (std. dev. = 0.01583) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C3-PFHxS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	358771.3	534171.859	True	5.00	0.672	4.56	0.930	4.730	4.822	2	30	
CAL2	335732.1	516360.932	True	5.00	0.650	4.56	0.920	4.730	4.668	-1	30	
CAL3	343139.5	524423.602	True	5.00	0.654	4.56	0.930	4.730	4.697	-1	30	
CAL4	339090.5	528557.819	True	5.00	0.642	4.55	0.930	4.730	4.606	-3	30	
CAL5	332808.5	488019.600	True	5.00	0.682	4.55	0.920	4.730	4.896	4	30	
CAL6	295466.2	457854.860	True	5.00	0.645	4.55	0.920	4.730	4.633	-2	30	
CAL7	279859.6	419465.882	True	5.00	0.667	4.55	0.930	4.730	4.790	1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

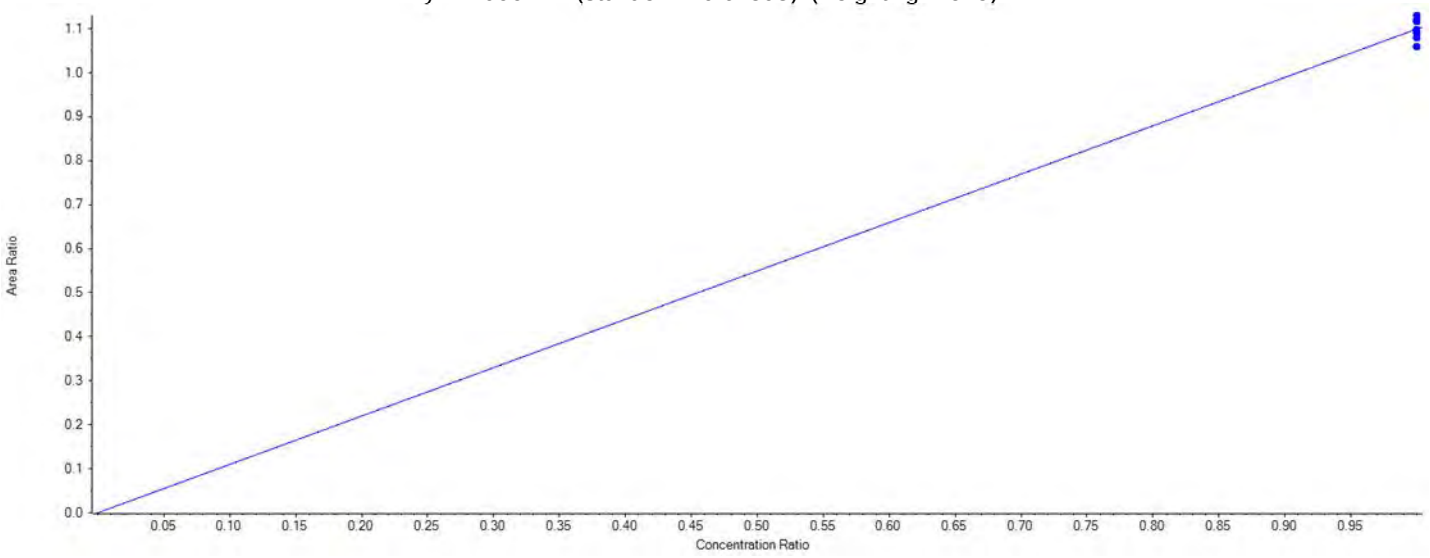
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFHpA

y = 1.09911 x (std. dev. = 0.02508) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFHpA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	586580.3	534171.859	True	5.00	1.098	4.56	0.930	5.000	4.995	0	30	
CAL2	583342.8	516360.932	True	5.00	1.130	4.55	0.920	5.000	5.139	3	30	
CAL3	566495.6	524423.602	True	5.00	1.080	4.56	0.930	5.000	4.914	-2	30	
CAL4	592497.9	528557.819	True	5.00	1.121	4.55	0.920	5.000	5.099	2	30	
CAL5	544681.1	488019.600	True	5.00	1.116	4.55	0.920	5.000	5.077	2	30	
CAL6	484763.2	457854.860	True	5.00	1.059	4.55	0.920	5.000	4.816	-4	30	
CAL7	457160.4	419465.882	True	5.00	1.090	4.55	0.920	5.000	4.958	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

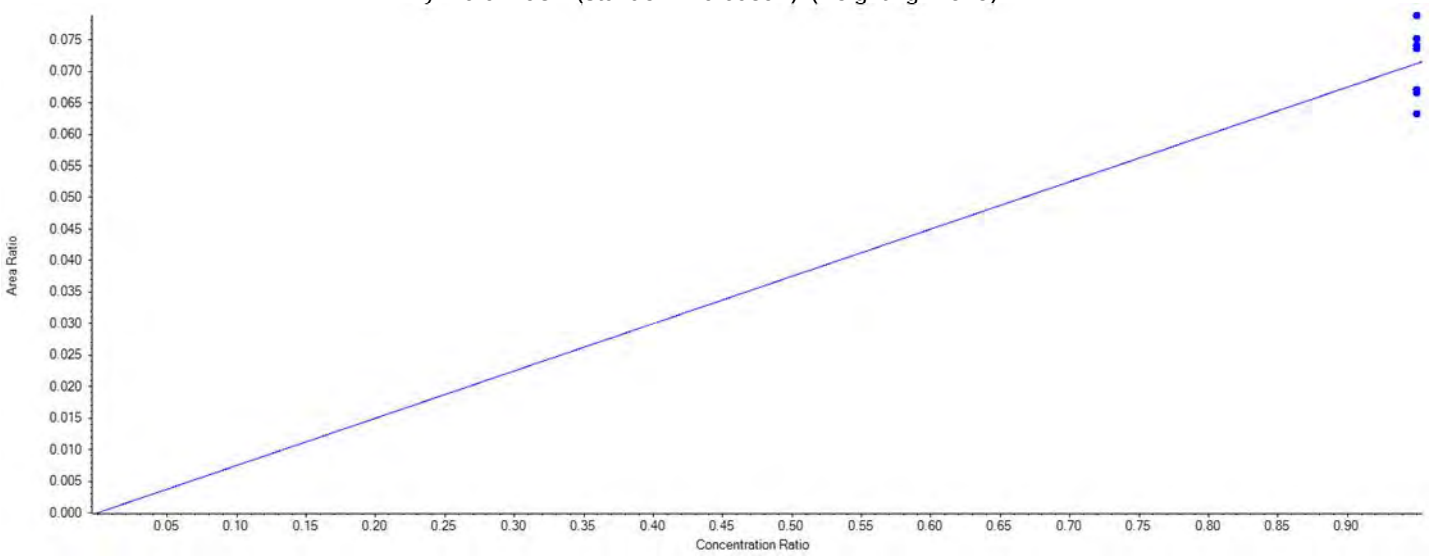
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-6:2-FTS

y = 0.07498 x (std. dev. = 0.00592) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-6:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	42112.8	534171.859	True	5.00	0.079	4.91	1.000	4.750	5.257	11	30	
CAL2	38849.6	516360.932	True	5.00	0.075	4.91	1.000	4.750	5.017	6	30	
CAL3	38605.5	524423.602	True	5.00	0.074	4.91	1.000	4.750	4.909	3	30	
CAL4	39121.7	528557.819	True	5.00	0.074	4.91	1.000	4.750	4.936	4	30	
CAL5	32735.6	488019.600	True	5.00	0.067	4.91	1.000	4.750	4.473	-6	30	
CAL6	30466.8	457854.860	True	5.00	0.067	4.90	1.000	4.750	4.437	-7	30	
CAL7	26549.1	419465.882	True	5.00	0.063	4.91	1.000	4.750	4.221	-11	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

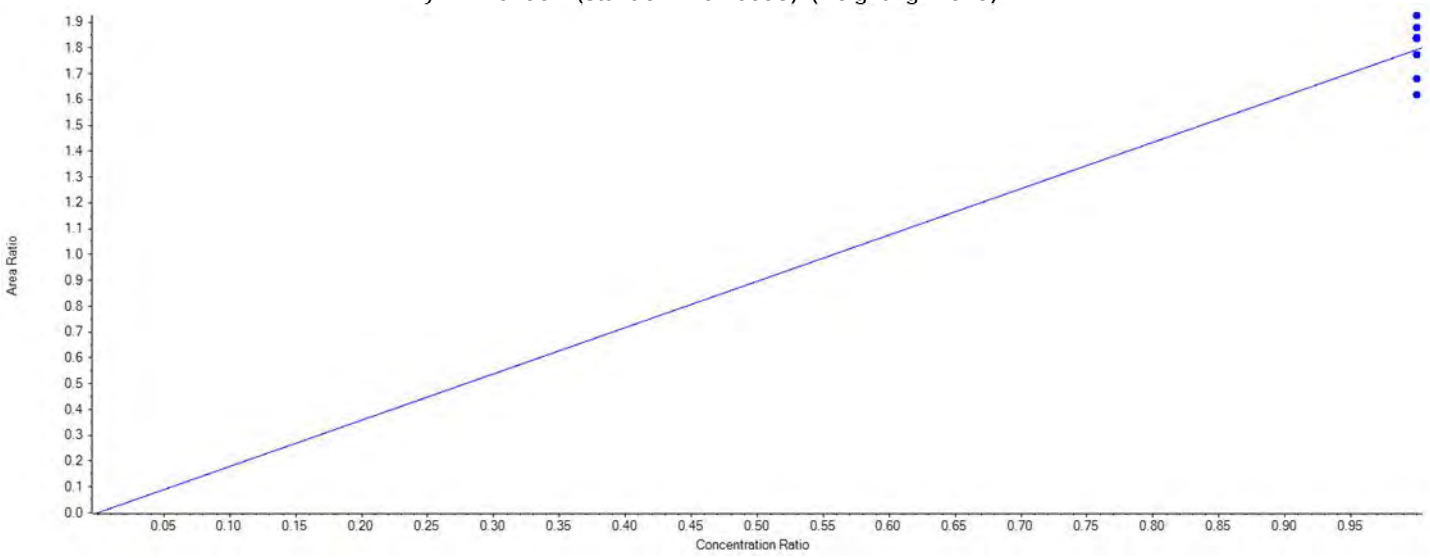
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOA

y = 1.79299 x (std. dev. = 0.10993) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1028414.9	534171.859	True	5.00	1.925	4.93	1.000	5.000	5.369	7	30	
CAL2	970523.2	516360.932	True	5.00	1.880	4.92	1.000	5.000	5.241	5	30	
CAL3	964414.6	524423.602	True	5.00	1.839	4.93	1.000	5.000	5.128	3	30	
CAL4	937287.5	528557.819	True	5.00	1.773	4.92	1.000	5.000	4.945	-1	30	
CAL5	895692.2	488019.600	True	5.00	1.835	4.92	1.000	5.000	5.118	2	30	
CAL6	769164.4	457854.860	True	5.00	1.680	4.92	1.000	5.000	4.685	-6	30	
CAL7	678914.6	419465.882	True	5.00	1.619	4.92	1.000	5.000	4.513	-10	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

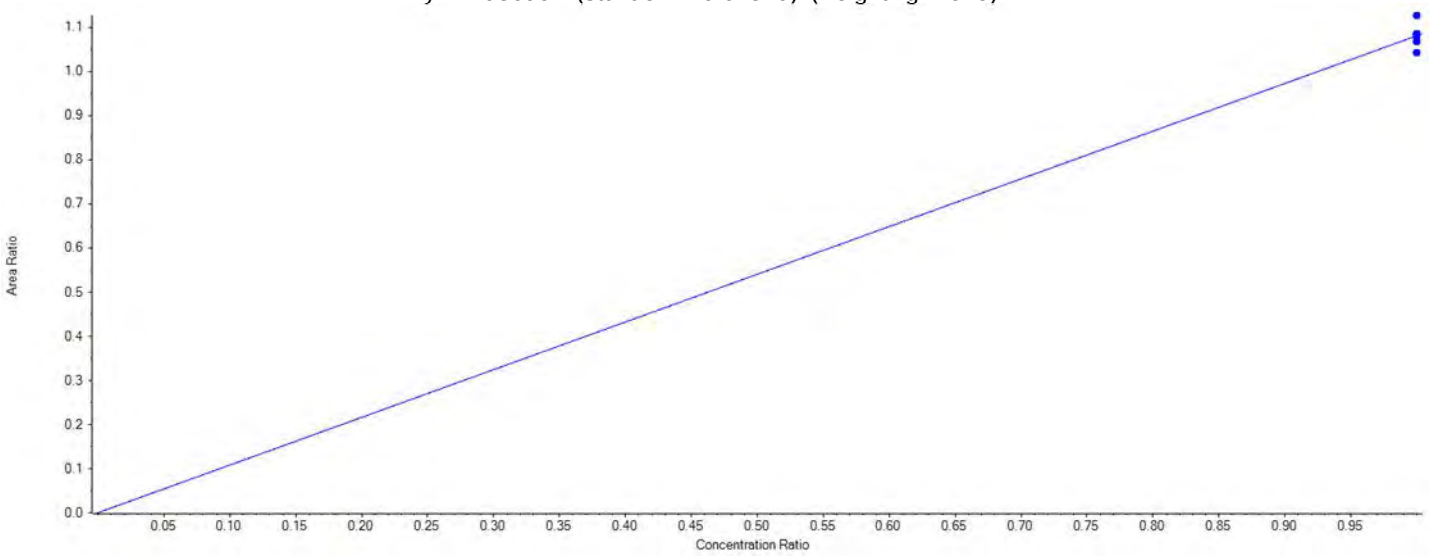
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOS

y = 1.08099 x (std. dev. = 0.02540) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOS Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	307224.3	272674.740	True	4.78	1.127	5.25	1.000	4.780	4.982	4	30	
CAL2	286174.8	263756.990	True	4.78	1.085	5.25	1.000	4.780	4.798	0	30	
CAL3	297259.7	274061.672	True	4.78	1.085	5.25	1.000	4.780	4.796	0	30	
CAL4	291941.6	270733.913	True	4.78	1.078	5.25	1.000	4.780	4.768	0	30	
CAL5	297995.6	275029.173	True	4.78	1.084	5.25	1.000	4.780	4.791	0	30	
CAL6	268369.0	251499.907	True	4.78	1.067	5.24	1.000	4.780	4.718	-1	30	
CAL7	264295.9	253720.801	True	4.78	1.042	5.24	1.000	4.780	4.606	-4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

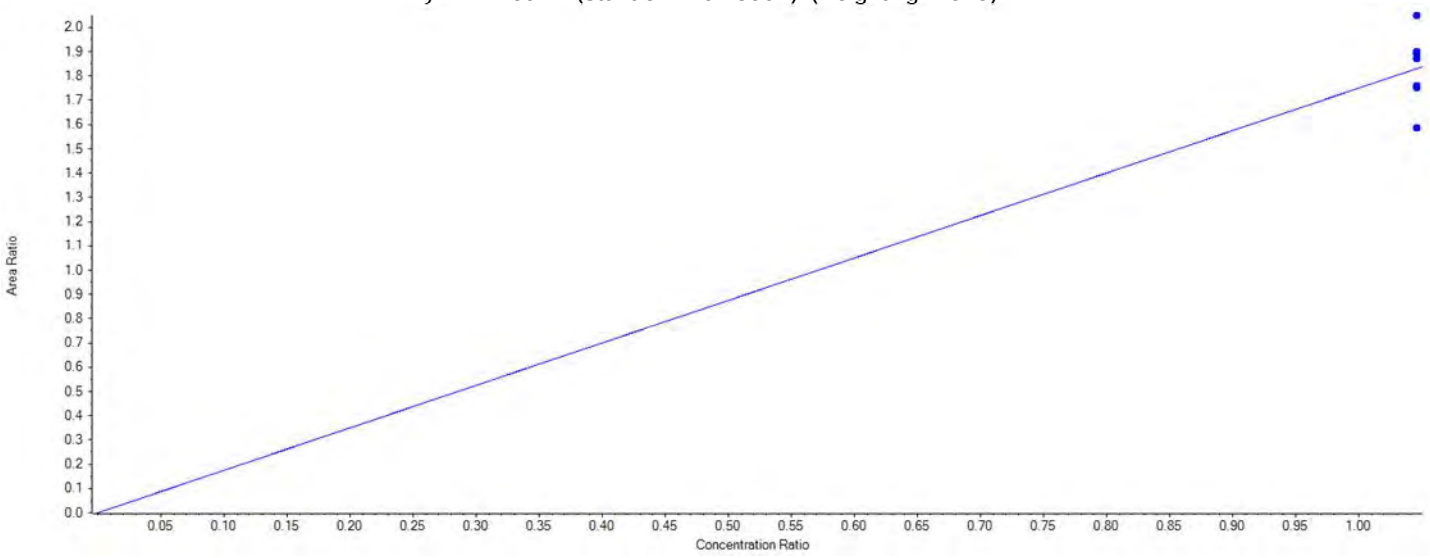
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C9-PFNA

y = 1.74992 x (std. dev. = 0.13964) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C9-PFNA Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	518118.7	272674.740	True	4.78	1.900	5.27	1.000	5.000	5.190	4	30	
CAL2	540435.4	263756.990	True	4.78	2.049	5.27	1.000	5.000	5.597	12	30	
CAL3	513116.0	274061.672	True	4.78	1.872	5.27	1.000	5.000	5.114	2	30	
CAL4	512147.4	270733.913	True	4.78	1.892	5.26	1.000	5.000	5.167	3	30	
CAL5	484419.3	275029.173	True	4.78	1.761	5.27	1.000	5.000	4.811	-4	30	
CAL6	440319.0	251499.907	True	4.78	1.751	5.26	1.000	5.000	4.782	-4	30	
CAL7	402916.7	253720.801	True	4.78	1.588	5.26	1.000	5.000	4.338	-13	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

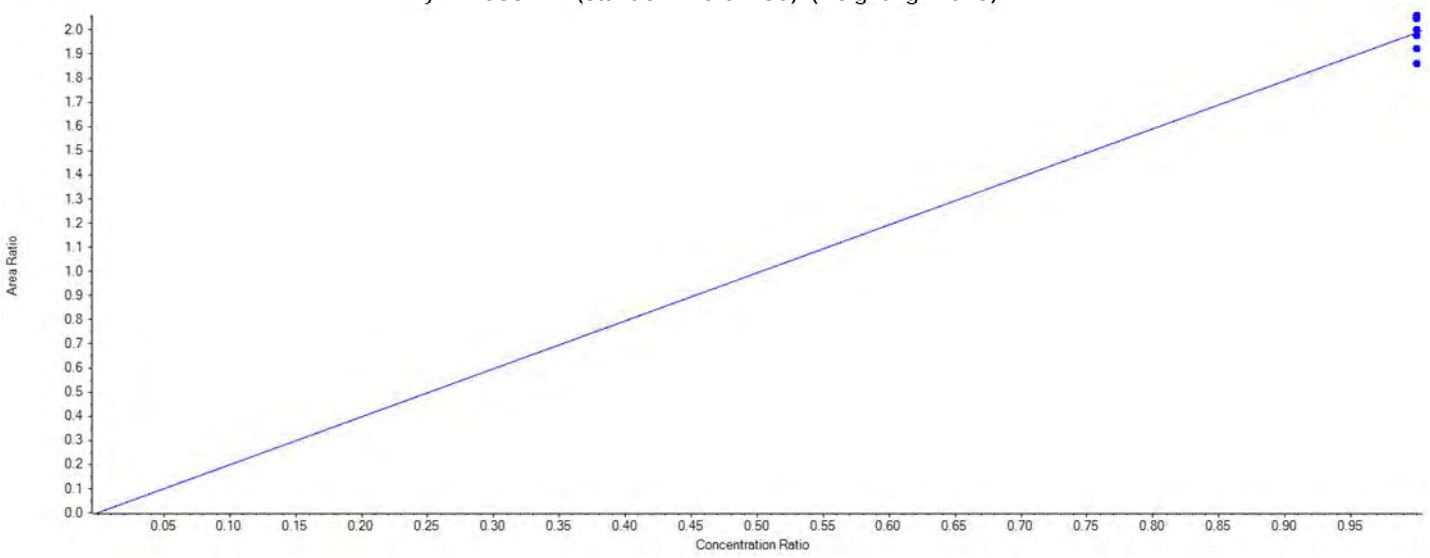
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C6-PFDA

y = 1.98822 x (std. dev. = 0.07436) (weighting: None)



Extraction Standard Calibration Verification

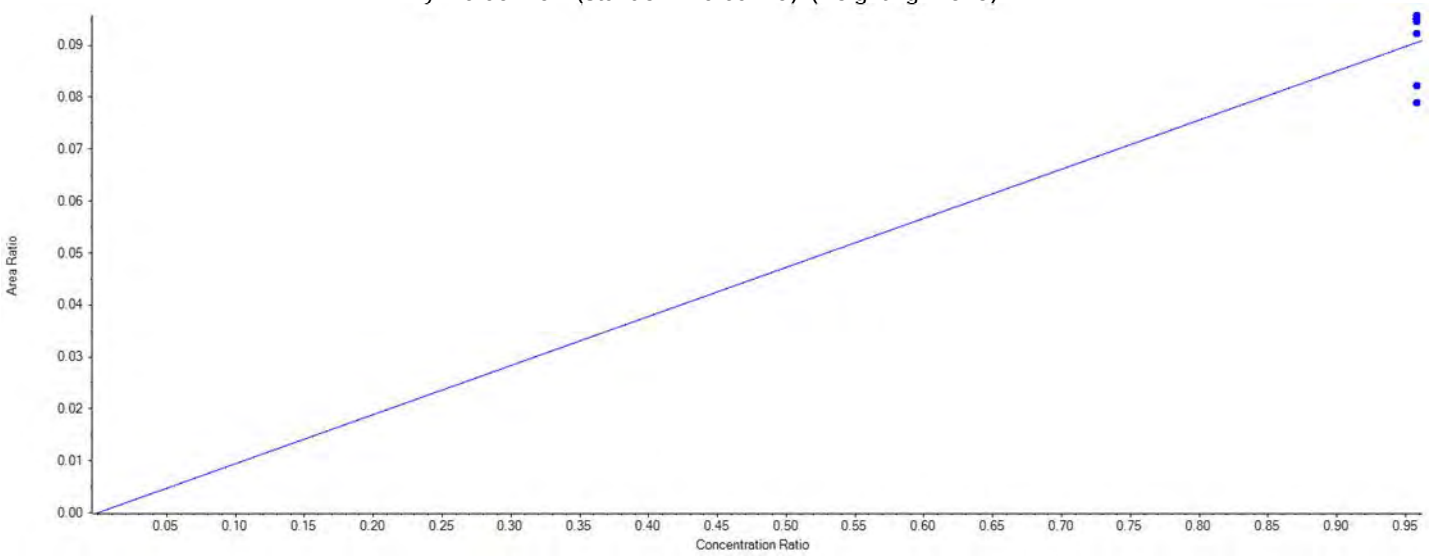
Sample Name	E13C6-PFDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	651348.0	338833.714	True	5.00	1.922	5.57	1.000	5.000	4.834	-3	30	
CAL2	661423.8	334958.441	True	5.00	1.975	5.57	1.000	5.000	4.966	-1	30	
CAL3	639022.8	311442.089	True	5.00	2.052	5.57	1.000	5.000	5.160	3	30	
CAL4	656868.3	320985.487	True	5.00	2.046	5.56	1.000	5.000	5.146	3	30	
CAL5	598009.7	298912.145	True	5.00	2.001	5.57	1.000	5.000	5.031	1	30	
CAL6	536626.2	260528.967	True	5.00	2.060	5.56	1.000	5.000	5.180	4	30	
CAL7	480927.9	258292.235	True	5.00	1.862	5.56	1.000	5.000	4.682	-6	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-8:2-FTS

y = 0.09449 x (std. dev. = 0.00729) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-8:2-FTS Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	26730.2	338833.714	True	5.00	0.079	5.57	1.000	4.790	4.174	-13	30	
CAL2	27523.0	334958.441	True	5.00	0.082	5.57	1.000	4.790	4.348	-9	30	
CAL3	29468.3	311442.089	True	5.00	0.095	5.57	1.000	4.790	5.007	5	30	
CAL4	30500.3	320985.487	True	5.00	0.095	5.57	1.000	4.790	5.028	5	30	
CAL5	27554.0	298912.145	True	5.00	0.092	5.57	1.000	4.790	4.878	2	30	
CAL6	24938.2	260528.967	True	5.00	0.096	5.56	1.000	4.790	5.065	6	30	
CAL7	24555.7	258292.235	True	5.00	0.095	5.57	1.000	4.790	5.031	5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

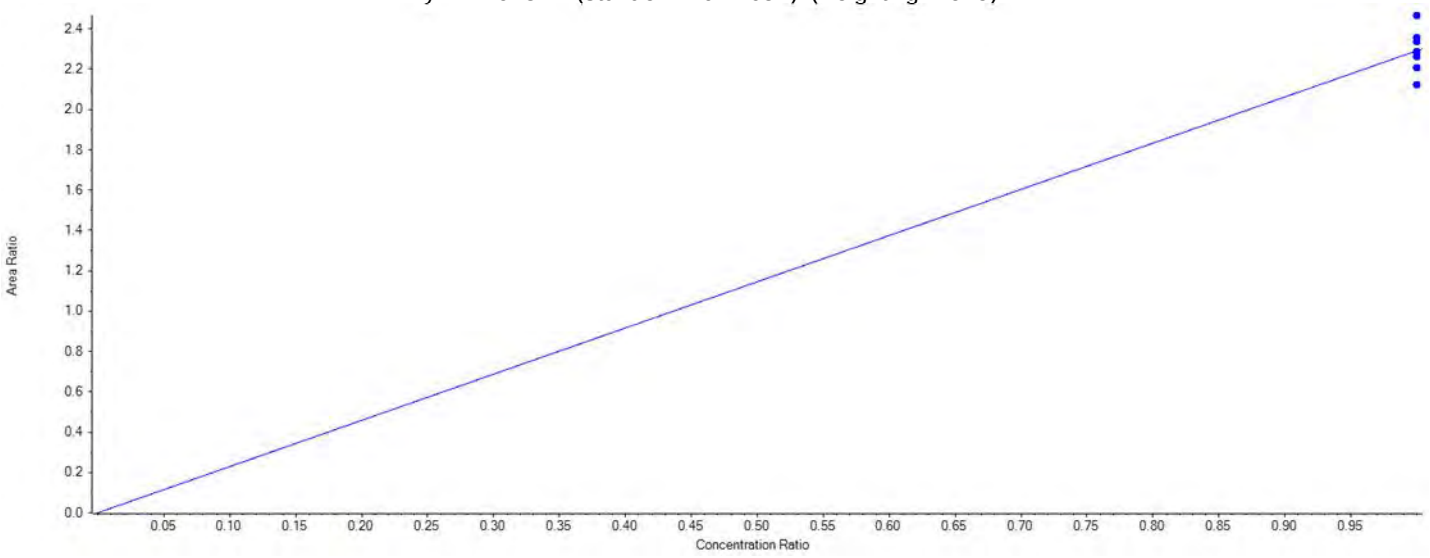
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOSA

y = 2.29132 x (std. dev. = 0.11051) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	774962.8	338833.714	True	5.00	2.287	5.64	1.010	5.000	4.991	0	30	
CAL2	711032.2	334958.441	True	5.00	2.123	5.64	1.010	5.000	4.632	-7	30	
CAL3	704745.5	311442.089	True	5.00	2.263	5.64	1.010	5.000	4.938	-1	30	
CAL4	708330.5	320985.487	True	5.00	2.207	5.64	1.010	5.000	4.815	-4	30	
CAL5	737038.5	298912.145	True	5.00	2.466	5.64	1.010	5.000	5.381	8	30	
CAL6	614406.4	260528.967	True	5.00	2.358	5.64	1.010	5.000	5.146	3	30	
CAL7	603296.1	258292.235	True	5.00	2.336	5.64	1.010	5.000	5.097	2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

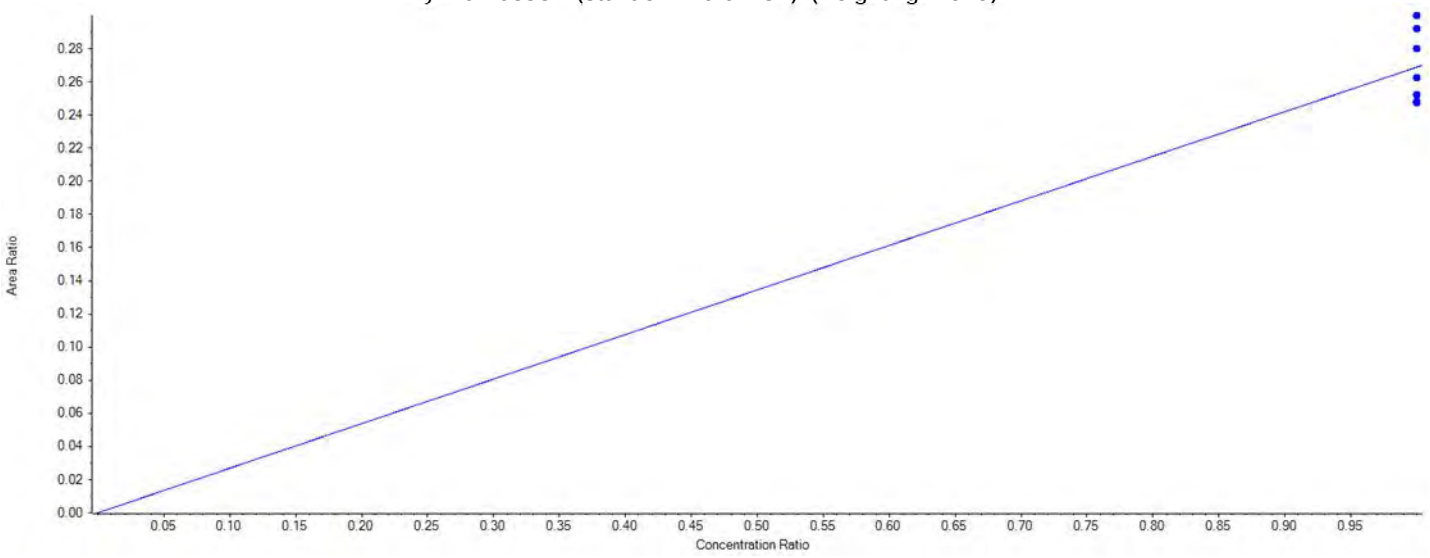
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMeFOSAA

y = 0.26888 x (std. dev. = 0.02181) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMeFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	94967.0	338833.714	True	5.00	0.280	5.71	1.030	5.000	5.212	4	30	
CAL2	83112.2	334958.441	True	5.00	0.248	5.71	1.020	5.000	4.614	-8	30	
CAL3	81763.3	311442.089	True	5.00	0.263	5.71	1.030	5.000	4.882	-2	30	
CAL4	80900.1	320985.487	True	5.00	0.252	5.70	1.030	5.000	4.687	-6	30	
CAL5	73896.1	298912.145	True	5.00	0.247	5.71	1.020	5.000	4.597	-8	30	
CAL6	78158.0	260528.967	True	5.00	0.300	5.70	1.020	5.000	5.579	12	30	
CAL7	75408.7	258292.235	True	5.00	0.292	5.70	1.020	5.000	5.429	9	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

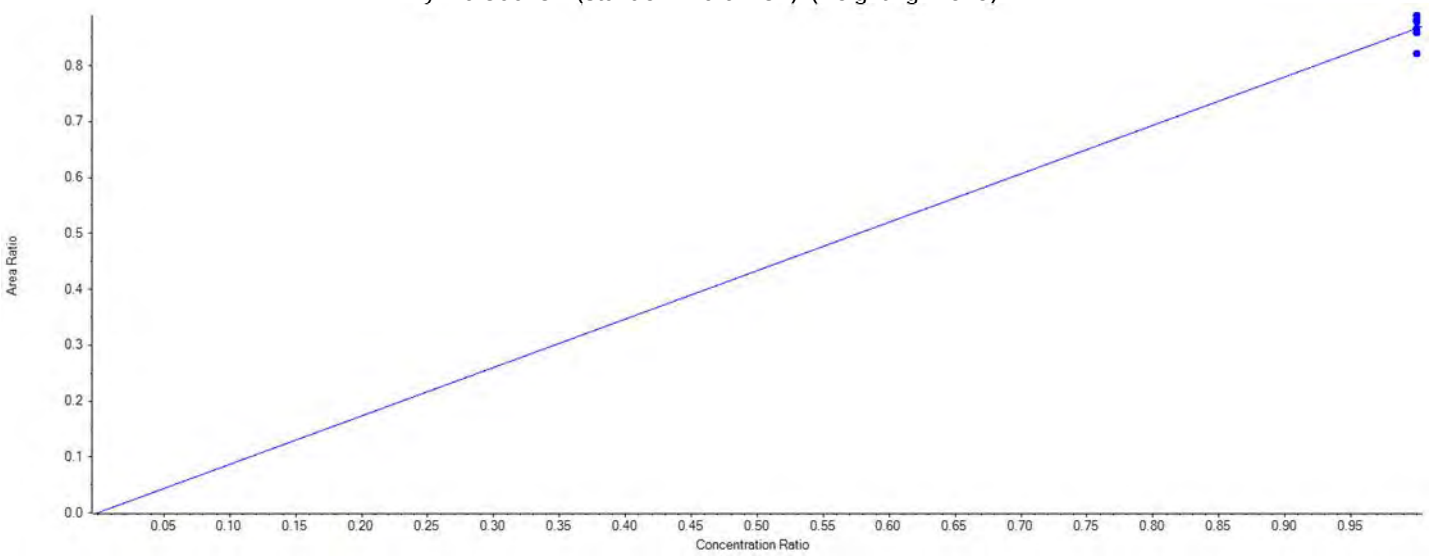
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C7-PFUnDA

y = 0.86673 x (std. dev. = 0.02232) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C7-PFUnDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	293658.7	338833.714	True	5.00	0.867	5.83	1.050	5.000	5.000	0	30	
CAL2	289985.1	334958.441	True	5.00	0.866	5.83	1.050	5.000	4.994	0	30	
CAL3	277115.5	311442.089	True	5.00	0.890	5.83	1.050	5.000	5.133	3	30	
CAL4	275977.2	320985.487	True	5.00	0.860	5.83	1.050	5.000	4.960	-1	30	
CAL5	263924.7	298912.145	True	5.00	0.883	5.83	1.050	5.000	5.094	2	30	
CAL6	229237.1	260528.967	True	5.00	0.880	5.82	1.050	5.000	5.076	2	30	
CAL7	212399.8	258292.235	True	5.00	0.822	5.82	1.050	5.000	4.744	-5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

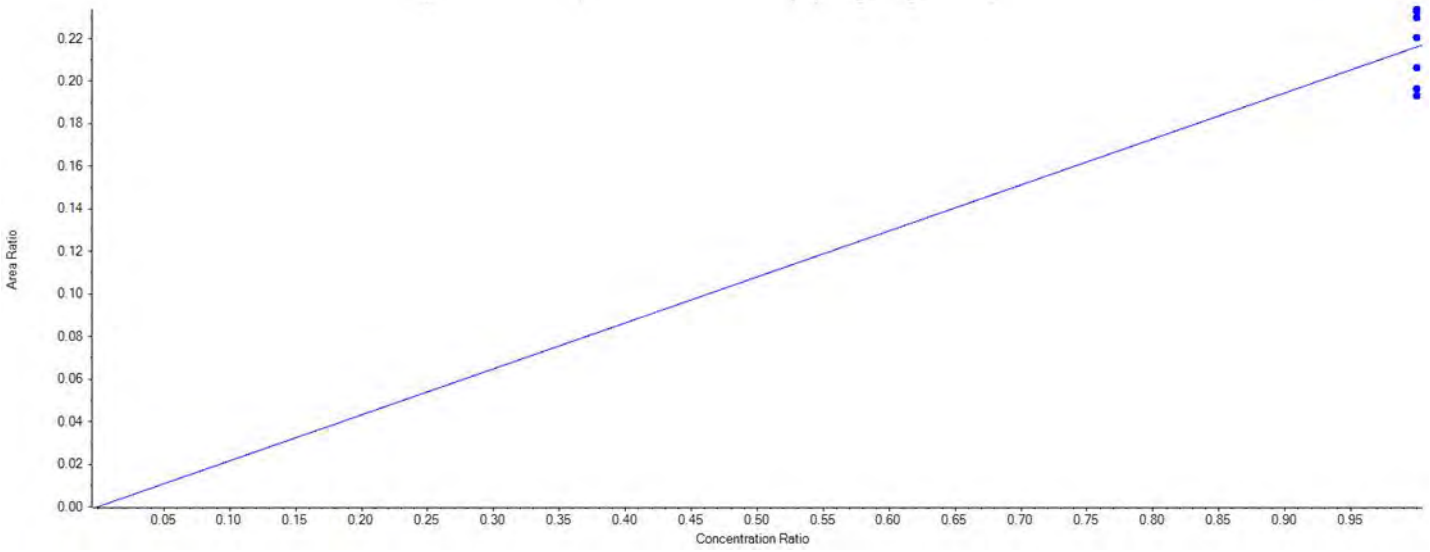
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtFOSAA

y = 0.21606 x (std. dev. = 0.01730) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed5-NEtFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	77938.3	338833.714	True	5.00	0.230	5.84	1.050	5.000	5.323	6	30	
CAL2	65815.9	334958.441	True	5.00	0.196	5.84	1.050	5.000	4.547	-9	30	
CAL3	72755.7	311442.089	True	5.00	0.234	5.84	1.050	5.000	5.406	8	30	
CAL4	66162.4	320985.487	True	5.00	0.206	5.84	1.050	5.000	4.770	-5	30	
CAL5	57745.7	298912.145	True	5.00	0.193	5.84	1.050	5.000	4.471	-11	30	
CAL6	60556.6	260528.967	True	5.00	0.232	5.83	1.050	5.000	5.379	8	30	
CAL7	56963.1	258292.235	True	5.00	0.221	5.84	1.050	5.000	5.104	2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

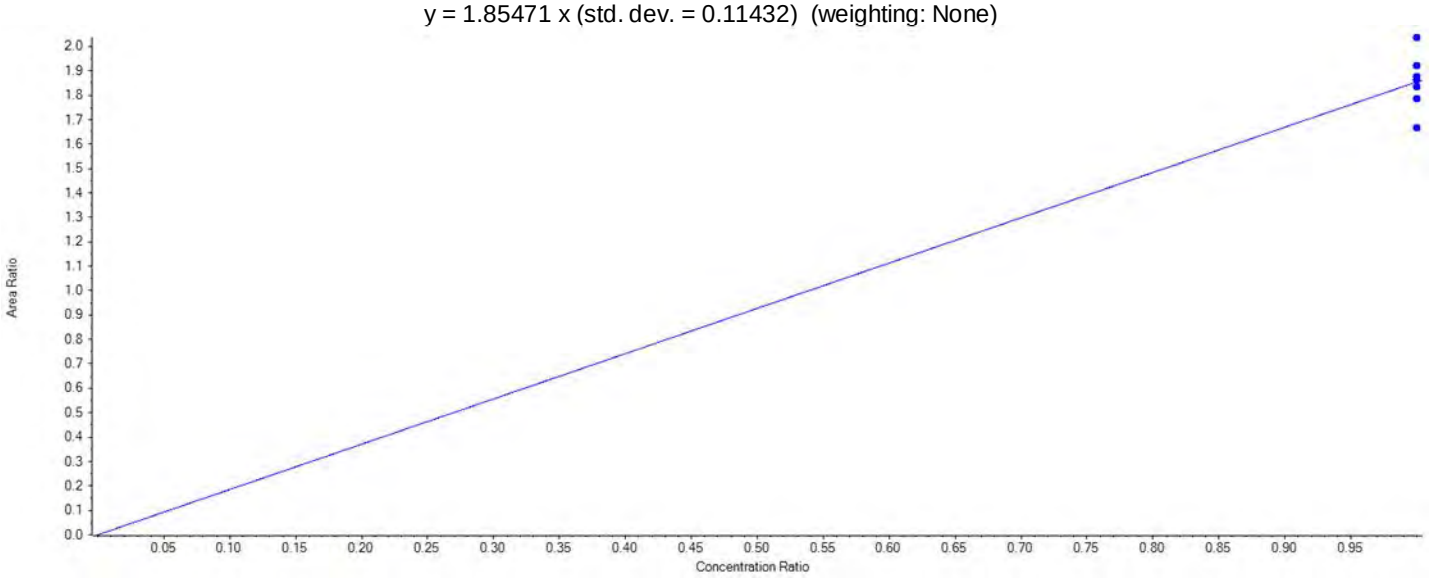
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFDoDA

y = 1.85471 x (std. dev. = 0.11432) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-PFDoDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	564794.9	338833.714	True	5.00	1.667	6.06	1.090	5.000	4.494	-10	30	
CAL2	597616.3	334958.441	True	5.00	1.784	6.06	1.090	5.000	4.810	-4	30	
CAL3	584631.5	311442.089	True	5.00	1.877	6.06	1.090	5.000	5.061	1	30	
CAL4	598287.4	320985.487	True	5.00	1.864	6.05	1.090	5.000	5.025	0	30	
CAL5	548536.0	298912.145	True	5.00	1.835	6.06	1.090	5.000	4.947	-1	30	
CAL6	500065.3	260528.967	True	5.00	1.919	6.05	1.090	5.000	5.174	3	30	
CAL7	525971.8	258292.235	True	5.00	2.036	6.05	1.090	5.000	5.490	10	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

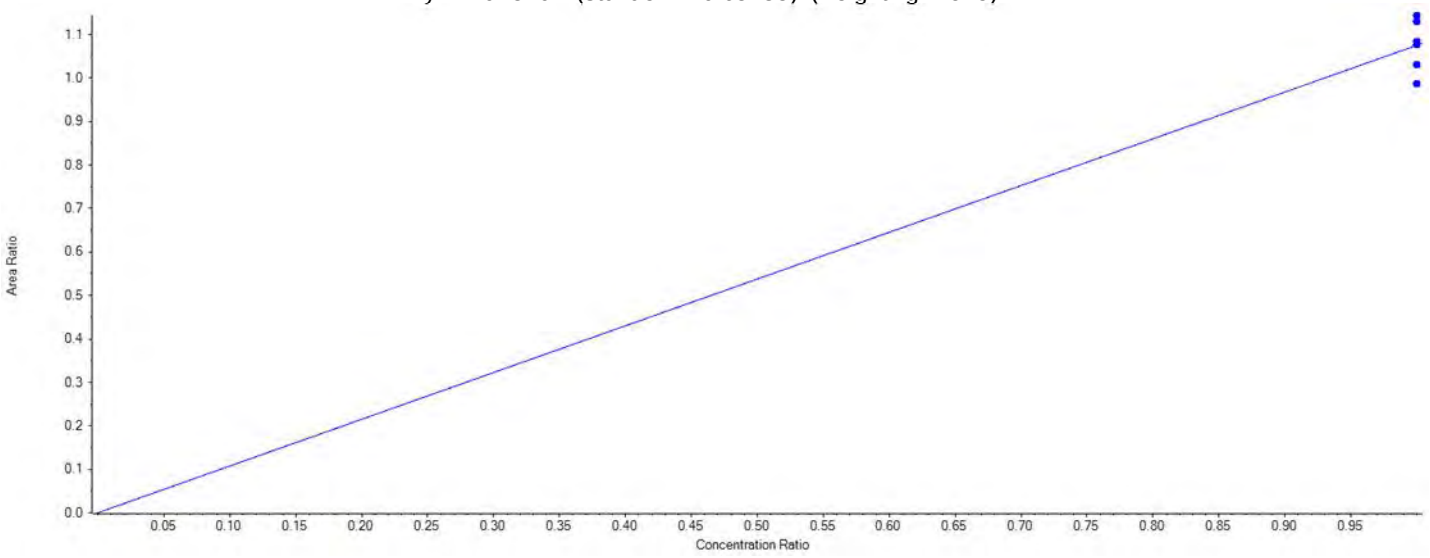
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed7-NMePFOSAE

y = 1.07520 x (std. dev. = 0.05435) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed7-NMePFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	366847.7	338833.714	True	5.00	1.083	6.09	1.090	5.000	5.035	1	30	
CAL2	330298.6	334958.441	True	5.00	0.986	6.09	1.090	5.000	4.586	-8	30	
CAL3	335206.8	311442.089	True	5.00	1.076	6.09	1.090	5.000	5.005	0	30	
CAL4	330968.7	320985.487	True	5.00	1.031	6.08	1.090	5.000	4.795	-4	30	
CAL5	321549.5	298912.145	True	5.00	1.076	6.09	1.090	5.000	5.002	0	30	
CAL6	294617.6	260528.967	True	5.00	1.131	6.08	1.090	5.000	5.259	5	30	
CAL7	295395.3	258292.235	True	5.00	1.144	6.08	1.090	5.000	5.318	6	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

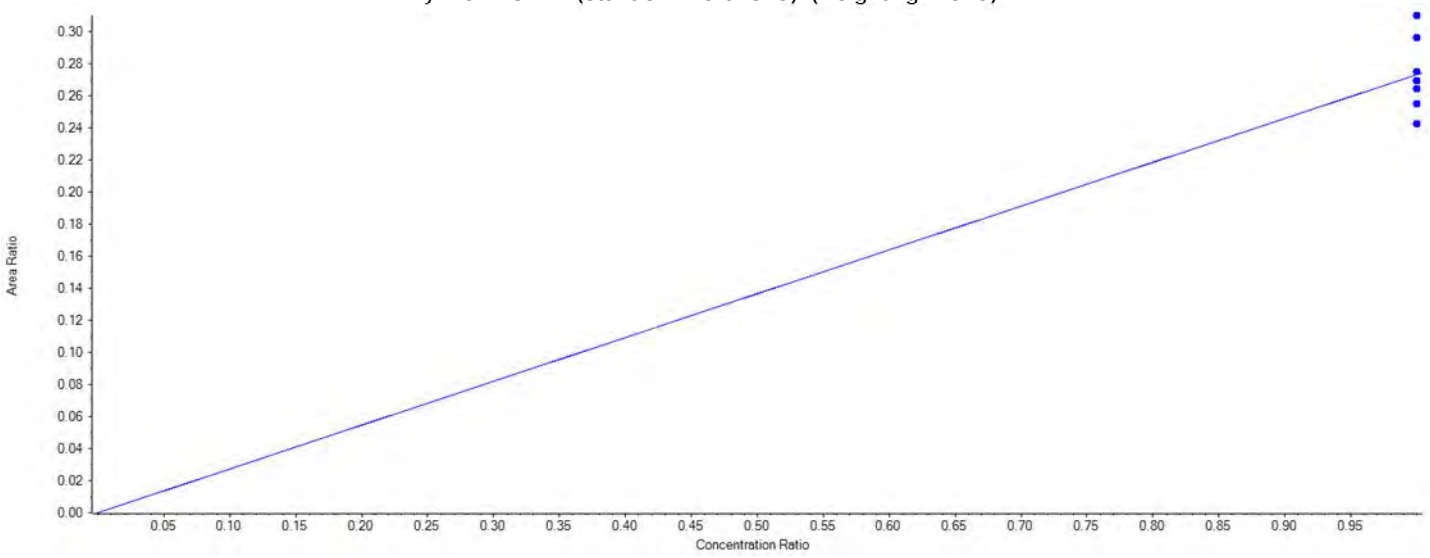
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMePFOSA

y = 0.27311 x (std. dev. = 0.02323) (weighting: None)



Extraction Standard Calibration Verification

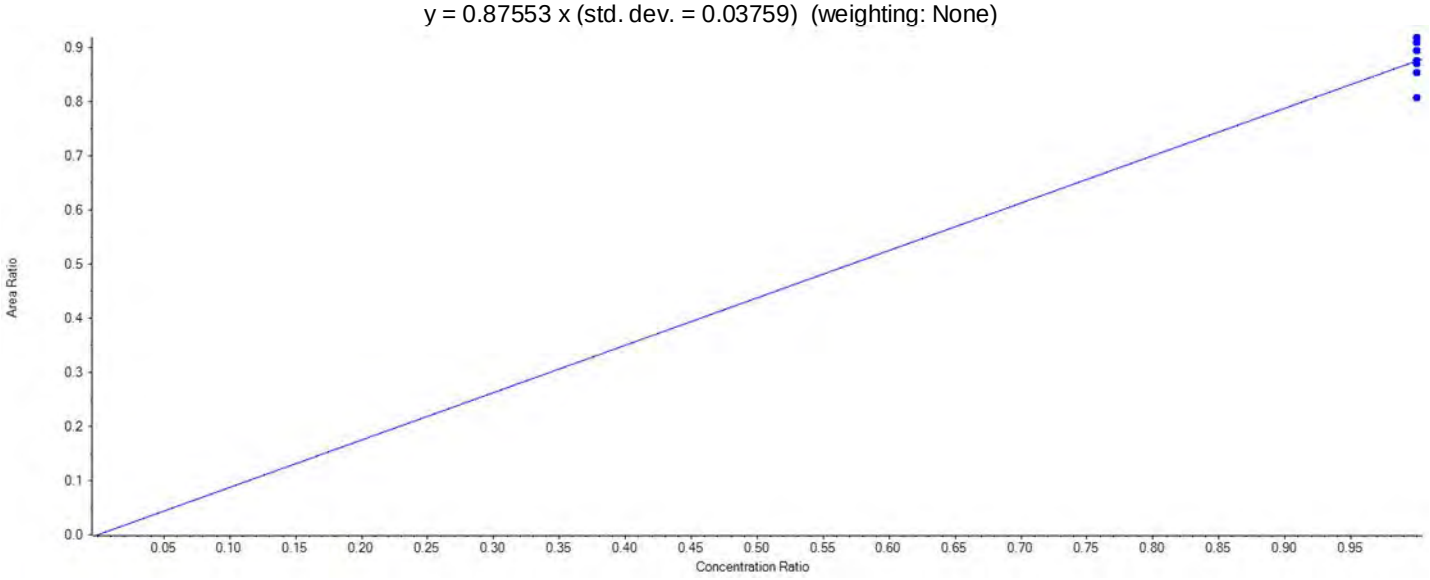
Sample Name	Ed3-NMePFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	89511.9	338833.714	True	5.00	0.264	6.10	1.100	5.000	4.836	-3	30	
CAL2	81301.2	334958.441	True	5.00	0.243	6.10	1.100	5.000	4.444	-11	30	
CAL3	79381.7	311442.089	True	5.00	0.255	6.10	1.100	5.000	4.666	-7	30	
CAL4	86399.4	320985.487	True	5.00	0.269	6.10	1.100	5.000	4.928	-1	30	
CAL5	82137.6	298912.145	True	5.00	0.275	6.10	1.100	5.000	5.031	1	30	
CAL6	77146.9	260528.967	True	5.00	0.296	6.09	1.100	5.000	5.421	8	30	
CAL7	80053.2	258292.235	True	5.00	0.310	6.10	1.100	5.000	5.674	13	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed9-NEtPFOSAE

y = 0.87553 x (std. dev. = 0.03759) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed9-NEtPFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	296629.3	338833.714	True	5.00	0.875	6.24	1.120	5.000	5.000	0	30	
CAL2	270607.6	334958.441	True	5.00	0.808	6.24	1.120	5.000	4.614	-8	30	
CAL3	278375.1	311442.089	True	5.00	0.894	6.24	1.120	5.000	5.104	2	30	
CAL4	273909.1	320985.487	True	5.00	0.853	6.24	1.120	5.000	4.873	-3	30	
CAL5	259950.9	298912.145	True	5.00	0.870	6.24	1.120	5.000	4.966	-1	30	
CAL6	239317.0	260528.967	True	5.00	0.919	6.23	1.120	5.000	5.246	5	30	
CAL7	235038.0	258292.235	True	5.00	0.910	6.24	1.120	5.000	5.197	4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

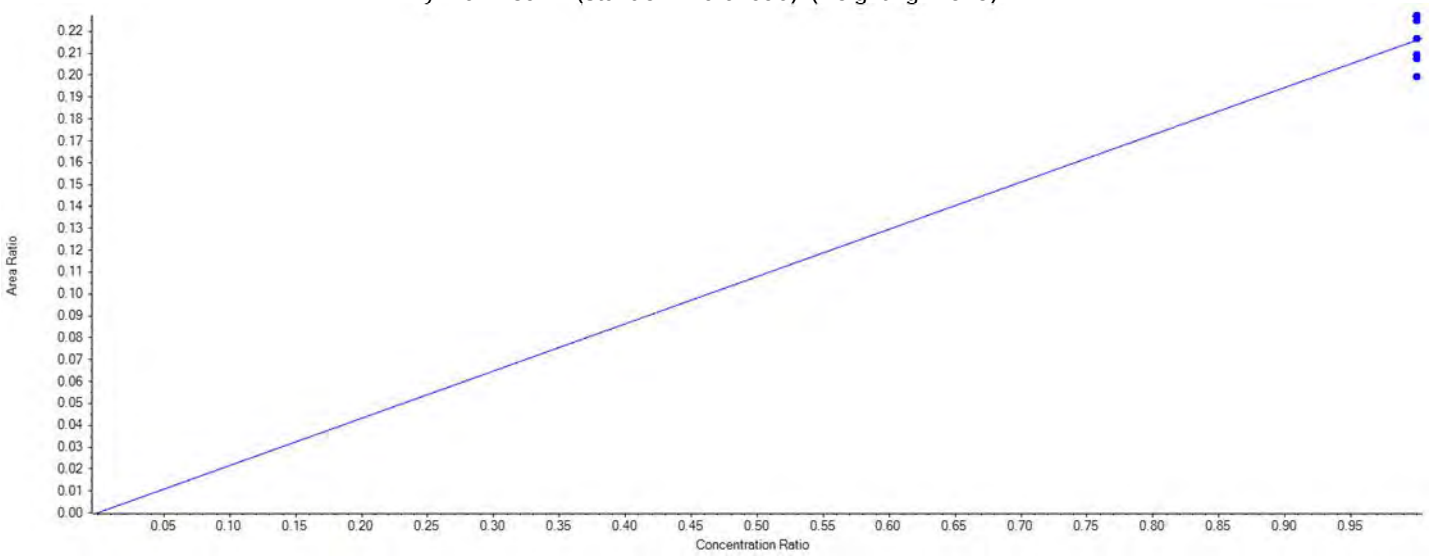
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtPFOSA

y = 0.21594 x (std. dev. = 0.01096) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed5-NEtPFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	70926.7	338833.714	True	5.00	0.209	6.26	1.120	5.000	4.847	-3	30	
CAL2	66745.4	334958.441	True	5.00	0.199	6.26	1.120	5.000	4.614	-8	30	
CAL3	67444.3	311442.089	True	5.00	0.217	6.26	1.120	5.000	5.014	0	30	
CAL4	72258.7	320985.487	True	5.00	0.225	6.26	1.120	5.000	5.212	4	30	
CAL5	62005.6	298912.145	True	5.00	0.207	6.26	1.120	5.000	4.803	-4	30	
CAL6	59054.4	260528.967	True	5.00	0.227	6.25	1.120	5.000	5.248	5	30	
CAL7	58686.1	258292.235	True	5.00	0.227	6.26	1.120	5.000	5.261	5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

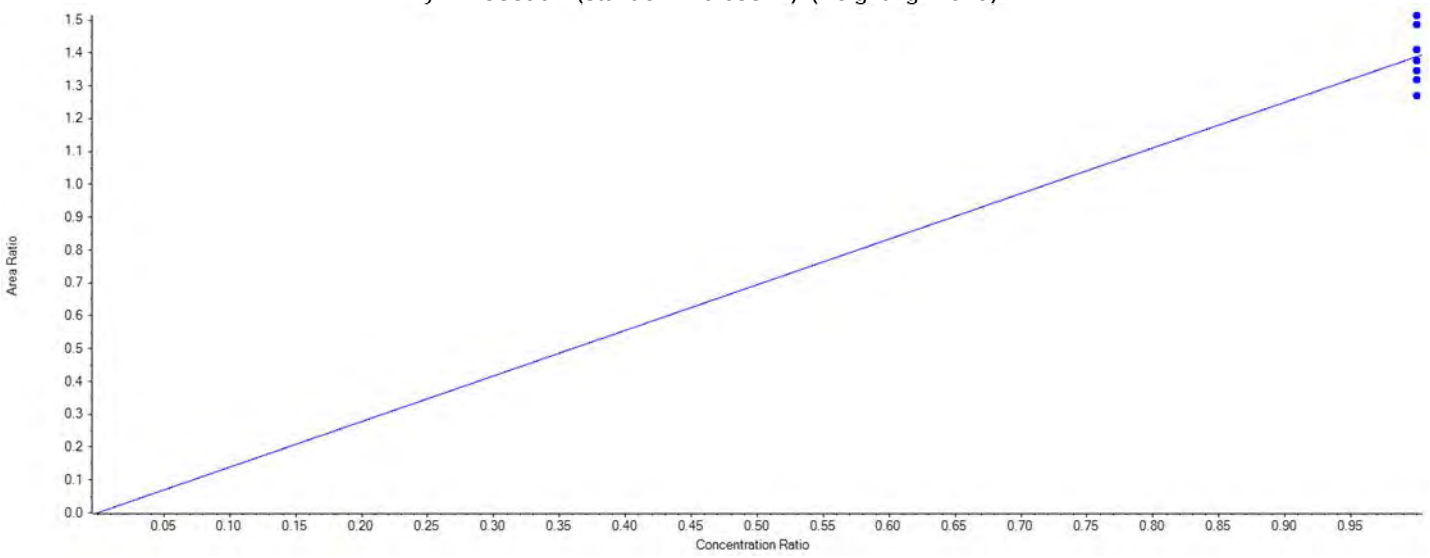
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFTeDA

y = 1.38890 x (std. dev. = 0.08847) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-PFTeDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	430341.3	338833.714	True	5.00	1.270	6.43	1.160	5.000	4.572	-9	30	
CAL2	441206.9	334958.441	True	5.00	1.317	6.43	1.160	5.000	4.742	-5	30	
CAL3	419341.7	311442.089	True	5.00	1.346	6.43	1.160	5.000	4.847	-3	30	
CAL4	441858.1	320985.487	True	5.00	1.377	6.43	1.160	5.000	4.956	-1	30	
CAL5	421798.8	298912.145	True	5.00	1.411	6.43	1.160	5.000	5.080	2	30	
CAL6	394433.9	260528.967	True	5.00	1.514	6.43	1.160	5.000	5.450	9	30	
CAL7	384058.1	258292.235	True	5.00	1.487	6.43	1.160	5.000	5.353	7	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

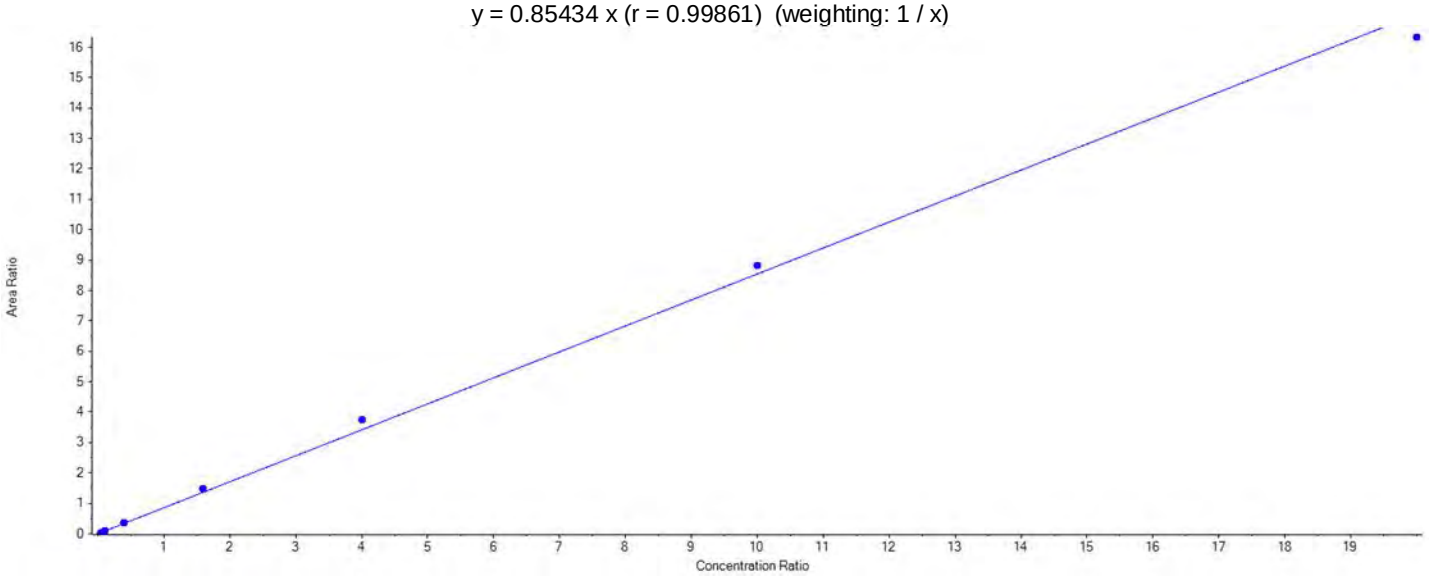
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBA

y = 0.85434 x (r = 0.99861) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBA Area	S/N	13C4-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32354.4	146.4	794718.852	True	5.00	0.041	3.27	1.000	0.200	0.238	19	30	
CAL2	72868.6	212.8	782732.821	True	5.00	0.093	3.27	1.000	0.500	0.545	9	30	
CAL3	285113.3	434.5	787180.244	True	5.00	0.362	3.27	1.000	2.000	2.120	6	30	
CAL4	1152870.9	735.9	771359.129	True	5.00	1.495	3.27	1.000	8.000	8.747	9	30	
CAL5	2730076.0	1045.3	728925.112	True	5.00	3.745	3.27	1.000	20.000	21.919	10	30	
CAL6	5709364.6	1410.1	647849.559	True	5.00	8.813	3.26	1.000	50.000	51.576	3	30	
CAL7	9954520.3	1648.1	609686.139	True	5.00	16.327	3.26	1.000	100.000	95.554	-4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

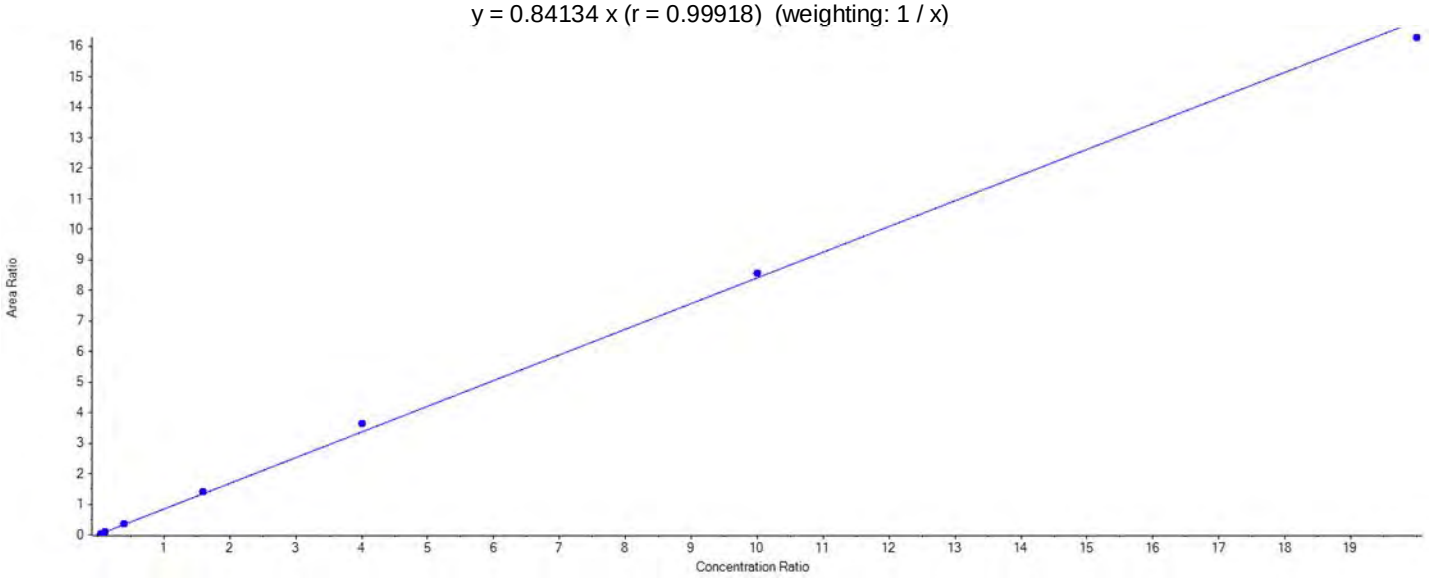
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeA

y = 0.84134 x (r = 0.99918) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeA Area	S/N	13C5-PFPeA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	33205.5	67.0	844850.159	True	5.00	0.039	3.77	1.000	0.200	0.234	17	30	
CAL2	77403.9	97.9	863262.811	True	5.00	0.090	3.77	1.000	0.500	0.533	7	30	
CAL3	286630.7	271.7	829978.484	True	5.00	0.345	3.77	1.000	2.000	2.052	3	30	
CAL4	1165758.7	263.0	824842.795	True	5.00	1.413	3.76	1.000	8.000	8.399	5	30	
CAL5	2812772.2	497.5	768958.133	True	5.00	3.658	3.77	1.000	20.000	21.739	9	30	
CAL6	5899932.2	954.6	687796.699	True	5.00	8.578	3.76	1.000	50.000	50.979	2	30	
CAL7	10229627.8	783.9	628265.483	True	5.00	16.282	3.76	1.000	100.000	96.765	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

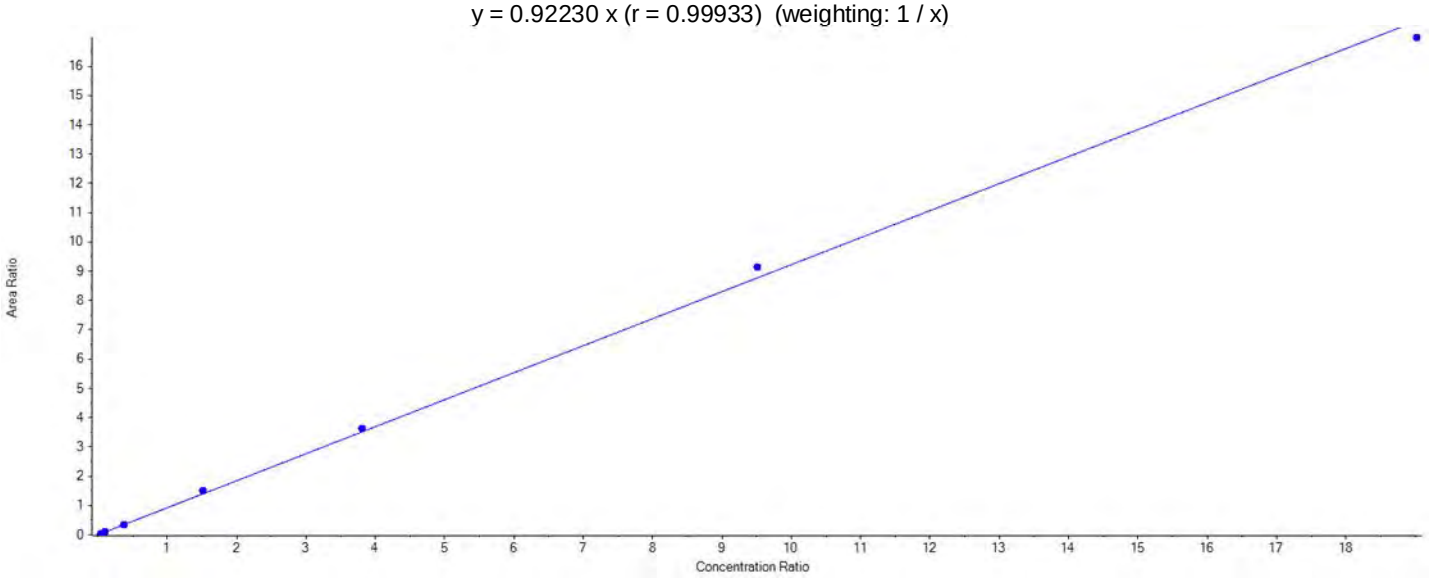
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBS

y = 0.92230 x (r = 0.99933) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	19024.1	393.3	449266.276	True	4.65	0.042	3.82	1.000	0.170	0.213	26	30	
CAL2	41415.1	562.8	444721.279	True	4.65	0.093	3.82	1.000	0.440	0.470	7	30	
CAL3	157656.3	933.8	456815.174	True	4.65	0.345	3.82	1.000	1.770	1.740	-2	30	
CAL4	648524.4	1539.0	434938.872	True	4.65	1.491	3.81	1.000	7.080	7.518	6	30	
CAL5	1601296.4	1306.5	442479.717	True	4.65	3.619	3.82	1.000	17.690	18.246	3	30	
CAL6	3508201.1	1595.6	384220.795	True	4.65	9.131	3.81	1.000	44.220	46.035	4	30	
CAL7	6474525.0	1528.4	381345.498	True	4.65	16.978	3.81	1.000	88.450	85.599	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

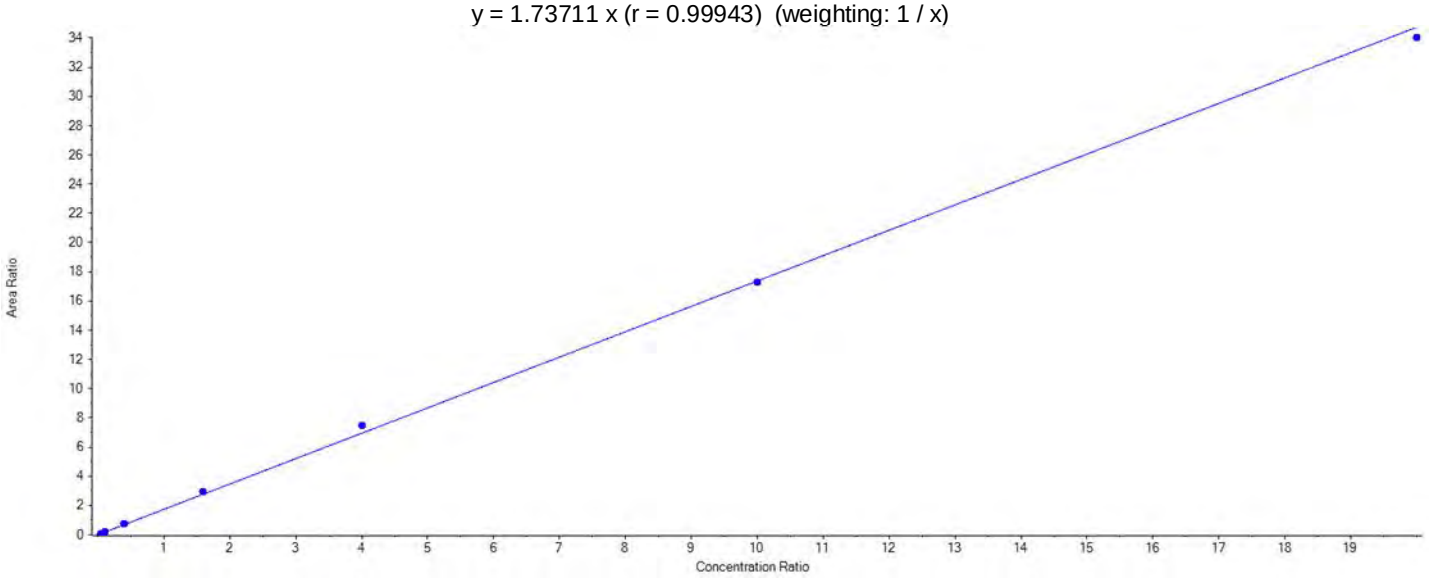
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

4:2-FTS

y = 1.73711 x (r = 0.99943) (weighting: 1 / x)



Component Calibration Verification

Sample Name	4:2-FTS Area	S/N	13C2-4:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	4145.4	132.5	58330.929	True	4.67	0.071	4.13	1.000	0.187	0.191	2	30	
CAL2	9924.9	268.5	54234.136	True	4.67	0.183	4.13	1.000	0.467	0.492	5	30	
CAL3	35586.2	540.9	48706.042	True	4.67	0.731	4.14	1.000	1.868	1.964	5	30	
CAL4	153295.4	973.4	51520.627	True	4.67	2.975	4.13	1.000	7.472	7.999	7	30	
CAL5	365423.8	1181.5	48869.851	True	4.67	7.477	4.13	1.000	18.680	20.102	8	30	
CAL6	866263.6	1274.7	50041.324	True	4.67	17.311	4.12	1.000	46.700	46.538	0	30	
CAL7	1576786.3	1225.2	46334.175	True	4.67	34.031	4.13	1.000	93.400	91.487	-2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

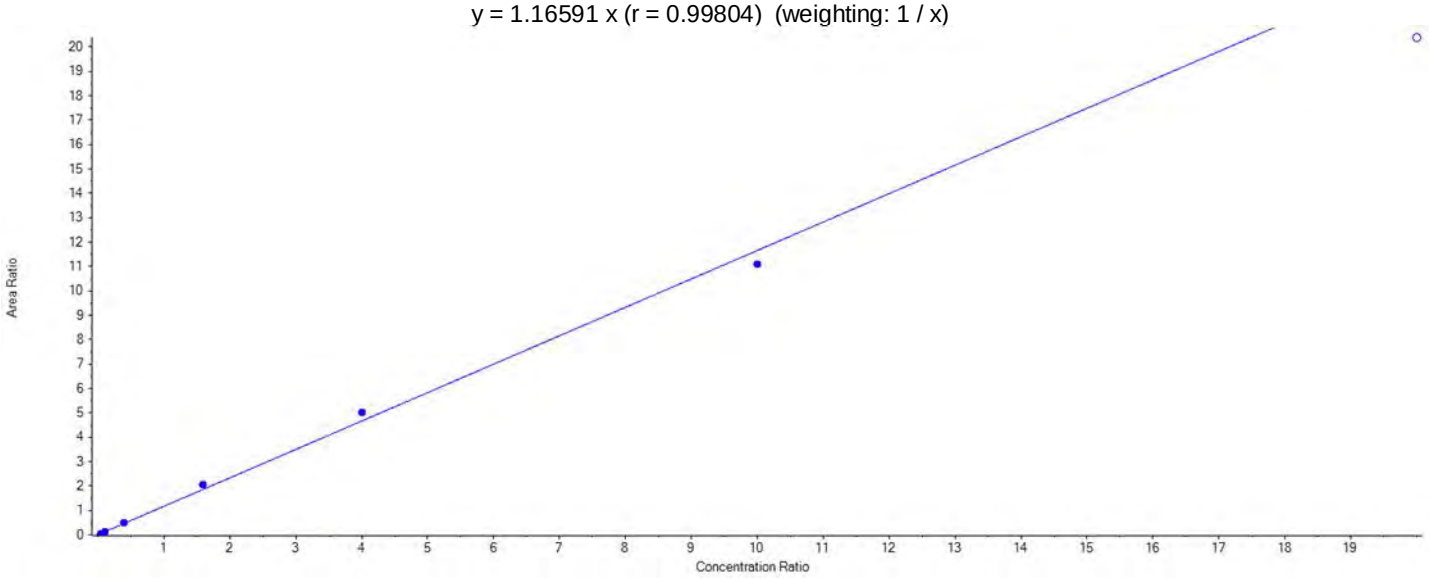
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxA

y = 1.16591 x (r = 0.99804) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxA Area	S/N	13C5-PFHxA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	39732.2	173.4	725432.031	True	5.00	0.055	4.17	1.000	0.200	0.235	17	30	
CAL2	88469.9	273.6	717434.931	True	5.00	0.123	4.17	1.000	0.500	0.529	6	30	
CAL3	351503.9	491.3	705369.014	True	5.00	0.498	4.17	1.000	2.000	2.137	7	30	
CAL4	1455862.5	897.7	713446.262	True	5.00	2.041	4.16	1.000	8.000	8.751	9	30	
CAL5	3380716.3	1094.5	674375.429	True	5.00	5.013	4.16	1.000	20.000	21.499	7	30	
CAL6	6739327.9	1094.4	607820.088	True	5.00	11.088	4.16	1.000	50.000	47.549	-5	30	
CAL7	11658104.6	1005.0	571807.508	False	5.00	20.388	4.16	1.000	100.000	87.434	-13	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

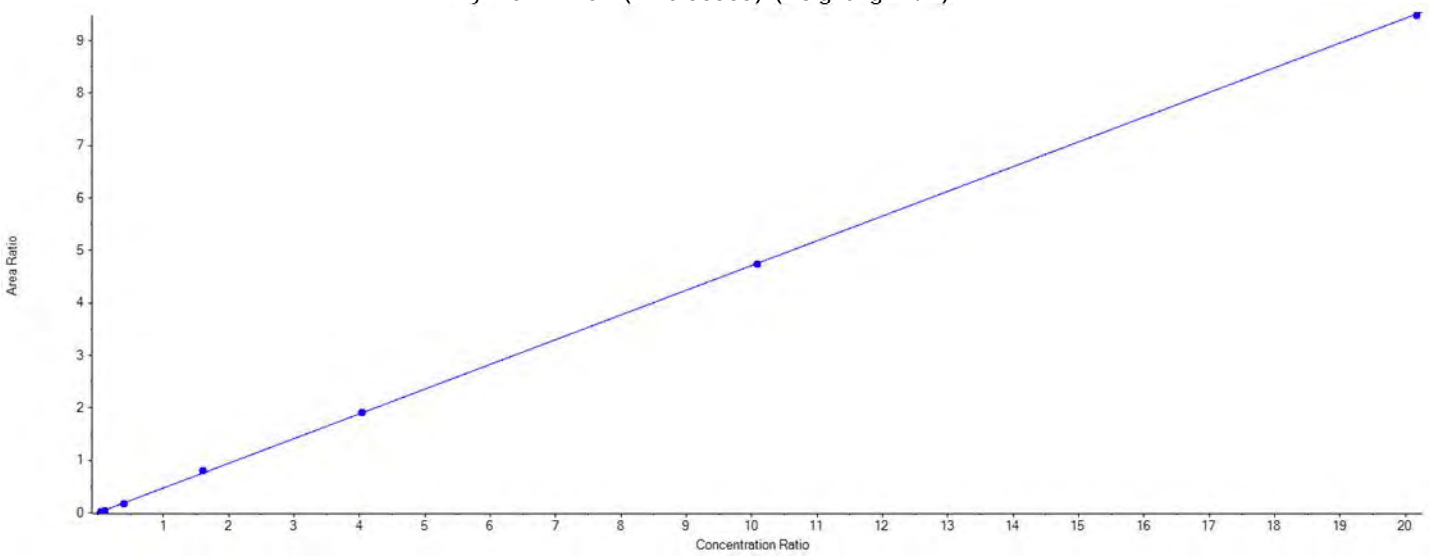
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeS

y = 0.47146 x (r = 0.99990) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	8335.4	274.6	449266.276	True	4.65	0.019	4.18	1.100	0.190	0.183	-4	30	
CAL2	20956.8	449.7	444721.279	True	4.65	0.047	4.19	1.100	0.469	0.465	-1	30	
CAL3	82090.1	729.5	456815.174	True	4.65	0.180	4.19	1.100	1.880	1.772	-6	30	
CAL4	349358.3	1303.9	434938.872	True	4.65	0.803	4.18	1.100	7.500	7.922	6	30	
CAL5	845636.3	1195.3	442479.717	True	4.65	1.911	4.18	1.100	18.760	18.849	0	30	
CAL6	1823355.9	1852.0	384220.795	True	4.65	4.746	4.18	1.100	46.900	46.806	0	30	
CAL7	3615170.2	1352.9	381345.498	True	4.65	9.480	4.18	1.100	93.800	93.501	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

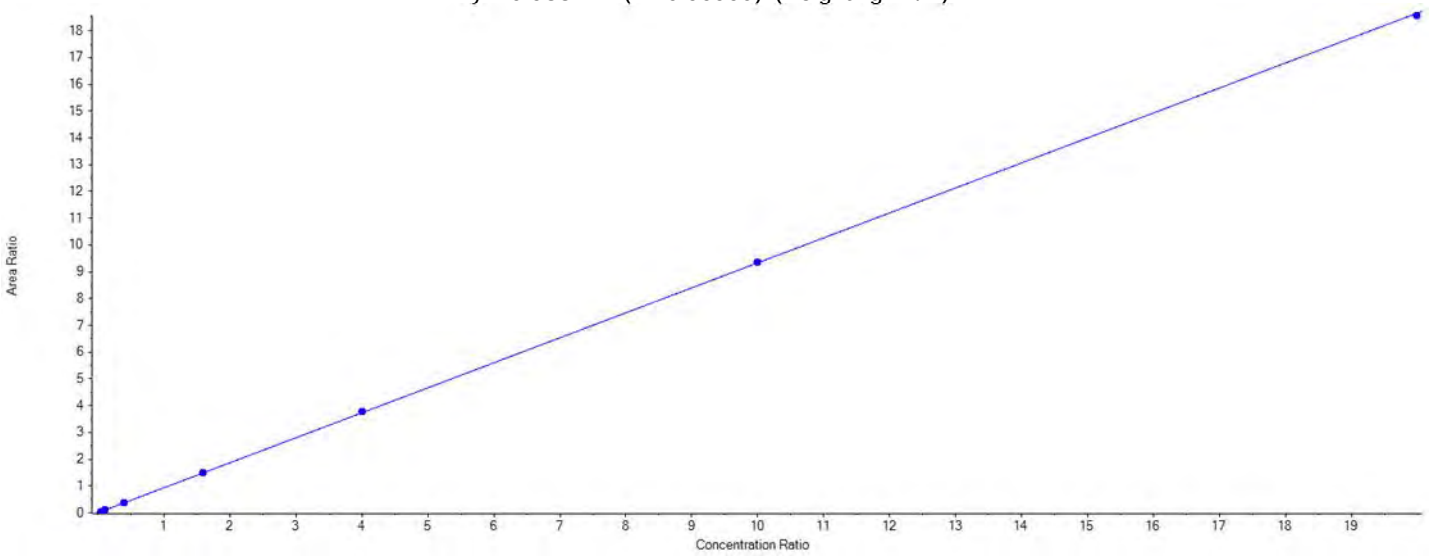
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxS

y = 0.93317 x (r = 0.99996) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13762.6	1166.5	358771.251	True	4.73	0.038	4.56	1.000	0.190	0.194	2	30	
CAL2	32061.0	6549.5	335732.100	True	4.73	0.095	4.56	1.000	0.473	0.484	2	30	
CAL3	122477.7	1994.1	343139.549	True	4.73	0.357	4.56	1.000	1.890	1.809	-4	30	
CAL4	513536.6	3164.6	339090.468	True	4.73	1.514	4.55	1.000	7.560	7.676	2	30	
CAL5	1261633.0	4348.9	332808.457	True	4.73	3.791	4.55	1.000	18.910	19.215	2	30	
CAL6	2760712.8	3934.3	295466.243	True	4.73	9.344	4.55	1.000	47.280	47.360	0	30	
CAL7	5196245.3	3688.8	279859.575	True	4.73	18.567	4.55	1.000	94.550	94.113	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

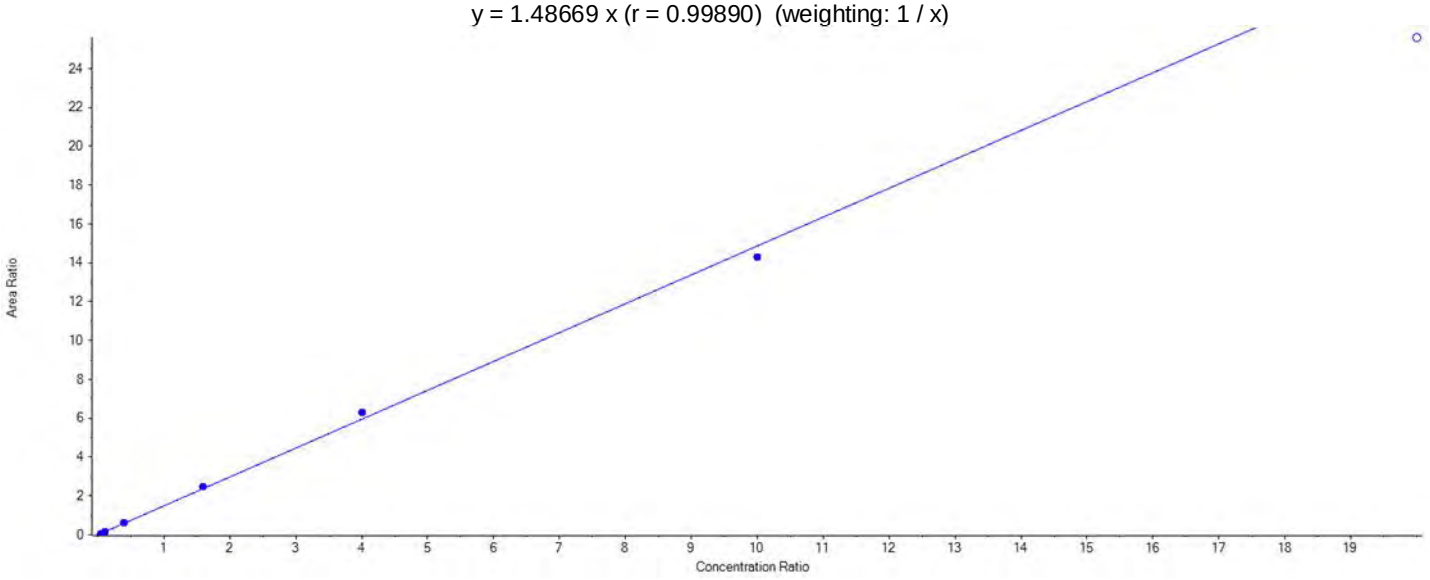
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpA

y = 1.48669 x (r = 0.99890) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpA Area	S/N	13C4-PFHpA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	38331.9	115.7	586580.259	True	5.00	0.065	4.55	1.000	0.200	0.220	10	30	
CAL2	93502.9	220.2	583342.783	True	5.00	0.160	4.56	1.000	0.500	0.539	8	30	
CAL3	360280.4	493.2	566495.562	True	5.00	0.636	4.56	1.000	2.000	2.139	7	30	
CAL4	1481489.5	591.4	592497.863	True	5.00	2.500	4.55	1.000	8.000	8.409	5	30	
CAL5	3440372.8	967.5	544681.071	True	5.00	6.316	4.55	1.000	20.000	21.243	6	30	
CAL6	6940304.7	1231.7	484763.199	True	5.00	14.317	4.55	1.000	50.000	48.150	-4	30	
CAL7	11701142.2	1512.0	457160.435	False	5.00	25.595	4.55	1.000	100.000	86.081	-14	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

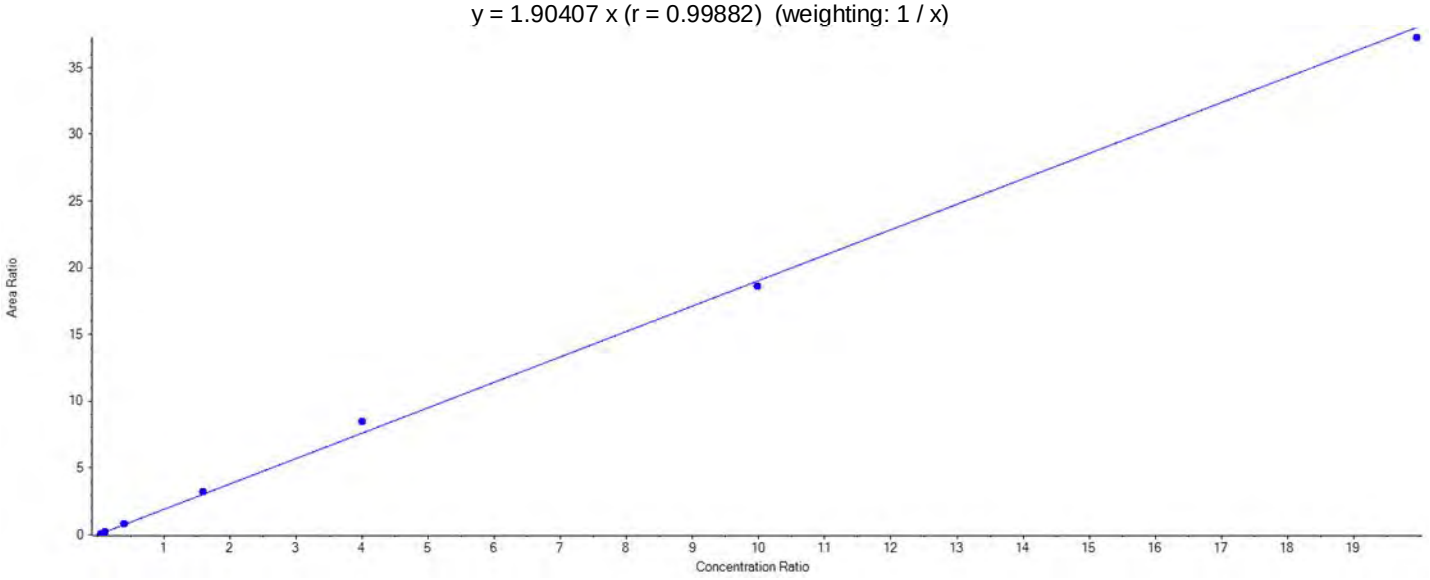
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

6:2-FTS

y = 1.90407 x (r = 0.99882) (weighting: 1 / x)



Component Calibration Verification

Sample Name	6:2-FTS Area	S/N	13C2-6:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2460.6	100.5	42112.811	True	4.75	0.058	4.91	1.000	0.190	0.146	-23	30	
CAL2	8883.8	317.6	38849.605	True	4.75	0.229	4.91	1.000	0.474	0.570	20	30	
CAL3	32056.4	598.2	38605.475	True	4.75	0.830	4.92	1.000	1.896	2.071	9	30	
CAL4	125170.2	897.1	39121.731	True	4.75	3.200	4.91	1.000	7.584	7.982	5	30	
CAL5	278493.0	1000.7	32735.591	True	4.75	8.507	4.91	1.000	18.960	21.223	12	30	
CAL6	566692.8	797.2	30466.848	True	4.75	18.600	4.90	1.000	47.400	46.401	-2	30	
CAL7	988785.9	901.9	26549.079	True	4.75	37.244	4.90	1.000	94.800	92.910	-2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

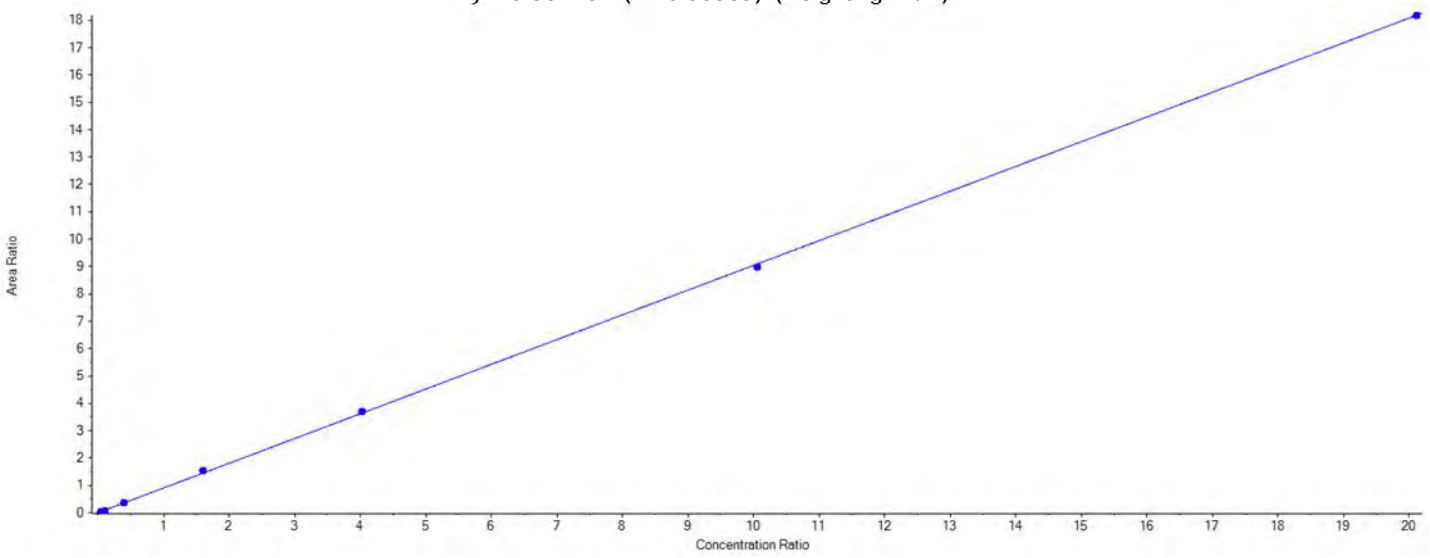
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpS

y = 0.90410 x (r = 0.99989) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	14183.4	333.2	358771.251	True	4.73	0.040	4.91	1.080	0.190	0.207	9	30	
CAL2	30553.2	575.9	335732.100	True	4.73	0.091	4.92	1.080	0.476	0.476	0	30	
CAL3	123126.9	881.8	343139.549	True	4.73	0.359	4.92	1.080	1.900	1.877	-1	30	
CAL4	516333.1	1178.7	339090.468	True	4.73	1.523	4.91	1.080	7.610	7.966	5	30	
CAL5	1236603.7	1092.5	332808.457	True	4.73	3.716	4.92	1.080	19.030	19.439	2	30	
CAL6	2648512.9	1087.8	295466.243	True	4.73	8.964	4.91	1.080	47.580	46.896	-1	30	
CAL7	5085803.6	1089.6	279859.575	True	4.73	18.173	4.91	1.080	95.150	95.074	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

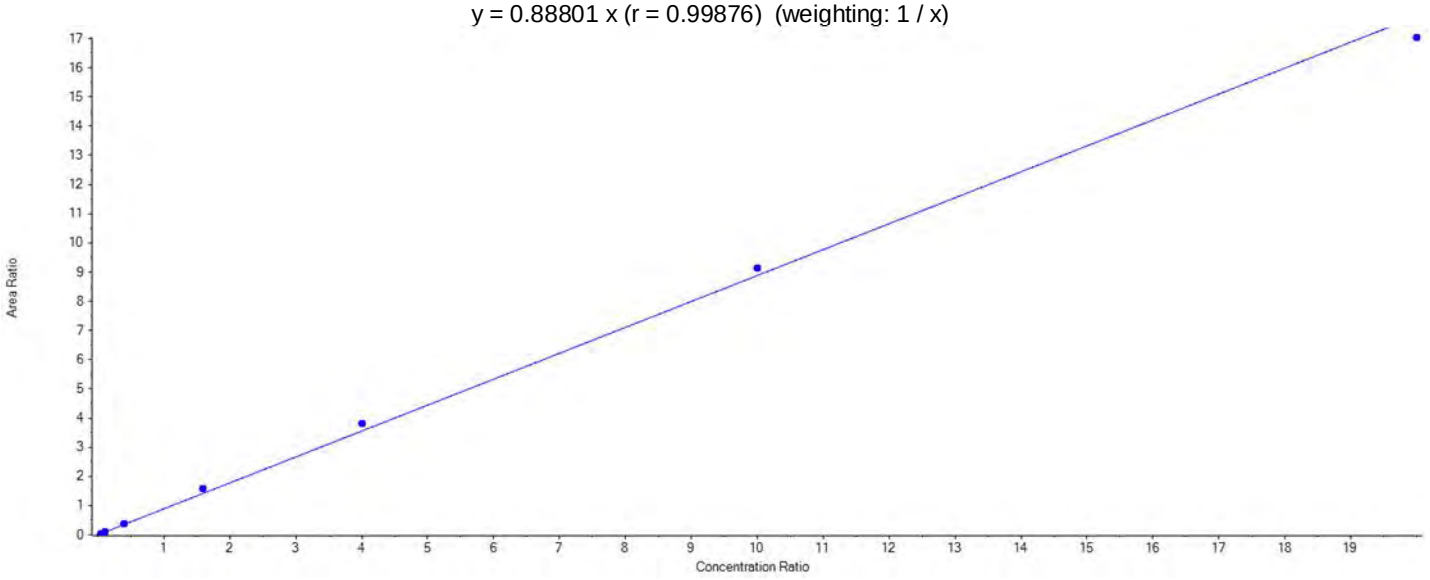
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOA

y = 0.88801 x (r = 0.99876) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOA Area	S/N	13C8-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	39843.5	233.7	1028414.921	True	5.00	0.039	4.93	1.000	0.200	0.218	9	30	
CAL2	94348.1	430.7	970523.191	True	5.00	0.097	4.93	1.000	0.500	0.547	9	30	
CAL3	364943.1	791.6	964414.633	True	5.00	0.378	4.93	1.000	2.000	2.131	7	30	
CAL4	1491946.3	1207.0	937287.469	True	5.00	1.592	4.92	1.000	8.000	8.963	12	30	
CAL5	3425279.8	1901.2	895692.173	True	5.00	3.824	4.92	1.000	20.000	21.532	8	30	
CAL6	7023921.1	2522.0	769164.416	True	5.00	9.132	4.92	1.000	50.000	51.417	3	30	
CAL7	11562348.7	2334.2	678914.551	True	5.00	17.031	4.92	1.000	100.000	95.892	-4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

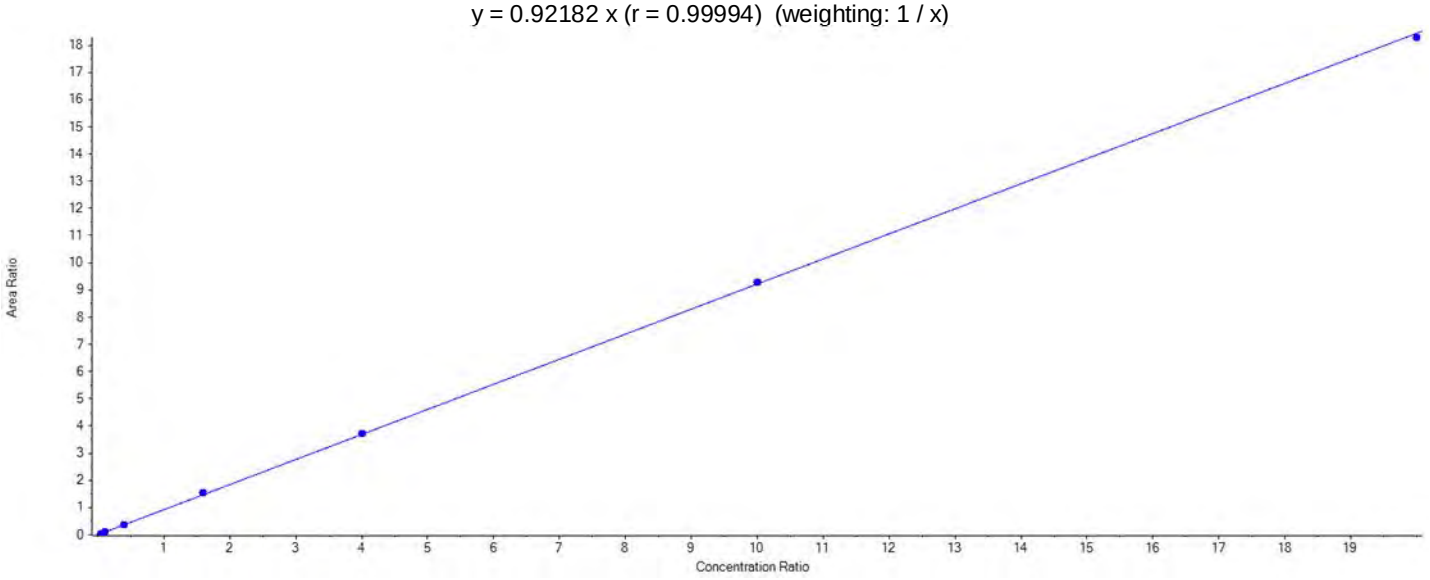
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOS

y = 0.92182 x (r = 0.99994) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	12181.7	1599.7	307224.329	True	4.78	0.040	5.25	1.000	0.190	0.206	8	30	
CAL2	28529.2	1301.4	286174.783	True	4.78	0.100	5.25	1.000	0.478	0.517	8	30	
CAL3	111397.7	2913.4	297259.750	True	4.78	0.375	5.25	1.000	1.910	1.943	2	30	
CAL4	447769.0	1957.6	291941.558	True	4.78	1.534	5.25	1.000	7.650	7.953	4	30	
CAL5	1108359.9	3249.6	297995.609	True	4.78	3.719	5.25	1.000	19.120	19.287	1	30	
CAL6	2487687.4	4656.8	268368.993	True	4.78	9.270	5.24	1.000	47.800	48.067	1	30	
CAL7	4830627.6	3150.6	264295.900	True	4.78	18.277	5.25	1.000	95.600	94.776	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

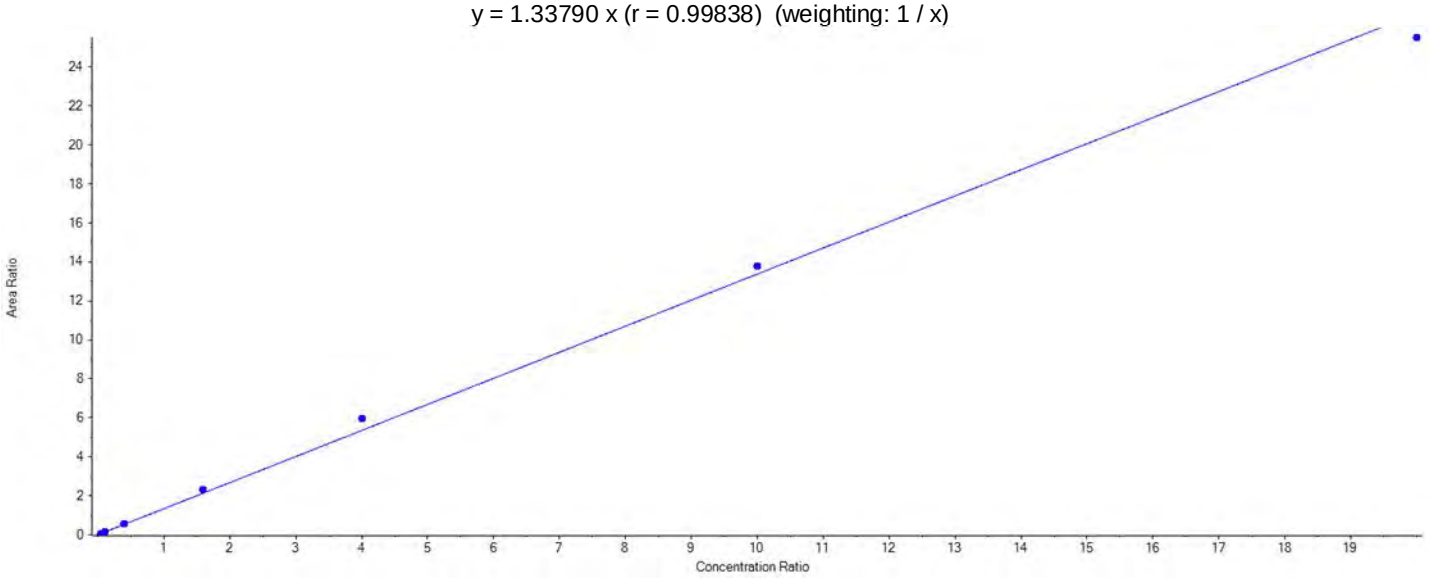
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNA

y = 1.33790 x (r = 0.99838) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNA Area	S/N	13C9-PFNA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	32563.3	212.6	518118.657	True	5.00	0.063	5.27	1.000	0.200	0.235	17	30	
CAL2	74743.9	385.8	540435.380	True	5.00	0.138	5.27	1.000	0.500	0.517	3	30	
CAL3	299530.4	891.6	513115.984	True	5.00	0.584	5.27	1.000	2.000	2.182	9	30	
CAL4	1179151.8	1096.7	512147.381	True	5.00	2.302	5.27	1.000	8.000	8.604	8	30	
CAL5	2889454.7	1462.7	484419.266	True	5.00	5.965	5.27	1.000	20.000	22.292	11	30	
CAL6	6070259.1	1061.5	440319.007	True	5.00	13.786	5.26	1.000	50.000	51.521	3	30	
CAL7	10279837.9	1111.6	402916.669	True	5.00	25.514	5.27	1.000	100.000	95.349	-5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

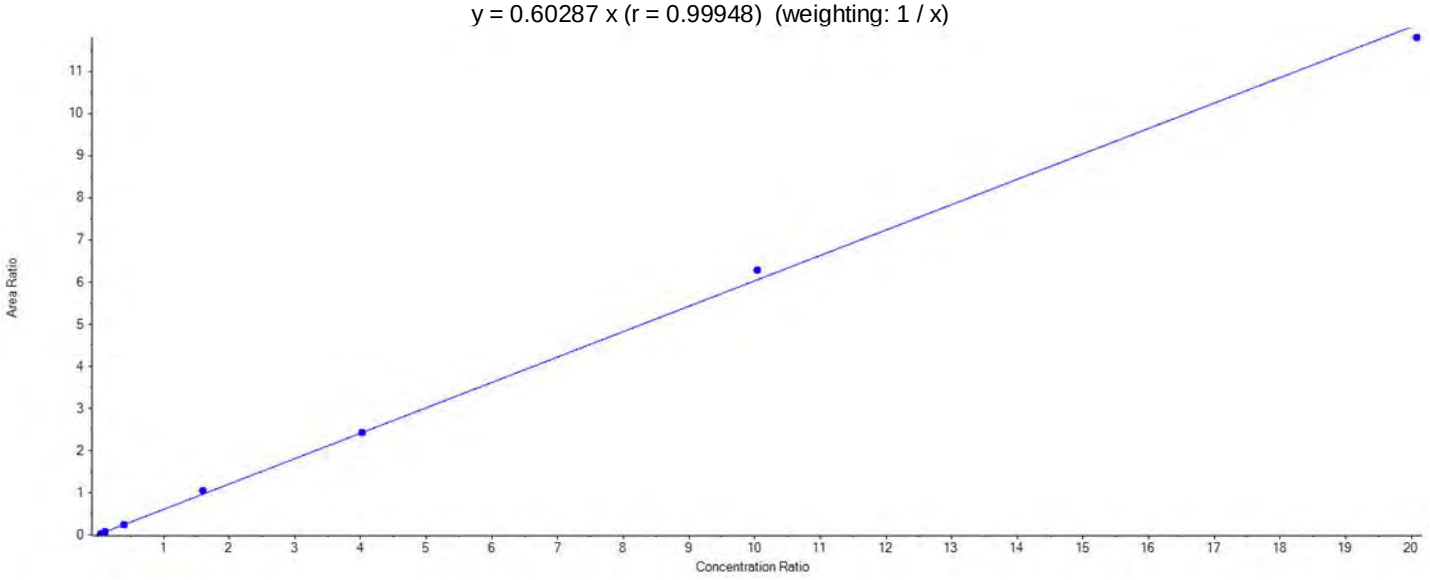
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNS

y = 0.60287 x (r = 0.99948) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6748.5	139.2	307224.329	True	4.78	0.022	5.55	1.060	0.190	0.174	-8	30	
CAL2	17507.8	298.5	286174.783	True	4.78	0.061	5.55	1.060	0.480	0.485	1	30	
CAL3	72940.0	700.2	297259.750	True	4.78	0.245	5.55	1.060	1.920	1.946	1	30	
CAL4	305013.7	830.3	291941.558	True	4.78	1.045	5.54	1.060	7.680	8.284	8	30	
CAL5	722178.3	1119.3	297995.609	True	4.78	2.423	5.54	1.060	19.200	19.215	0	30	
CAL6	1684601.2	897.8	268368.993	True	4.78	6.277	5.54	1.060	48.000	49.770	4	30	
CAL7	3119908.2	856.2	264295.900	True	4.78	11.805	5.54	1.060	96.000	93.596	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

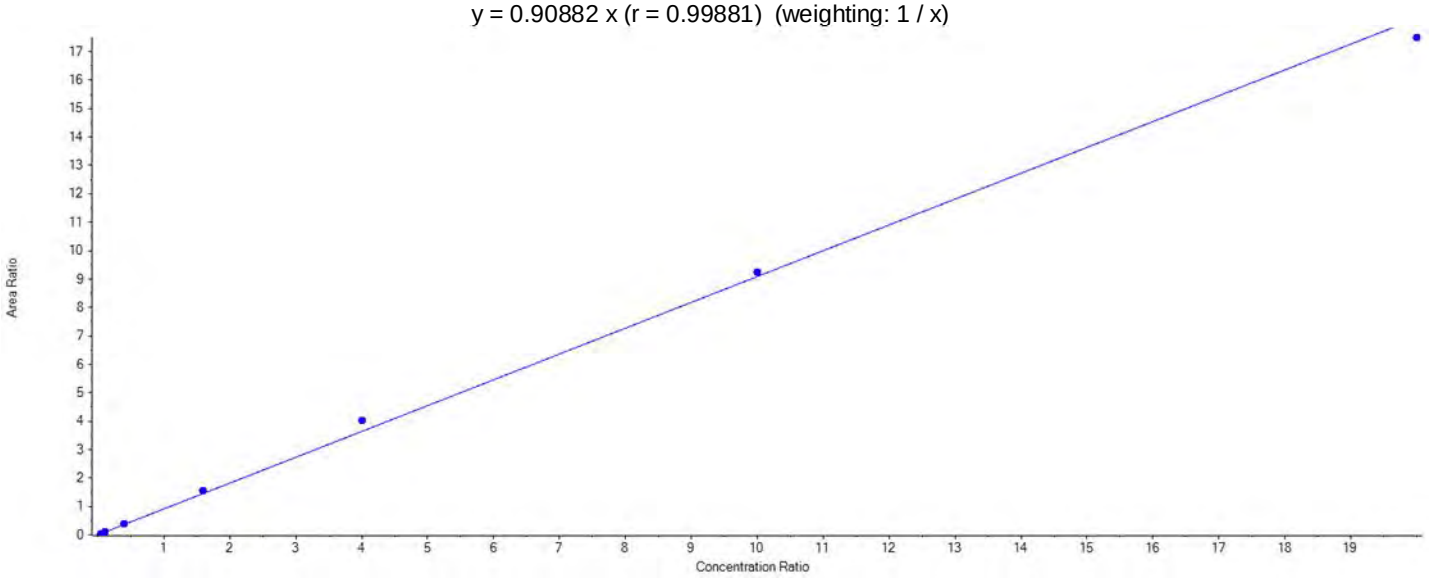
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDA

y = 0.90882 x (r = 0.99881) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDA Area	S/N	13C6-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	25530.0	80.6	651347.959	True	5.00	0.039	5.57	1.000	0.200	0.216	8	30	
CAL2	62530.6	137.6	661423.810	True	5.00	0.095	5.57	1.000	0.500	0.520	4	30	
CAL3	244693.9	357.4	639022.779	True	5.00	0.383	5.57	1.000	2.000	2.107	5	30	
CAL4	1029893.8	556.8	656868.302	True	5.00	1.568	5.56	1.000	8.000	8.626	8	30	
CAL5	2401274.2	683.6	598009.725	True	5.00	4.015	5.57	1.000	20.000	22.091	10	30	
CAL6	4962332.7	791.5	536626.204	True	5.00	9.247	5.56	1.000	50.000	50.875	2	30	
CAL7	8415098.4	928.9	480927.883	True	5.00	17.498	5.56	1.000	100.000	96.265	-4	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

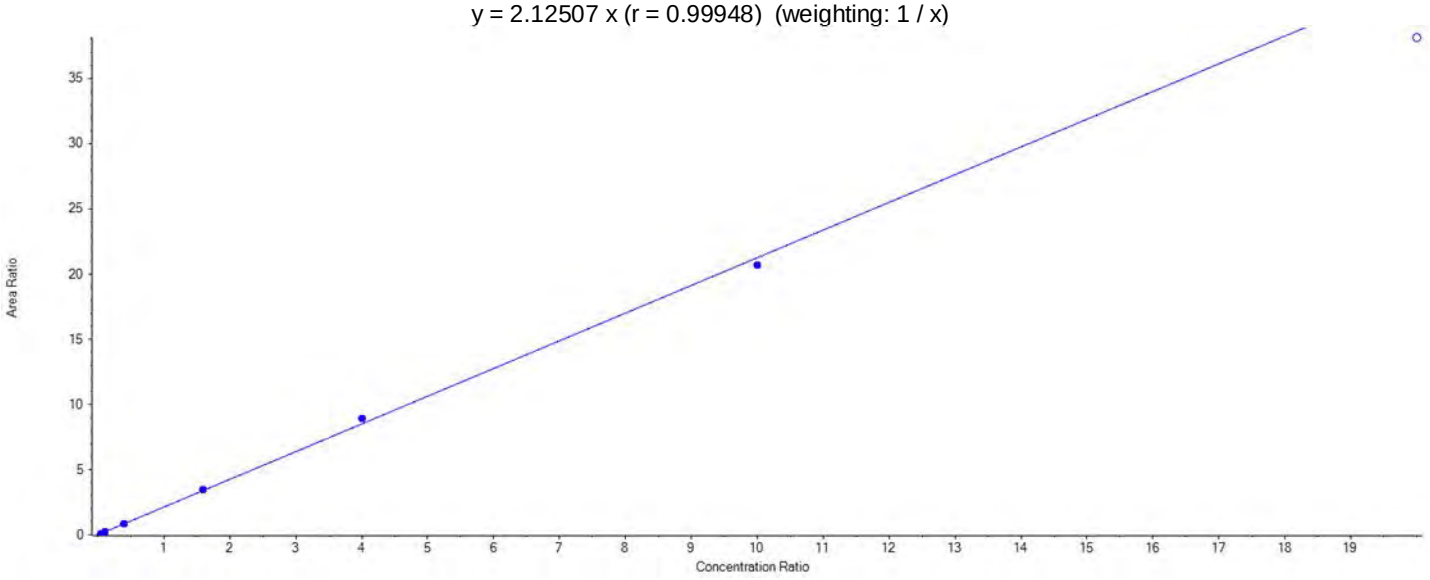
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

8:2-FTS

y = 2.12507 x (r = 0.99948) (weighting: 1 / x)



Component Calibration Verification

Sample Name	8:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	2783.3	121.0	26730.160	True	4.79	0.104	5.58	1.000	0.192	0.235	22	30	
CAL2	6917.6	207.6	27523.013	True	4.79	0.251	5.57	1.000	0.479	0.567	18	30	
CAL3	24892.6	1018.5	29468.270	True	4.79	0.845	5.57	1.000	1.916	1.904	-1	30	
CAL4	106591.3	873.6	30500.264	True	4.79	3.495	5.57	1.000	7.664	7.877	3	30	
CAL5	244867.6	996.2	27553.973	True	4.79	8.887	5.57	1.000	19.160	20.031	5	30	
CAL6	516640.5	1051.6	24938.159	True	4.79	20.717	5.56	1.000	47.900	46.697	-3	30	
CAL7	936483.2	582.0	24555.696	False	4.79	38.137	5.57	1.000	95.800	85.963	-10	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

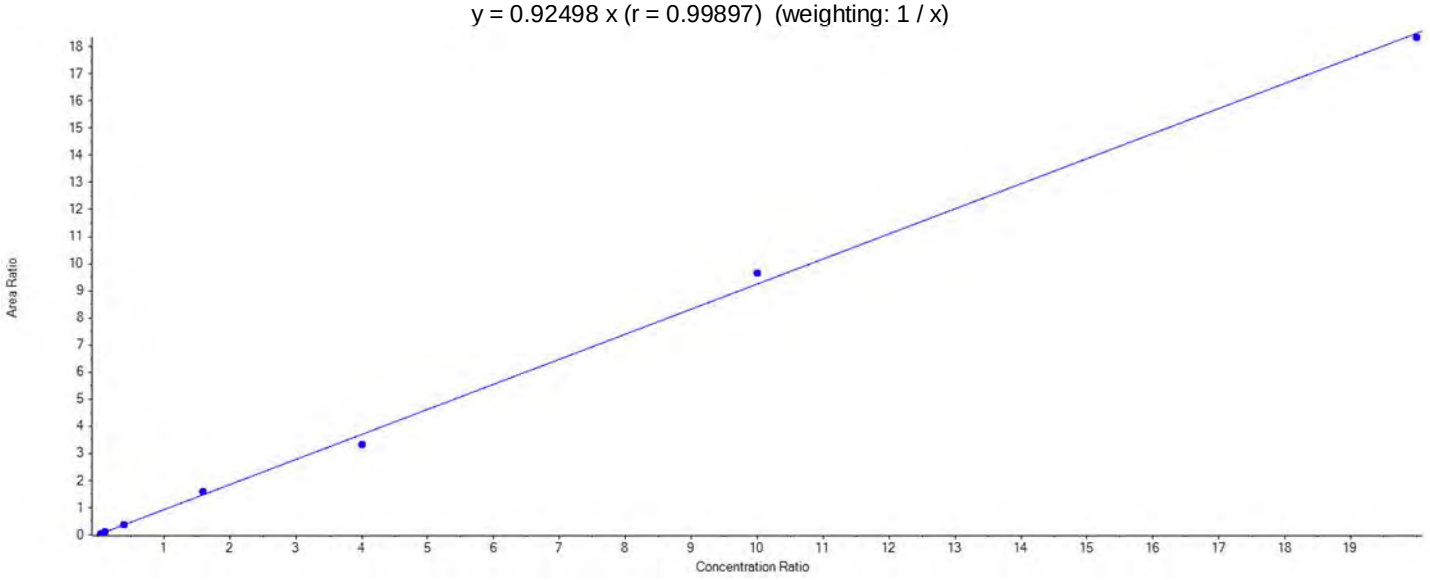
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOSA

y = 0.92498 x (r = 0.99897) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOSA Area	S/N	13C8-PFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	27779.6	365.6	774962.773	True	5.00	0.036	5.64	1.000	0.200	0.194	-3	30	
CAL2	69586.0	485.9	711032.158	True	5.00	0.098	5.64	1.000	0.500	0.529	6	30	
CAL3	271753.2	606.8	704745.507	True	5.00	0.386	5.64	1.000	2.000	2.084	4	30	
CAL4	1119770.1	706.4	708330.461	True	5.00	1.581	5.64	1.000	8.000	8.545	7	30	
CAL5	2448684.3	761.3	737038.484	True	5.00	3.322	5.64	1.000	20.000	17.959	-10	30	
CAL6	5938541.7	607.4	614406.373	True	5.00	9.665	5.64	1.000	50.000	52.247	4	30	
CAL7	11064835.5	659.2	603296.116	True	5.00	18.341	5.64	1.000	100.000	99.141	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

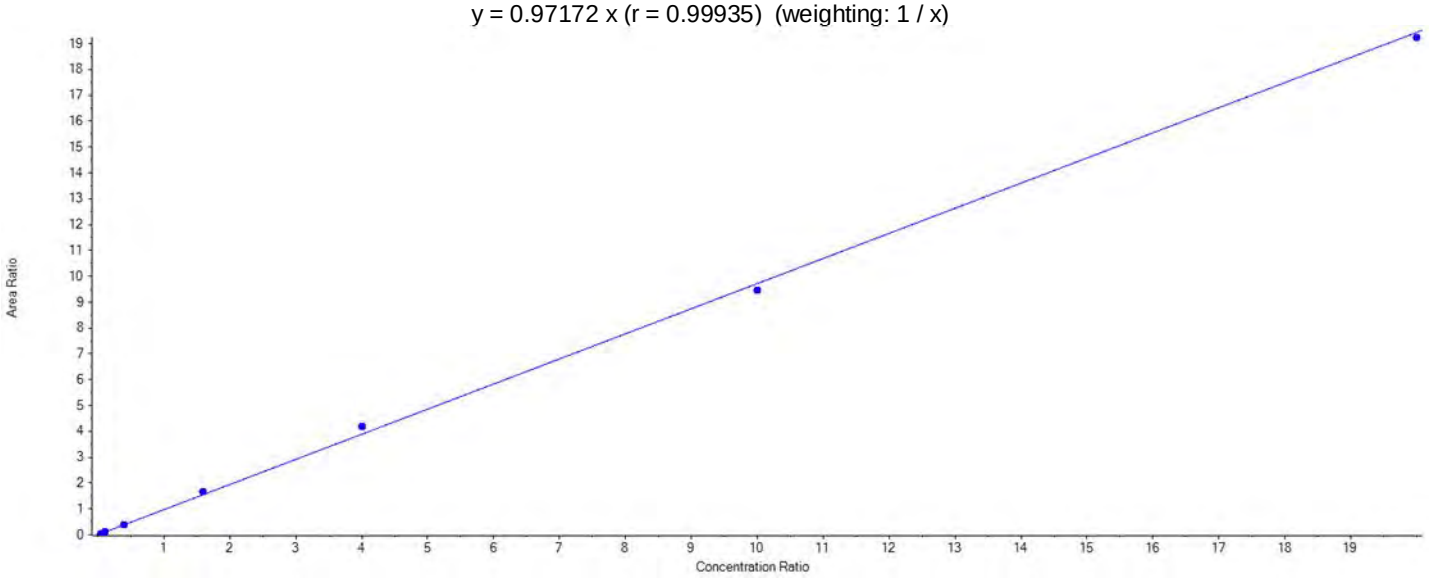
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NMeFOSAA

y = 0.97172 x (r = 0.99935) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMeFOSAA Area	S/N	d3-NMeFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3293.8	523.5	94966.986	True	5.00	0.035	5.71	1.000	0.200	0.178	-11	30	
CAL2	9807.4	1757.7	83112.192	True	5.00	0.118	5.71	1.000	0.500	0.607	21	30	
CAL3	32400.4	714.3	81763.338	True	5.00	0.396	5.71	1.000	2.000	2.039	2	30	
CAL4	136316.9	1055.9	80900.105	True	5.00	1.685	5.71	1.000	8.000	8.670	8	30	
CAL5	308507.7	1864.0	73896.081	True	5.00	4.175	5.71	1.000	20.000	21.482	7	30	
CAL6	740651.6	2592.1	78157.968	True	5.00	9.476	5.70	1.000	50.000	48.760	-2	30	
CAL7	1450331.2	3029.7	75408.724	True	5.00	19.233	5.70	1.000	100.000	98.963	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

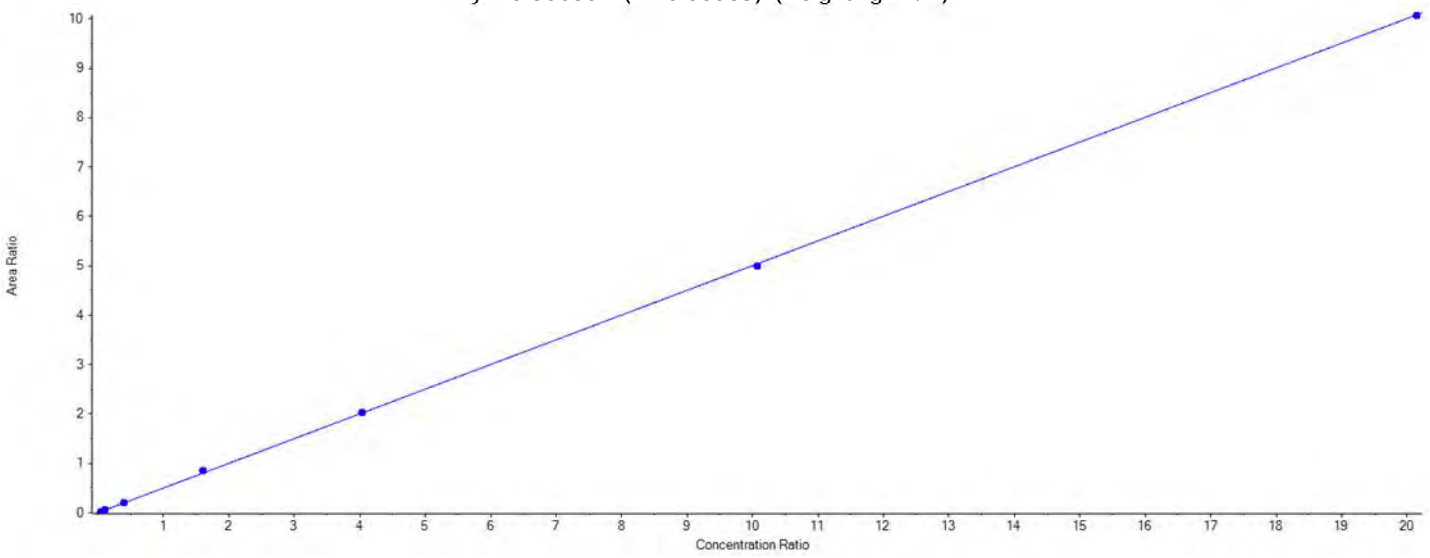
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDS

y = 0.50039 x (r = 0.99988) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6453.6	144.3	307224.329	True	4.78	0.021	5.80	1.100	0.190	0.201	6	30	
CAL2	15726.3	346.3	286174.783	True	4.78	0.055	5.80	1.110	0.482	0.525	9	30	
CAL3	59073.9	499.2	297259.750	True	4.78	0.199	5.80	1.100	1.930	1.898	-2	30	
CAL4	250911.0	762.1	291941.558	True	4.78	0.859	5.80	1.110	7.700	8.210	7	30	
CAL5	605559.3	1144.8	297995.609	True	4.78	2.032	5.80	1.110	19.260	19.412	1	30	
CAL6	1337416.6	1228.3	268368.993	True	4.78	4.983	5.79	1.110	48.150	47.605	-1	30	
CAL7	2660525.2	1099.2	264295.900	True	4.78	10.066	5.80	1.110	96.300	96.161	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

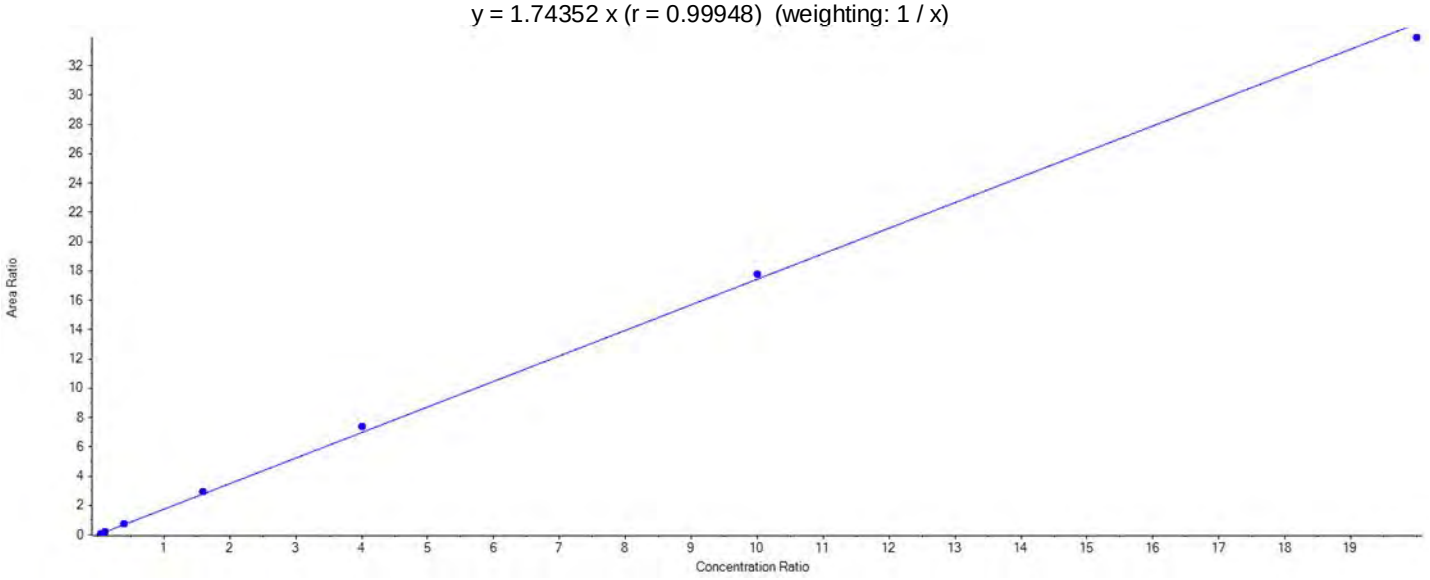
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFUnDA

y = 1.74352 x (r = 0.99948) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFUnDA Area	S/N	13C7-PFUnDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	23275.5	123.3	293658.674	True	5.00	0.079	5.83	1.000	0.200	0.227	14	30	
CAL2	54085.5	306.2	289985.074	True	5.00	0.187	5.83	1.000	0.500	0.535	7	30	
CAL3	209644.8	492.6	277115.542	True	5.00	0.757	5.83	1.000	2.000	2.170	8	30	
CAL4	802732.3	974.7	275977.201	True	5.00	2.909	5.83	1.000	8.000	8.341	4	30	
CAL5	1952356.4	1160.8	263924.687	True	5.00	7.397	5.83	1.000	20.000	21.214	6	30	
CAL6	4071590.3	1109.0	229237.069	True	5.00	17.761	5.82	1.000	50.000	50.936	2	30	
CAL7	7204782.9	1154.1	212399.757	True	5.00	33.921	5.82	1.000	100.000	97.277	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

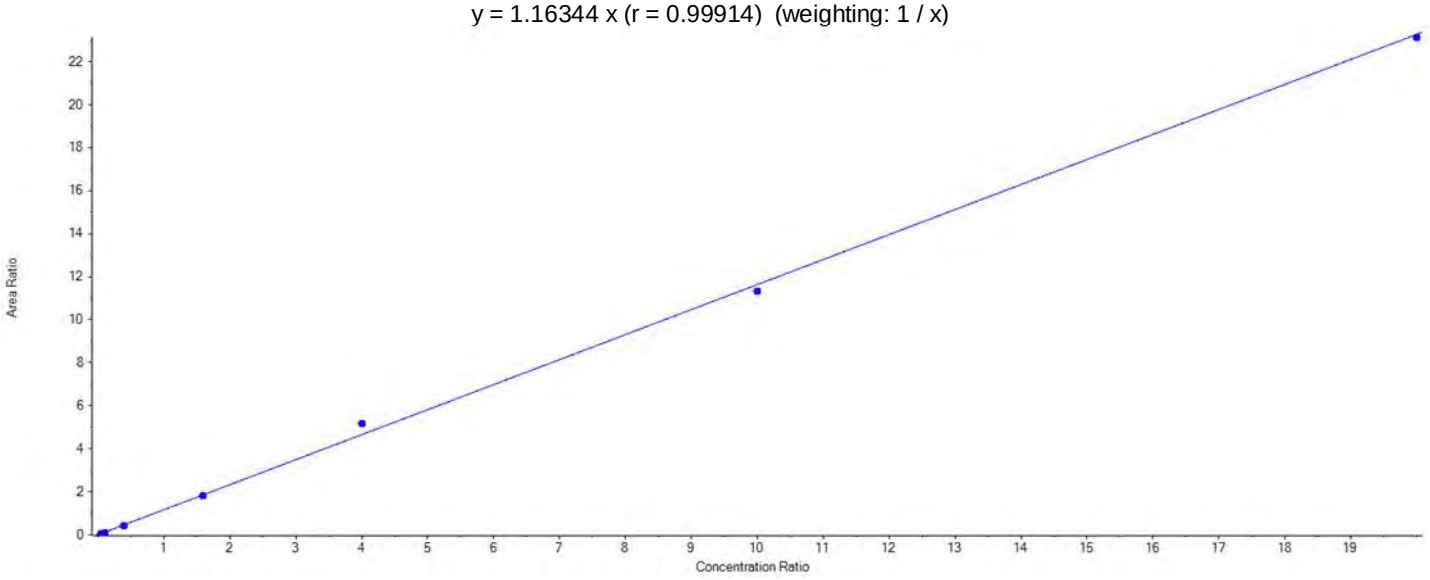
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtFOSAA

y = 1.16344 x (r = 0.99914) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtFOSAA Area	S/N	d5-NEtFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3313.0	102.1	77938.309	True	5.00	0.043	5.84	1.000	0.200	0.183	-9	30	
CAL2	7253.7	357.6	65815.920	True	5.00	0.110	5.84	1.000	0.500	0.474	-5	30	
CAL3	32100.8	3488.9	72755.747	True	5.00	0.441	5.85	1.000	2.000	1.896	-5	30	
CAL4	121615.1	1770.9	66162.445	True	5.00	1.838	5.84	1.000	8.000	7.900	-1	30	
CAL5	298834.2	3536.0	57745.714	True	5.00	5.175	5.85	1.000	20.000	22.240	11	30	
CAL6	685447.7	2450.9	60556.615	True	5.00	11.319	5.84	1.000	50.000	48.645	-3	30	
CAL7	1317020.6	2554.3	56963.053	True	5.00	23.121	5.84	1.000	100.000	99.363	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

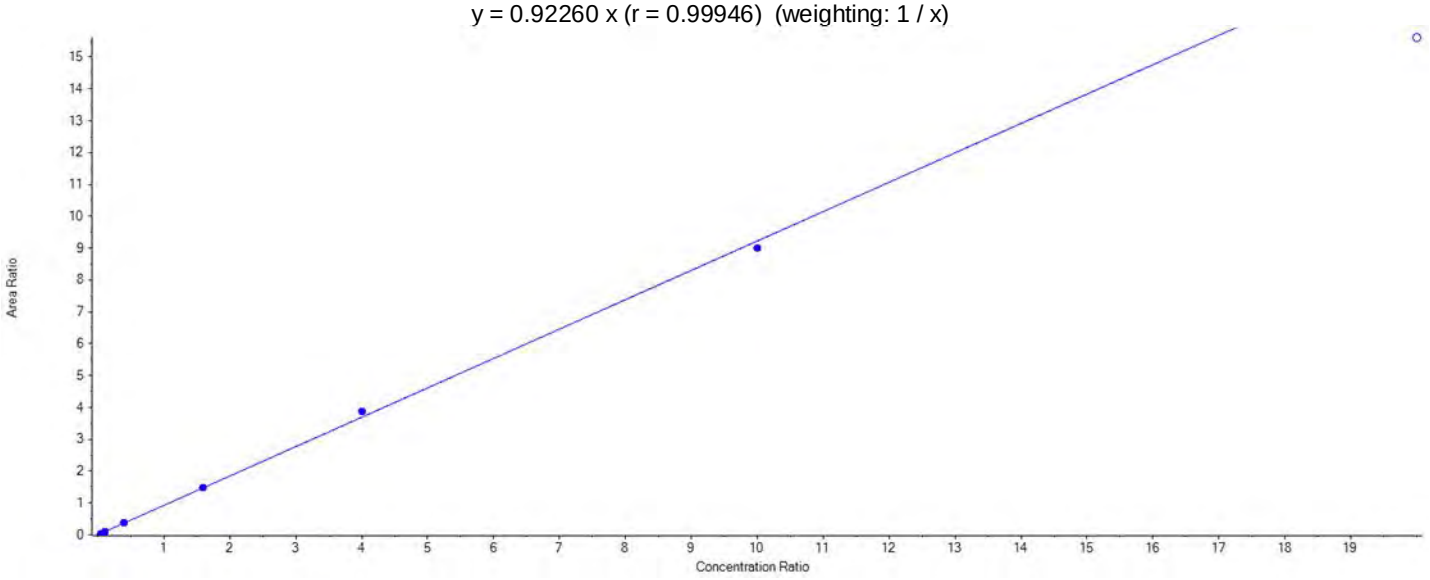
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoDA

y = 0.92260 x (r = 0.99946) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	23314.2	211.1	564794.852	True	5.00	0.041	6.06	1.000	0.200	0.224	12	30	
CAL2	60098.0	579.3	597616.302	True	5.00	0.101	6.06	1.000	0.500	0.545	9	30	
CAL3	220663.6	750.3	584631.538	True	5.00	0.377	6.06	1.000	2.000	2.046	2	30	
CAL4	877242.2	1049.4	598287.433	True	5.00	1.466	6.05	1.000	8.000	7.946	-1	30	
CAL5	2132260.7	1239.0	548536.046	True	5.00	3.887	6.06	1.000	20.000	21.067	5	30	
CAL6	4509578.7	1127.0	500065.276	True	5.00	9.018	6.05	1.000	50.000	48.873	-2	30	
CAL7	8211828.8	1159.6	525971.755	False	5.00	15.613	6.05	1.000	100.000	84.613	-15	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

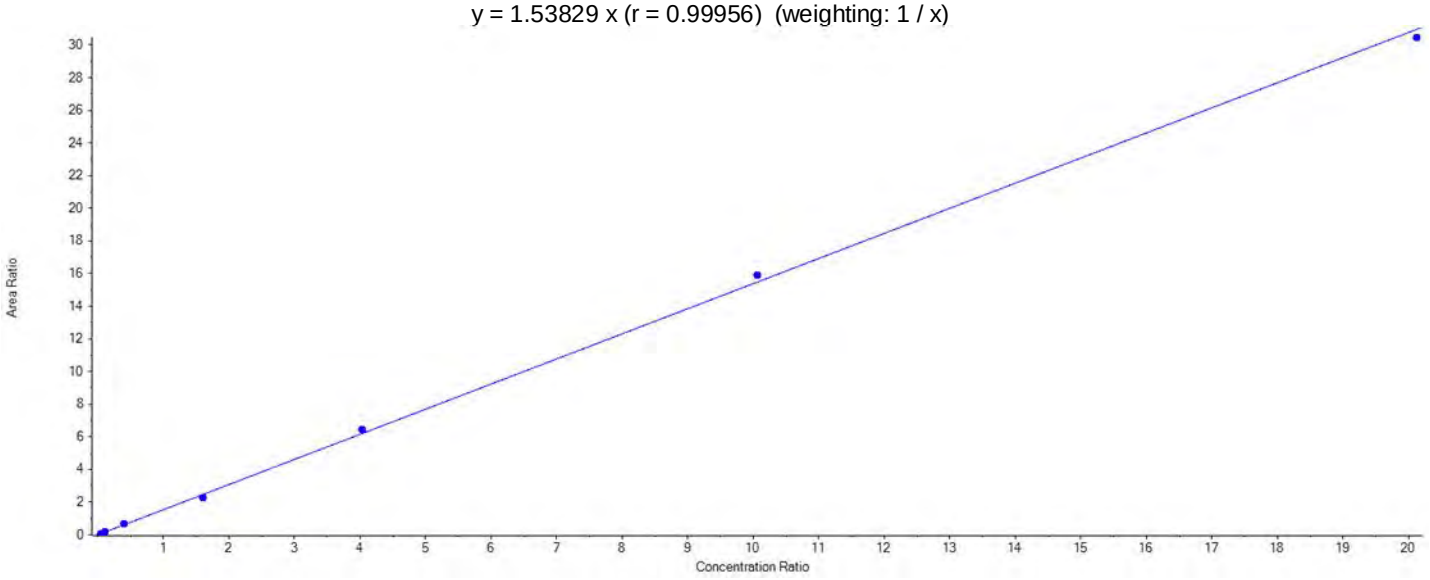
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

10:2-FTS

y = 1.53829 x (r = 0.99956) (weighting: 1 / x)



Component Calibration Verification

Sample Name	10:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1903.7	172.7	26730.160	True	4.79	0.071	6.07	1.090	0.193	0.222	15	30	
CAL2	4874.3	125.8	27523.013	True	4.79	0.177	6.07	1.090	0.482	0.551	14	30	
CAL3	19060.5	262.9	29468.270	True	4.79	0.647	6.07	1.090	1.928	2.014	4	30	
CAL4	69275.8	544.3	30500.264	True	4.79	2.271	6.07	1.090	7.712	7.073	-8	30	
CAL5	177607.5	693.3	27553.973	True	4.79	6.446	6.07	1.090	19.280	20.071	4	30	
CAL6	395929.8	1104.6	24938.159	True	4.79	15.876	6.07	1.090	48.200	49.437	3	30	
CAL7	747804.5	1151.9	24555.696	True	4.79	30.453	6.07	1.090	96.400	94.827	-2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

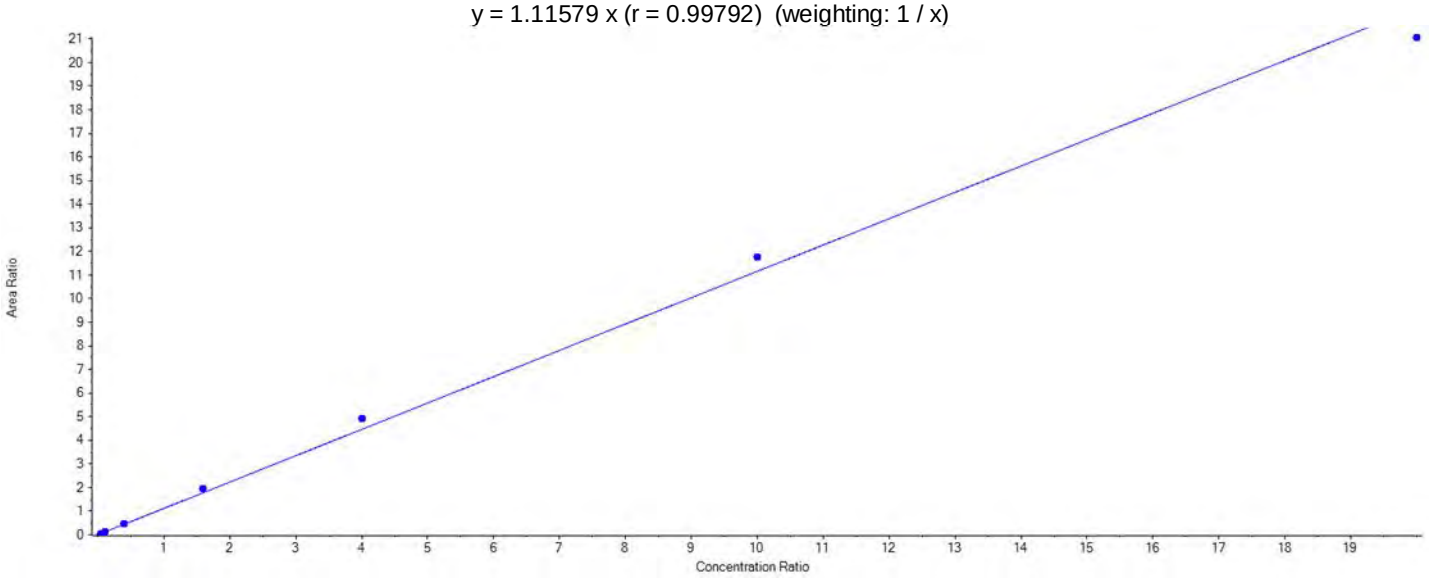
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSAE

y = 1.11579 x (r = 0.99792) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSAE Area	S/N	d7-NMePFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	19989.4	87.7	366847.670	True	5.00	0.054	6.10	1.000	0.200	0.244	22	30	
CAL2	40902.1	140.8	330298.603	True	5.00	0.124	6.10	1.000	0.500	0.555	11	30	
CAL3	151795.0	297.4	335206.816	True	5.00	0.453	6.10	1.000	2.000	2.029	1	30	
CAL4	648523.4	496.3	330968.748	True	5.00	1.959	6.09	1.000	8.000	8.781	10	30	
CAL5	1583085.5	689.6	321549.477	True	5.00	4.923	6.10	1.000	20.000	22.062	10	30	
CAL6	3462215.2	801.3	294617.585	True	5.00	11.752	6.09	1.000	50.000	52.660	5	30	
CAL7	6220772.1	824.6	295395.339	True	5.00	21.059	6.09	1.000	100.000	94.369	-6	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

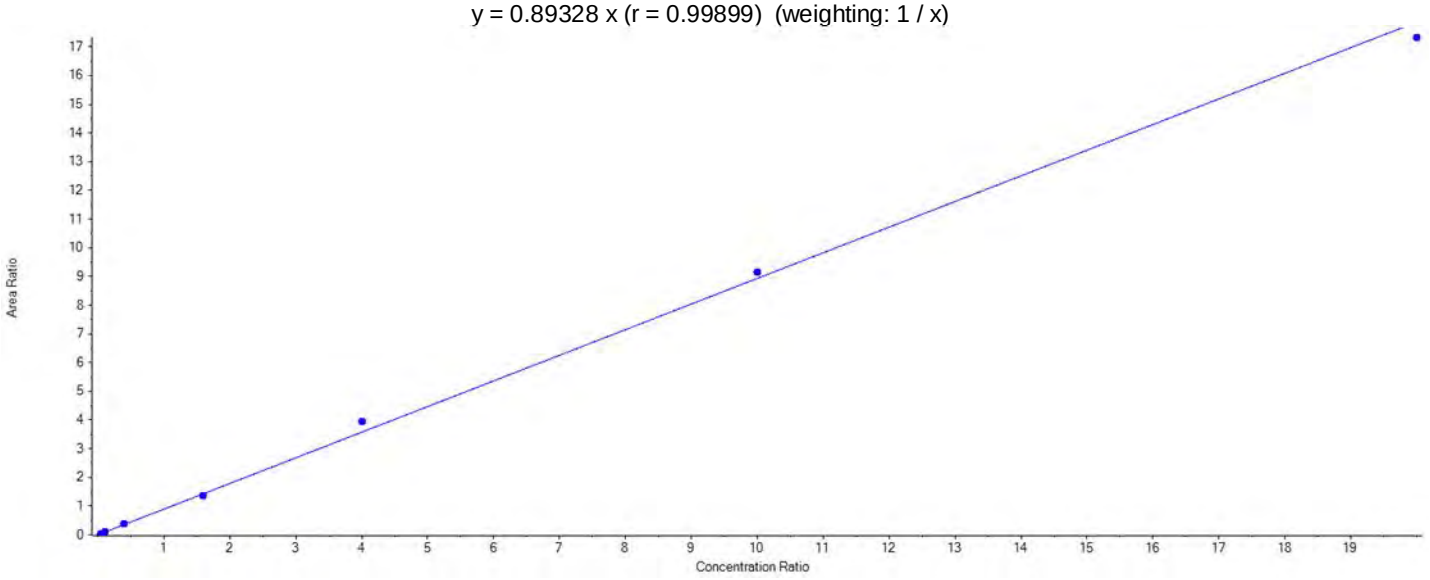
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSA

y = 0.89328 x (r = 0.99899) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSA Area	S/N	d3-NMePFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3218.9	123.4	89511.926	True	5.00	0.036	6.10	1.000	0.200	0.201	1	30	
CAL2	8251.9	123.5	81301.239	True	5.00	0.101	6.10	1.000	0.500	0.568	14	30	
CAL3	29797.4	354.6	79381.682	True	5.00	0.375	6.10	1.000	2.000	2.101	5	30	
CAL4	118194.2	528.2	86399.425	True	5.00	1.368	6.10	1.000	8.000	7.657	-4	30	
CAL5	323567.0	708.0	82137.635	True	5.00	3.939	6.10	1.000	20.000	22.050	10	30	
CAL6	705149.2	546.6	77146.949	True	5.00	9.140	6.10	1.000	50.000	51.162	2	30	
CAL7	1386738.5	563.9	80053.250	True	5.00	17.323	6.10	1.000	100.000	96.961	-3	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

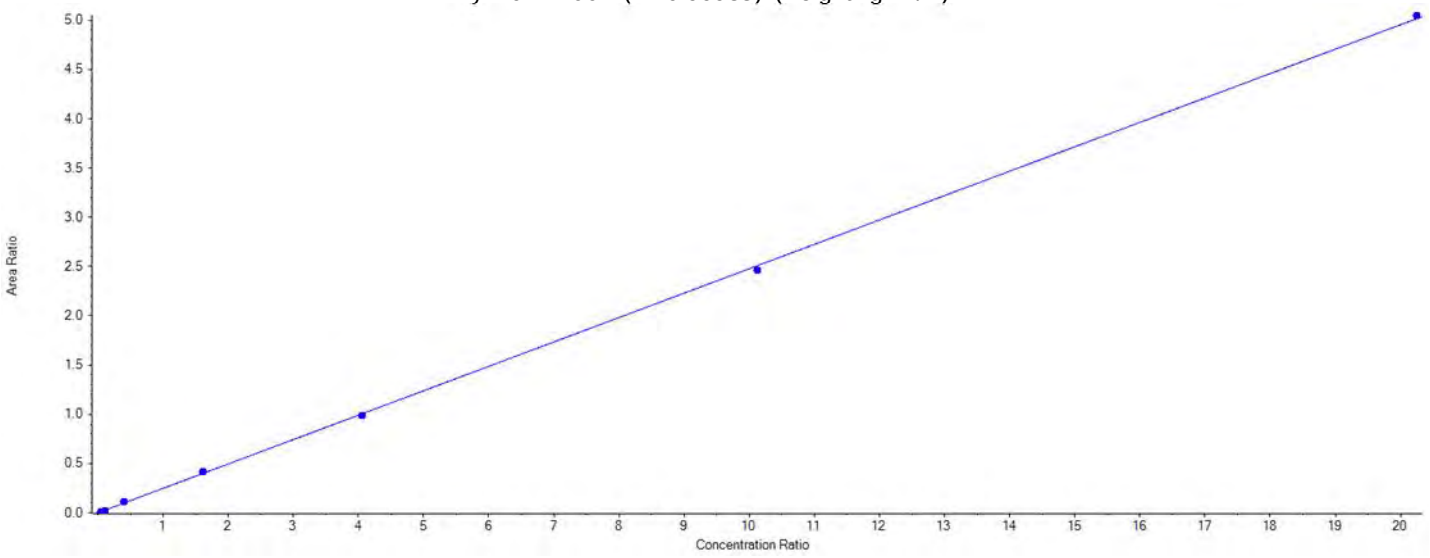
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoS

y = 0.24766 x (r = 0.99988) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3016.1	142.5	307224.329	True	4.78	0.010	6.22	1.190	0.190	0.189	0	30	
CAL2	7227.2	251.5	286174.783	True	4.78	0.025	6.23	1.190	0.484	0.487	1	30	
CAL3	32096.3	376.5	297259.750	True	4.78	0.108	6.22	1.190	1.940	2.084	7	30	
CAL4	121590.1	703.3	291941.558	True	4.78	0.416	6.22	1.190	7.740	8.039	4	30	
CAL5	295383.8	738.2	297995.609	True	4.78	0.991	6.22	1.190	19.360	19.132	-1	30	
CAL6	661528.1	1015.3	268368.993	True	4.78	2.465	6.22	1.190	48.400	47.576	-2	30	
CAL7	1333847.1	1122.7	264295.900	True	4.78	5.047	6.22	1.190	96.800	97.407	1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

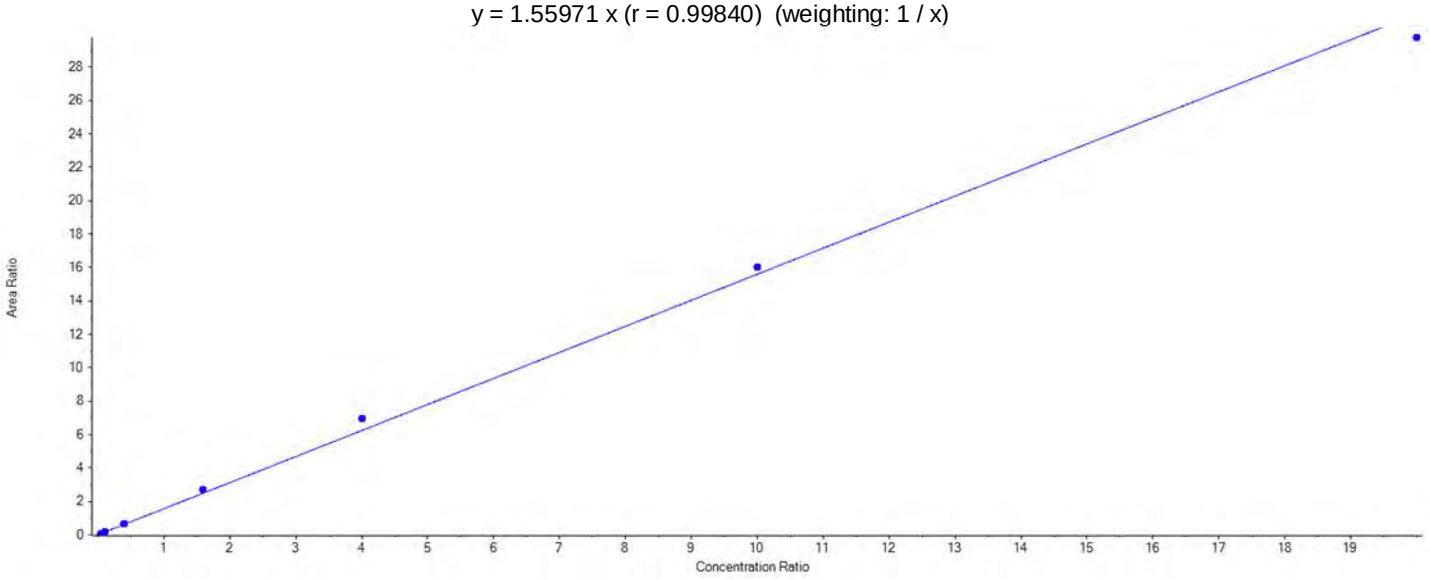
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSAE

y = 1.55971 x (r = 0.99840) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSAE Area	S/N	d9-NEtPFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	21922.0	86.9	296629.265	True	5.00	0.074	6.25	1.000	0.200	0.237	18	30	
CAL2	48905.8	147.7	270607.582	True	5.00	0.181	6.25	1.000	0.500	0.579	16	30	
CAL3	180884.6	310.2	278375.126	True	5.00	0.650	6.25	1.000	2.000	2.083	4	30	
CAL4	740427.4	562.5	273909.084	True	5.00	2.703	6.25	1.000	8.000	8.666	8	30	
CAL5	1810587.6	560.5	259950.874	True	5.00	6.965	6.25	1.000	20.000	22.328	12	30	
CAL6	3836850.8	823.2	239316.963	True	5.00	16.033	6.25	1.000	50.000	51.396	3	30	
CAL7	6995371.5	738.3	235038.050	True	5.00	29.763	6.25	1.000	100.000	95.411	-5	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

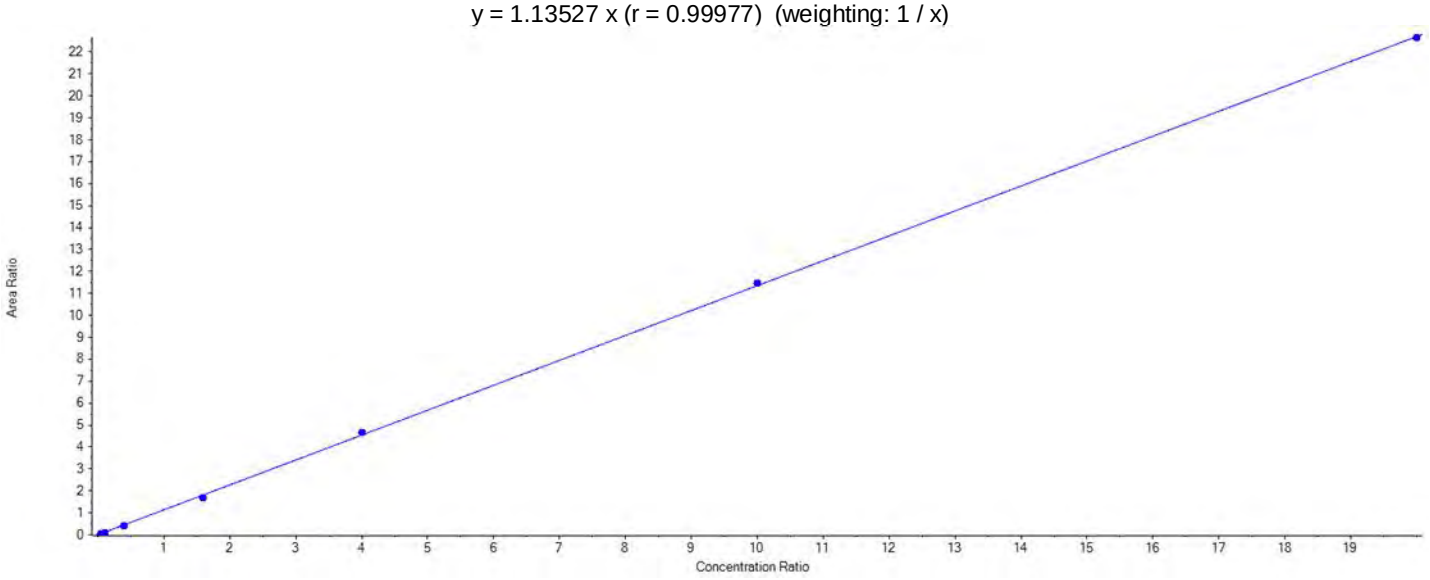
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSA

y = 1.13527 x (r = 0.99977) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSA Area	S/N	d5-NEtPFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3068.5	69.6	70926.726	True	5.00	0.043	6.26	1.000	0.200	0.191	-5	30	
CAL2	6419.4	198.8	66745.434	True	5.00	0.096	6.26	1.000	0.500	0.424	-15	30	
CAL3	26524.6	267.9	67444.318	True	5.00	0.393	6.27	1.000	2.000	1.732	-13	30	
CAL4	123609.2	637.6	72258.683	True	5.00	1.711	6.26	1.000	8.000	7.534	-6	30	
CAL5	290096.1	630.6	62005.585	True	5.00	4.679	6.27	1.000	20.000	20.605	3	30	
CAL6	676107.2	667.5	59054.389	True	5.00	11.449	6.26	1.000	50.000	50.423	1	30	
CAL7	1329706.9	655.7	58686.052	True	5.00	22.658	6.26	1.000	100.000	99.791	0	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

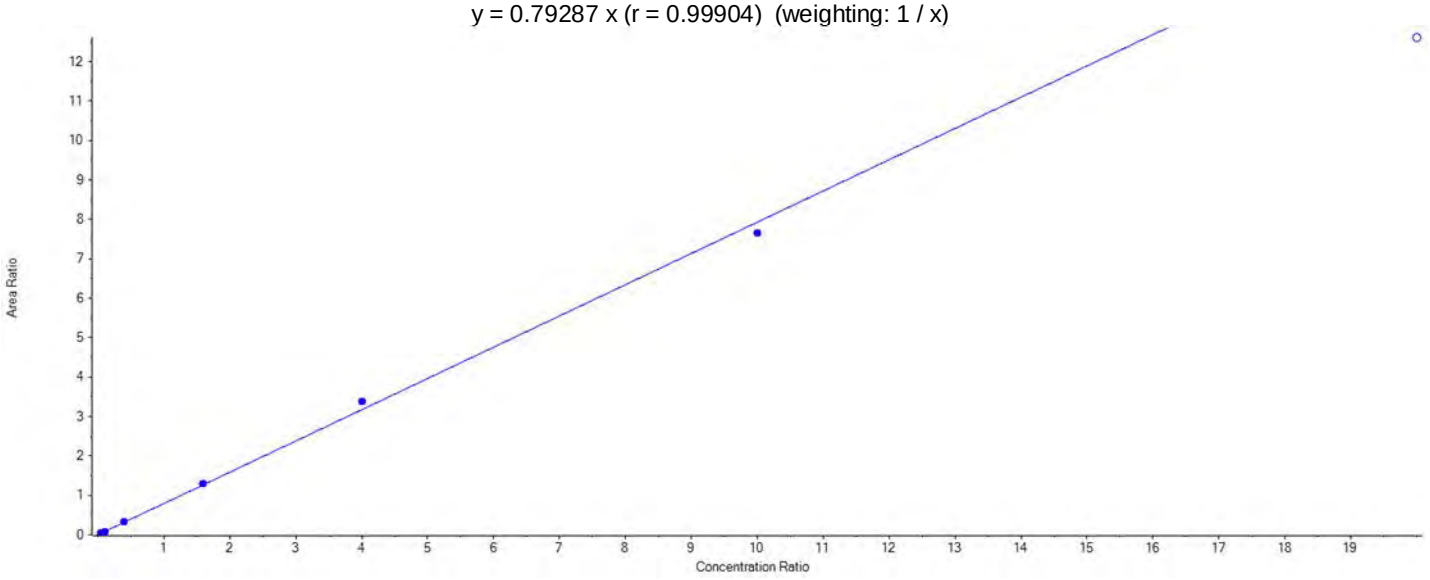
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTrDA

y = 0.79287 x (r = 0.99904) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTrDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	22403.2	67.6	564794.852	True	5.00	0.040	6.25	1.030	0.200	0.250	25	30	
CAL2	49218.5	108.1	597616.302	True	5.00	0.082	6.25	1.030	0.500	0.519	4	30	
CAL3	197290.7	195.6	584631.538	True	5.00	0.337	6.25	1.030	2.000	2.128	6	30	
CAL4	781283.7	366.6	598287.433	True	5.00	1.306	6.25	1.030	8.000	8.235	3	30	
CAL5	1851055.0	610.7	548536.046	True	5.00	3.375	6.25	1.030	20.000	21.280	6	30	
CAL6	3829048.4	757.6	500065.276	True	5.00	7.657	6.25	1.030	50.000	48.287	-3	30	
CAL7	6633128.3	811.0	525971.755	False	5.00	12.611	6.25	1.030	100.000	79.528	-20	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

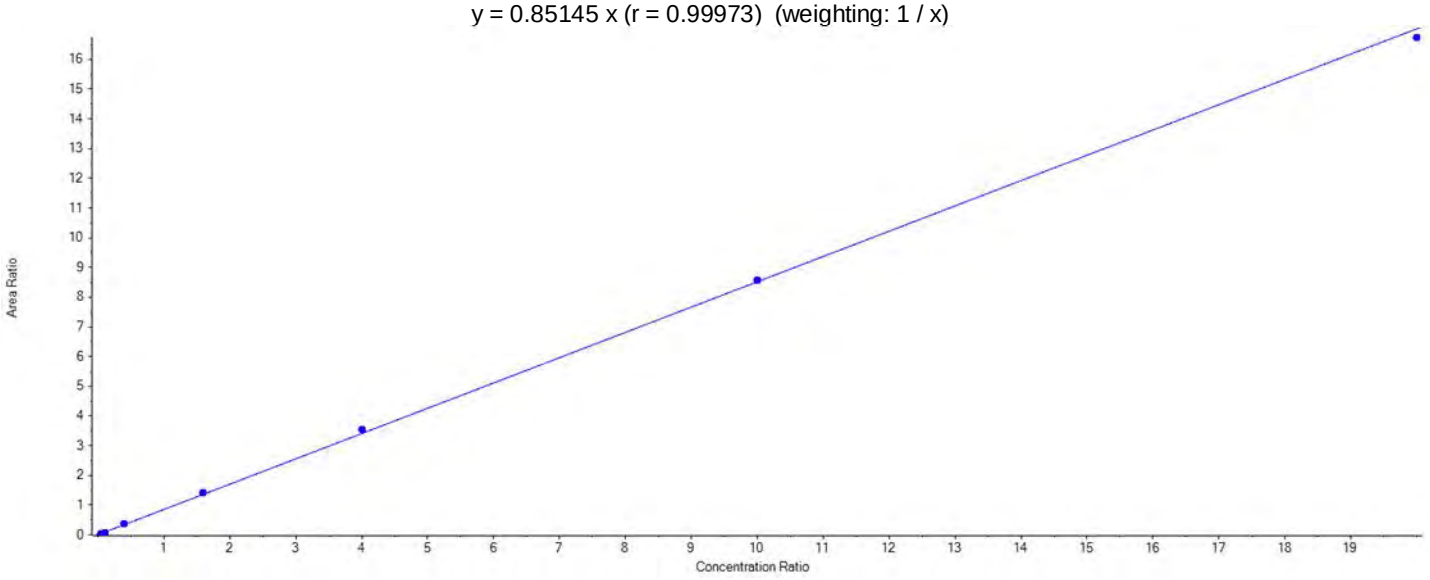
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTeDA

y = 0.85145 x (r = 0.99973) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTeDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	17031.0	49.1	430341.267	True	5.00	0.040	6.43	1.000	0.200	0.232	16	30	
CAL2	36223.2	102.6	441206.866	True	5.00	0.082	6.43	1.000	0.500	0.482	-4	30	
CAL3	150162.8	175.3	419341.711	True	5.00	0.358	6.43	1.000	2.000	2.103	5	30	
CAL4	630801.4	309.8	441858.057	True	5.00	1.428	6.43	1.000	8.000	8.383	5	30	
CAL5	1500655.1	416.1	421798.801	True	5.00	3.558	6.43	1.000	20.000	20.892	4	30	
CAL6	3381511.1	591.7	394433.888	True	5.00	8.573	6.42	1.000	50.000	50.344	1	30	
CAL7	6426587.4	783.6	384058.101	True	5.00	16.733	6.43	1.000	100.000	98.263	-2	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

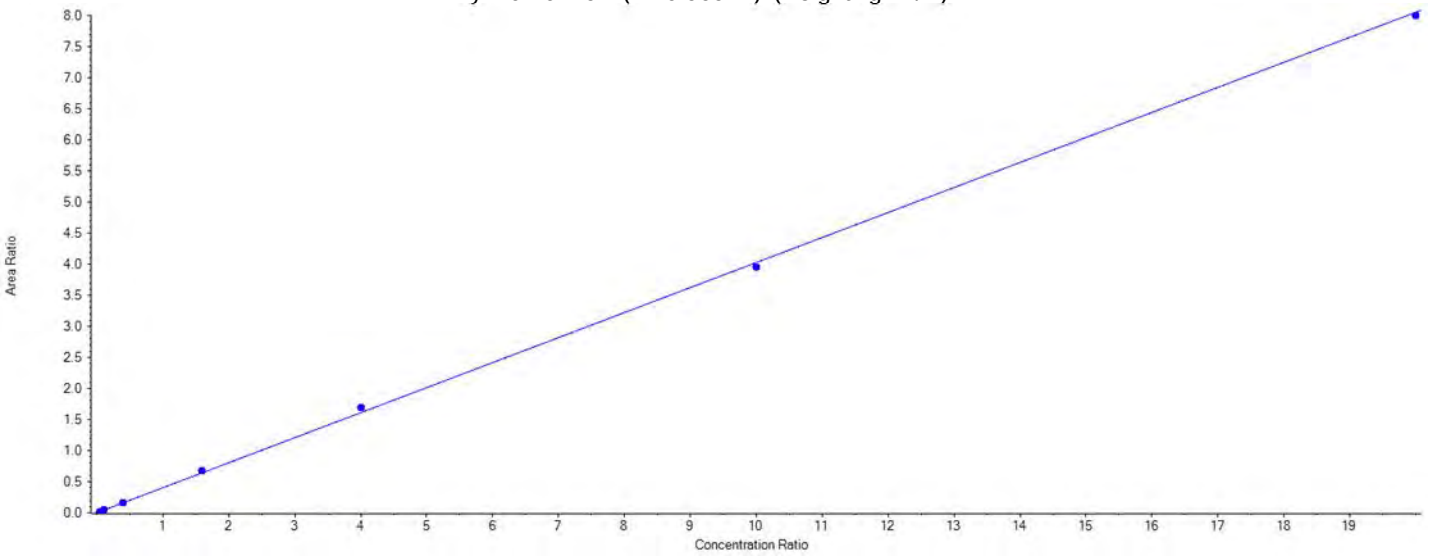
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxDA

y = 0.40279 x (r = 0.99974) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	8175.1	231.4	430341.267	True	5.00	0.019	6.74	1.050	0.200	0.236	18	30	
CAL2	18619.3	372.3	441206.866	True	5.00	0.042	6.74	1.050	0.500	0.524	5	30	
CAL3	70193.5	676.5	419341.711	True	5.00	0.167	6.74	1.050	2.000	2.078	4	30	
CAL4	297242.6	1318.1	441858.057	True	5.00	0.673	6.73	1.050	8.000	8.351	4	30	
CAL5	716467.3	1493.6	421798.801	True	5.00	1.699	6.73	1.050	20.000	21.085	5	30	
CAL6	1559604.6	1330.2	394433.888	True	5.00	3.954	6.73	1.050	50.000	49.083	-2	30	
CAL7	3073572.7	1322.0	384058.101	True	5.00	8.003	6.73	1.050	100.000	99.343	-1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

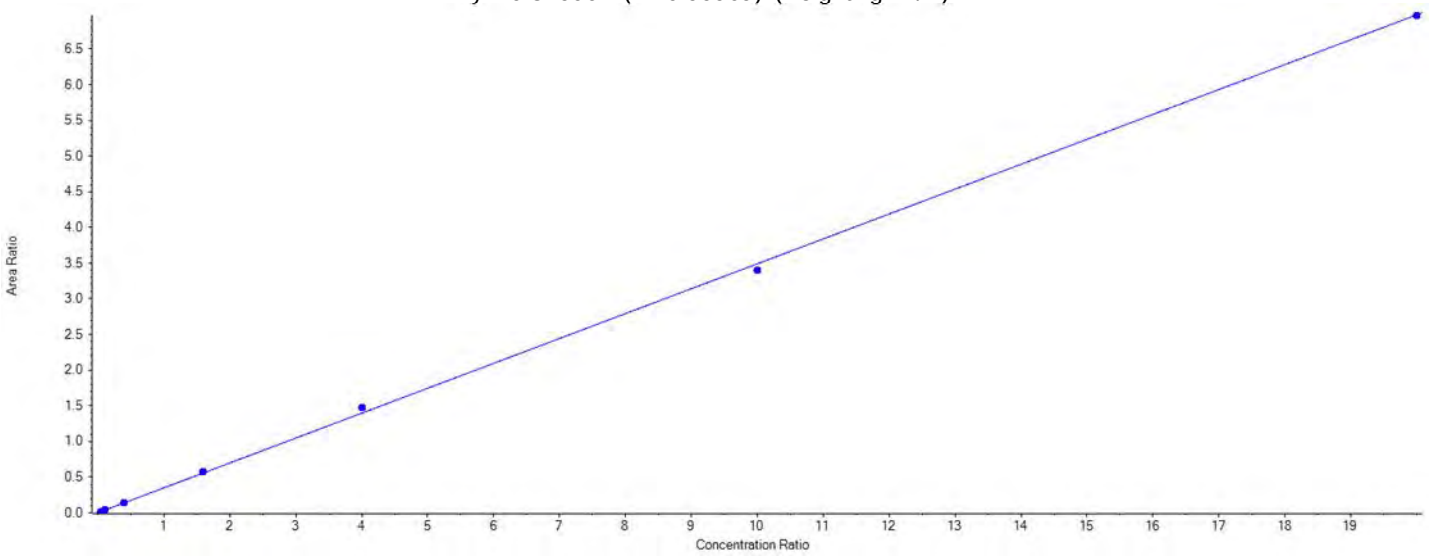
REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFODA

y = 0.34900 x (r = 0.99969) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFODA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6622.6	295.7	430341.267	True	5.00	0.015	7.00	1.090	0.200	0.220	10	30	
CAL2	15742.1	618.0	441206.866	True	5.00	0.036	7.00	1.090	0.500	0.511	2	30	
CAL3	59736.9	980.9	419341.711	True	5.00	0.142	7.00	1.090	2.000	2.041	2	30	
CAL4	251726.5	1475.1	441858.057	True	5.00	0.570	7.00	1.090	8.000	8.162	2	30	
CAL5	624697.0	1672.6	421798.801	True	5.00	1.481	7.00	1.090	20.000	21.218	6	30	
CAL6	1340733.9	1995.4	394433.888	True	5.00	3.399	6.99	1.090	50.000	48.698	-3	30	
CAL7	2676698.5	2398.9	384058.101	True	5.00	6.970	6.99	1.090	100.000	99.849	0	30	

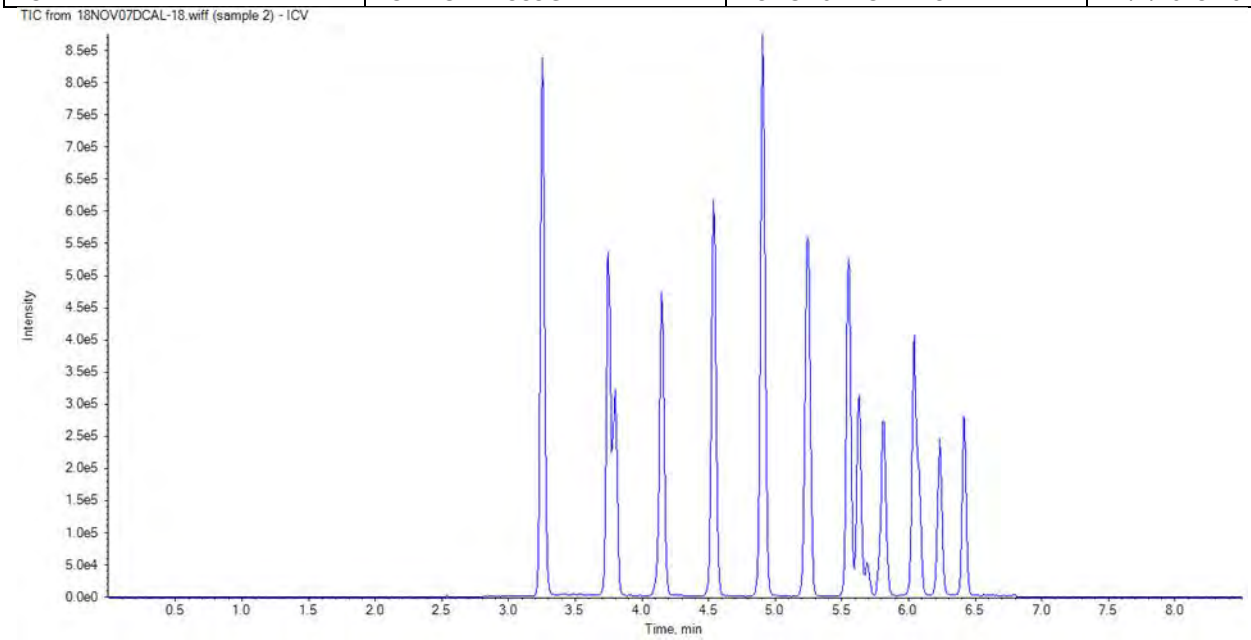
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV07DCAL-18.wiff	11/7/2018 10:51:59 AM



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	CAL3 Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.000	748799.9	730410.6	2.5	50	
13C2-PFOA	5.000	501855.0	524423.6	-4.3	50	
13C4-PFOS	4.780	265586.7	274061.7	-3.1	50	
13C2-PFDA	5.000	309656.0	311442.1	-0.6	50	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV07DCAL-18.wiff	11/7/2018 10:51:59 AM

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	307777.1	13C4-PFBA	809267.460	5.00	0.380	3.25	1.00	2.000	2.226	11	30	
PFPeA	325574.9	13C5-PFPeA	881218.236	5.00	0.369	3.75	1.00	2.000	2.196	10	30	
PFBS	159719.5	13C3-PFBS	459507.471	4.65	0.348	3.80	1.00	1.770	1.752	-1	30	
4:2-FTS	N/A	13C2-4:2-FTS	53451.954	4.67	N/A	N/A	N/A	0.000	N/A		30	
PFHxA	397434.6	13C5-PFHxA	721013.613	5.00	0.551	4.15	1.00	2.000	2.364	18	30	
PFPeS	N/A	13C3-PFBS	459507.471	4.65	N/A	N/A	N/A	0.000	N/A		30	
PFHxS	126635.3	13C3-PFHxS	351165.975	4.73	0.361	4.54	1.00	1.890	1.828	-3	30	
PFHpA	390197.1	13C4-PFHpA	564695.352	5.00	0.691	4.54	1.00	2.000	2.324	16	30	
6:2-FTS	N/A	13C2-6:2-FTS	37550.072	4.75	N/A	N/A	N/A	0.000	N/A		30	
PFHpS	126812.1	13C3-PFHxS	351165.975	4.73	0.361	4.90	1.08	1.900	1.889	-1	30	
PFOA	387215.1	13C8-PFOA	985027.092	5.00	0.393	4.91	1.00	2.000	2.213	11	30	
PFOS	114911.8	13C8-PFOS	289450.121	4.78	0.397	5.23	1.00	1.910	2.059	8	30	
PFNA	329644.4	13C9-PFNA	531663.026	5.00	0.620	5.25	1.00	2.000	2.317	16	30	
PFNS	N/A	13C8-PFOS	289450.121	4.78	N/A	N/A	N/A	0.000	N/A		30	
PFDA	262760.0	13C6-PFDA	669137.111	5.00	0.393	5.55	1.00	2.000	2.160	8	30	
8:2-FTS	N/A	13C2-8:2-FTS	27983.400	4.79	N/A	N/A	N/A	0.000	N/A		30	
PFOSA	N/A	13C8-PFOSA	741232.186	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMeFOSAA	33916.6	d3-NMeFOSAA	76665.384	5.00	0.442	5.69	1.00	2.000	2.276	14	30	
PFDS	65962.5	13C8-PFOS	289450.121	4.78	0.228	5.79	1.11	1.930	2.177	13	30	
PFUnDA	225137.5	13C7-PFUnDA	292761.511	5.00	0.769	5.81	1.00	2.000	2.205	10	30	
NEtFOSAA	29687.2	d5-NEtFOSAA	78938.706	5.00	0.376	5.83	1.00	2.000	1.616	-19	30	
PFDoDA	232949.2	13C2-PFDoDA	580675.056	5.00	0.401	6.04	1.00	2.000	2.174	9	30	
10:2-FTS	N/A	13C2-8:2-FTS	27983.400	4.79	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSAE	N/A	d7-NMePFOSAE	334001.430	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSA	N/A	d3-NMePFOSA	79719.053	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFDoS	N/A	13C8-PFOS	289450.121	4.78	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSAE	N/A	d9-NEtPFOSAE	293829.693	5.00	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSA	N/A	d5-NEtPFOSA	65412.861	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFTrDA	206908.4	13C2-PFDoDA	580675.056	5.00	0.356	6.24	1.03	2.000	2.247	12	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV07DCAL **QMethod Name:** MQ4-18AUG13
Result Table: 18NOV07DCAL11/7/2018 2:18:30 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTeDA	157975.3	13C2-PFTeDA	427601.643	5.00	0.369	6.42	1.00	2.000	2.169	8	30	
PFHxDA	N/A	13C2-PFTeDA	427601.643	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFODA	N/A	13C2-PFTeDA	427601.643	5.00	N/A	N/A	N/A	0.000	N/A		30	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL1			**Data File:**		18NOV07DCAL-10.wiff
Sample ID:	CALMOD11833G			**Acquis Date:**		2018-11-07T09:39:56
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	3			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	750780.0	730410.6	3	50	
13C2-PFOA	5.0	534171.9	524423.6	2	50	
13C4-PFOS	4.8	272674.7	274061.7	-1	50	
13C2-PFDA	5.0	338833.7	311442.1	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	794718.9	13C3-PFBA	750780.0	1.059	5.000	4.899	98	70-130	
E13C5-PFPeA	844850.2	13C3-PFBA	750780.0	1.125	5.000	4.902	98	70-130	
E13C3-PFBS	449266.3	13C3-PFBA	750780.0	0.598	4.650	4.392	94	70-130	
E13C2-4:2-FTS	58330.9	13C2-PFOA	534171.9	0.109	4.670	4.927	106	70-130	
E13C5-PFHxA	725432.0	13C2-PFOA	534171.9	1.358	5.000	4.996	100	70-130	
E13C3-PFHxS	358771.3	13C2-PFOA	534171.9	0.672	4.730	4.822	102	70-130	
E13C4-PFHpA	586580.3	13C2-PFOA	534171.9	1.098	5.000	4.995	100	70-130	
E13C2-6:2-FTS	42112.8	13C2-PFOA	534171.9	0.079	4.750	5.257	111	70-130	
E13C8-PFOA	1028414.9	13C2-PFOA	534171.9	1.925	5.000	5.369	107	70-130	
E13C8-PFOS	307224.3	13C4-PFOS	272674.7	1.127	4.780	4.982	104	70-130	
E13C9-PFNA	518118.7	13C4-PFOS	272674.7	1.900	5.000	5.190	104	70-130	
E13C6-PFDA	651348.0	13C2-PFDA	338833.7	1.922	5.000	4.834	97	70-130	
E13C2-8:2-FTS	26730.2	13C2-PFDA	338833.7	0.079	4.790	4.174	87	70-130	
E13C8-PFOSA	774962.8	13C2-PFDA	338833.7	2.287	5.000	4.991	100	70-130	
Ed3-NMeFOSAA	94967.0	13C2-PFDA	338833.7	0.280	5.000	5.212	104	70-130	
E13C7-PFUnDA	293658.7	13C2-PFDA	338833.7	0.867	5.000	5.000	100	70-130	
Ed5-NEtFOSAA	77938.3	13C2-PFDA	338833.7	0.230	5.000	5.323	106	70-130	
E13C2-PFDoDA	564794.9	13C2-PFDA	338833.7	1.667	5.000	4.494	90	70-130	
Ed7-NMePFOSAE	366847.7	13C2-PFDA	338833.7	1.083	5.000	5.035	101	70-130	
Ed3-NMePFOSA	89511.9	13C2-PFDA	338833.7	0.264	5.000	4.836	97	70-130	
Ed9-NEtPFOSAE	296629.3	13C2-PFDA	338833.7	0.875	5.000	5.000	100	70-130	
Ed5-NEtPFOSA	70926.7	13C2-PFDA	338833.7	0.209	5.000	4.847	97	70-130	
E13C2-PFTeDA	430341.3	13C2-PFDA	338833.7	1.270	5.000	4.572	91	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

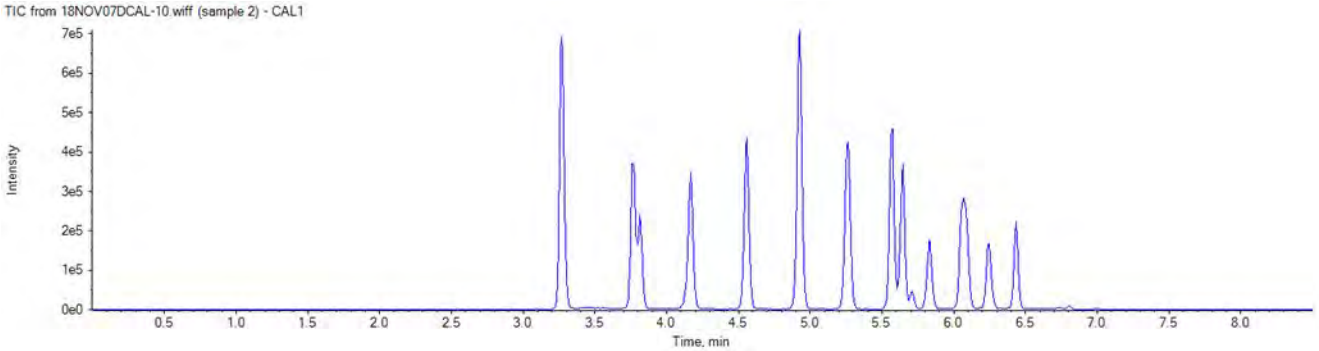
Analyte Quantitation Peak Table

Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-10.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	32354.4		A	13C4-PFBA	3.27	794718.9	0.041	0.238
PFPeA	3.77	1.000	33205.5		A	13C5-PFPeA	3.77	844850.2	0.039	0.234
PFBS	3.82	1.000	19024.1		A	13C3-PFBS	3.82	449266.3	0.042	0.213
4:2-FTS	4.13	1.000	4145.4		M	13C2-4:2-FTS	4.13	58330.9	0.071	0.191
PFHxA	4.17	1.000	39732.2		A	13C5-PFHxA	4.17	725432.0	0.055	0.235
PFPeS	4.18	1.100	8335.4		A	13C3-PFBS	3.82	449266.3	0.019	0.183
PFHxS	4.56	1.000	13762.6		M	13C3-PFHxS	4.56	358771.3	0.038	0.194
PFHpA	4.55	1.000	38331.9		M	13C4-PFHpA	4.56	586580.3	0.065	0.220
6:2-FTS	4.91	1.000	2460.6		A	13C2-6:2-FTS	4.91	42112.8	0.058	0.146
PFHpS	4.91	1.080	14183.4		M	13C3-PFHxS	4.56	358771.3	0.040	0.207
PFOA	4.93	1.000	39843.5		A	13C8-PFOA	4.93	1028414.9	0.039	0.218
PFOS	5.25	1.000	12181.7		A	13C8-PFOS	5.25	307224.3	0.040	0.206
PFNA	5.27	1.000	32563.3		M	13C9-PFNA	5.27	518118.7	0.063	0.235
PFNS	5.55	1.060	6748.5		A	13C8-PFOS	5.25	307224.3	0.022	0.174
PFDA	5.57	1.000	25530.0		A	13C6-PFDA	5.57	651348.0	0.039	0.216
8:2-FTS	5.58	1.000	2783.3		M	13C2-8:2-FTS	5.57	26730.2	0.104	0.235
PFOSA	5.64	1.000	27779.6		A	13C8-PFOSA	5.64	774962.8	0.036	0.194
NMeFOSAA	5.71	1.000	3293.8		M	d3-NMeFOSAA	5.71	94967.0	0.035	0.178
PFDS	5.80	1.100	6453.6		A	13C8-PFOS	5.25	307224.3	0.021	0.201
PFUnDA	5.83	1.000	23275.5		M	13C7-PFUnDA	5.83	293658.7	0.079	0.227
NEtFOSAA	5.84	1.000	3313.0		A	d5-NEtFOSAA	5.84	77938.3	0.043	0.183
PFDoDA	6.06	1.000	23314.2		M	13C2-PFDoDA	6.06	564794.9	0.041	0.224
10:2-FTS	6.07	1.090	1903.7		A	13C2-8:2-FTS	5.57	26730.2	0.071	0.222
NMePFOSAE	6.10	1.000	19989.4		A	d7-NMePFOSAE	6.09	366847.7	0.054	0.244
NMePFOSA	6.10	1.000	3218.9		M	d3-NMePFOSA	6.10	89511.9	0.036	0.201
PFDoS	6.22	1.190	3016.1		M	13C8-PFOS	5.25	307224.3	0.010	0.189
NEtPFOSAE	6.25	1.000	21922.0		A	d9-NEtPFOSAE	6.24	296629.3	0.074	0.237
NEtPFOSA	6.26	1.000	3068.5		M	d5-NEtPFOSA	6.26	70926.7	0.043	0.191
PFTrDA	6.25	1.030	22403.2		A	13C2-PFDoDA	6.06	564794.9	0.040	0.250
PFTeDA	6.43	1.000	17031.0		A	13C2-PFTeDA	6.43	430341.3	0.040	0.232
PFHxDA	6.74	1.050	8175.1		A	13C2-PFTeDA	6.43	430341.3	0.019	0.236
PFODA	7.00	1.090	6622.6		A	13C2-PFTeDA	6.43	430341.3	0.015	0.220

Total Ion Chromatogram

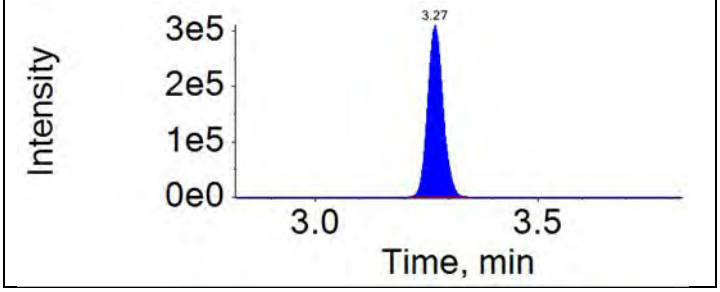


APPROVED
By JPT at 2:53 pm, 11/7/18

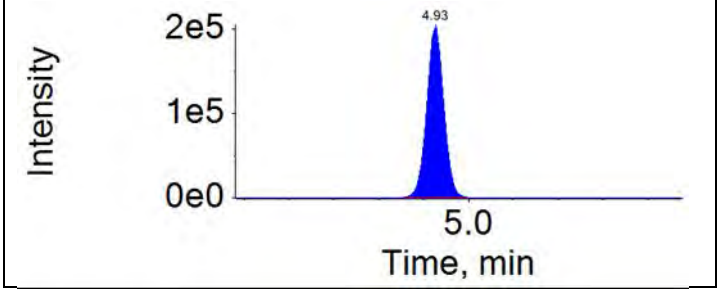
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

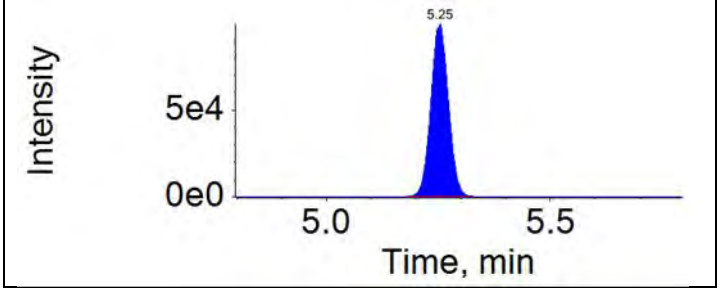
Injection Standard: 13C3-PFBA
216.0 / 172.0



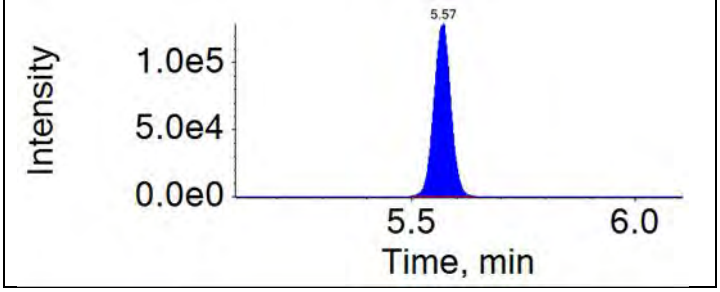
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

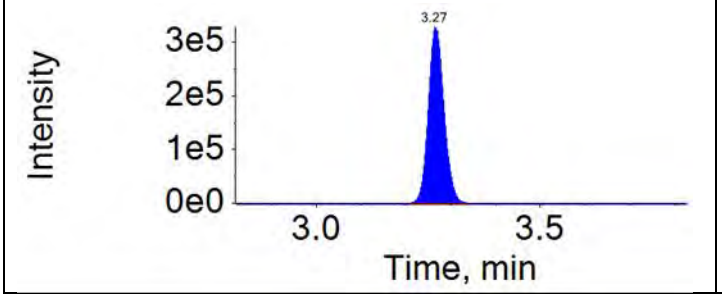


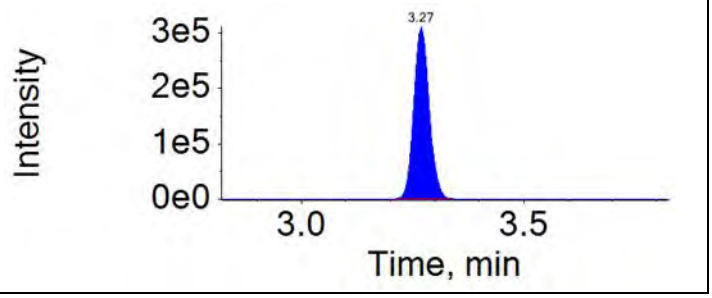
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

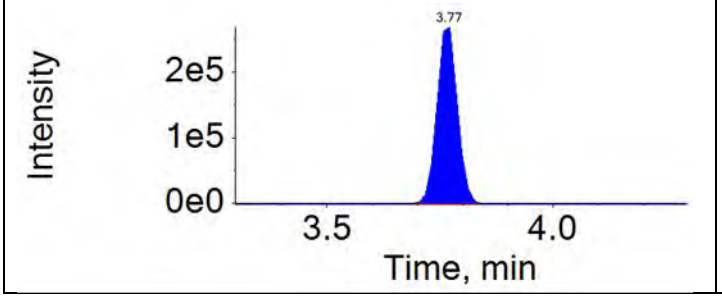
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

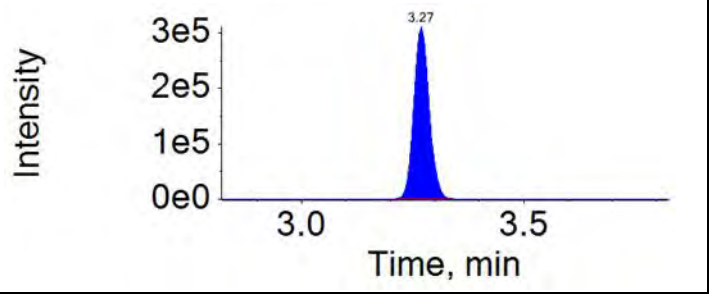
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



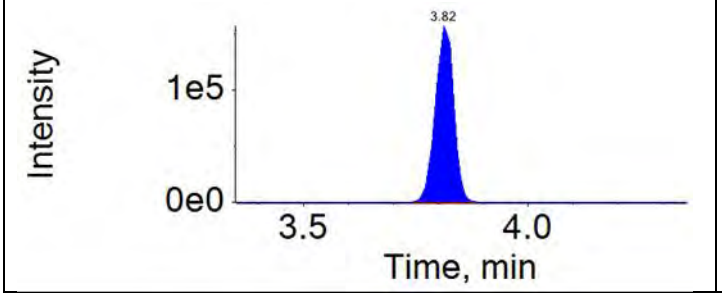


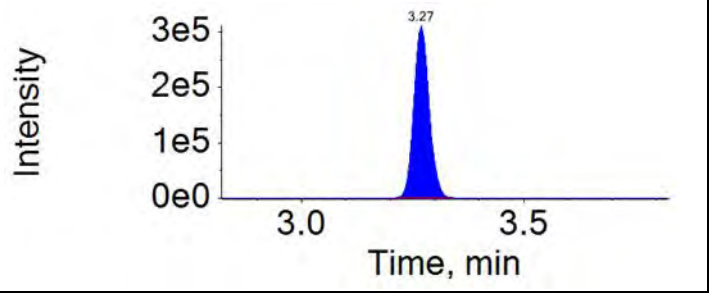
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



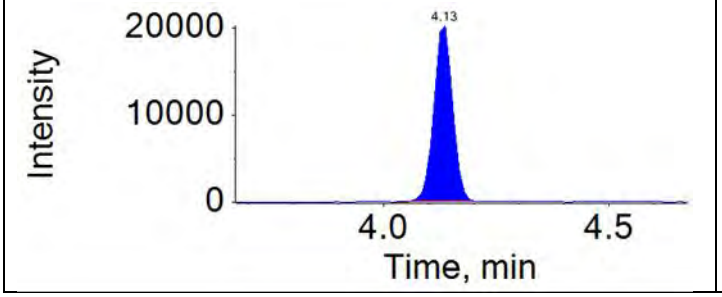


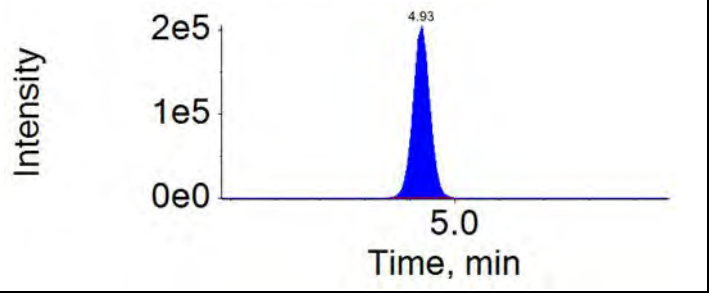
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



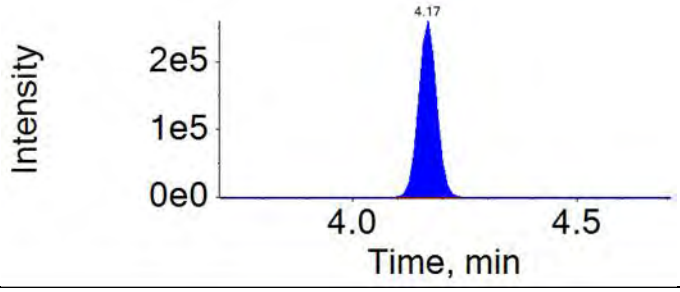
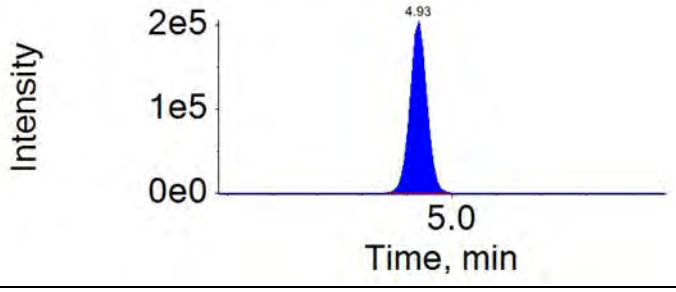


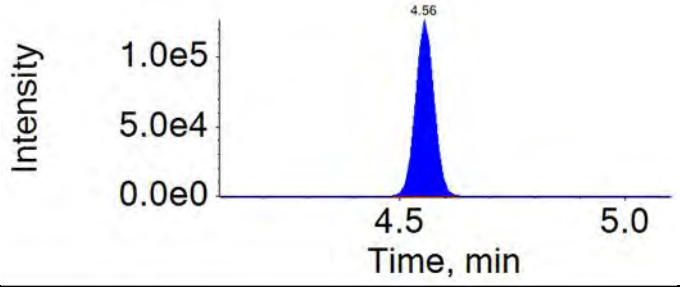
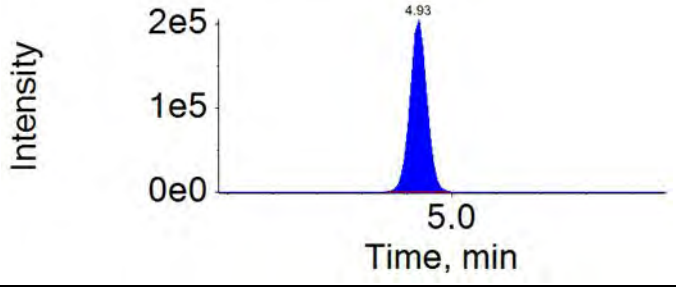
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

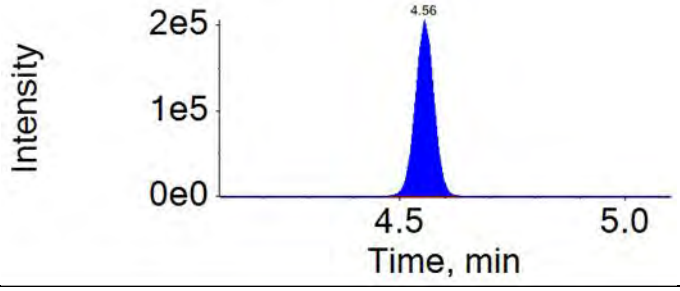
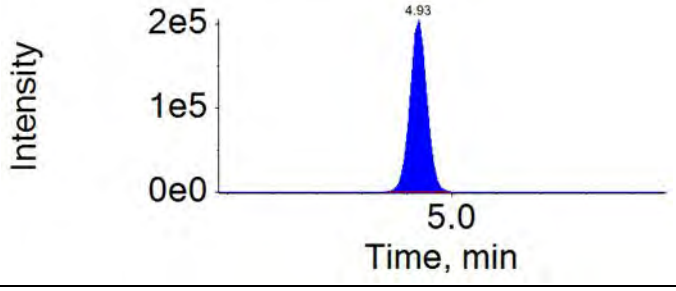


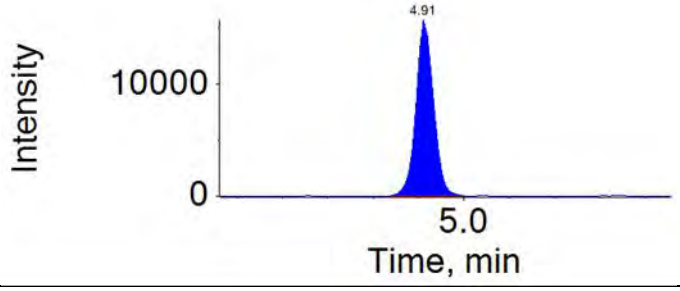
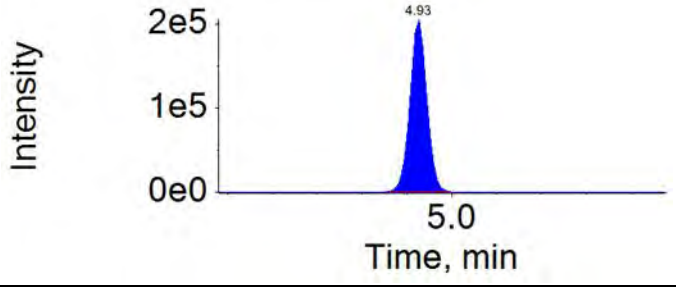


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

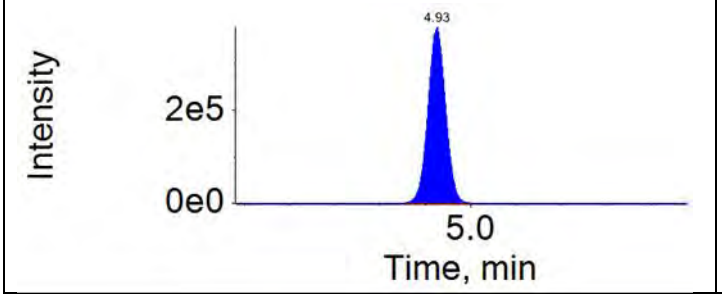
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

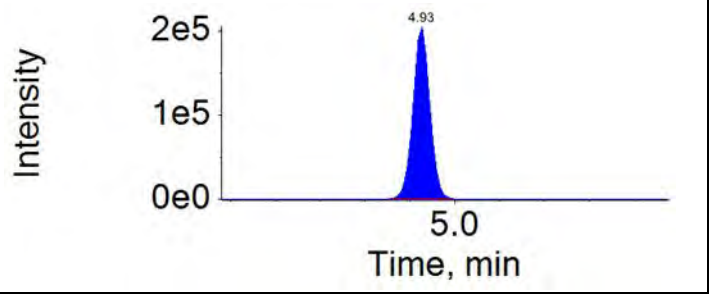
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

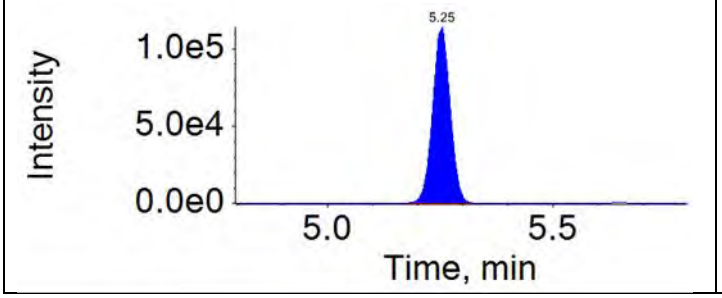
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

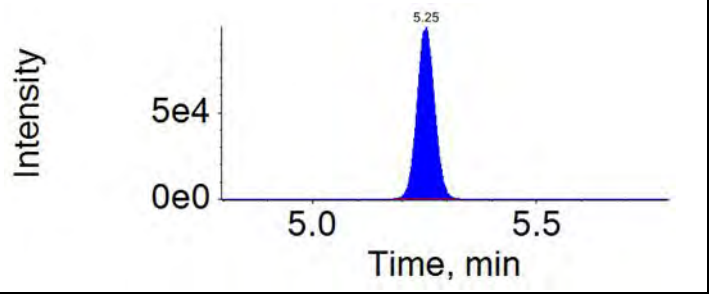
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



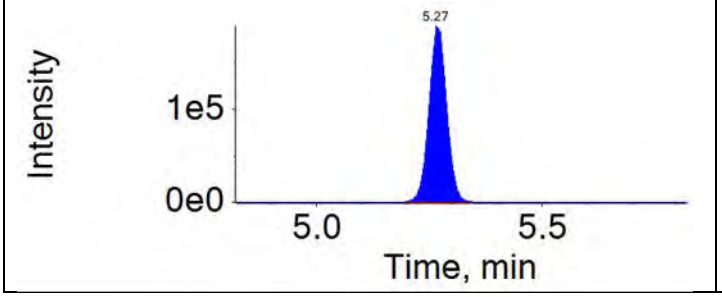


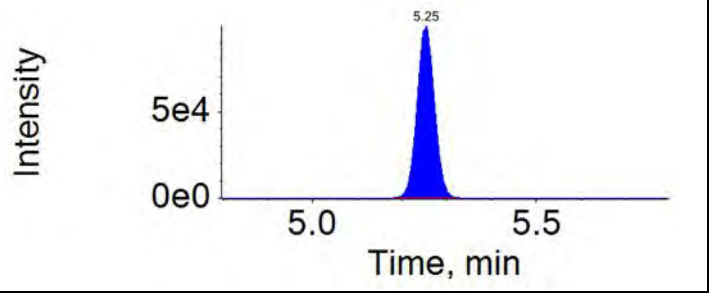
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



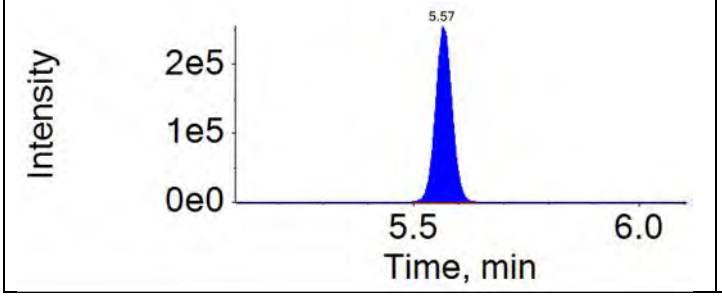


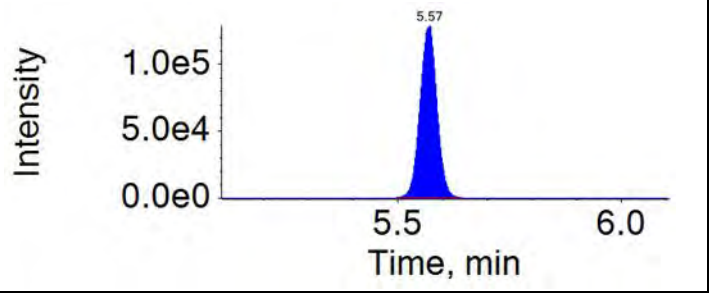
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

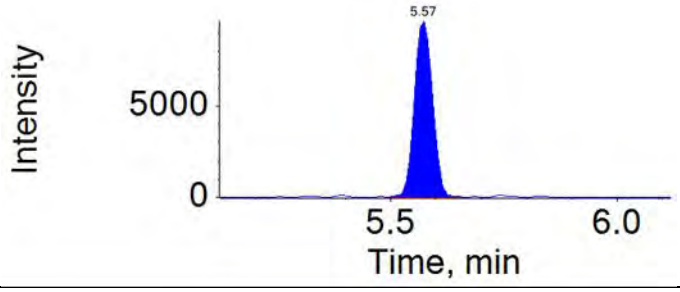
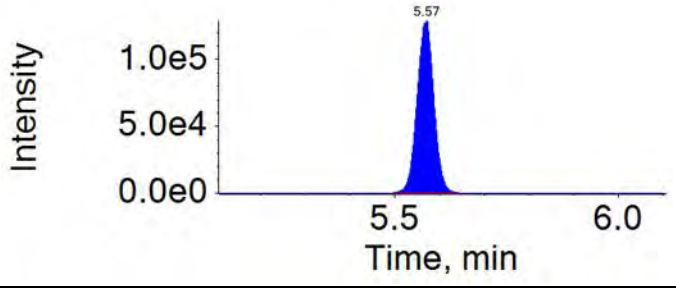


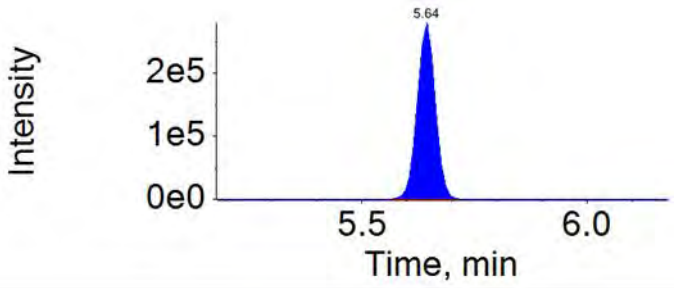
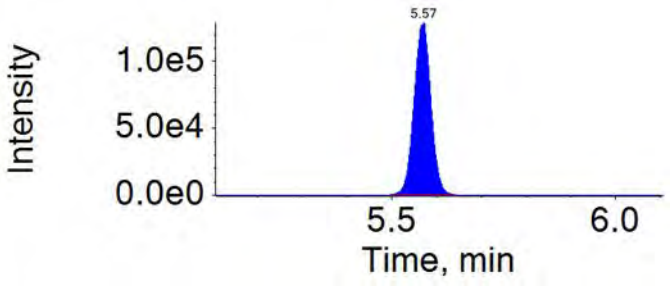


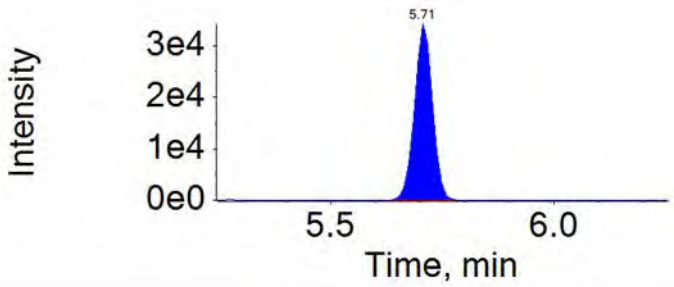
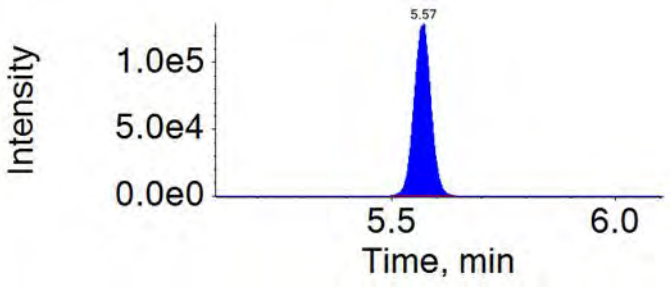
APPROVED
By JPT at 2:53 pm, 11/7/18

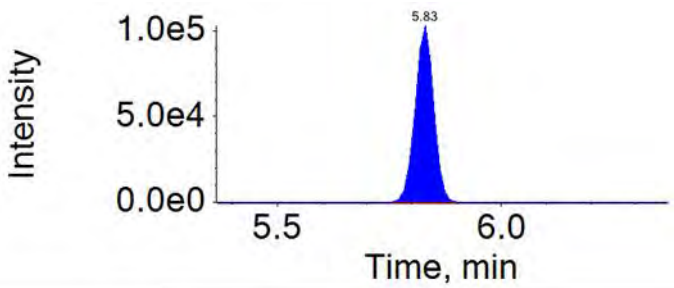
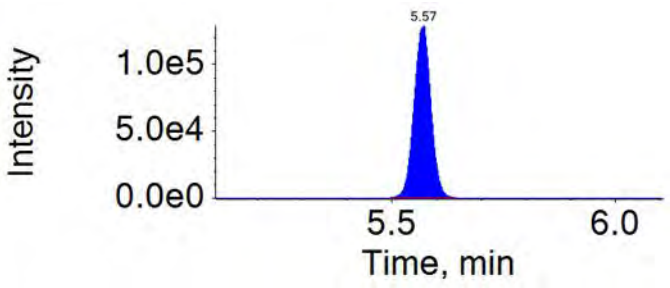
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

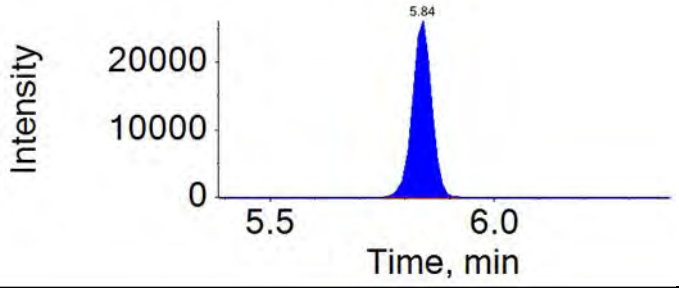
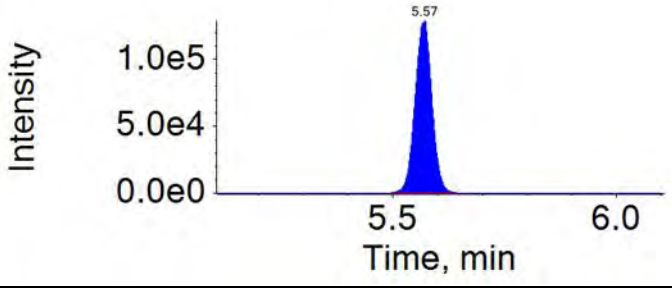
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

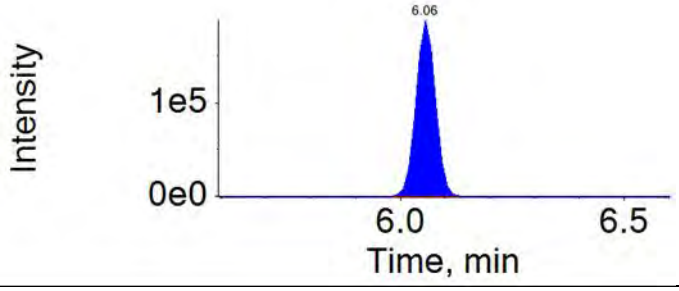
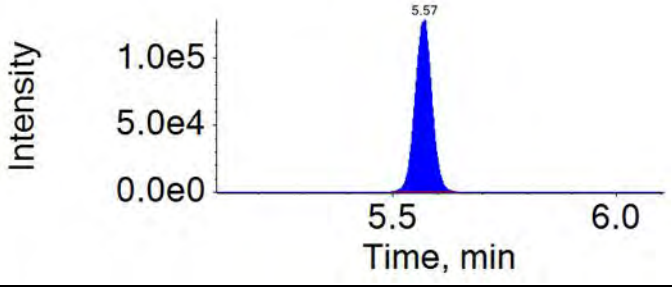
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

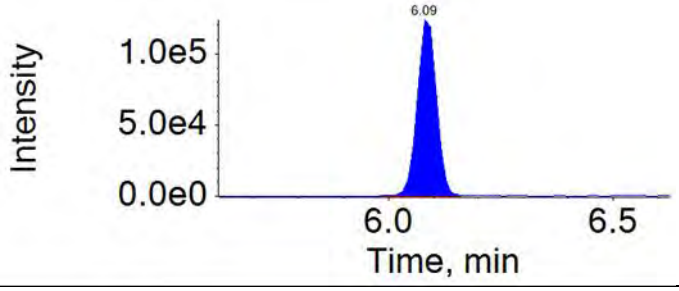
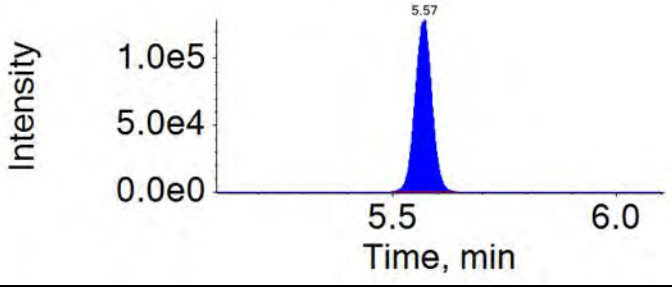
APPROVED
By JPT at 2:53 pm, 11/7/18

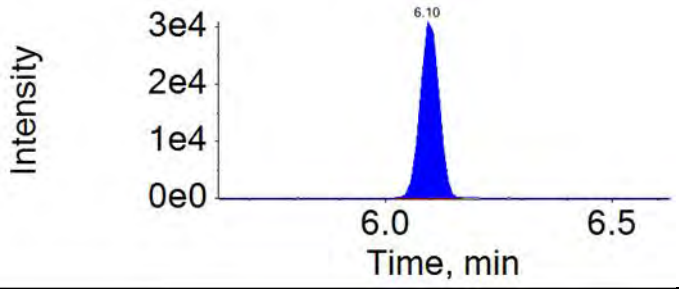
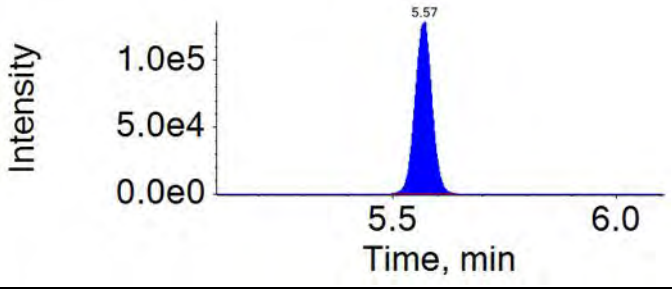
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

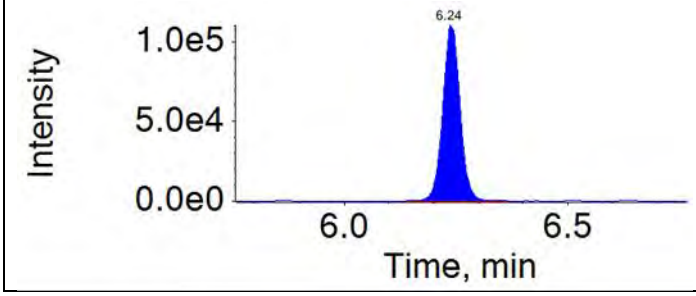
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

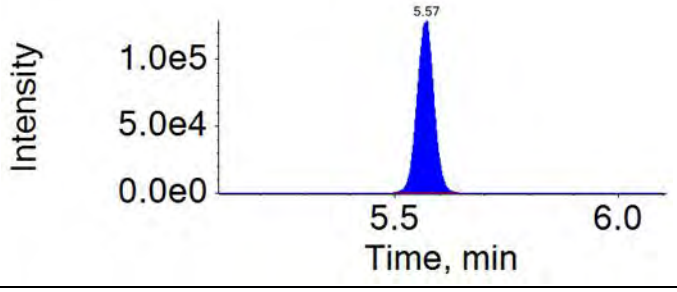
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

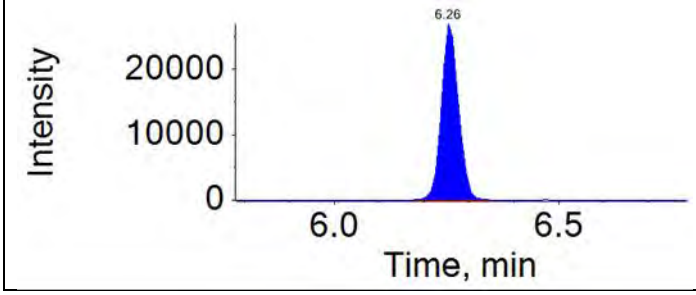
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

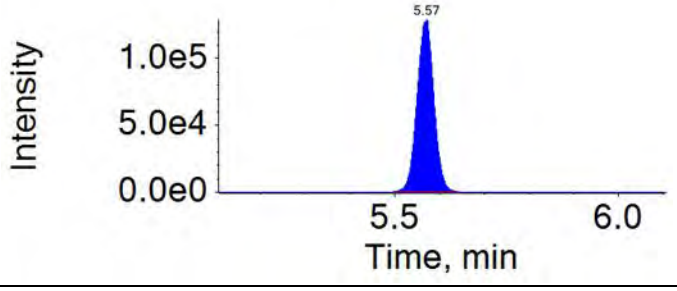
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



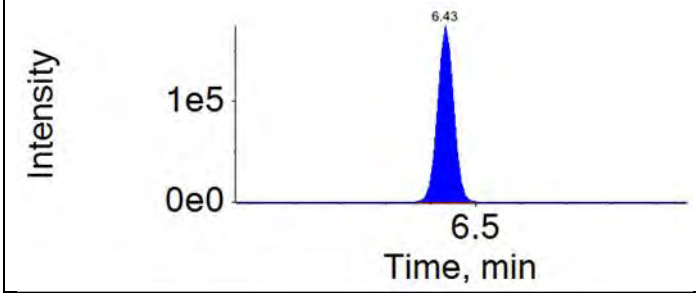


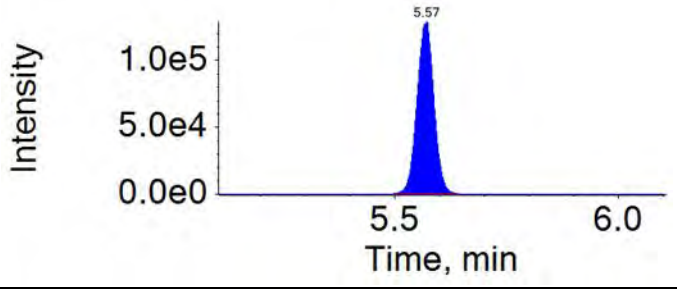
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



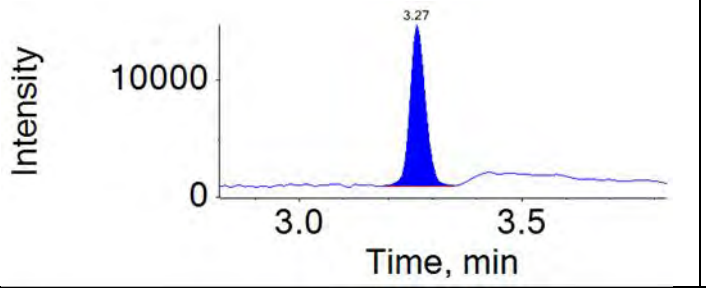


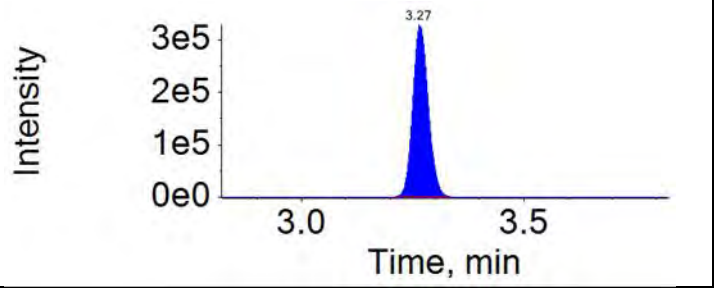
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

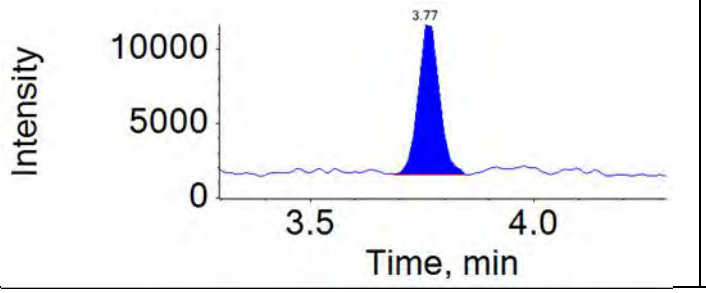
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

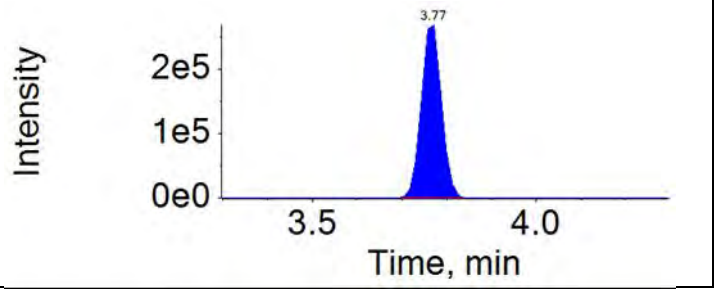
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



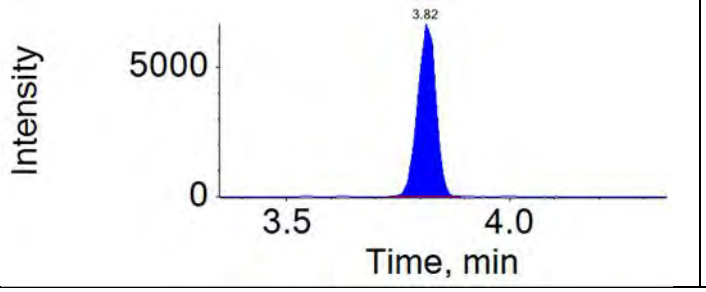


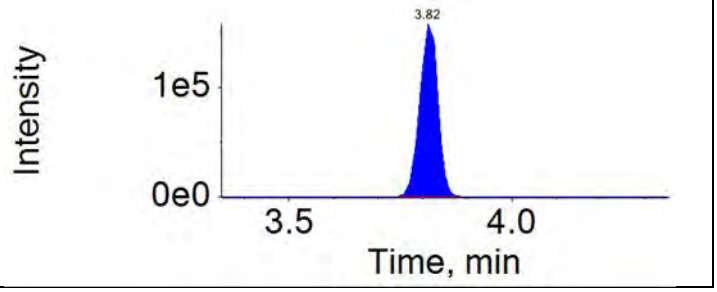
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



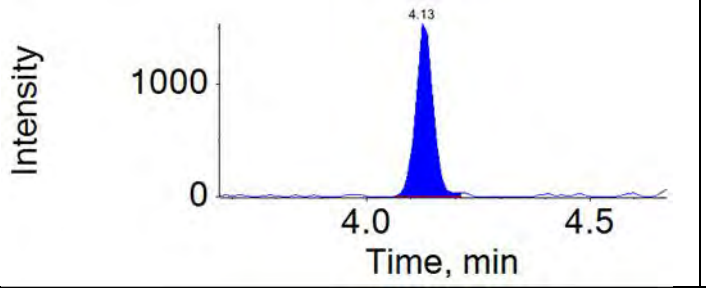


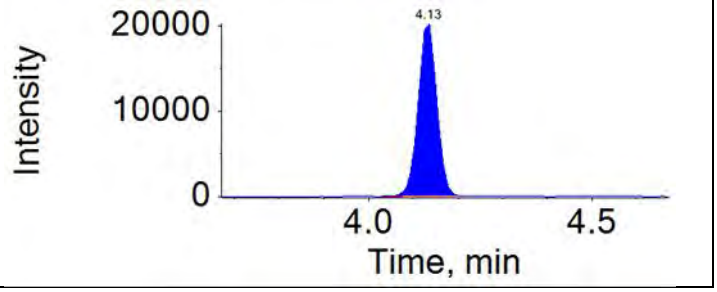
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

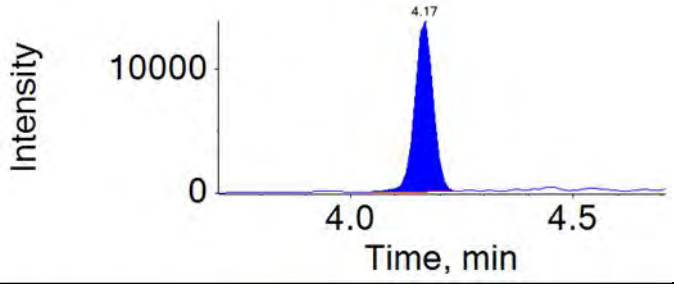
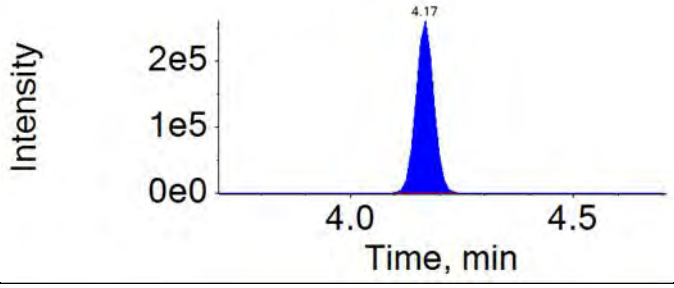


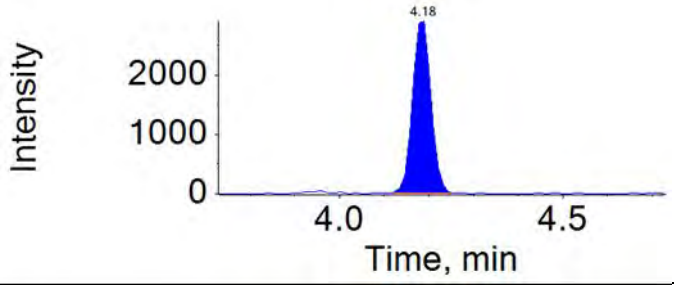
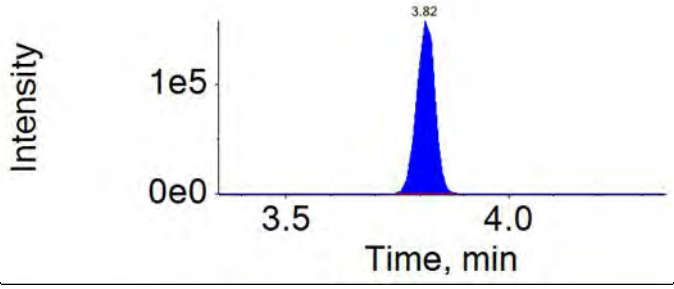


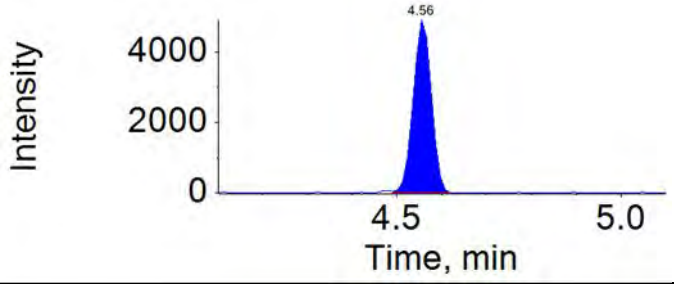
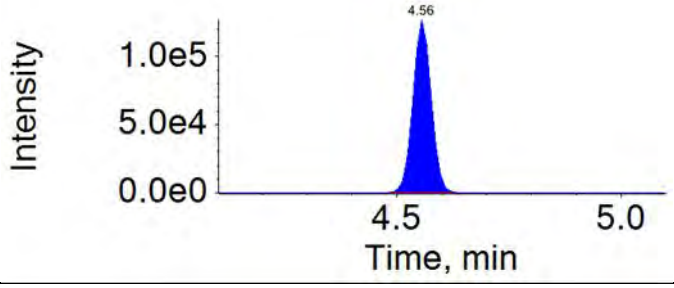
APPROVED
By JPT at 2:53 pm, 11/7/18

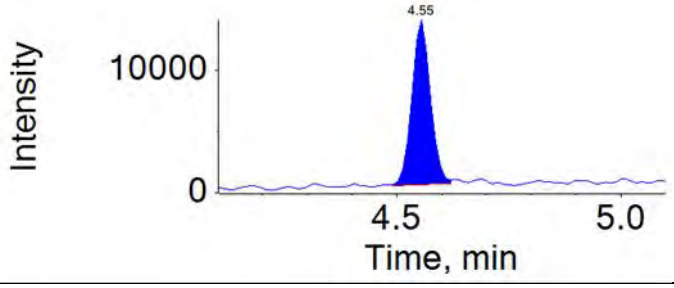
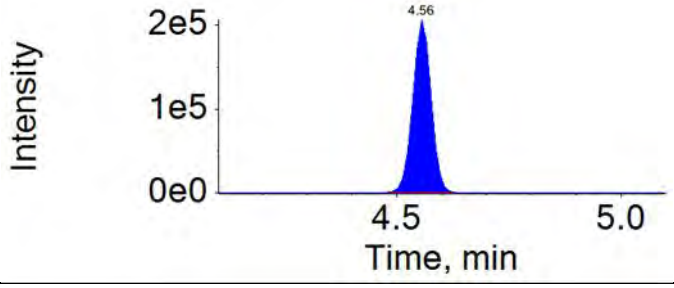
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

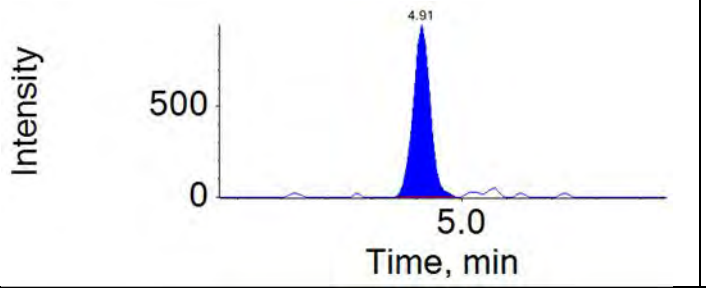
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

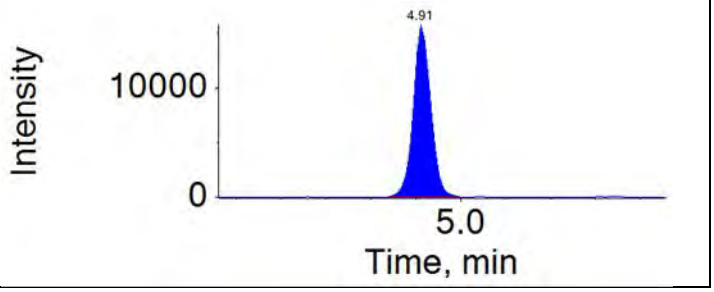
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

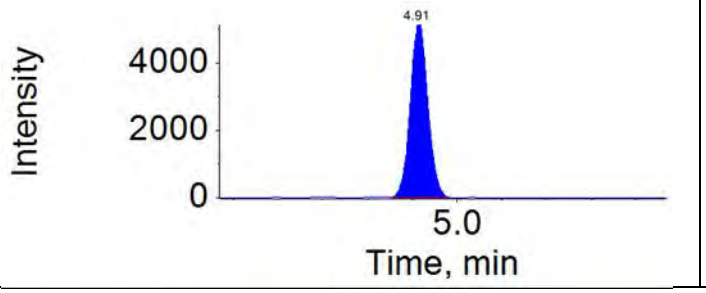
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

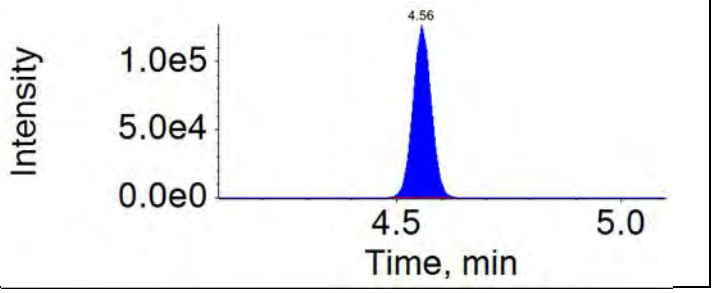
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



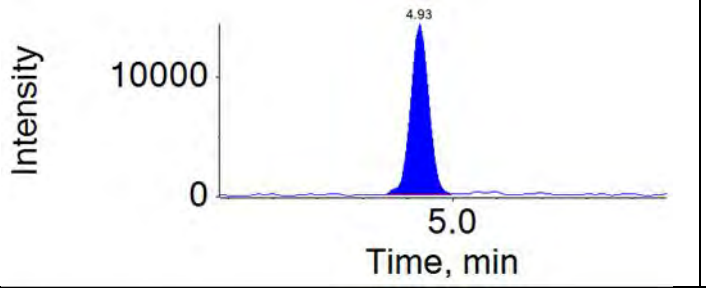


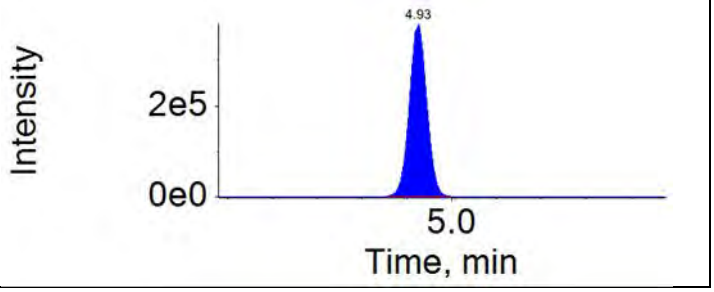
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



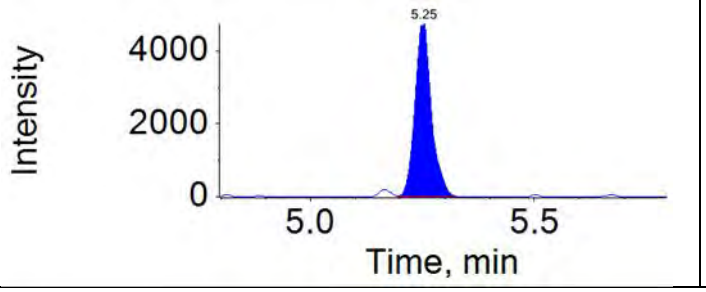


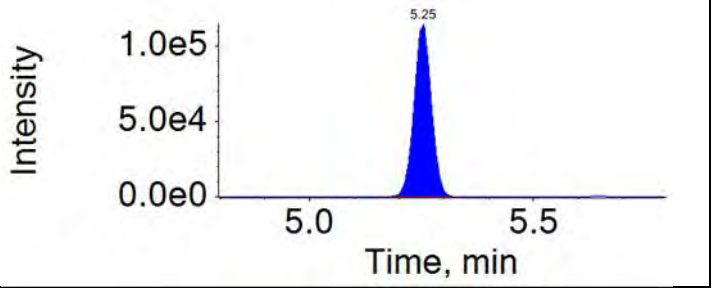
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

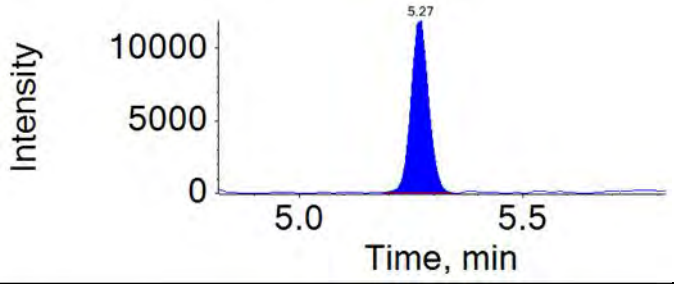
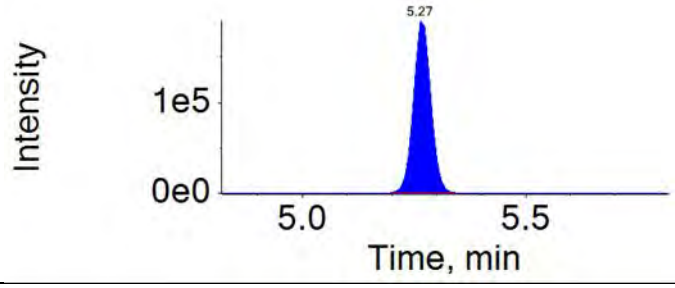


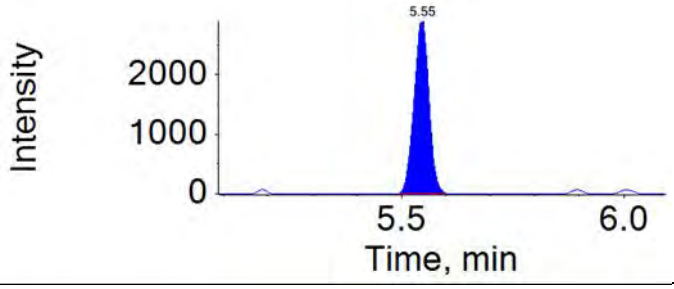
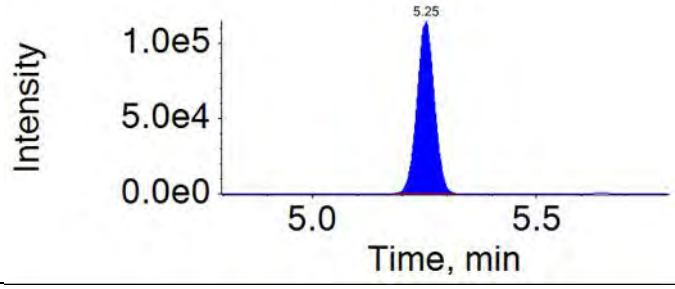


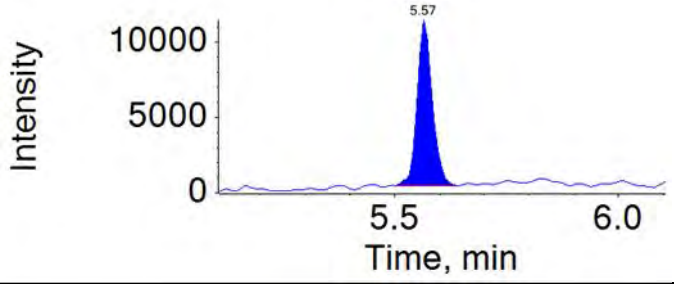
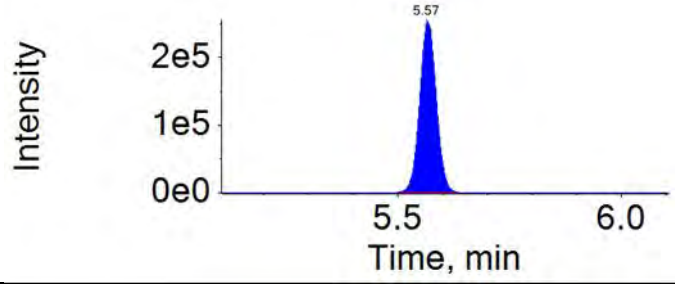
APPROVED
By JPT at 2:53 pm, 11/7/18

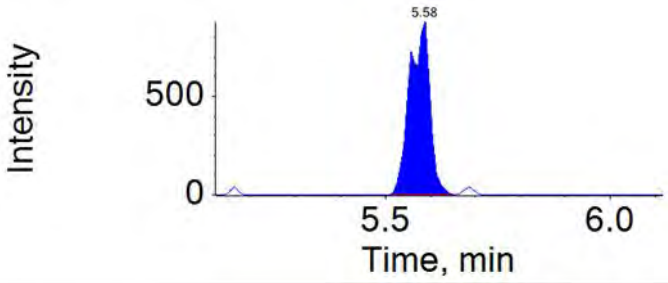
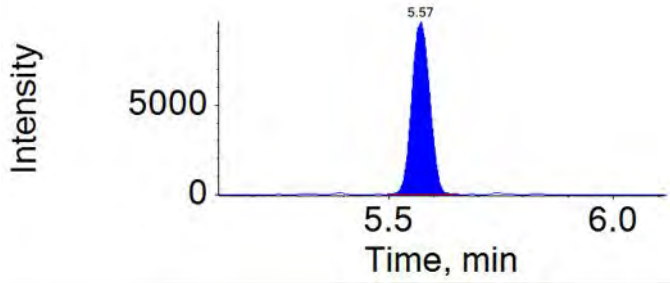
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

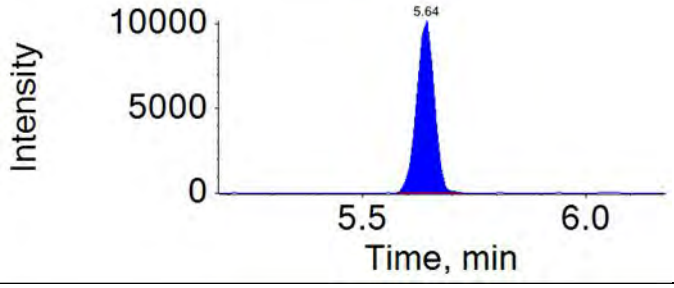
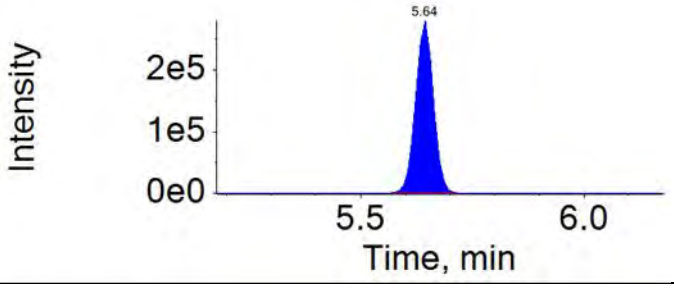
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

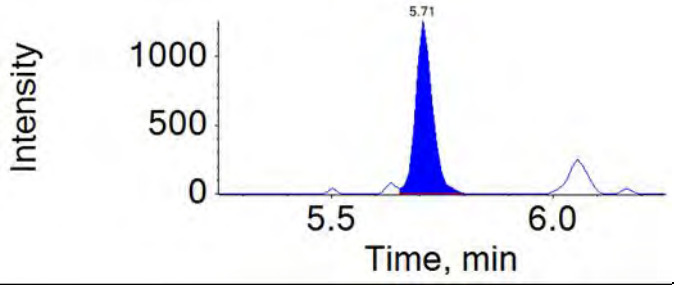
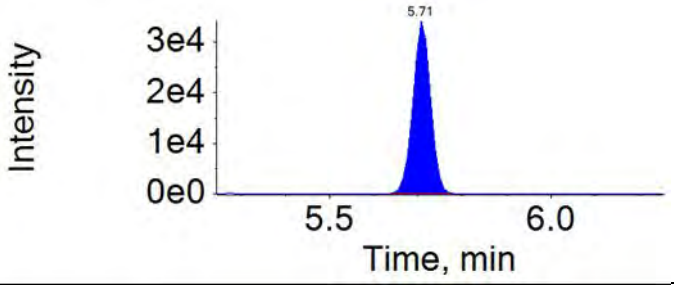
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

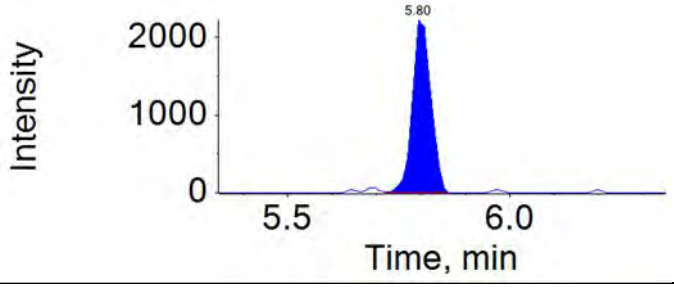
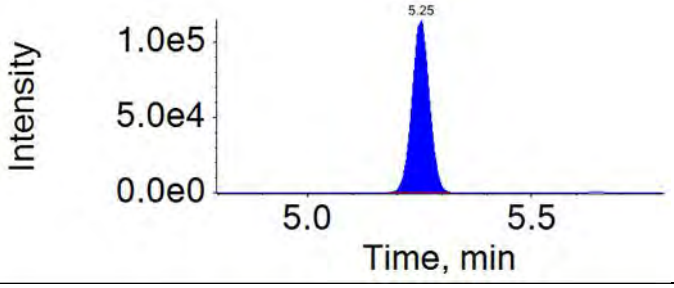
APPROVED
By JPT at 2:53 pm, 11/7/18

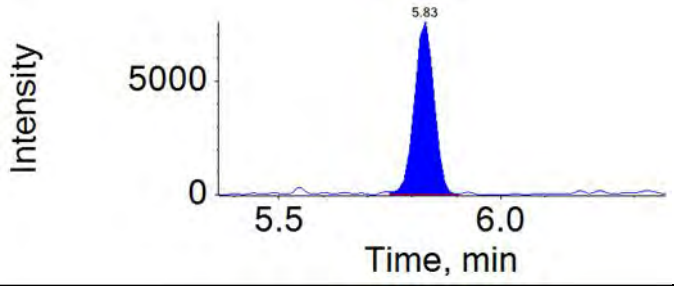
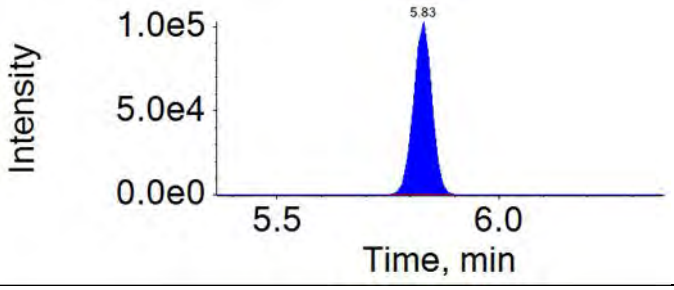
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

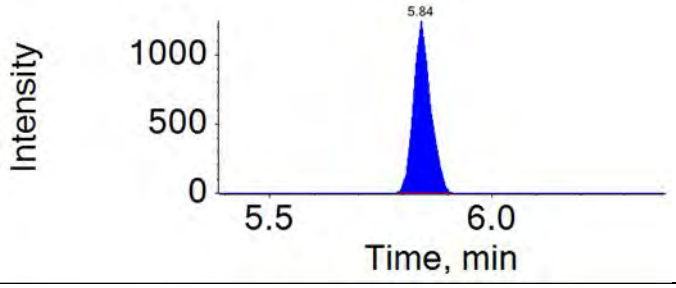
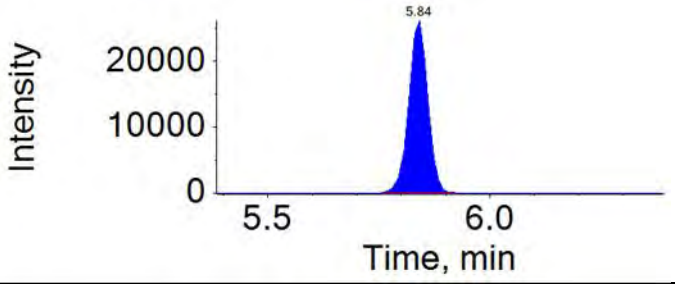
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

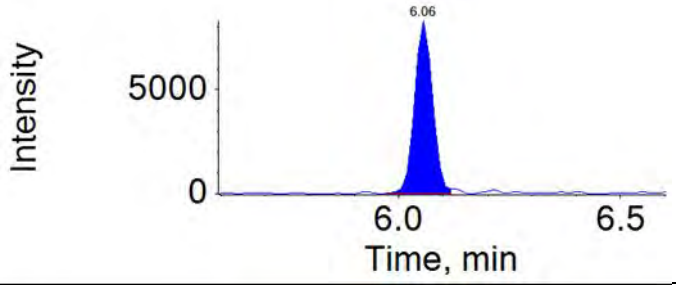
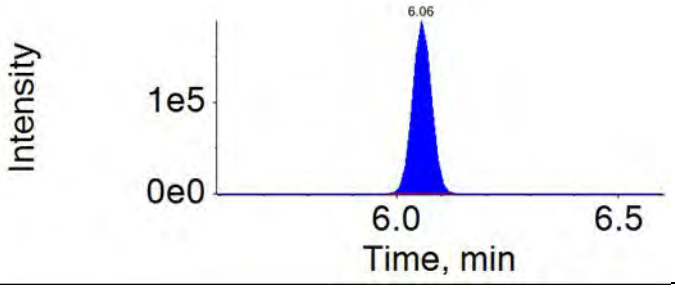
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

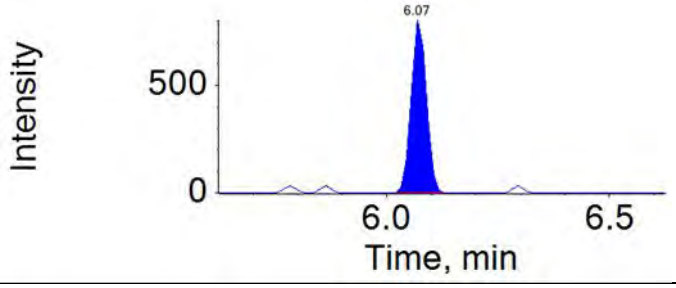
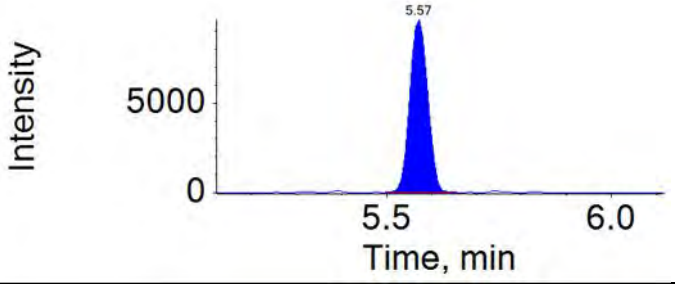
APPROVED
By JPT at 2:53 pm, 11/7/18

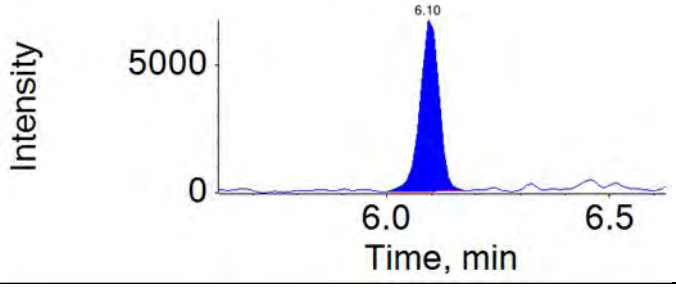
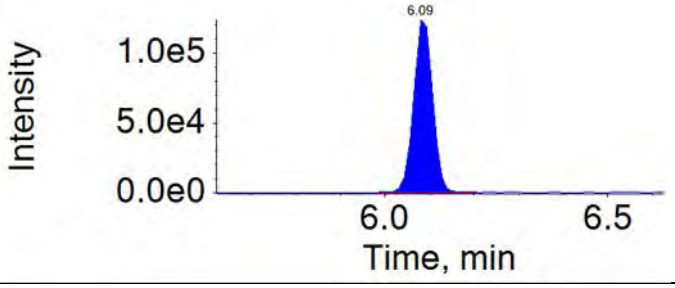
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

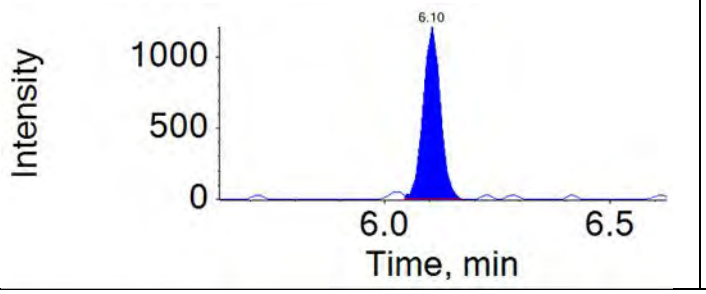
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

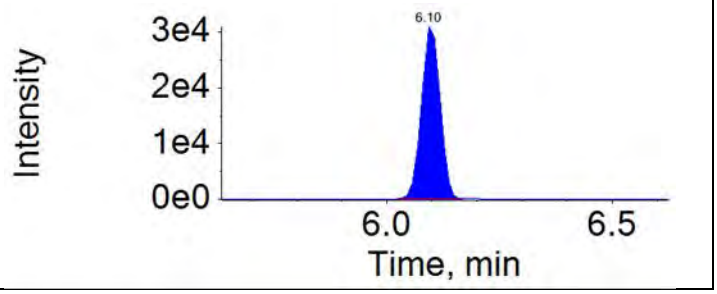
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

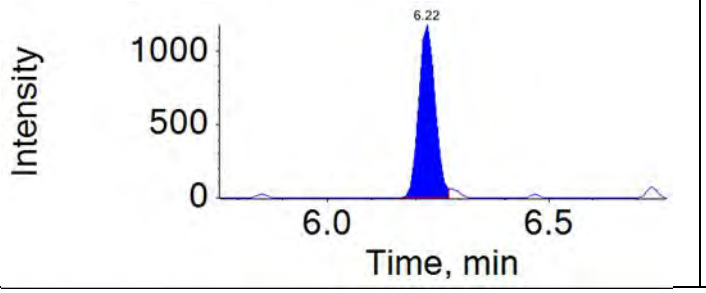
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

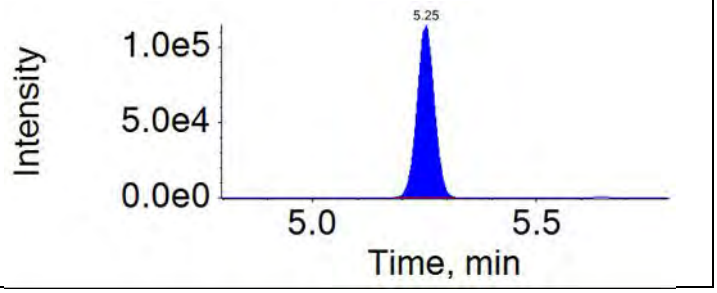
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



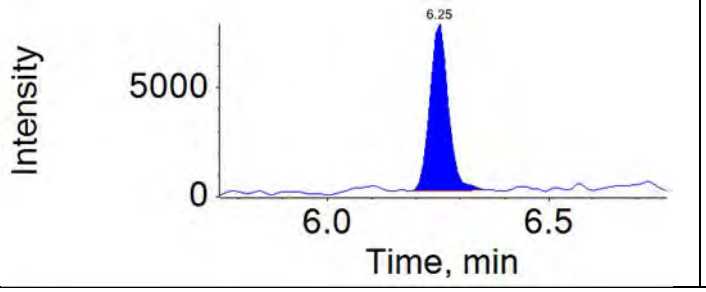


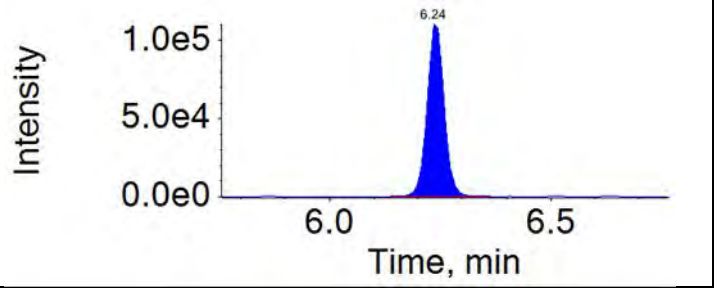
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



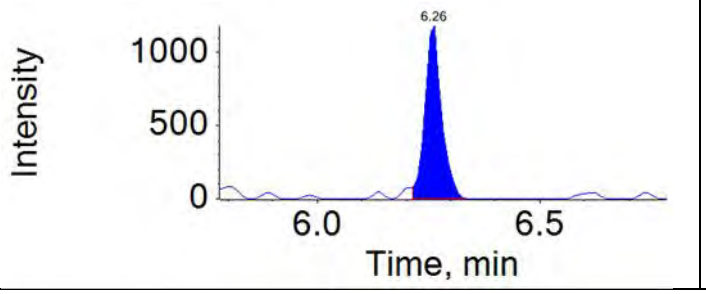


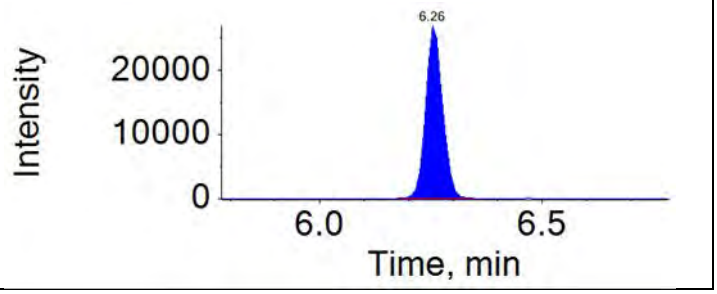
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



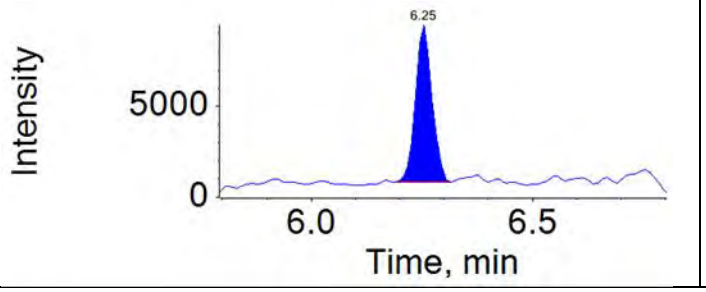


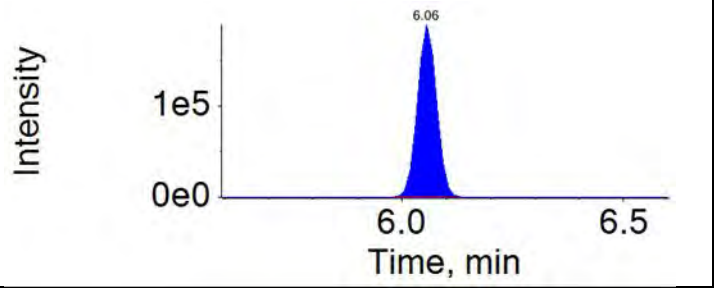
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

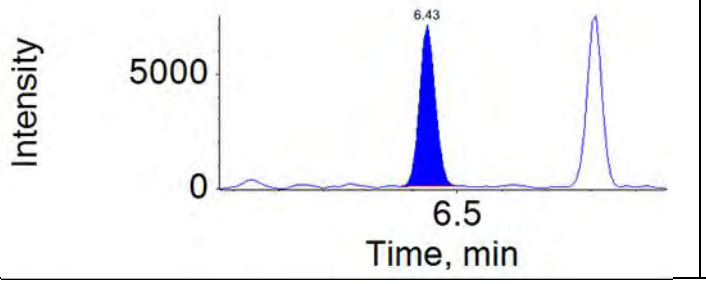
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

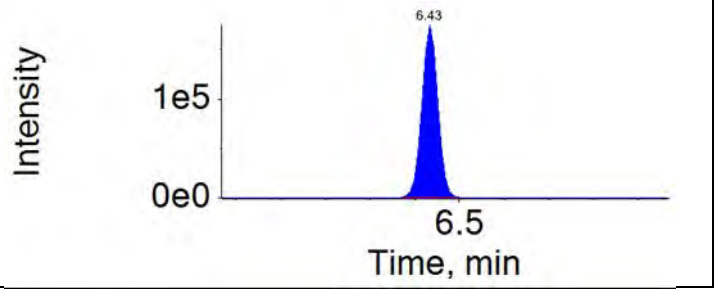
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



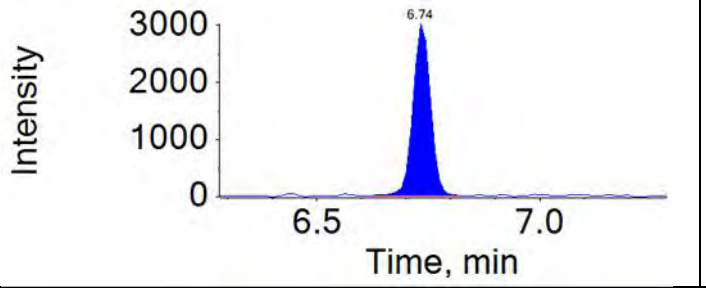


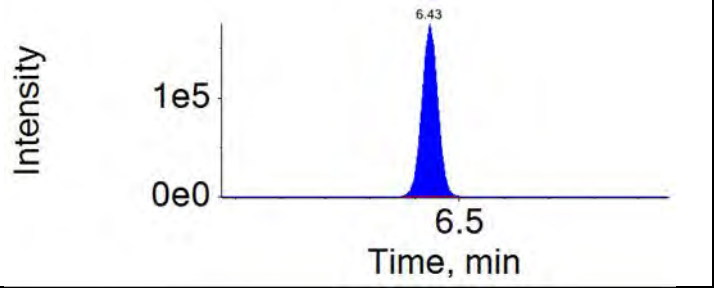
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



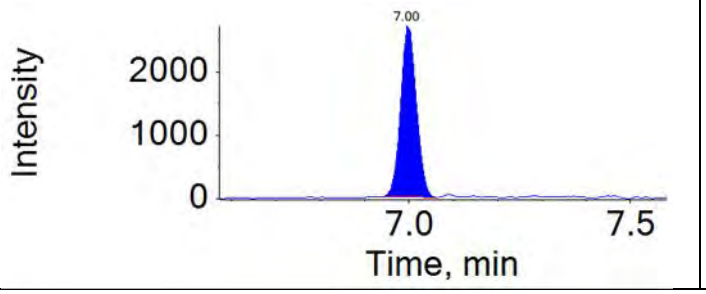


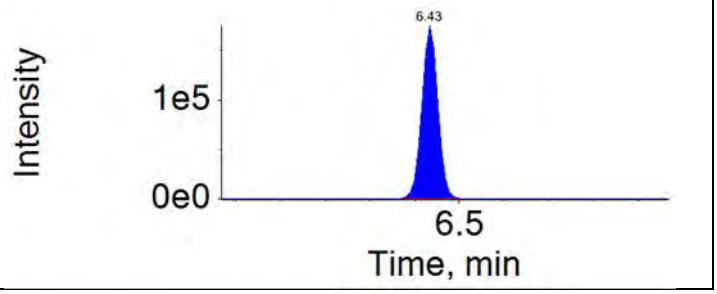
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



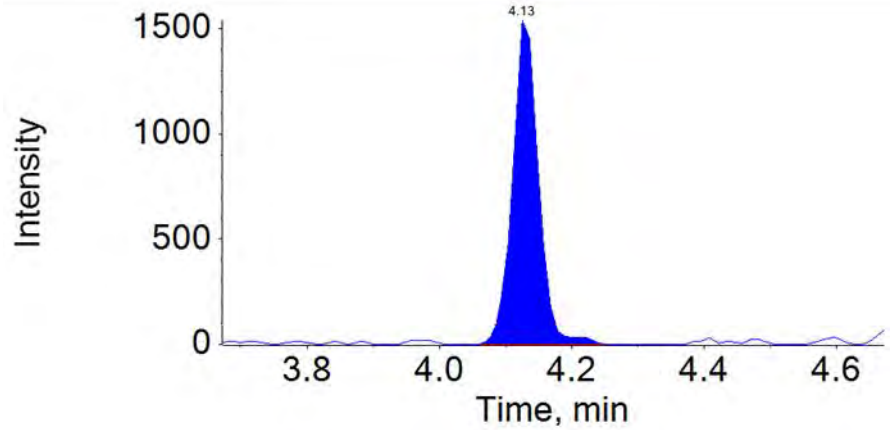


APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

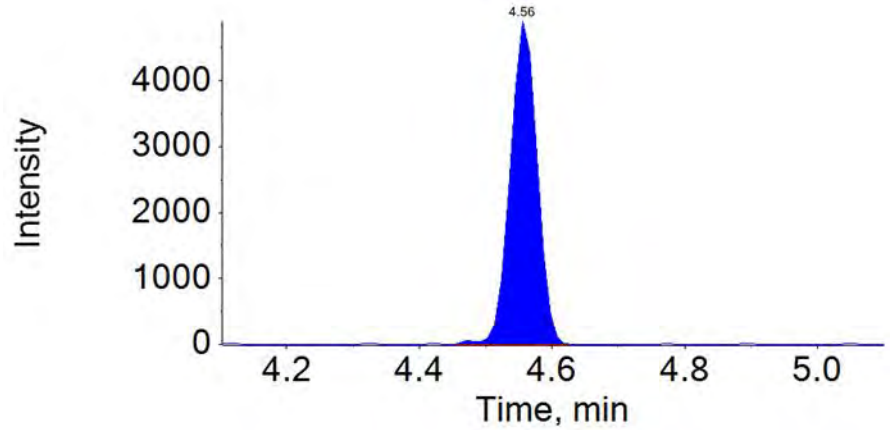
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
4:2-FTS
RT (min.):
4.13
Peak Area:
4195.6
Mass Range:
327.0 / 307.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



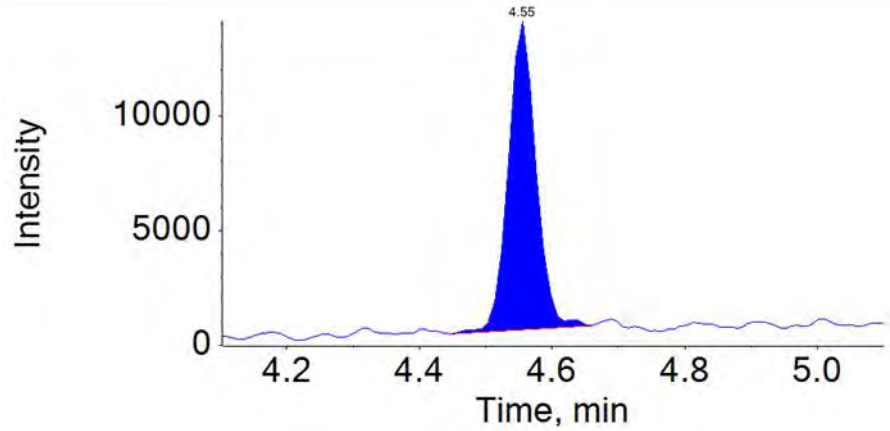
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
13860.4
Mass Range:
399.0 / 80.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
PFHpA
RT (min.):
4.55
Peak Area:
38996.9
Mass Range:
363.0 / 319.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



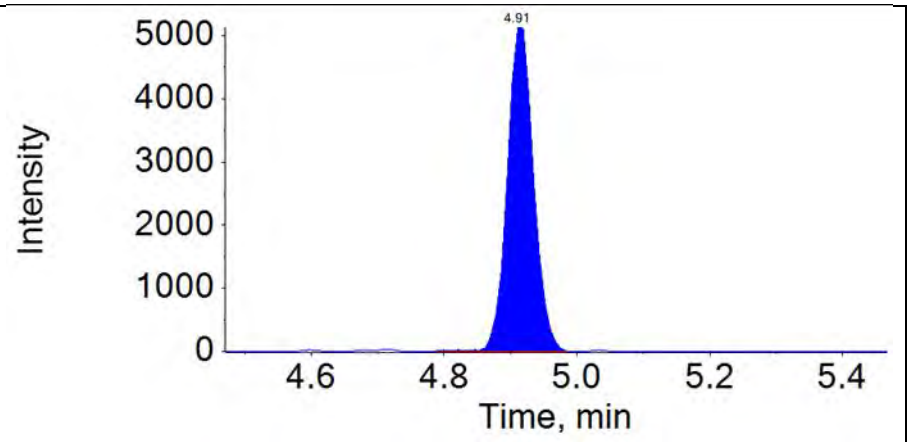
Integration Comment: incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

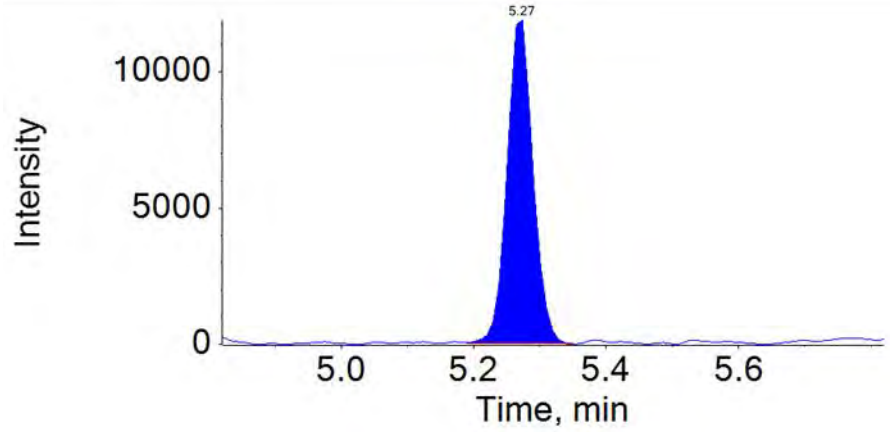
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHpS
RT (min.):
4.91
Peak Area:
14266.0
Mass Range:
449.0 / 80.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



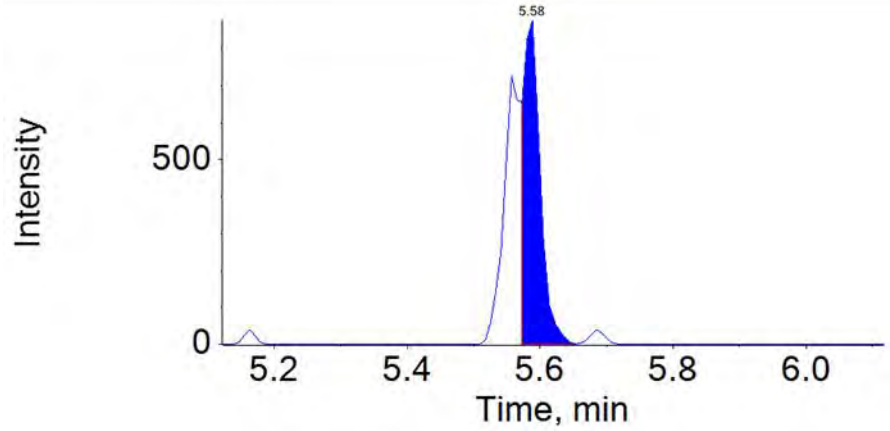
Integration Comment: incorrect integration

Component Name:
PFNA
RT (min.):
5.27
Peak Area:
32355.6
Mass Range:
463.0 / 419.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
8:2-FTS
RT (min.):
5.58
Peak Area:
1513.1
Mass Range:
527.0 / 507.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



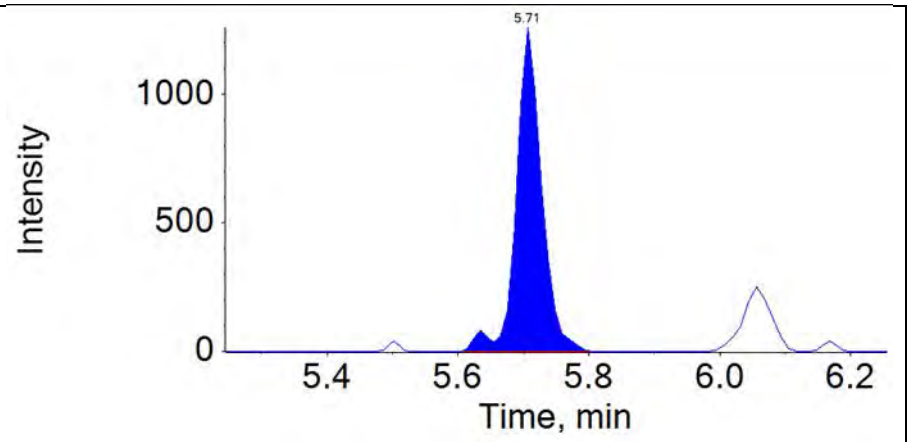
Integration Comment: incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

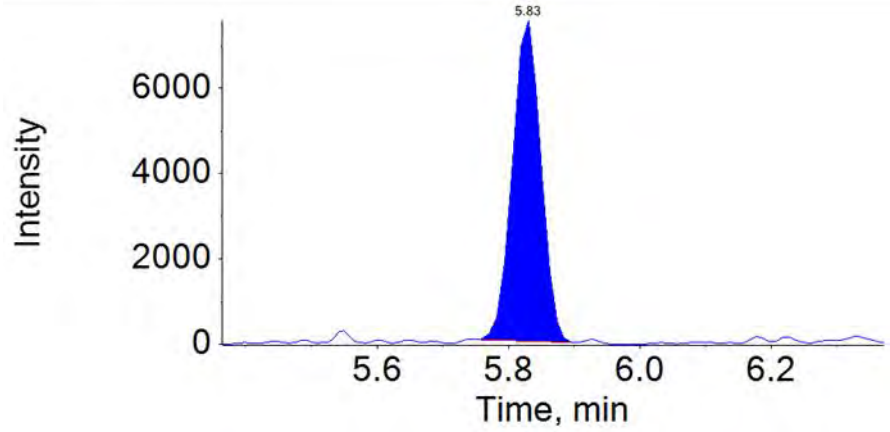
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: NMeFOSAA
RT (min.): 5.71
Peak Area: 3425.3
Mass Range: 570.0 / 419.0
File Name: 18NOV07DCAL-10.wiff
Sample Name: CAL1



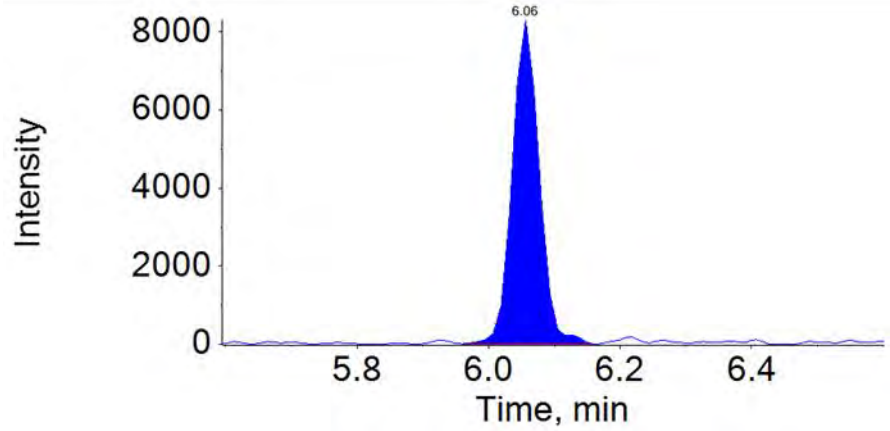
Integration Comment: incorrect integration

Component Name: PFUnDA
RT (min.): 5.83
Peak Area: 22631.3
Mass Range: 563.0 / 519.0
File Name: 18NOV07DCAL-10.wiff
Sample Name: CAL1



Integration Comment: incorrect integration

Component Name: PFDoDA
RT (min.): 6.06
Peak Area: 23623.5
Mass Range: 613.0 / 569.0
File Name: 18NOV07DCAL-10.wiff
Sample Name: CAL1



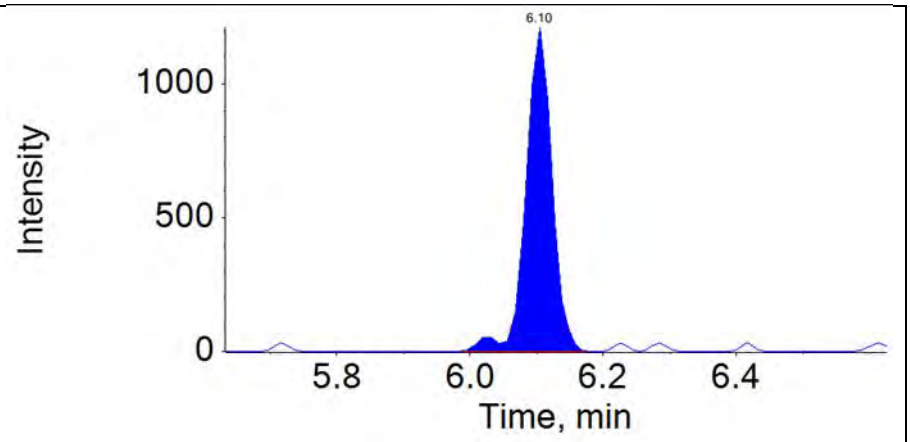
Integration Comment: incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

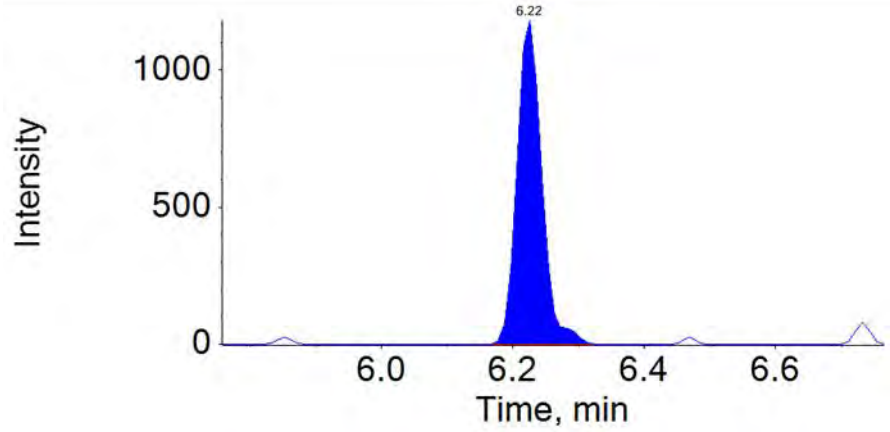
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
NMePFOSA
RT (min.):
6.10
Peak Area:
3327.7
Mass Range:
512.0 / 169.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



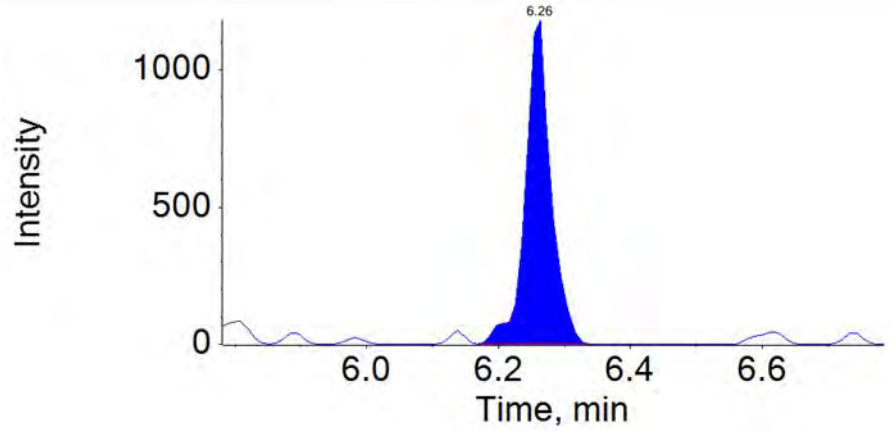
Integration Comment: incorrect integration

Component Name:
PFDoS
RT (min.):
6.22
Peak Area:
3114.4
Mass Range:
699.0 / 80.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
NEtPFOSA
RT (min.):
6.26
Peak Area:
3185.1
Mass Range:
526.0 / 169.0
File Name:
18NOV07DCAL-10.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

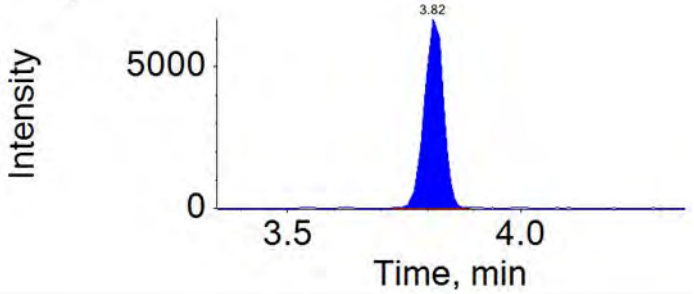
Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-10.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	19024.1	A	1.0000	1.0000			
PFBS_2	3.82	1.00	5667.0	A	0.3576	0.2979	-17	50	
4:2-FTS	4.13	1.00	4145.4	M	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	3113.1	A	0.6359	0.7510	18	50	
PFHxA	4.17	1.00	39732.2	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	426.0	A	0.0115	0.0107	-7	50	
PFPeS	4.18	1.10	8335.4	A	1.0000	1.0000			
PFPeS_2	4.19	1.10	4437.8	A	0.5384	0.5324	-1	50	
PFHxS	4.56	1.00	13762.6	M	1.0000	1.0000			
PFHxS_2	4.55	1.00	4694.9	A	0.3569	0.3411	-4	50	
PFHpA	4.55	1.00	38331.9	M	1.0000	1.0000			
PFHpA_2	4.56	1.00	2299.9	A	0.0577	0.0600	4	50	
6:2-FTS	4.91	1.00	2460.6	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	2419.1	A	0.6752	0.9832	46	50	
PFHpS	4.91	1.08	14183.4	M	1.0000	1.0000			
PFHpS_2	4.92	1.08	4803.7	A	0.3950	0.3387	-14	50	
PFOA	4.93	1.00	39843.5	A	1.0000	1.0000			
PFOA_2	4.92	1.00	2905.3	A	0.0635	0.0729	15	50	
PFOS	5.25	1.00	12181.7	A	1.0000	1.0000			
PFOS_2	5.25	1.00	4968.4	A	0.3494	0.4079	17	50	
PFNA	5.27	1.00	32563.3	M	1.0000	1.0000			
PFNA_2	5.29	1.00	475.0	A	0.0207	0.0146	-29	50	
PFNS	5.55	1.06	6748.5	A	1.0000	1.0000			
PFNS_2	5.55	1.06	3646.4	A	0.4890	0.5403	10	50	
PFDA	5.57	1.00	25530.0	A	1.0000	1.0000			
PFDA_2	5.55	1.00	33.4	A	0.0057	0.0013	-77	50	OOS
8:2-FTS	5.58	1.00	2783.3	M	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	2168.5	A	0.6169	0.7791	26	50	
NMeFOSAA	5.71	1.00	3293.8	M	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	644.8	A	0.2206	0.1958	-11	50	
PFDS	5.80	1.10	6453.6	A	1.0000	1.0000			
PFDS_2	5.82	1.11	1756.6	A	0.4648	0.2722	-41	50	
PFUnDA	5.83	1.00	23275.5	M	1.0000	1.0000			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	5.84	1.00	3313.0	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	1807.4	A	0.6082	0.5455	-10	50	
PFDoDA	6.06	1.00	23314.2	M	1.0000	1.0000			
PFDoDA_2	6.06	1.00	62.7	A	0.0109	0.0027	-75	50	OOS
10:2-FTS	6.07	1.09	1903.7	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	1472.7	A	0.7082	0.7736	9	50	
PFTrDA	6.25	1.03	22403.2	A	1.0000	1.0000			
PFTrDA_2	6.26	1.03	178.7	A	0.0096	0.0080	-17	50	
PFTeDA	6.43	1.00	17031.0	A	1.0000	1.0000			
PFTeDA_2	6.48	1.01	40.0	A	0.0055	0.0023	-58	50	OOS
PFHxDA	6.74	1.05	8175.1	A	1.0000	1.0000			
PFHxDA_2	6.74	1.05	437.4	A	0.0596	0.0535	-10	50	
PFODA	7.00	1.09	6622.6	A	1.0000	1.0000			
PFODA_2	6.99	1.09	171.3	A	0.0257	0.0259	1	50	

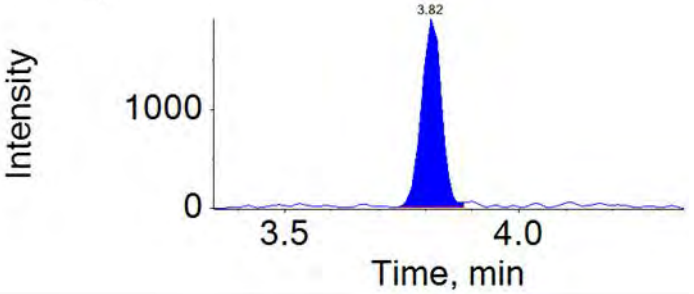
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

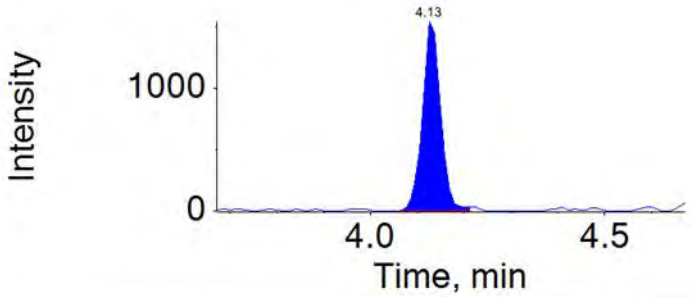
Component: PFBS
Primary Mass: 299.0 / 80.0



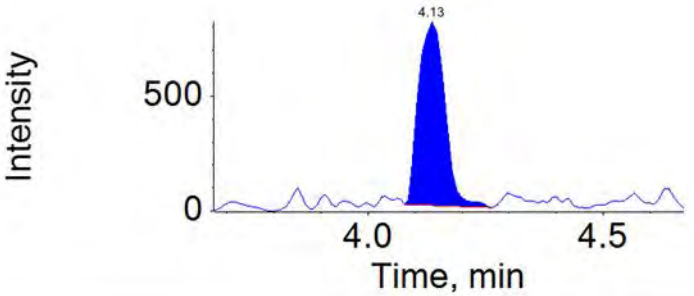
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



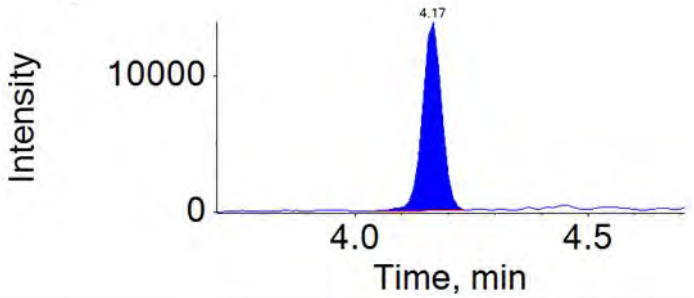
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



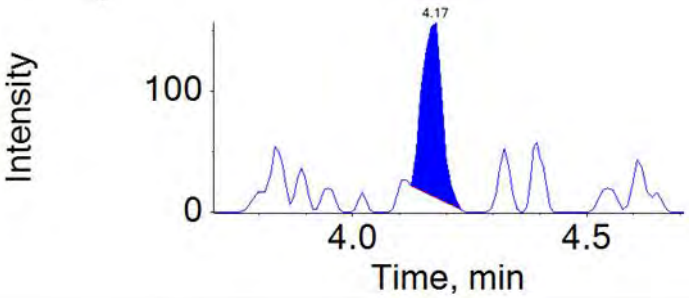
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



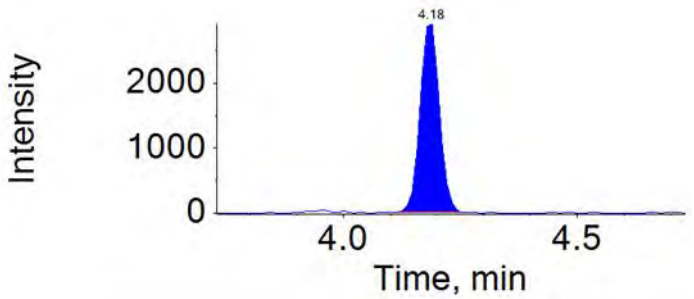
Component: PFHxA
Primary Mass: 313.0 / 269.0



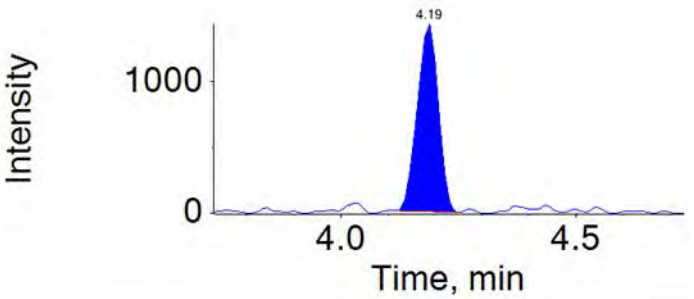
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



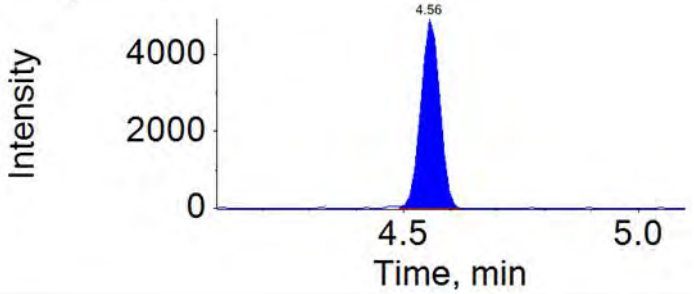
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



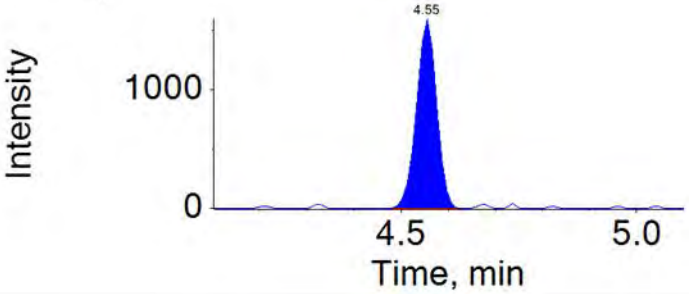
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

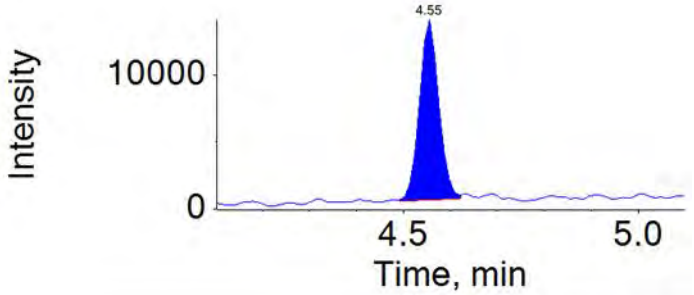
Component: PFHxS
Primary Mass: 399.0 / 80.0



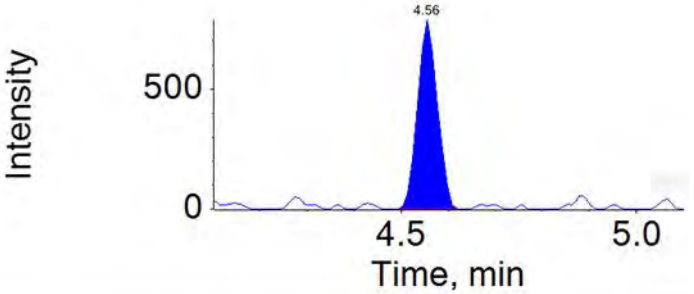
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



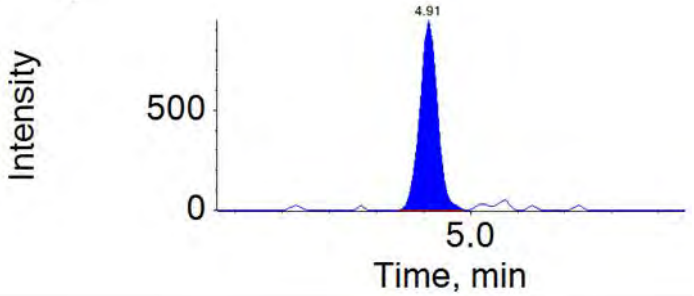
Component: PFHpA
Primary Mass: 363.0 / 319.0



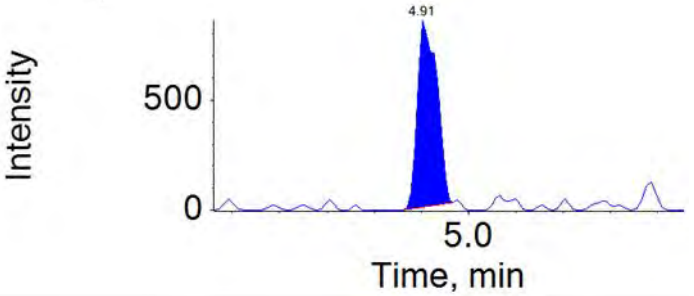
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



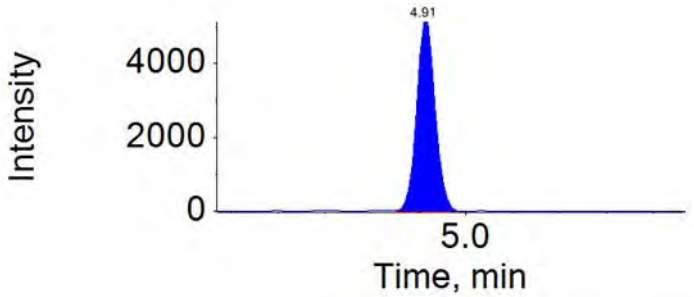
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



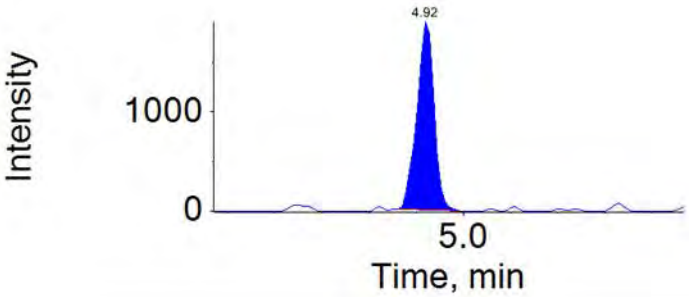
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



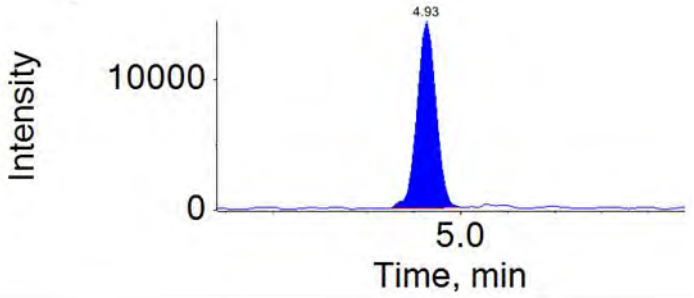
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



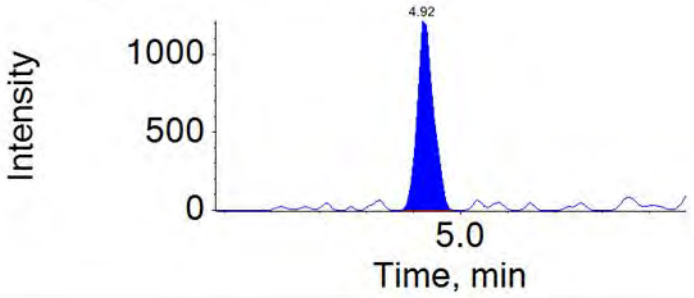
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

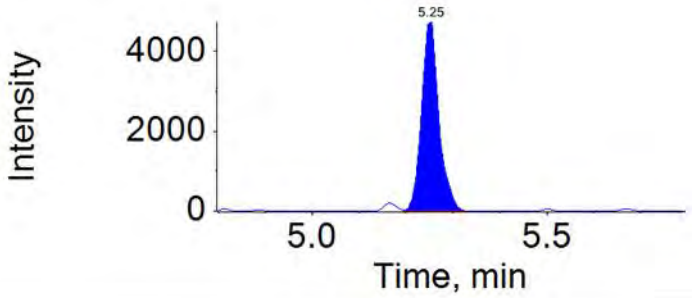
Component: PFOA
Primary Mass: 413.0 / 369.0



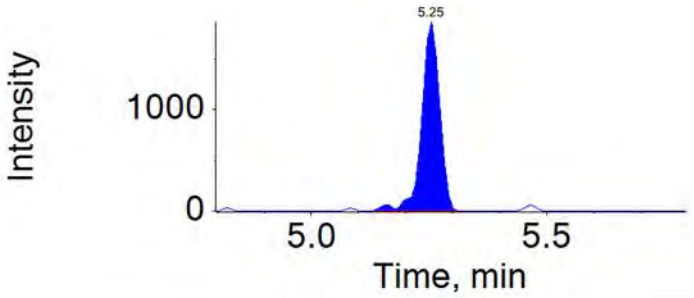
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



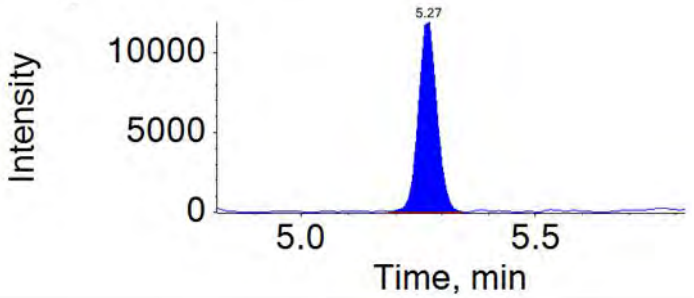
Component: PFOS
Primary Mass: 499.0 / 80.0



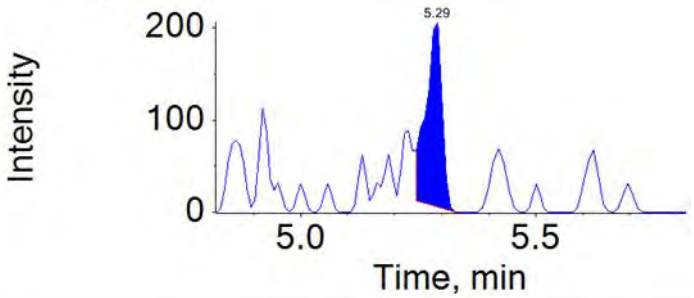
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



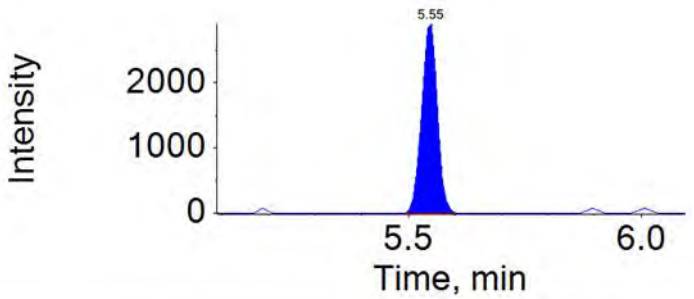
Component: PFNA
Primary Mass: 463.0 / 419.0



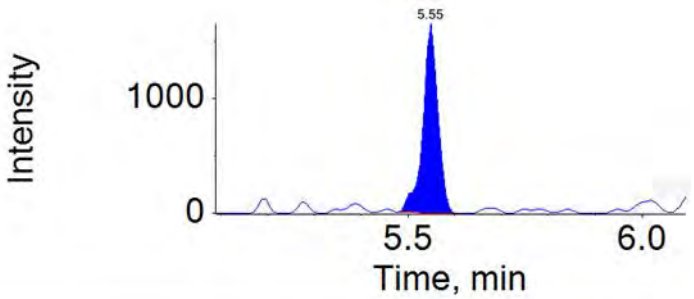
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



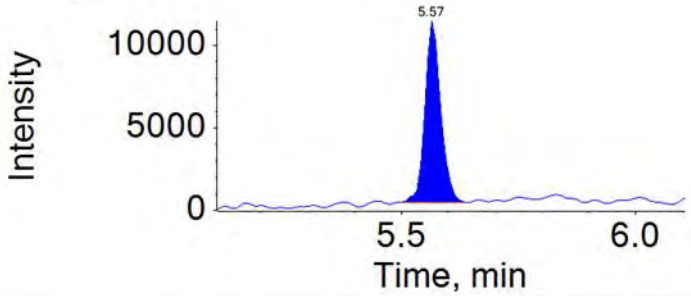
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



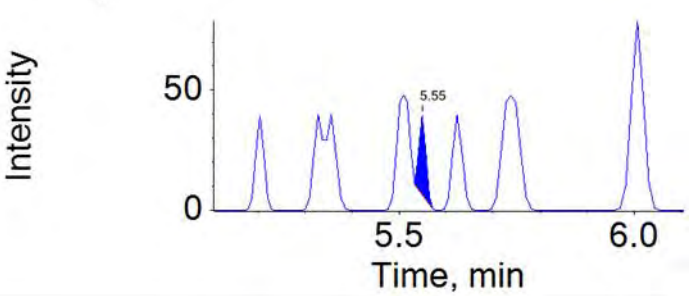
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

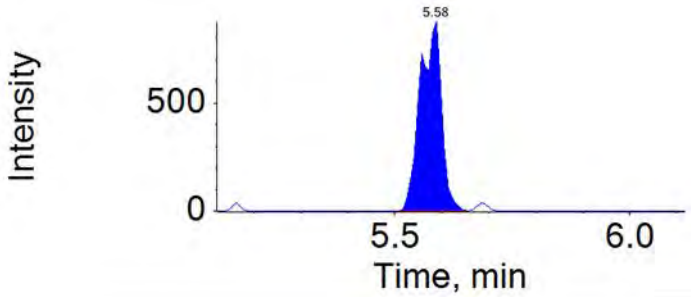
Component: PFDA
Primary Mass: 513.0 / 469.0



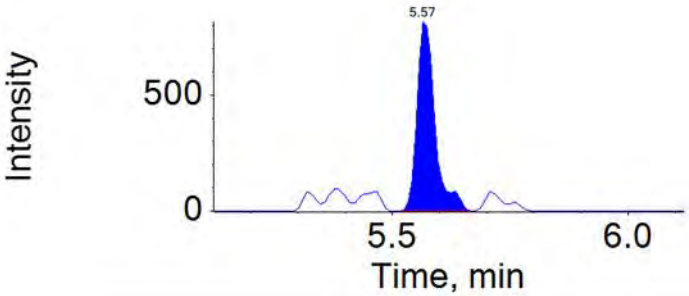
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



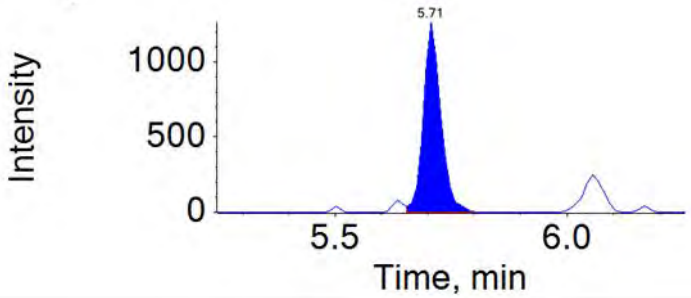
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



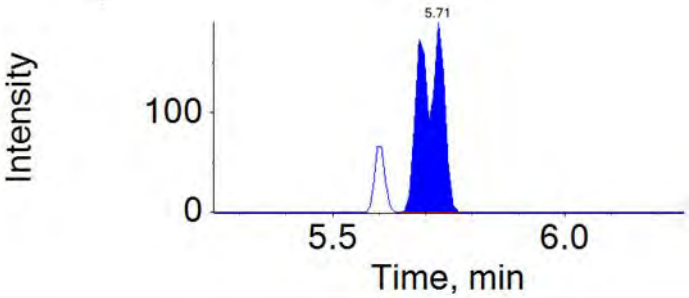
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



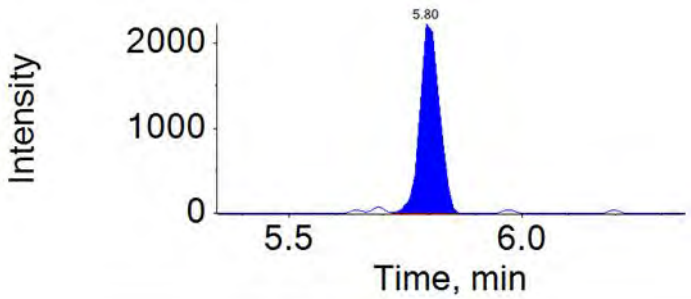
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



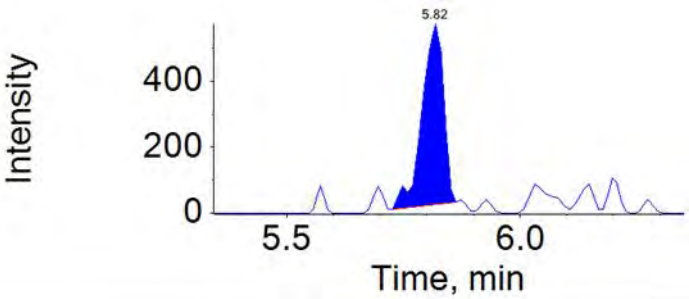
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



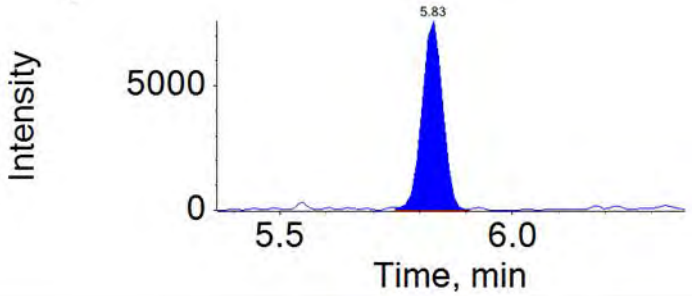
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



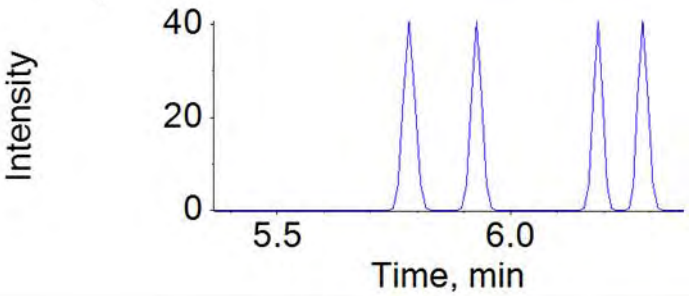
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

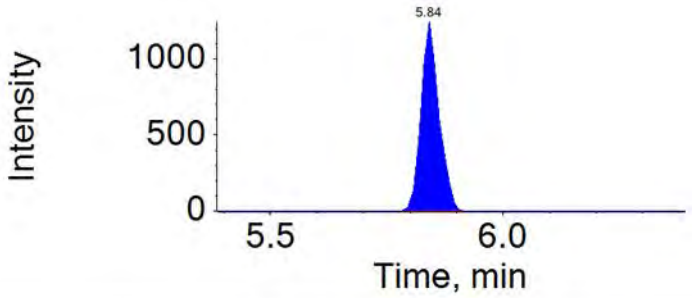
Component: PFUnDA
Primary Mass: 563.0 / 519.0



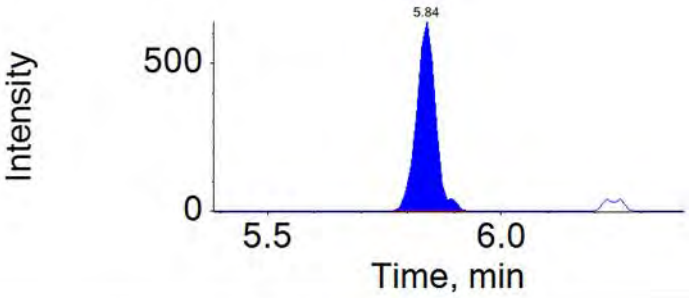
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



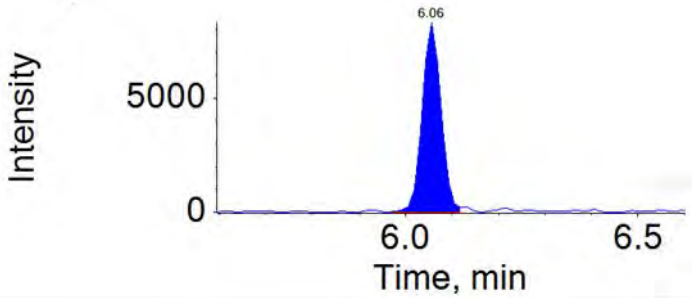
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



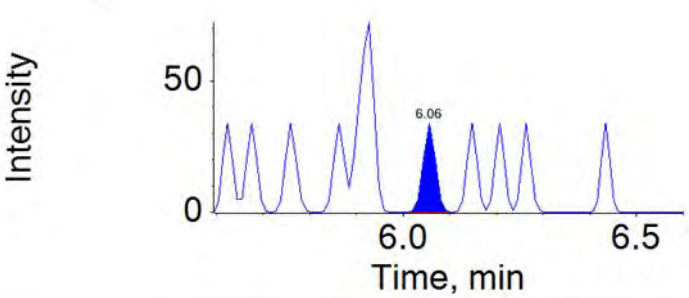
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



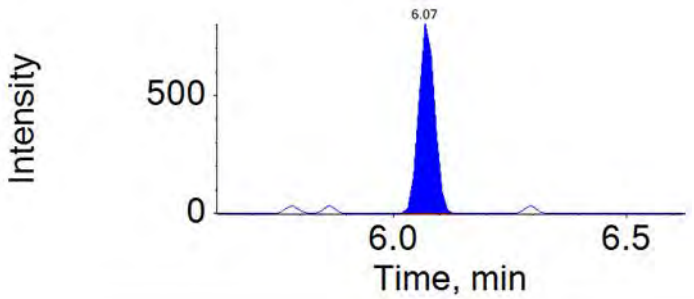
Component: PFDoDA
Primary Mass: 613.0 / 569.0



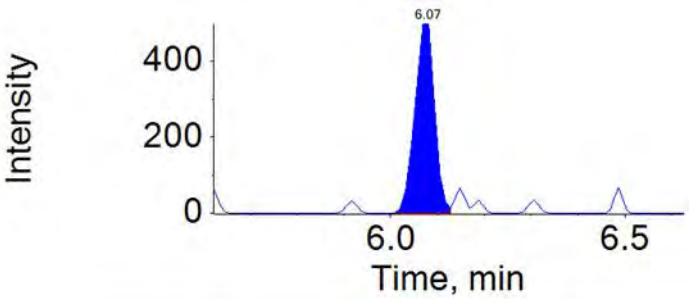
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



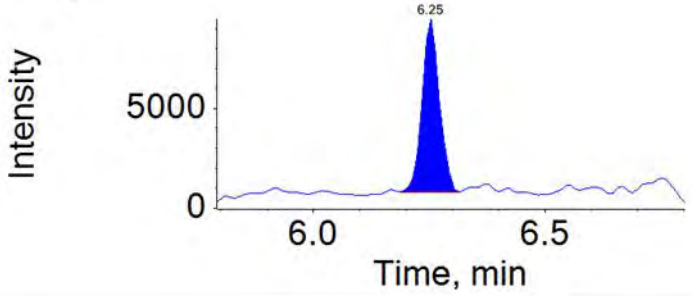
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



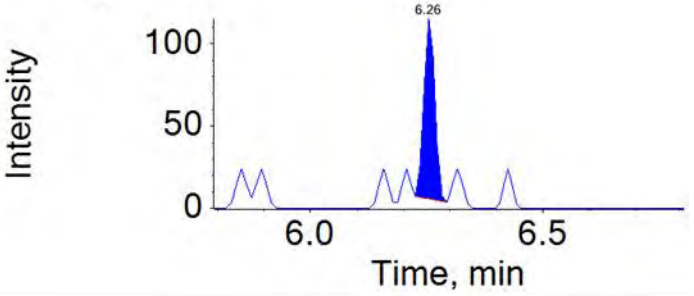
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



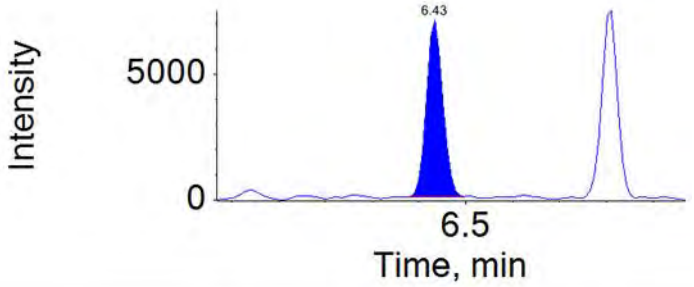
Component: PFTrDA
Primary Mass: 663.0 / 619.0



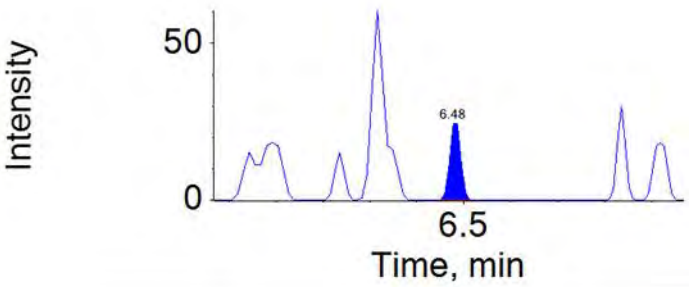
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



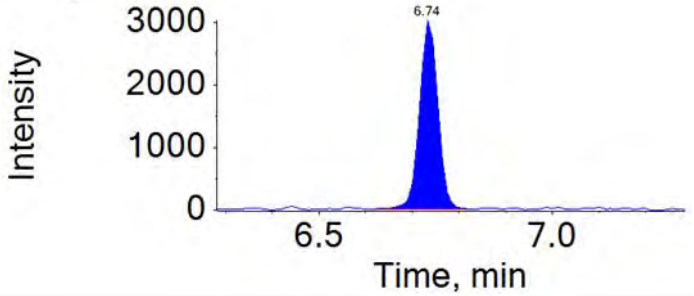
Component: PFTeDA
Primary Mass: 713.0 / 669.0



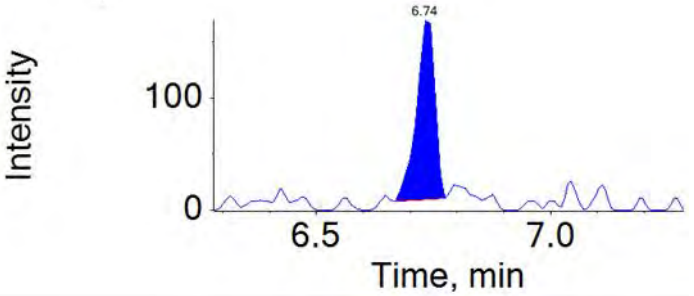
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



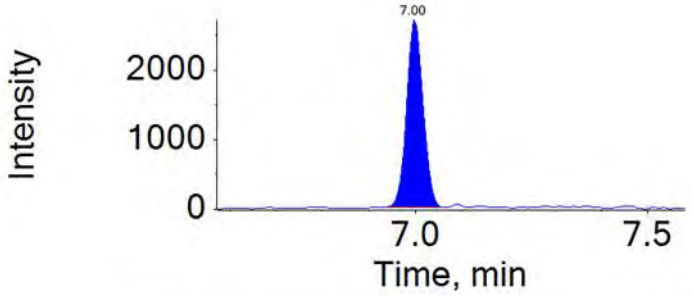
Component: PFHxDA
Primary Mass: 813.0 / 769.0



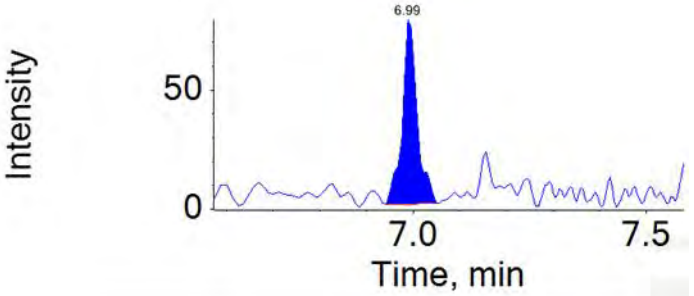
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL2			**Data File:**		18NOV07DCAL-11.wiff
Sample ID:	CALMOD21833F			**Acquis Date:**		2018-11-07T09:48:56
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	723209.9	730410.6	-1	50	
13C2-PFOA	5.0	516360.9	524423.6	-2	50	
13C4-PFOS	4.8	263757.0	274061.7	-4	50	
13C2-PFDA	5.0	334958.4	311442.1	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	782732.8	13C3-PFBA	723209.9	1.082	5.000	5.009	100	70-130	
E13C5-PFPeA	863262.8	13C3-PFBA	723209.9	1.194	5.000	5.200	104	70-130	
E13C3-PFBS	444721.3	13C3-PFBA	723209.9	0.615	4.650	4.513	97	70-130	
E13C2-4:2-FTS	54234.1	13C2-PFOA	516360.9	0.105	4.670	4.739	101	70-130	
E13C5-PFHxA	717434.9	13C2-PFOA	516360.9	1.389	5.000	5.111	102	70-130	
E13C3-PFHxS	335732.1	13C2-PFOA	516360.9	0.650	4.730	4.668	99	70-130	
E13C4-PFHpA	583342.8	13C2-PFOA	516360.9	1.130	5.000	5.139	103	70-130	
E13C2-6:2-FTS	38849.6	13C2-PFOA	516360.9	0.075	4.750	5.017	106	70-130	
E13C8-PFOA	970523.2	13C2-PFOA	516360.9	1.880	5.000	5.241	105	70-130	
E13C8-PFOS	286174.8	13C4-PFOS	263757.0	1.085	4.780	4.798	100	70-130	
E13C9-PFNA	540435.4	13C4-PFOS	263757.0	2.049	5.000	5.597	112	70-130	
E13C6-PFDA	661423.8	13C2-PFDA	334958.4	1.975	5.000	4.966	99	70-130	
E13C2-8:2-FTS	27523.0	13C2-PFDA	334958.4	0.082	4.790	4.348	91	70-130	
E13C8-PFOSA	711032.2	13C2-PFDA	334958.4	2.123	5.000	4.632	93	70-130	
Ed3-NMeFOSAA	83112.2	13C2-PFDA	334958.4	0.248	5.000	4.614	92	70-130	
E13C7-PFUnDA	289985.1	13C2-PFDA	334958.4	0.866	5.000	4.994	100	70-130	
Ed5-NEtFOSAA	65815.9	13C2-PFDA	334958.4	0.196	5.000	4.547	91	70-130	
E13C2-PFDoDA	597616.3	13C2-PFDA	334958.4	1.784	5.000	4.810	96	70-130	
Ed7-NMePFOSAE	330298.6	13C2-PFDA	334958.4	0.986	5.000	4.586	92	70-130	
Ed3-NMePFOSA	81301.2	13C2-PFDA	334958.4	0.243	5.000	4.444	89	70-130	
Ed9-NEtPFOSAE	270607.6	13C2-PFDA	334958.4	0.808	5.000	4.614	92	70-130	
Ed5-NEtPFOSA	66745.4	13C2-PFDA	334958.4	0.199	5.000	4.614	92	70-130	
E13C2-PFTeDA	441206.9	13C2-PFDA	334958.4	1.317	5.000	4.742	95	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

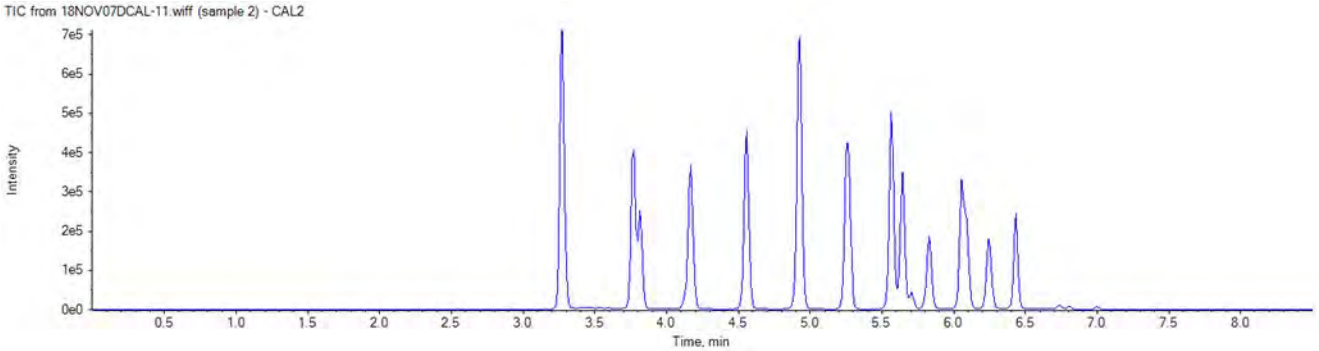
Analyte Quantitation Peak Table

Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-11.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	72868.6		A	13C4-PFBA	3.27	782732.8	0.093	0.545
PFPeA	3.77	1.000	77403.9		A	13C5-PFPeA	3.77	863262.8	0.090	0.533
PFBS	3.82	1.000	41415.1		A	13C3-PFBS	3.82	444721.3	0.093	0.470
4:2-FTS	4.13	1.000	9924.9		M	13C2-4:2-FTS	4.13	54234.1	0.183	0.492
PFHxA	4.17	1.000	88469.9		A	13C5-PFHxA	4.17	717434.9	0.123	0.529
PFPeS	4.19	1.100	20956.8		A	13C3-PFBS	3.82	444721.3	0.047	0.465
PFHxS	4.56	1.000	32061.0		M	13C3-PFHxS	4.56	335732.1	0.095	0.484
PFHpA	4.56	1.000	93502.9		A	13C4-PFHpA	4.55	583342.8	0.160	0.539
6:2-FTS	4.91	1.000	8883.8		A	13C2-6:2-FTS	4.91	38849.6	0.229	0.570
PFHpS	4.92	1.080	30553.2		A	13C3-PFHxS	4.56	335732.1	0.091	0.476
PFOA	4.93	1.000	94348.1		A	13C8-PFOA	4.92	970523.2	0.097	0.547
PFOS	5.25	1.000	28529.2		M	13C8-PFOS	5.25	286174.8	0.100	0.517
PFNA	5.27	1.000	74743.9		A	13C9-PFNA	5.27	540435.4	0.138	0.517
PFNS	5.55	1.060	17507.8		A	13C8-PFOS	5.25	286174.8	0.061	0.485
PFDA	5.57	1.000	62530.6		A	13C6-PFDA	5.57	661423.8	0.095	0.520
8:2-FTS	5.57	1.000	6917.6		A	13C2-8:2-FTS	5.57	27523.0	0.251	0.567
PFOSA	5.64	1.000	69586.0		A	13C8-PFOSA	5.64	711032.2	0.098	0.529
NMeFOSAA	5.71	1.000	9807.4		A	d3-NMeFOSAA	5.71	83112.2	0.118	0.607
PFDS	5.80	1.110	15726.3		A	13C8-PFOS	5.25	286174.8	0.055	0.525
PFUnDA	5.83	1.000	54085.5		A	13C7-PFUnDA	5.83	289985.1	0.187	0.535
NEtFOSAA	5.84	1.000	7253.7		A	d5-NEtFOSAA	5.84	65815.9	0.110	0.474
PFDoDA	6.06	1.000	60098.0		A	13C2-PFDoDA	6.06	597616.3	0.101	0.545
10:2-FTS	6.07	1.090	4874.3		A	13C2-8:2-FTS	5.57	27523.0	0.177	0.551
NMePFOSAE	6.10	1.000	40902.1		A	d7-NMePFOSAE	6.09	330298.6	0.124	0.555
NMePFOSA	6.10	1.000	8251.9		A	d3-NMePFOSA	6.10	81301.2	0.101	0.568
PFDoS	6.23	1.190	7227.2		A	13C8-PFOS	5.25	286174.8	0.025	0.487
NEtPFOSAE	6.25	1.000	48905.8		A	d9-NEtPFOSAE	6.24	270607.6	0.181	0.579
NEtPFOSA	6.26	1.000	6419.4		A	d5-NEtPFOSA	6.26	66745.4	0.096	0.424
PFTrDA	6.25	1.030	49218.5		A	13C2-PFDoDA	6.06	597616.3	0.082	0.519
PFTeDA	6.43	1.000	36223.2		A	13C2-PFTeDA	6.43	441206.9	0.082	0.482
PFHxDA	6.74	1.050	18619.3		A	13C2-PFTeDA	6.43	441206.9	0.042	0.524
PFODA	7.00	1.090	15742.1		A	13C2-PFTeDA	6.43	441206.9	0.036	0.511

Total Ion Chromatogram

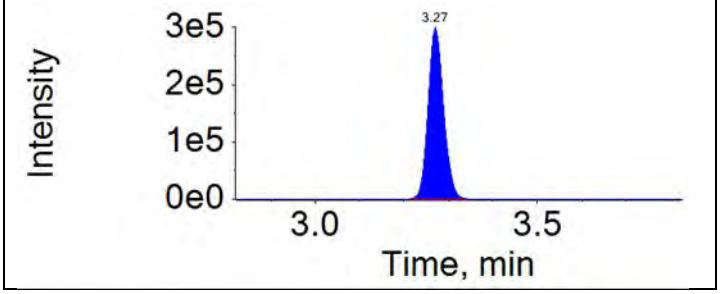


APPROVED
By JPT at 2:53 pm, 11/7/18

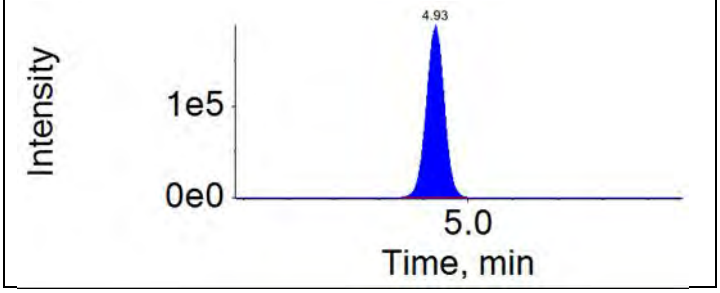
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

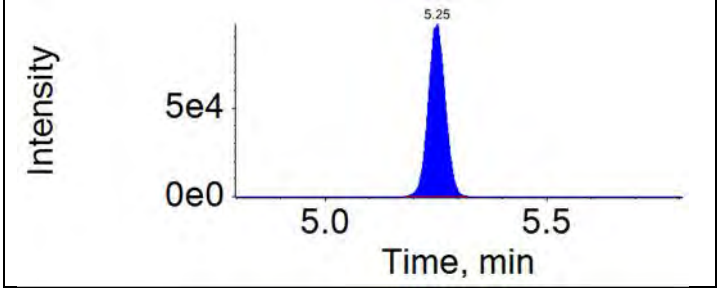
Injection Standard: 13C3-PFBA
216.0 / 172.0



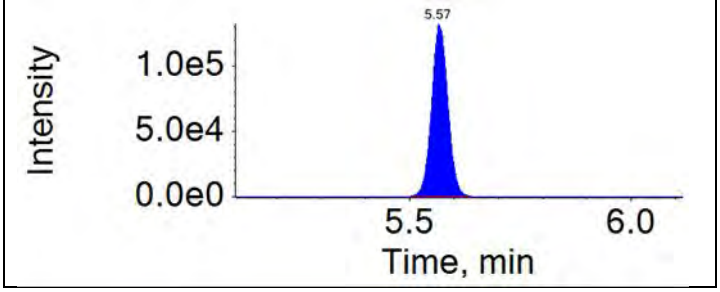
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

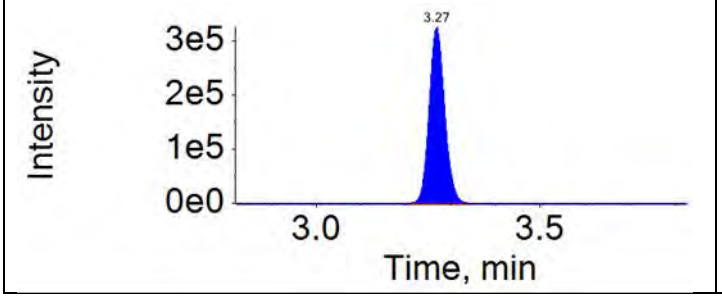


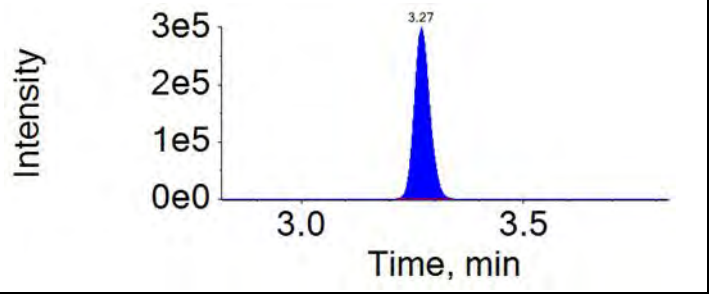
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

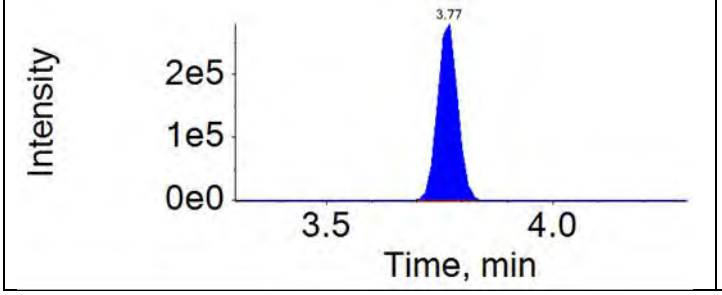
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

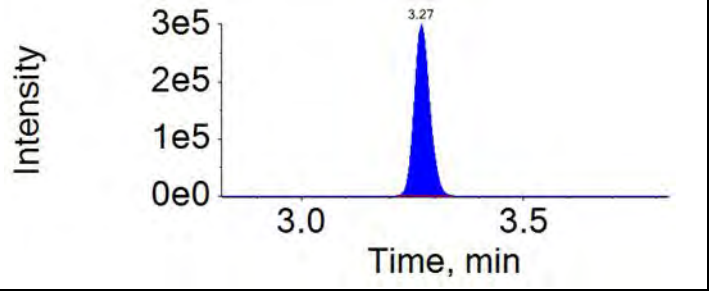
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



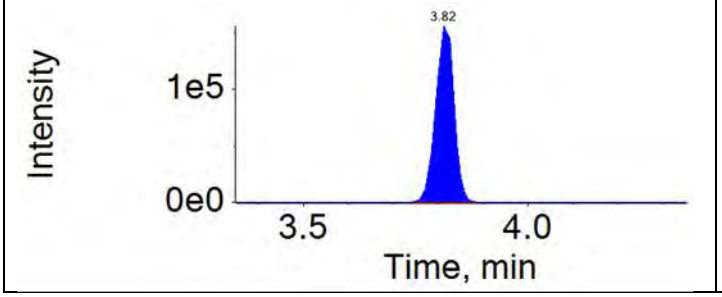


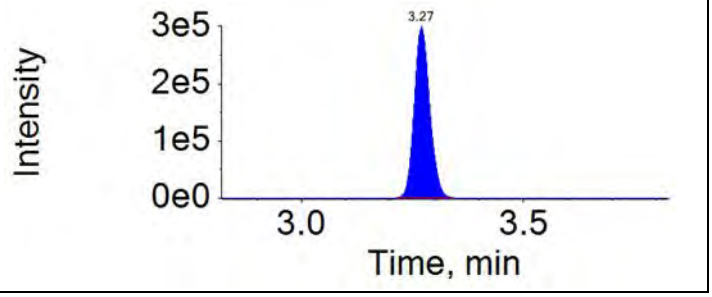
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



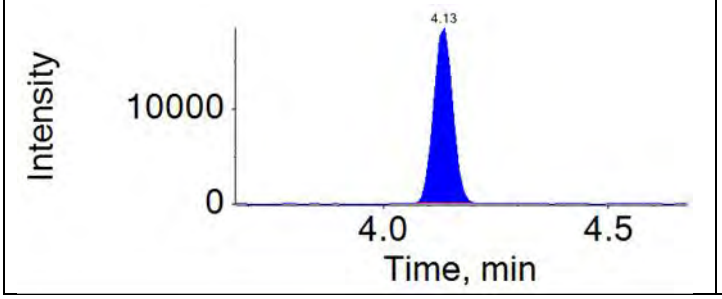


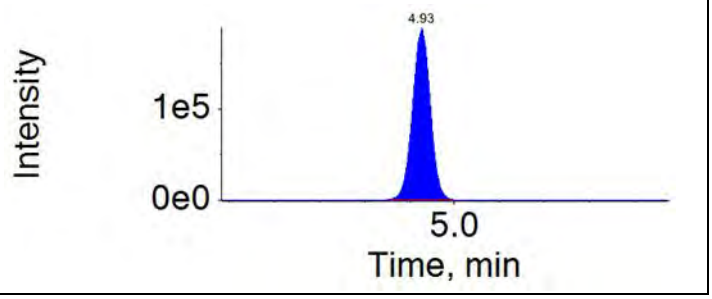
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



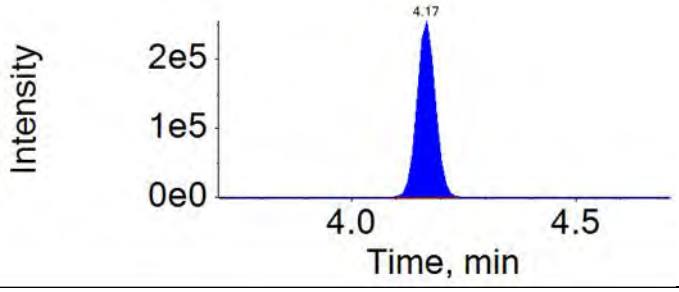
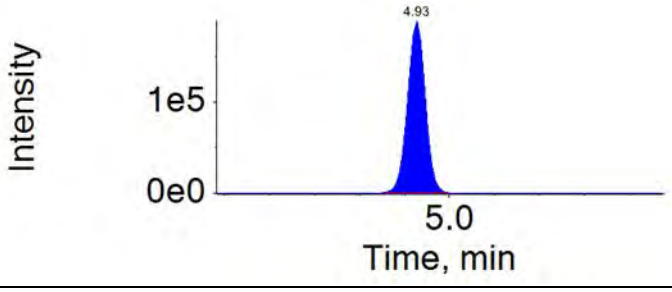


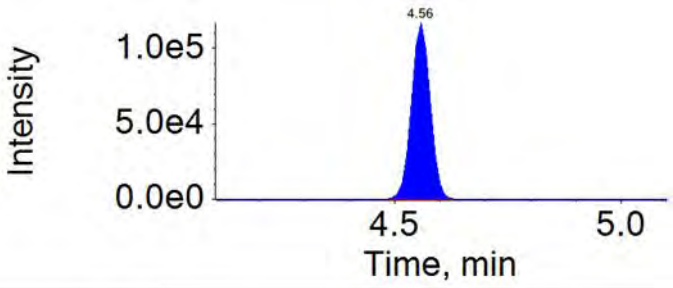
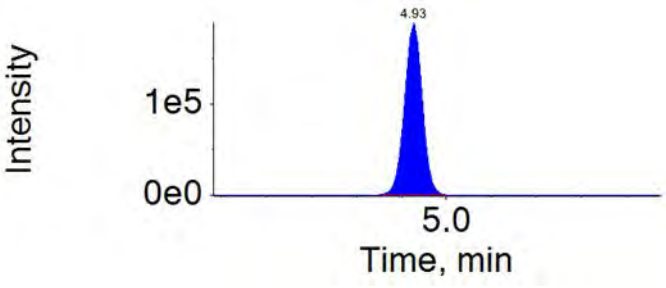
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

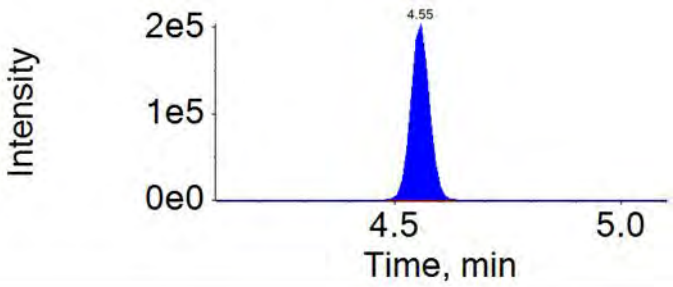
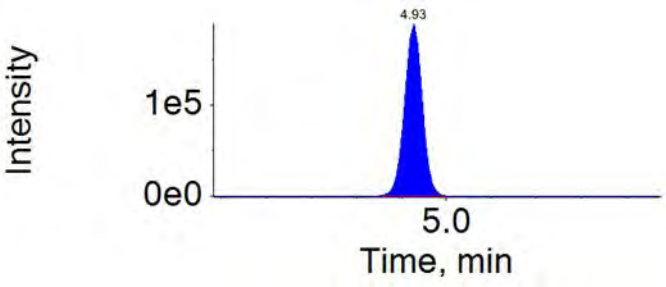


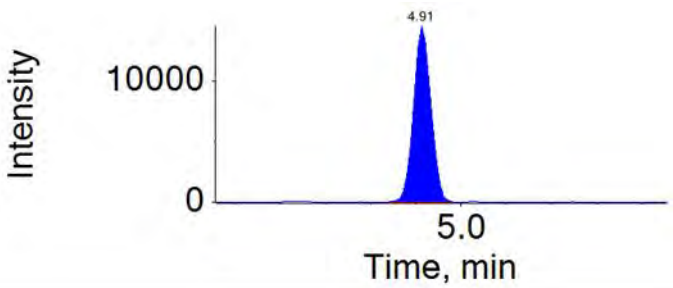
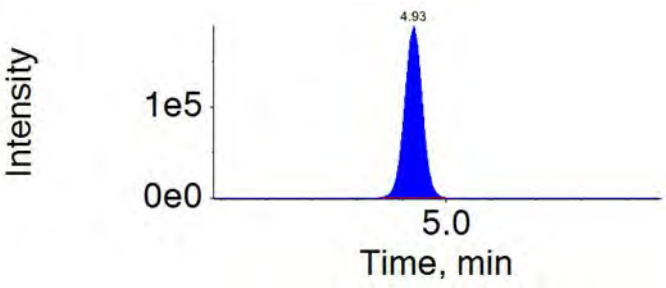


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

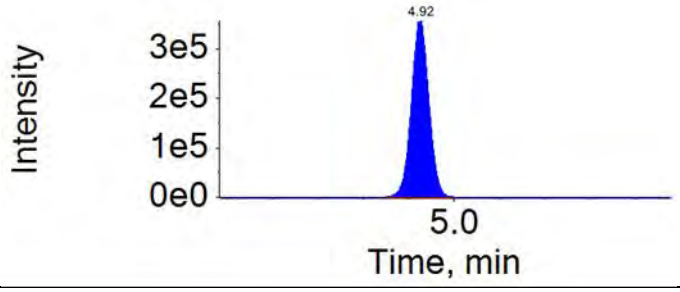
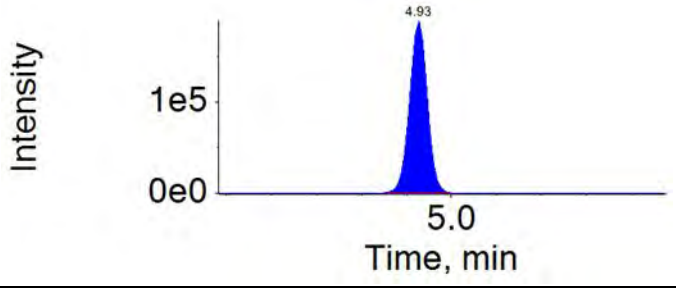
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

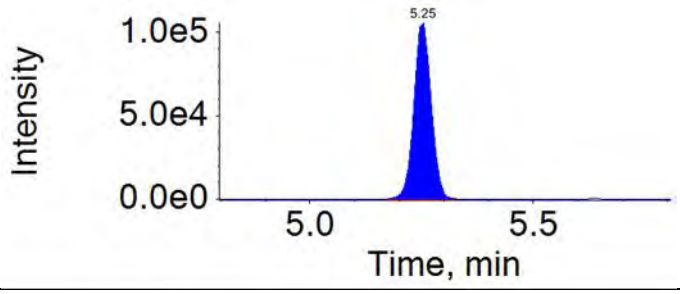
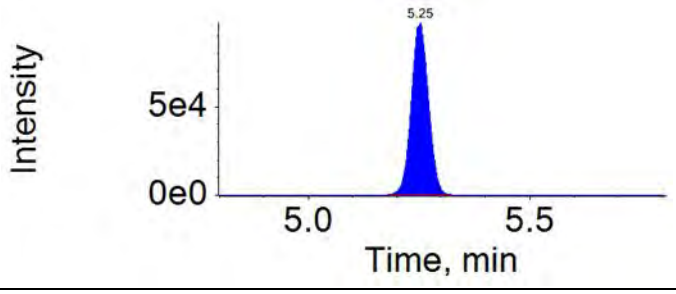
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

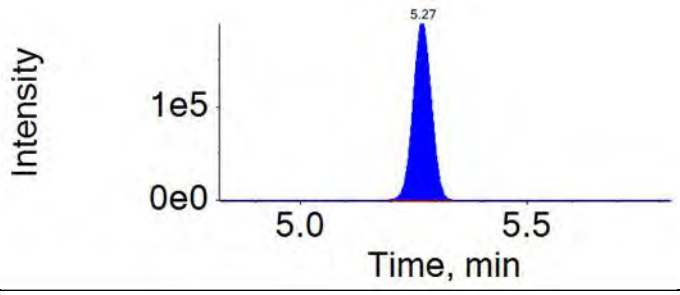
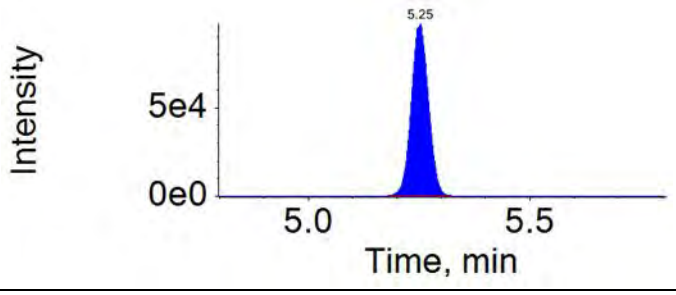
APPROVED
By JPT at 2:53 pm, 11/7/18

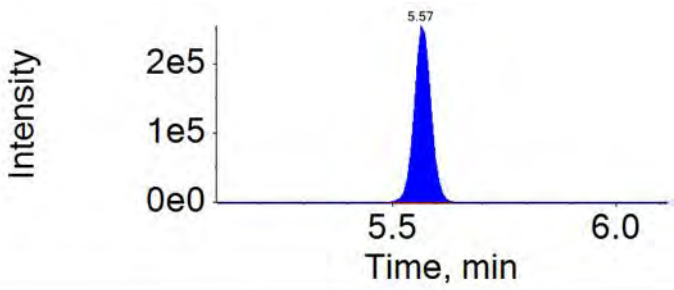
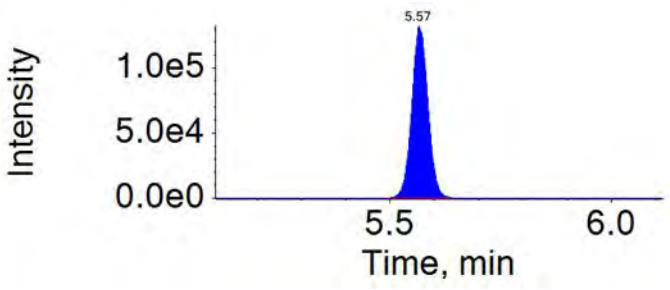
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

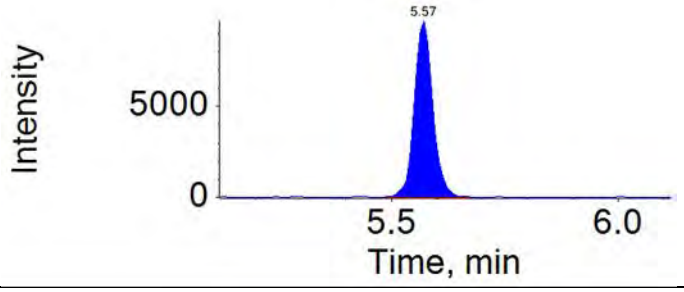
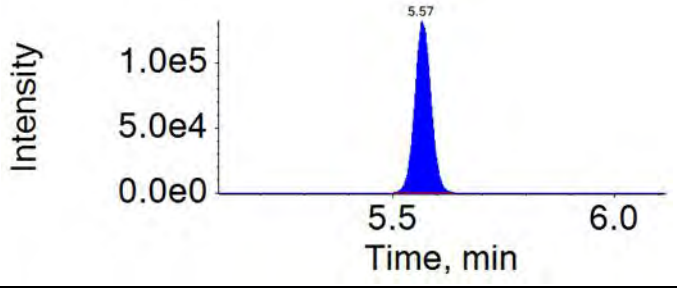
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

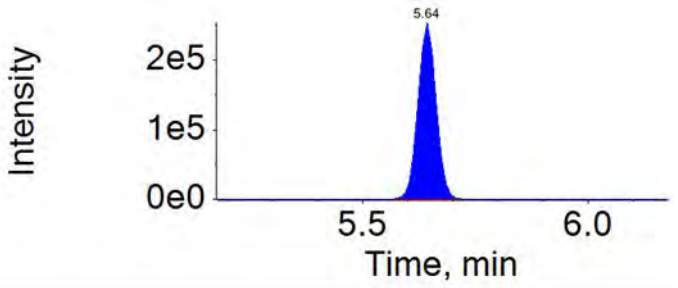
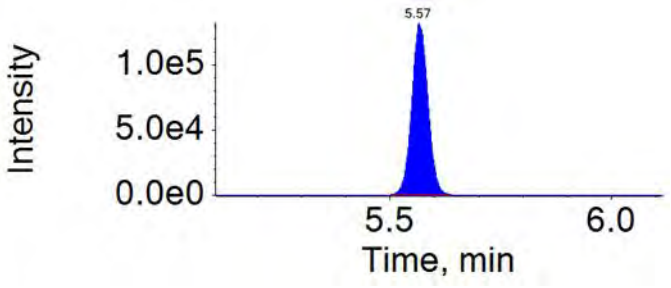
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

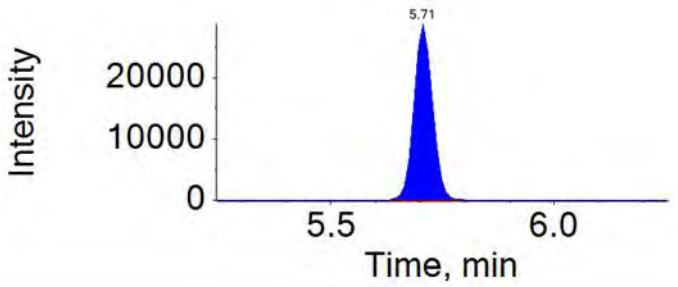
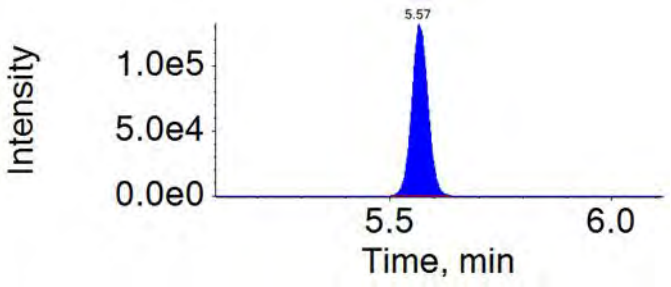
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

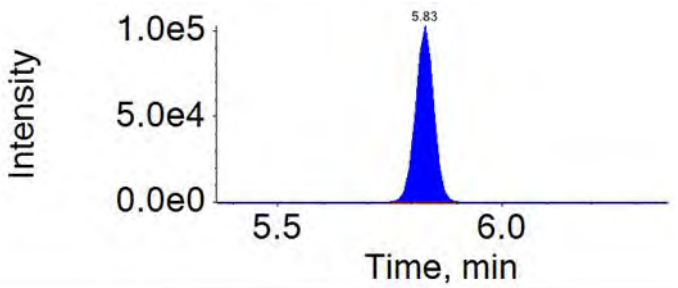
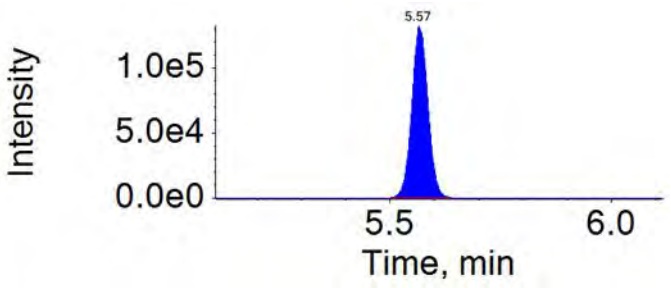
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

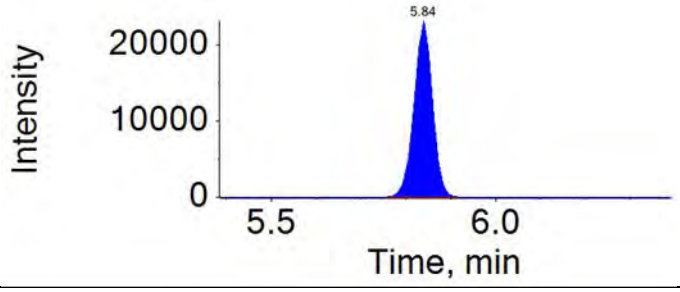
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

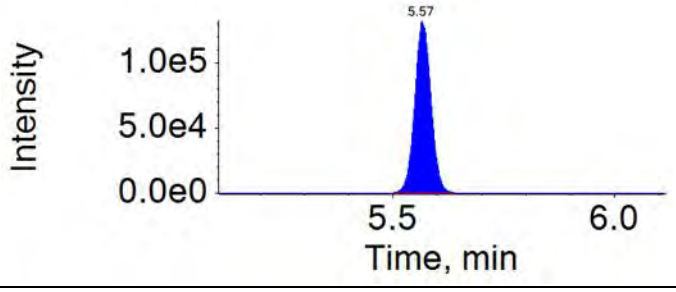
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

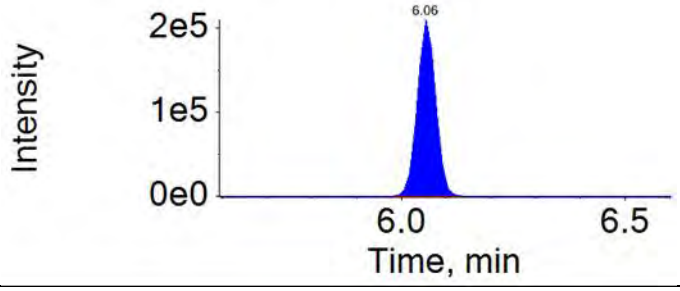
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

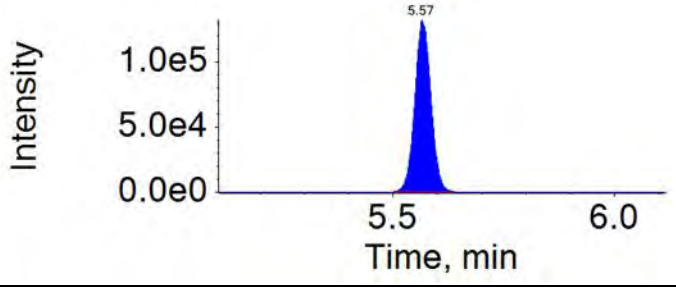
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



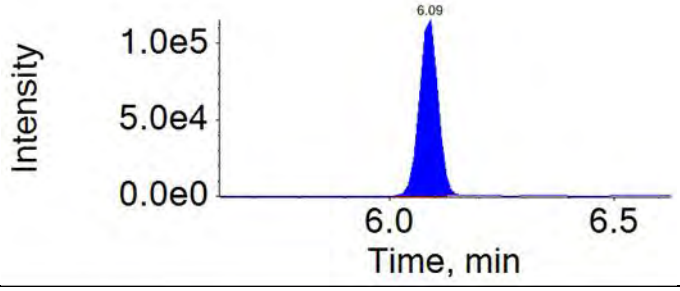


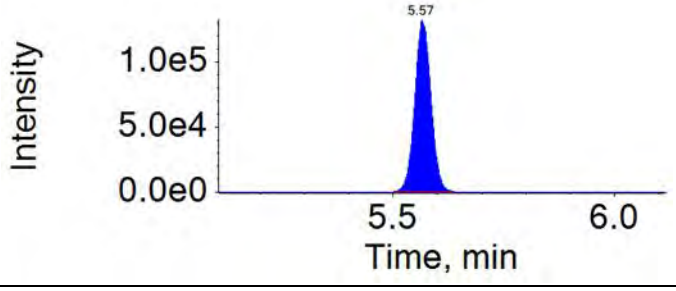
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



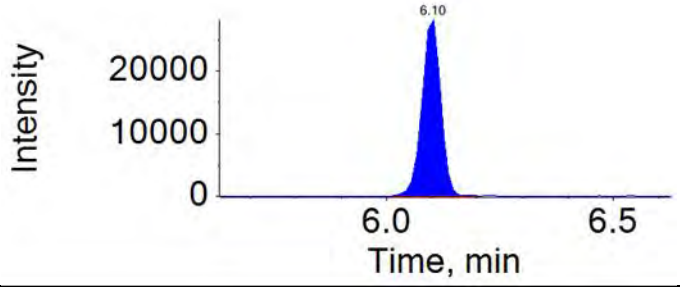


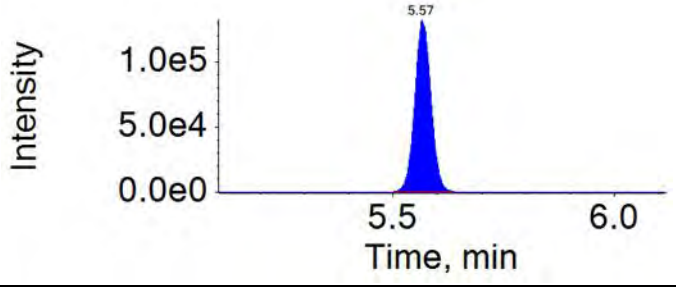
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



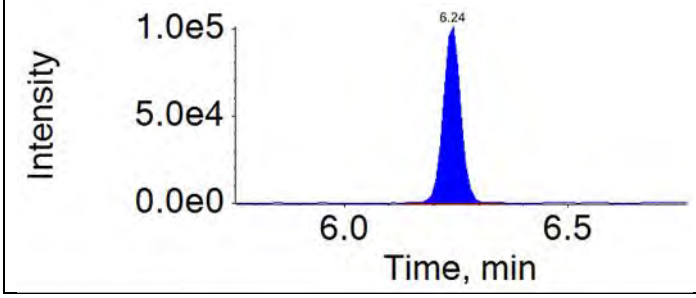


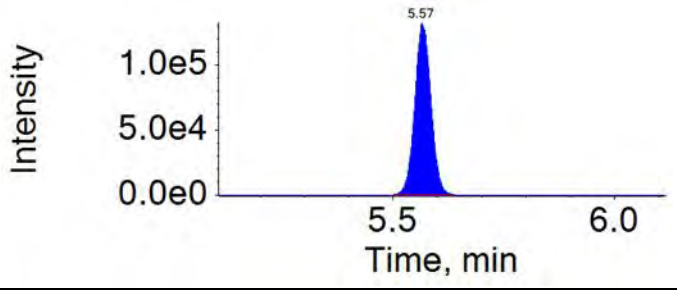
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

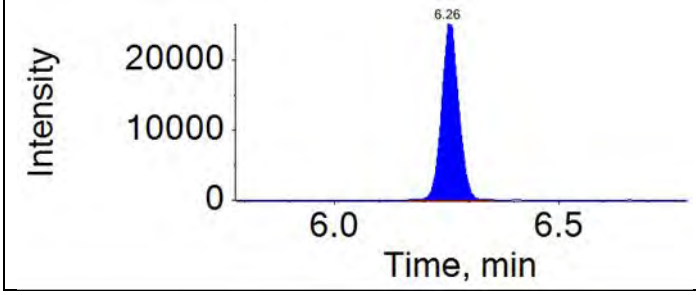
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

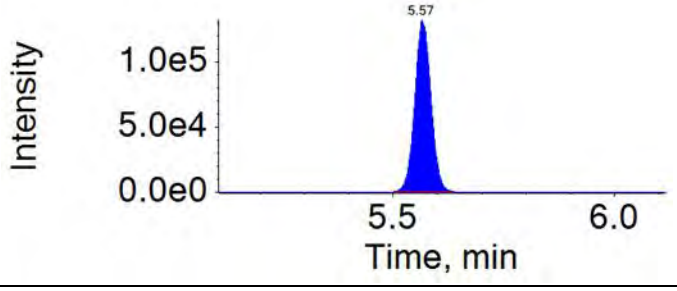
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



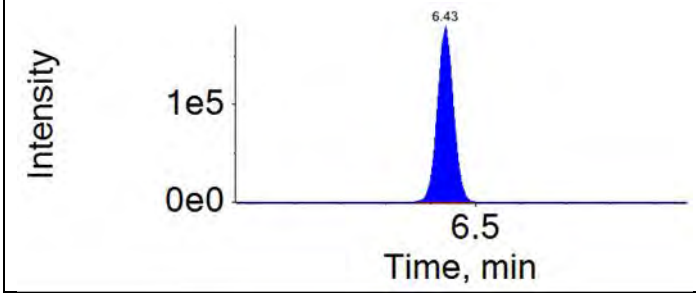


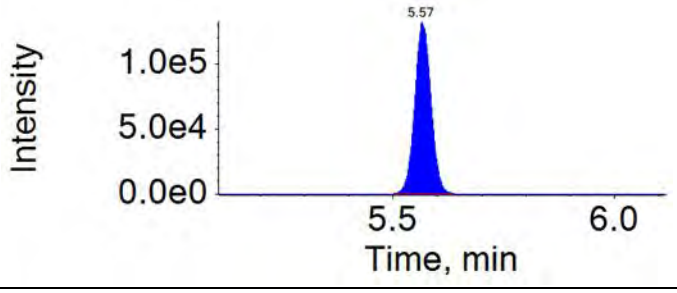
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



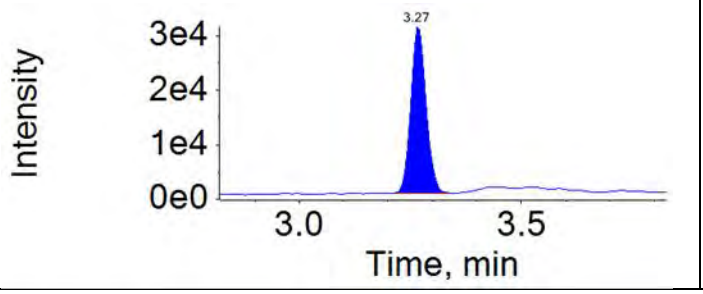


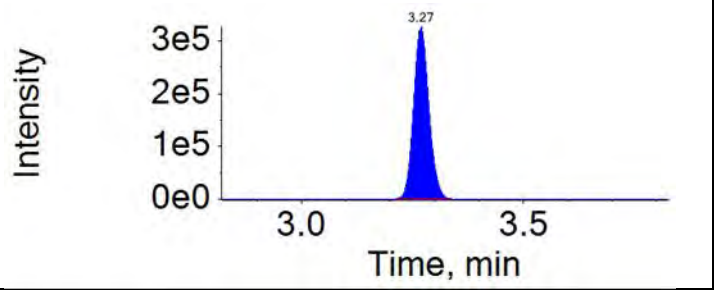
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

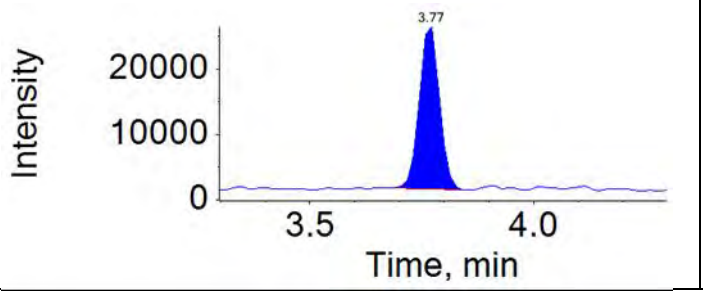
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

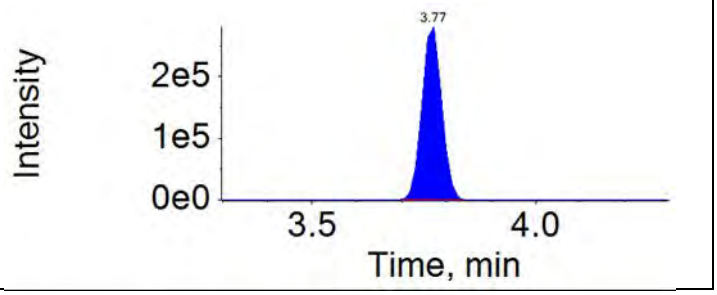
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



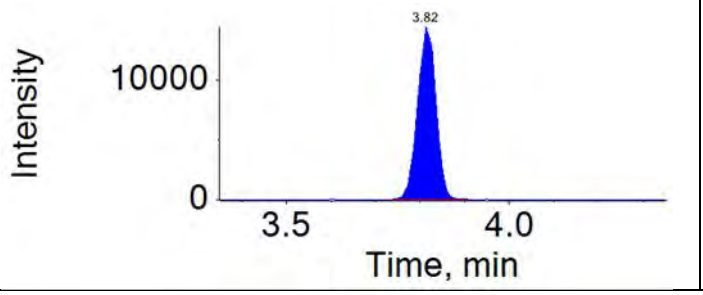


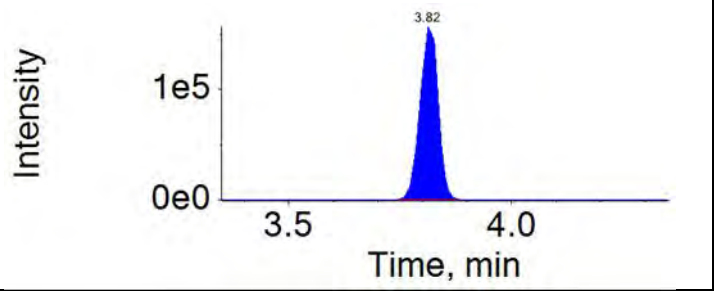
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



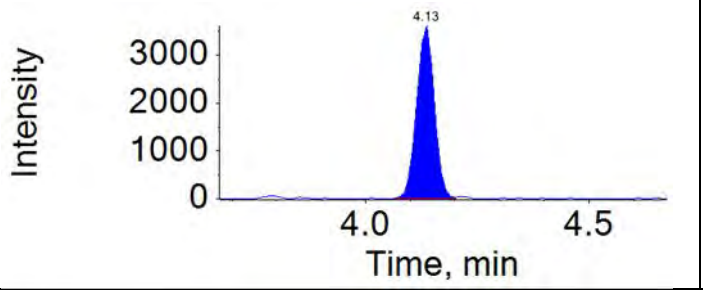


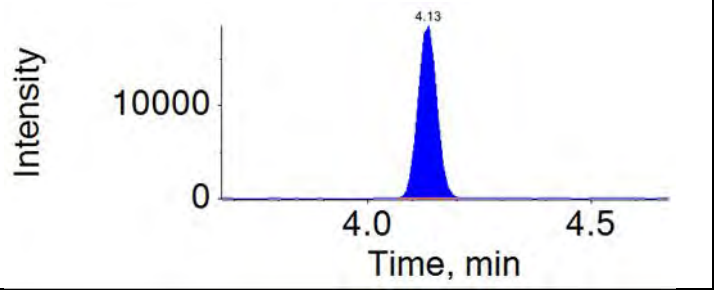
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



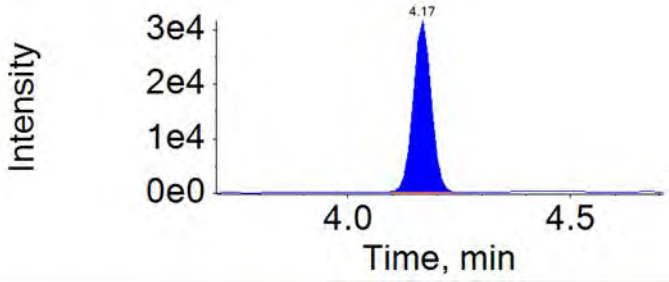


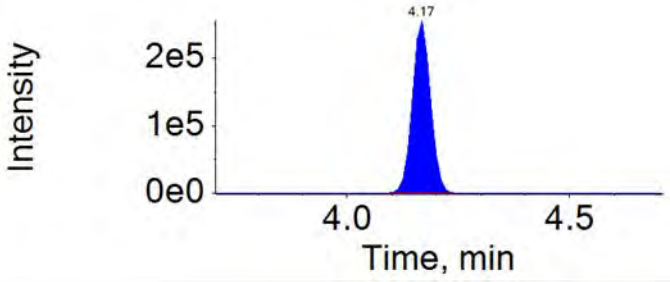
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

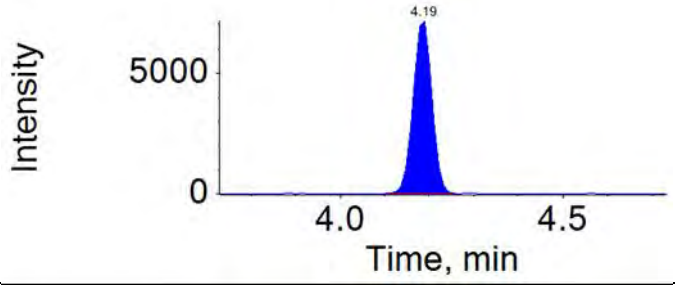
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

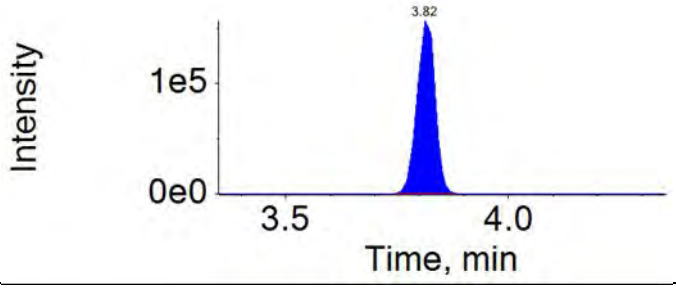
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



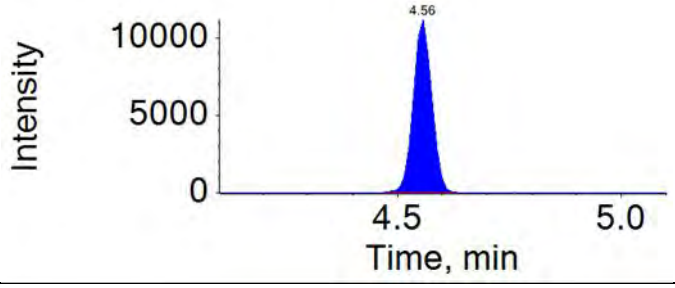


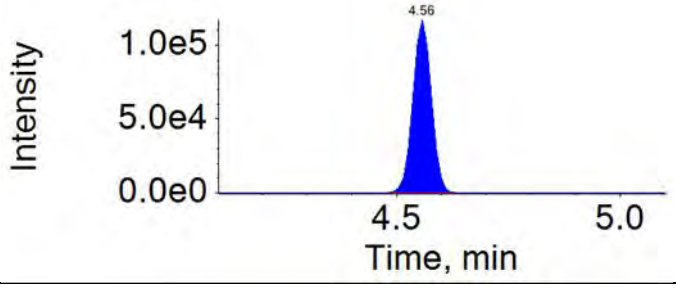
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



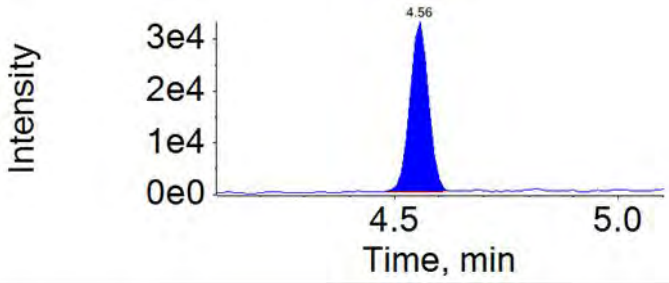


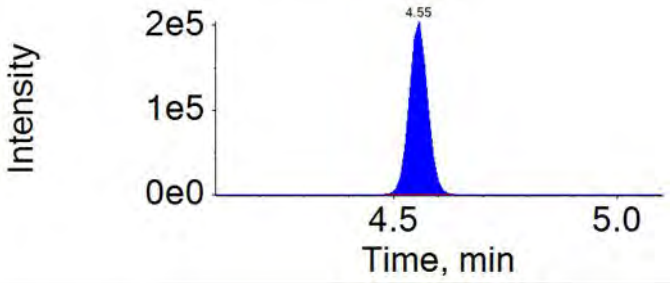
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

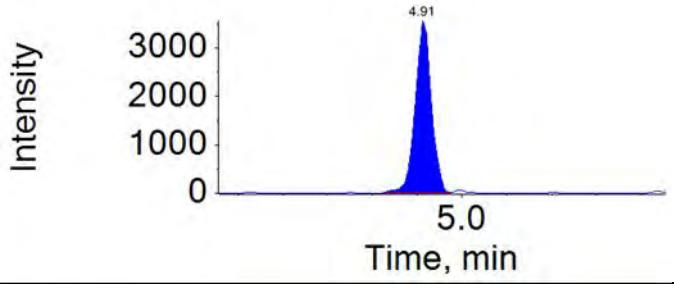
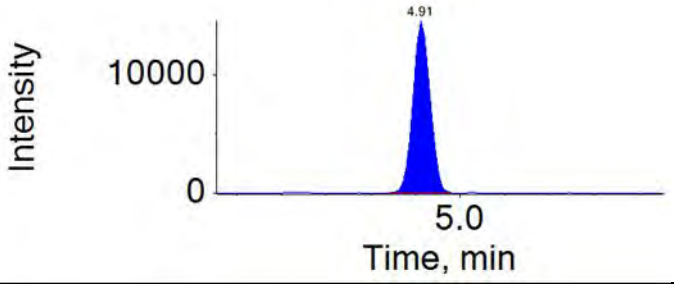


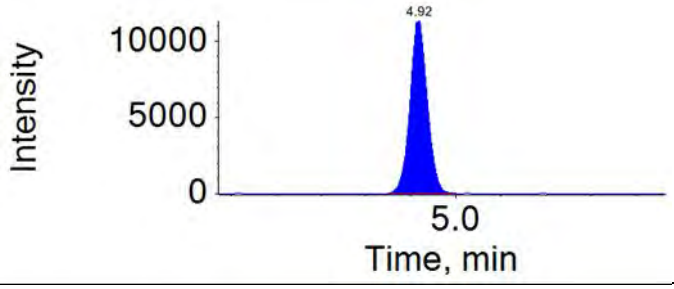
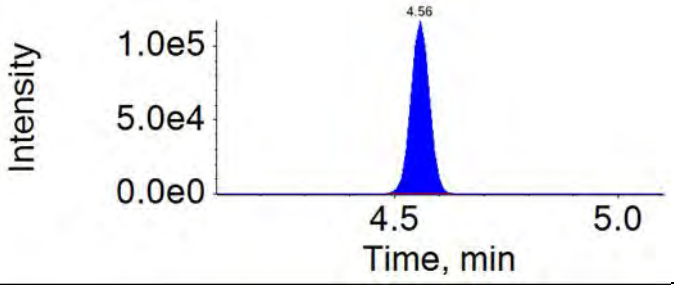


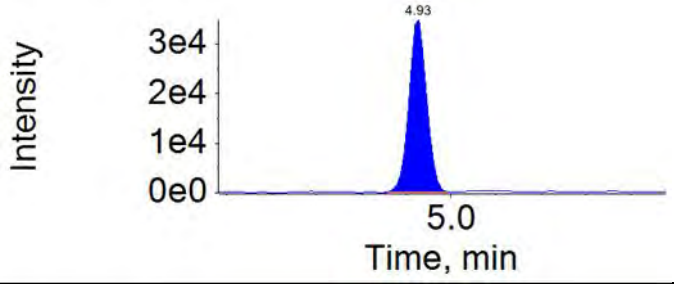
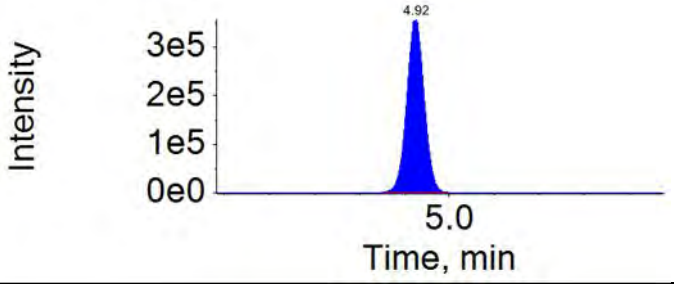
APPROVED
By JPT at 2:53 pm, 11/7/18

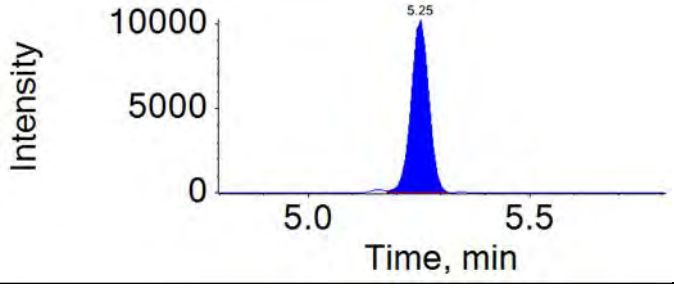
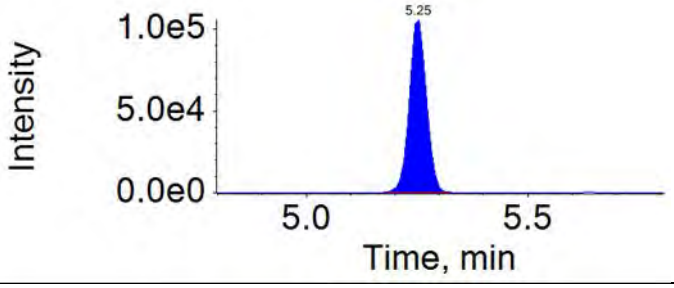
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

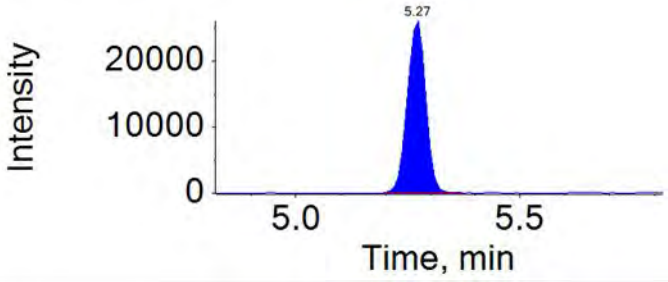
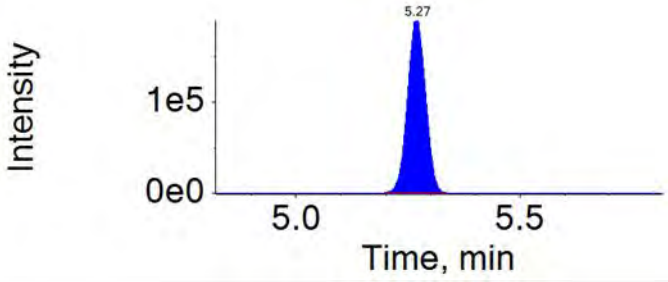
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

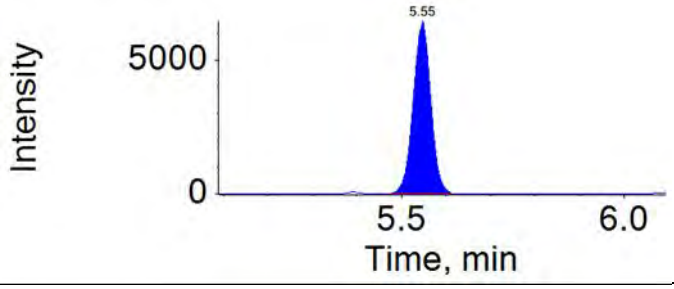
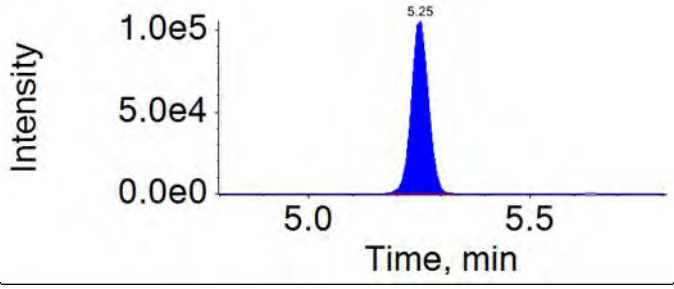
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

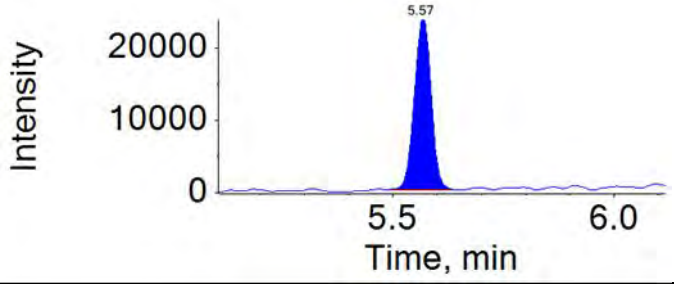
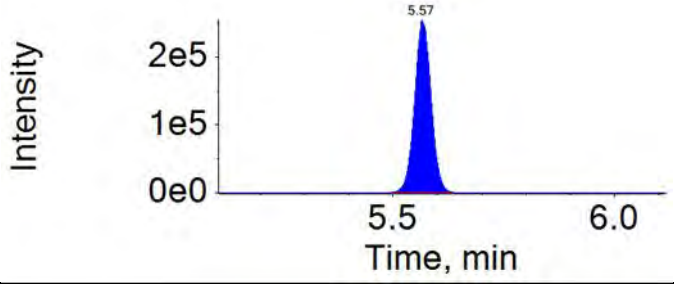
APPROVED
By JPT at 2:53 pm, 11/7/18

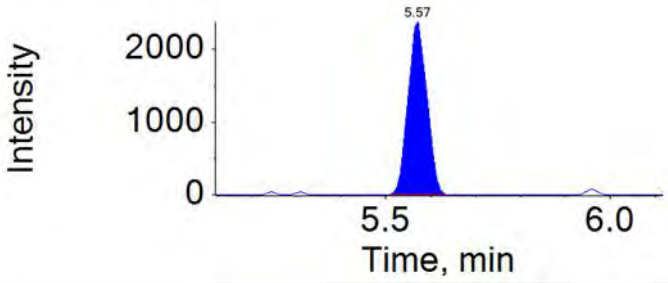
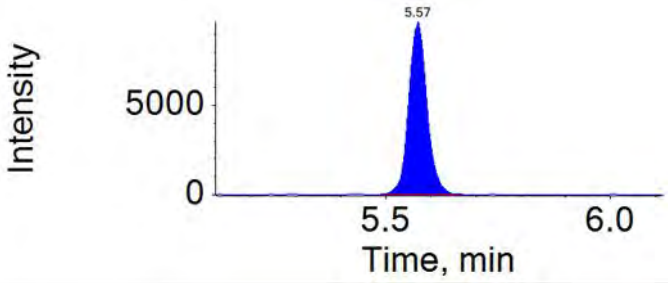
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

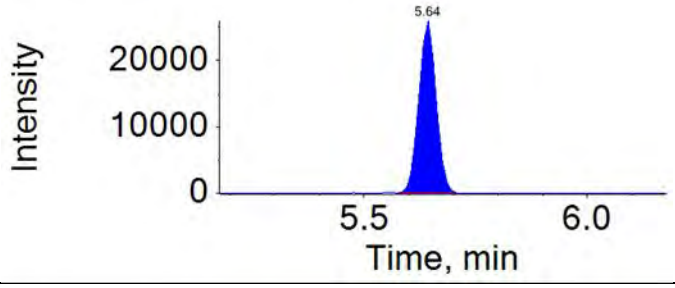
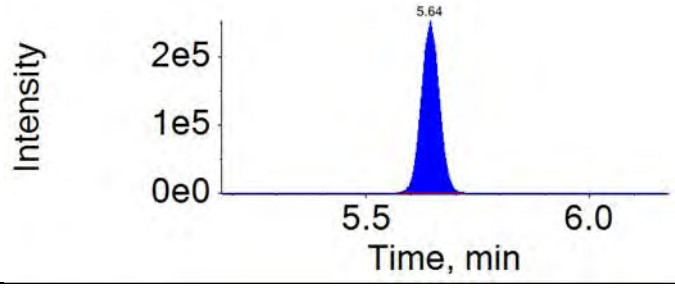
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

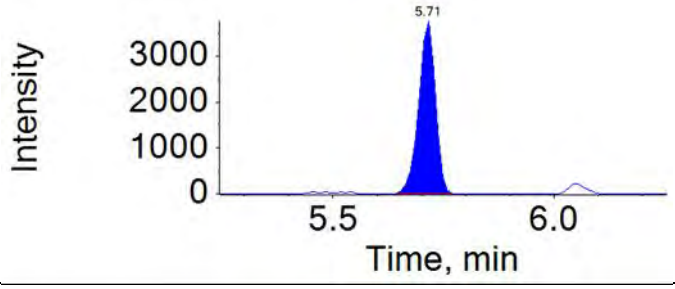
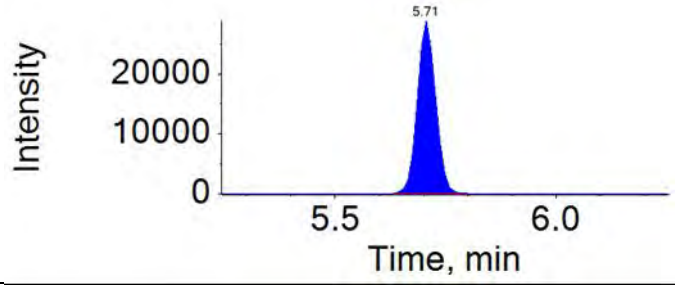
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

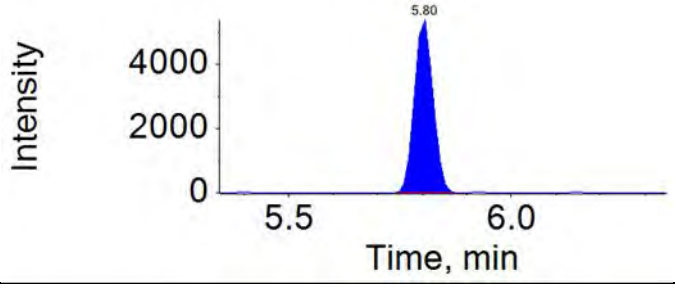
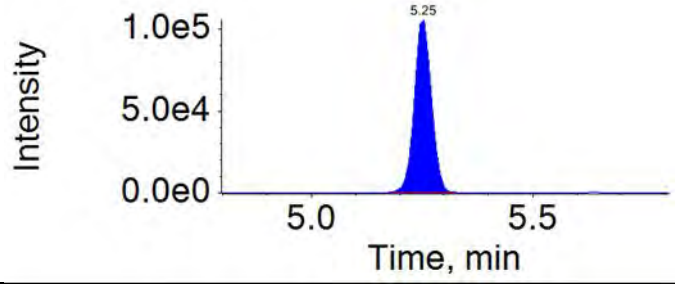
APPROVED
By JPT at 2:53 pm, 11/7/18

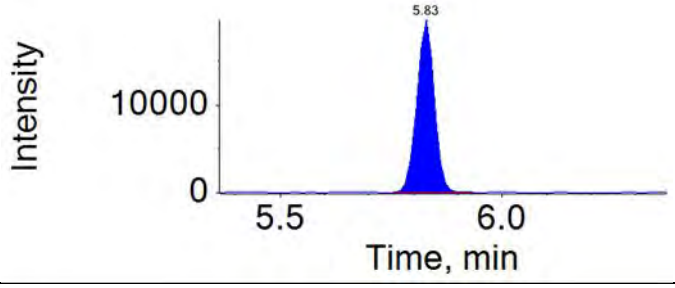
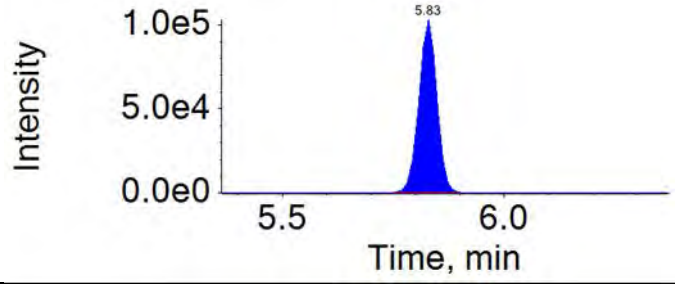
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

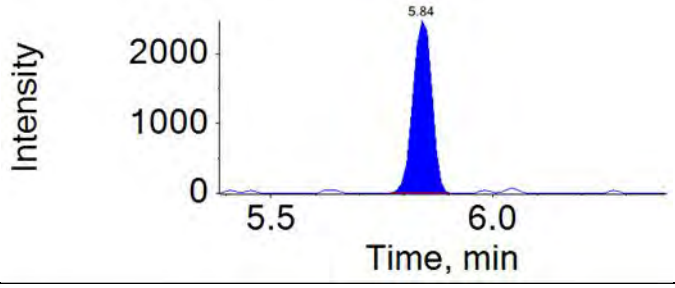
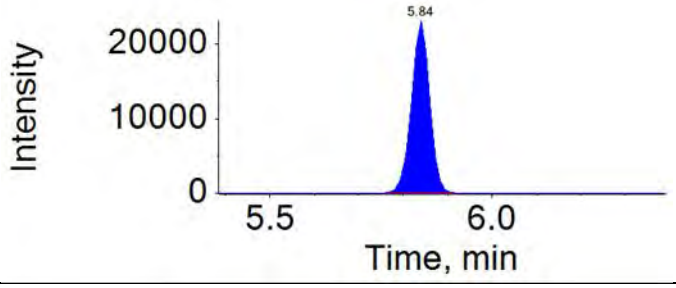
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

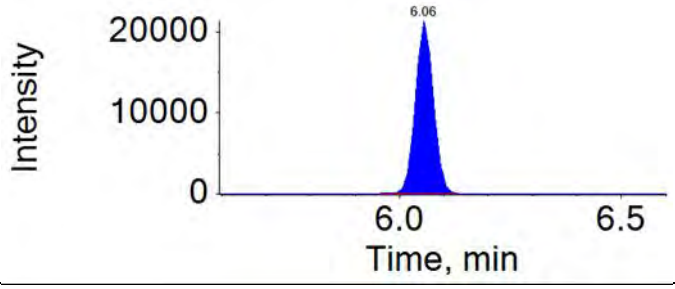
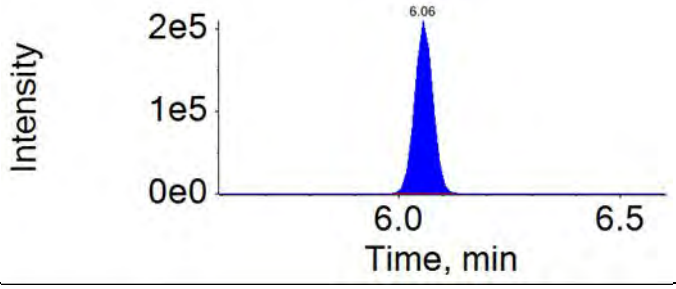
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

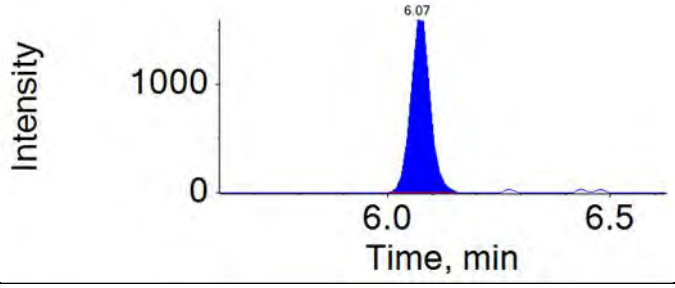
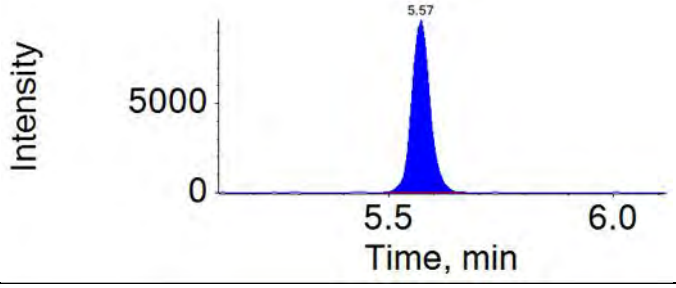
APPROVED
By JPT at 2:53 pm, 11/7/18

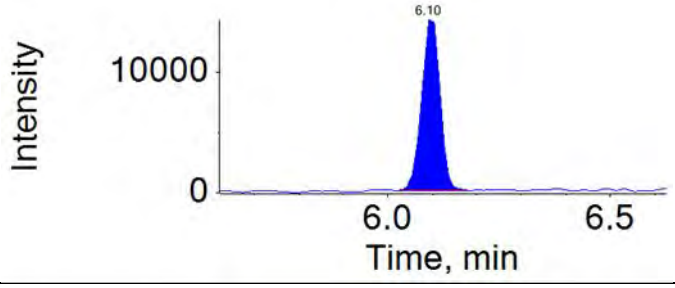
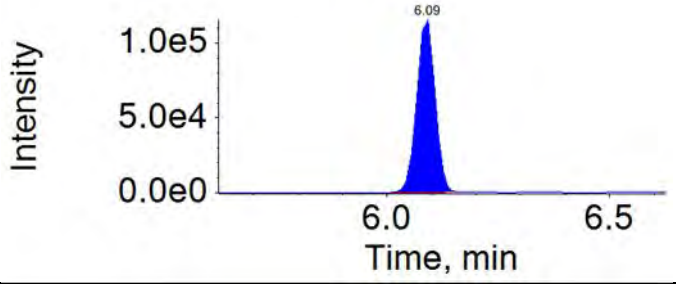
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

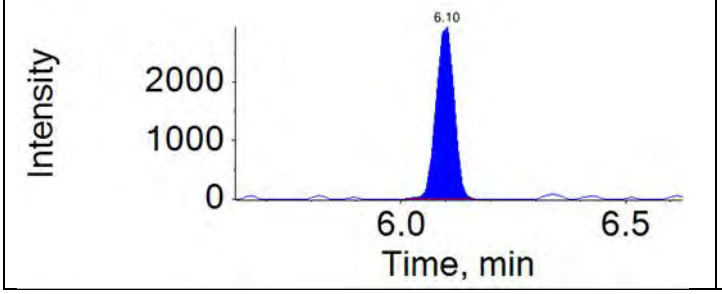
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

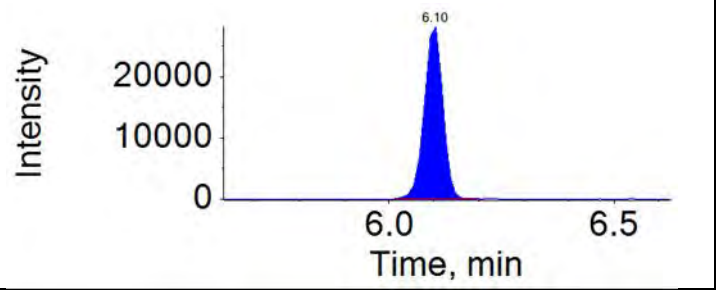
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

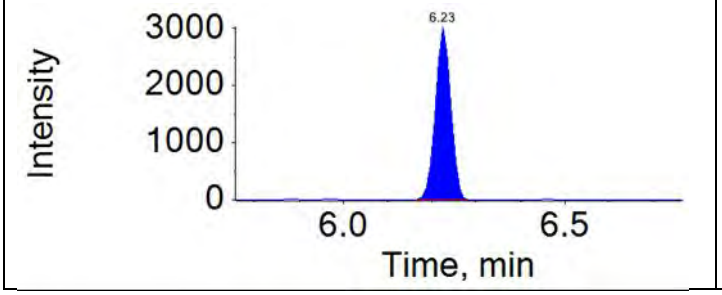
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

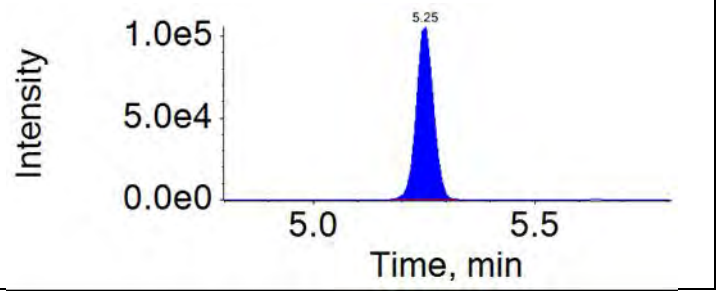
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



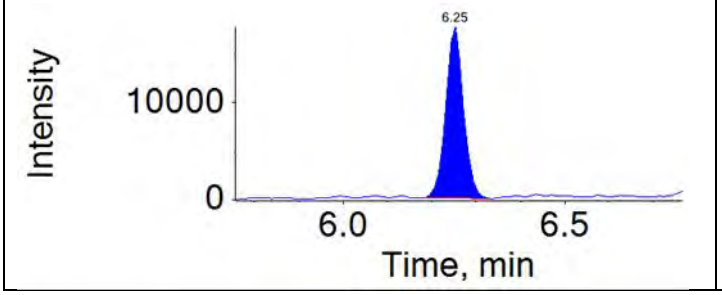


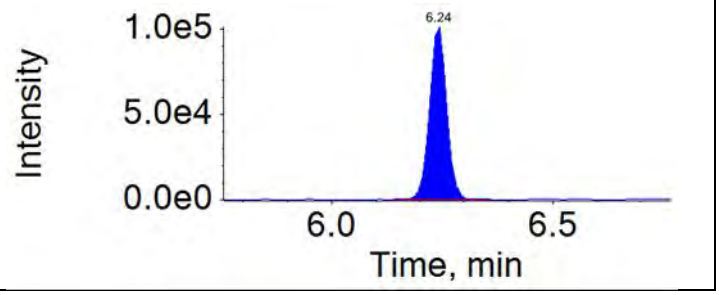
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



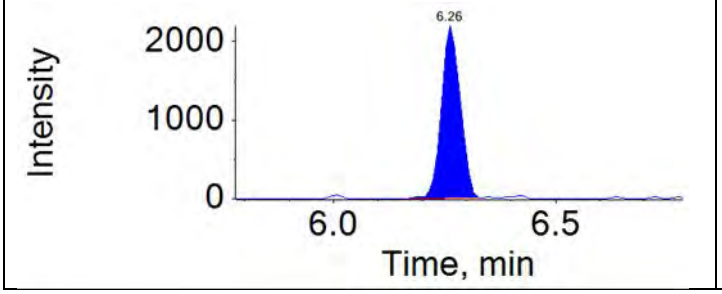


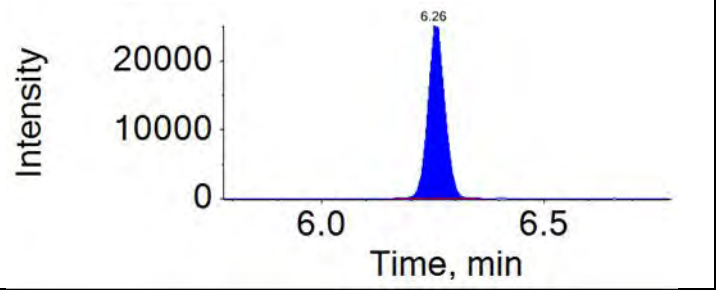
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



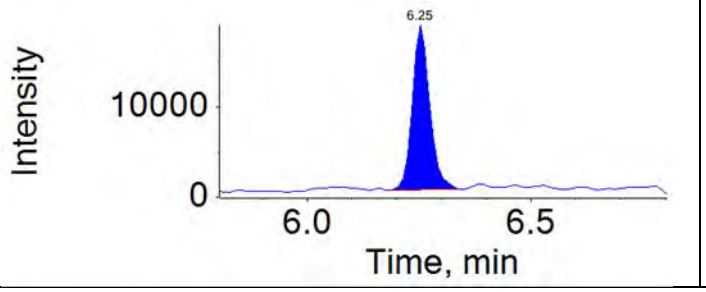


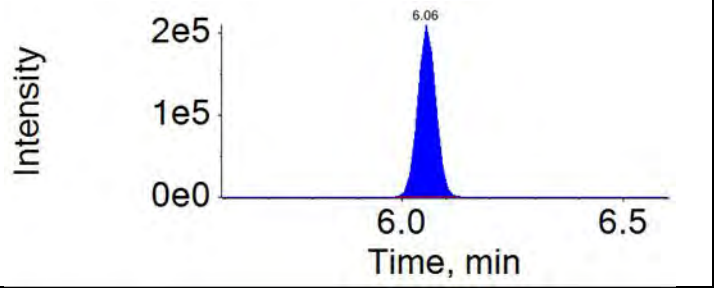
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

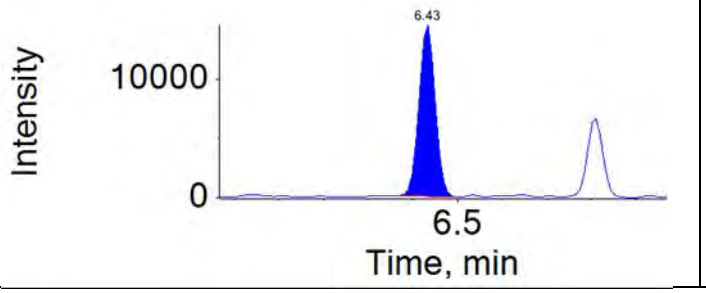
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

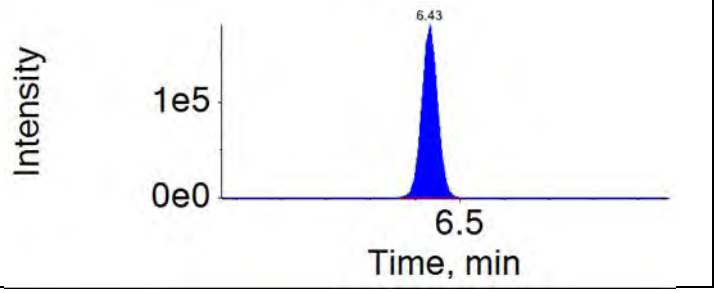
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



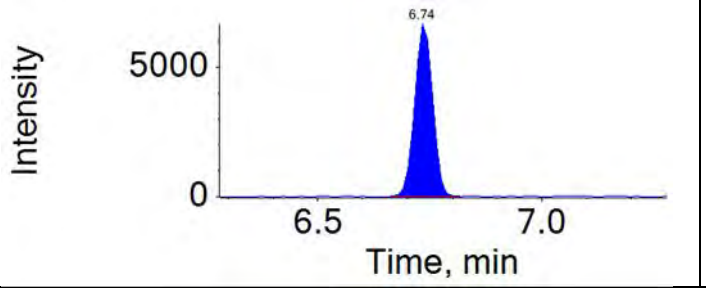


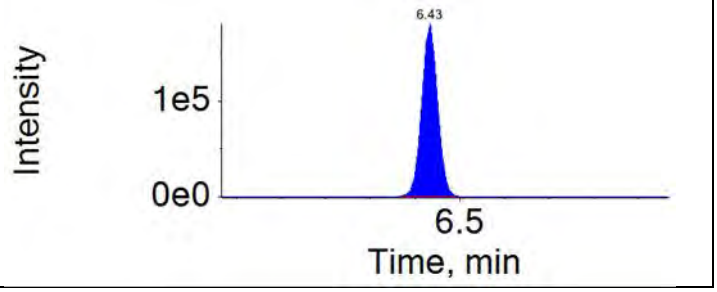
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



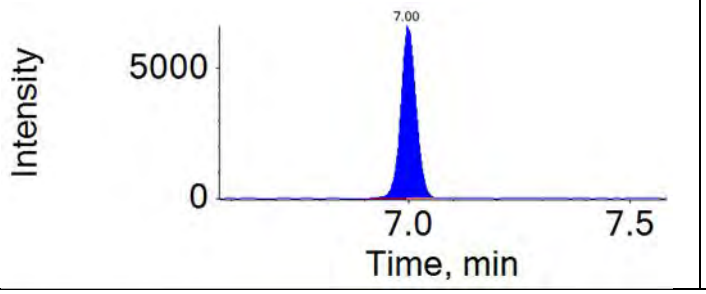


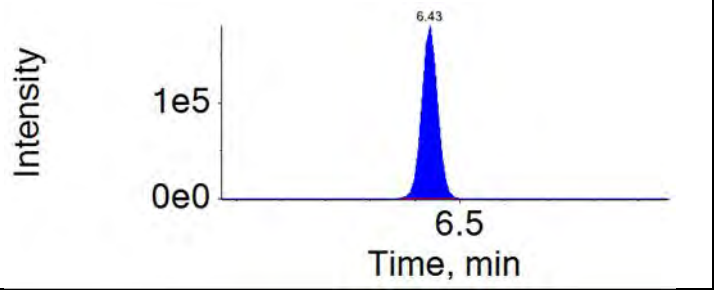
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



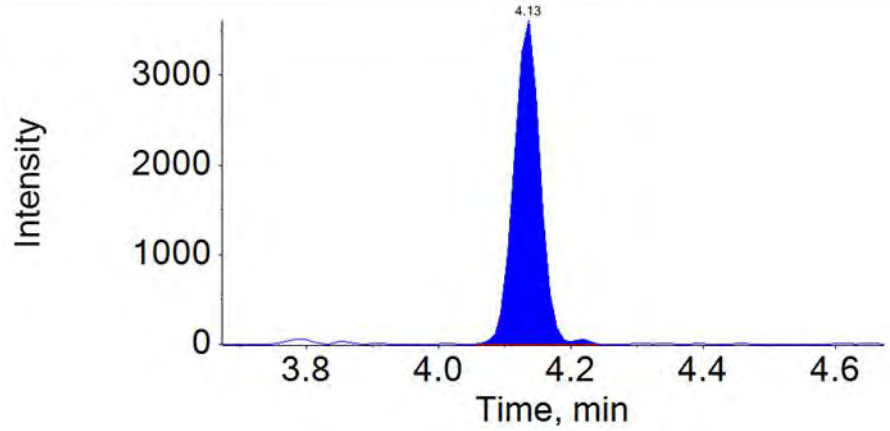


APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

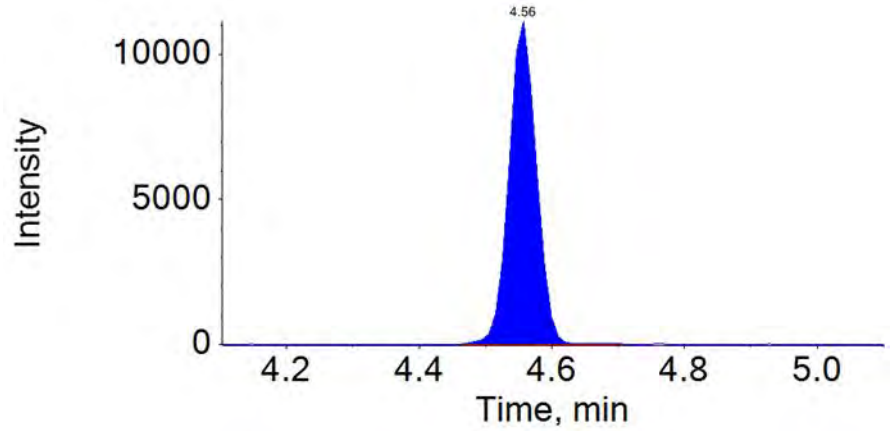
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
4:2-FTS
RT (min.):
4.13
Peak Area:
10015.5
Mass Range:
327.0 / 307.0
File Name:
18NOV07DCAL-11.wiff
Sample Name:
CAL2



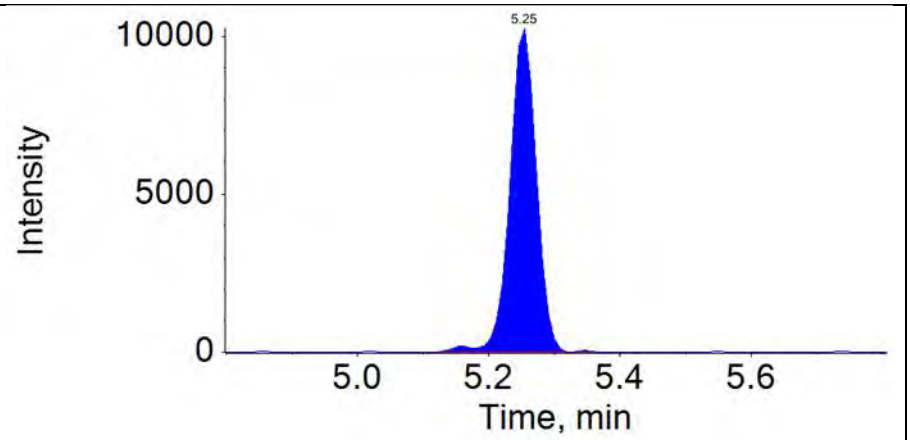
Integration Comment: incorrect integration

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
32165.6
Mass Range:
399.0 / 80.0
File Name:
18NOV07DCAL-11.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
29015.4
Mass Range:
499.0 / 80.0
File Name:
18NOV07DCAL-11.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

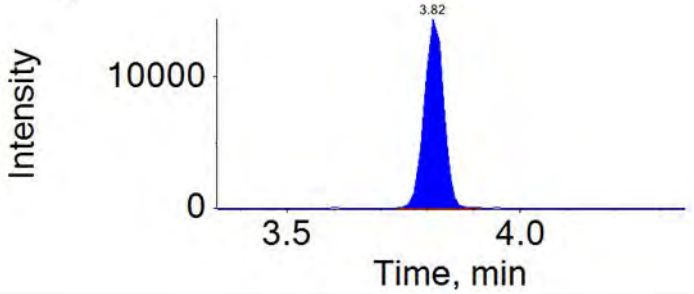
Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-11.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	41415.1	A	1.0000	1.0000			
PFBS_2	3.82	1.00	14355.0	A	0.3576	0.3466	-3	50	
4:2-FTS	4.13	1.00	9924.9	M	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	6720.6	A	0.6359	0.6771	6	50	
PFHxA	4.17	1.00	88469.9	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	1053.3	A	0.0115	0.0119	4	50	
PFPeS	4.19	1.10	20956.8	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	12018.2	A	0.5384	0.5735	7	50	
PFHxS	4.56	1.00	32061.0	M	1.0000	1.0000			
PFHxS_2	4.56	1.00	11356.8	A	0.3569	0.3542	-1	50	
PFHpA	4.56	1.00	93502.9	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	5694.0	A	0.0577	0.0609	6	50	
6:2-FTS	4.91	1.00	8883.8	A	1.0000	1.0000			
6:2-FTS_2	4.92	1.00	4933.5	A	0.6752	0.5553	-18	50	
PFHpS	4.92	1.08	30553.2	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	12511.0	A	0.3950	0.4095	4	50	
PFOA	4.93	1.00	94348.1	A	1.0000	1.0000			
PFOA_2	4.92	1.00	6706.8	A	0.0635	0.0711	12	50	
PFOS	5.25	1.00	28529.2	M	1.0000	1.0000			
PFOS_2	5.25	1.00	9986.4	A	0.3494	0.3500	0	50	
PFNA	5.27	1.00	74743.9	A	1.0000	1.0000			
PFNA_2	5.27	1.00	2006.2	A	0.0207	0.0268	30	50	
PFNS	5.55	1.06	17507.8	A	1.0000	1.0000			
PFNS_2	5.54	1.06	9005.6	A	0.4890	0.5144	5	50	
PFDA	5.57	1.00	62530.6	A	1.0000	1.0000			
PFDA_2	5.57	1.00	229.8	A	0.0057	0.0037	-35	50	
8:2-FTS	5.57	1.00	6917.6	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	4092.7	A	0.6169	0.5916	-4	50	
NMeFOSAA	5.71	1.00	9807.4	A	1.0000	1.0000			
NMeFOSAA_2	5.72	1.00	1815.6	A	0.2206	0.1851	-16	50	
PFDS	5.80	1.11	15726.3	A	1.0000	1.0000			
PFDS_2	5.79	1.10	7422.2	A	0.4648	0.4720	2	50	
PFUnDA	5.83	1.00	54085.5	A	1.0000	1.0000			
PFUnDA_2	5.83	1.00	55.5	A	0.0031	0.0010	-67	50	OOS
NEtFOSAA	5.84	1.00	7253.7	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	4097.5	A	0.6082	0.5649	-7	50	
PFDoDA	6.06	1.00	60098.0	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	610.7	A	0.0109	0.0102	-7	50	
10:2-FTS	6.07	1.09	4874.3	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	3667.0	A	0.7082	0.7523	6	50	
PFTrDA	6.25	1.03	49218.5	A	1.0000	1.0000			
PFTrDA_2	6.26	1.03	479.8	A	0.0096	0.0097	1	50	
PFTeDA	6.43	1.00	36223.2	A	1.0000	1.0000			
PFTeDA_2	6.44	1.00	219.8	A	0.0055	0.0061	10	50	
PFHxDA	6.74	1.05	18619.3	A	1.0000	1.0000			
PFHxDA_2	6.74	1.05	1073.0	A	0.0596	0.0576	-3	50	
PFODA	7.00	1.09	15742.1	A	1.0000	1.0000			
PFODA_2	7.00	1.09	416.9	A	0.0257	0.0265	3	50	

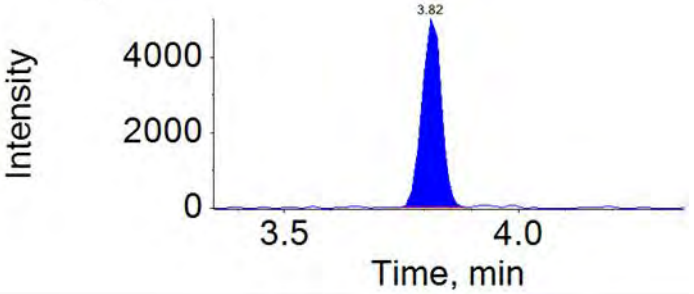
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

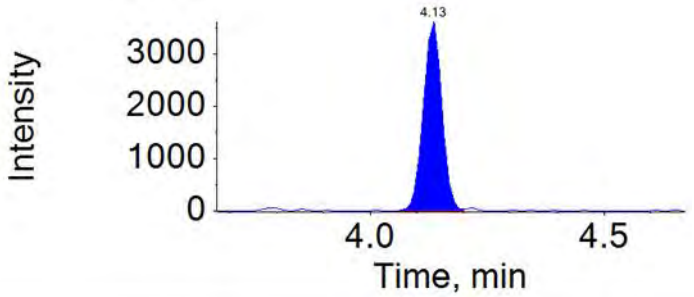
Component: PFBS
Primary Mass: 299.0 / 80.0



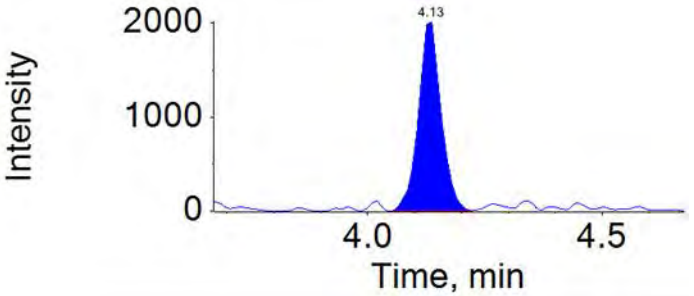
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



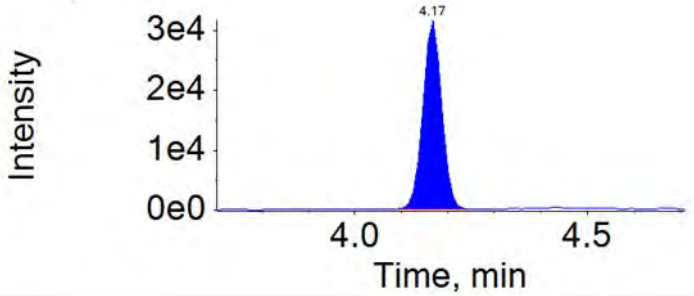
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



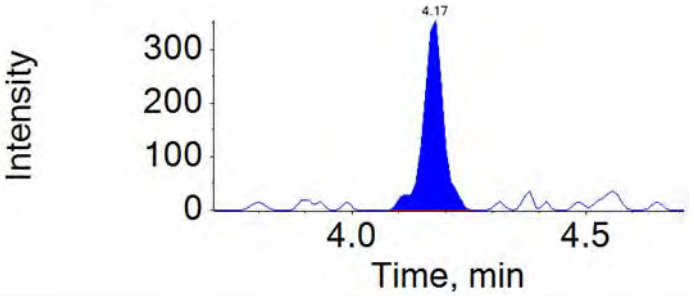
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



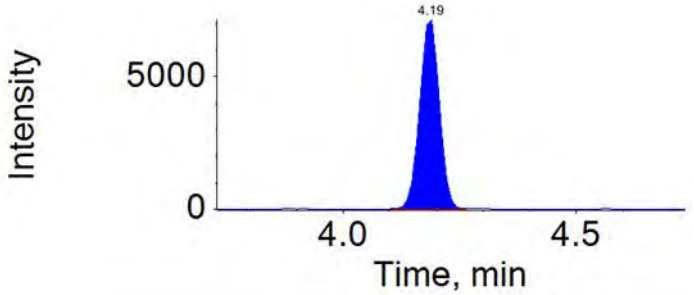
Component: PFHxA
Primary Mass: 313.0 / 269.0



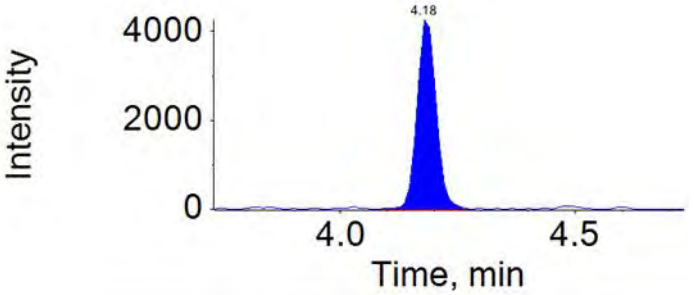
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



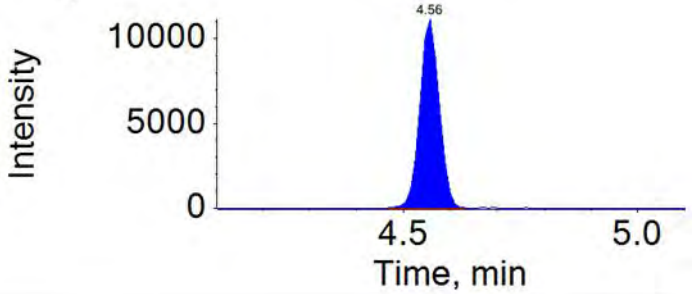
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



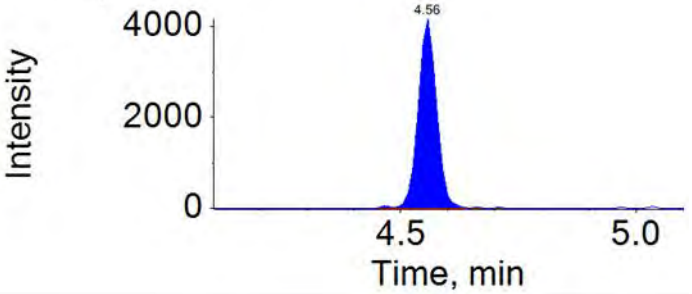
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

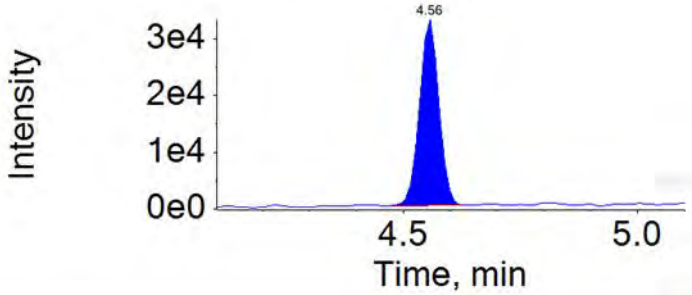
Component: PFHxS
Primary Mass: 399.0 / 80.0



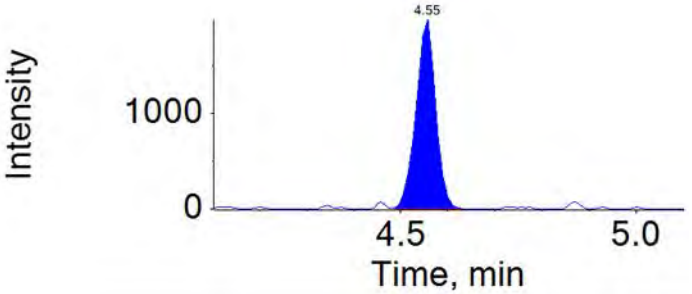
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



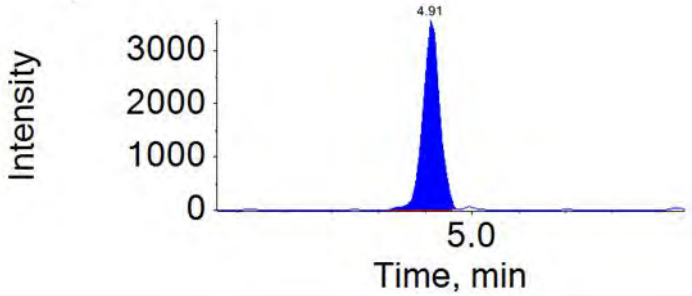
Component: PFHpA
Primary Mass: 363.0 / 319.0



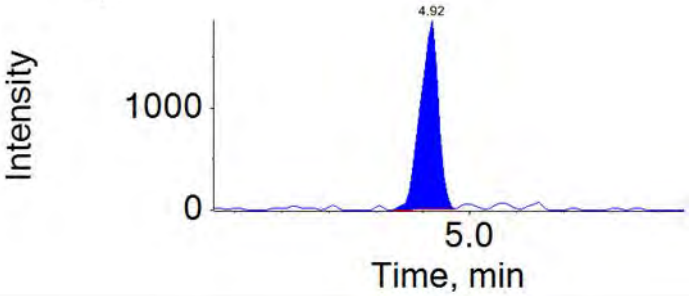
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



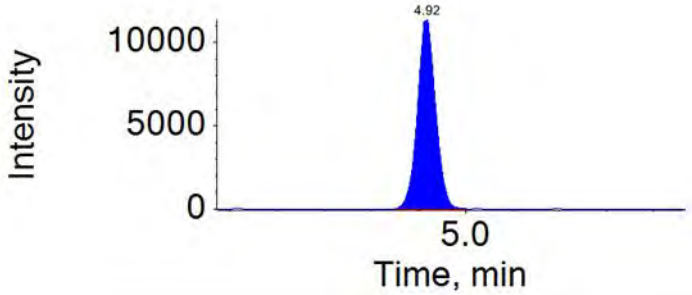
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



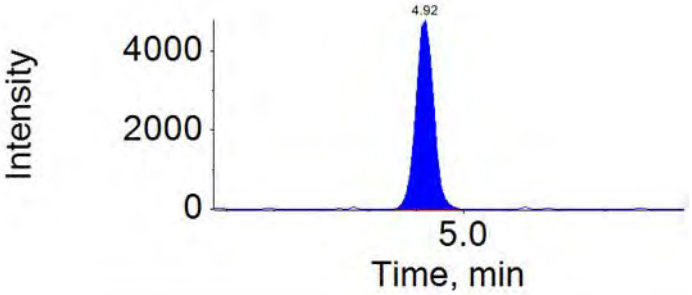
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



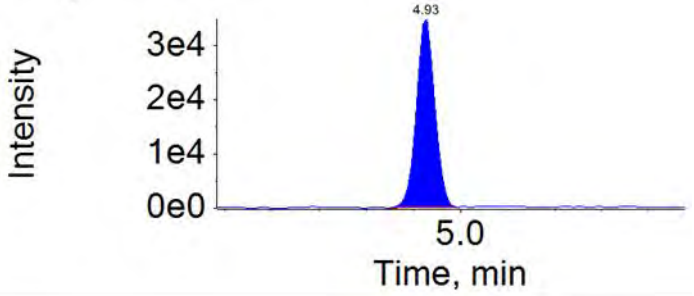
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



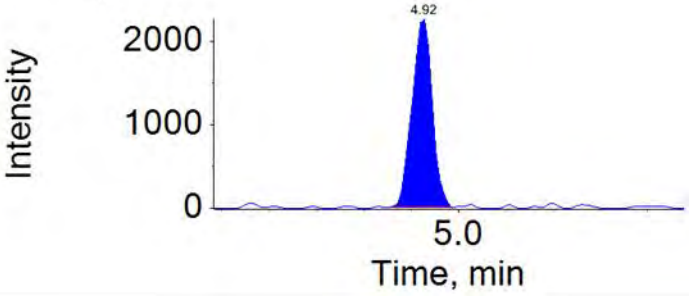
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

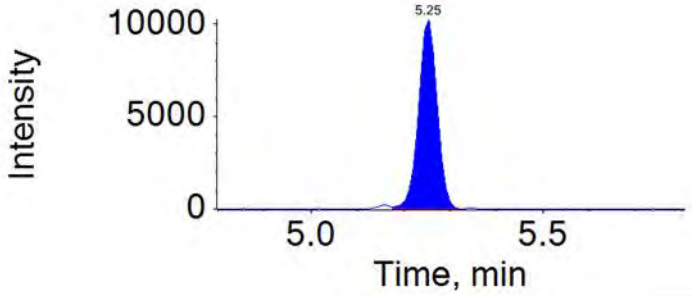
Component: PFOA
Primary Mass: 413.0 / 369.0



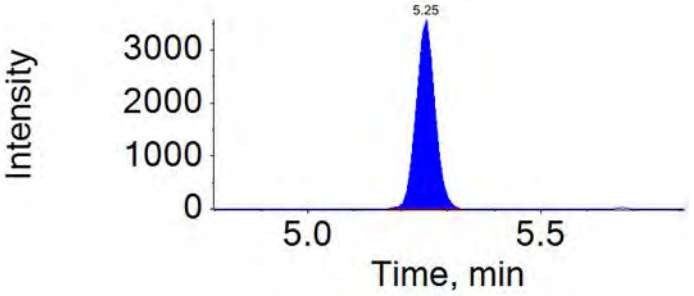
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



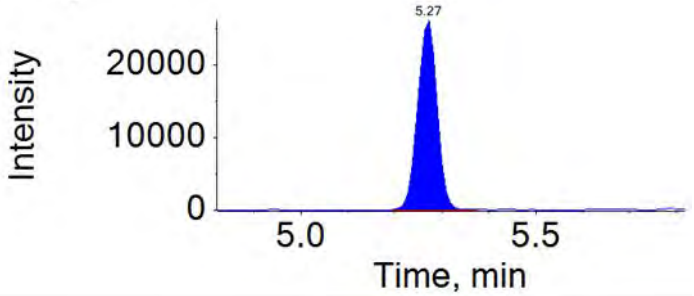
Component: PFOS
Primary Mass: 499.0 / 80.0



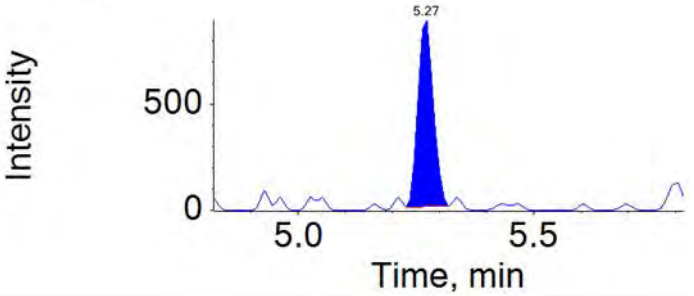
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



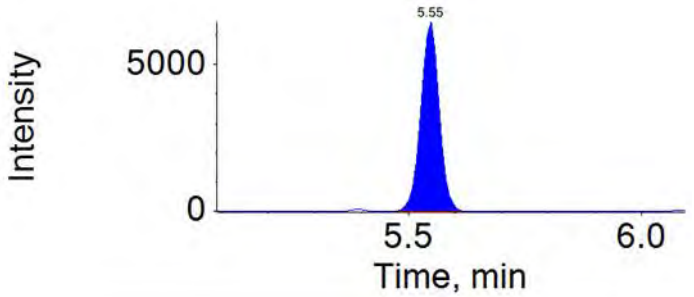
Component: PFNA
Primary Mass: 463.0 / 419.0



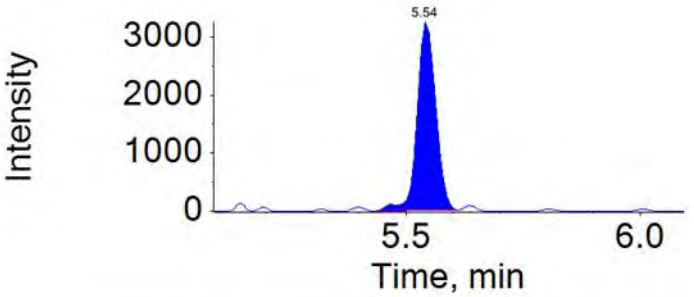
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



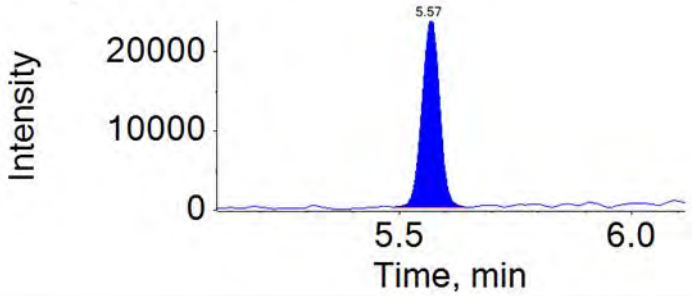
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



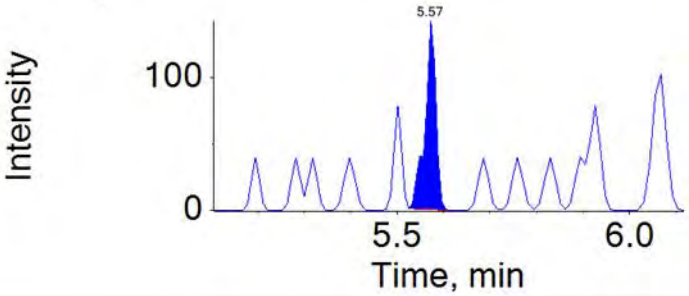
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

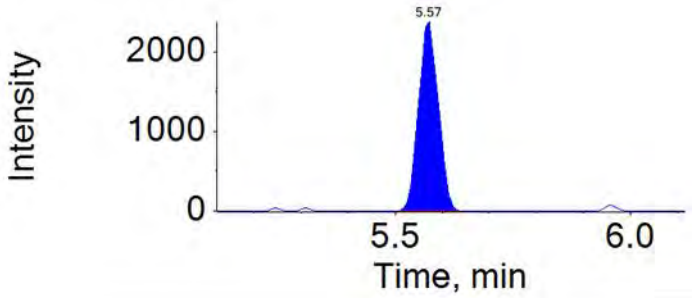
Component: PFDA
Primary Mass: 513.0 / 469.0



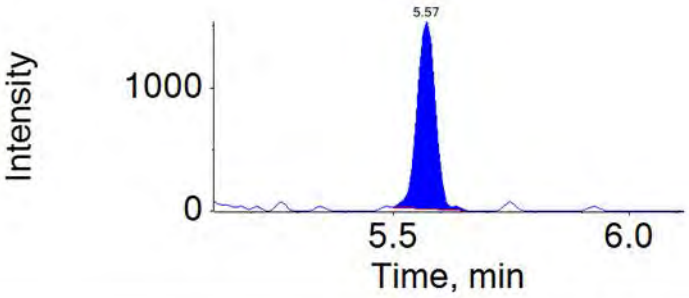
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



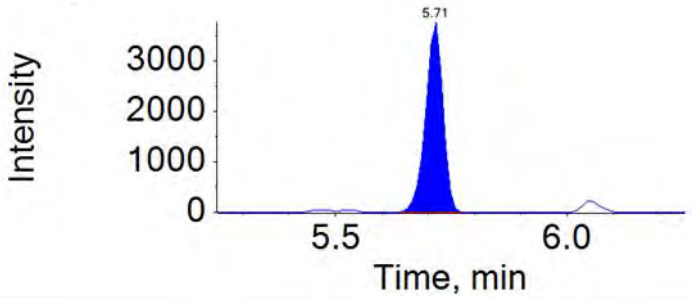
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



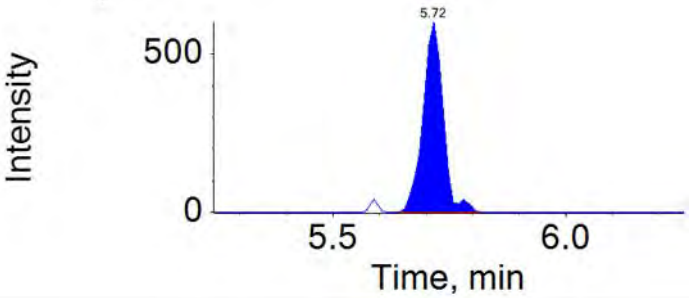
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



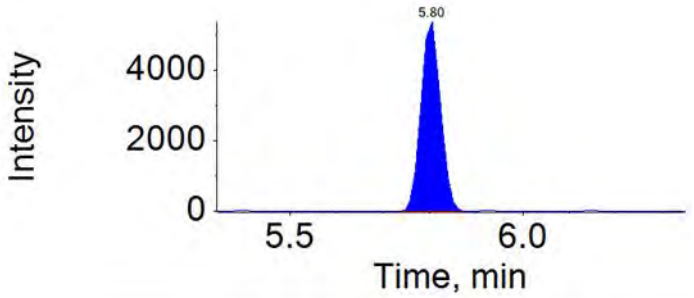
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



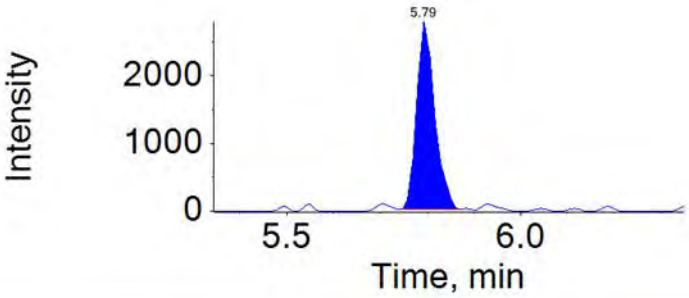
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



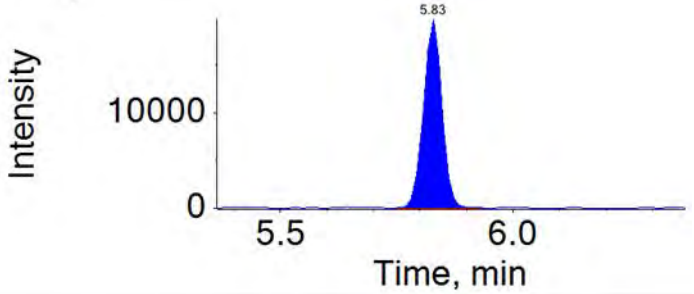
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



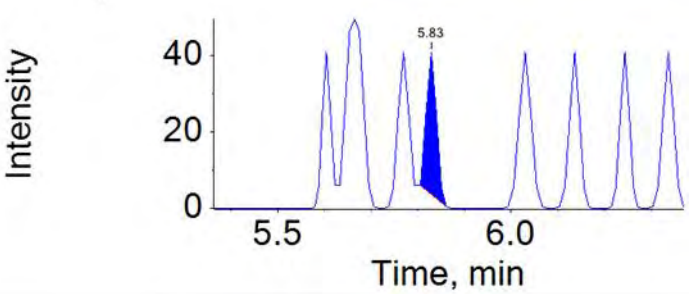
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

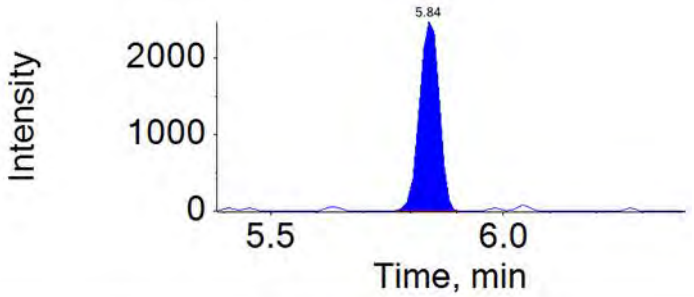
Component: PFUnDA
Primary Mass: 563.0 / 519.0



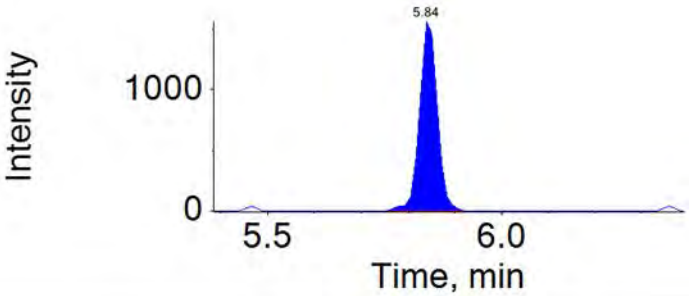
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



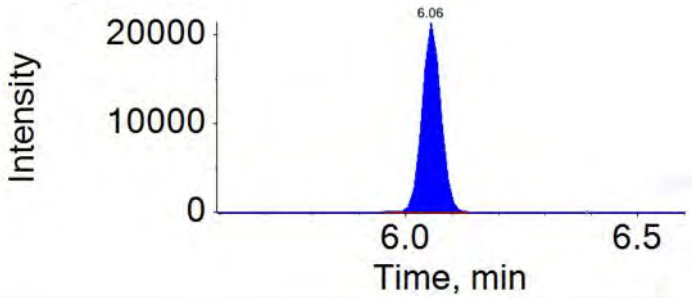
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



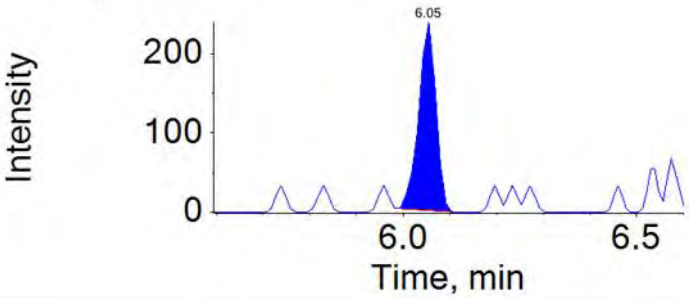
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



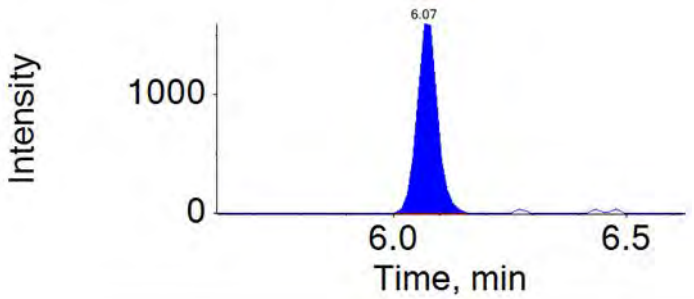
Component: PFDoDA
Primary Mass: 613.0 / 569.0



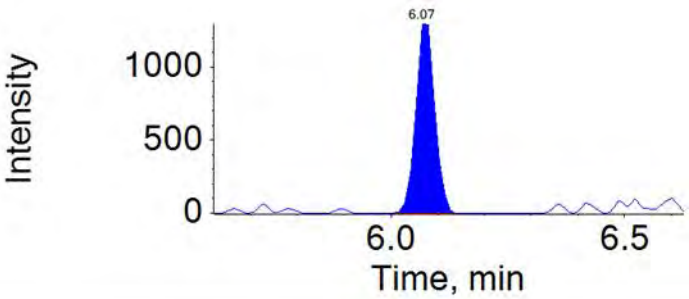
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



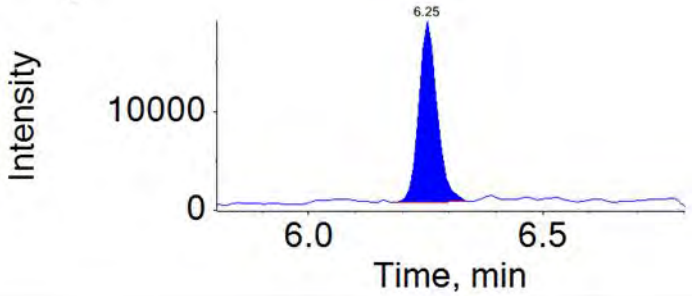
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



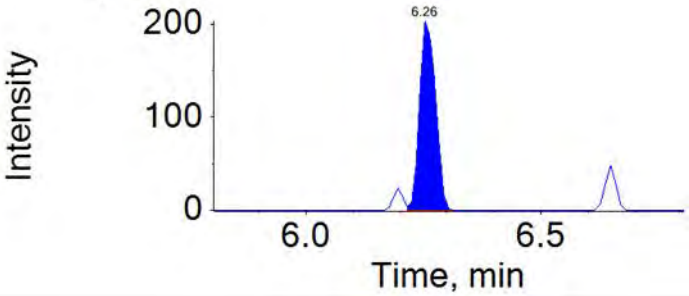
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

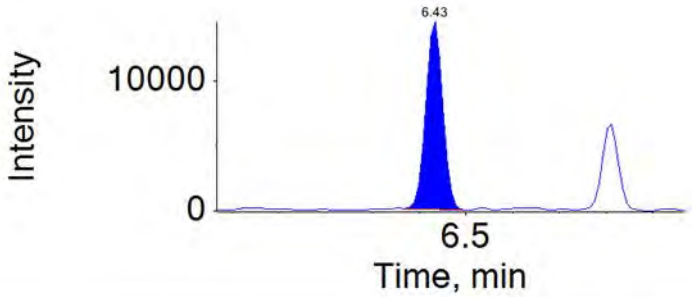
Component: PFTrDA
Primary Mass: 663.0 / 619.0



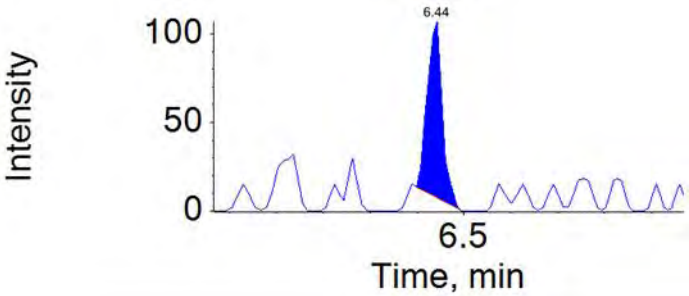
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



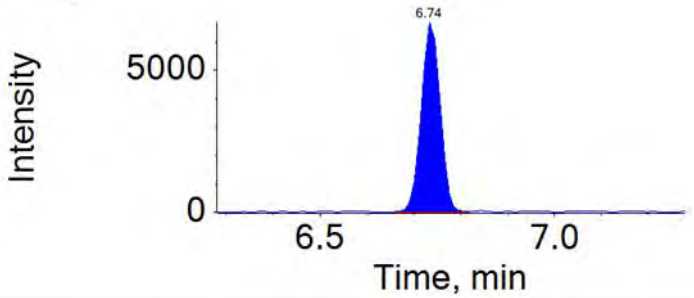
Component: PFTeDA
Primary Mass: 713.0 / 669.0



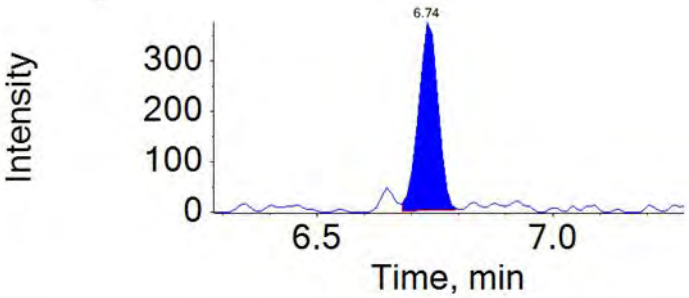
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



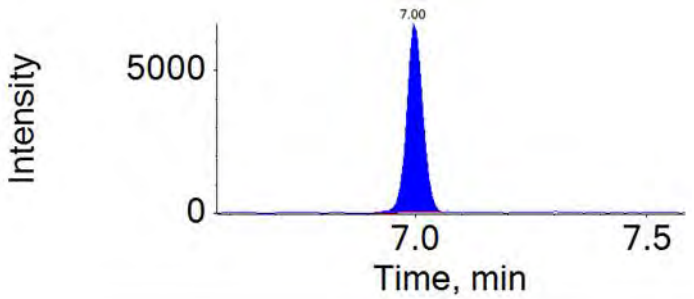
Component: PFHxDA
Primary Mass: 813.0 / 769.0



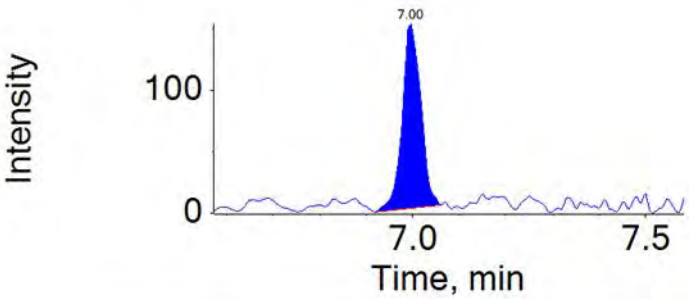
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL3			**Data File:**		18NOV07DCAL-12.wiff
Sample ID:	CALMOD31833F			**Acquis Date:**		2018-11-07T09:57:56
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	730410.6	730410.6	0	50	
13C2-PFOA	5.0	524423.6	524423.6	0	50	
13C4-PFOS	4.8	274061.7	274061.7	0	50	
13C2-PFDA	5.0	311442.1	311442.1	0	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	787180.2	13C3-PFBA	730410.6	1.078	5.000	4.987	100	70-130	
E13C5-PFPeA	829978.5	13C3-PFBA	730410.6	1.136	5.000	4.950	99	70-130	
E13C3-PFBS	456815.2	13C3-PFBA	730410.6	0.625	4.650	4.590	99	70-130	
E13C2-4:2-FTS	48706.0	13C2-PFOA	524423.6	0.093	4.670	4.191	90	70-130	
E13C5-PFHxA	705369.0	13C2-PFOA	524423.6	1.345	5.000	4.948	99	70-130	
E13C3-PFHxS	343139.5	13C2-PFOA	524423.6	0.654	4.730	4.697	99	70-130	
E13C4-PFHpA	566495.6	13C2-PFOA	524423.6	1.080	5.000	4.914	98	70-130	
E13C2-6:2-FTS	38605.5	13C2-PFOA	524423.6	0.074	4.750	4.909	103	70-130	
E13C8-PFOA	964414.6	13C2-PFOA	524423.6	1.839	5.000	5.128	103	70-130	
E13C8-PFOS	297259.7	13C4-PFOS	274061.7	1.085	4.780	4.796	100	70-130	
E13C9-PFNA	513116.0	13C4-PFOS	274061.7	1.872	5.000	5.114	102	70-130	
E13C6-PFDA	639022.8	13C2-PFDA	311442.1	2.052	5.000	5.160	103	70-130	
E13C2-8:2-FTS	29468.3	13C2-PFDA	311442.1	0.095	4.790	5.007	105	70-130	
E13C8-PFOSA	704745.5	13C2-PFDA	311442.1	2.263	5.000	4.938	99	70-130	
Ed3-NMeFOSAA	81763.3	13C2-PFDA	311442.1	0.263	5.000	4.882	98	70-130	
E13C7-PFUnDA	277115.5	13C2-PFDA	311442.1	0.890	5.000	5.133	103	70-130	
Ed5-NEtFOSAA	72755.7	13C2-PFDA	311442.1	0.234	5.000	5.406	108	70-130	
E13C2-PFDoDA	584631.5	13C2-PFDA	311442.1	1.877	5.000	5.061	101	70-130	
Ed7-NMePFOSAE	335206.8	13C2-PFDA	311442.1	1.076	5.000	5.005	100	70-130	
Ed3-NMePFOSA	79381.7	13C2-PFDA	311442.1	0.255	5.000	4.666	93	70-130	
Ed9-NEtPFOSAE	278375.1	13C2-PFDA	311442.1	0.894	5.000	5.104	102	70-130	
Ed5-NEtPFOSA	67444.3	13C2-PFDA	311442.1	0.217	5.000	5.014	100	70-130	
E13C2-PFTeDA	419341.7	13C2-PFDA	311442.1	1.346	5.000	4.847	97	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

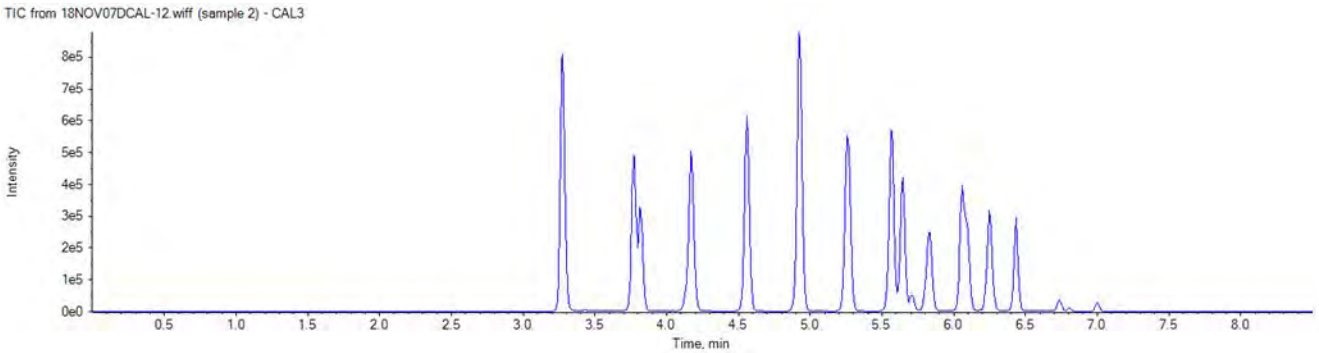
Analyte Quantitation Peak Table

Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-12.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	285113.3		A	13C4-PFBA	3.27	787180.2	0.362	2.120
PFPeA	3.77	1.000	286630.7		A	13C5-PFPeA	3.77	829978.5	0.345	2.052
PFBS	3.82	1.000	157656.3		A	13C3-PFBS	3.82	456815.2	0.345	1.740
4:2-FTS	4.14	1.000	35586.2		A	13C2-4:2-FTS	4.13	48706.0	0.731	1.964
PFHxA	4.17	1.000	351503.9		A	13C5-PFHxA	4.17	705369.0	0.498	2.137
PFPeS	4.19	1.100	82090.1		A	13C3-PFBS	3.82	456815.2	0.180	1.772
PFHxS	4.56	1.000	122477.7		A	13C3-PFHxS	4.56	343139.5	0.357	1.809
PFHpA	4.56	1.000	360280.4		A	13C4-PFHpA	4.56	566495.6	0.636	2.139
6:2-FTS	4.92	1.000	32056.4		A	13C2-6:2-FTS	4.91	38605.5	0.830	2.071
PFHpS	4.92	1.080	123126.9		A	13C3-PFHxS	4.56	343139.5	0.359	1.877
PFOA	4.93	1.000	364943.1		A	13C8-PFOA	4.93	964414.6	0.378	2.131
PFOS	5.25	1.000	111397.7		A	13C8-PFOS	5.25	297259.8	0.375	1.943
PFNA	5.27	1.000	299530.4		A	13C9-PFNA	5.27	513116.0	0.584	2.182
PFNS	5.55	1.060	72940.0		A	13C8-PFOS	5.25	297259.8	0.245	1.946
PFDA	5.57	1.000	244693.9		A	13C6-PFDA	5.57	639022.8	0.383	2.107
8:2-FTS	5.57	1.000	24892.6		A	13C2-8:2-FTS	5.57	29468.3	0.845	1.904
PFOSA	5.64	1.000	271753.2		A	13C8-PFOSA	5.64	704745.5	0.386	2.084
NMeFOSAA	5.71	1.000	32400.4		A	d3-NMeFOSAA	5.71	81763.3	0.396	2.039
PFDS	5.80	1.100	59073.9		A	13C8-PFOS	5.25	297259.8	0.199	1.898
PFUnDA	5.83	1.000	209644.8		A	13C7-PFUnDA	5.83	277115.5	0.757	2.170
NEtFOSAA	5.85	1.000	32100.8		A	d5-NEtFOSAA	5.84	72755.7	0.441	1.896
PFDoDA	6.06	1.000	220663.6		A	13C2-PFDoDA	6.06	584631.5	0.377	2.046
10:2-FTS	6.07	1.090	19060.5		A	13C2-8:2-FTS	5.57	29468.3	0.647	2.014
NMePFOSAE	6.10	1.000	151795.0		A	d7-NMePFOSAE	6.09	335206.8	0.453	2.029
NMePFOSA	6.10	1.000	29797.4		A	d3-NMePFOSA	6.10	79381.7	0.375	2.101
PFDoS	6.22	1.190	32096.3		A	13C8-PFOS	5.25	297259.8	0.108	2.084
NEtPFOSAE	6.25	1.000	180884.6		A	d9-NEtPFOSAE	6.24	278375.1	0.650	2.083
NEtPFOSA	6.27	1.000	26524.6		A	d5-NEtPFOSA	6.26	67444.3	0.393	1.732
PFTrDA	6.25	1.030	197290.7		A	13C2-PFDoDA	6.06	584631.5	0.337	2.128
PFTeDA	6.43	1.000	150162.8		A	13C2-PFTeDA	6.43	419341.7	0.358	2.103
PFHxDA	6.74	1.050	70193.5		A	13C2-PFTeDA	6.43	419341.7	0.167	2.078
PFODA	7.00	1.090	59736.9		A	13C2-PFTeDA	6.43	419341.7	0.142	2.041

Total Ion Chromatogram

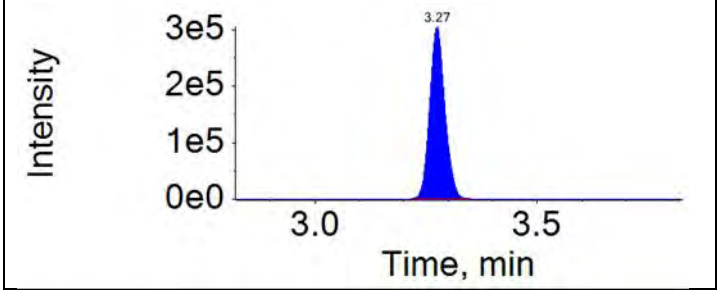


APPROVED
By JPT at 2:53 pm, 11/7/18

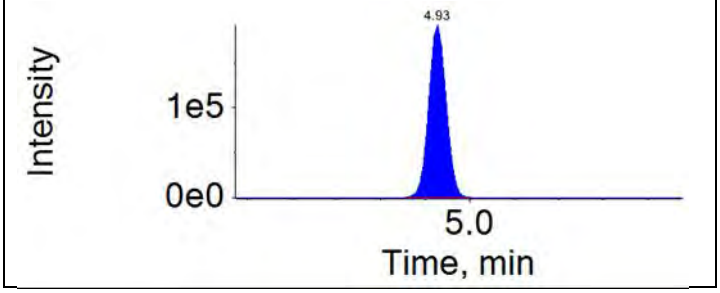
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

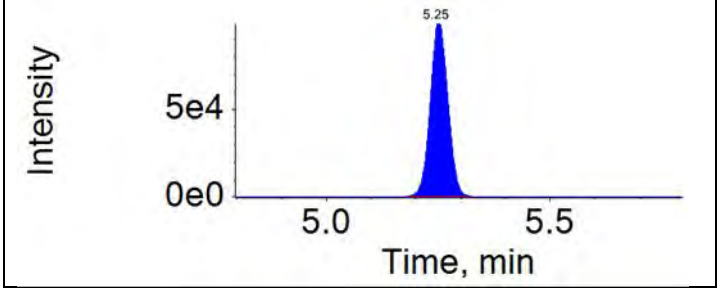
Injection Standard: 13C3-PFBA
216.0 / 172.0



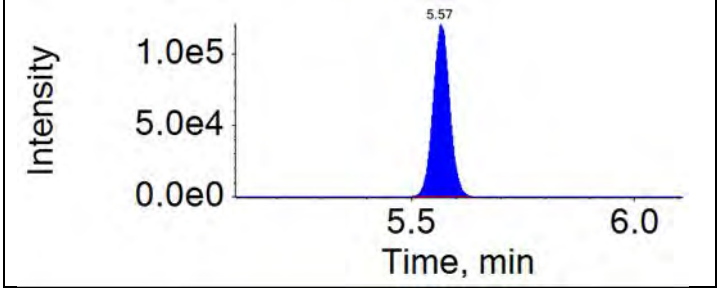
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



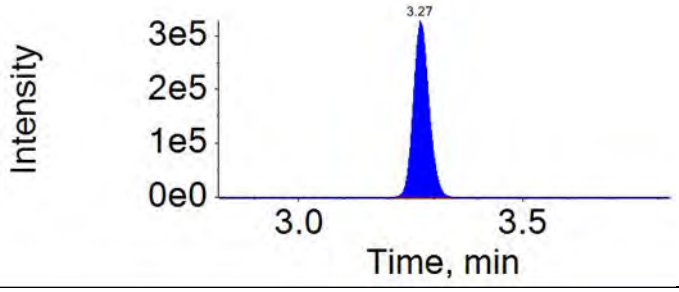
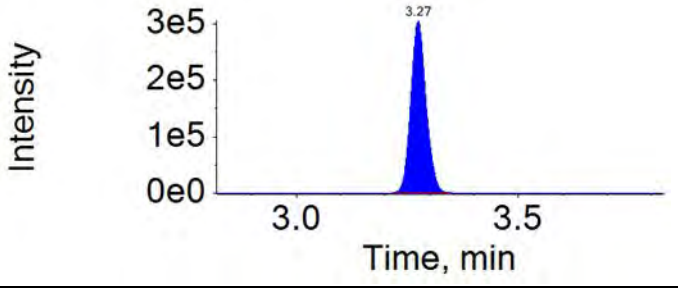
Injection Standard: 13C2-PFDA
515.0 / 470.0

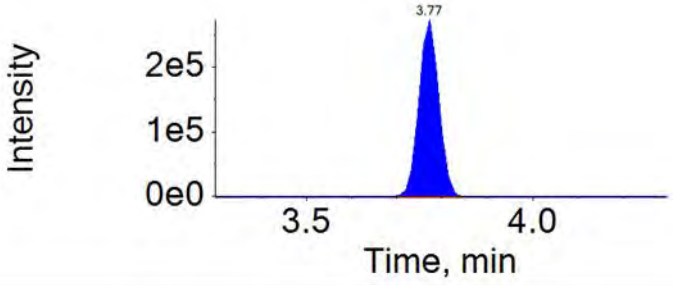
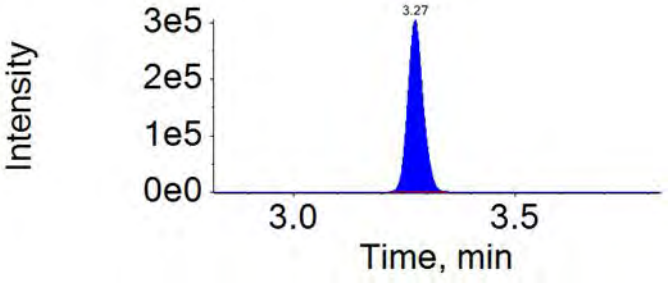


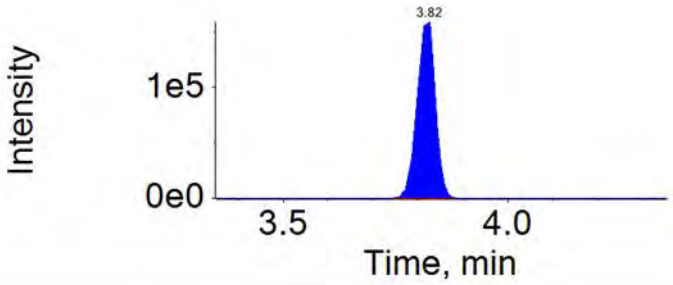
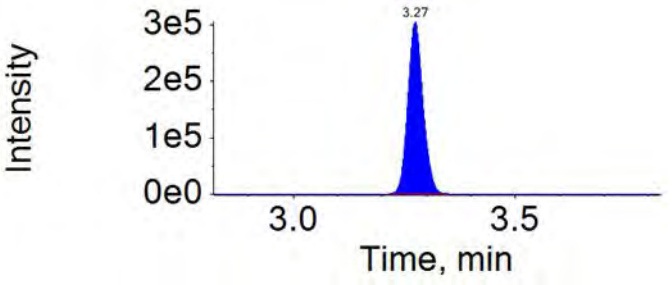
APPROVED
By JPT at 2:53 pm, 11/7/18

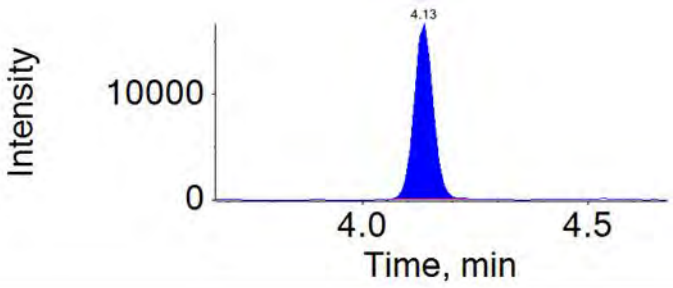
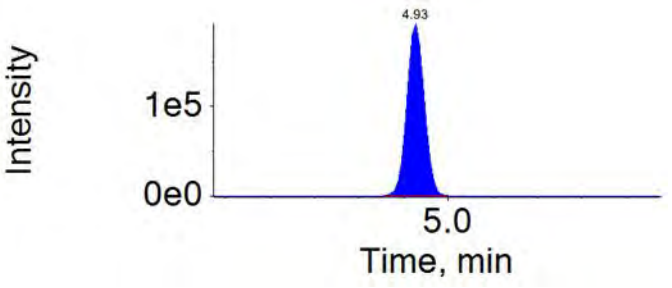
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

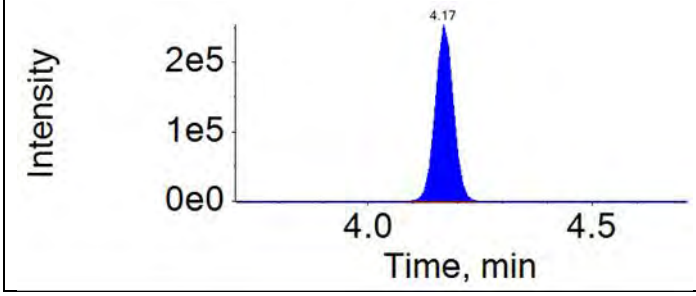
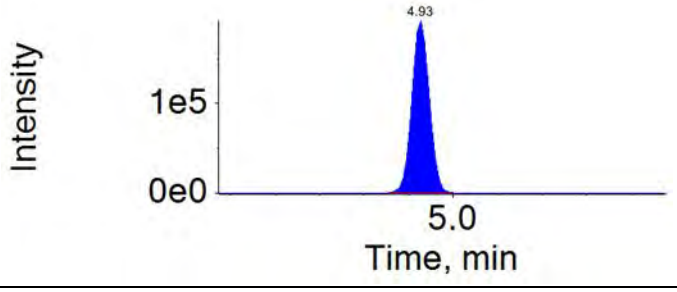
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

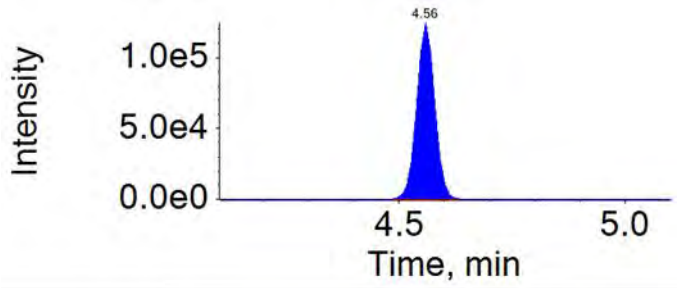
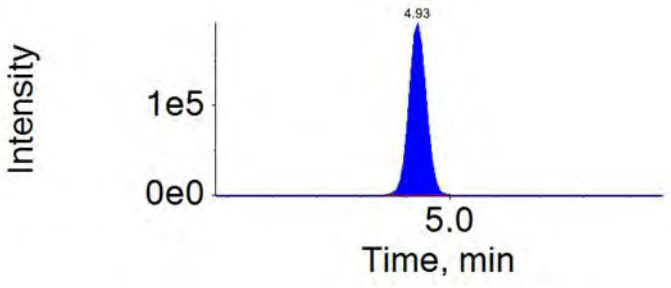
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

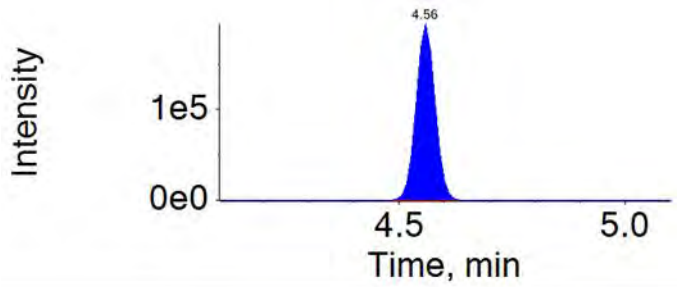
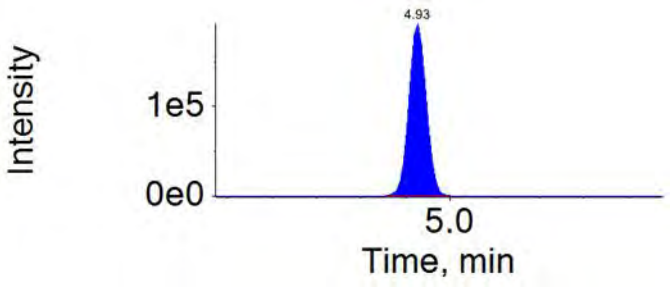
APPROVED
By JPT at 2:53 pm, 11/7/18

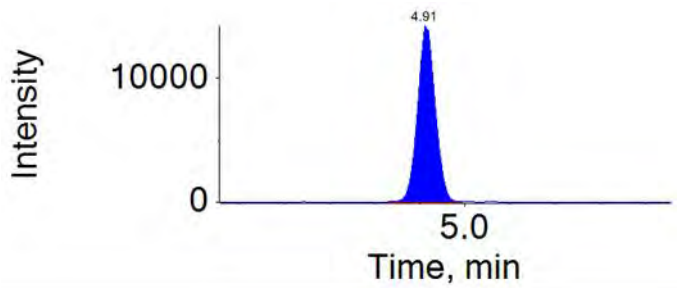
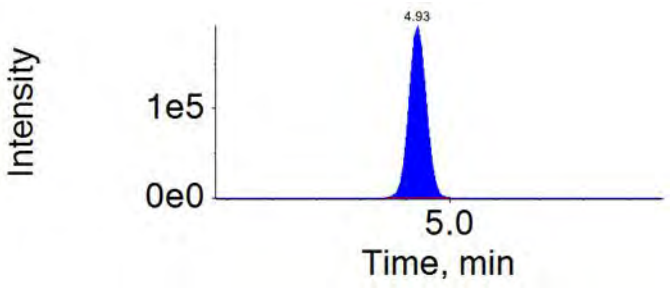
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

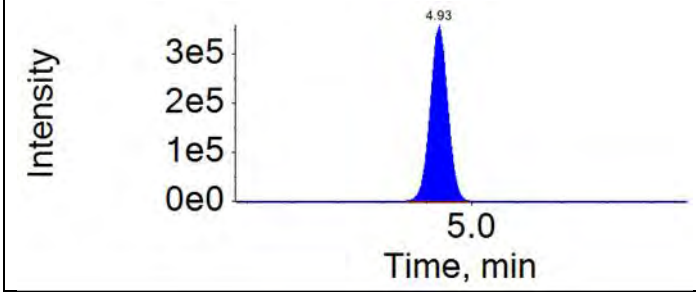
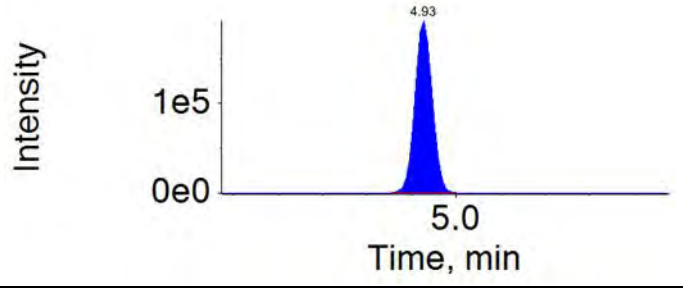
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

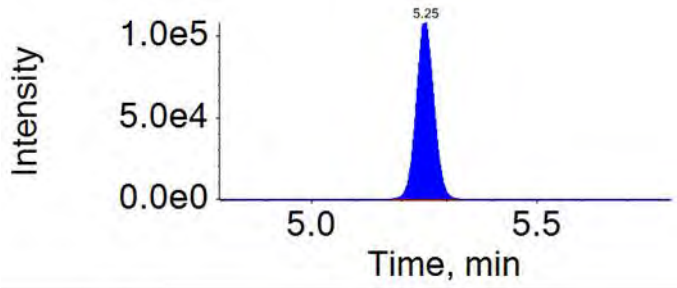
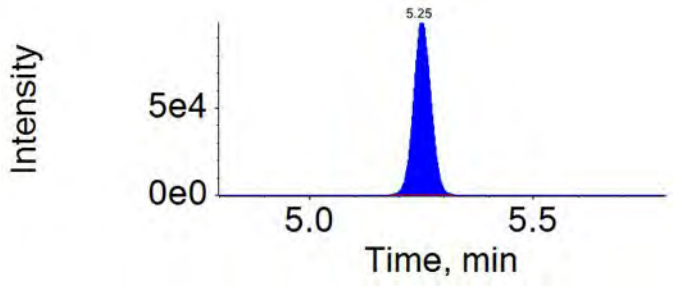
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

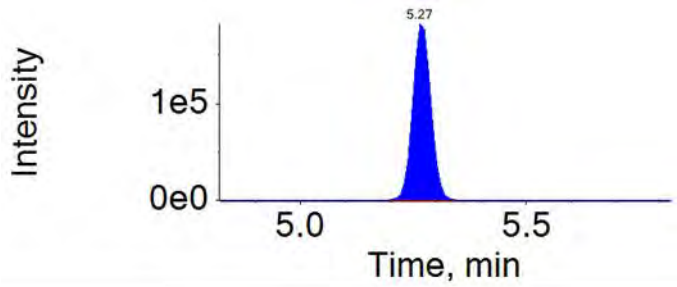
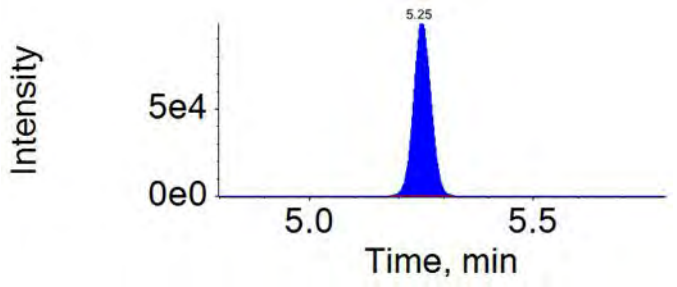
APPROVED
By JPT at 2:53 pm, 11/7/18

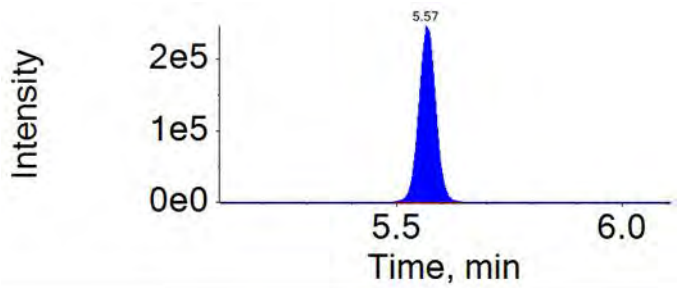
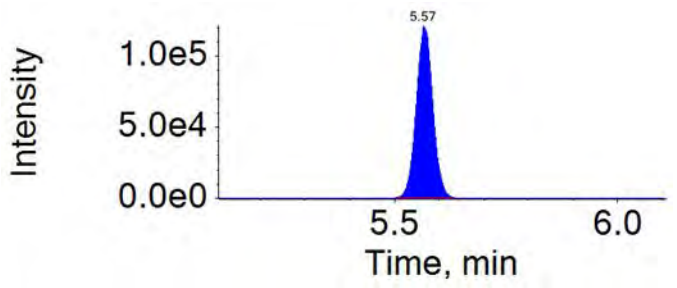
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

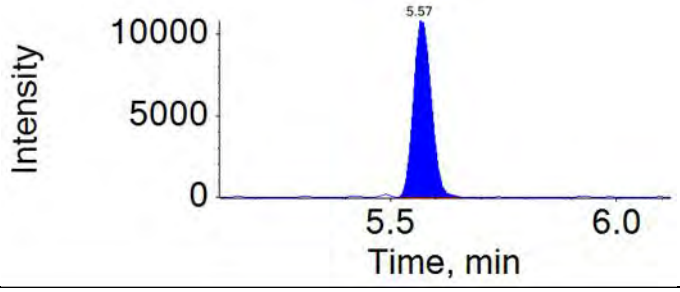
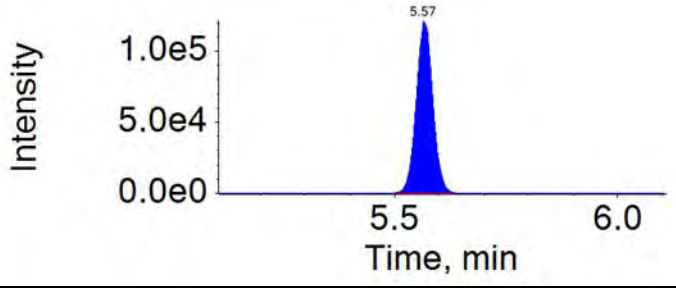
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

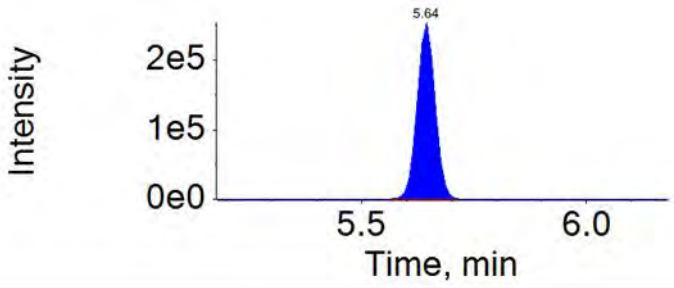
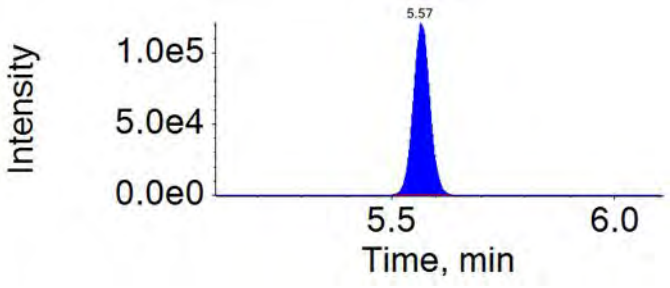
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

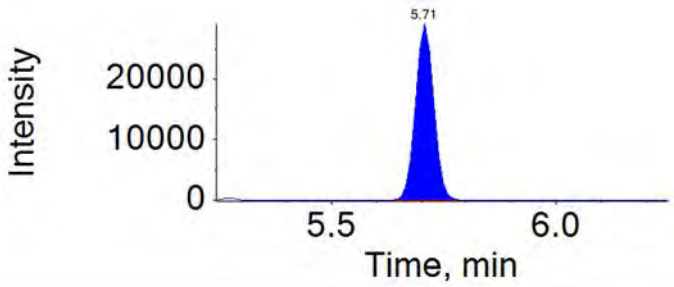
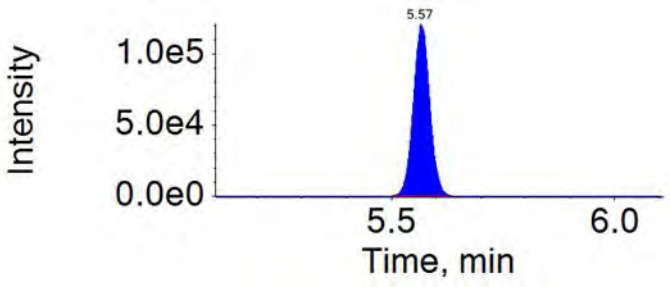
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

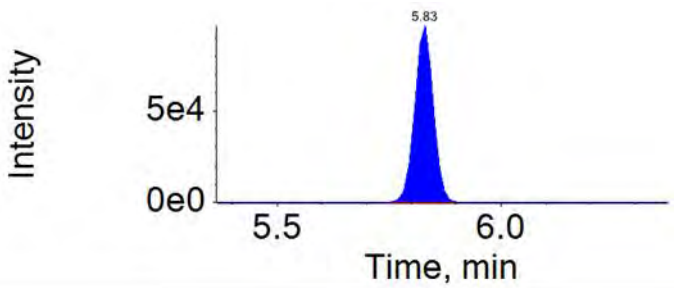
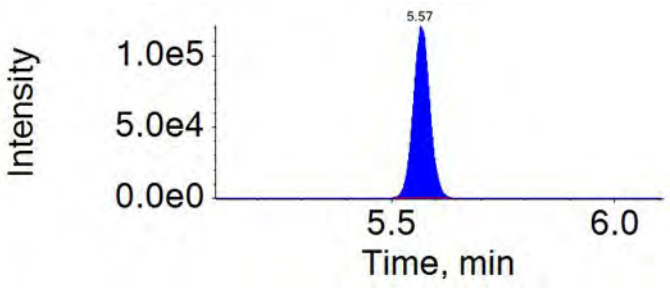
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

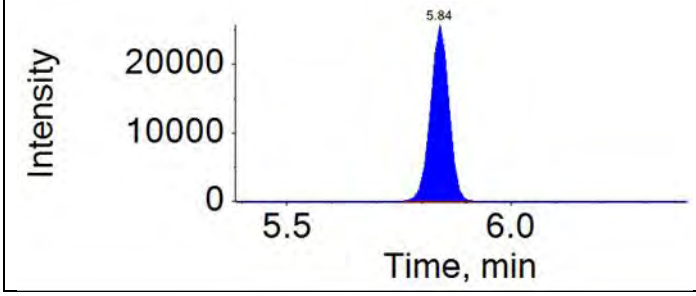
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

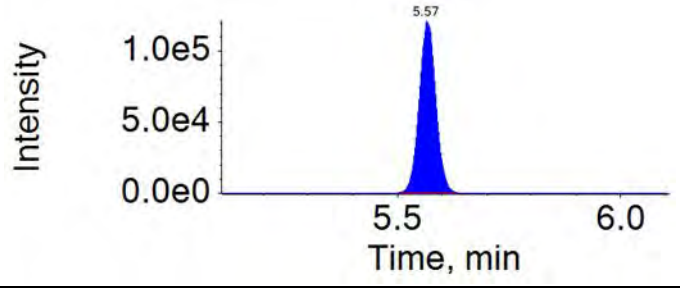
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

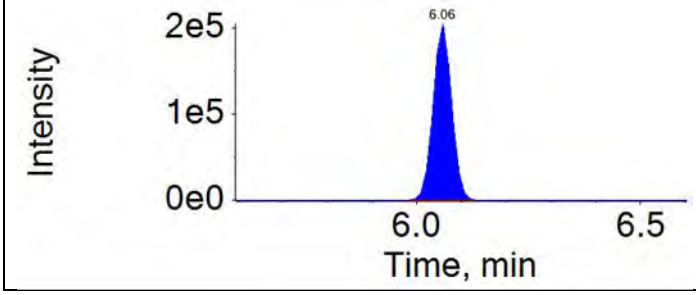
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

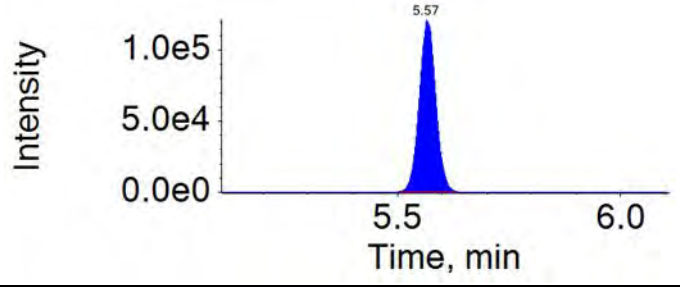
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



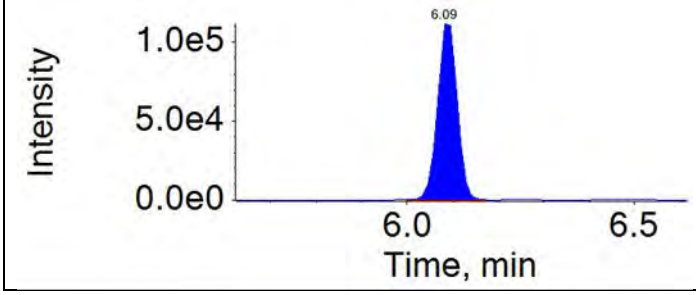


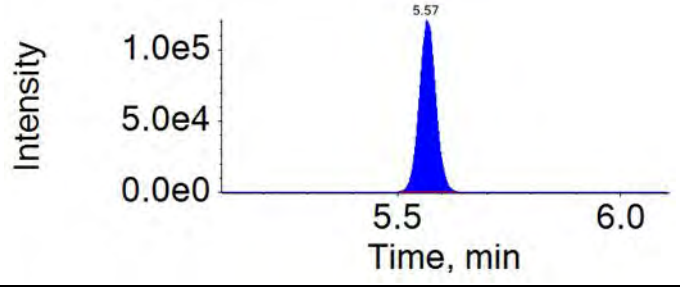
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



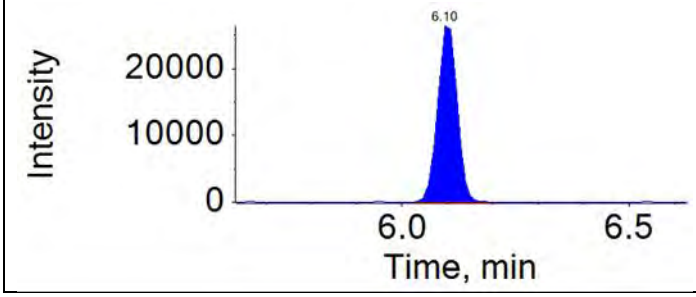


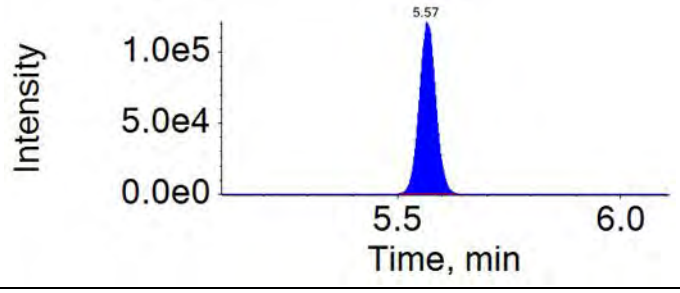
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



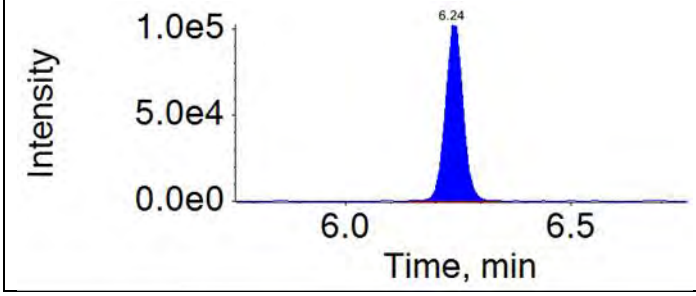


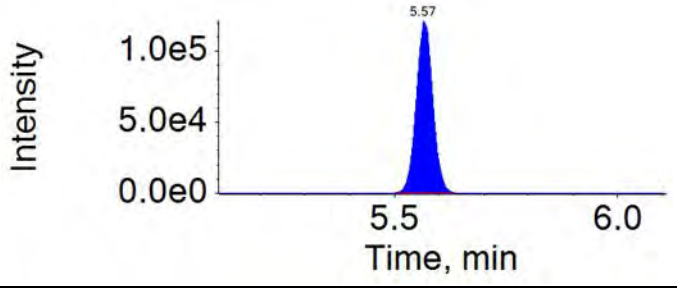
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

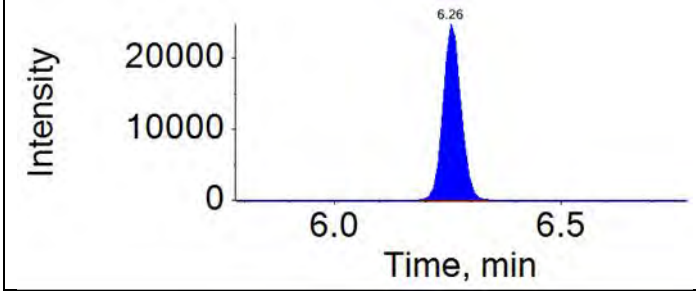
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

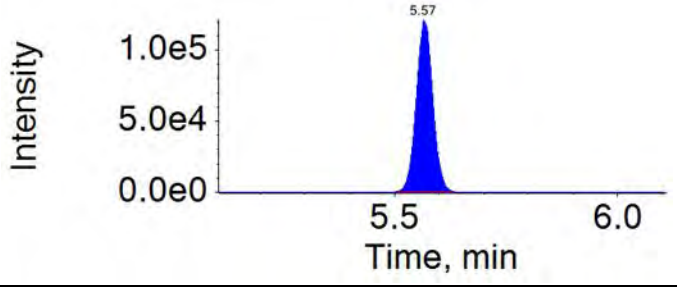
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



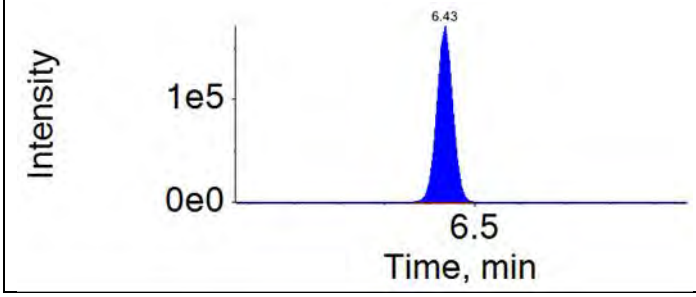


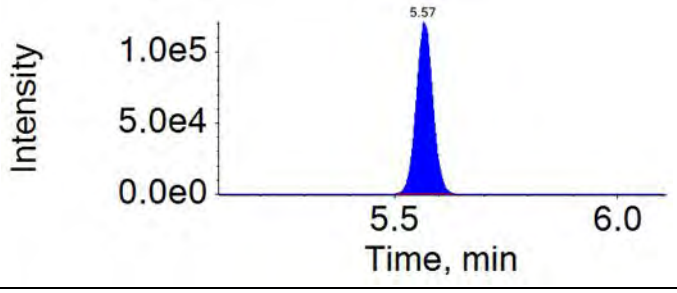
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



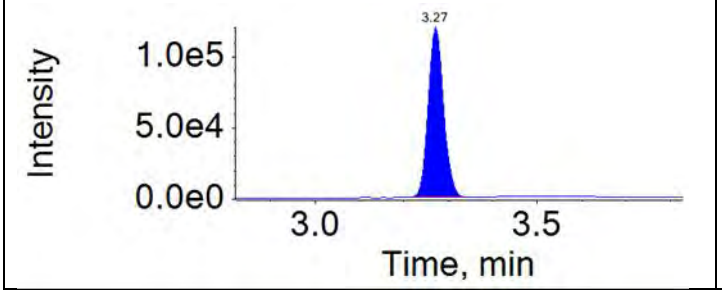


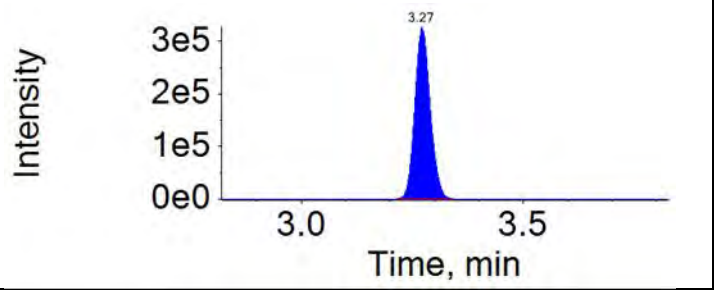
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

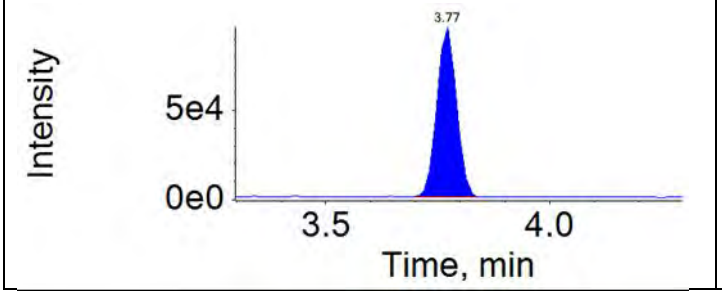
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

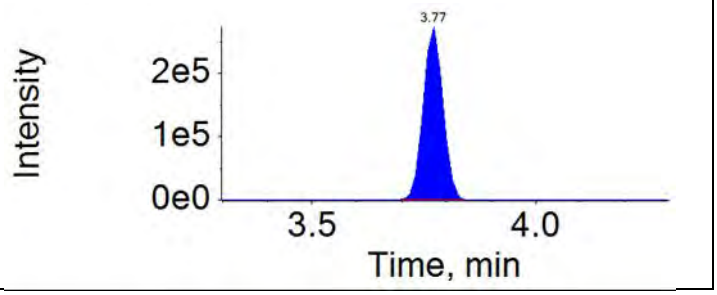
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



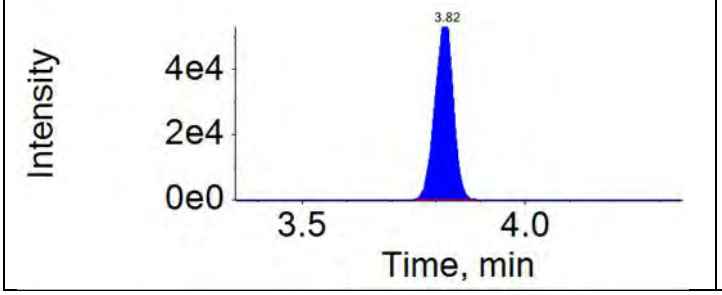


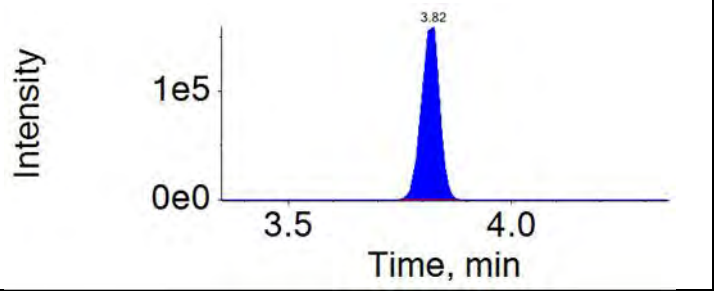
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



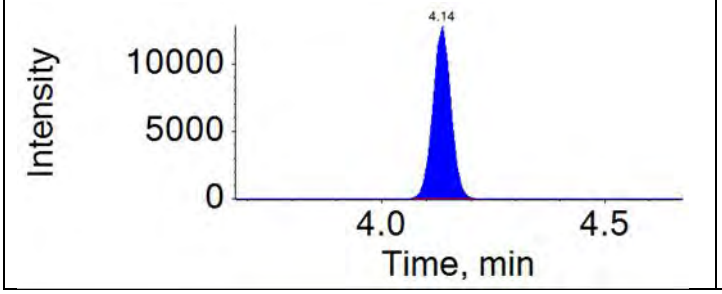


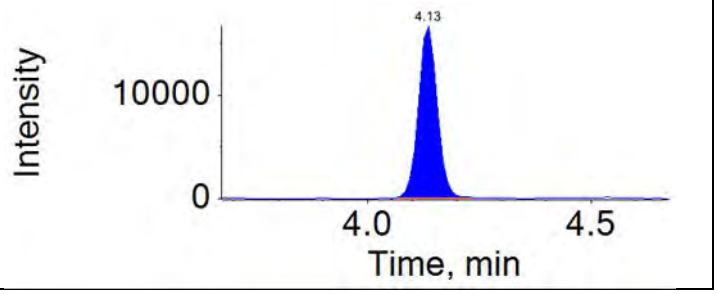
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

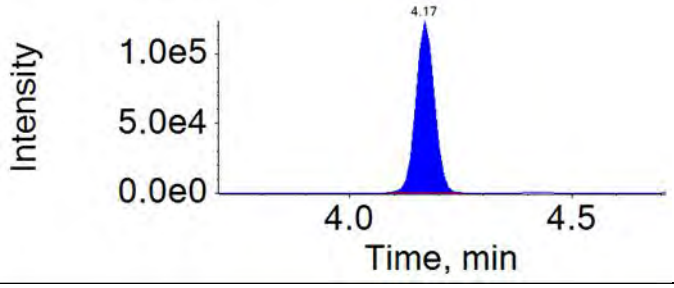
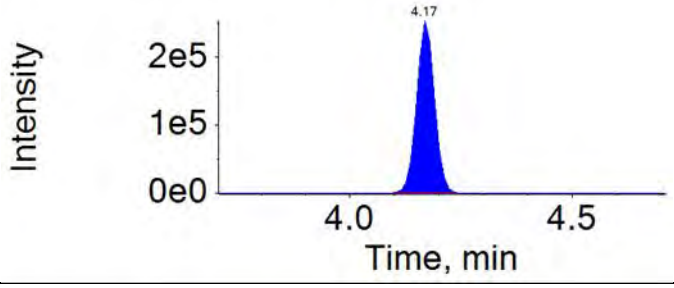


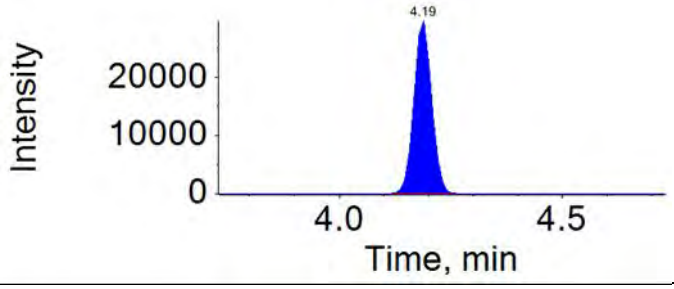
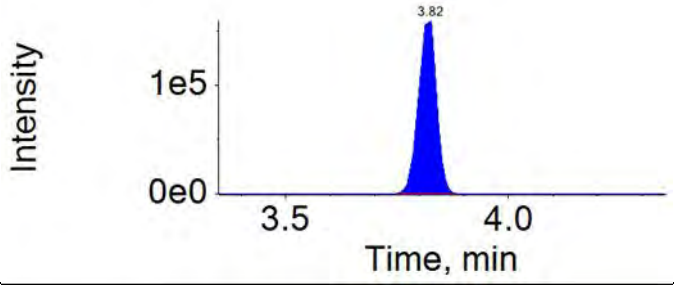


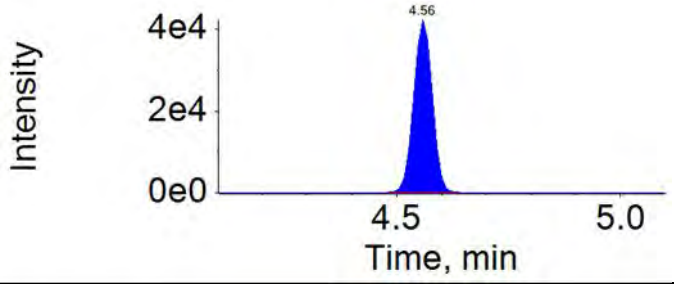
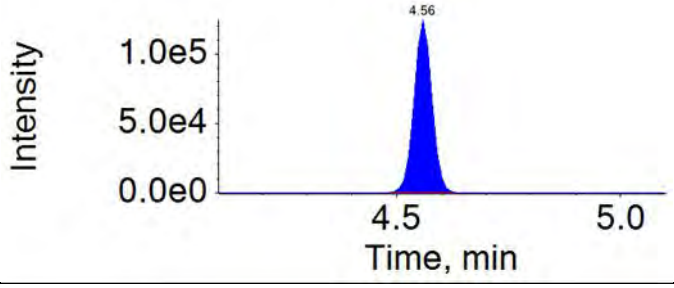
APPROVED
By JPT at 2:53 pm, 11/7/18

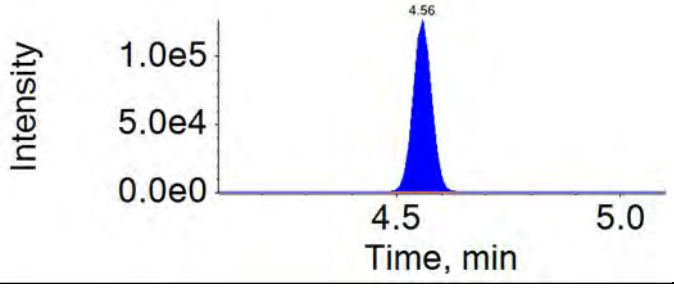
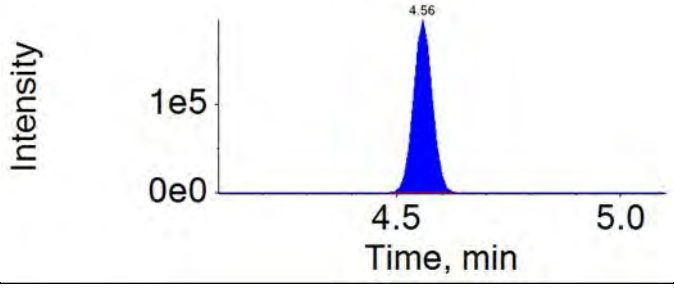
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

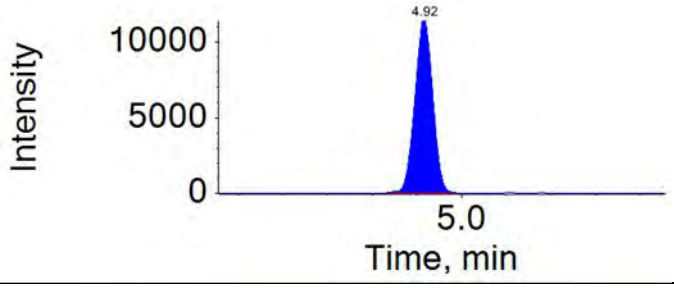
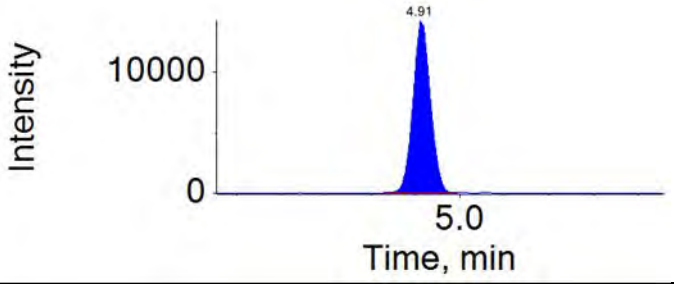
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

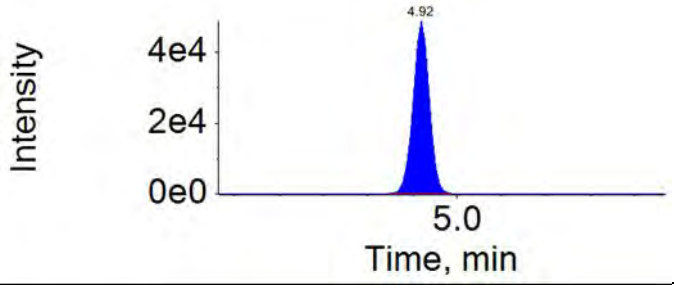
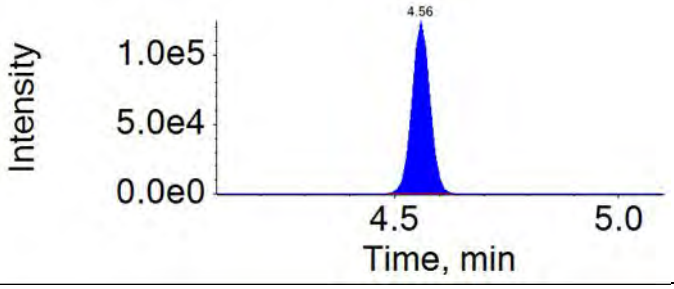
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

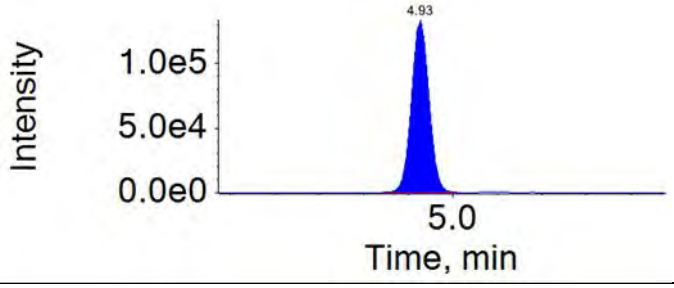
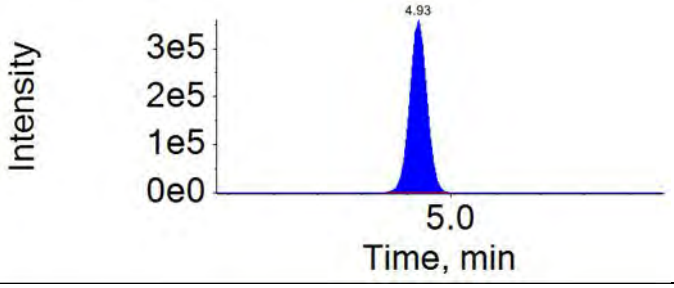
APPROVED
By JPT at 2:53 pm, 11/7/18

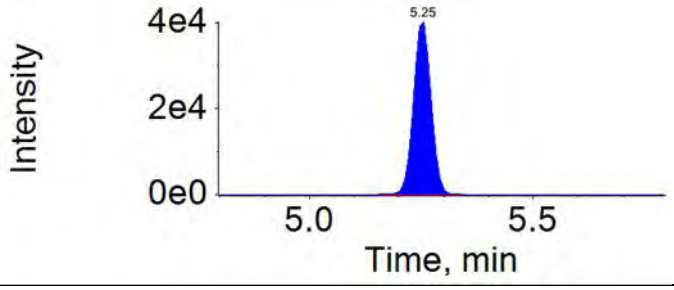
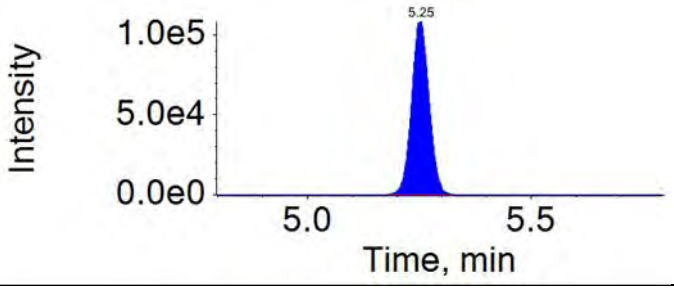
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

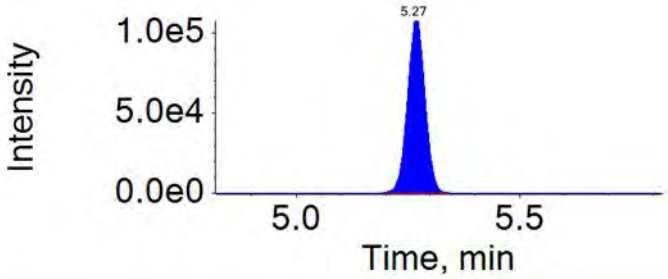
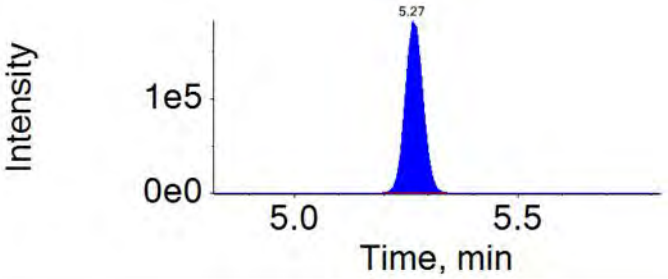
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

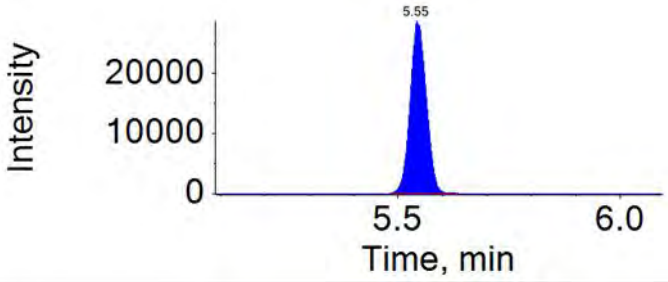
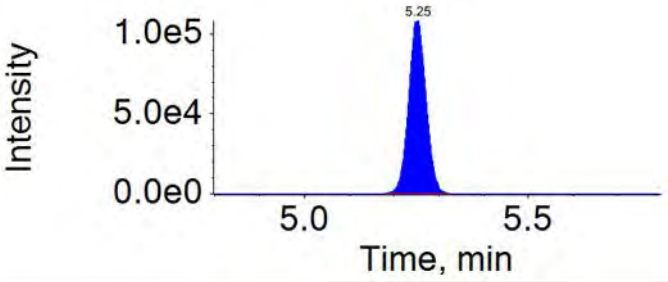
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

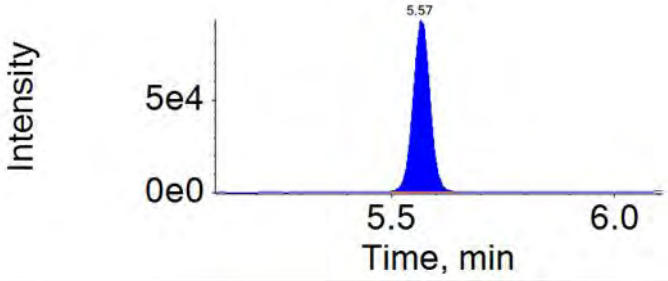
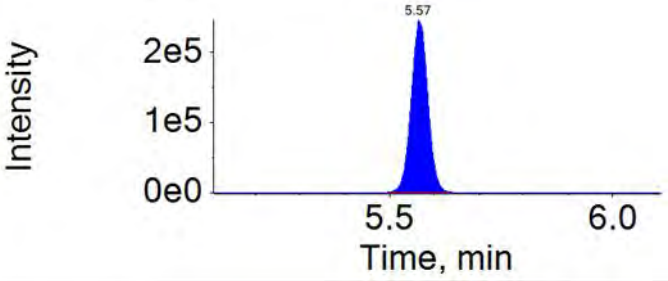
APPROVED
By JPT at 2:53 pm, 11/7/18

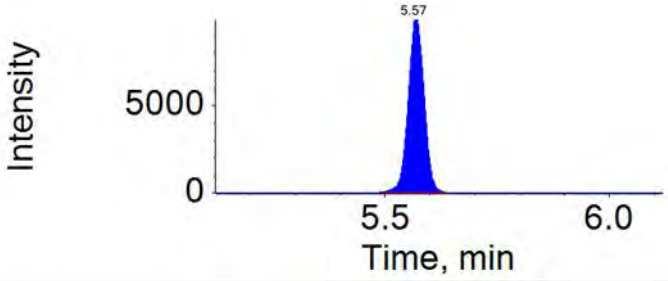
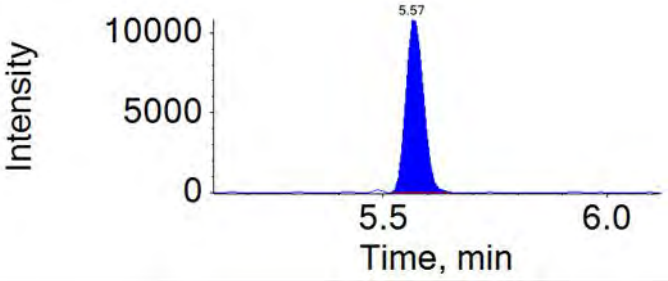
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

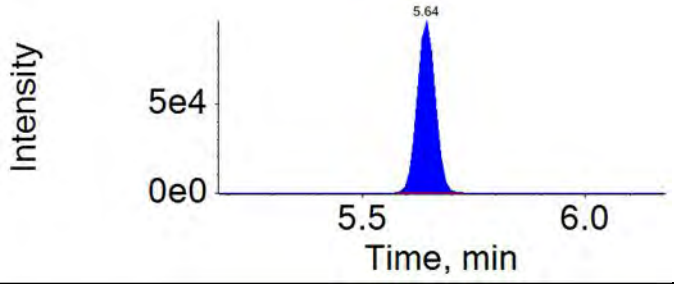
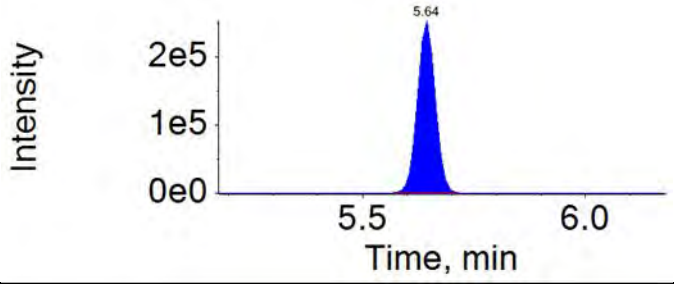
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

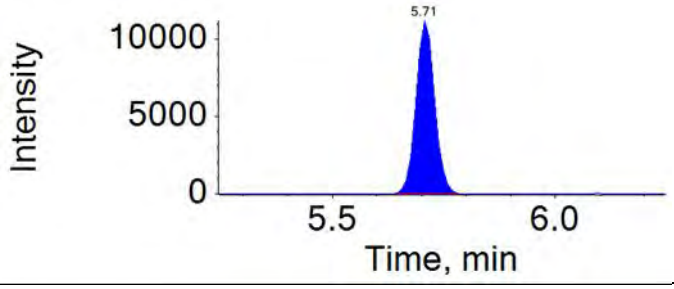
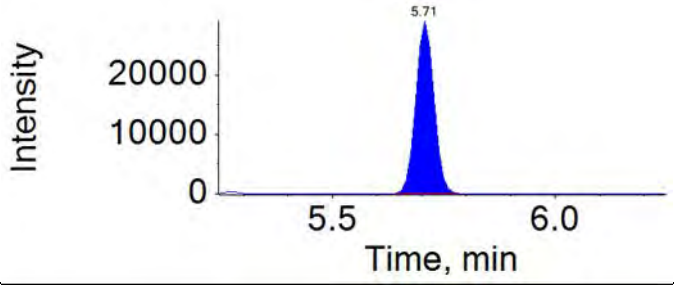
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

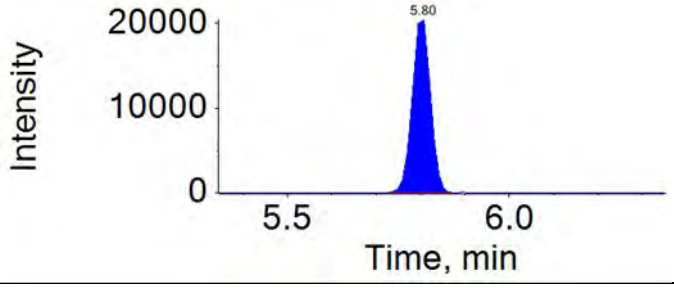
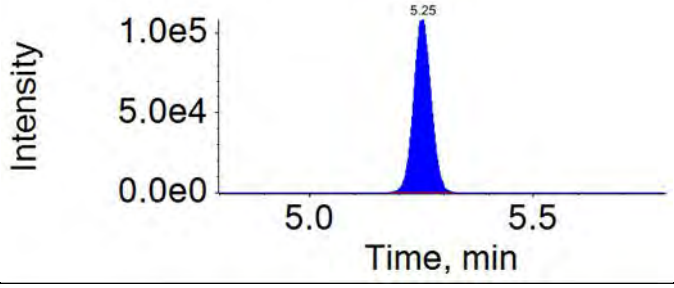
APPROVED
By JPT at 2:53 pm, 11/7/18

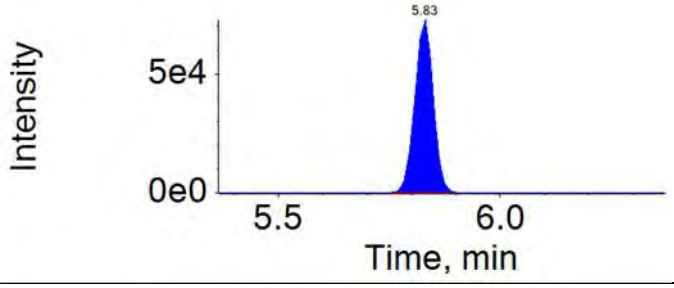
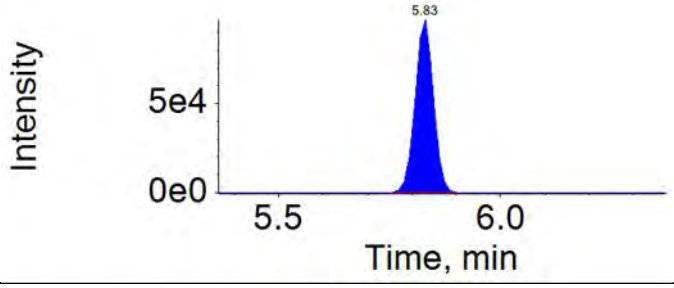
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

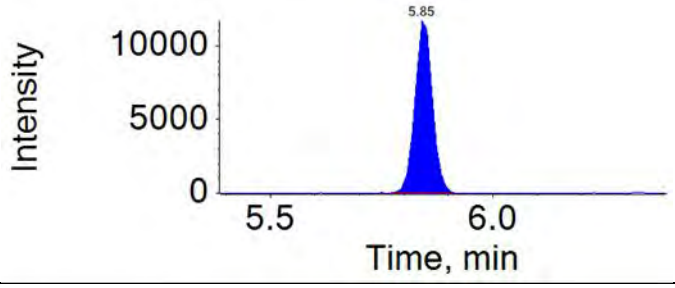
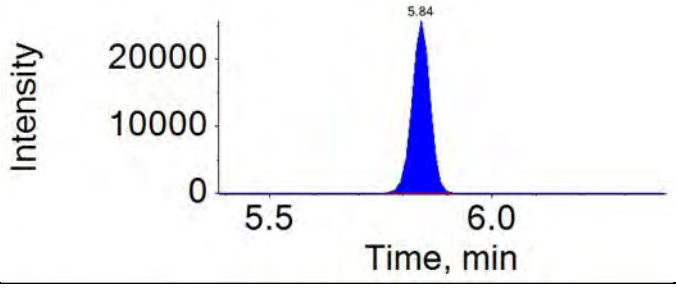
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

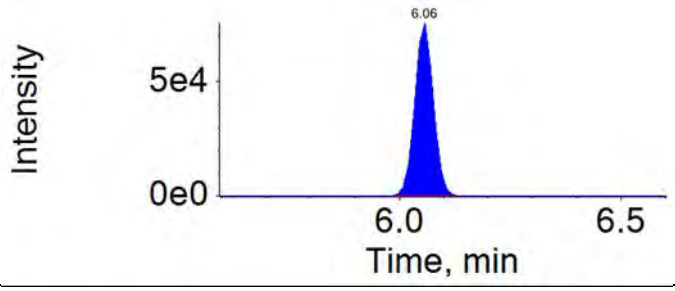
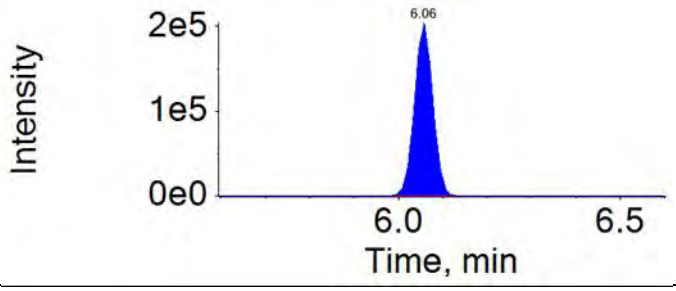
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

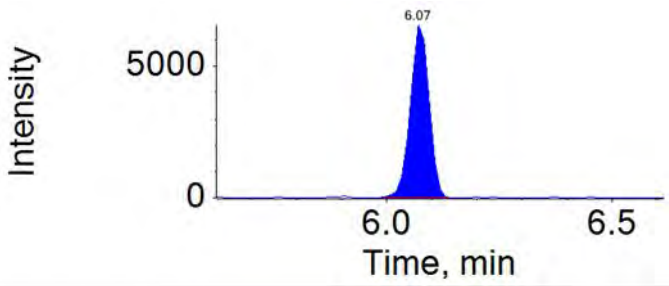
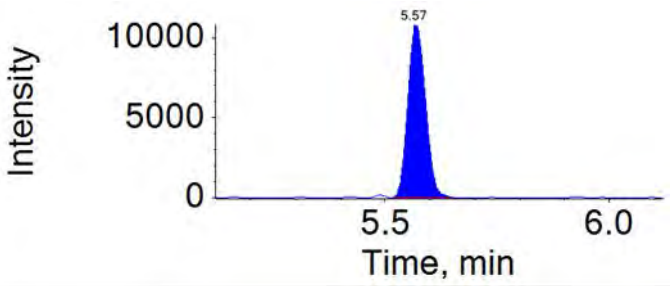
APPROVED
By JPT at 2:53 pm, 11/7/18

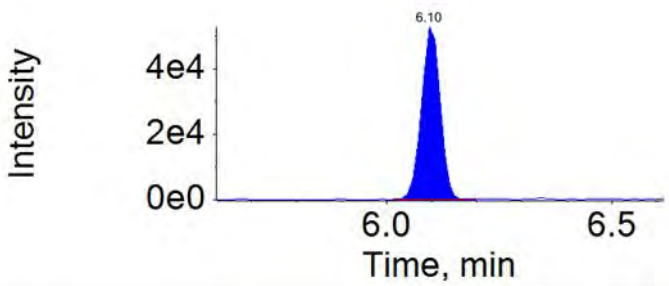
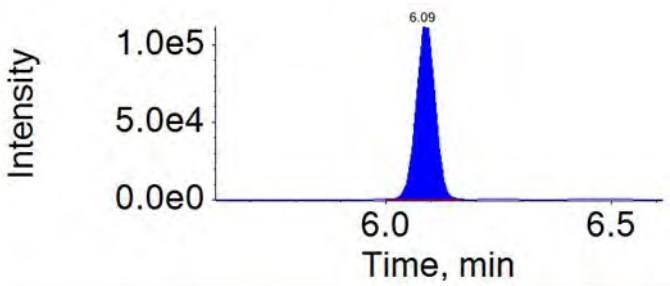
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

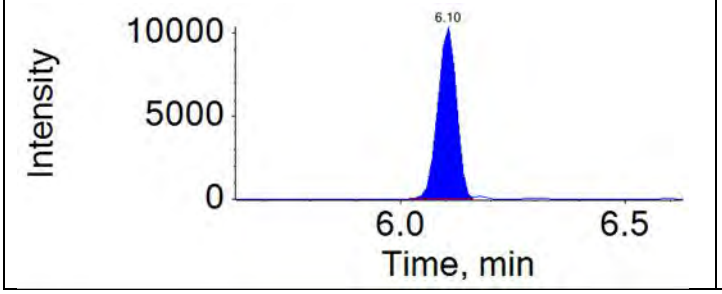
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

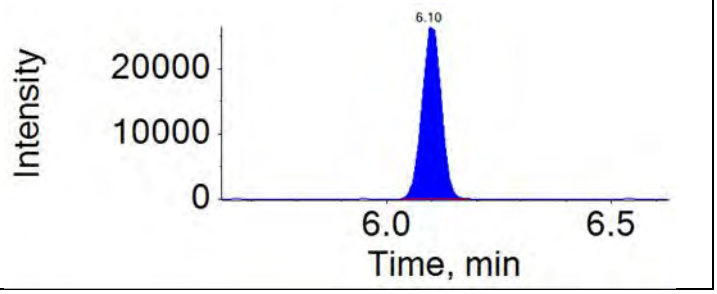
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

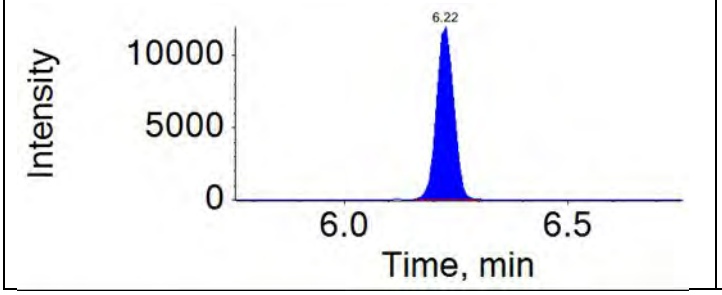
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

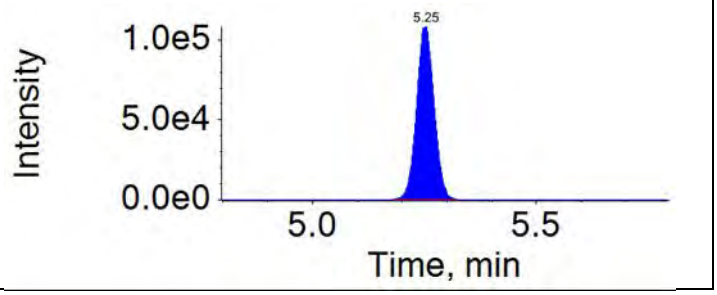
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



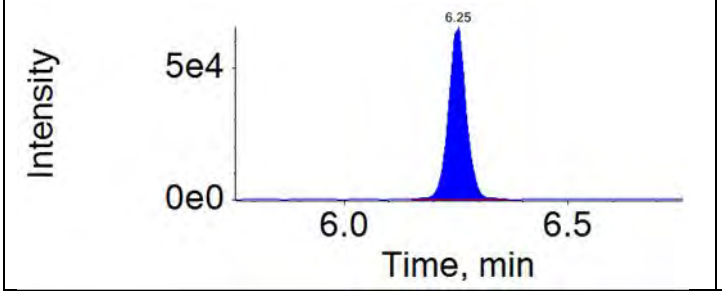


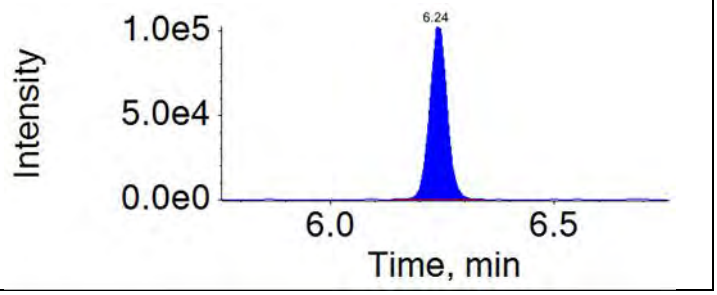
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



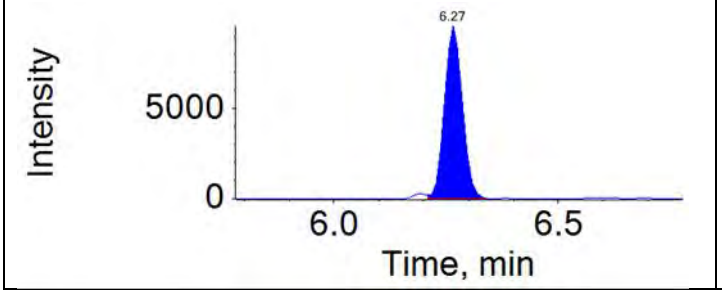


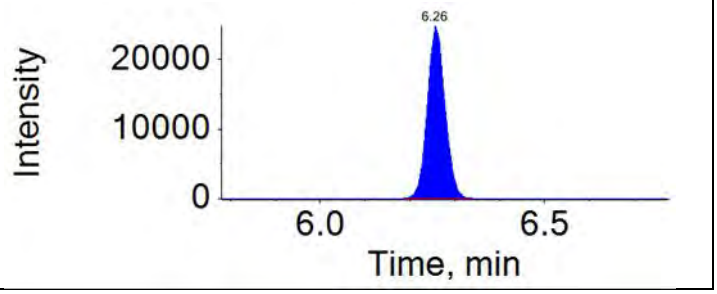
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0





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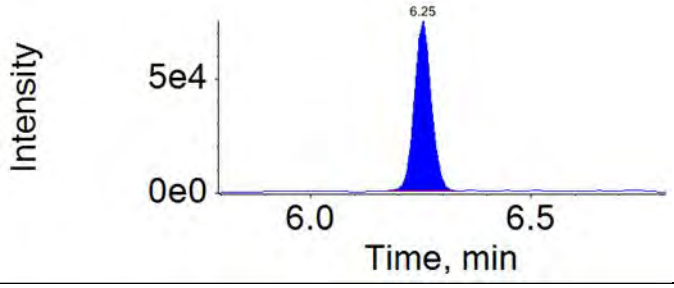
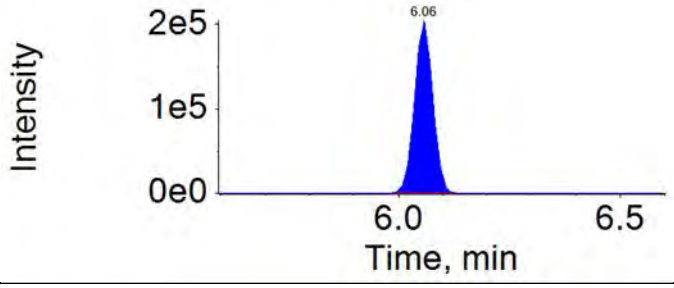
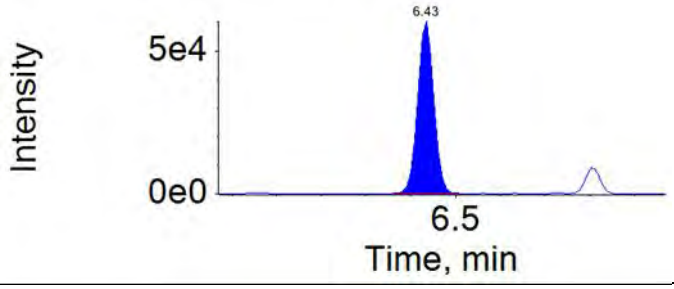
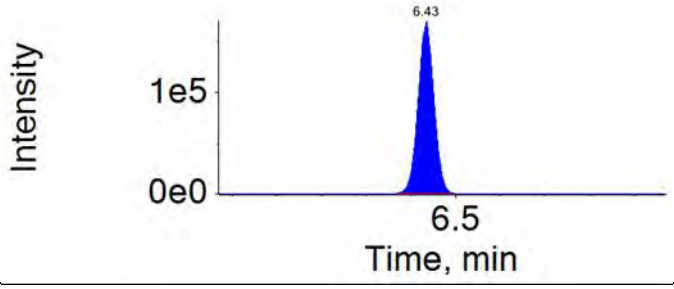
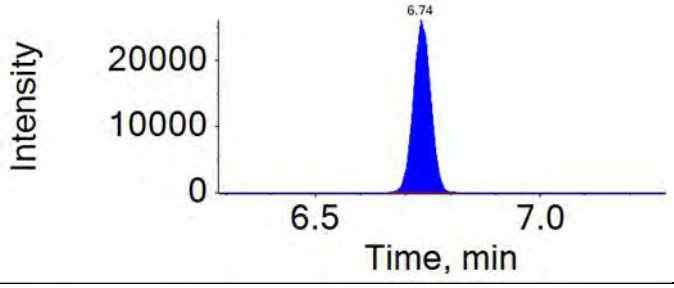
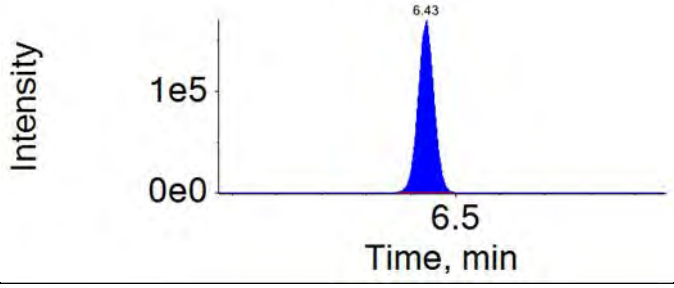
By JPT at 2:53 pm, 11/7/18

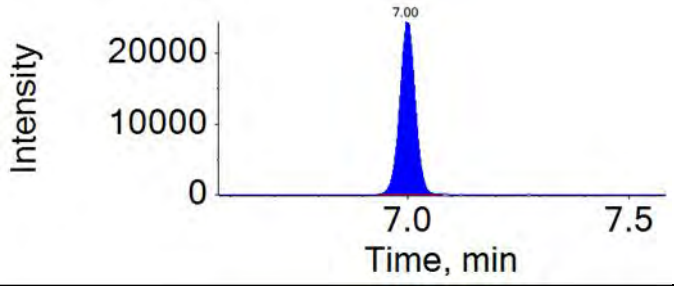
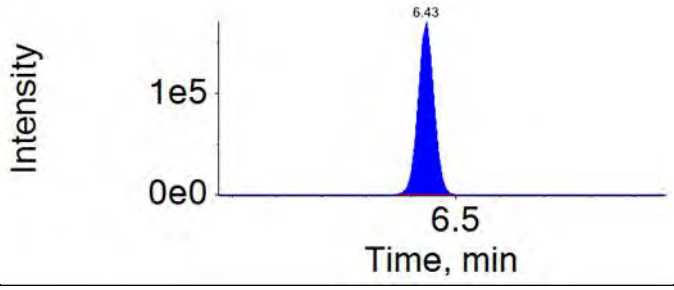
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

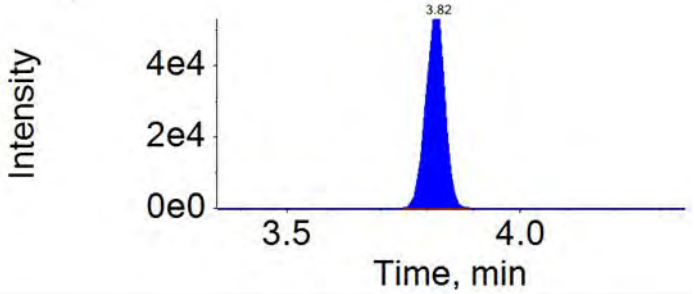
Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-12.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	157656.3	A	1.0000	1.0000			
PFBS_2	3.82	1.00	57942.5	A	0.3576	0.3675	3	50	
4:2-FTS	4.14	1.00	35586.2	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	22248.8	A	0.6359	0.6252	-2	50	
PFHxA	4.17	1.00	351503.9	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	3580.7	A	0.0115	0.0102	-11	50	
PFPeS	4.19	1.10	82090.1	A	1.0000	1.0000			
PFPeS_2	4.19	1.10	44176.0	A	0.5384	0.5381	0	50	
PFHxS	4.56	1.00	122477.7	A	1.0000	1.0000			
PFHxS_2	4.56	1.00	45270.2	A	0.3569	0.3696	4	50	
PFHpA	4.56	1.00	360280.4	A	1.0000	1.0000			
PFHpA_2	4.56	1.00	20898.8	A	0.0577	0.0580	1	50	
6:2-FTS	4.92	1.00	32056.4	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	19790.8	A	0.6752	0.6174	-9	50	
PFHpS	4.92	1.08	123126.9	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	49357.0	A	0.3950	0.4009	1	50	
PFOA	4.93	1.00	364943.1	A	1.0000	1.0000			
PFOA_2	4.92	1.00	23223.3	A	0.0635	0.0636	0	50	
PFOS	5.25	1.00	111397.7	A	1.0000	1.0000			
PFOS_2	5.25	1.00	35008.5	A	0.3494	0.3143	-10	50	
PFNA	5.27	1.00	299530.4	A	1.0000	1.0000			
PFNA_2	5.27	1.00	6077.4	A	0.0207	0.0203	-2	50	
PFNS	5.55	1.06	72940.0	A	1.0000	1.0000			
PFNS_2	5.54	1.06	34560.8	A	0.4890	0.4738	-3	50	
PFDA	5.57	1.00	244693.9	A	1.0000	1.0000			
PFDA_2	5.57	1.00	1604.2	A	0.0057	0.0066	16	50	
8:2-FTS	5.57	1.00	24892.6	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	15231.3	A	0.6169	0.6119	-1	50	
NMeFOSAA	5.71	1.00	32400.4	A	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	7101.6	A	0.2206	0.2192	-1	50	
PFDS	5.80	1.10	59073.9	A	1.0000	1.0000			
PFDS_2	5.80	1.11	31660.9	A	0.4648	0.5360	15	50	
PFUnDA	5.83	1.00	209644.8	A	1.0000	1.0000			
PFUnDA_2	5.84	1.00	267.4	A	0.0031	0.0013	-59	50	OOS
NEtFOSAA	5.85	1.00	32100.8	A	1.0000	1.0000			
NEtFOSAA_2	5.85	1.00	21563.1	A	0.6082	0.6717	10	50	
PFDoDA	6.06	1.00	220663.6	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	2566.4	A	0.0109	0.0116	6	50	
10:2-FTS	6.07	1.09	19060.5	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	13428.2	A	0.7082	0.7045	-1	50	
PFTrDA	6.25	1.03	197290.7	A	1.0000	1.0000			
PFTrDA_2	6.26	1.03	2128.7	A	0.0096	0.0108	12	50	
PFTeDA	6.43	1.00	150162.8	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	849.9	A	0.0055	0.0057	2	50	
PFHxDA	6.74	1.05	70193.5	A	1.0000	1.0000			
PFHxDA_2	6.74	1.05	4327.4	A	0.0596	0.0616	3	50	
PFODA	7.00	1.09	59736.9	A	1.0000	1.0000			
PFODA_2	7.00	1.09	1504.6	A	0.0257	0.0252	-2	50	

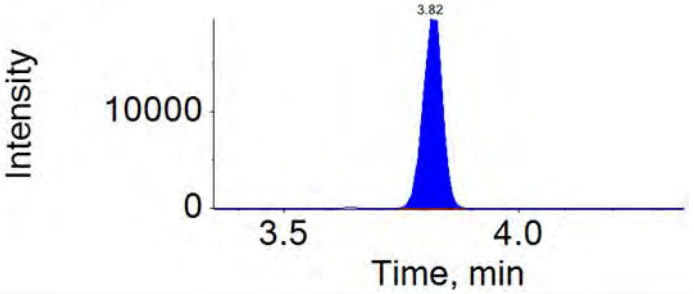
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

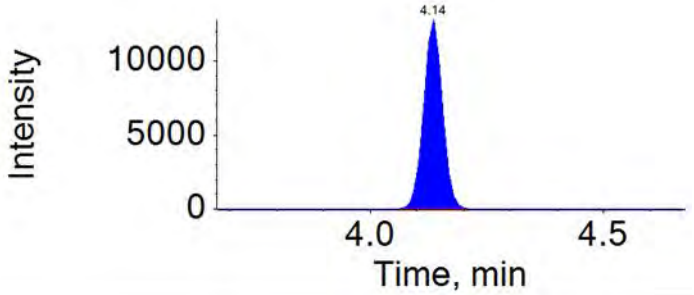
Component: PFBS
Primary Mass: 299.0 / 80.0



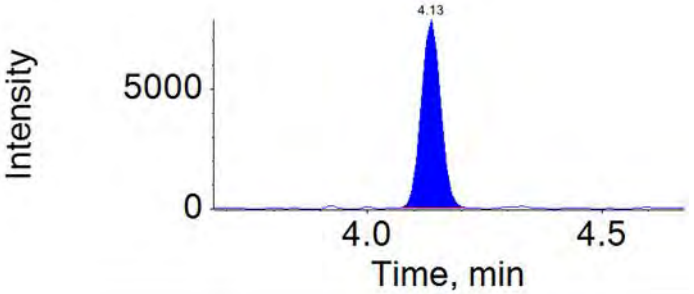
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



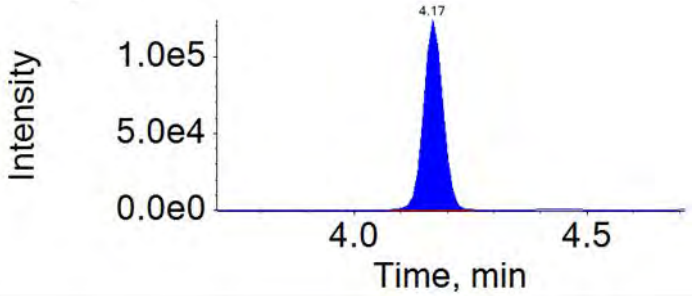
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



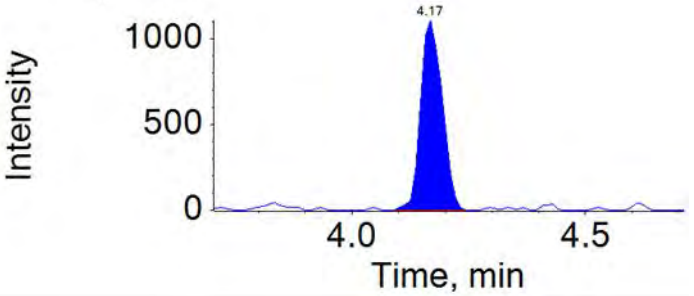
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



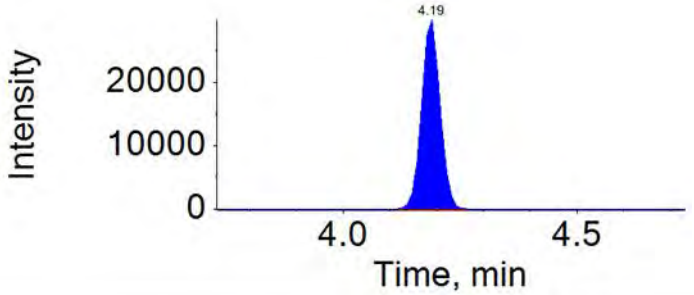
Component: PFHxA
Primary Mass: 313.0 / 269.0



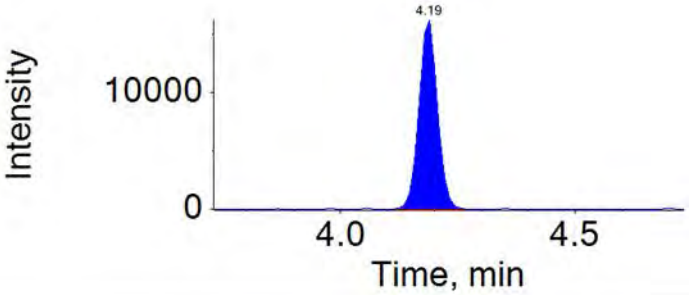
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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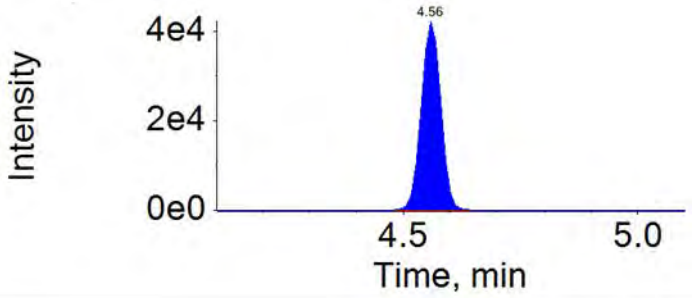
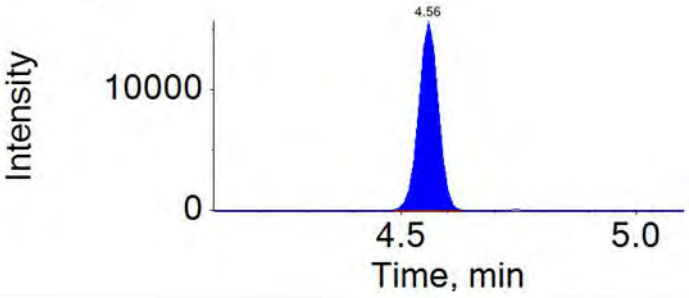
By umar at 5:23 pm, 11/9/18

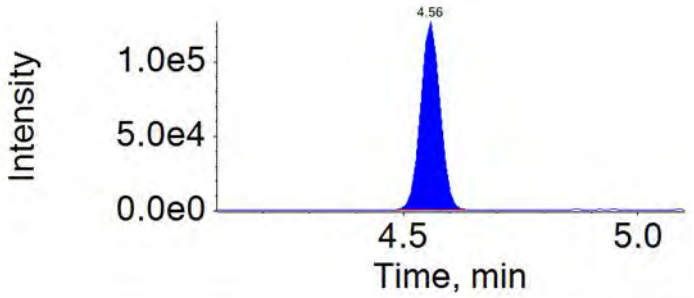
Component: PFHxS
Primary Mass: 399.0 / 80.0



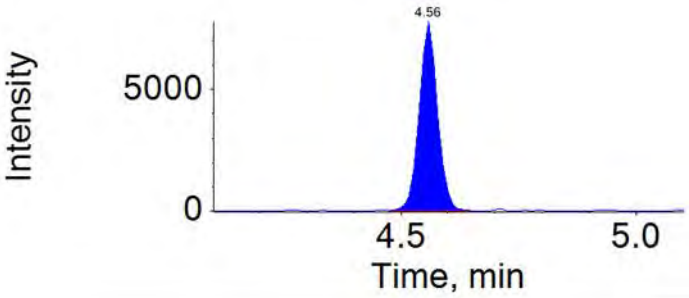
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



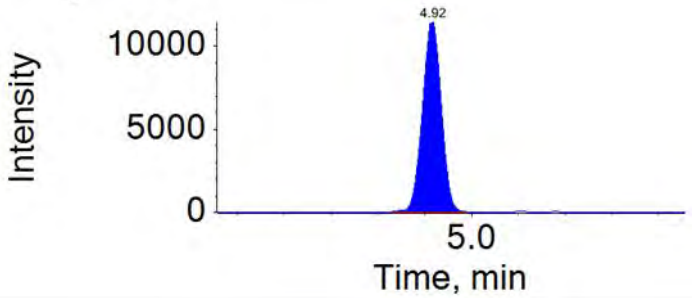
Component: PFHpA
Primary Mass: 363.0 / 319.0



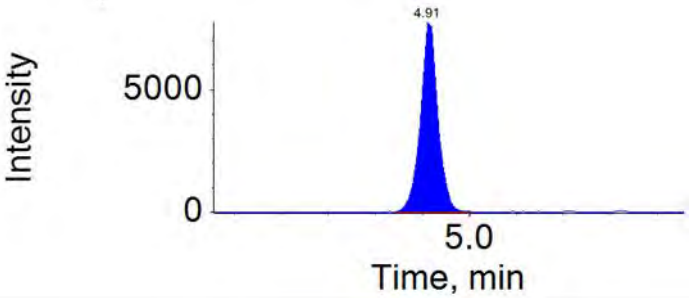
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



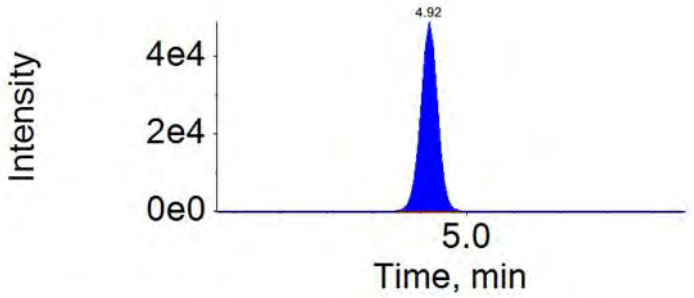
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



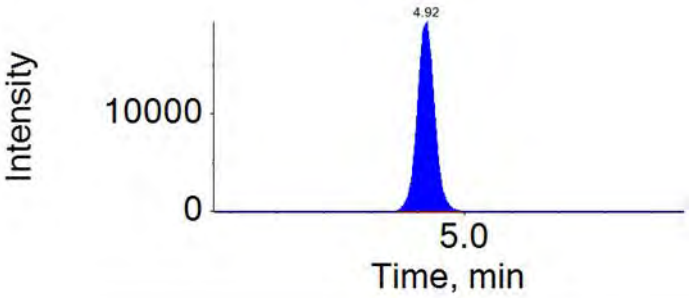
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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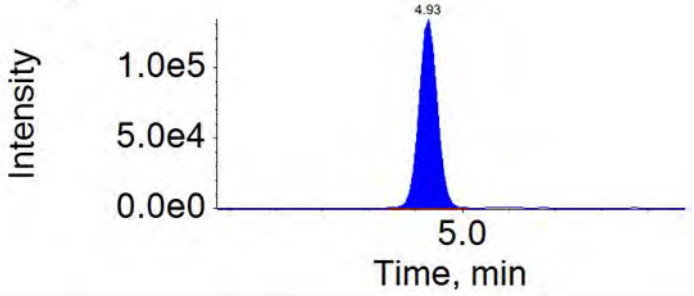
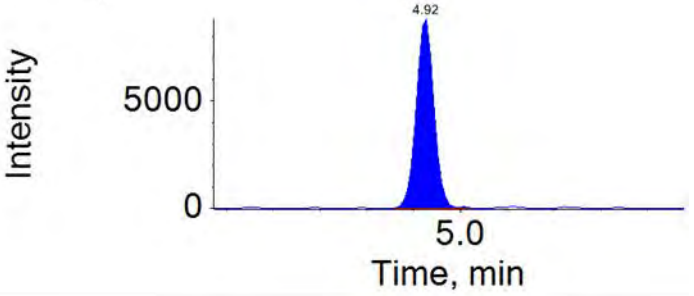
By umar at 5:23 pm, 11/9/18

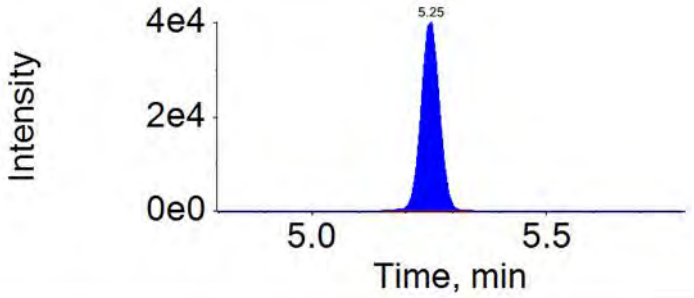
Component: PFOA
Primary Mass: 413.0 / 369.0



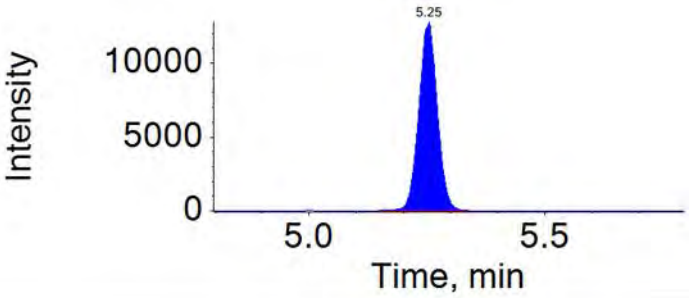
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



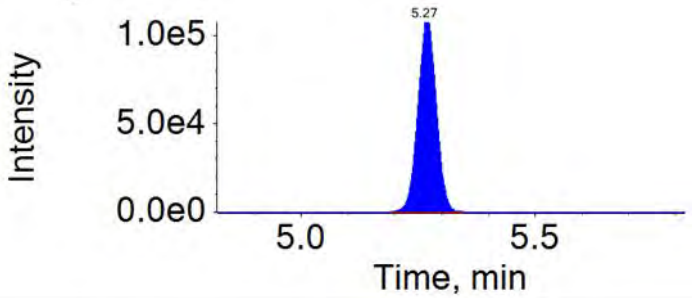
Component: PFOS
Primary Mass: 499.0 / 80.0



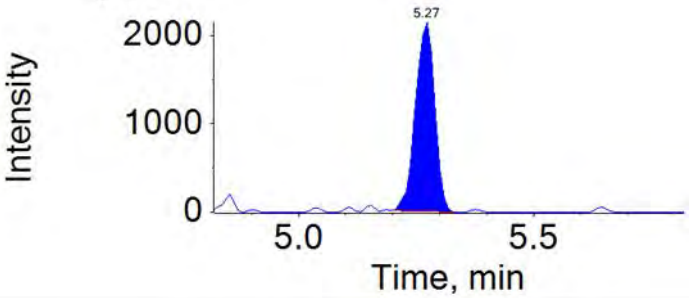
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



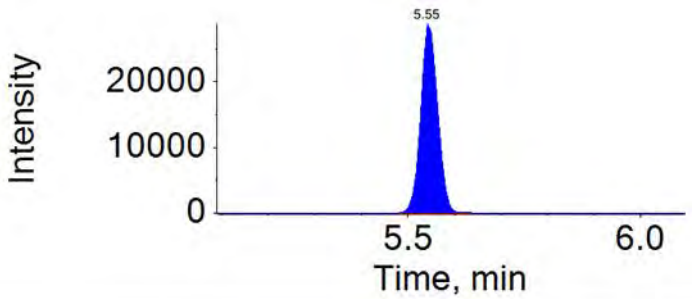
Component: PFNA
Primary Mass: 463.0 / 419.0



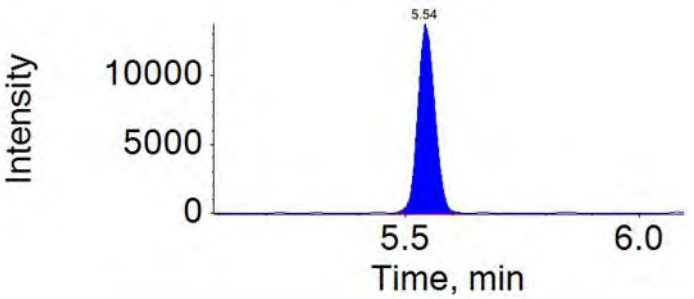
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



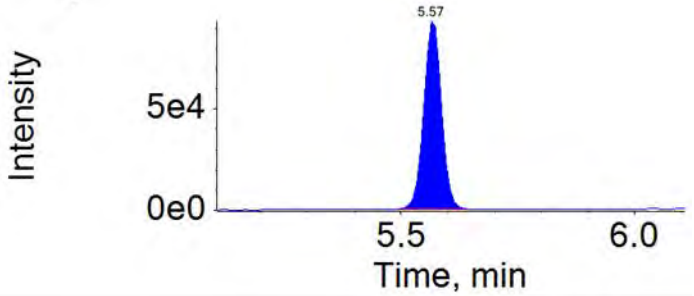
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



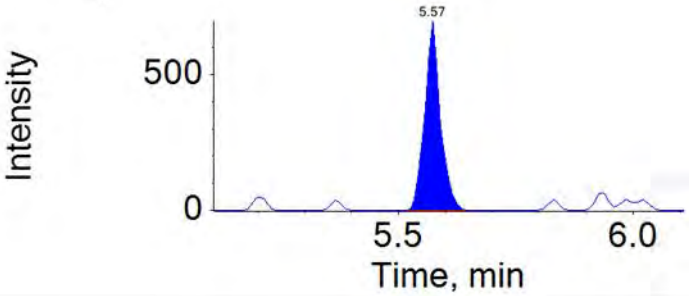
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

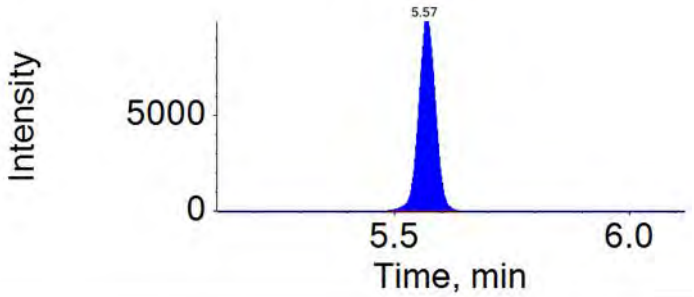
Component: PFDA
Primary Mass: 513.0 / 469.0



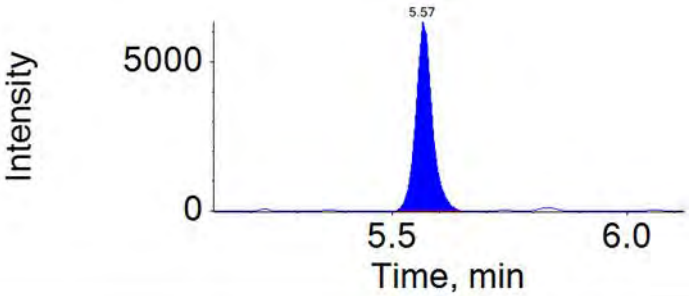
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



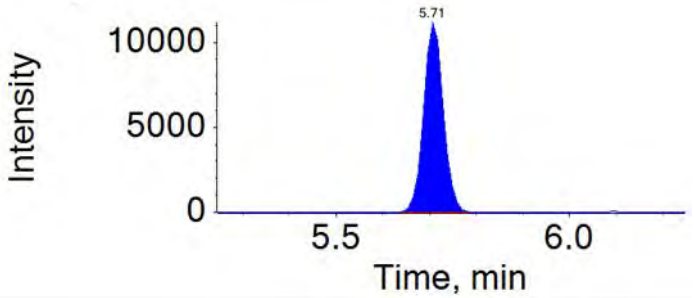
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



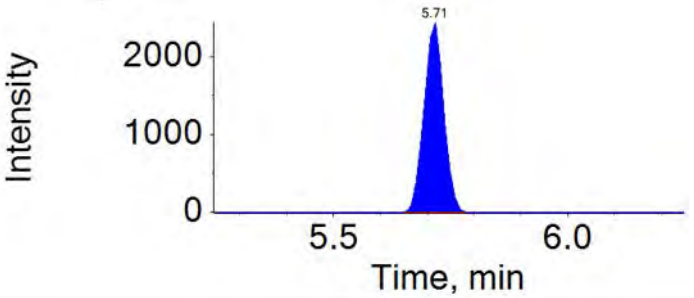
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



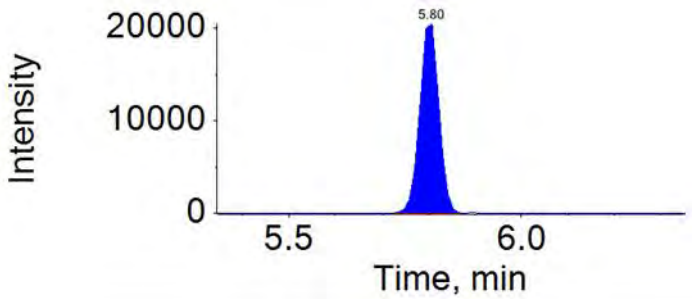
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



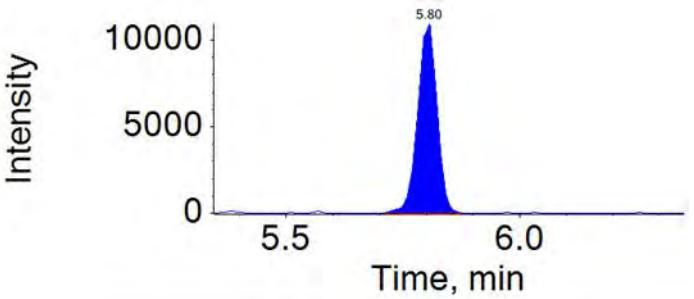
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



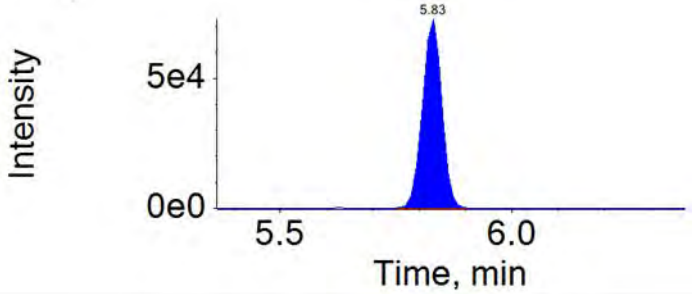
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



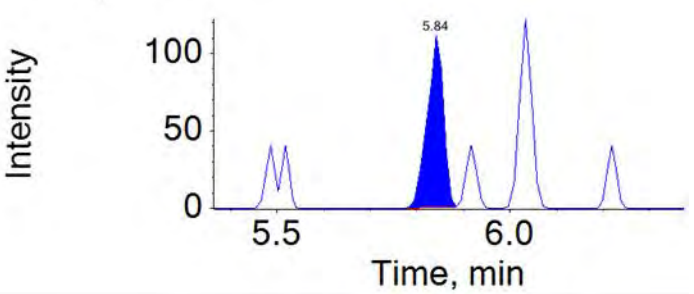
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

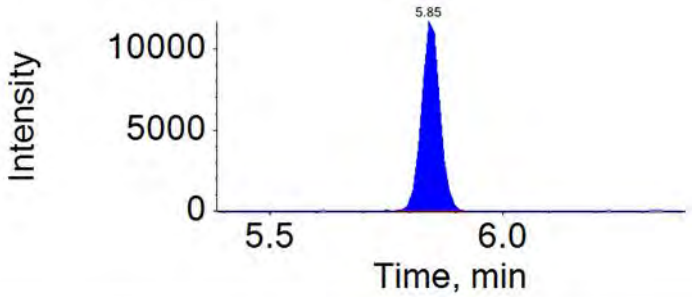
Component: PFUnDA
Primary Mass: 563.0 / 519.0



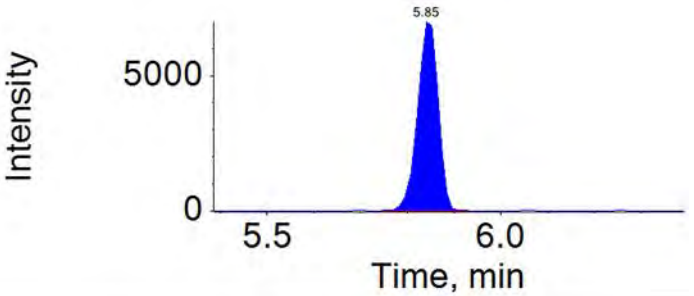
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



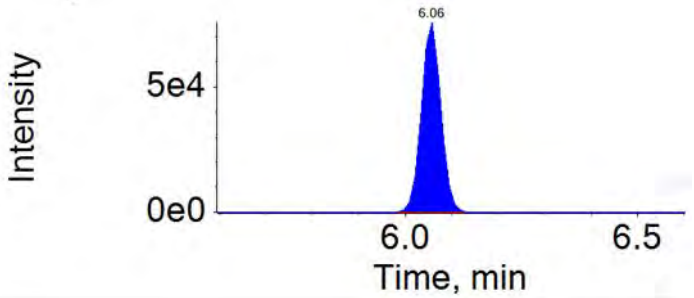
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



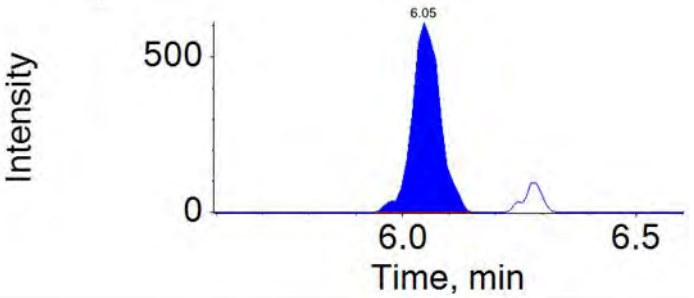
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



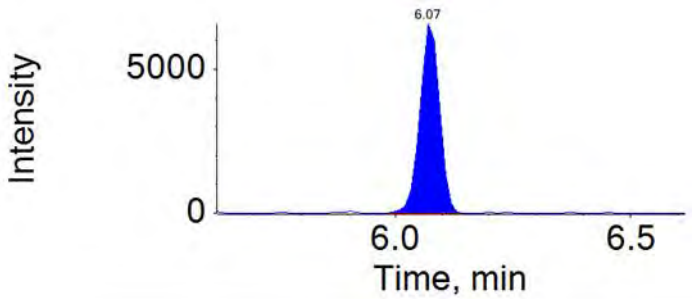
Component: PFDoDA
Primary Mass: 613.0 / 569.0



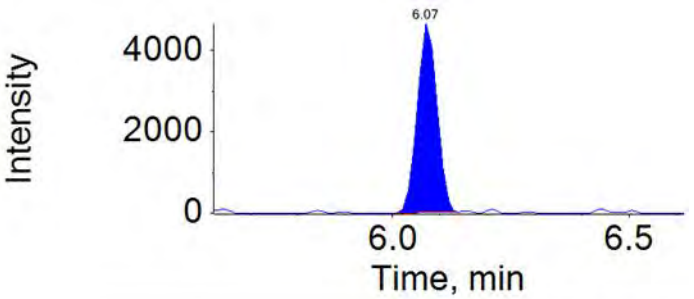
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



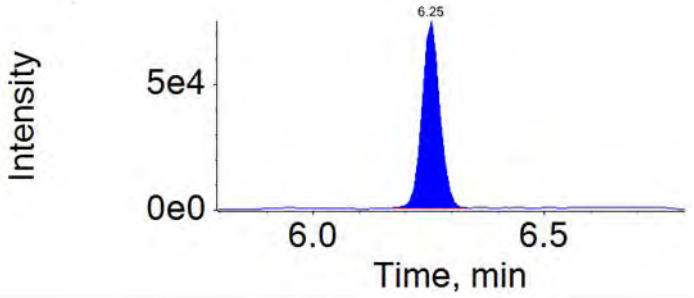
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



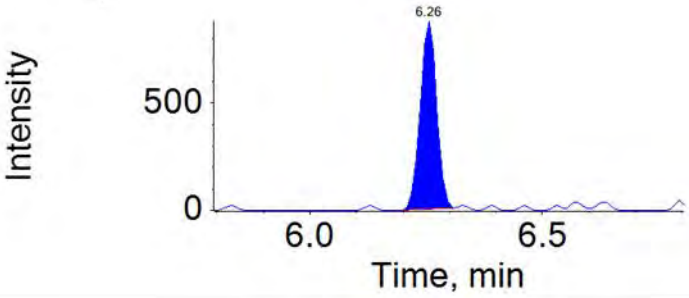
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

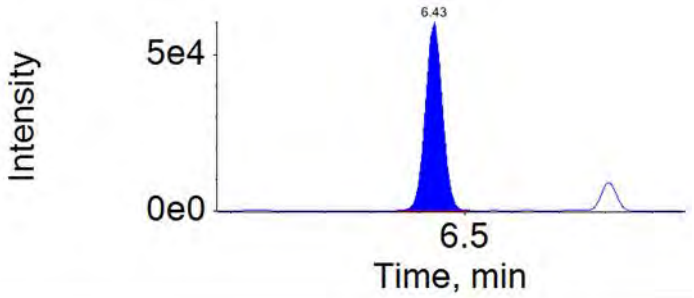
Component: PFTrDA
Primary Mass: 663.0 / 619.0



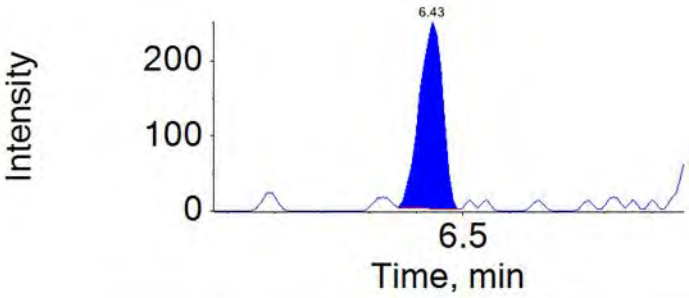
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



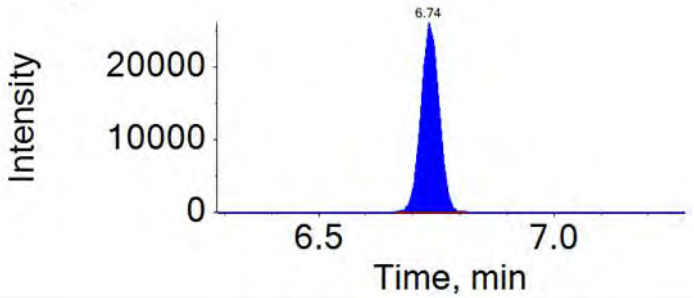
Component: PFTeDA
Primary Mass: 713.0 / 669.0



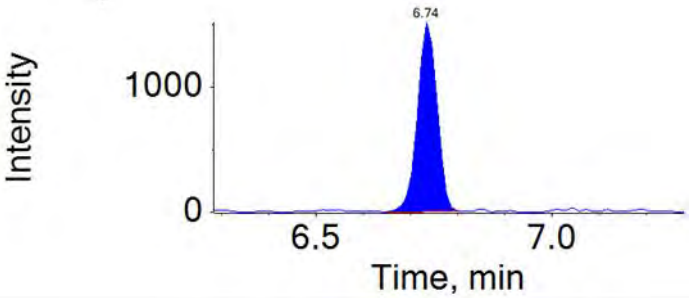
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



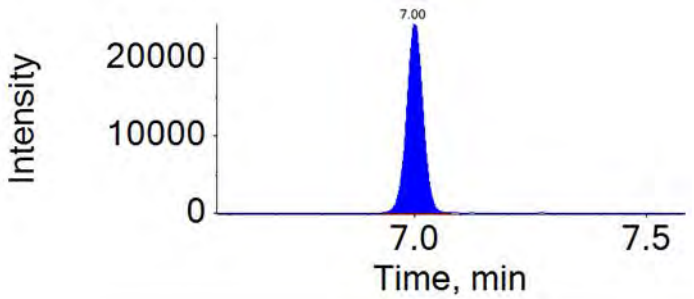
Component: PFHxDA
Primary Mass: 813.0 / 769.0



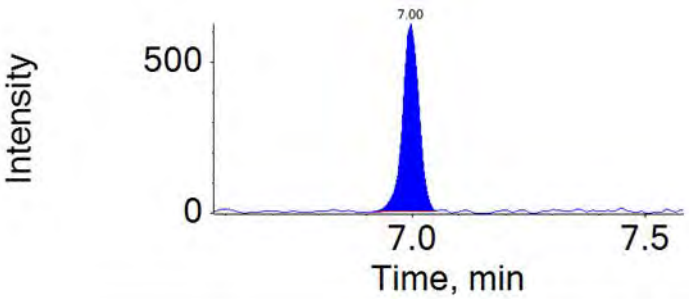
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL4			**Data File:**		18NOV07DCAL-13.wiff
Sample ID:	CALMOD41833F			**Acquis Date:**		2018-11-07T10:06:59
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	721806.8	730410.6	-1	50	
13C2-PFOA	5.0	528557.8	524423.6	1	50	
13C4-PFOS	4.8	270733.9	274061.7	-1	50	
13C2-PFDA	5.0	320985.5	311442.1	3	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	771359.1	13C3-PFBA	721806.8	1.069	5.000	4.945	99	70-130	
E13C5-PFPeA	824842.8	13C3-PFBA	721806.8	1.143	5.000	4.978	100	70-130	
E13C3-PFBS	434938.9	13C3-PFBA	721806.8	0.603	4.650	4.422	95	70-130	
E13C2-4:2-FTS	51520.6	13C2-PFOA	528557.8	0.097	4.670	4.398	94	70-130	
E13C5-PFHxA	713446.3	13C2-PFOA	528557.8	1.350	5.000	4.965	99	70-130	
E13C3-PFHxS	339090.5	13C2-PFOA	528557.8	0.642	4.730	4.606	97	70-130	
E13C4-PFHpA	592497.9	13C2-PFOA	528557.8	1.121	5.000	5.099	102	70-130	
E13C2-6:2-FTS	39121.7	13C2-PFOA	528557.8	0.074	4.750	4.936	104	70-130	
E13C8-PFOA	937287.5	13C2-PFOA	528557.8	1.773	5.000	4.945	99	70-130	
E13C8-PFOS	291941.6	13C4-PFOS	270733.9	1.078	4.780	4.768	100	70-130	
E13C9-PFNA	512147.4	13C4-PFOS	270733.9	1.892	5.000	5.167	103	70-130	
E13C6-PFDA	656868.3	13C2-PFDA	320985.5	2.046	5.000	5.146	103	70-130	
E13C2-8:2-FTS	30500.3	13C2-PFDA	320985.5	0.095	4.790	5.028	105	70-130	
E13C8-PFOSA	708330.5	13C2-PFDA	320985.5	2.207	5.000	4.815	96	70-130	
Ed3-NMeFOSAA	80900.1	13C2-PFDA	320985.5	0.252	5.000	4.687	94	70-130	
E13C7-PFUnDA	275977.2	13C2-PFDA	320985.5	0.860	5.000	4.960	99	70-130	
Ed5-NEtFOSAA	66162.4	13C2-PFDA	320985.5	0.206	5.000	4.770	95	70-130	
E13C2-PFDoDA	598287.4	13C2-PFDA	320985.5	1.864	5.000	5.025	100	70-130	
Ed7-NMePFOSAE	330968.7	13C2-PFDA	320985.5	1.031	5.000	4.795	96	70-130	
Ed3-NMePFOSA	86399.4	13C2-PFDA	320985.5	0.269	5.000	4.928	99	70-130	
Ed9-NEtPFOSAE	273909.1	13C2-PFDA	320985.5	0.853	5.000	4.873	97	70-130	
Ed5-NEtPFOSA	72258.7	13C2-PFDA	320985.5	0.225	5.000	5.212	104	70-130	
E13C2-PFTeDA	441858.1	13C2-PFDA	320985.5	1.377	5.000	4.956	99	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

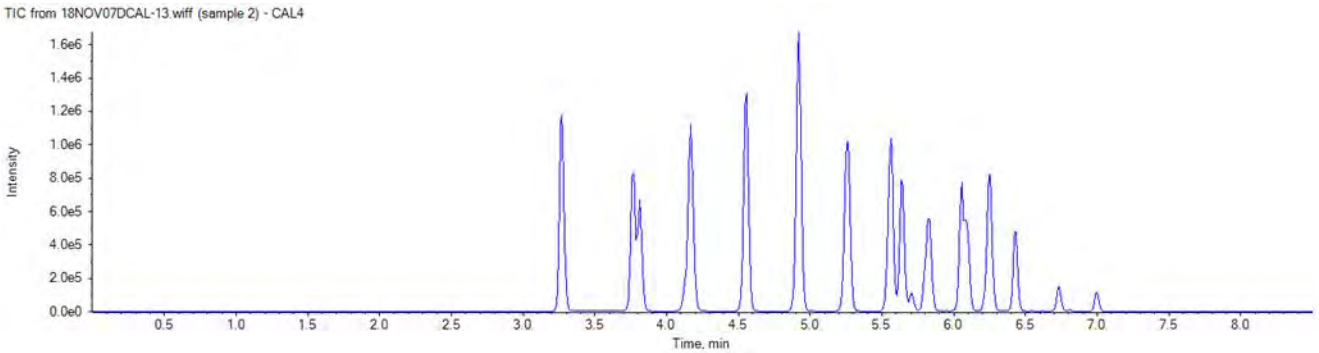
Analyte Quantitation Peak Table

Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-13.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	1152870.9		A	13C4-PFBA	3.27	771359.1	1.495	8.747
PFPeA	3.76	1.000	1165758.7		A	13C5-PFPeA	3.77	824842.8	1.413	8.399
PFBS	3.81	1.000	648524.4		A	13C3-PFBS	3.81	434938.9	1.491	7.518
4:2-FTS	4.13	1.000	153295.4		A	13C2-4:2-FTS	4.13	51520.6	2.975	7.999
PFHxA	4.16	1.000	1455862.5		A	13C5-PFHxA	4.16	713446.3	2.041	8.751
PFPeS	4.18	1.100	349358.3		A	13C3-PFBS	3.81	434938.9	0.803	7.922
PFHxS	4.55	1.000	513536.6		A	13C3-PFHxS	4.55	339090.5	1.514	7.676
PFHpA	4.55	1.000	1481489.5		A	13C4-PFHpA	4.55	592497.9	2.500	8.409
6:2-FTS	4.91	1.000	125170.2		A	13C2-6:2-FTS	4.91	39121.7	3.200	7.982
PFHpS	4.91	1.080	516333.1		A	13C3-PFHxS	4.55	339090.5	1.523	7.966
PFOA	4.92	1.000	1491946.3		A	13C8-PFOA	4.92	937287.5	1.592	8.963
PFOS	5.25	1.000	447769.0		A	13C8-PFOS	5.25	291941.6	1.534	7.953
PFNA	5.27	1.000	1179151.8		A	13C9-PFNA	5.26	512147.4	2.302	8.604
PFNS	5.54	1.060	305013.7		A	13C8-PFOS	5.25	291941.6	1.045	8.284
PFDA	5.56	1.000	1029893.8		A	13C6-PFDA	5.56	656868.3	1.568	8.626
8:2-FTS	5.57	1.000	106591.3		A	13C2-8:2-FTS	5.57	30500.3	3.495	7.877
PFOSA	5.64	1.000	1119770.1		A	13C8-PFOSA	5.64	708330.5	1.581	8.545
NMeFOSAA	5.71	1.000	136316.9		A	d3-NMeFOSAA	5.70	80900.1	1.685	8.670
PFDS	5.80	1.110	250911.0		A	13C8-PFOS	5.25	291941.6	0.859	8.210
PFUnDA	5.83	1.000	802732.3		A	13C7-PFUnDA	5.83	275977.2	2.909	8.341
NEtFOSAA	5.84	1.000	121615.1		A	d5-NEtFOSAA	5.84	66162.4	1.838	7.900
PFDoDA	6.05	1.000	877242.2		A	13C2-PFDoDA	6.05	598287.4	1.466	7.946
10:2-FTS	6.07	1.090	69275.8		A	13C2-8:2-FTS	5.57	30500.3	2.271	7.073
NMePFOSAE	6.09	1.000	648523.4		A	d7-NMePFOSAE	6.08	330968.7	1.959	8.781
NMePFOSA	6.10	1.000	118194.2		A	d3-NMePFOSA	6.10	86399.4	1.368	7.657
PFDoS	6.22	1.190	121590.1		A	13C8-PFOS	5.25	291941.6	0.416	8.039
NEtPFOSAE	6.25	1.000	740427.4		A	d9-NEtPFOSAE	6.24	273909.1	2.703	8.666
NEtPFOSA	6.26	1.000	123609.2		A	d5-NEtPFOSA	6.26	72258.7	1.711	7.534
PFTrDA	6.25	1.030	781283.7		A	13C2-PFDoDA	6.05	598287.4	1.306	8.235
PFTeDA	6.43	1.000	630801.4		A	13C2-PFTeDA	6.43	441858.1	1.428	8.383
PFHxDA	6.73	1.050	297242.6		A	13C2-PFTeDA	6.43	441858.1	0.673	8.351
PFODA	7.00	1.090	251726.5		A	13C2-PFTeDA	6.43	441858.1	0.570	8.162

Total Ion Chromatogram

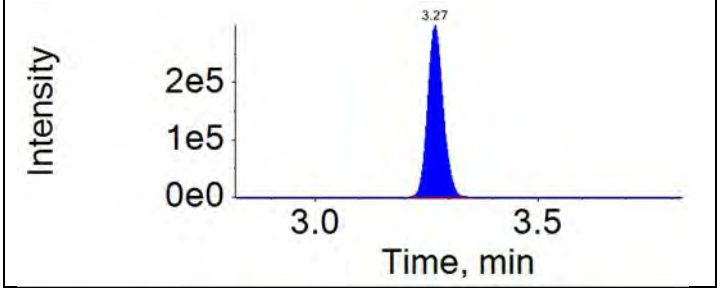


APPROVED
By JPT at 2:53 pm, 11/7/18

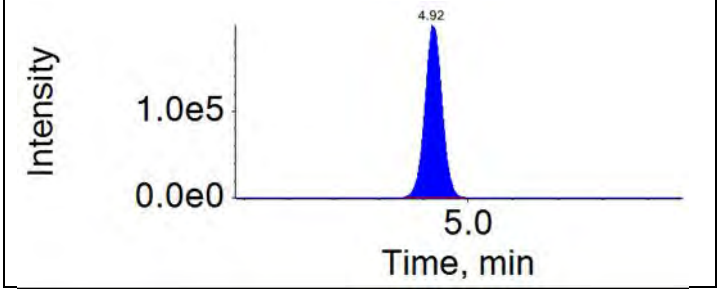
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

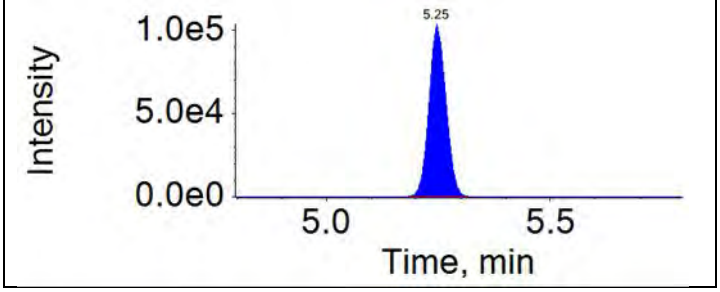
Injection Standard: 13C3-PFBA
216.0 / 172.0



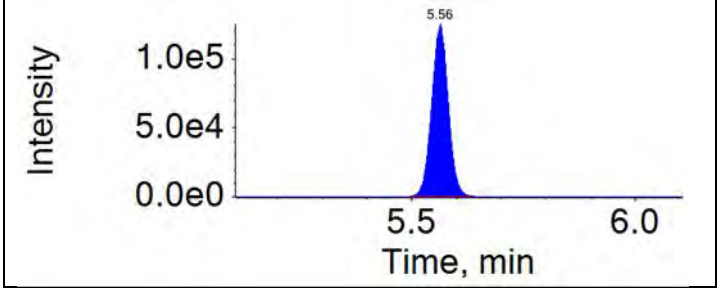
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



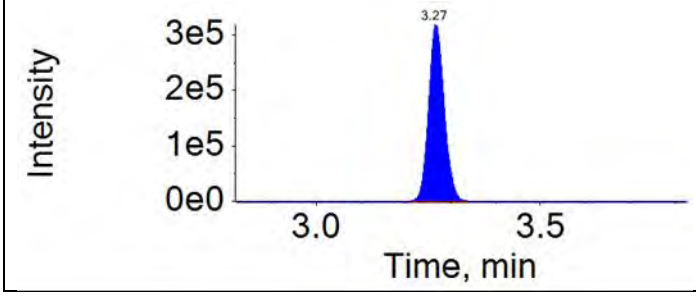
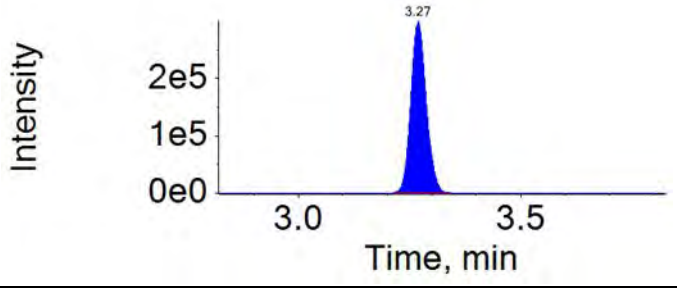
Injection Standard: 13C2-PFDA
515.0 / 470.0

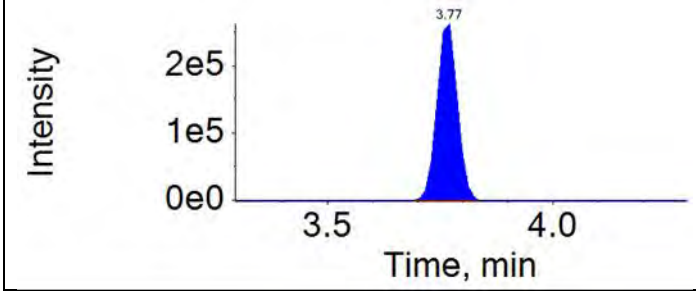
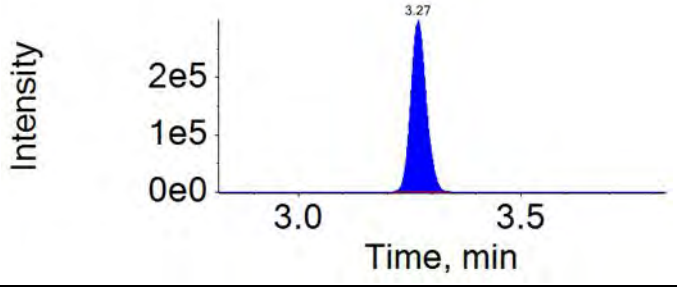


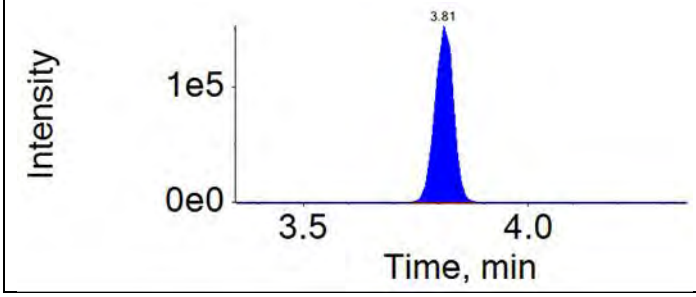
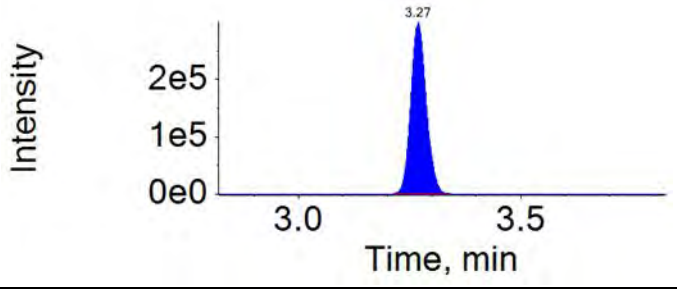
APPROVED
By JPT at 2:53 pm, 11/7/18

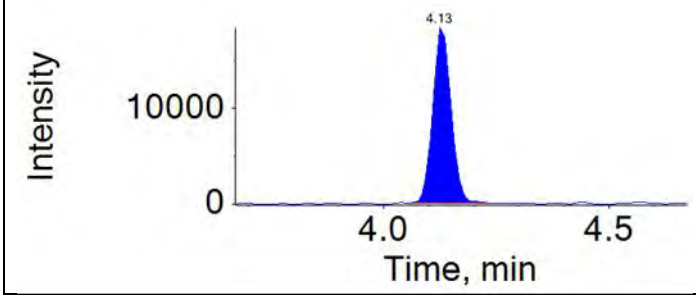
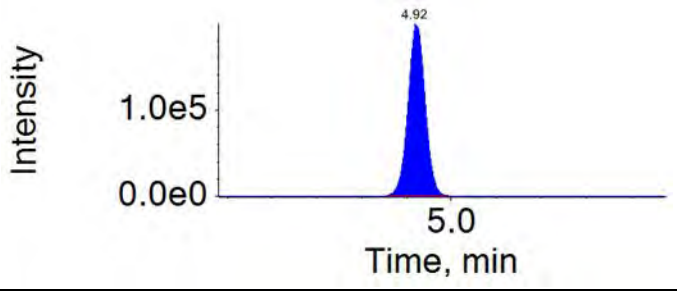
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

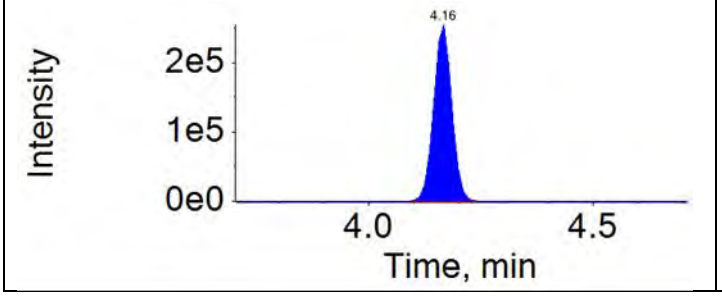
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

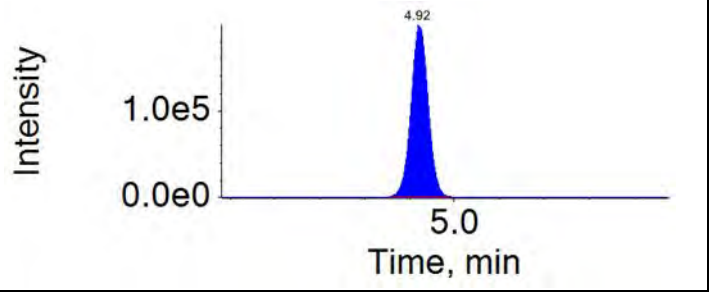
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

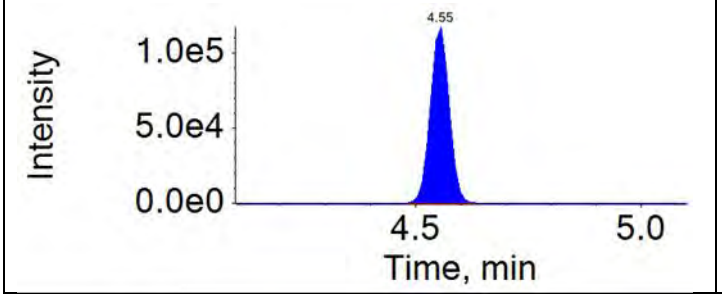
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

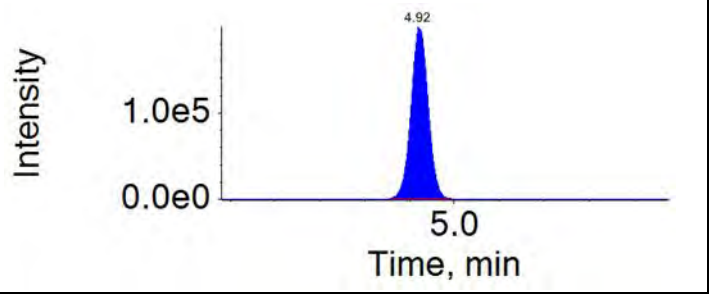
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



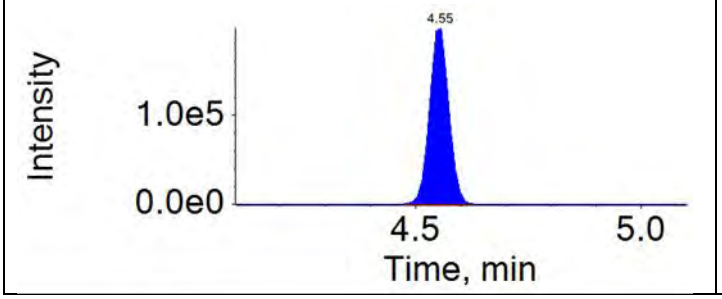


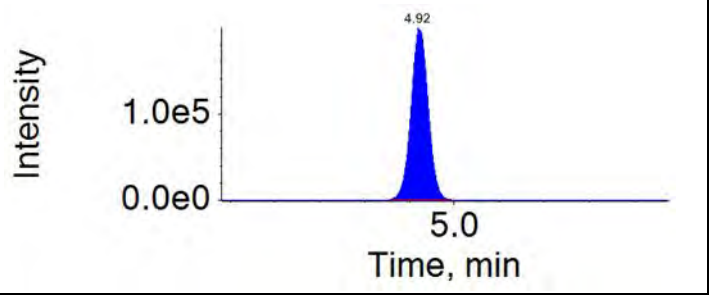
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



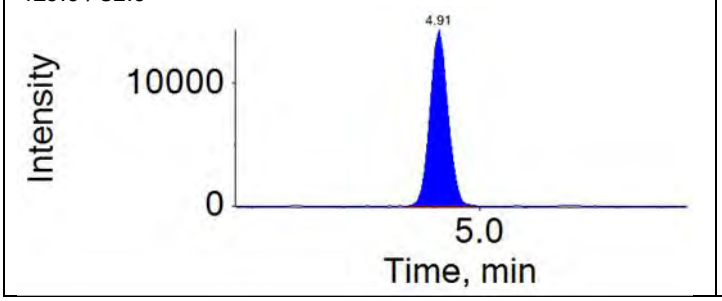


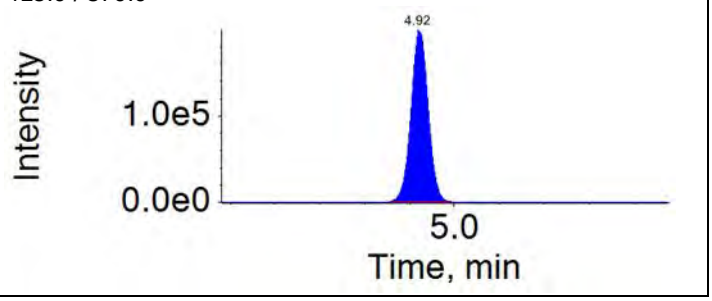
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



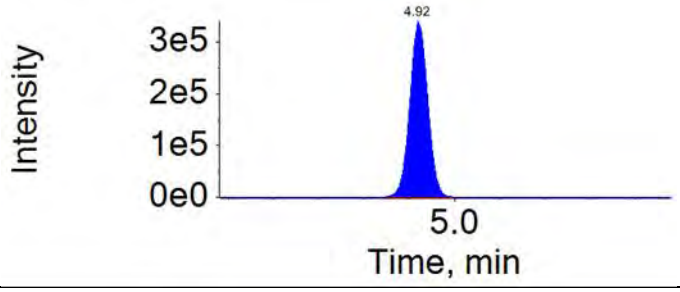
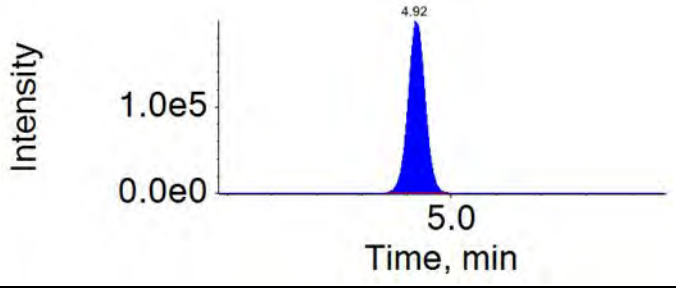


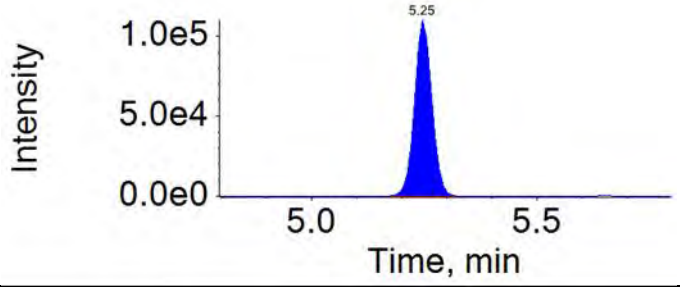
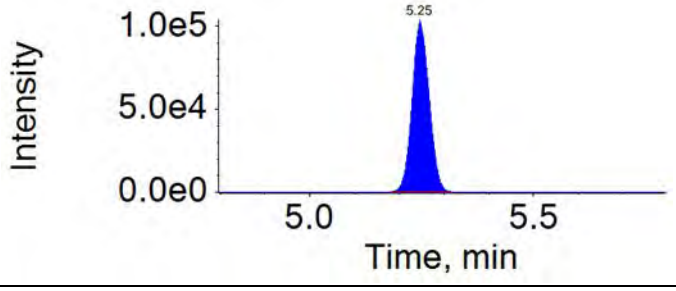
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

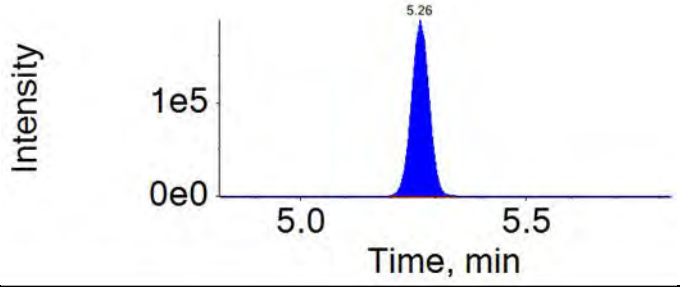
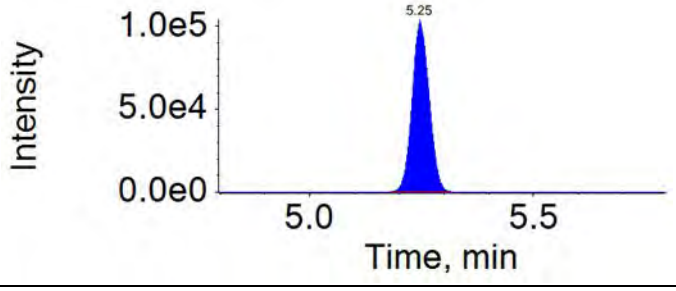


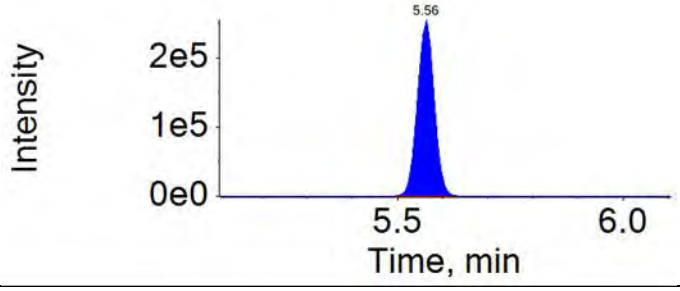
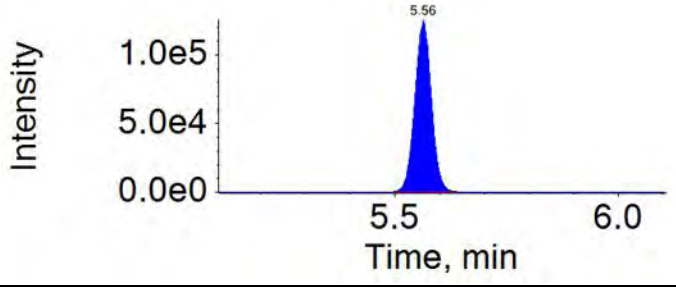


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

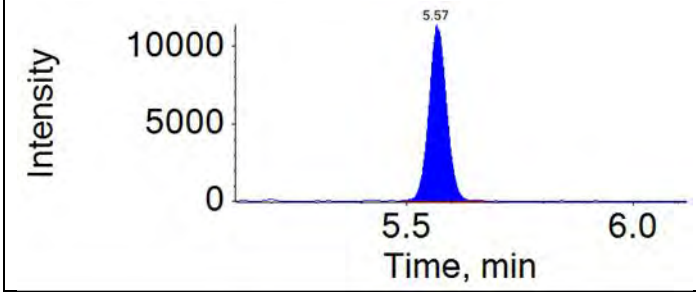
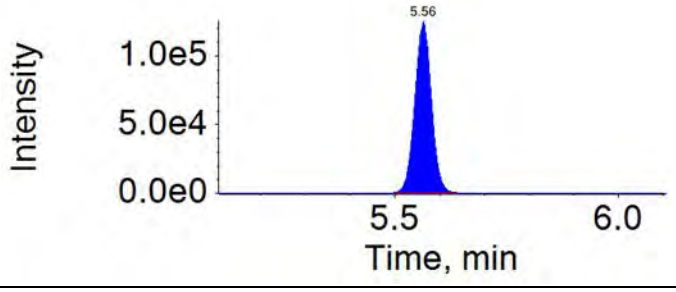
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

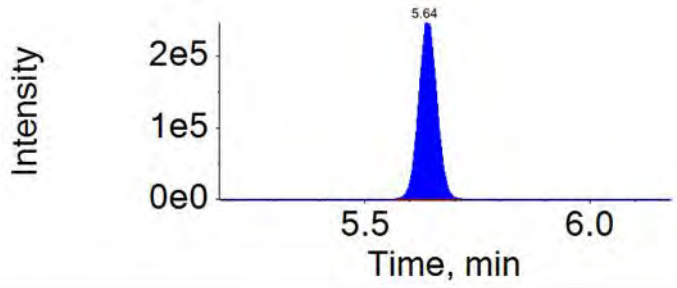
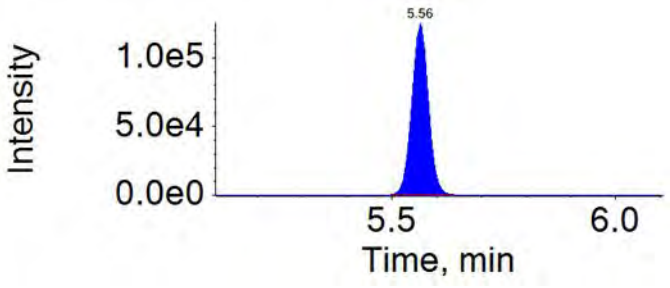
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

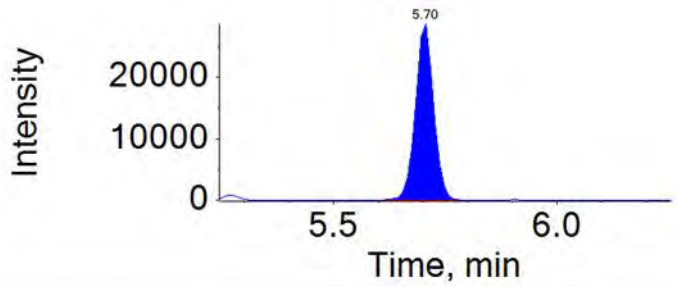
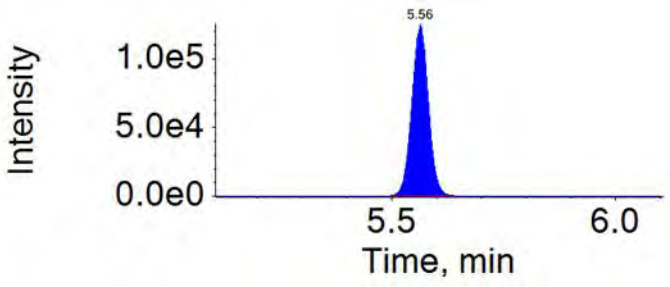
APPROVED
By JPT at 2:53 pm, 11/7/18

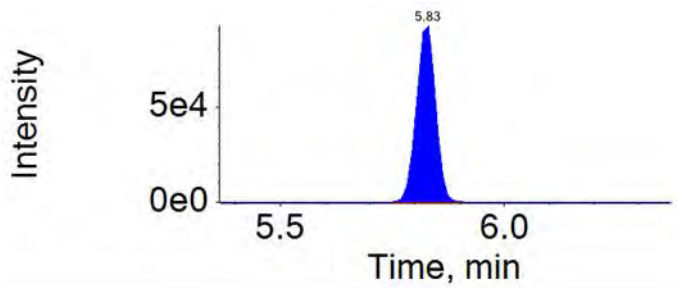
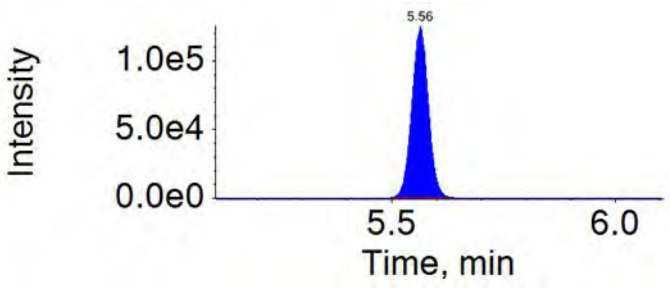
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

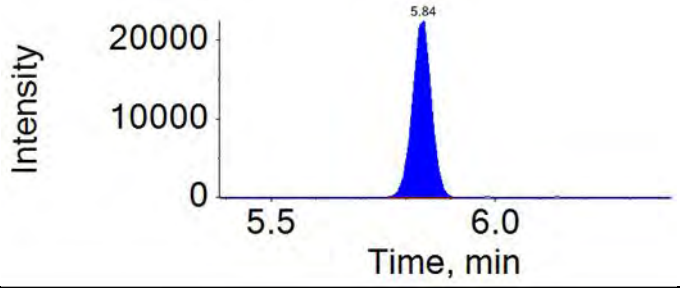
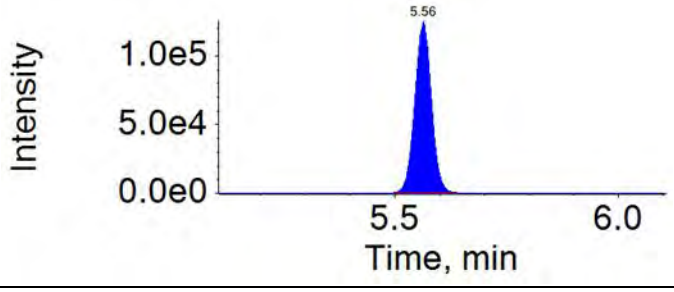
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

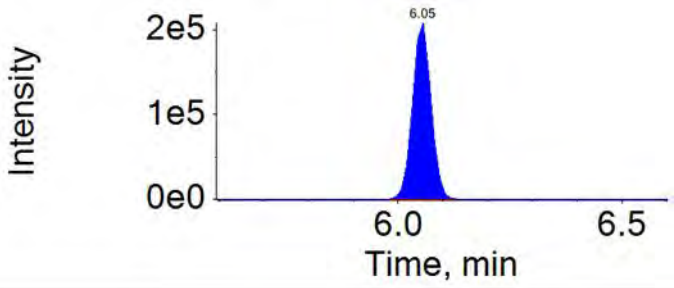
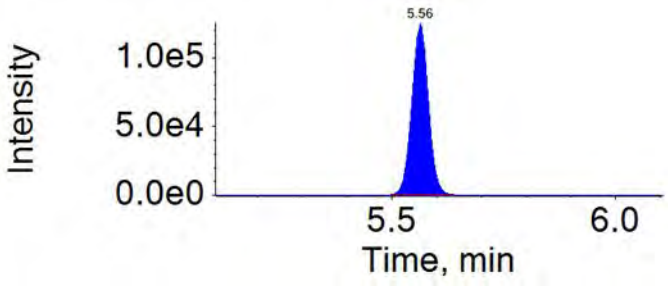
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

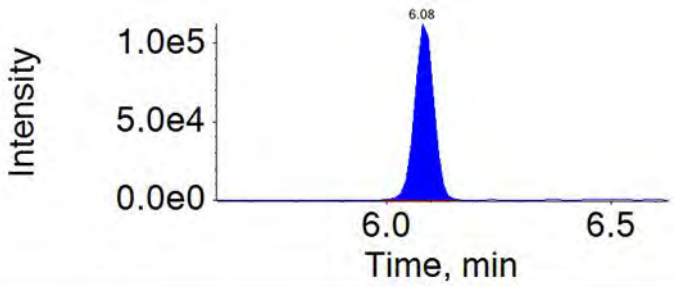
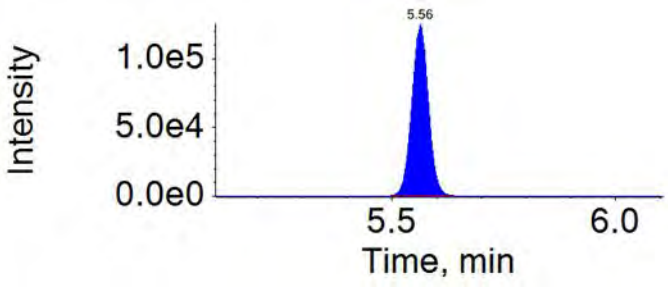
APPROVED
By JPT at 2:53 pm, 11/7/18

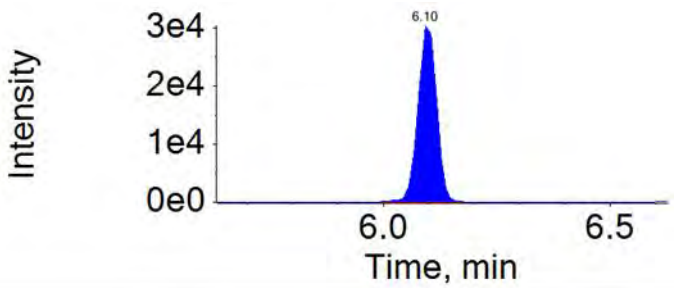
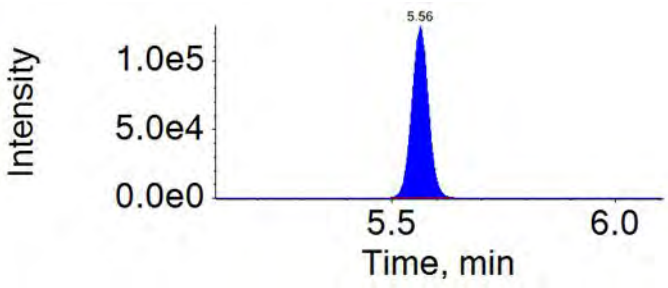
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

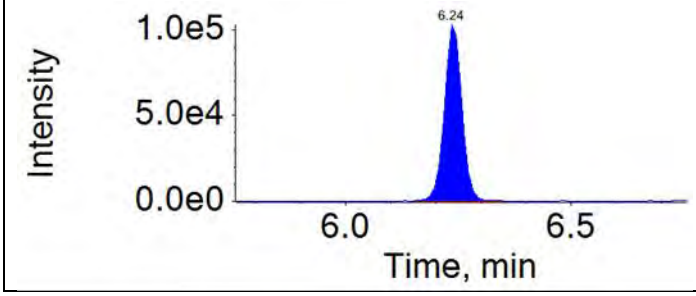
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

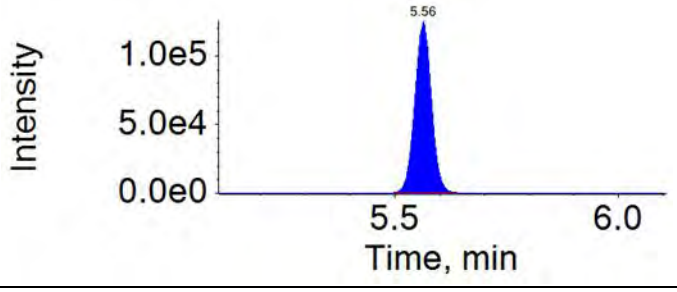
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

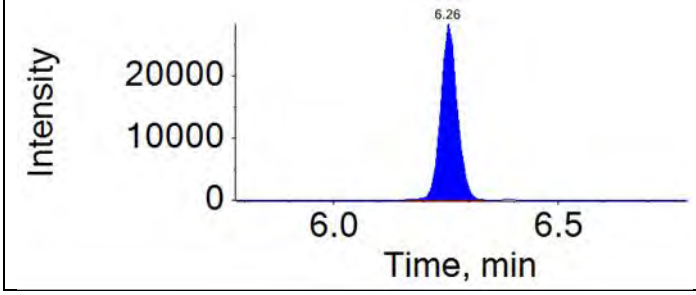
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

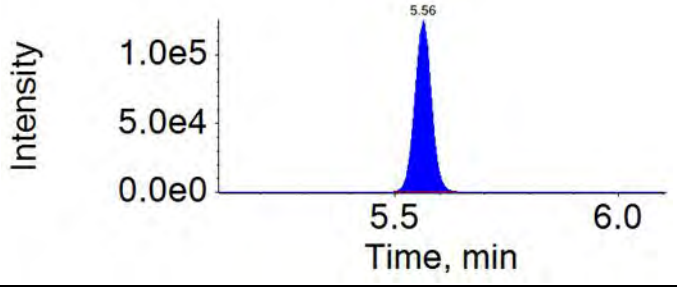
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



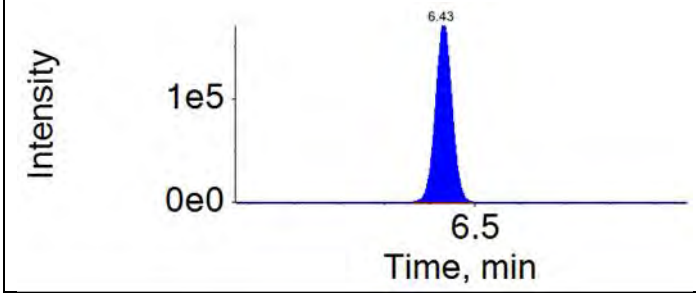


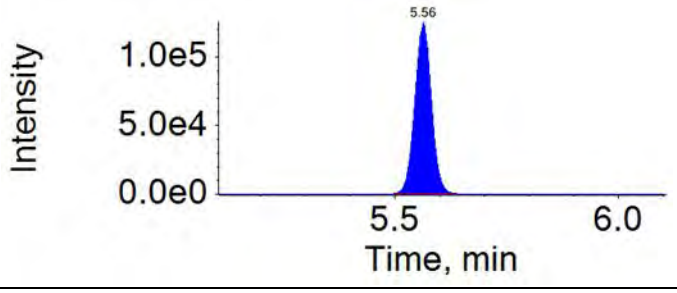
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

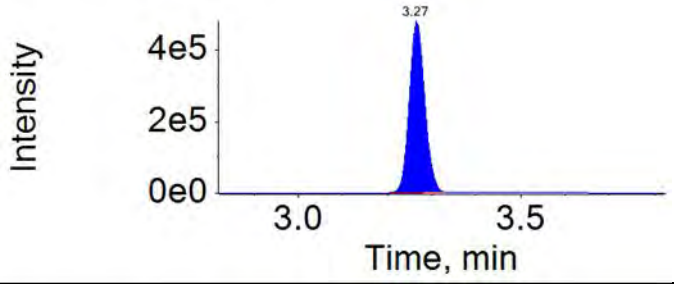
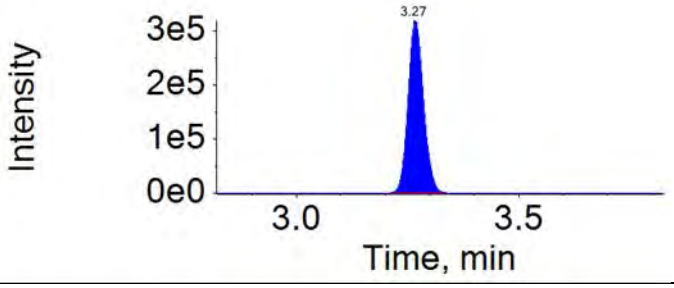


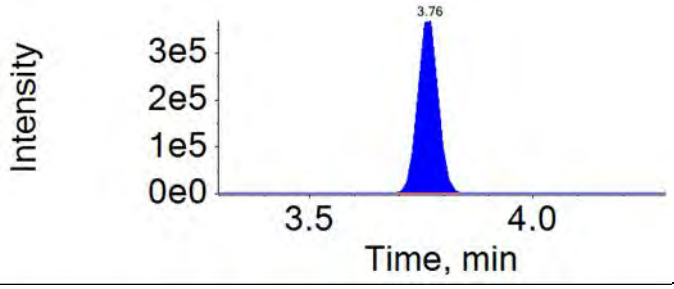
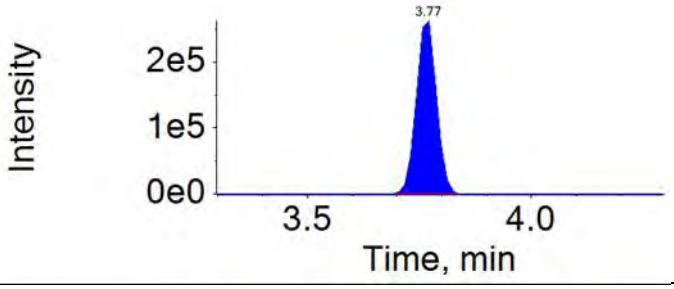


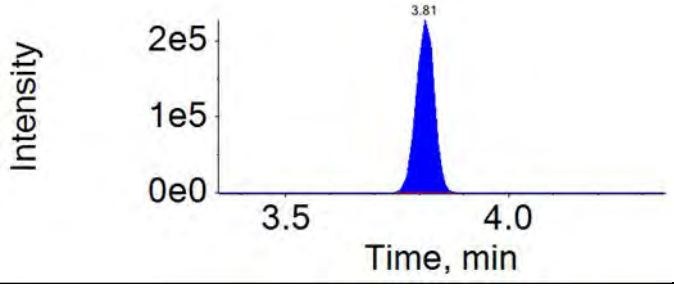
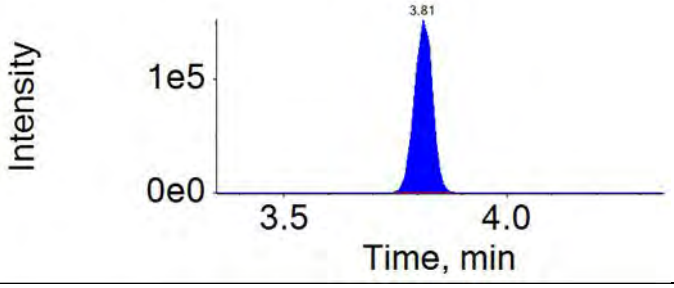
APPROVED
By JPT at 2:53 pm, 11/7/18

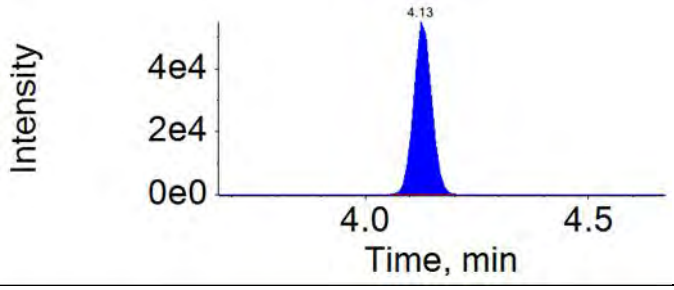
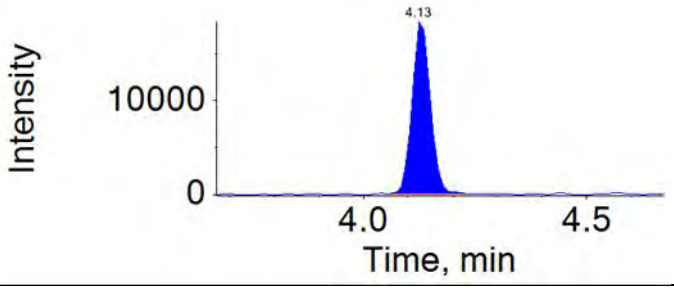
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

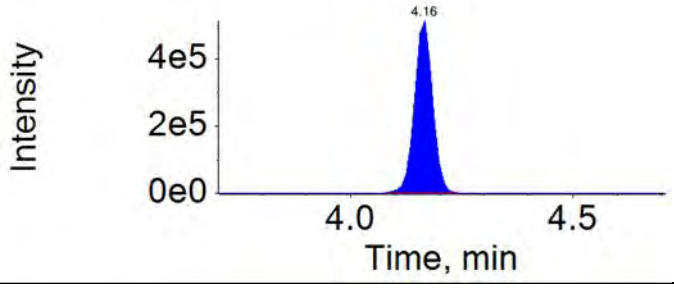
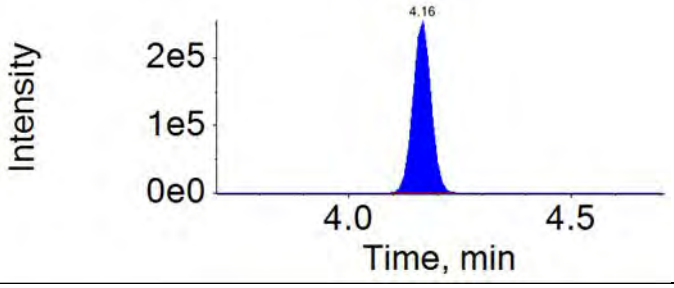
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

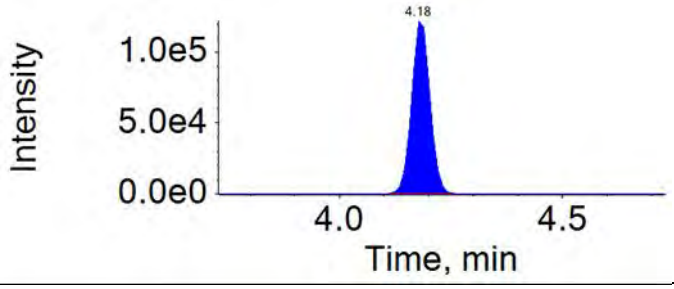
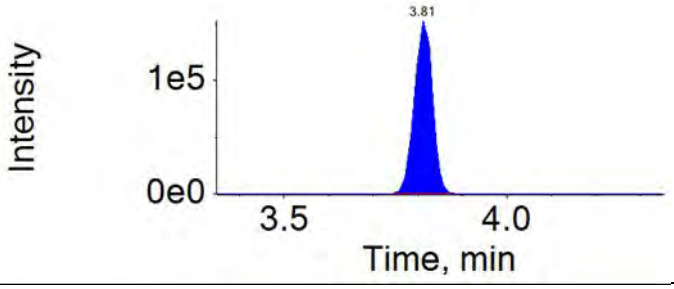
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

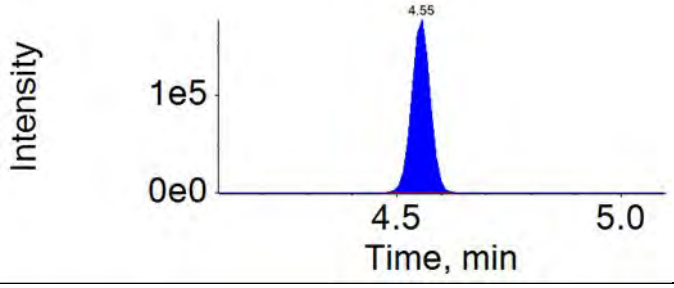
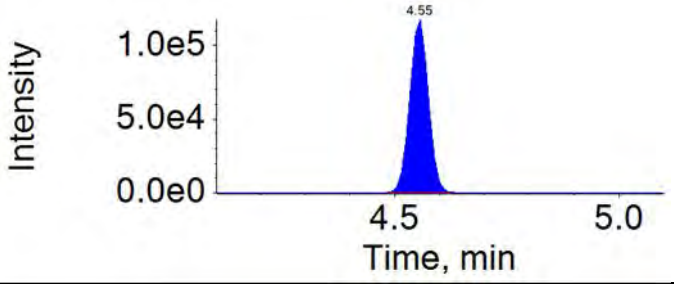
APPROVED
By JPT at 2:53 pm, 11/7/18

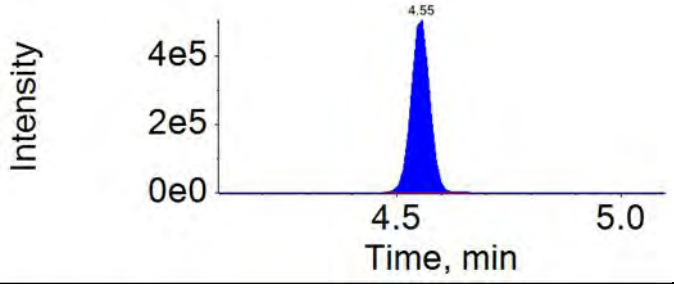
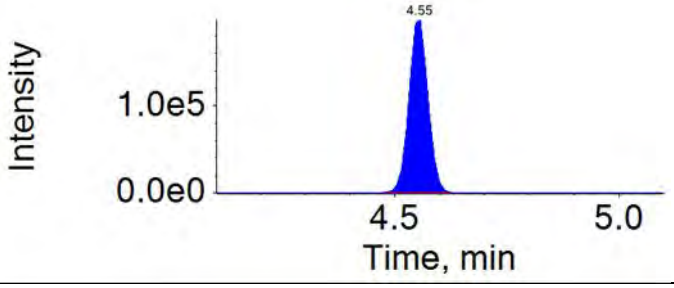
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

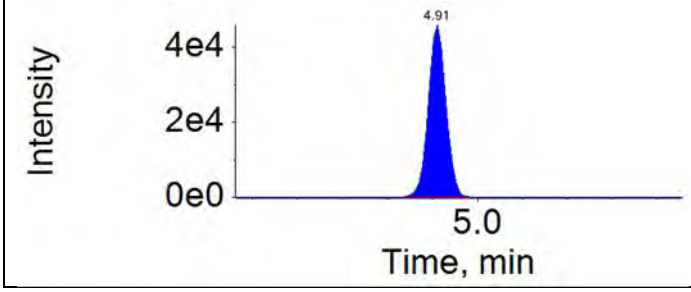
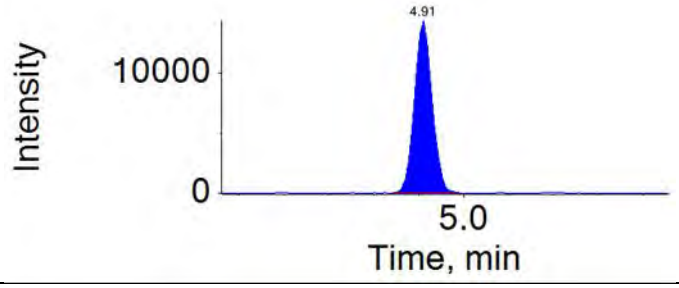
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

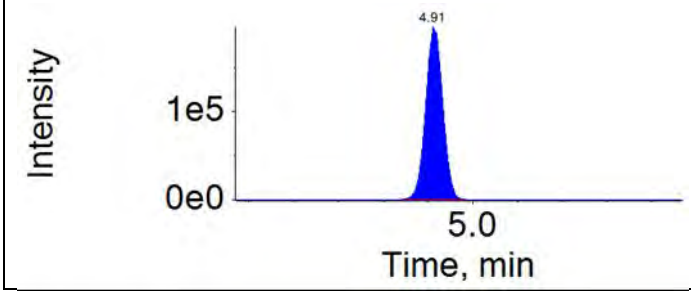
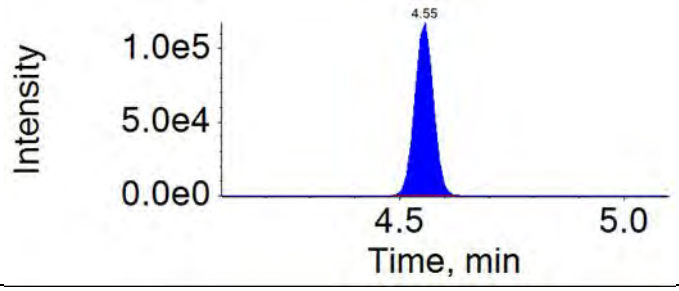
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

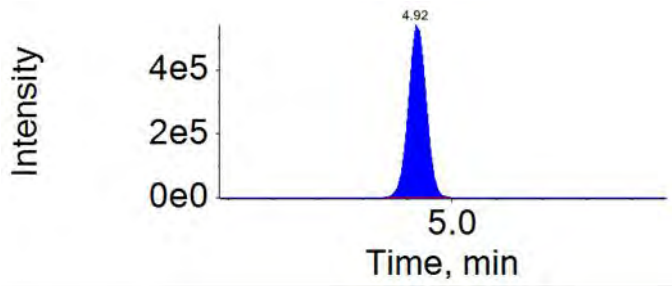
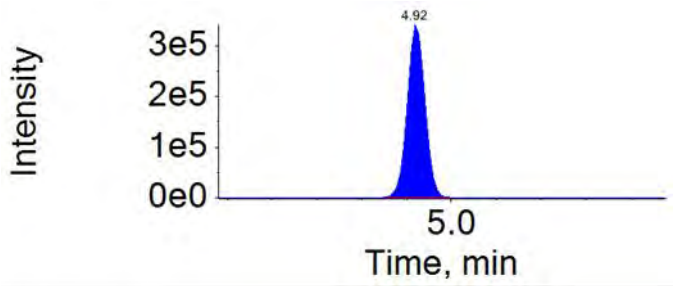
APPROVED
By JPT at 2:53 pm, 11/7/18

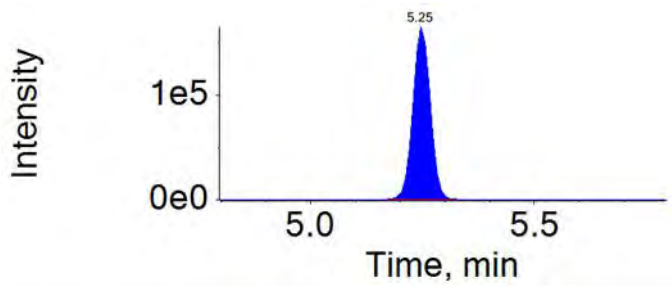
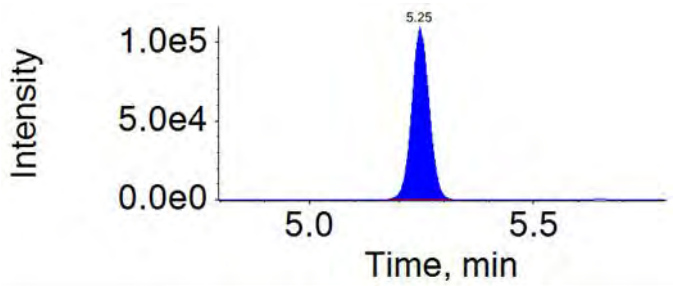
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

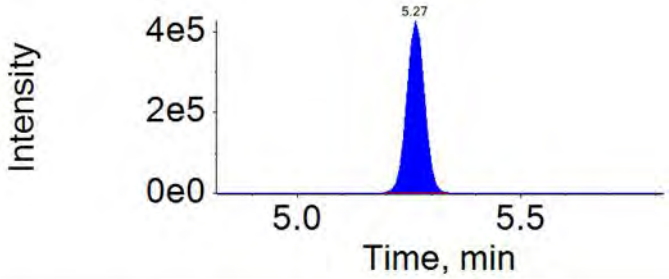
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

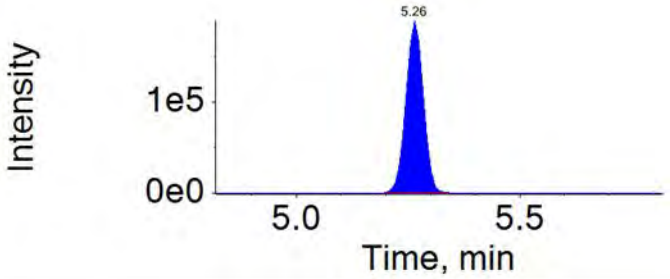
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

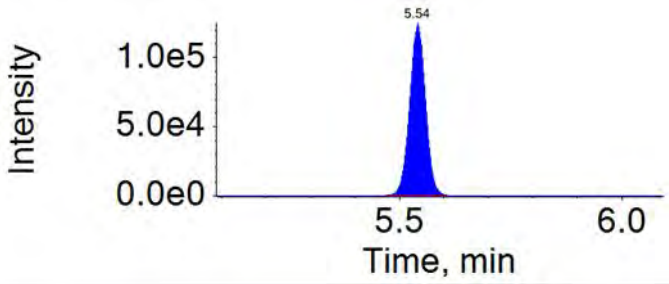
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

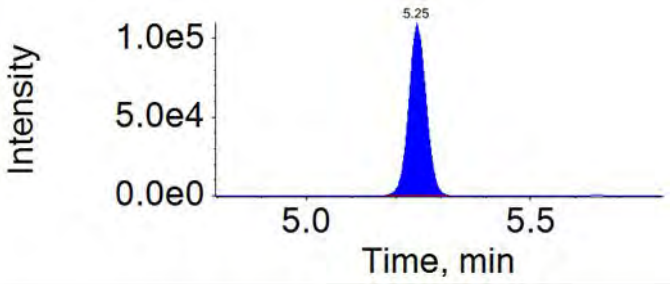
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



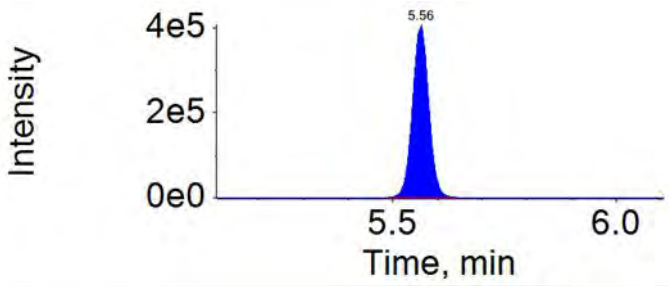


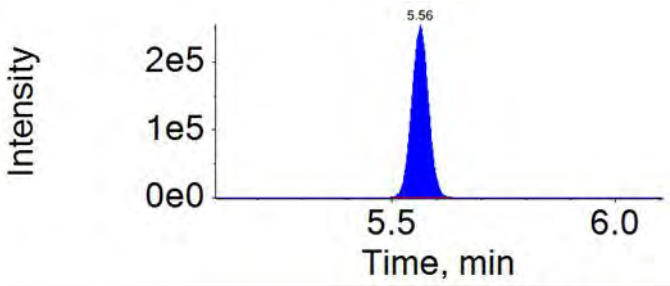
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



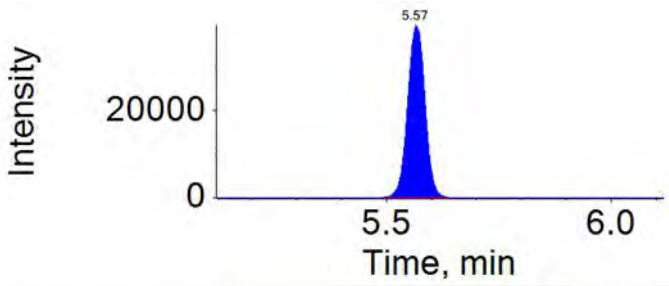


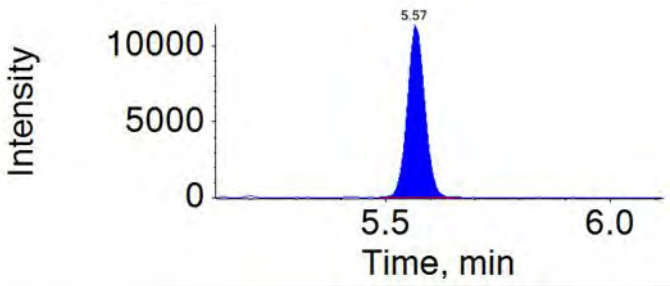
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

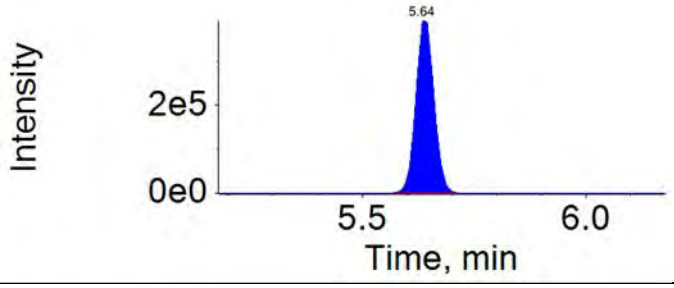
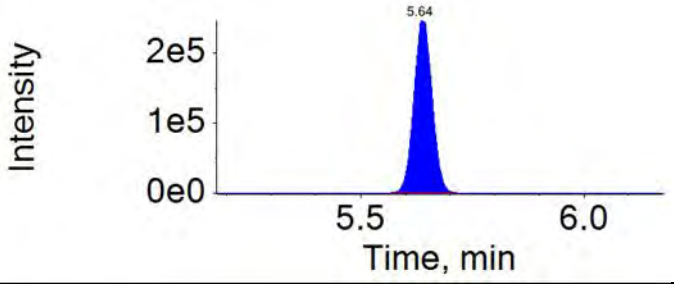


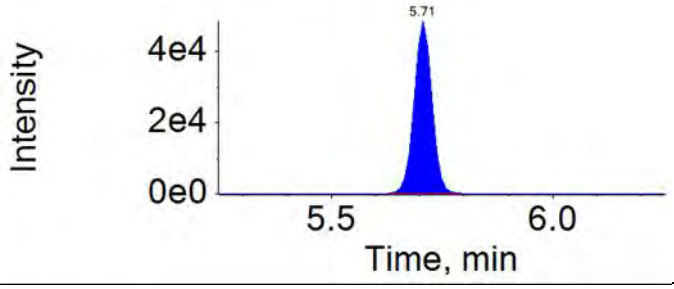
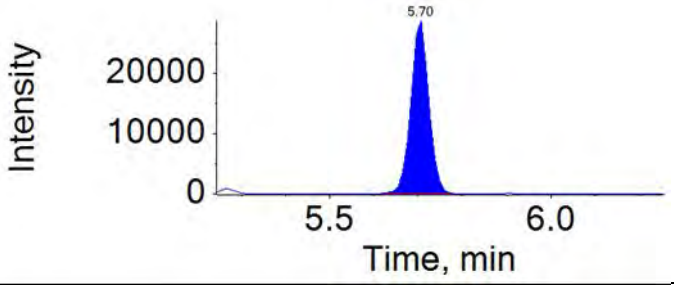


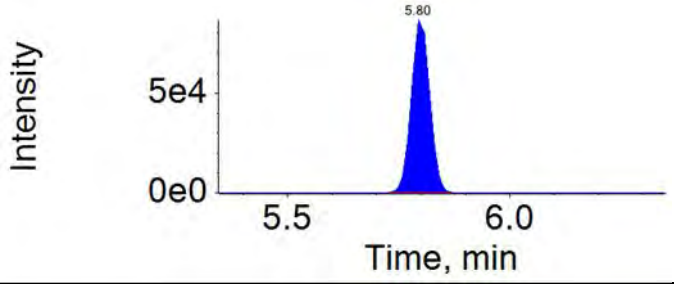
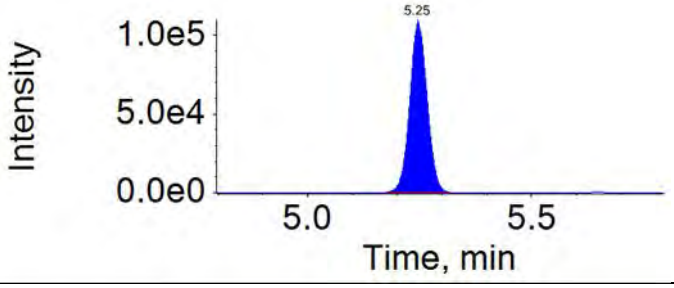
APPROVED
By JPT at 2:53 pm, 11/7/18

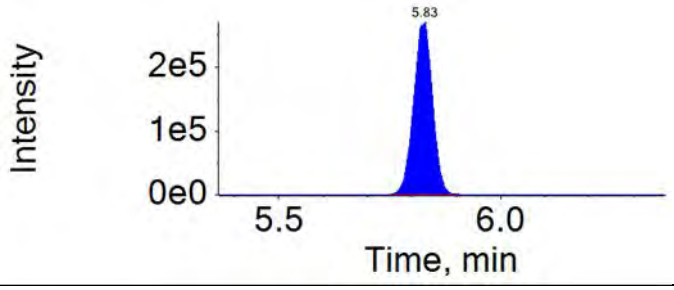
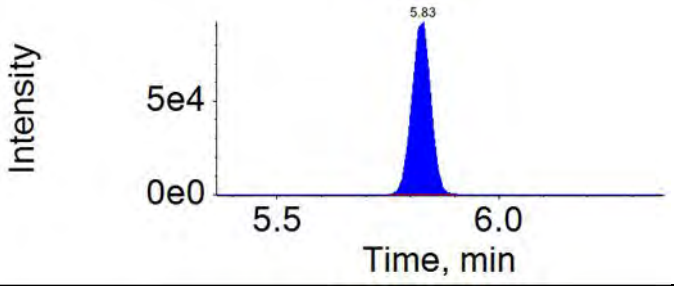
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

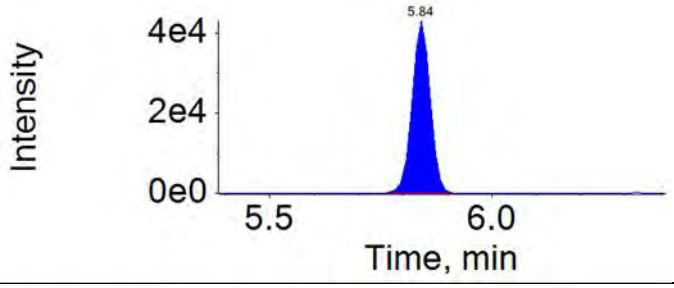
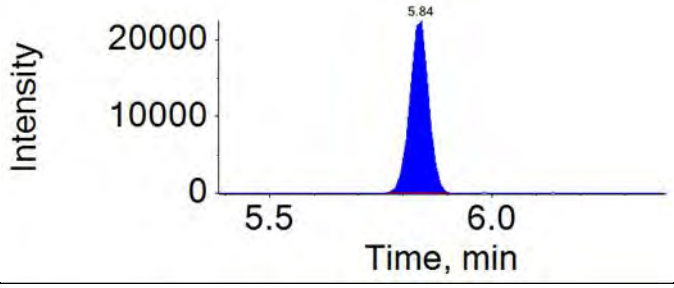
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

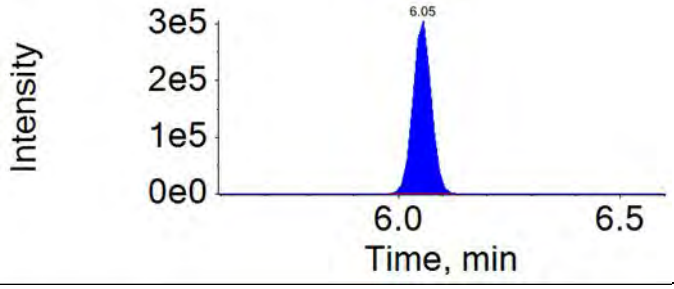
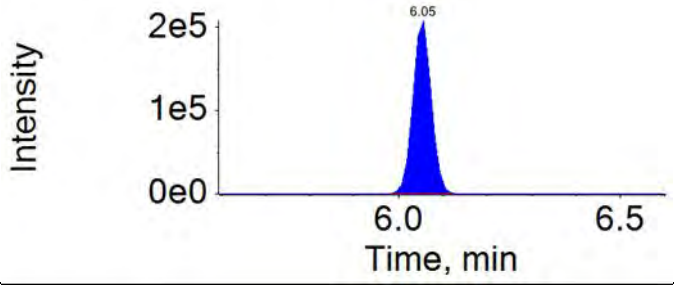
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

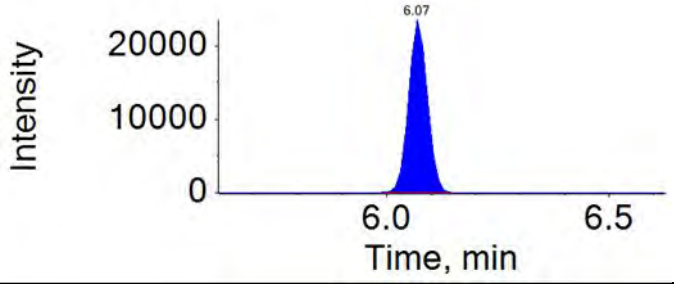
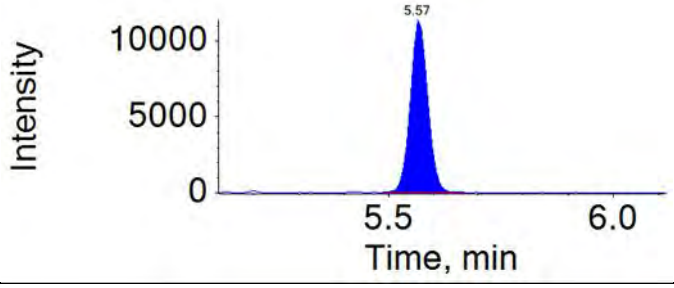
APPROVED
By JPT at 2:53 pm, 11/7/18

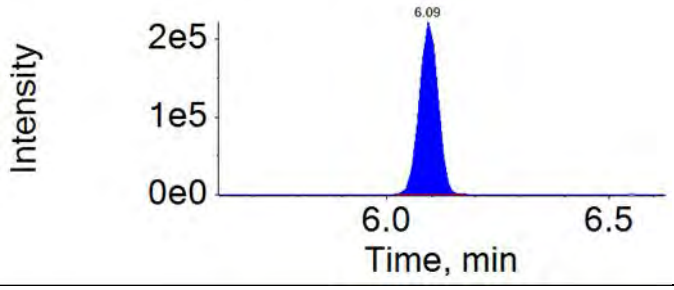
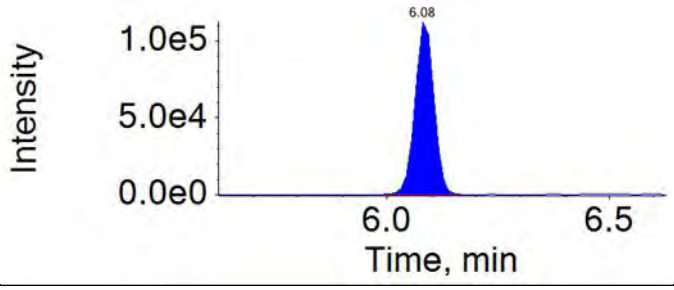
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

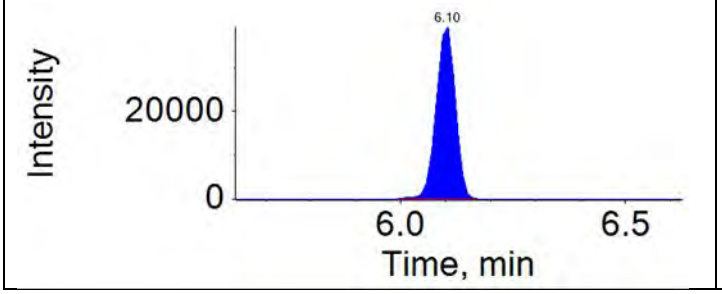
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

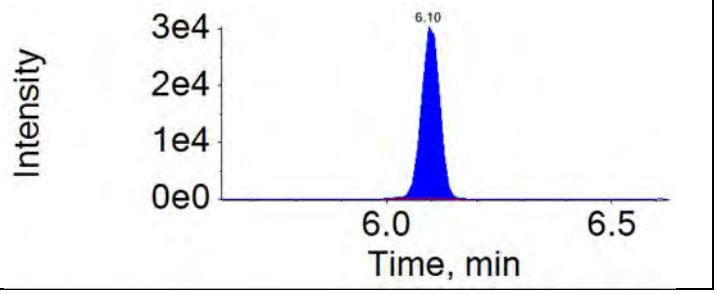
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

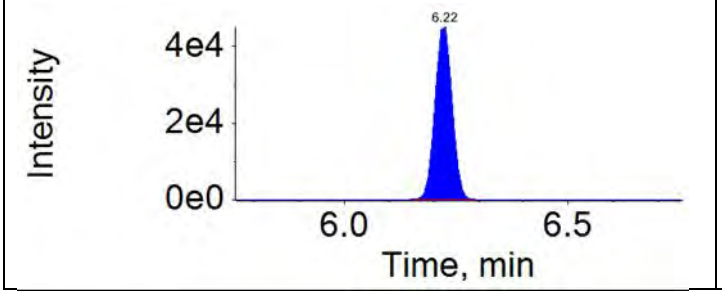
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

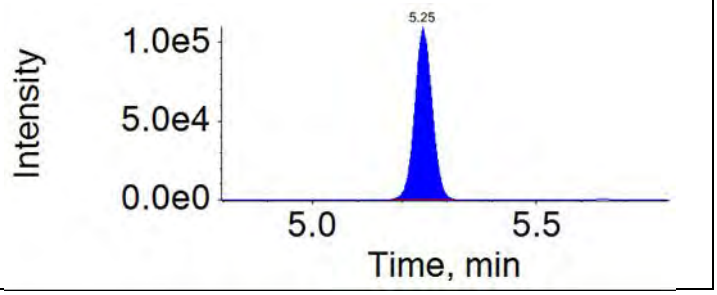
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



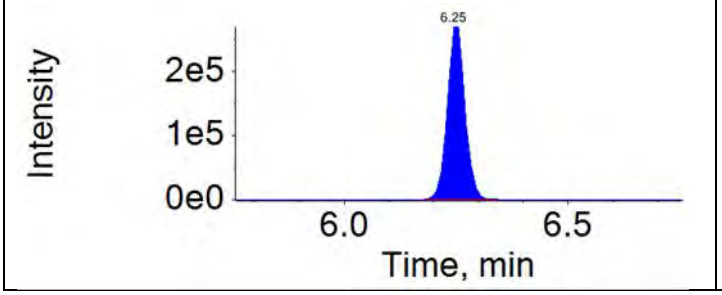


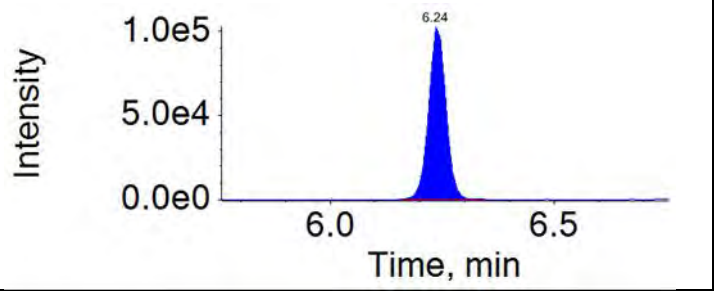
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



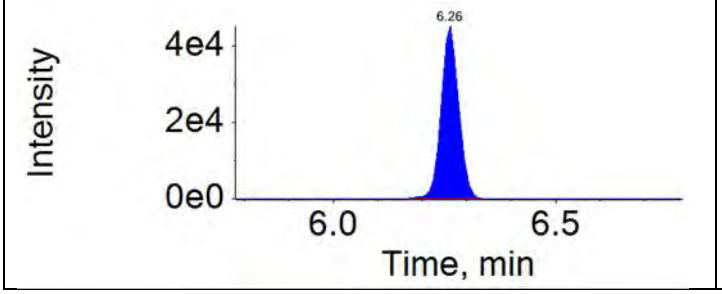


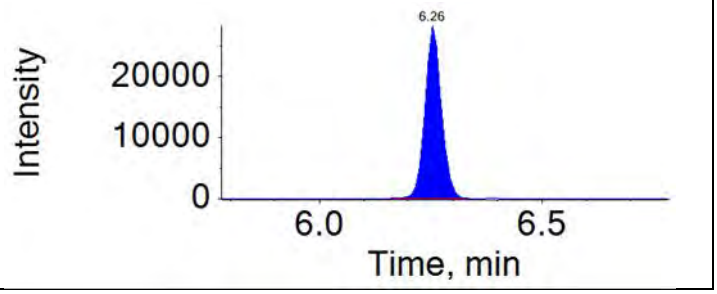
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

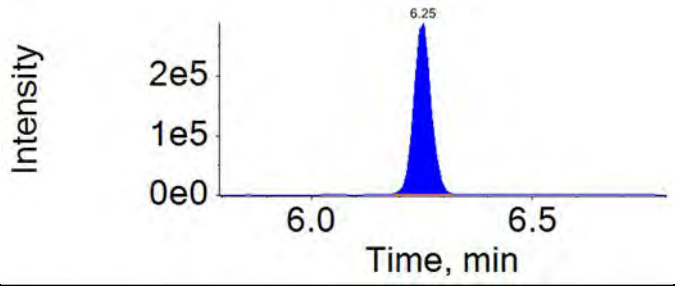
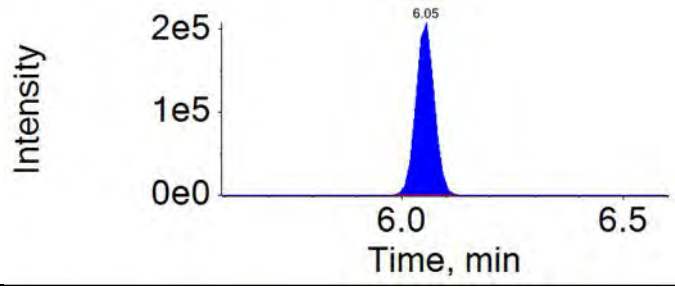


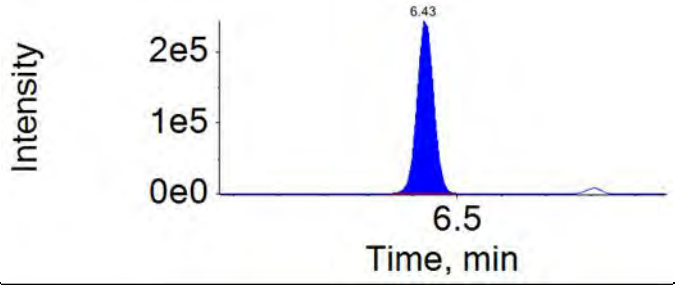
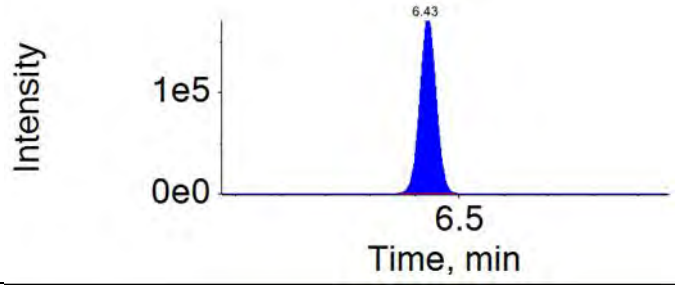


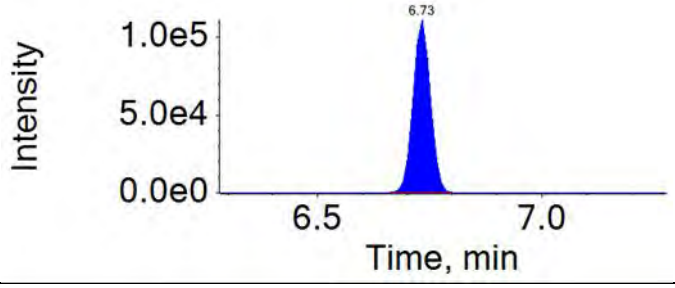
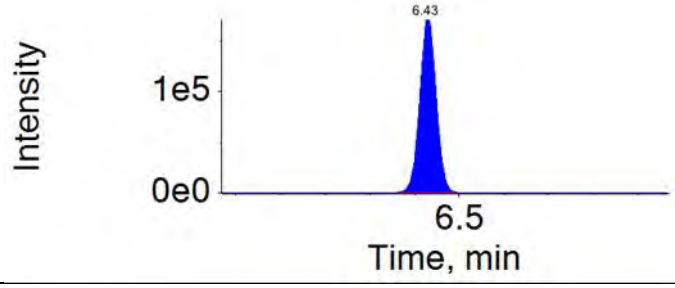
APPROVED
By JPT at 2:53 pm, 11/7/18

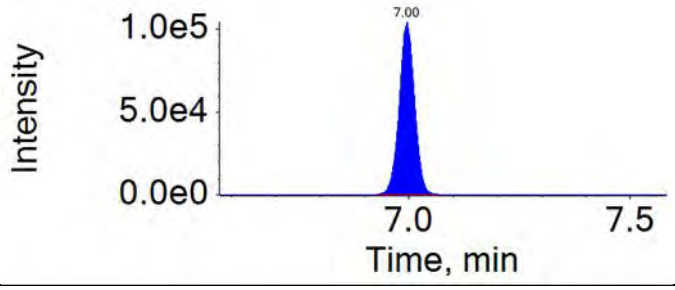
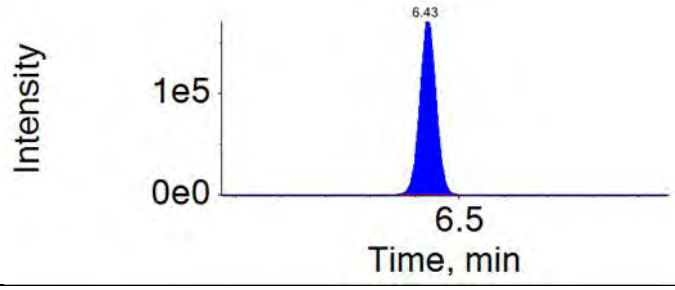
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

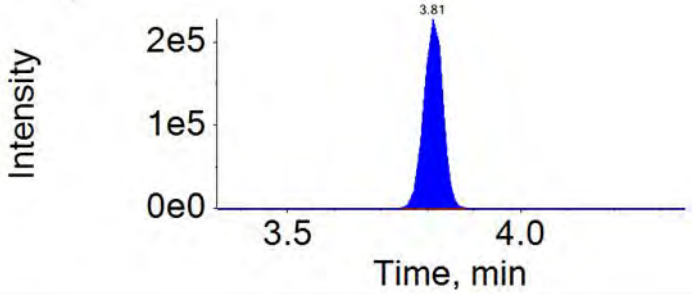
Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-13.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	648524.4	A	1.0000	1.0000			
PFBS_2	3.81	1.00	251751.9	A	0.3576	0.3882	9	50	
4:2-FTS	4.13	1.00	153295.4	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	92676.3	A	0.6359	0.6046	-5	50	
PFHxA	4.16	1.00	1455862.5	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	17238.3	A	0.0115	0.0118	3	50	
PFPeS	4.18	1.10	349358.3	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	186638.0	A	0.5384	0.5342	-1	50	
PFHxS	4.55	1.00	513536.6	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	191630.2	A	0.3569	0.3732	5	50	
PFHpA	4.55	1.00	1481489.5	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	81361.9	A	0.0577	0.0549	-5	50	
6:2-FTS	4.91	1.00	125170.2	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	79402.5	A	0.6752	0.6344	-6	50	
PFHpS	4.91	1.08	516333.1	A	1.0000	1.0000			
PFHpS_2	4.91	1.08	209566.6	A	0.3950	0.4059	3	50	
PFOA	4.92	1.00	1491946.3	A	1.0000	1.0000			
PFOA_2	4.92	1.00	87116.1	A	0.0635	0.0584	-8	50	
PFOS	5.25	1.00	447769.0	A	1.0000	1.0000			
PFOS_2	5.25	1.00	153925.0	A	0.3494	0.3438	-2	50	
PFNA	5.27	1.00	1179151.8	A	1.0000	1.0000			
PFNA_2	5.26	1.00	25252.4	A	0.0207	0.0214	4	50	
PFNS	5.54	1.06	305013.7	A	1.0000	1.0000			
PFNS_2	5.54	1.06	144136.3	A	0.4890	0.4726	-3	50	
PFDA	5.56	1.00	1029893.8	A	1.0000	1.0000			
PFDA_2	5.56	1.00	7604.6	A	0.0057	0.0074	31	50	
8:2-FTS	5.57	1.00	106591.3	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	64856.7	A	0.6169	0.6085	-1	50	
NMeFOSAA	5.71	1.00	136316.9	A	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	30839.5	A	0.2206	0.2262	3	50	
PFDS	5.80	1.11	250911.0	A	1.0000	1.0000			
PFDS_2	5.80	1.11	110579.9	A	0.4648	0.4407	-5	50	
PFUnDA	5.83	1.00	802732.3	A	1.0000	1.0000			
PFUnDA_2	5.83	1.00	3336.4	A	0.0031	0.0042	32	50	
NEtFOSAA	5.84	1.00	121615.1	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	75878.8	A	0.6082	0.6239	3	50	
PFDoDA	6.05	1.00	877242.2	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	11649.3	A	0.0109	0.0133	21	50	
10:2-FTS	6.07	1.09	69275.8	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	48328.6	A	0.7082	0.6976	-2	50	
PFTrDA	6.25	1.03	781283.7	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	8100.4	A	0.0096	0.0104	8	50	
PFTeDA	6.43	1.00	630801.4	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	3863.1	A	0.0055	0.0061	11	50	
PFHxDA	6.73	1.05	297242.6	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	17318.1	A	0.0596	0.0583	-2	50	
PFODA	7.00	1.09	251726.5	A	1.0000	1.0000			
PFODA_2	6.99	1.09	6453.4	A	0.0257	0.0256	0	50	

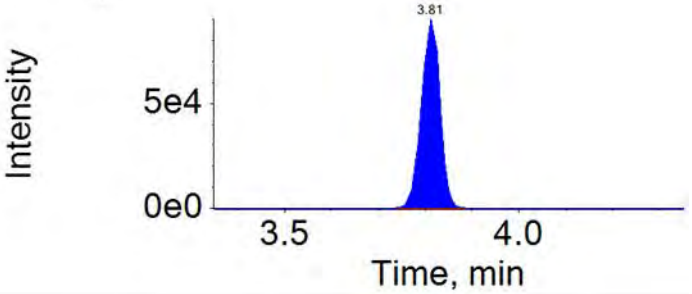
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

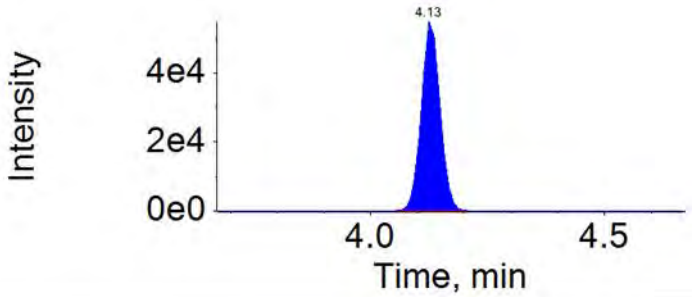
Component: PFBS
Primary Mass: 299.0 / 80.0



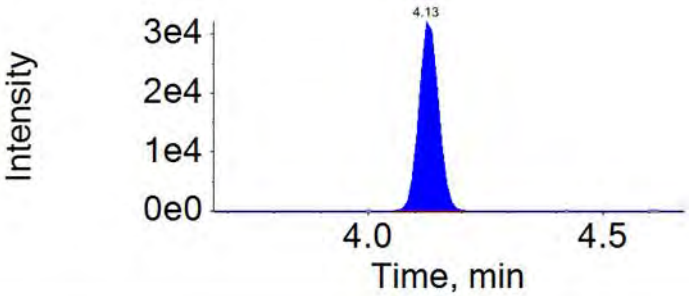
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



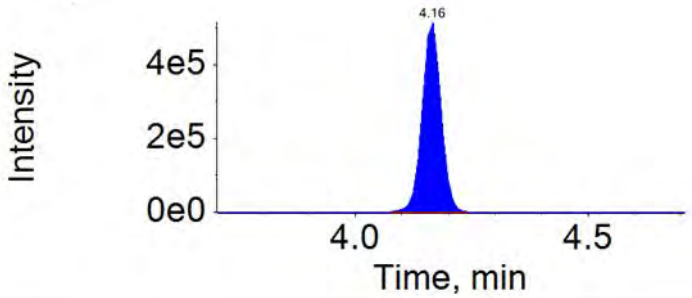
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



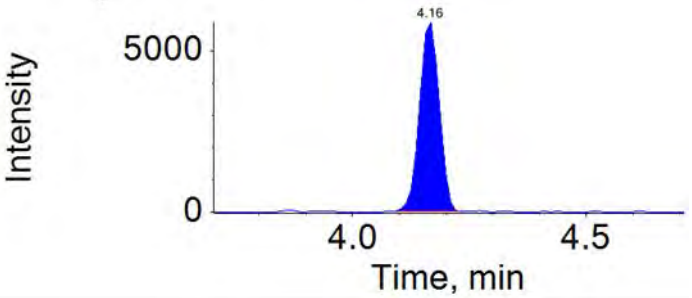
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



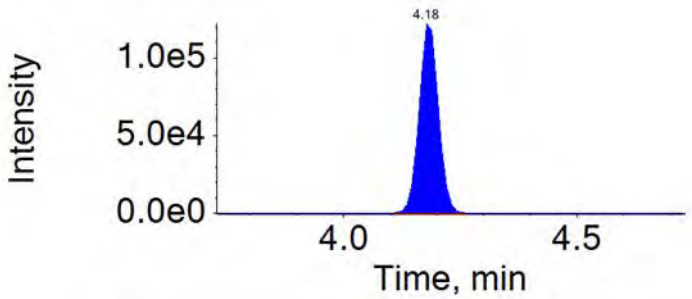
Component: PFHxA
Primary Mass: 313.0 / 269.0



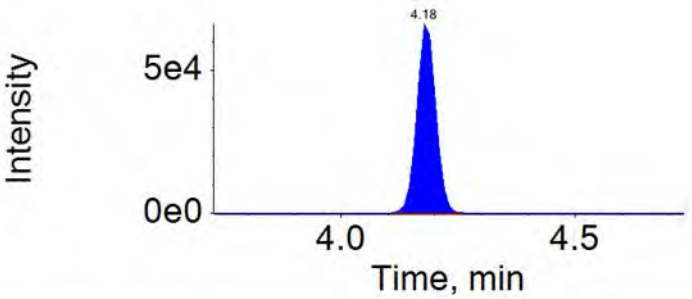
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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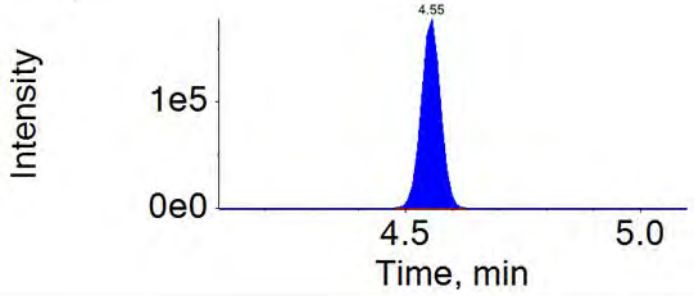
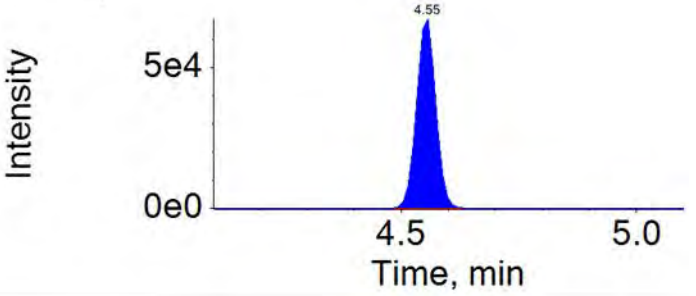
By umar at 5:23 pm, 11/9/18

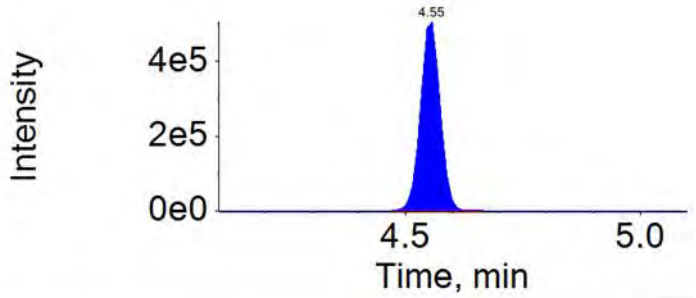
Component: PFHxS
Primary Mass: 399.0 / 80.0



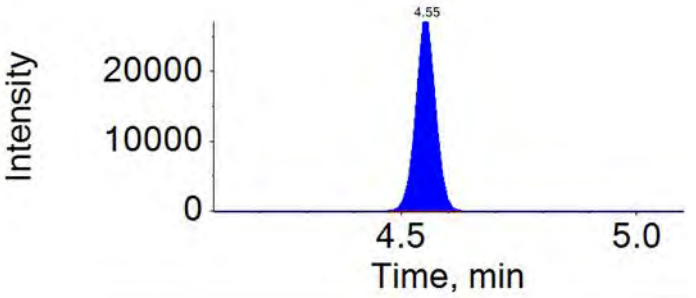
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



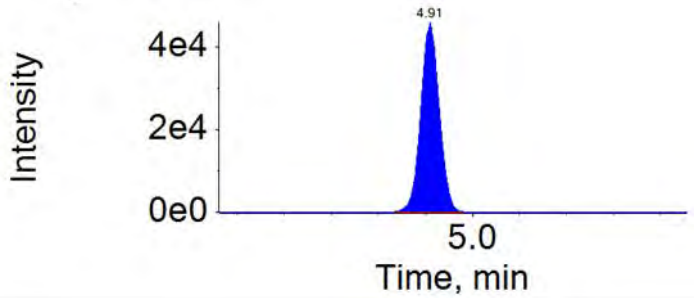
Component: PFHpA
Primary Mass: 363.0 / 319.0



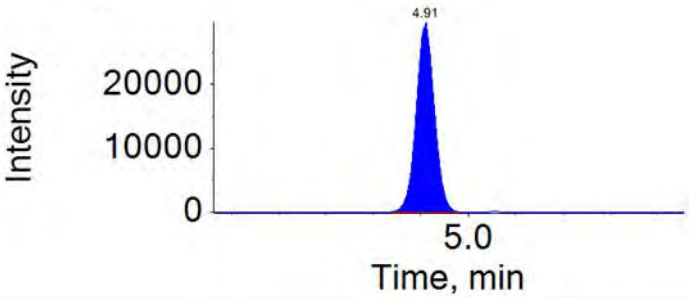
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



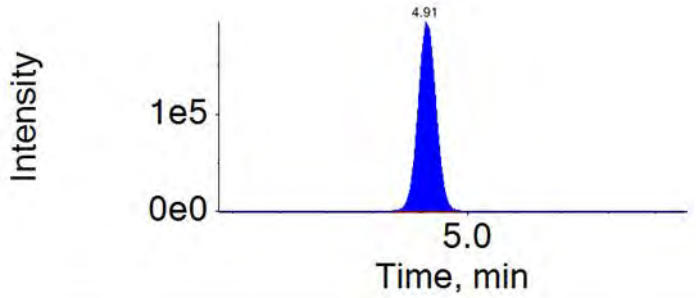
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



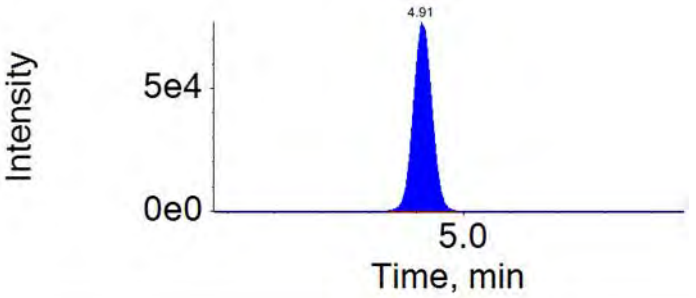
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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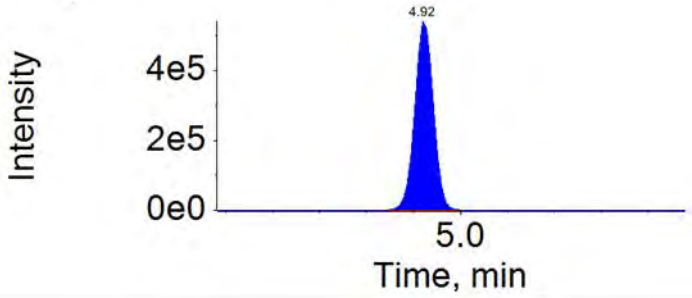
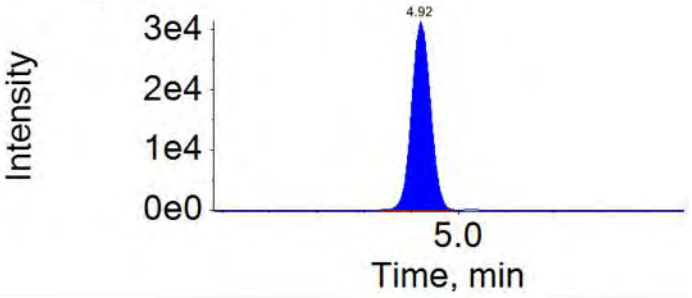
By umar at 5:23 pm, 11/9/18

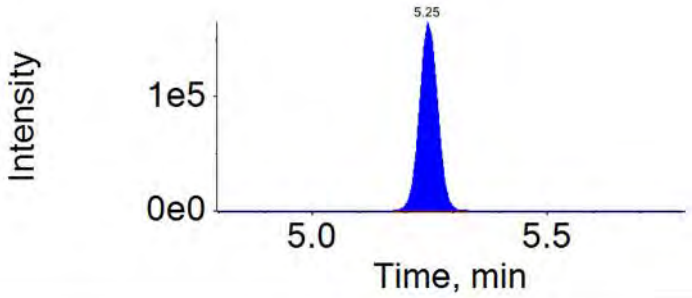
Component: PFOA
Primary Mass: 413.0 / 369.0



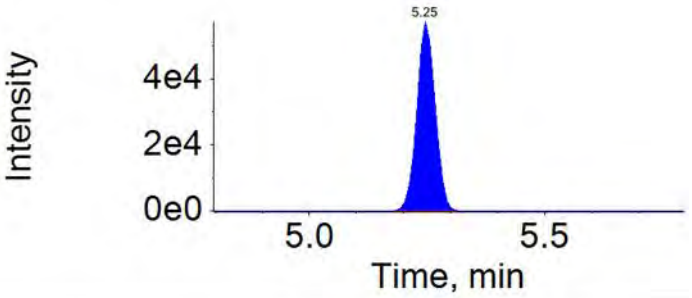
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



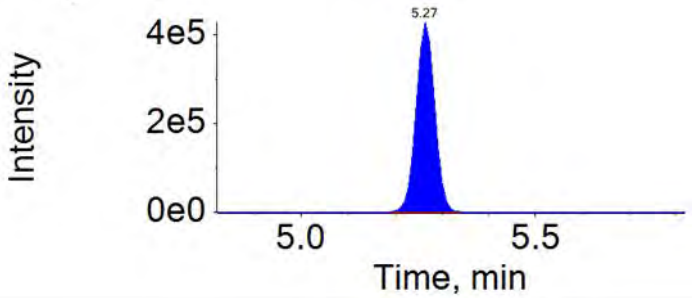
Component: PFOS
Primary Mass: 499.0 / 80.0



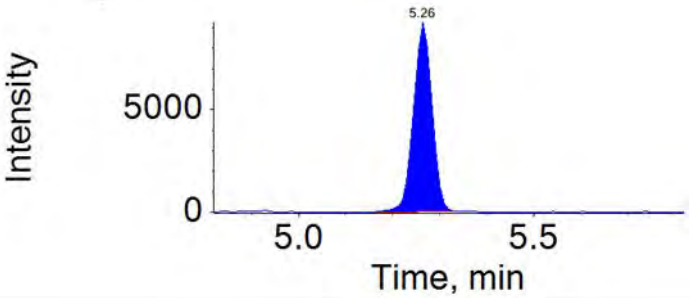
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



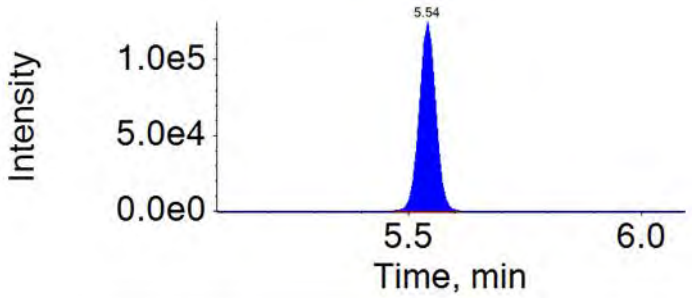
Component: PFNA
Primary Mass: 463.0 / 419.0



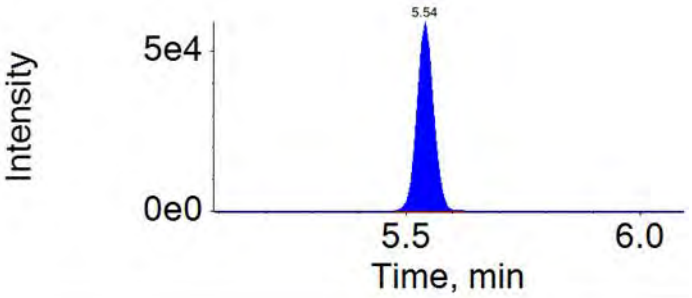
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



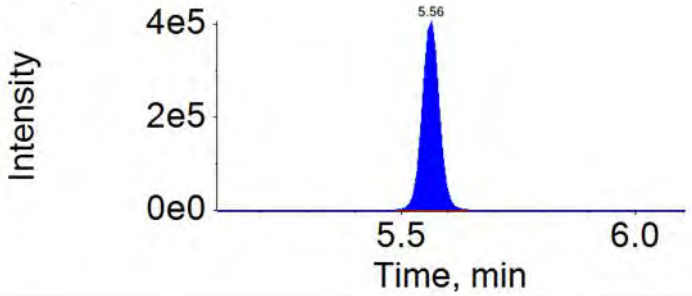
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



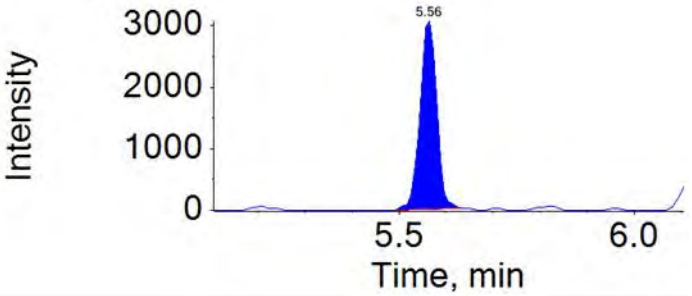
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

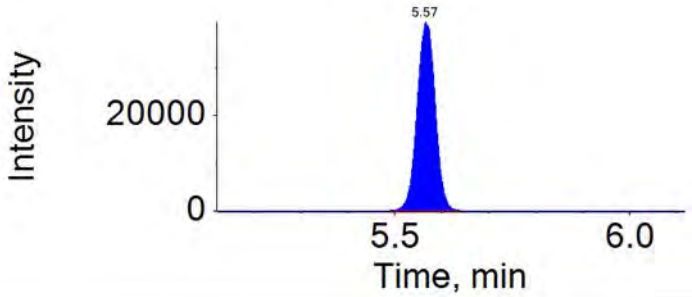
Component: PFDA
Primary Mass: 513.0 / 469.0



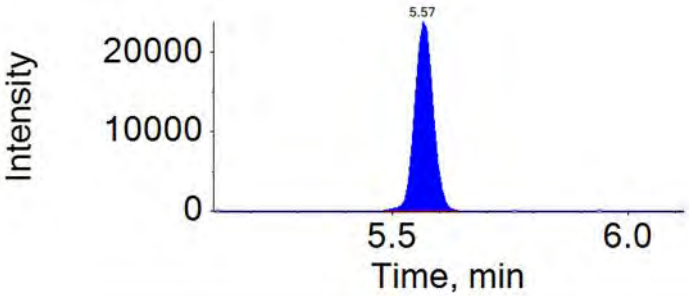
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



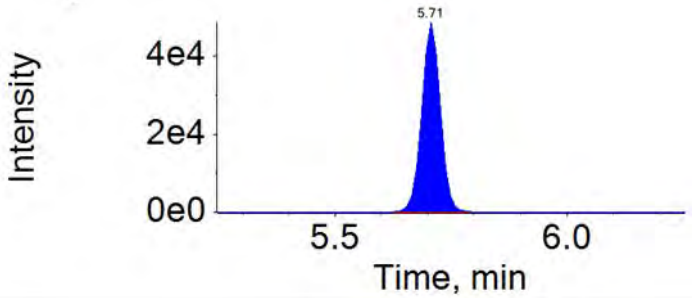
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



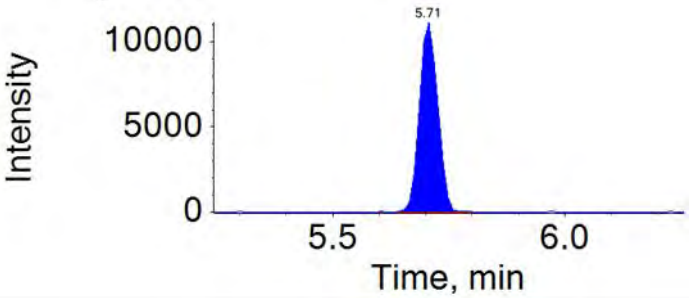
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



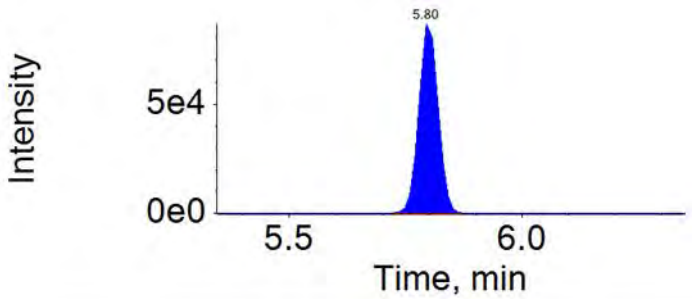
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



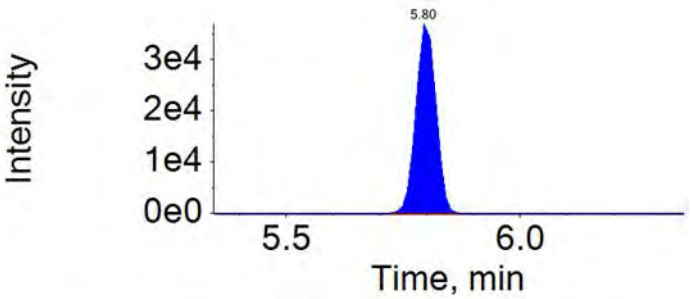
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



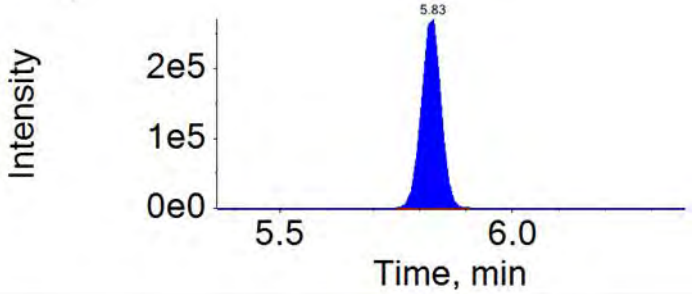
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



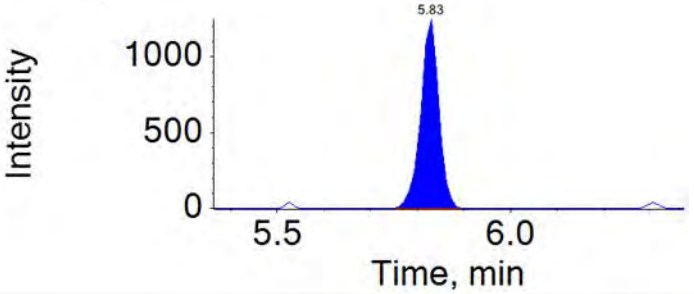
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

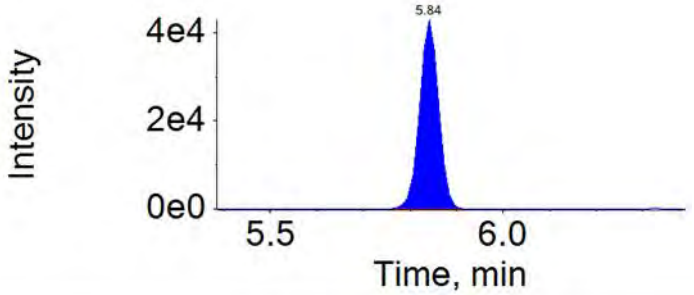
Component: PFUnDA
Primary Mass: 563.0 / 519.0



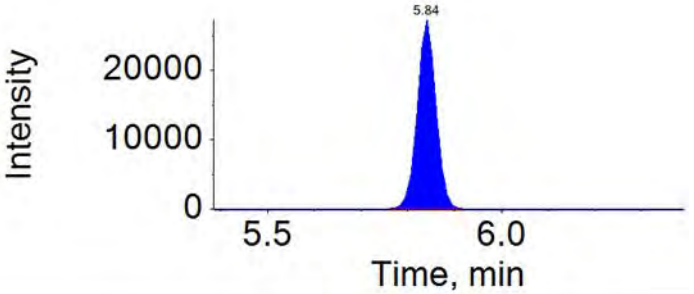
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



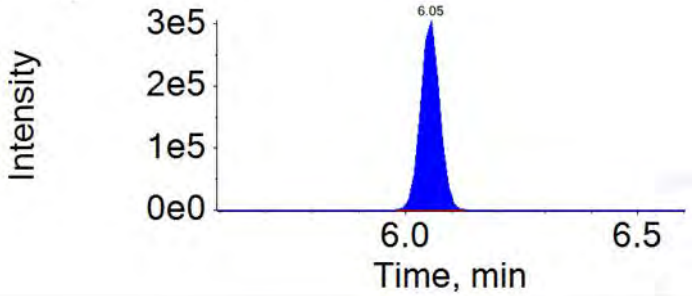
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



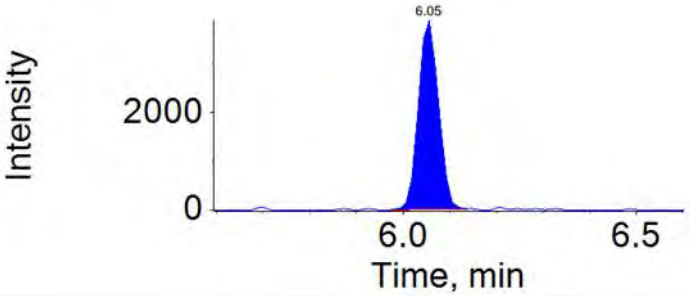
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



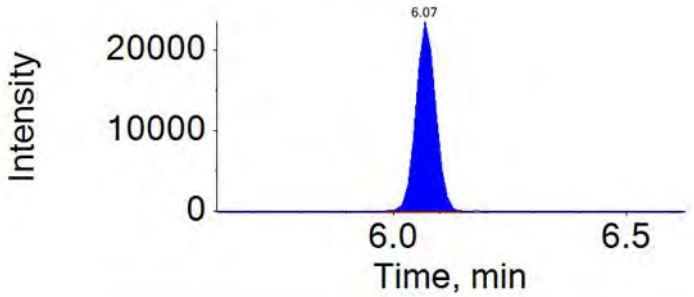
Component: PFDoDA
Primary Mass: 613.0 / 569.0



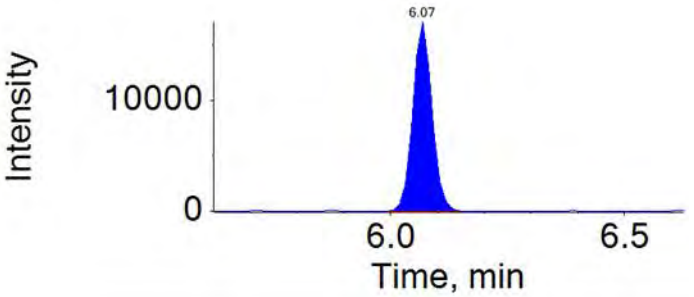
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



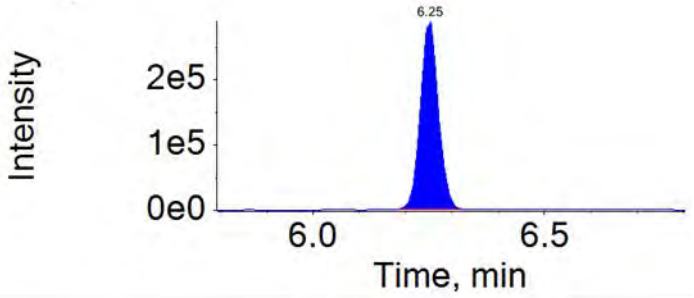
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



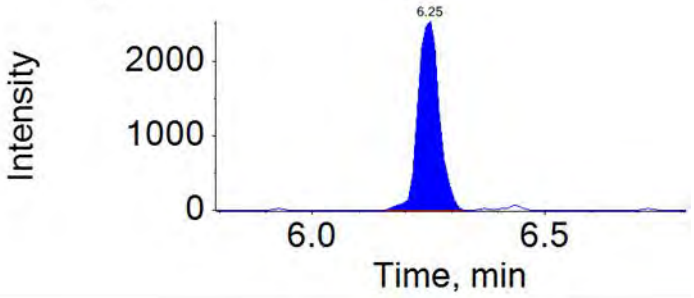
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

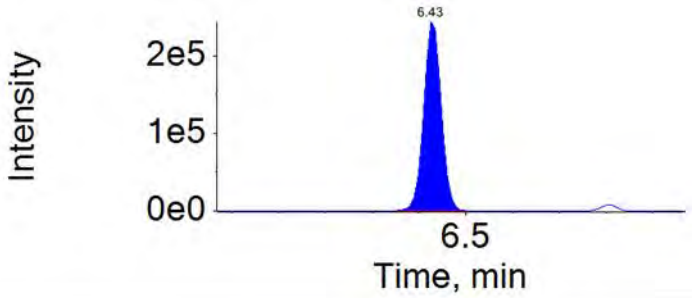
Component: PFTrDA
Primary Mass: 663.0 / 619.0



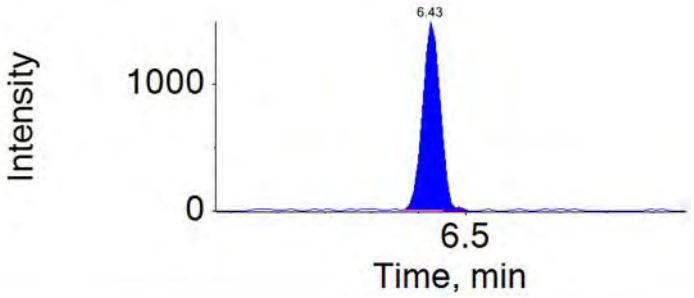
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



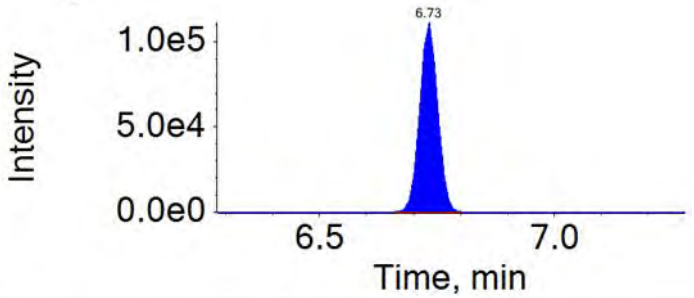
Component: PFTeDA
Primary Mass: 713.0 / 669.0



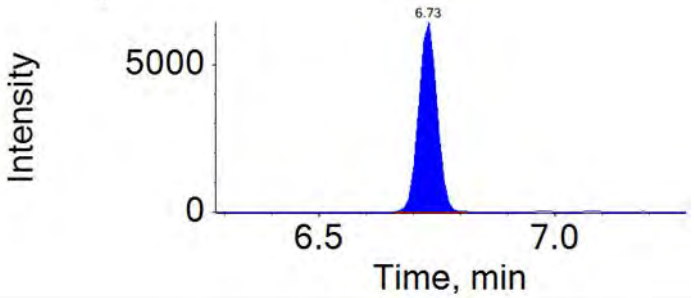
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



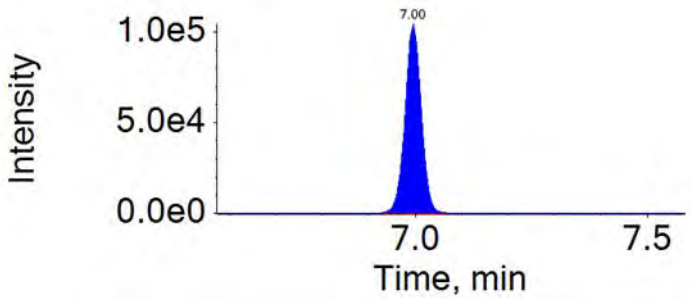
Component: PFHxDA
Primary Mass: 813.0 / 769.0



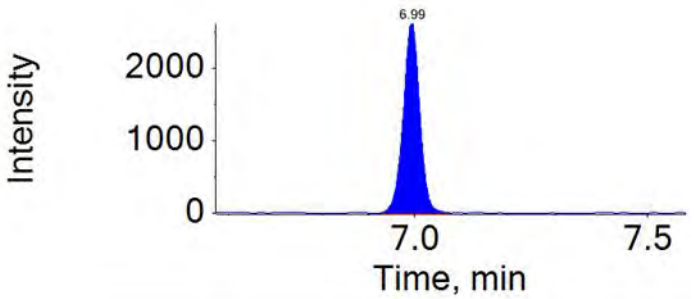
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL5			**Data File:**		18NOV07DCAL-14.wiff
Sample ID:	CALMOD51833F			**Acquis Date:**		2018-11-07T10:15:59
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	7			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	664213.6	730410.6	-9	50	
13C2-PFOA	5.0	488019.6	524423.6	-7	50	
13C4-PFOS	4.8	275029.2	274061.7	0	50	
13C2-PFDA	5.0	298912.1	311442.1	-4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	728925.1	13C3-PFBA	664213.6	1.097	5.000	5.079	102	70-130	
E13C5-PFPeA	768958.1	13C3-PFBA	664213.6	1.158	5.000	5.043	101	70-130	
E13C3-PFBS	442479.7	13C3-PFBA	664213.6	0.666	4.650	4.889	105	70-130	
E13C2-4:2-FTS	48869.9	13C2-PFOA	488019.6	0.100	4.670	4.519	97	70-130	
E13C5-PFHxA	674375.4	13C2-PFOA	488019.6	1.382	5.000	5.083	102	70-130	
E13C3-PFHxS	332808.5	13C2-PFOA	488019.6	0.682	4.730	4.896	104	70-130	
E13C4-PFHpA	544681.1	13C2-PFOA	488019.6	1.116	5.000	5.077	102	70-130	
E13C2-6:2-FTS	32735.6	13C2-PFOA	488019.6	0.067	4.750	4.473	94	70-130	
E13C8-PFOA	895692.2	13C2-PFOA	488019.6	1.835	5.000	5.118	102	70-130	
E13C8-PFOS	297995.6	13C4-PFOS	275029.2	1.084	4.780	4.791	100	70-130	
E13C9-PFNA	484419.3	13C4-PFOS	275029.2	1.761	5.000	4.811	96	70-130	
E13C6-PFDA	598009.7	13C2-PFDA	298912.1	2.001	5.000	5.031	101	70-130	
E13C2-8:2-FTS	27554.0	13C2-PFDA	298912.1	0.092	4.790	4.878	102	70-130	
E13C8-PFOSA	737038.5	13C2-PFDA	298912.1	2.466	5.000	5.381	108	70-130	
Ed3-NMeFOSAA	73896.1	13C2-PFDA	298912.1	0.247	5.000	4.597	92	70-130	
E13C7-PFUnDA	263924.7	13C2-PFDA	298912.1	0.883	5.000	5.094	102	70-130	
Ed5-NEtFOSAA	57745.7	13C2-PFDA	298912.1	0.193	5.000	4.471	89	70-130	
E13C2-PFDoDA	548536.0	13C2-PFDA	298912.1	1.835	5.000	4.947	99	70-130	
Ed7-NMePFOSAE	321549.5	13C2-PFDA	298912.1	1.076	5.000	5.002	100	70-130	
Ed3-NMePFOSA	82137.6	13C2-PFDA	298912.1	0.275	5.000	5.031	101	70-130	
Ed9-NEtPFOSAE	259950.9	13C2-PFDA	298912.1	0.870	5.000	4.966	99	70-130	
Ed5-NEtPFOSA	62005.6	13C2-PFDA	298912.1	0.207	5.000	4.803	96	70-130	
E13C2-PFTeDA	421798.8	13C2-PFDA	298912.1	1.411	5.000	5.080	102	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

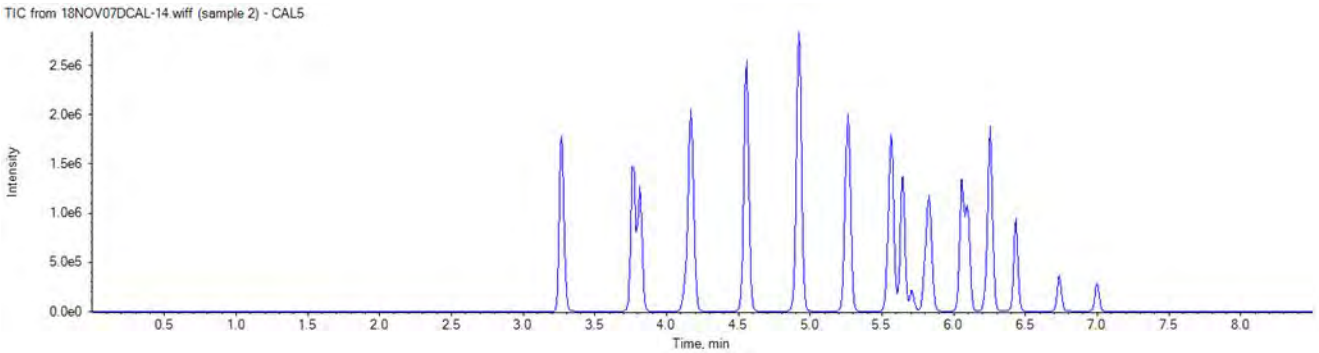
Analyte Quantitation Peak Table

Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-14.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	2730076.0		A	13C4-PFBA	3.27	728925.1	3.745	21.919
PFPeA	3.77	1.000	2812772.2		A	13C5-PFPeA	3.77	768958.1	3.658	21.739
PFBS	3.82	1.000	1601296.4		A	13C3-PFBS	3.82	442479.7	3.619	18.246
4:2-FTS	4.13	1.000	365423.8		A	13C2-4:2-FTS	4.13	48869.9	7.477	20.102
PFHxA	4.16	1.000	3380716.3		A	13C5-PFHxA	4.17	674375.4	5.013	21.499
PFPeS	4.18	1.100	845636.3		A	13C3-PFBS	3.82	442479.7	1.911	18.849
PFHxS	4.55	1.000	1261633.0		A	13C3-PFHxS	4.55	332808.5	3.791	19.215
PFHpA	4.55	1.000	3440372.8		A	13C4-PFHpA	4.55	544681.1	6.316	21.243
6:2-FTS	4.91	1.000	278493.0		A	13C2-6:2-FTS	4.91	32735.6	8.507	21.223
PFHpS	4.92	1.080	1236603.7		A	13C3-PFHxS	4.55	332808.5	3.716	19.439
PFOA	4.92	1.000	3425279.8		A	13C8-PFOA	4.92	895692.2	3.824	21.532
PFOS	5.25	1.000	1108359.9		A	13C8-PFOS	5.25	297995.6	3.719	19.287
PFNA	5.27	1.000	2889454.7		A	13C9-PFNA	5.27	484419.3	5.965	22.292
PFNS	5.54	1.060	722178.3		A	13C8-PFOS	5.25	297995.6	2.423	19.215
PFDA	5.57	1.000	2401274.2		A	13C6-PFDA	5.57	598009.7	4.015	22.091
8:2-FTS	5.57	1.000	244867.6		A	13C2-8:2-FTS	5.57	27554.0	8.887	20.031
PFOSA	5.64	1.000	2448684.3		A	13C8-PFOSA	5.64	737038.5	3.322	17.959
NMeFOSAA	5.71	1.000	308507.7		A	d3-NMeFOSAA	5.71	73896.1	4.175	21.482
PFDS	5.80	1.110	605559.3		A	13C8-PFOS	5.25	297995.6	2.032	19.412
PFUnDA	5.83	1.000	1952356.4		A	13C7-PFUnDA	5.83	263924.7	7.397	21.214
NEtFOSAA	5.85	1.000	298834.2		A	d5-NEtFOSAA	5.84	57745.7	5.175	22.240
PFDoDA	6.06	1.000	2132260.7		A	13C2-PFDoDA	6.06	548536.0	3.887	21.067
10:2-FTS	6.07	1.090	177607.5		A	13C2-8:2-FTS	5.57	27554.0	6.446	20.071
NMePFOSAE	6.10	1.000	1583085.5		A	d7-NMePFOSAE	6.09	321549.5	4.923	22.062
NMePFOSA	6.10	1.000	323567.0		A	d3-NMePFOSA	6.10	82137.6	3.939	22.050
PFDoS	6.22	1.190	295383.8		A	13C8-PFOS	5.25	297995.6	0.991	19.132
NEtPFOSAE	6.25	1.000	1810587.6		A	d9-NEtPFOSAE	6.24	259950.9	6.965	22.328
NEtPFOSA	6.27	1.000	290096.1		A	d5-NEtPFOSA	6.26	62005.6	4.679	20.605
PFTrDA	6.25	1.030	1851055.0		A	13C2-PFDoDA	6.06	548536.0	3.375	21.280
PFTeDA	6.43	1.000	1500655.1		A	13C2-PFTeDA	6.43	421798.8	3.558	20.892
PFHxDA	6.73	1.050	716467.3		A	13C2-PFTeDA	6.43	421798.8	1.699	21.085
PFODA	7.00	1.090	624697.0		A	13C2-PFTeDA	6.43	421798.8	1.481	21.218

Total Ion Chromatogram

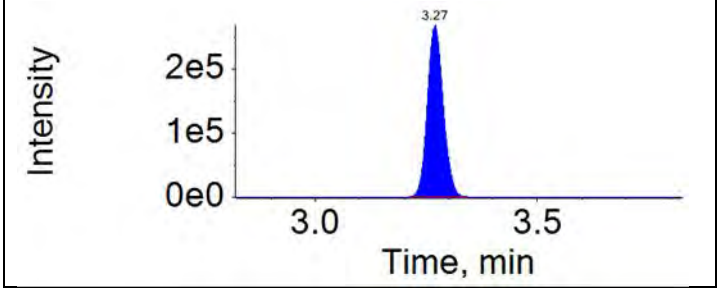


APPROVED
By JPT at 2:53 pm, 11/7/18

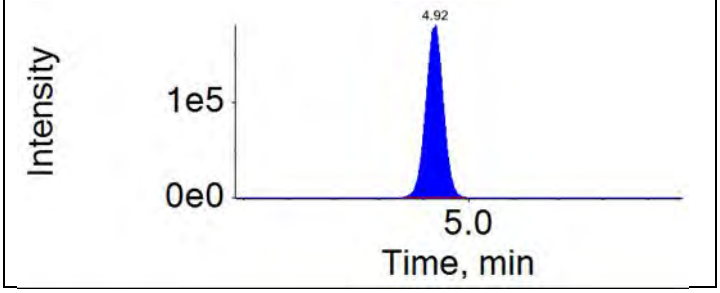
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

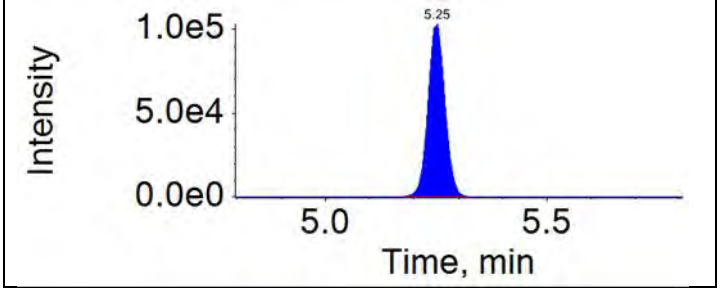
Injection Standard: 13C3-PFBA
216.0 / 172.0



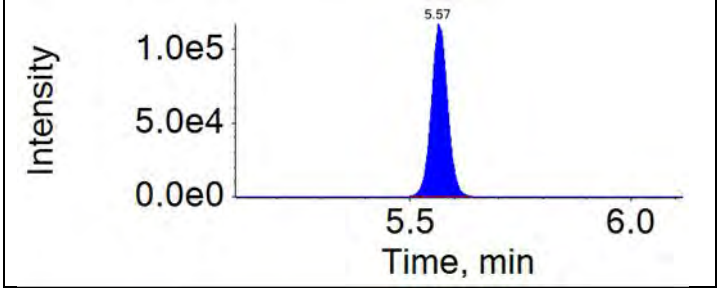
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



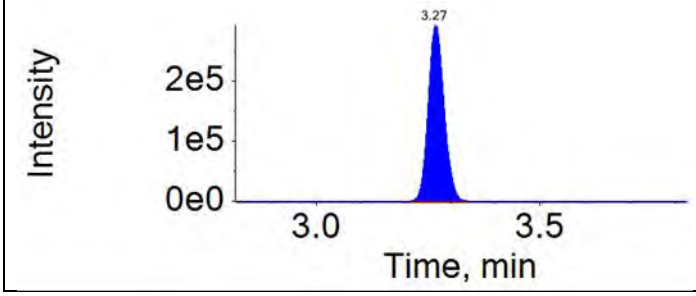
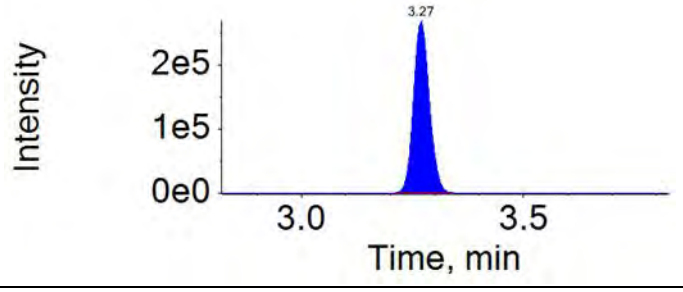
Injection Standard: 13C2-PFDA
515.0 / 470.0

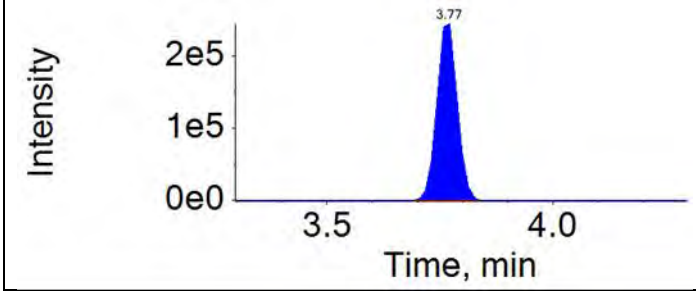
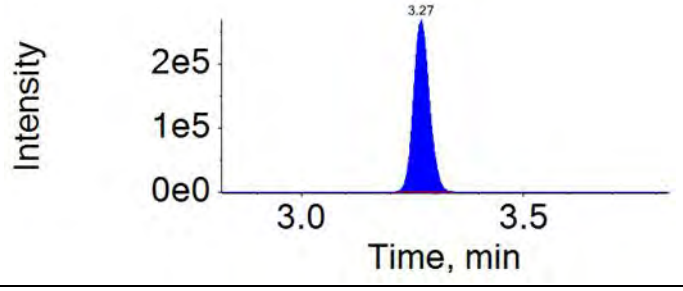


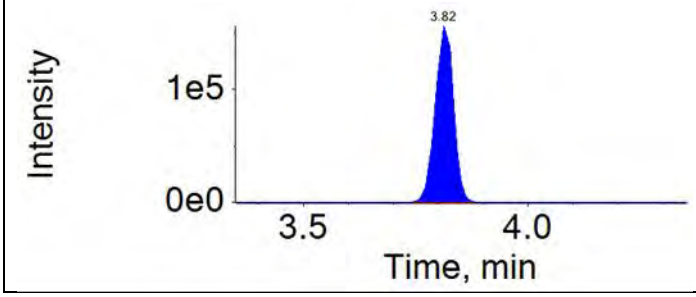
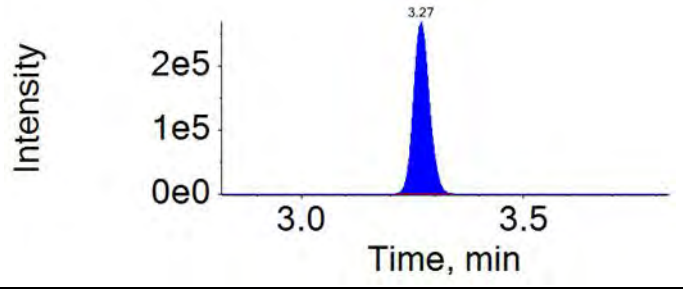
APPROVED
By JPT at 2:53 pm, 11/7/18

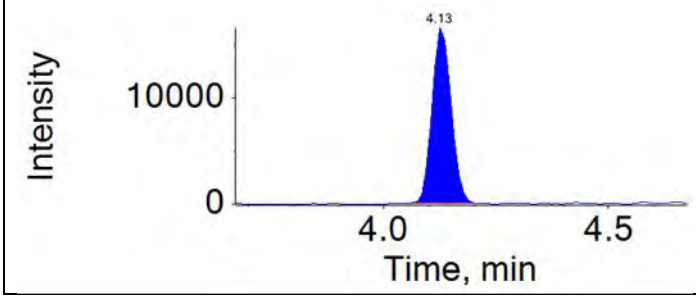
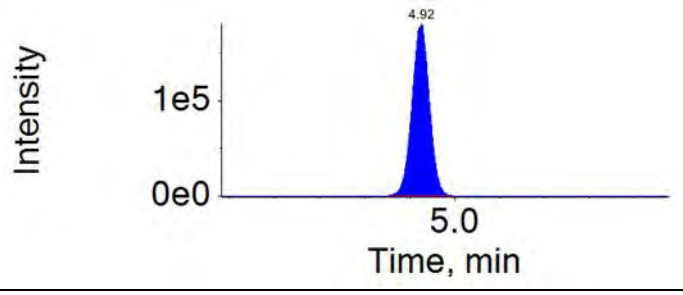
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

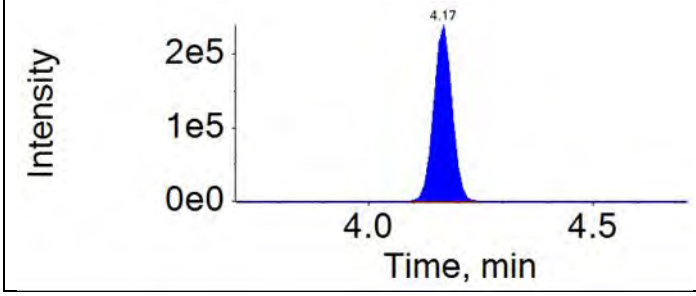
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

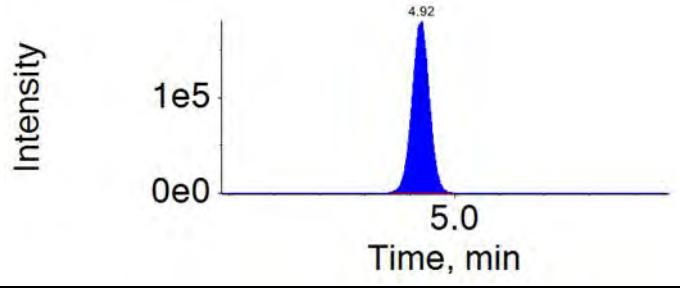
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

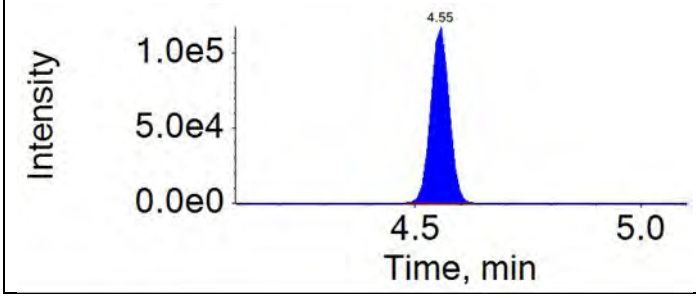
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

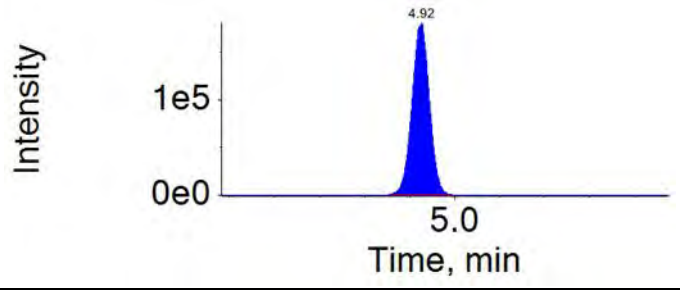
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



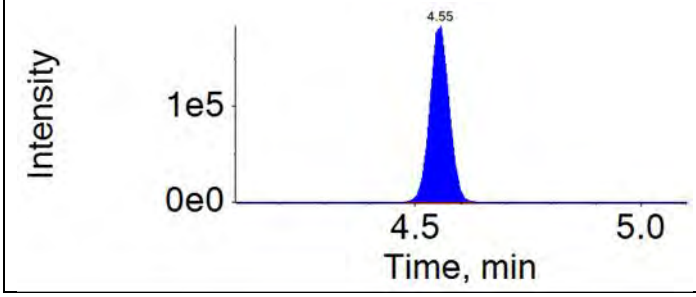


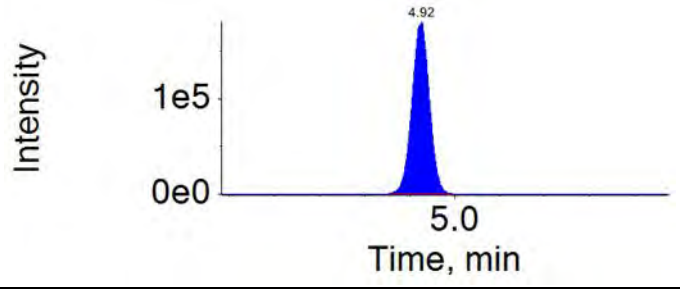
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



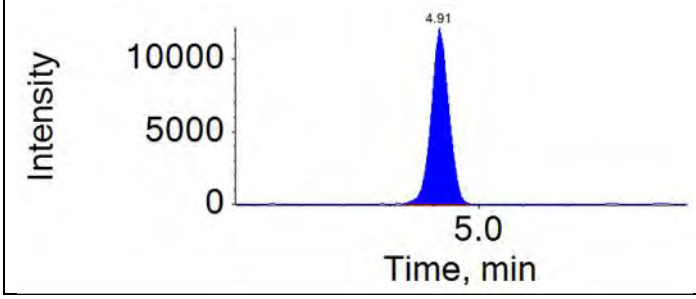


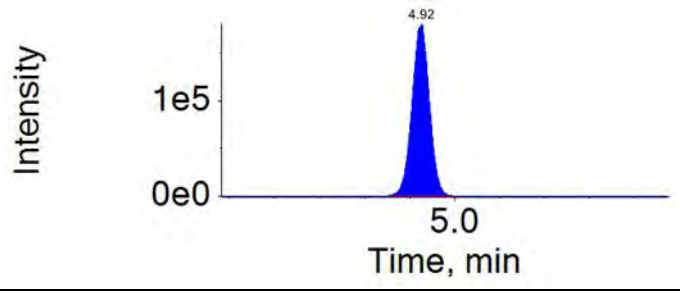
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

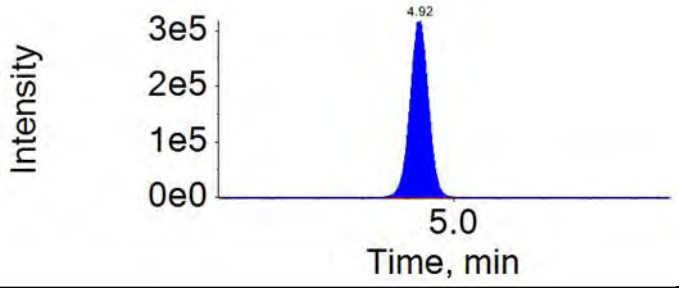
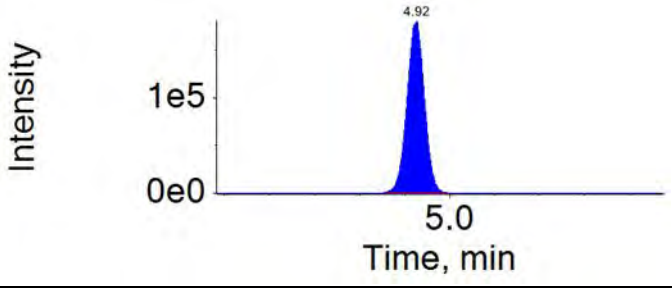


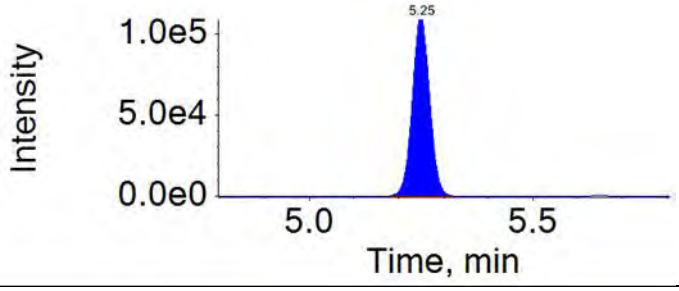
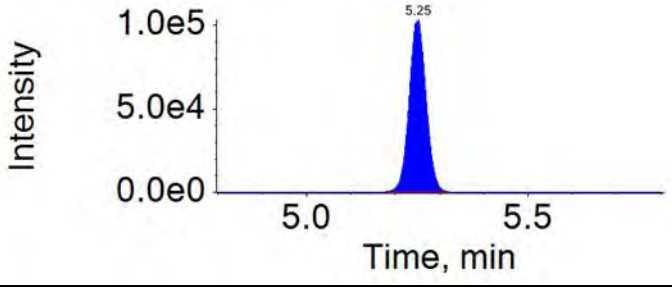


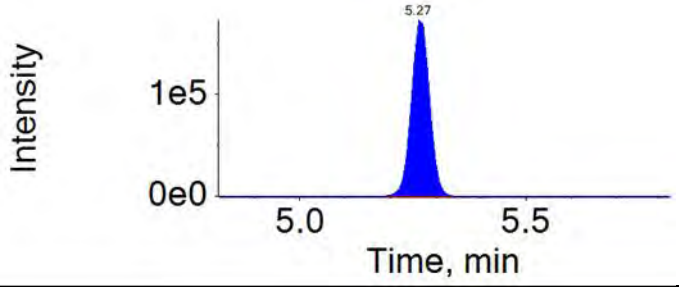
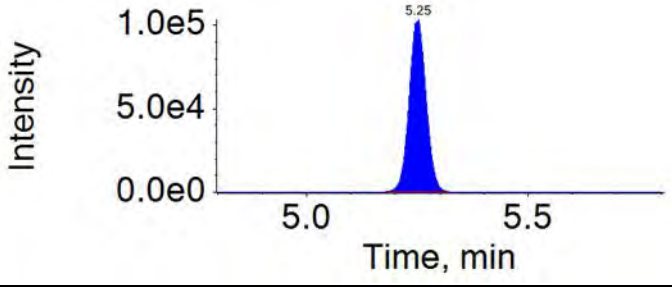
APPROVED
By JPT at 2:53 pm, 11/7/18

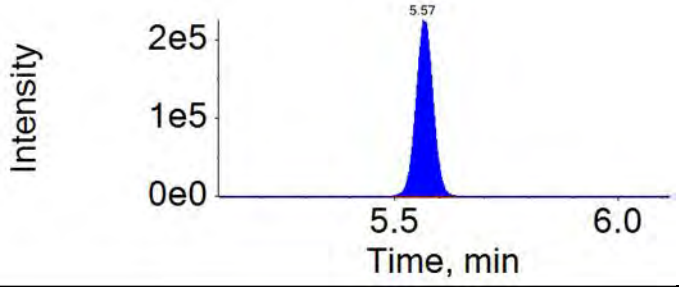
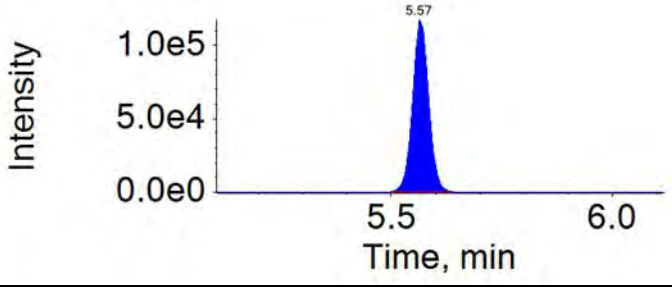
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

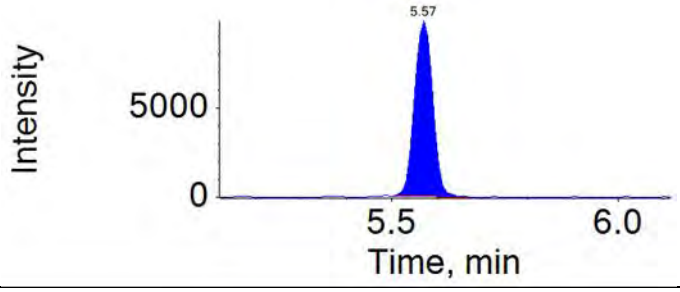
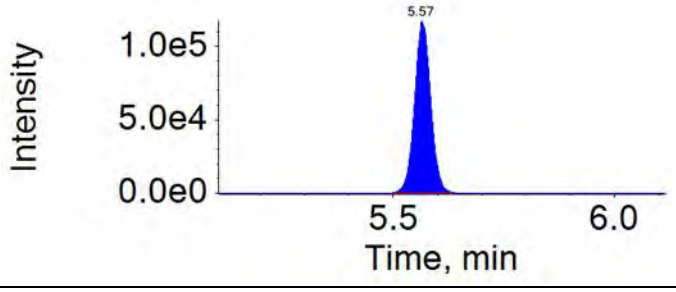
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

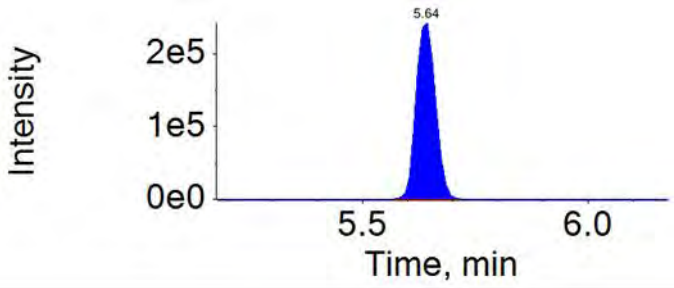
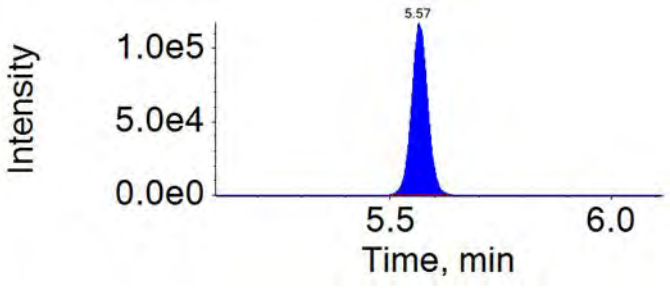
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

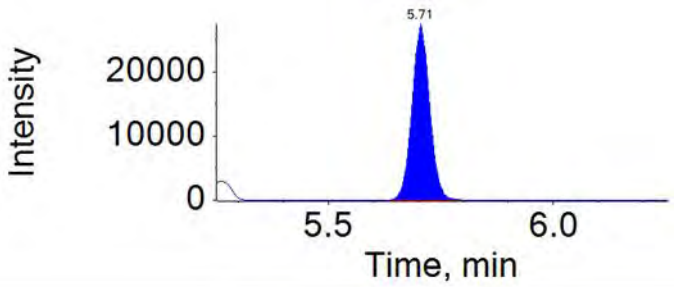
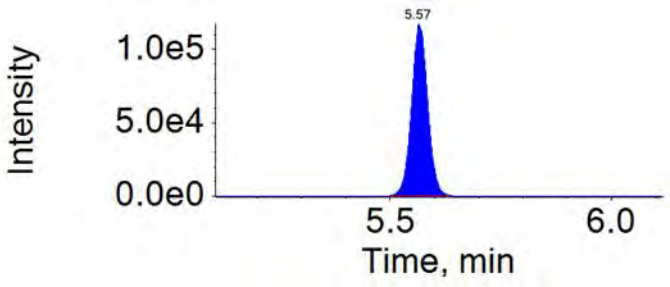
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

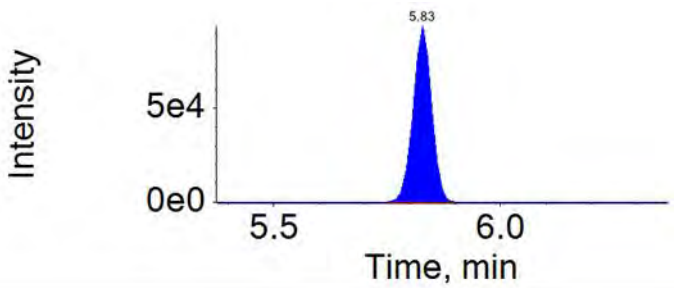
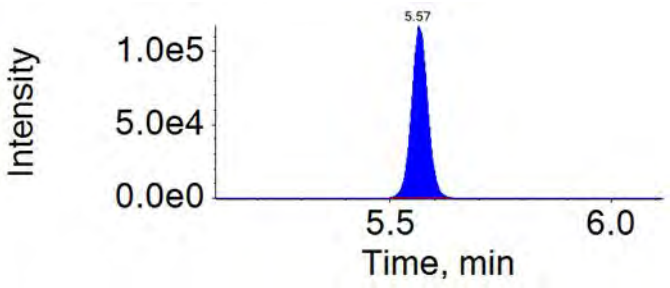
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

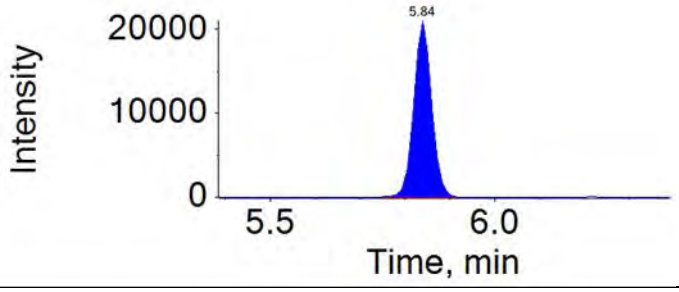
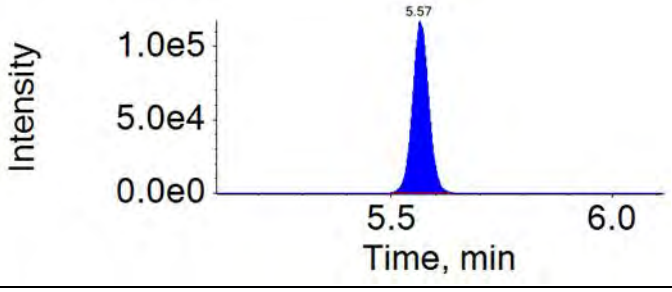
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

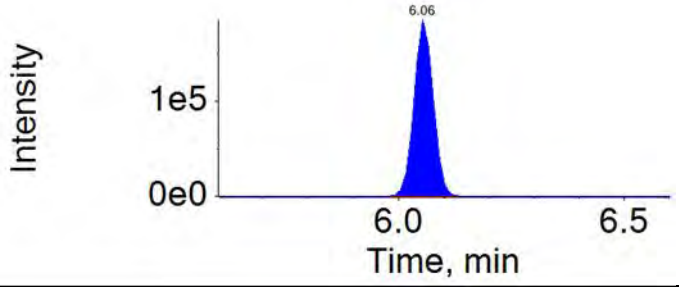
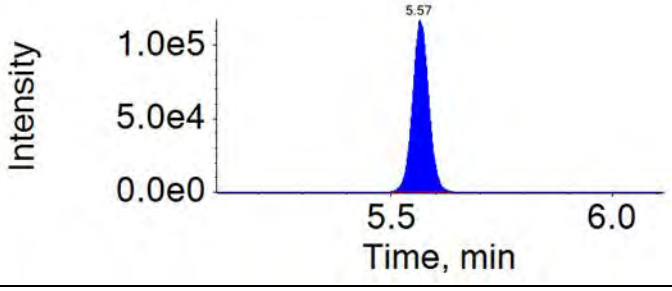
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

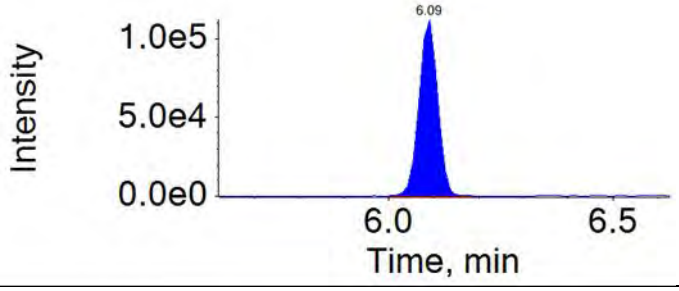
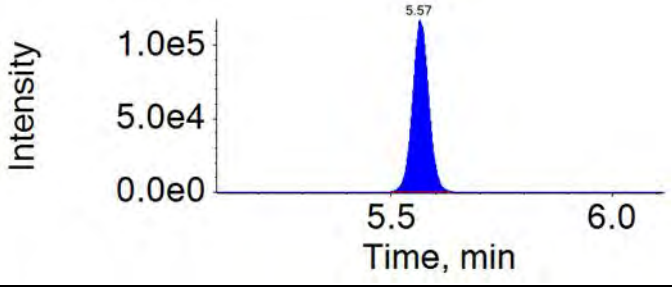
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

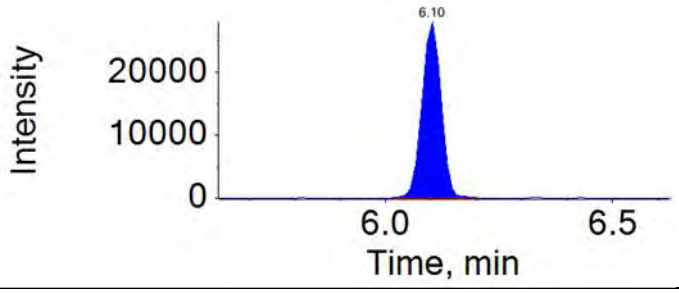
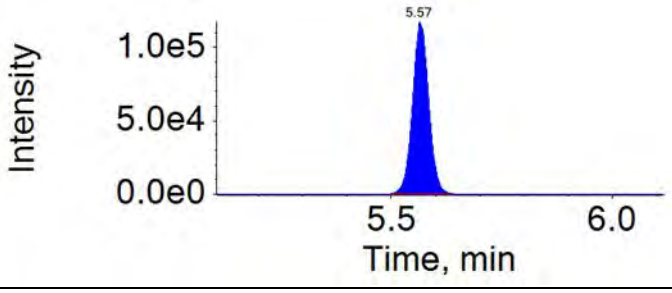
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

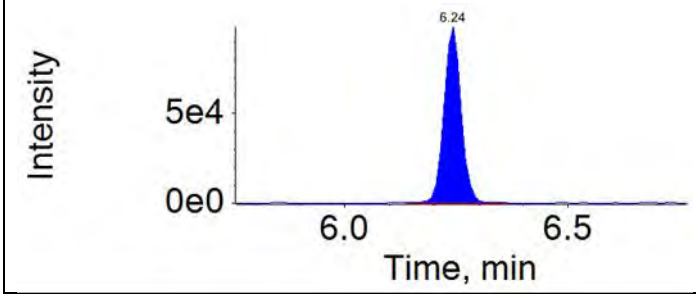
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

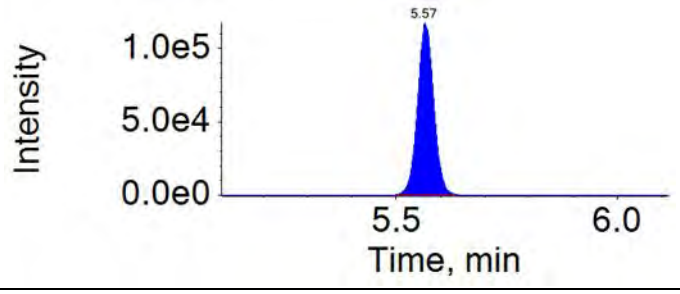
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

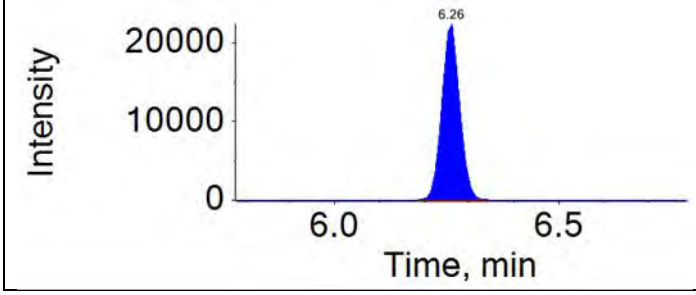
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

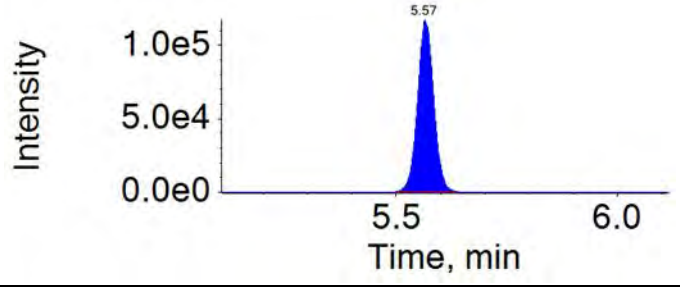
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



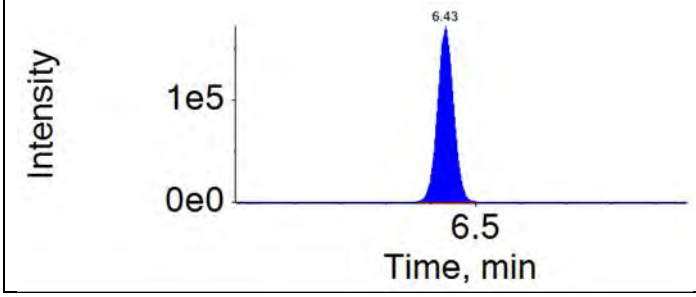


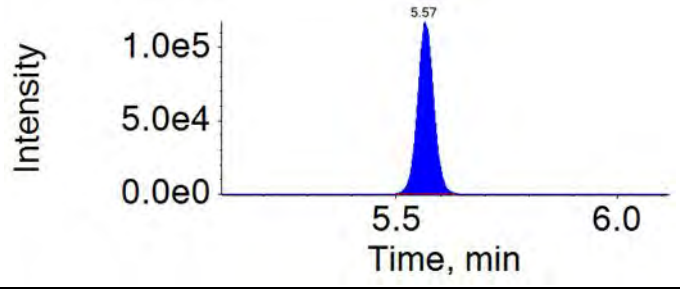
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

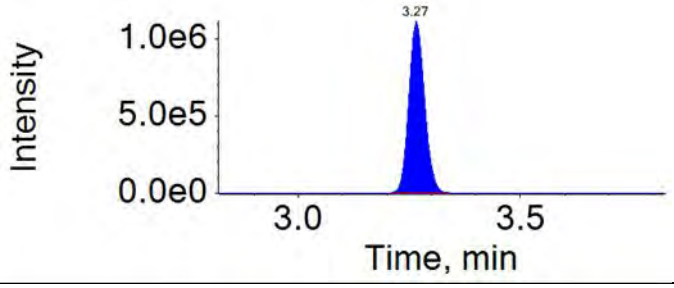
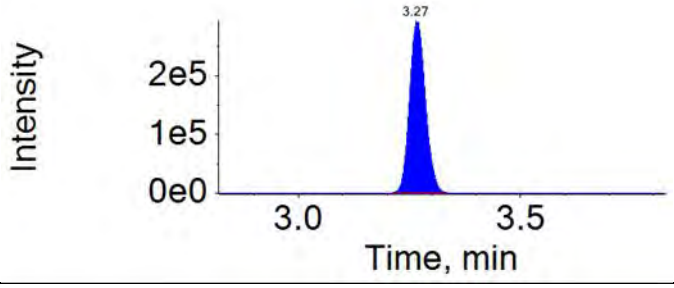


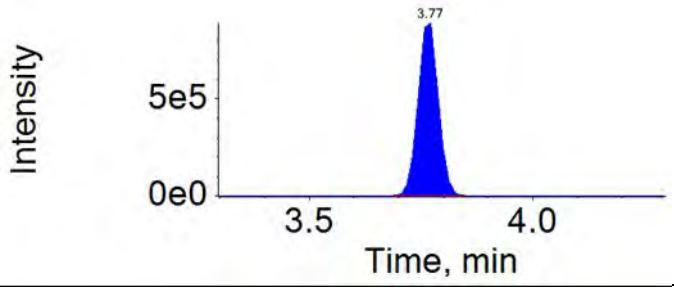
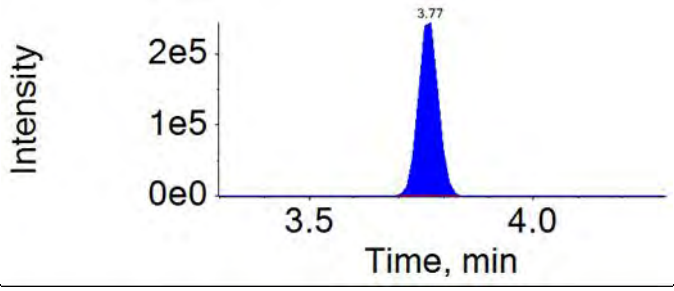


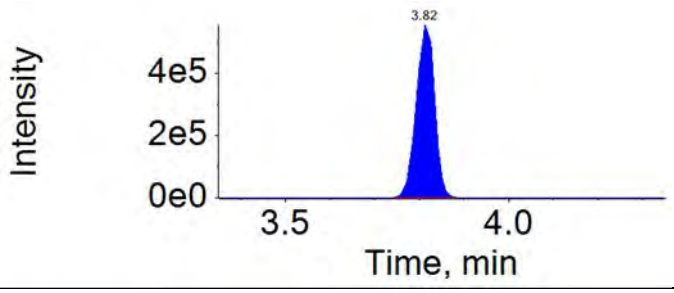
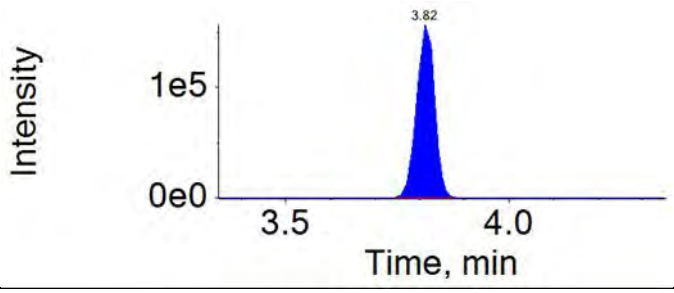
APPROVED
By JPT at 2:53 pm, 11/7/18

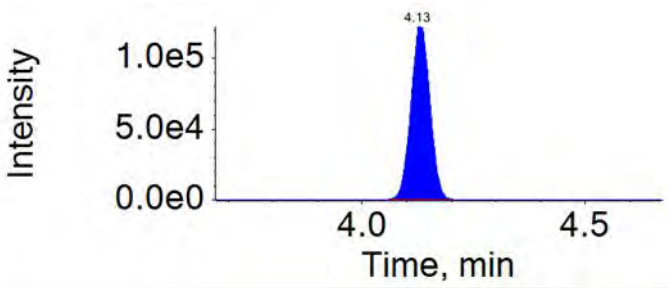
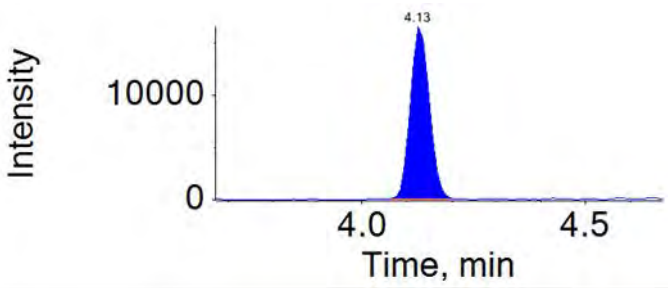
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

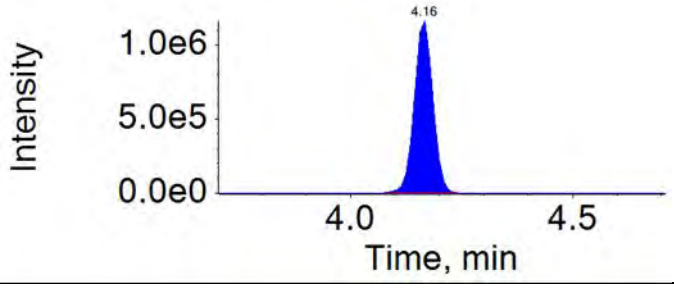
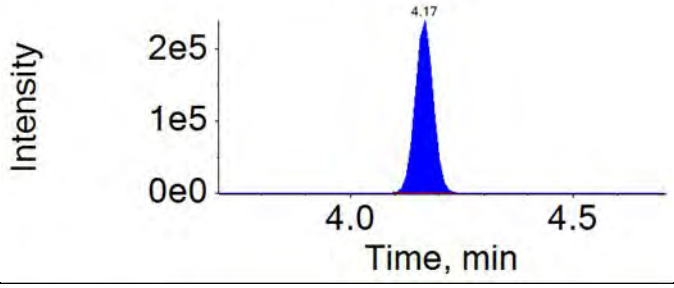
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

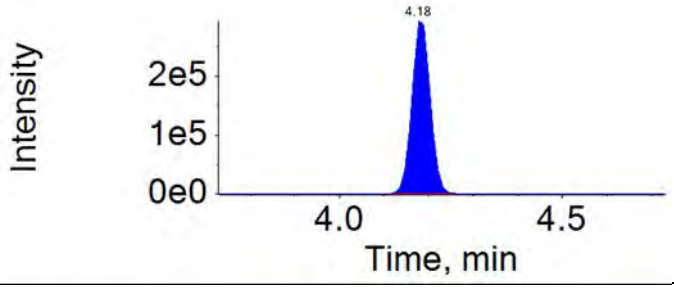
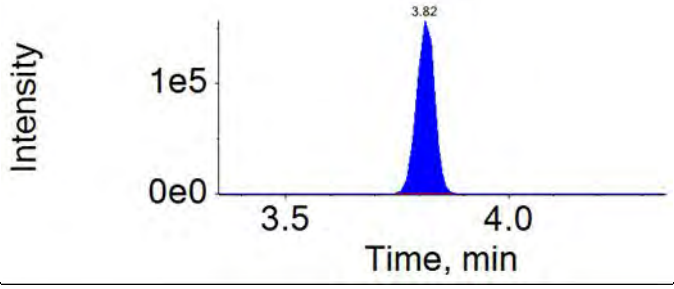
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

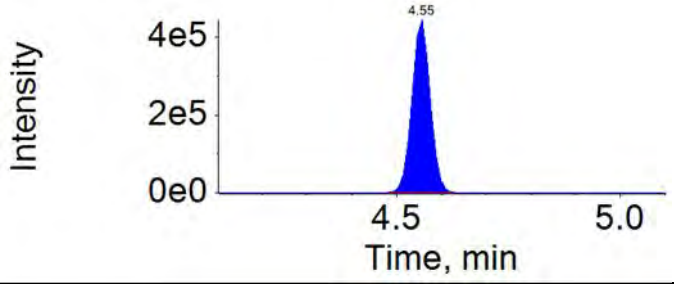
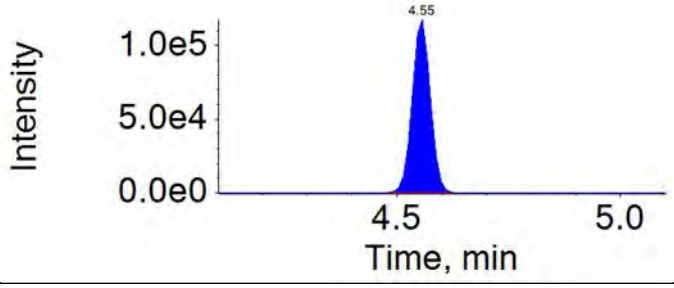
APPROVED
By JPT at 2:53 pm, 11/7/18

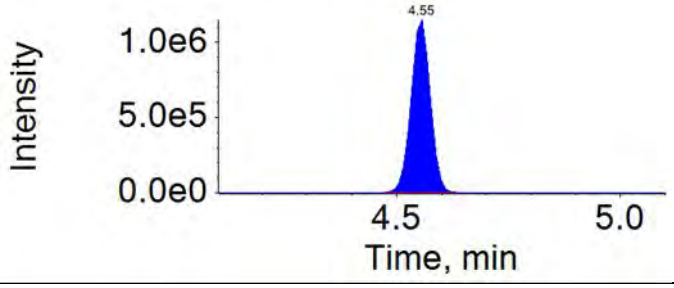
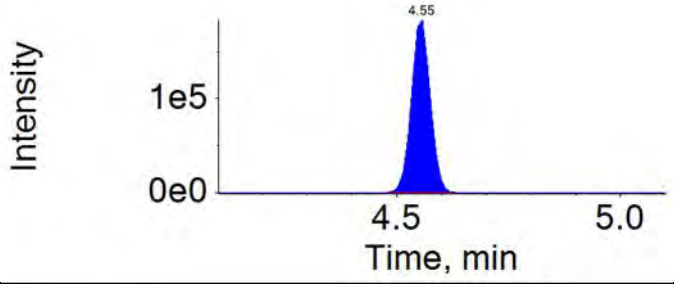
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

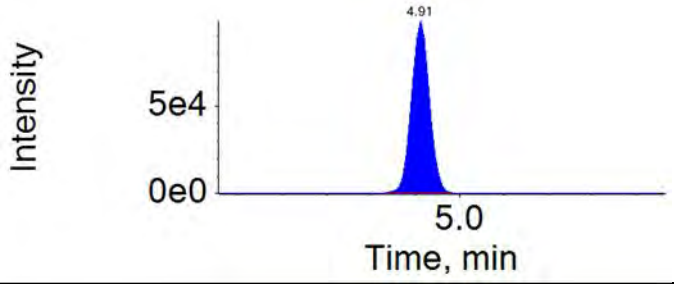
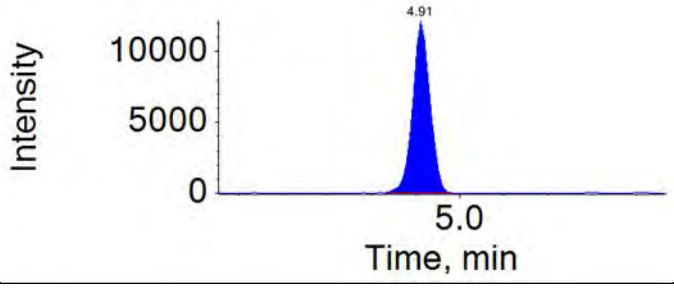
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

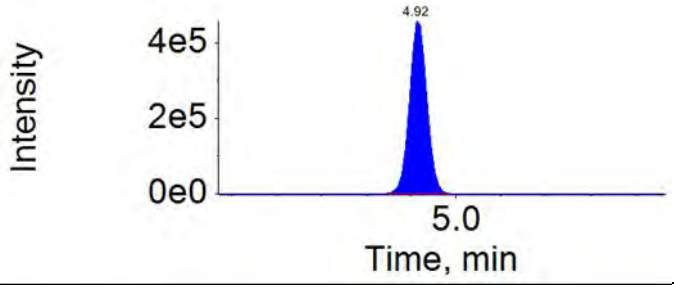
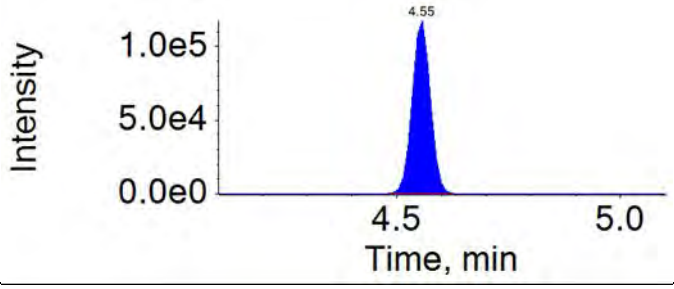
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

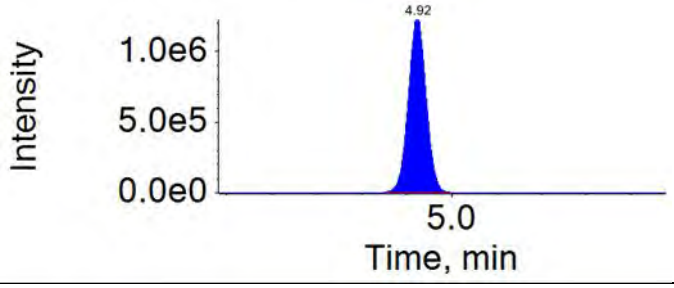
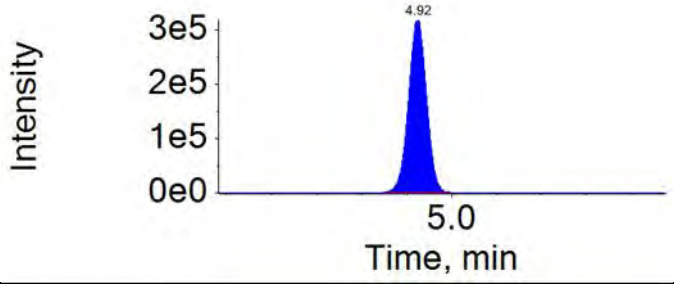
APPROVED
By JPT at 2:53 pm, 11/7/18

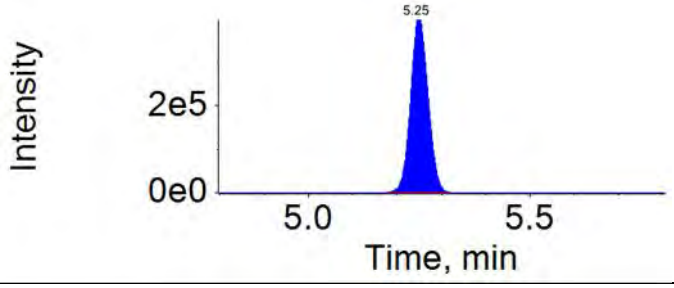
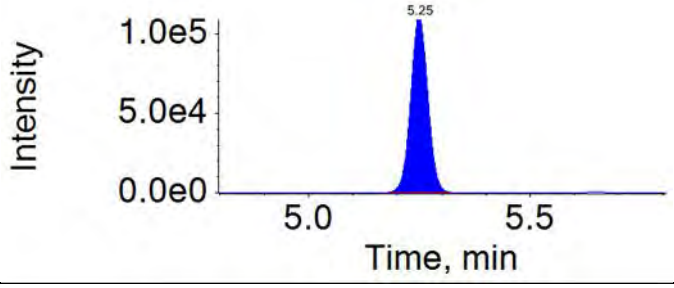
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

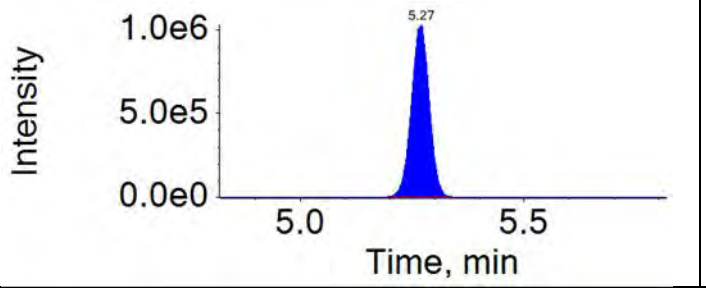
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

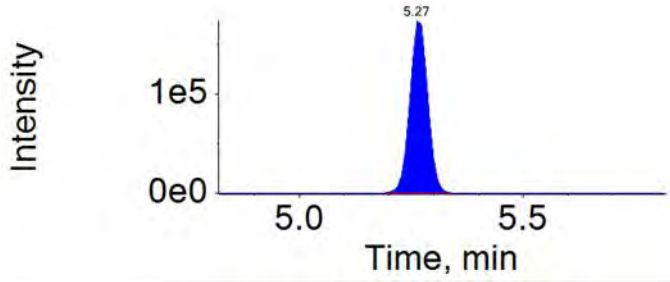
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

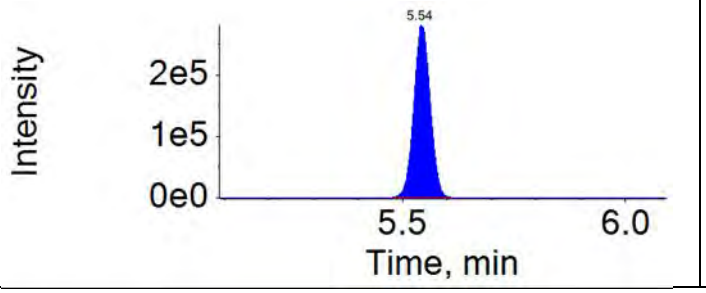
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

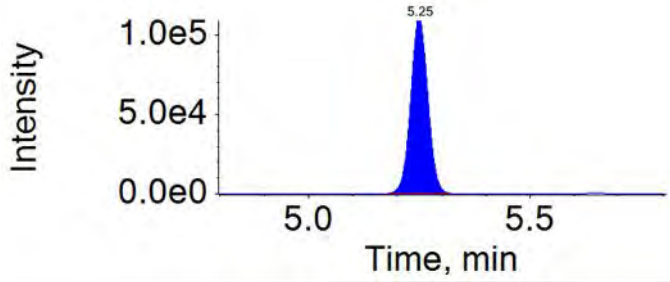
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



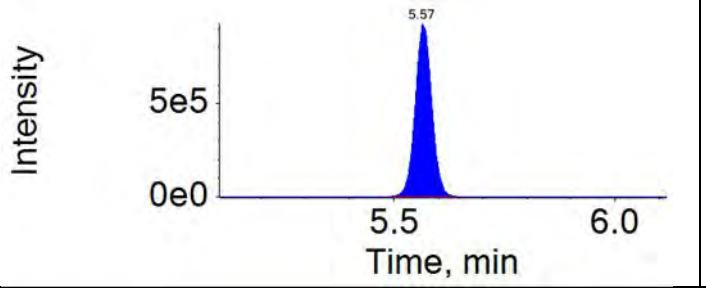


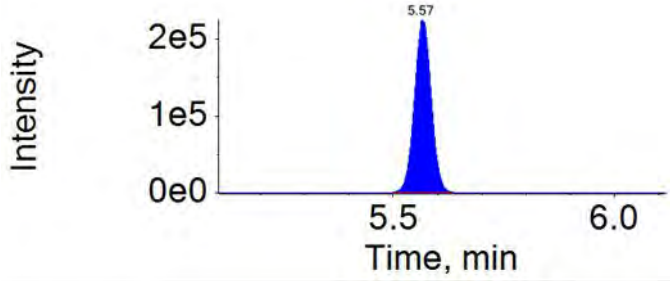
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



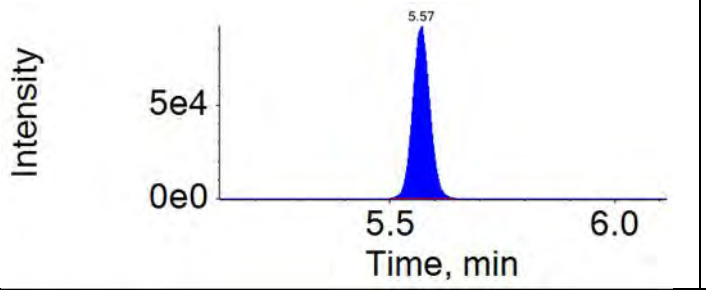


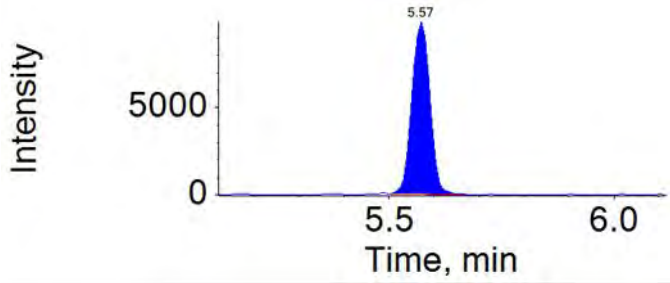
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

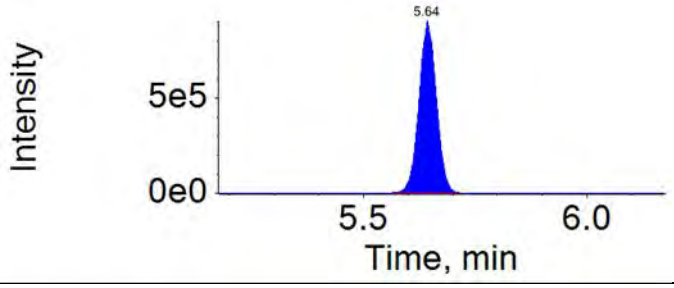
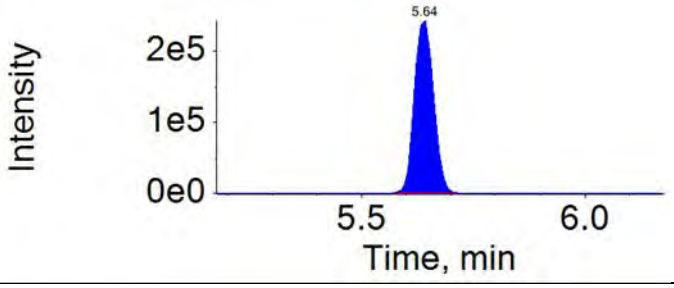


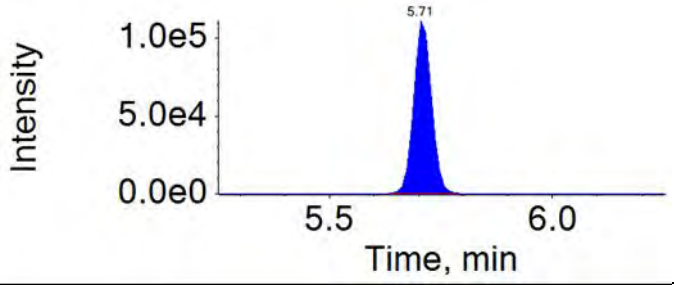
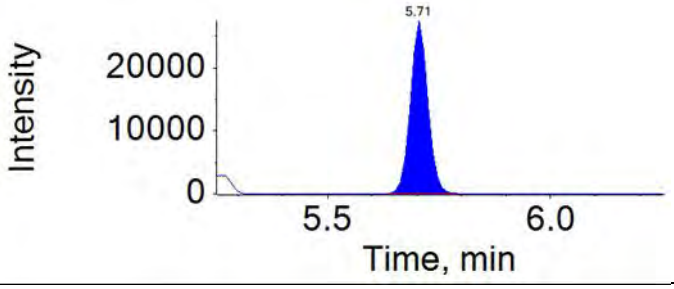


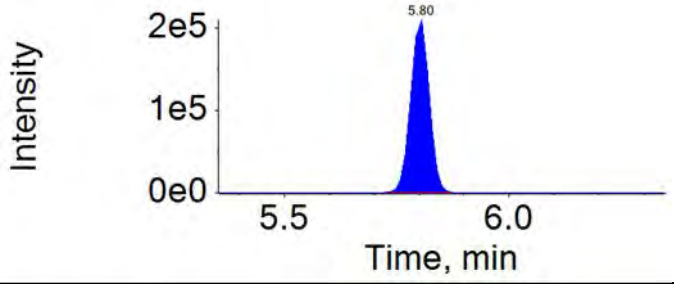
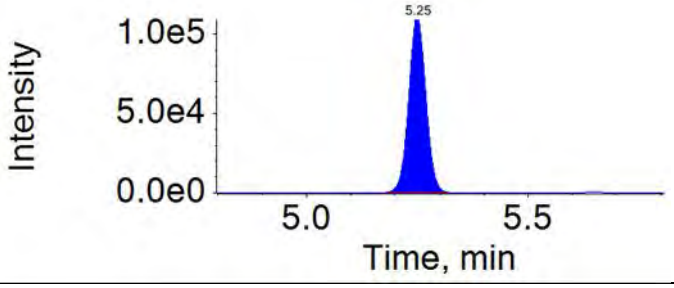
APPROVED
By JPT at 2:53 pm, 11/7/18

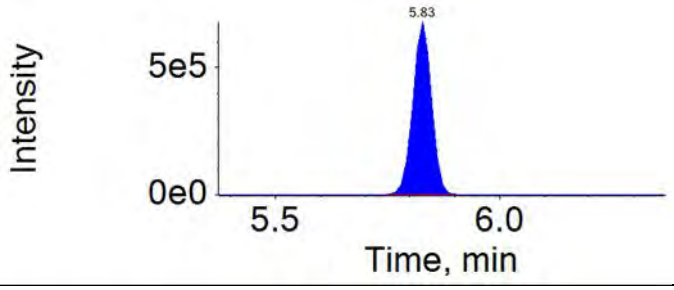
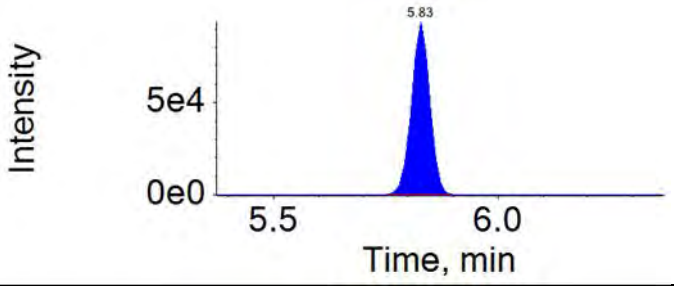
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

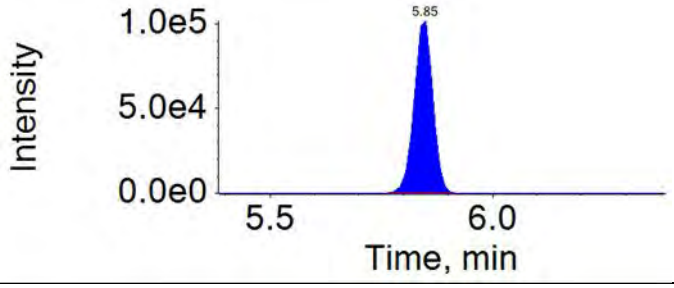
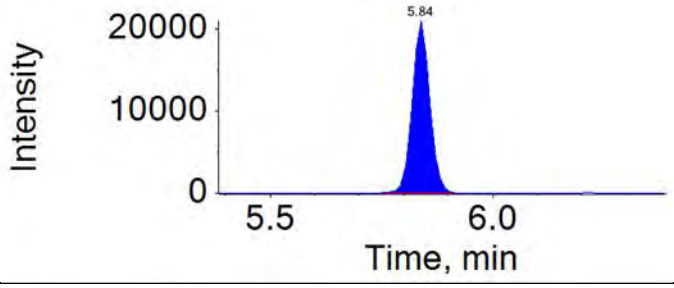
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

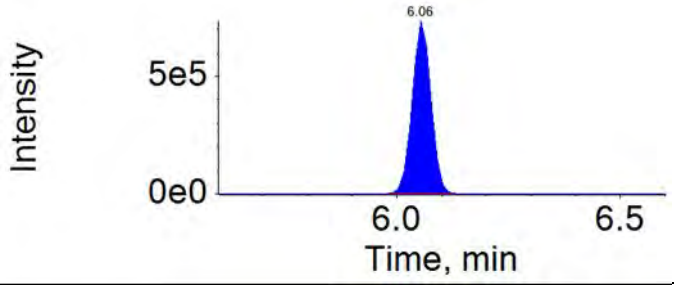
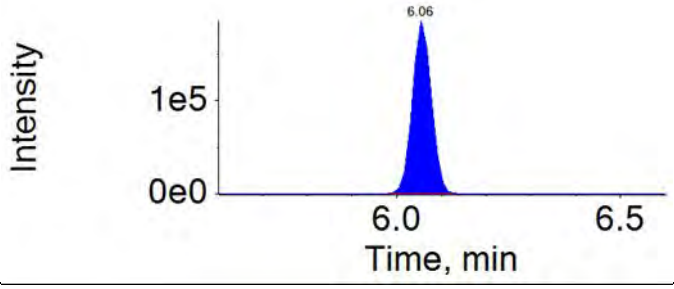
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

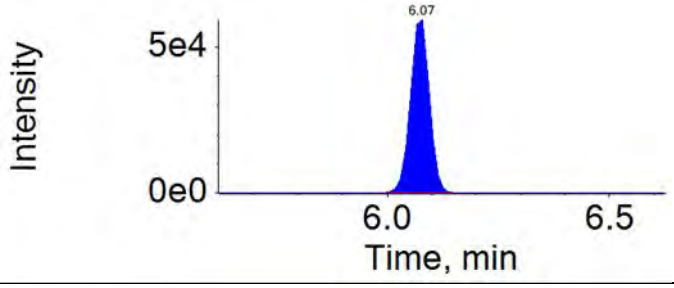
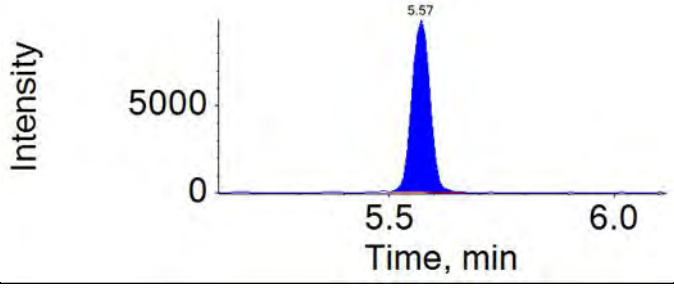
APPROVED
By JPT at 2:53 pm, 11/7/18

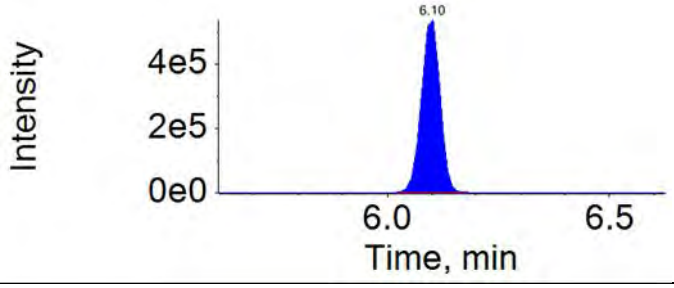
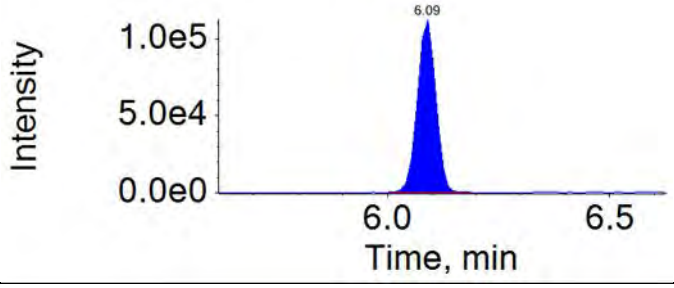
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

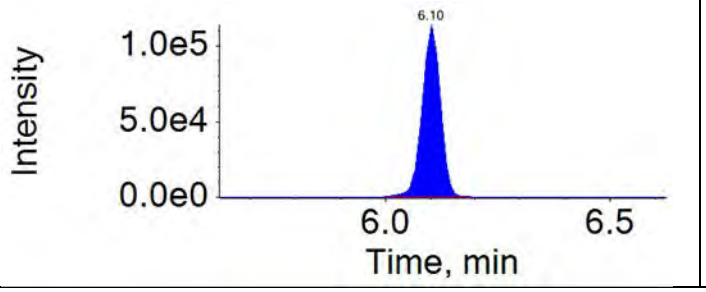
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

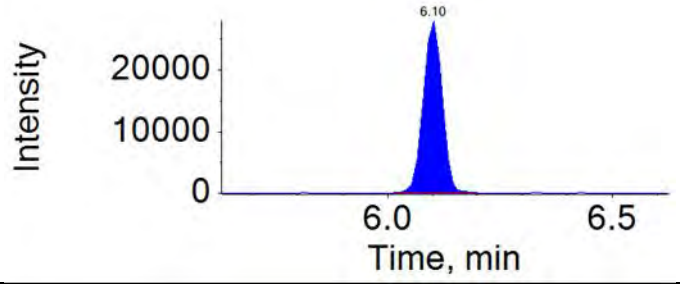
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

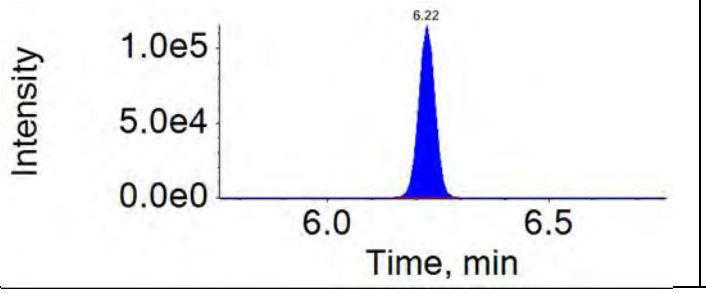
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

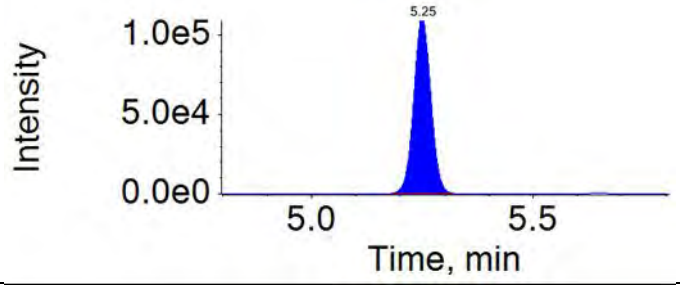
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



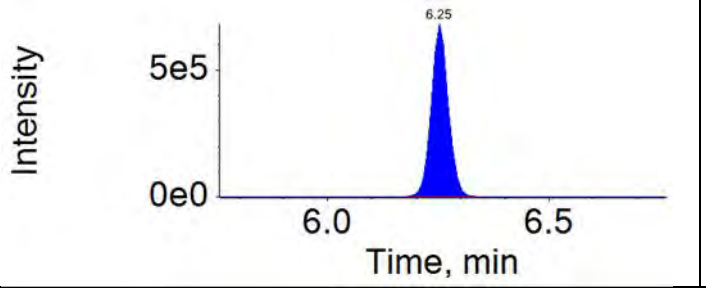


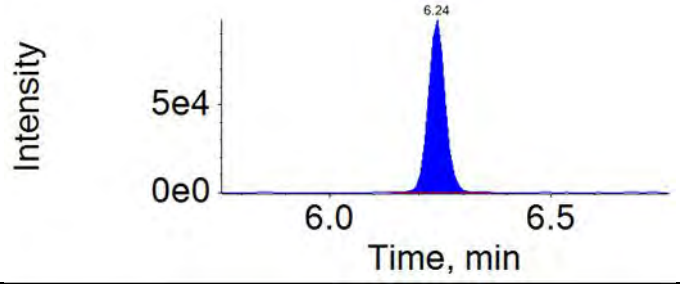
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



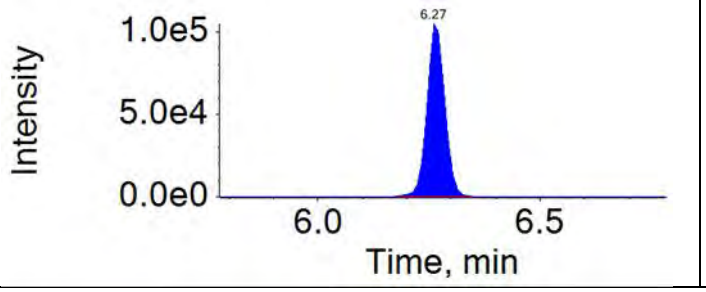


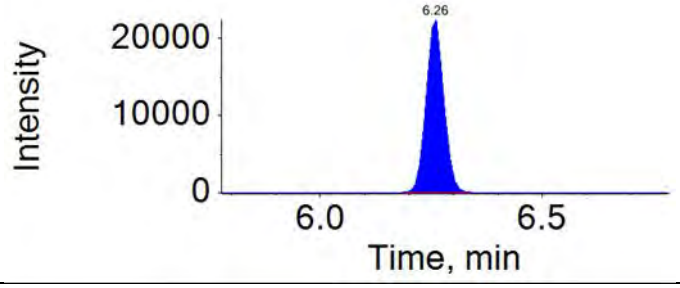
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





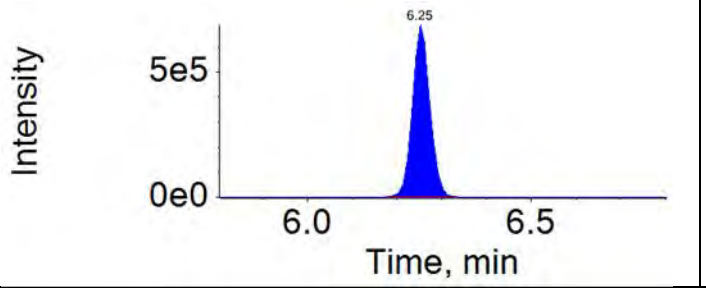
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

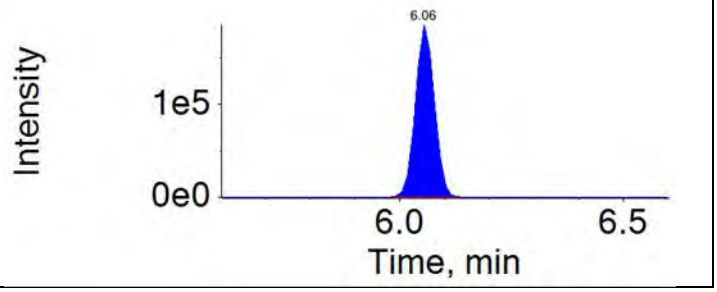




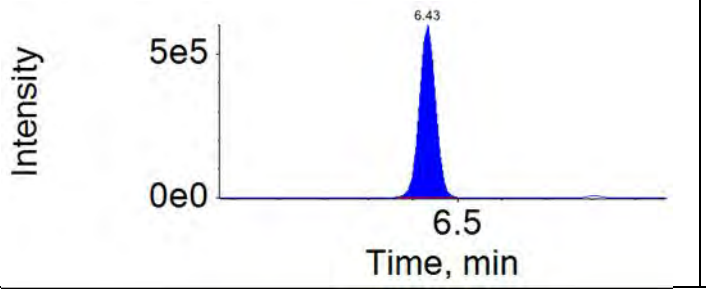
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

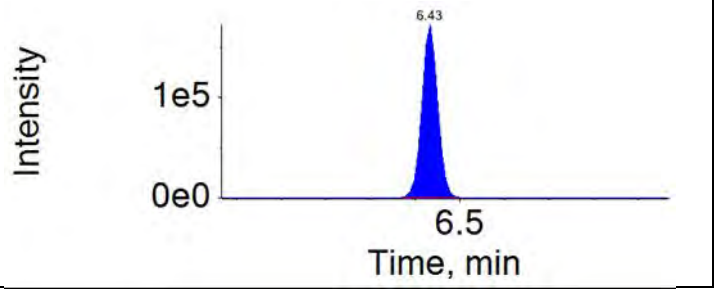
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



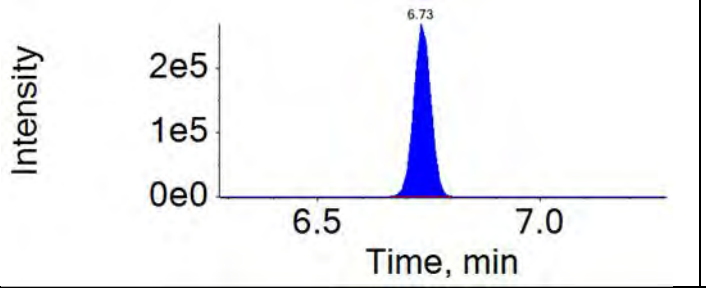


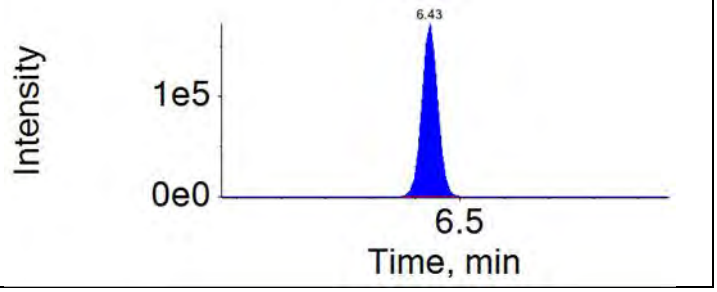
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



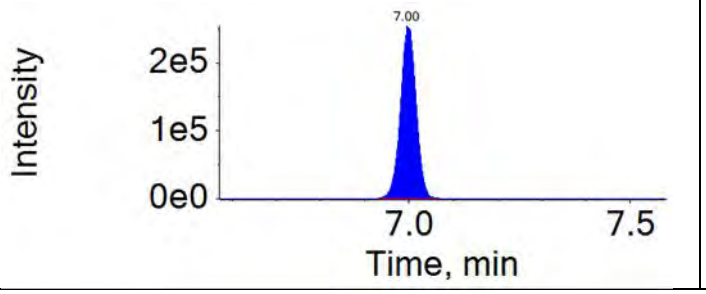


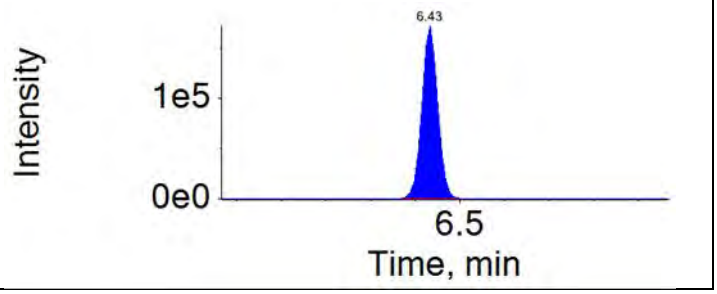
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

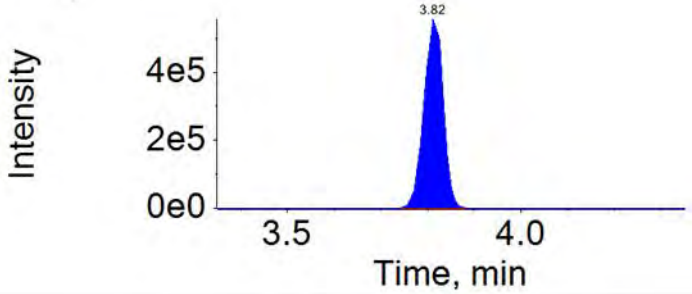
Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-14.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	1601296.4	A	1.0000	1.0000			
PFBS_2	3.81	1.00	589199.3	A	0.3576	0.3680	3	50	
4:2-FTS	4.13	1.00	365423.8	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	215025.0	A	0.6359	0.5884	-7	50	
PFHxA	4.16	1.00	3380716.3	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	39429.8	A	0.0115	0.0117	2	50	
PFPeS	4.18	1.10	845636.3	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	449010.4	A	0.5384	0.5310	-1	50	
PFHxS	4.55	1.00	1261633.0	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	452452.3	A	0.3569	0.3586	0	50	
PFHpA	4.55	1.00	3440372.8	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	189560.1	A	0.0577	0.0551	-4	50	
6:2-FTS	4.91	1.00	278493.0	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	181363.3	A	0.6752	0.6512	-4	50	
PFHpS	4.92	1.08	1236603.7	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	499368.1	A	0.3950	0.4038	2	50	
PFOA	4.92	1.00	3425279.8	A	1.0000	1.0000			
PFOA_2	4.92	1.00	194621.3	A	0.0635	0.0568	-10	50	
PFOS	5.25	1.00	1108359.9	A	1.0000	1.0000			
PFOS_2	5.25	1.00	389460.8	A	0.3494	0.3514	1	50	
PFNA	5.27	1.00	2889454.7	A	1.0000	1.0000			
PFNA_2	5.27	1.00	55493.0	A	0.0207	0.0192	-7	50	
PFNS	5.54	1.06	722178.3	A	1.0000	1.0000			
PFNS_2	5.54	1.06	336998.4	A	0.4890	0.4666	-5	50	
PFDA	5.57	1.00	2401274.2	A	1.0000	1.0000			
PFDA_2	5.57	1.00	16983.6	A	0.0057	0.0071	25	50	
8:2-FTS	5.57	1.00	244867.6	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	133528.0	A	0.6169	0.5453	-12	50	
NMeFOSAA	5.71	1.00	308507.7	A	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	75576.5	A	0.2206	0.2450	11	50	
PFDS	5.80	1.11	605559.3	A	1.0000	1.0000			
PFDS_2	5.80	1.11	310462.1	A	0.4648	0.5127	10	50	
PFUnDA	5.83	1.00	1952356.4	A	1.0000	1.0000			
PFUnDA_2	5.83	1.00	9988.0	A	0.0031	0.0051	62	50	OOS
NEtFOSAA	5.85	1.00	298834.2	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	185748.9	A	0.6082	0.6216	2	50	
PFDoDA	6.06	1.00	2132260.7	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	26780.3	A	0.0109	0.0126	15	50	
10:2-FTS	6.07	1.09	177607.5	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	115093.0	A	0.7082	0.6480	-9	50	
PFTrDA	6.25	1.03	1851055.0	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	17056.8	A	0.0096	0.0092	-4	50	
PFTeDA	6.43	1.00	1500655.1	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	8887.6	A	0.0055	0.0059	7	50	
PFHxDA	6.73	1.05	716467.3	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	43825.8	A	0.0596	0.0612	3	50	
PFODA	7.00	1.09	624697.0	A	1.0000	1.0000			
PFODA_2	7.00	1.09	15544.4	A	0.0257	0.0249	-3	50	

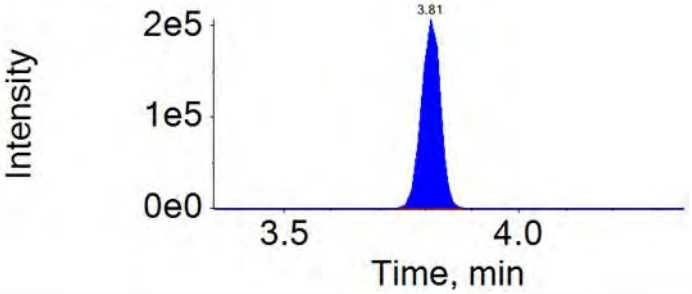
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

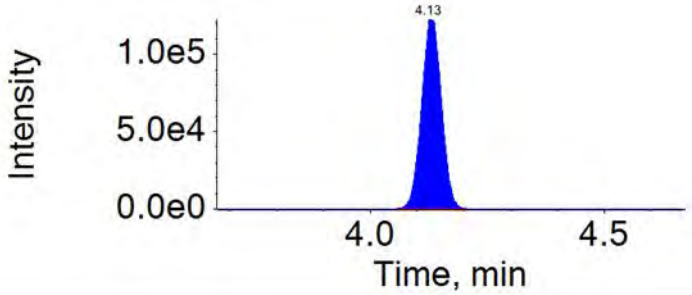
Component: PFBS
Primary Mass: 299.0 / 80.0



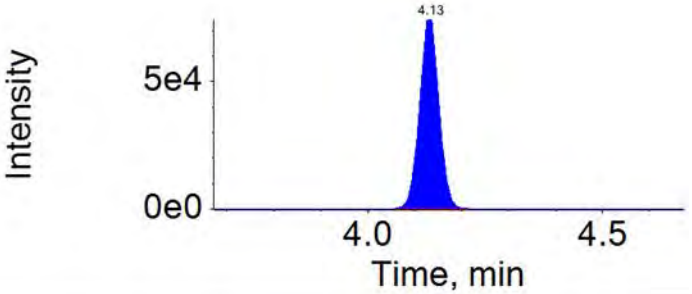
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



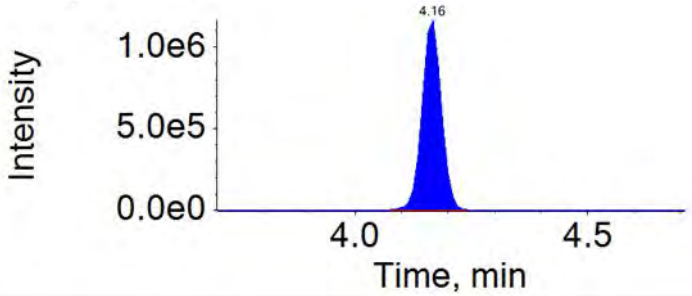
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



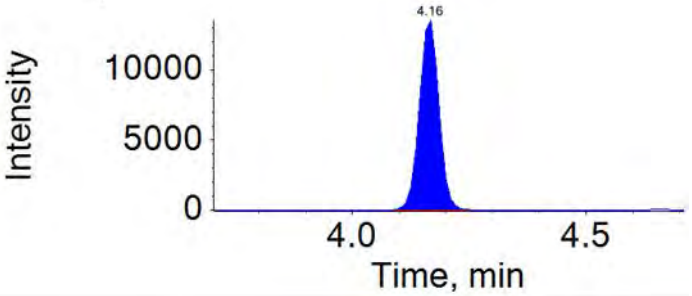
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



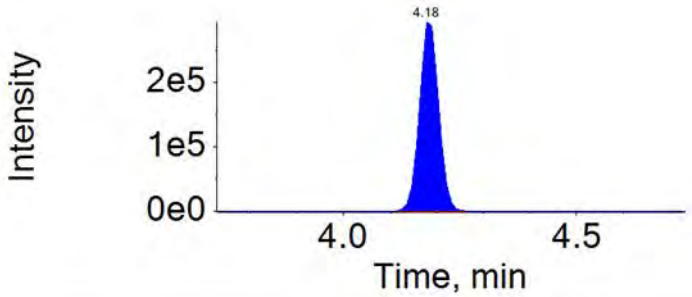
Component: PFHxA
Primary Mass: 313.0 / 269.0



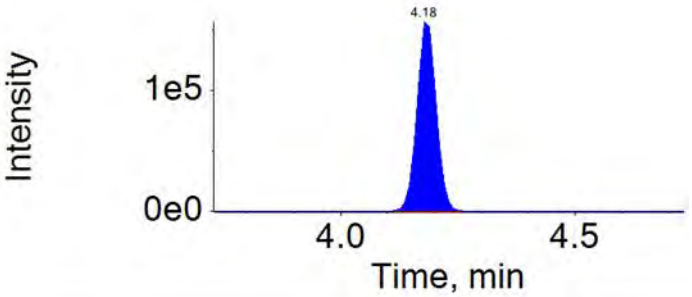
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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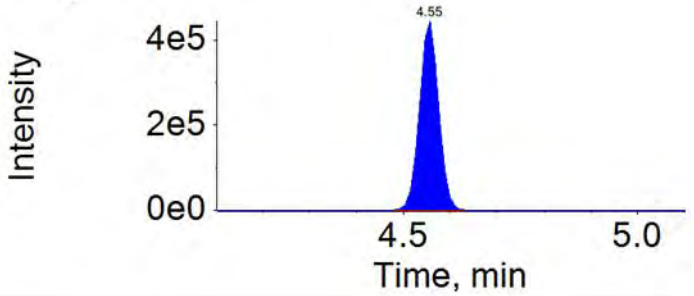
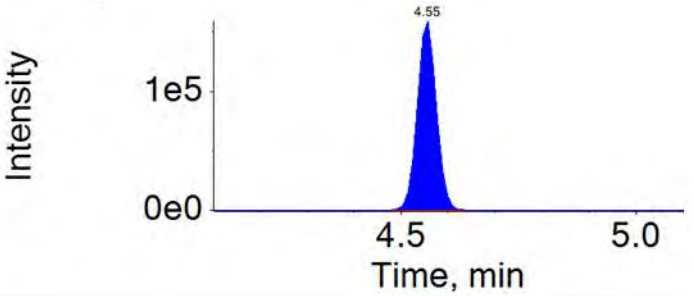
By umar at 5:23 pm, 11/9/18

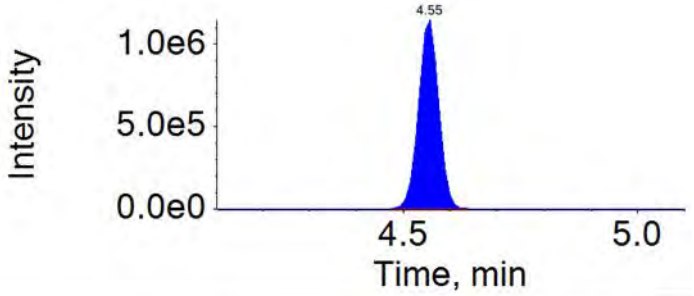
Component: PFHxS
Primary Mass: 399.0 / 80.0



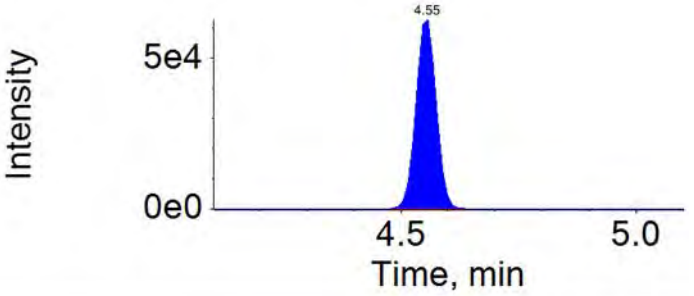
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



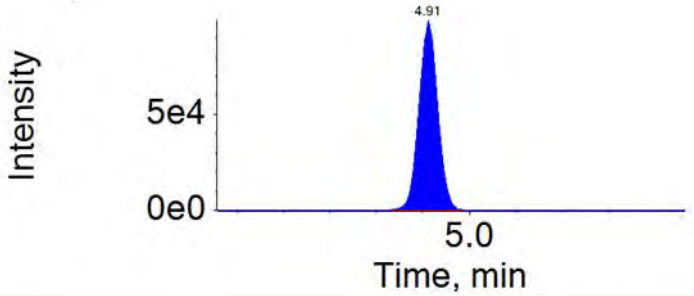
Component: PFHpA
Primary Mass: 363.0 / 319.0



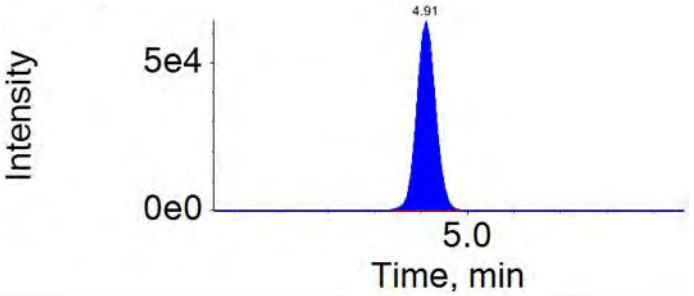
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



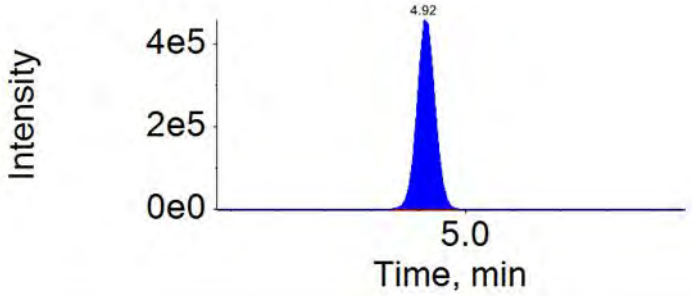
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



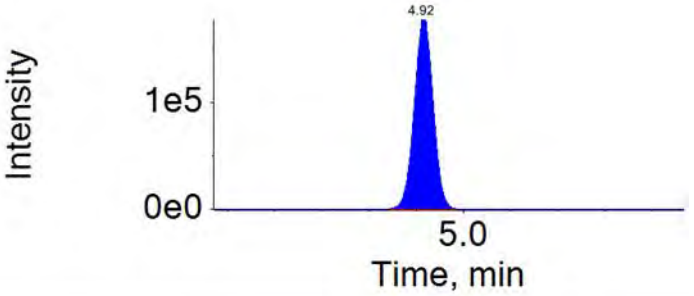
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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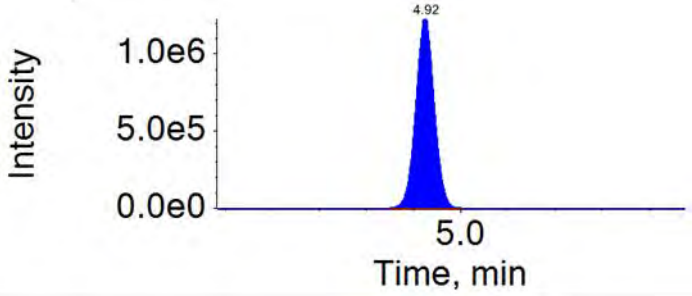
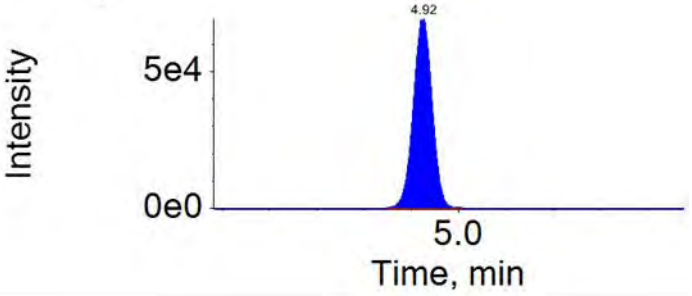
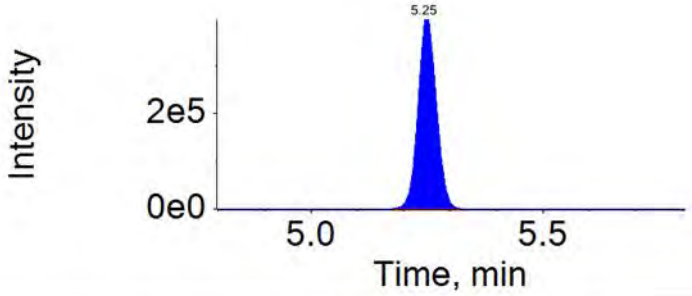
Component: PFOA
Primary Mass: 413.0 / 369.0



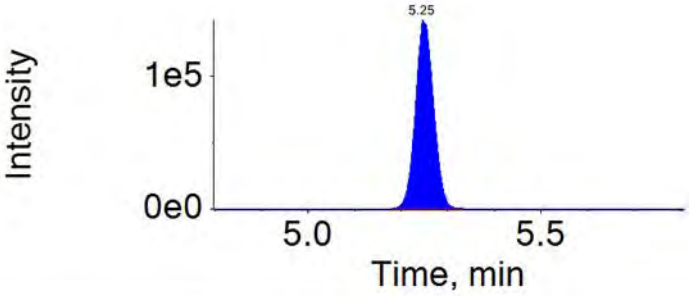
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



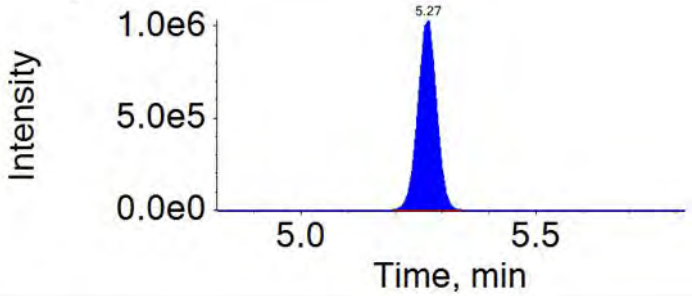
Component: PFOS
Primary Mass: 499.0 / 80.0



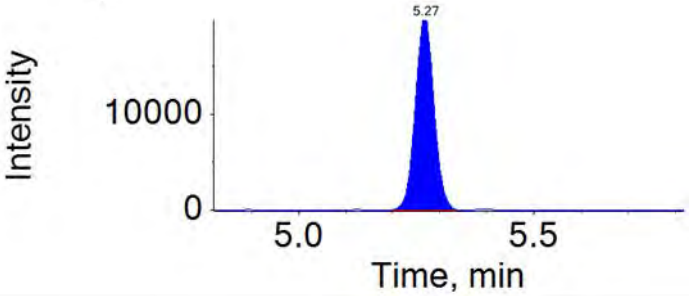
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



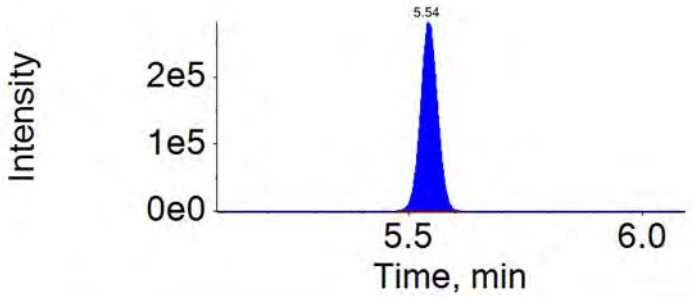
Component: PFNA
Primary Mass: 463.0 / 419.0



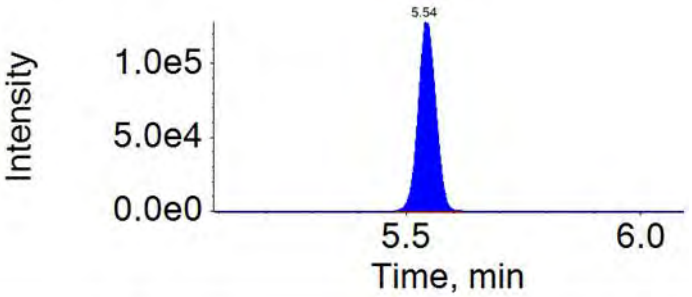
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



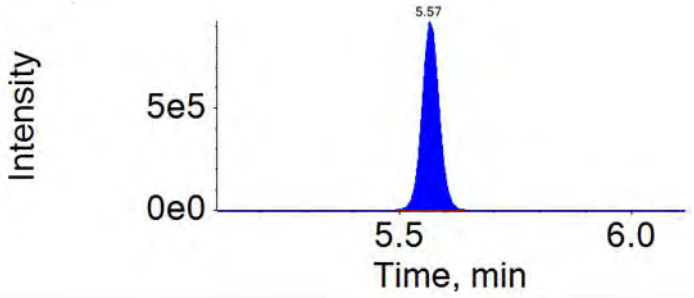
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



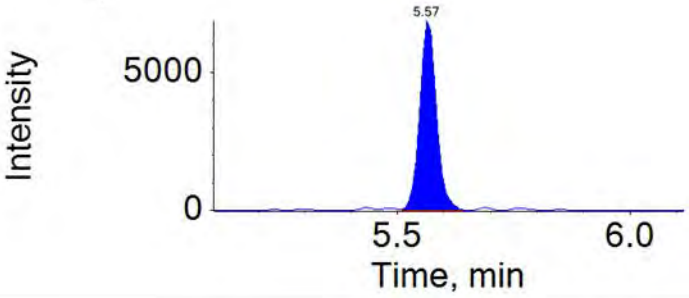
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

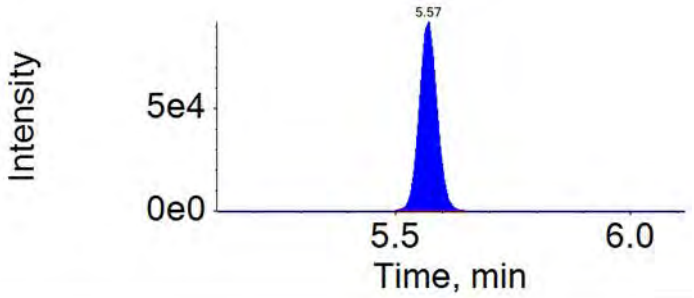
Component: PFDA
Primary Mass: 513.0 / 469.0



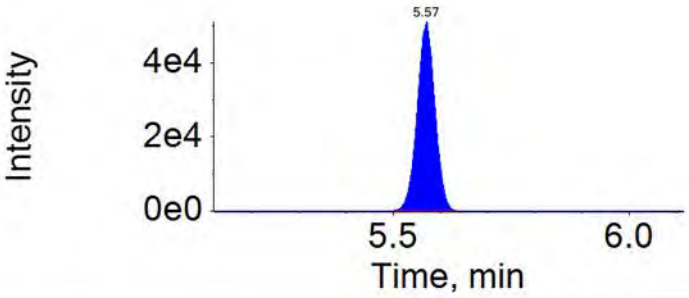
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



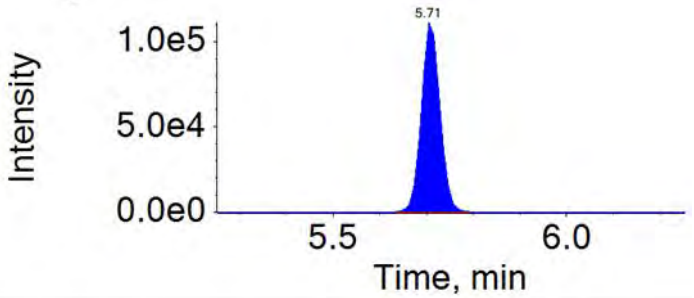
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



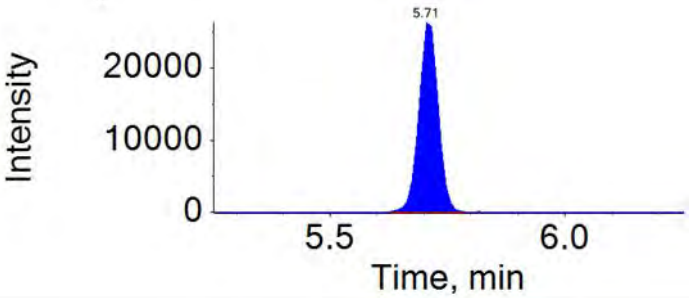
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



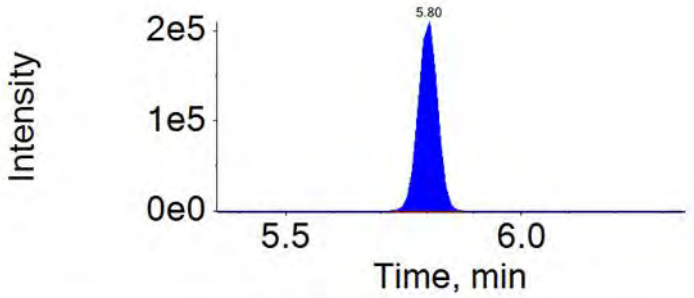
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



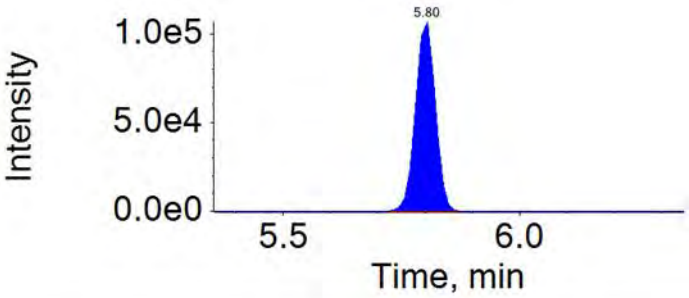
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



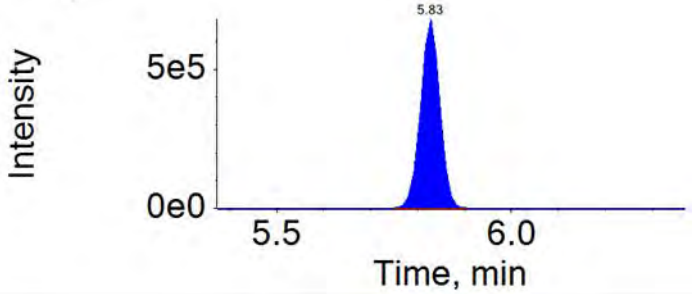
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



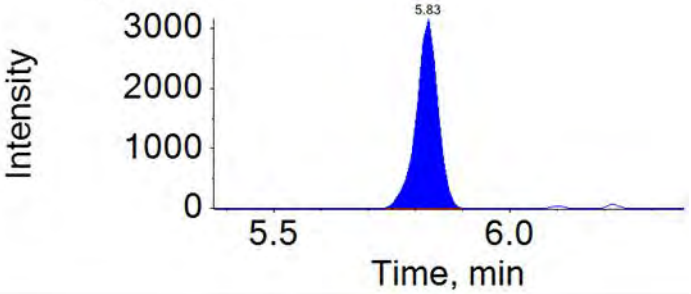
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

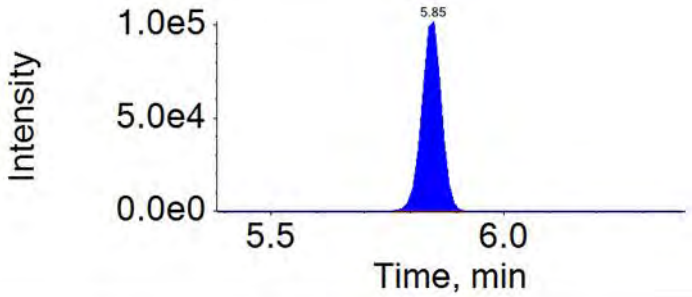
Component: PFUnDA
Primary Mass: 563.0 / 519.0



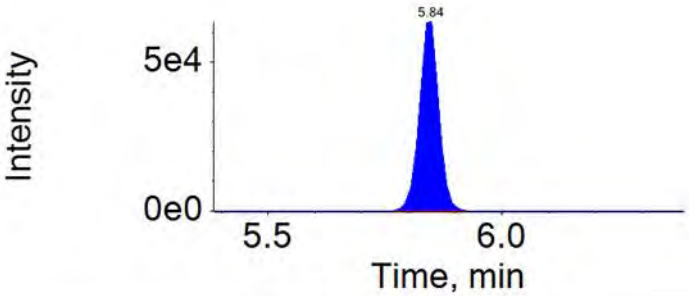
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



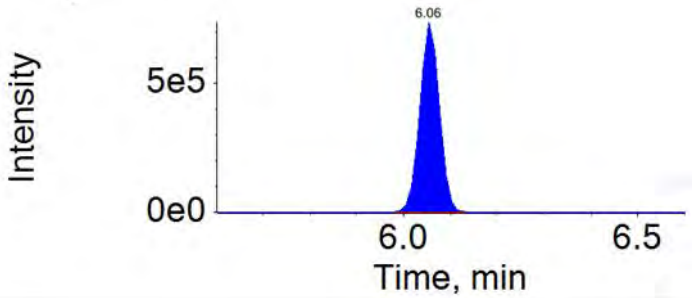
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



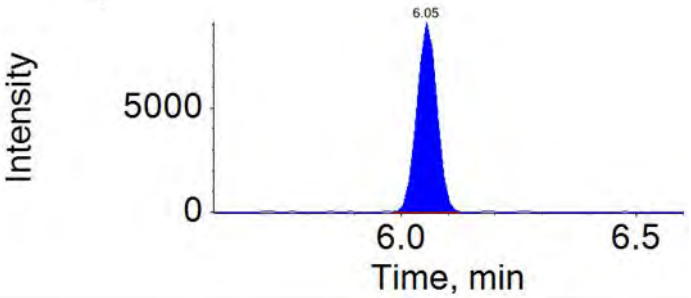
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



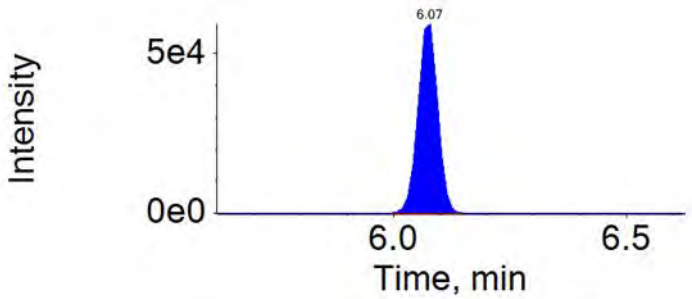
Component: PFDoDA
Primary Mass: 613.0 / 569.0



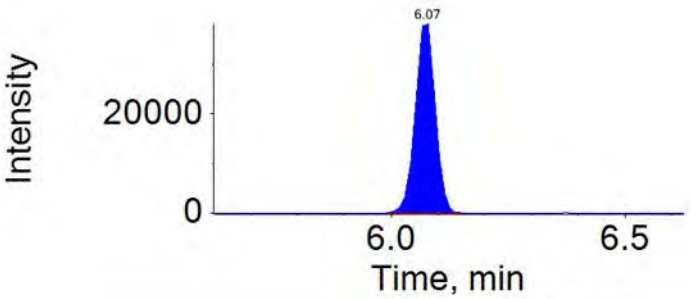
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



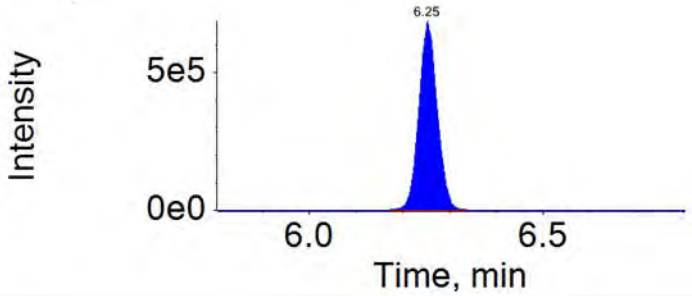
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



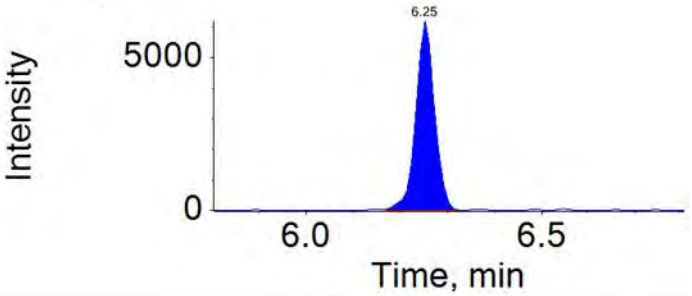
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



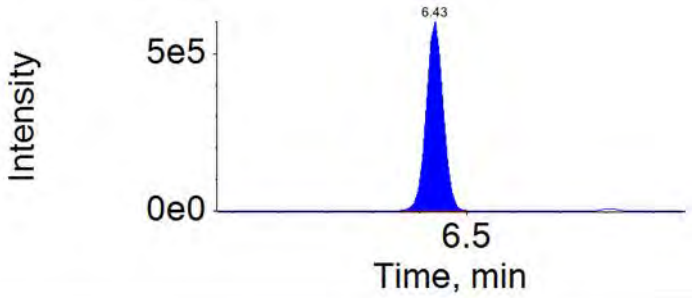
Component: PFTrDA
Primary Mass: 663.0 / 619.0



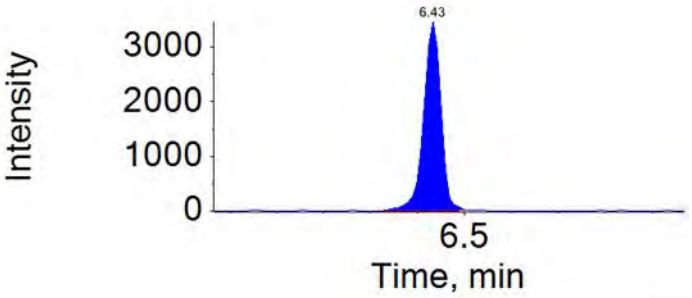
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



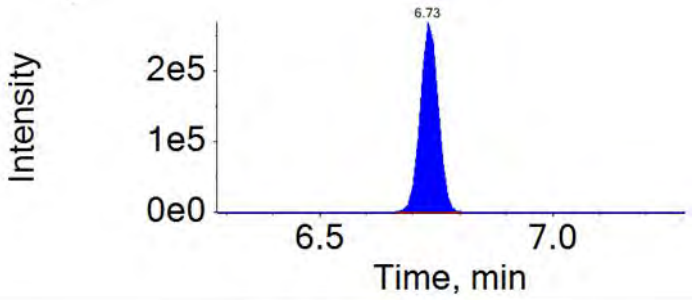
Component: PFTeDA
Primary Mass: 713.0 / 669.0



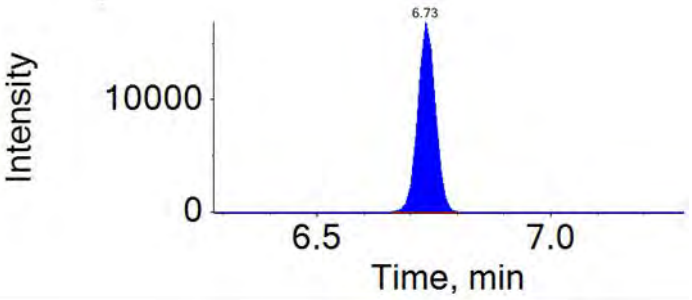
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



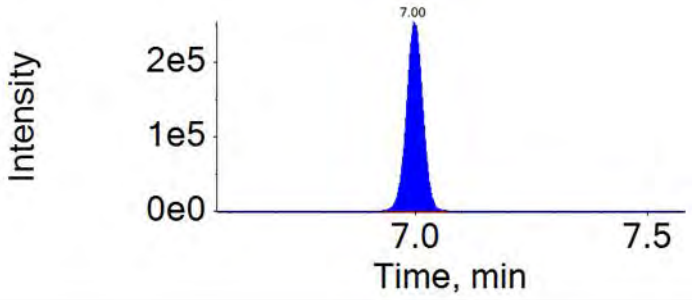
Component: PFHxDA
Primary Mass: 813.0 / 769.0



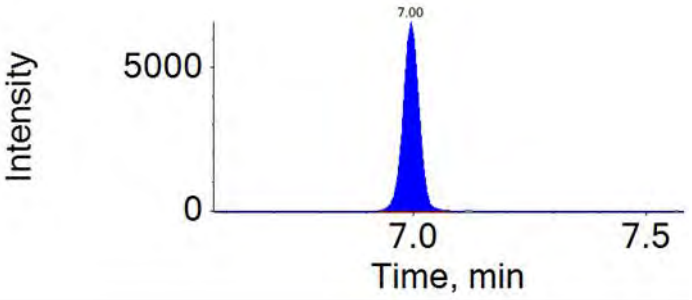
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL6			**Data File:**		18NOV07DCAL-15.wiff
Sample ID:	CALMOD61833E			**Acquis Date:**		2018-11-07T10:24:59
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	8			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	600246.7	730410.6	-18	50	
13C2-PFOA	5.0	457854.9	524423.6	-13	50	
13C4-PFOS	4.8	251499.9	274061.7	-8	50	
13C2-PFDA	5.0	260529.0	311442.1	-16	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	647849.6	13C3-PFBA	600246.7	1.079	5.000	4.995	100	70-130	
E13C5-PFPeA	687796.7	13C3-PFBA	600246.7	1.146	5.000	4.992	100	70-130	
E13C3-PFBS	384220.8	13C3-PFBA	600246.7	0.640	4.650	4.698	101	70-130	
E13C2-4:2-FTS	50041.3	13C2-PFOA	457854.9	0.109	4.670	4.932	106	70-130	
E13C5-PFHxA	607820.1	13C2-PFOA	457854.9	1.328	5.000	4.883	98	70-130	
E13C3-PFHxS	295466.2	13C2-PFOA	457854.9	0.645	4.730	4.633	98	70-130	
E13C4-PFHpA	484763.2	13C2-PFOA	457854.9	1.059	5.000	4.816	96	70-130	
E13C2-6:2-FTS	30466.8	13C2-PFOA	457854.9	0.067	4.750	4.437	93	70-130	
E13C8-PFOA	769164.4	13C2-PFOA	457854.9	1.680	5.000	4.685	94	70-130	
E13C8-PFOS	268369.0	13C4-PFOS	251499.9	1.067	4.780	4.718	99	70-130	
E13C9-PFNA	440319.0	13C4-PFOS	251499.9	1.751	5.000	4.782	96	70-130	
E13C6-PFDA	536626.2	13C2-PFDA	260529.0	2.060	5.000	5.180	104	70-130	
E13C2-8:2-FTS	24938.2	13C2-PFDA	260529.0	0.096	4.790	5.065	106	70-130	
E13C8-PFOSA	614406.4	13C2-PFDA	260529.0	2.358	5.000	5.146	103	70-130	
Ed3-NMeFOSAA	78158.0	13C2-PFDA	260529.0	0.300	5.000	5.579	112	70-130	
E13C7-PFUnDA	229237.1	13C2-PFDA	260529.0	0.880	5.000	5.076	102	70-130	
Ed5-NEtFOSAA	60556.6	13C2-PFDA	260529.0	0.232	5.000	5.379	108	70-130	
E13C2-PFDoDA	500065.3	13C2-PFDA	260529.0	1.919	5.000	5.174	103	70-130	
Ed7-NMePFOSAE	294617.6	13C2-PFDA	260529.0	1.131	5.000	5.259	105	70-130	
Ed3-NMePFOSA	77146.9	13C2-PFDA	260529.0	0.296	5.000	5.421	108	70-130	
Ed9-NEtPFOSAE	239317.0	13C2-PFDA	260529.0	0.919	5.000	5.246	105	70-130	
Ed5-NEtPFOSA	59054.4	13C2-PFDA	260529.0	0.227	5.000	5.248	105	70-130	
E13C2-PFTeDA	394433.9	13C2-PFDA	260529.0	1.514	5.000	5.450	109	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

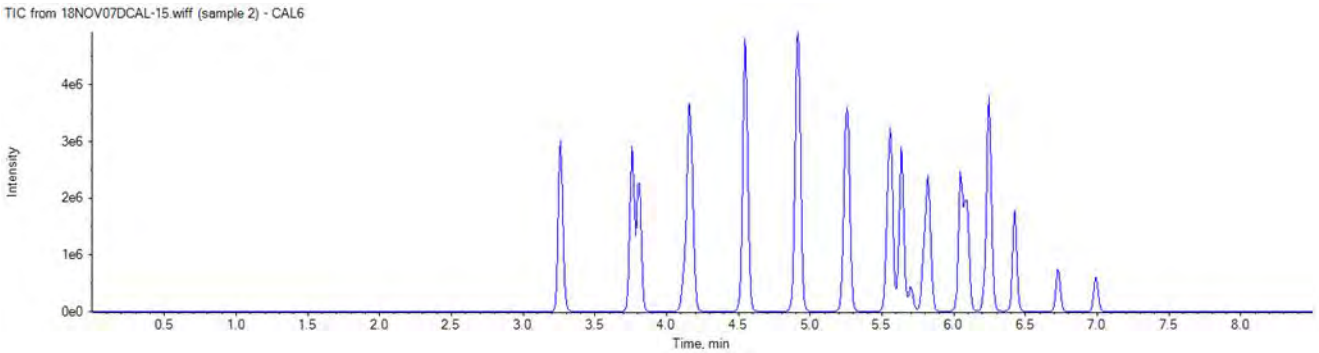
Analyte Quantitation Peak Table

Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-15.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	5709364.6		A	13C4-PFBA	3.26	647849.6	8.813	51.576
PFPeA	3.76	1.000	5899932.2		A	13C5-PFPeA	3.76	687796.7	8.578	50.979
PFBS	3.81	1.000	3508201.1		A	13C3-PFBS	3.81	384220.8	9.131	46.035
4:2-FTS	4.12	1.000	866263.6		A	13C2-4:2-FTS	4.12	50041.3	17.311	46.538
PFHxA	4.16	1.000	6739327.9		A	13C5-PFHxA	4.16	607820.1	11.088	47.549
PFPeS	4.18	1.100	1823355.9		A	13C3-PFBS	3.81	384220.8	4.746	46.806
PFHxS	4.55	1.000	2760712.8		A	13C3-PFHxS	4.55	295466.2	9.344	47.360
PFHpA	4.55	1.000	6940304.7		A	13C4-PFHpA	4.55	484763.2	14.317	48.150
6:2-FTS	4.90	1.000	566692.8		A	13C2-6:2-FTS	4.90	30466.8	18.600	46.401
PFHpS	4.91	1.080	2648512.9		A	13C3-PFHxS	4.55	295466.2	8.964	46.896
PFOA	4.92	1.000	7023921.1		A	13C8-PFOA	4.92	769164.4	9.132	51.417
PFOS	5.24	1.000	2487687.4		A	13C8-PFOS	5.24	268369.0	9.270	48.067
PFNA	5.26	1.000	6070259.1		A	13C9-PFNA	5.26	440319.0	13.786	51.521
PFNS	5.54	1.060	1684601.2		A	13C8-PFOS	5.24	268369.0	6.277	49.770
PFDA	5.56	1.000	4962332.7		A	13C6-PFDA	5.56	536626.2	9.247	50.875
8:2-FTS	5.56	1.000	516640.5		A	13C2-8:2-FTS	5.56	24938.2	20.717	46.697
PFOSA	5.64	1.000	5938541.7		A	13C8-PFOSA	5.64	614406.4	9.665	52.247
NMeFOSAA	5.70	1.000	740651.6		A	d3-NMeFOSAA	5.70	78158.0	9.476	48.760
PFDS	5.79	1.110	1337416.6		A	13C8-PFOS	5.24	268369.0	4.983	47.605
PFUnDA	5.82	1.000	4071590.3		A	13C7-PFUnDA	5.82	229237.1	17.761	50.936
NEtFOSAA	5.84	1.000	685447.7		A	d5-NEtFOSAA	5.83	60556.6	11.319	48.645
PFDoDA	6.05	1.000	4509578.7		A	13C2-PFDoDA	6.05	500065.3	9.018	48.873
10:2-FTS	6.07	1.090	395929.8		A	13C2-8:2-FTS	5.56	24938.2	15.876	49.437
NMePFOSAE	6.09	1.000	3462215.2		A	d7-NMePFOSAE	6.08	294617.6	11.752	52.660
NMePFOSA	6.10	1.000	705149.2		A	d3-NMePFOSA	6.09	77146.9	9.140	51.162
PFDoS	6.22	1.190	661528.1		A	13C8-PFOS	5.24	268369.0	2.465	47.576
NEtPFOSAE	6.25	1.000	3836850.8		A	d9-NEtPFOSAE	6.23	239317.0	16.033	51.396
NEtPFOSA	6.26	1.000	676107.2		A	d5-NEtPFOSA	6.25	59054.4	11.449	50.423
PFTrDA	6.25	1.030	3829048.4		A	13C2-PFDoDA	6.05	500065.3	7.657	48.287
PFTeDA	6.42	1.000	3381511.1		A	13C2-PFTeDA	6.43	394433.9	8.573	50.344
PFHxDA	6.73	1.050	1559604.6		A	13C2-PFTeDA	6.43	394433.9	3.954	49.083
PFODA	6.99	1.090	1340733.9		A	13C2-PFTeDA	6.43	394433.9	3.399	48.698

Total Ion Chromatogram

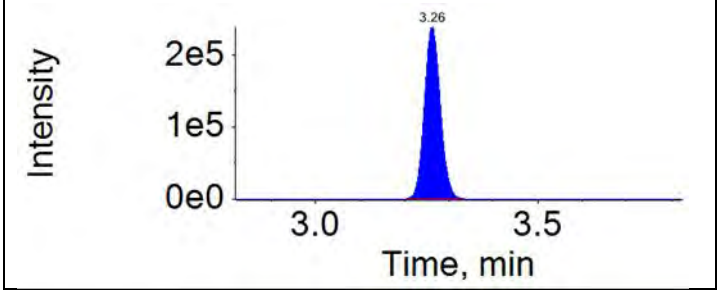


APPROVED
By JPT at 2:53 pm, 11/7/18

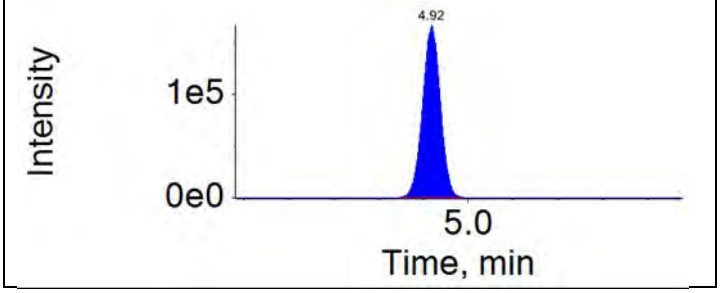
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

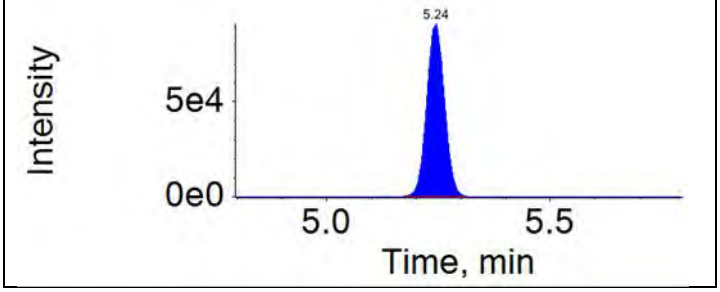
Injection Standard: 13C3-PFBA
216.0 / 172.0



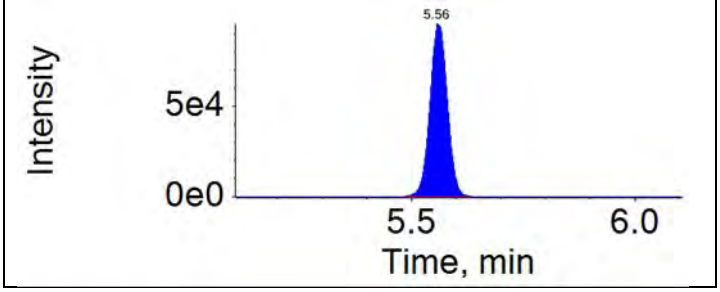
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



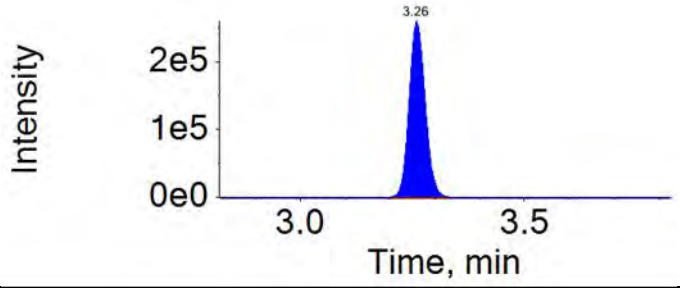
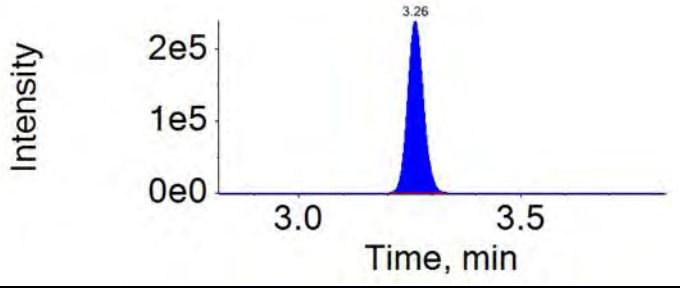
Injection Standard: 13C2-PFDA
515.0 / 470.0

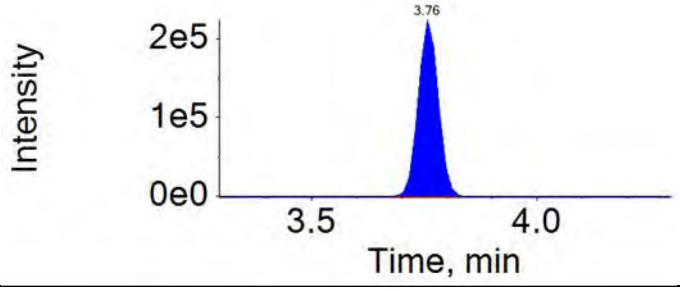
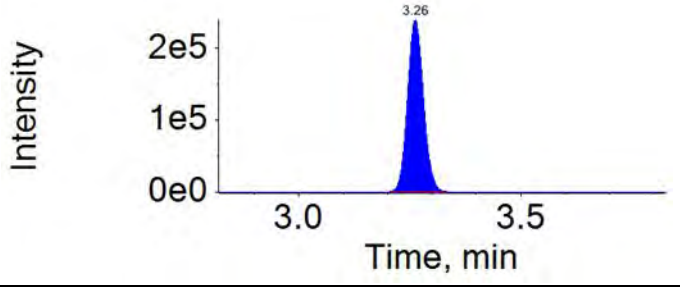


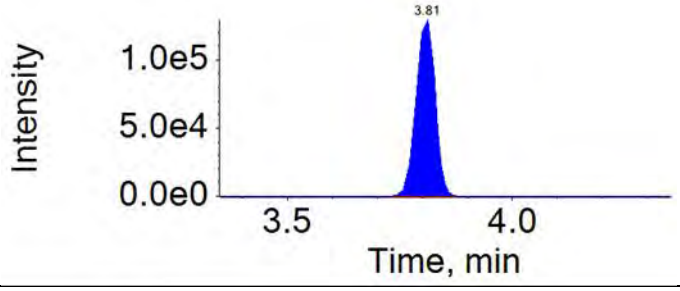
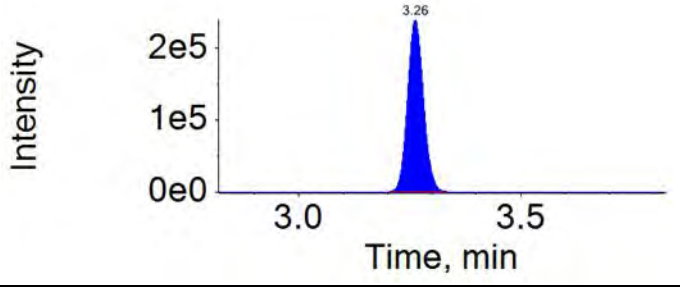
APPROVED
By JPT at 2:53 pm, 11/7/18

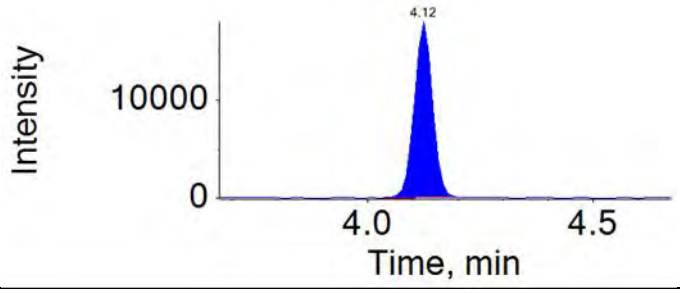
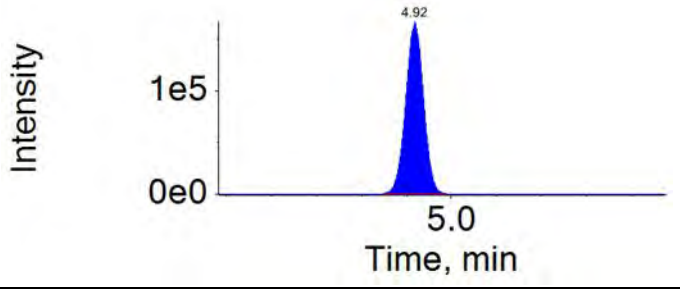
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

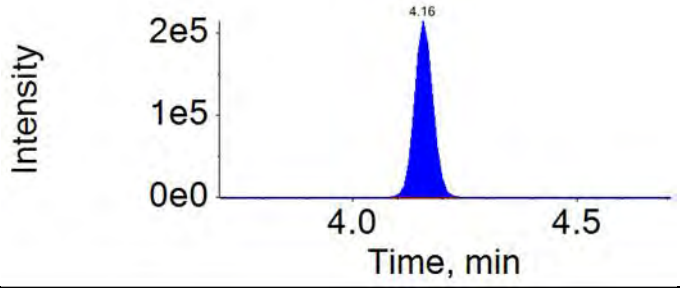
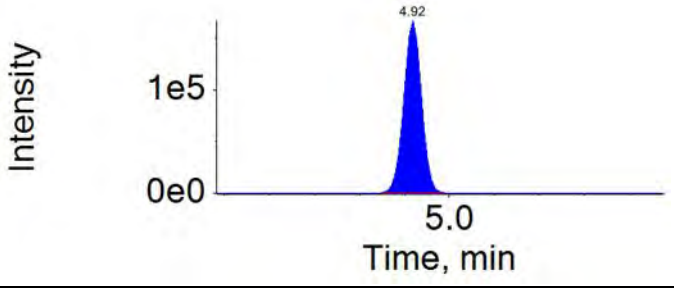
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

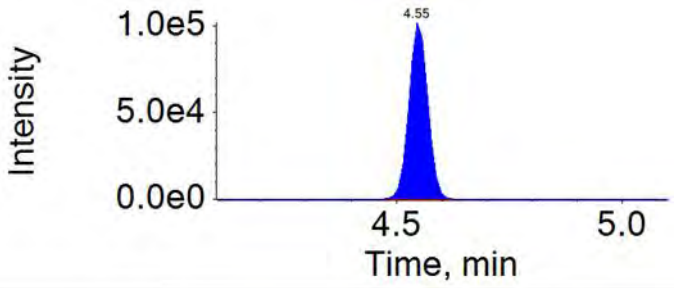
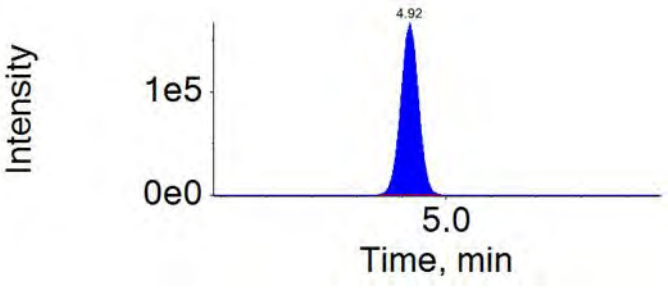
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

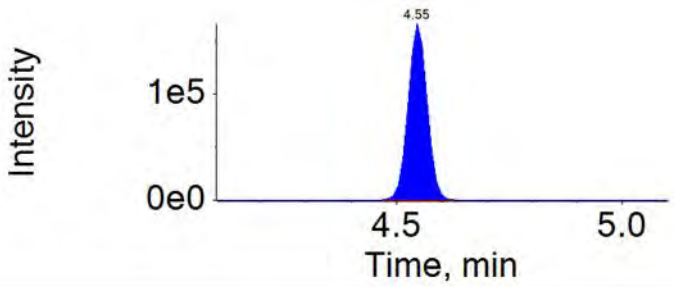
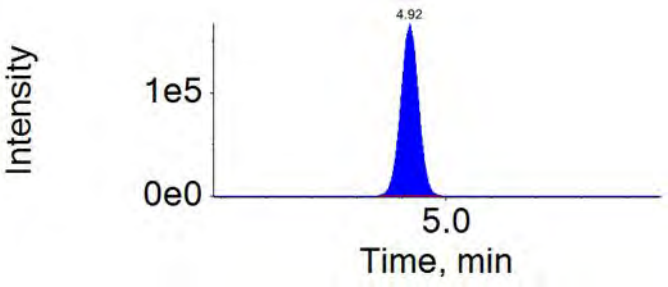
APPROVED
By JPT at 2:53 pm, 11/7/18

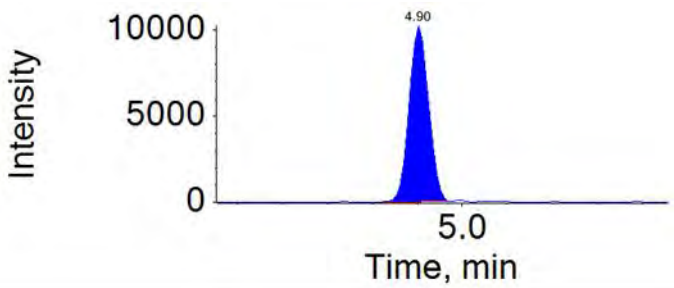
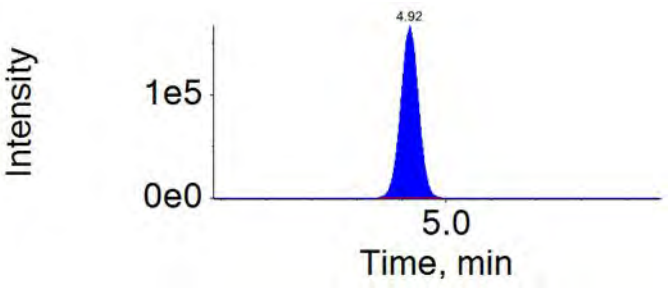
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

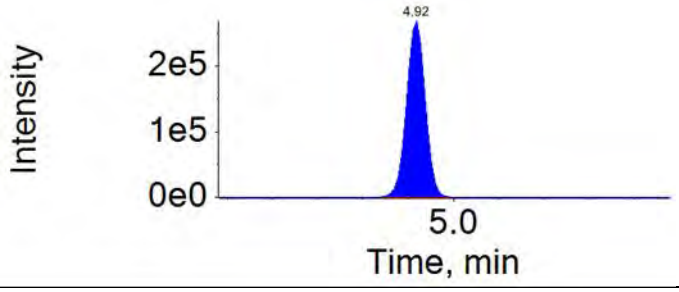
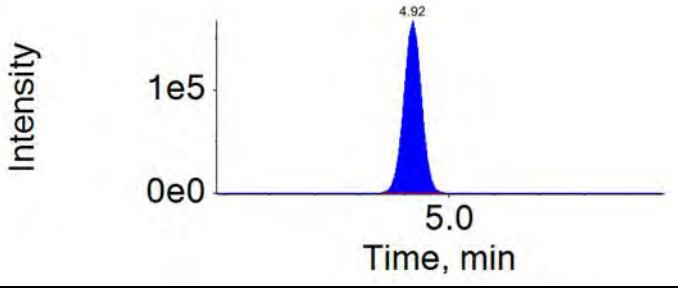
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

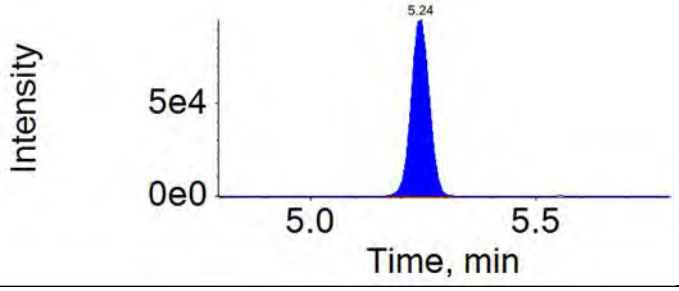
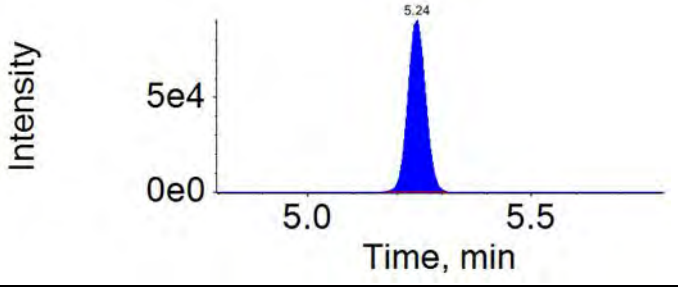
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

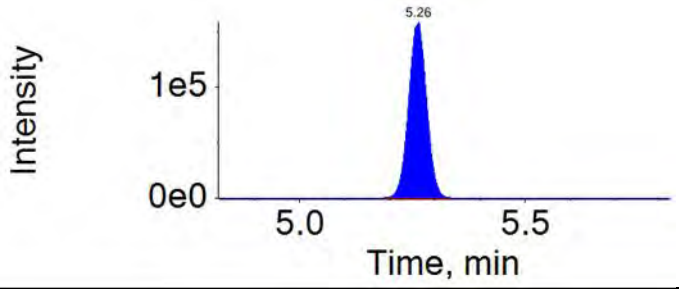
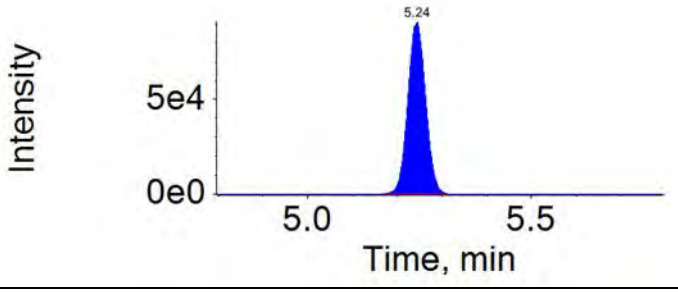
APPROVED
By JPT at 2:53 pm, 11/7/18

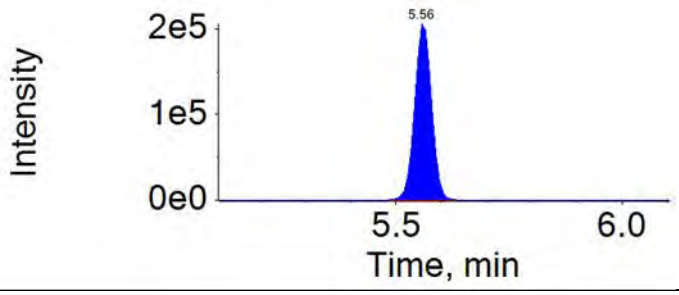
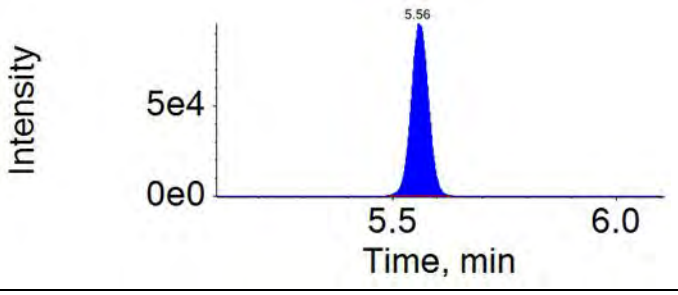
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

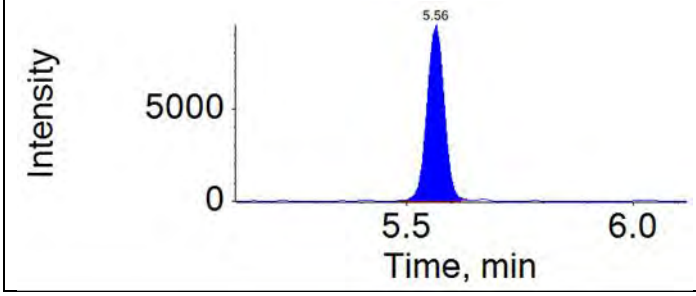
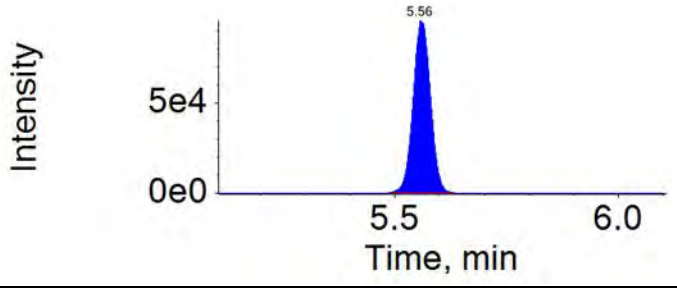
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

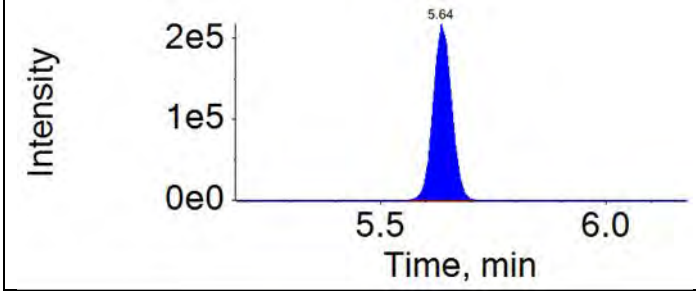
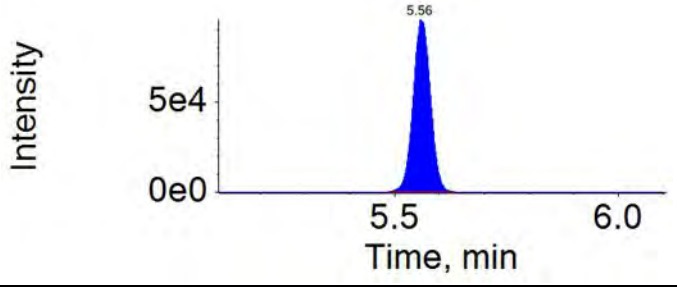
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

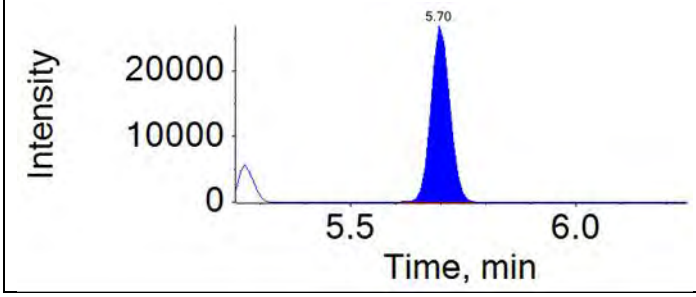
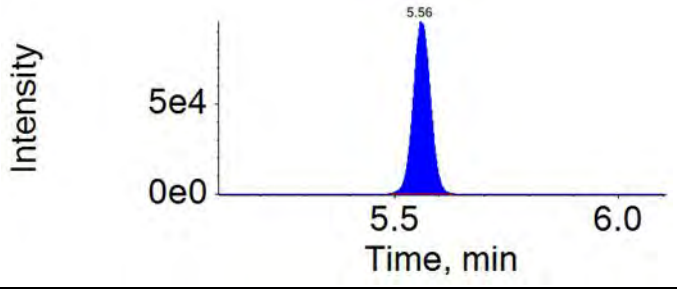
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

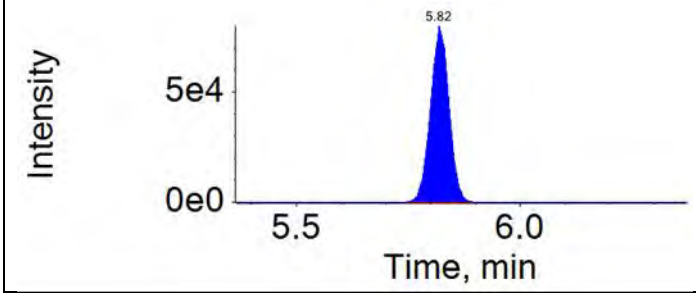
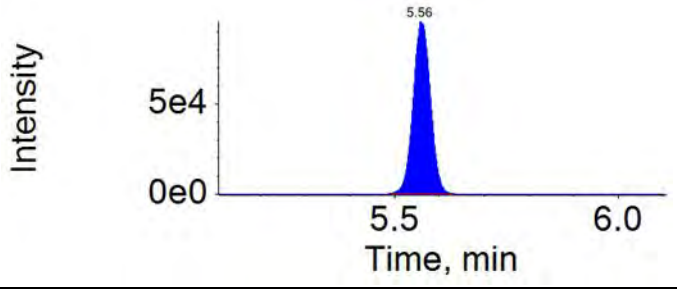
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

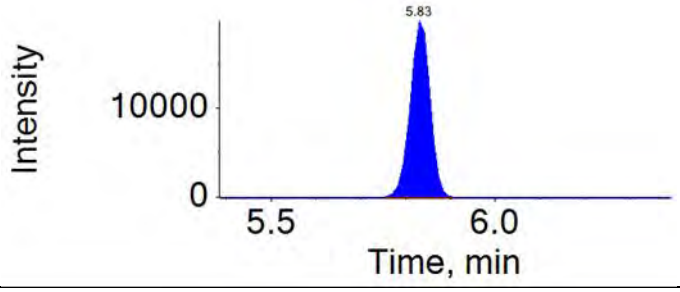
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

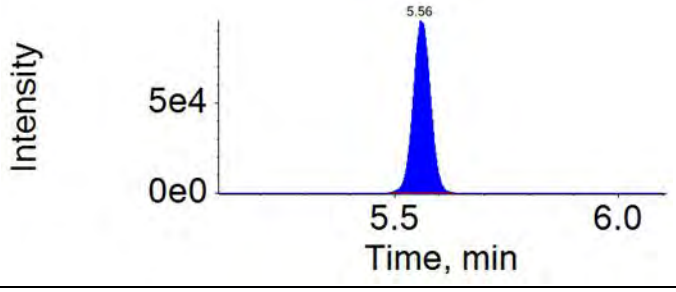
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

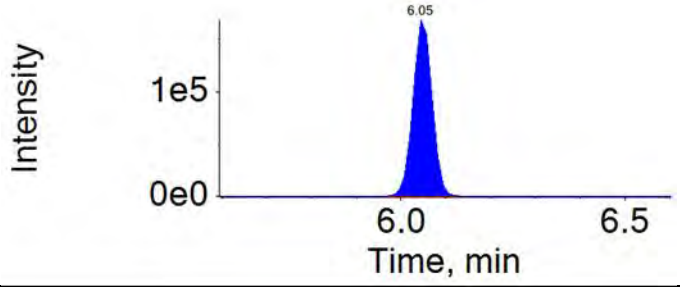
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

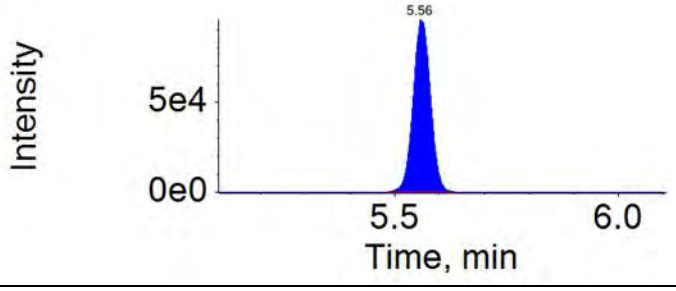
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



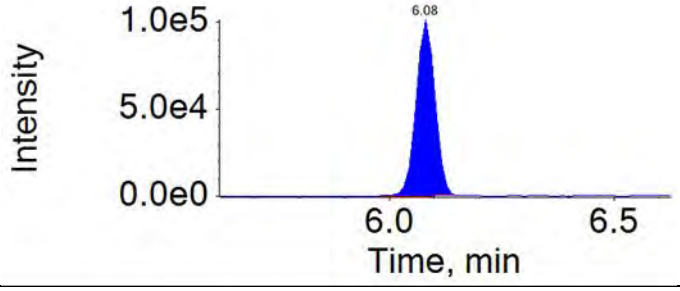


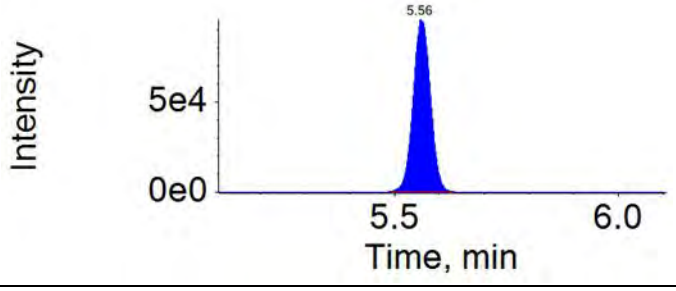
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



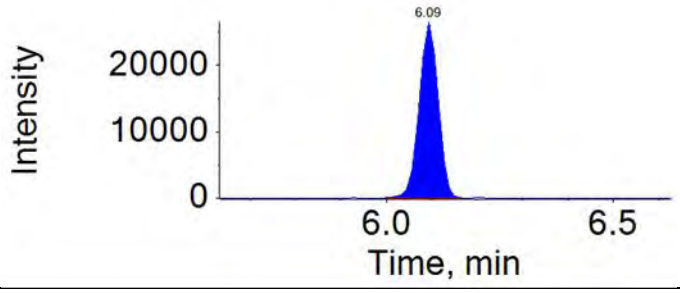


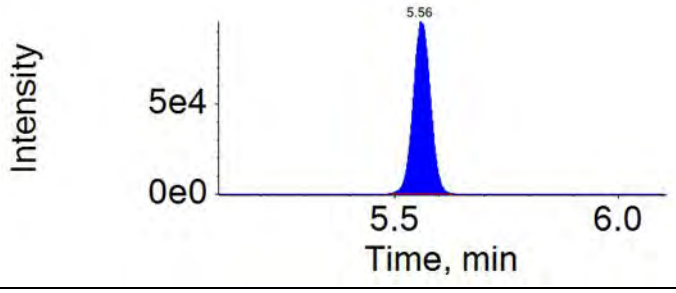
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



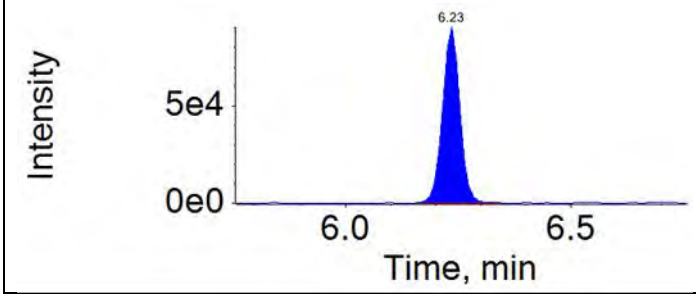


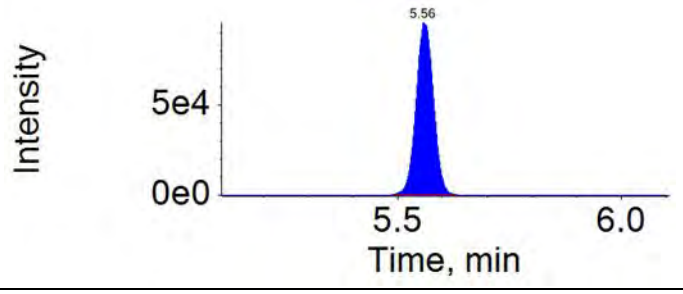
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

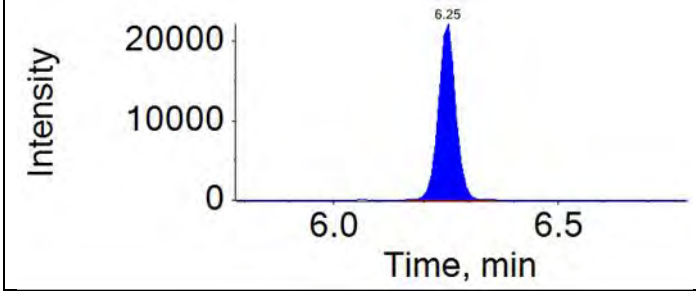
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

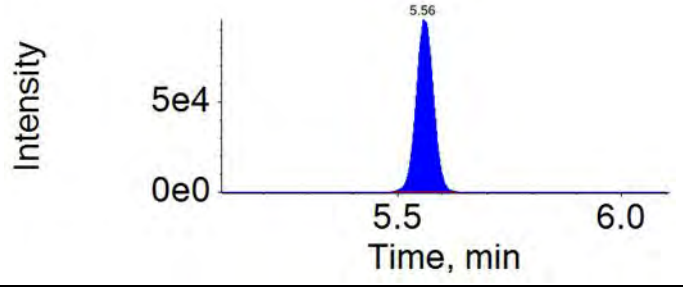
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



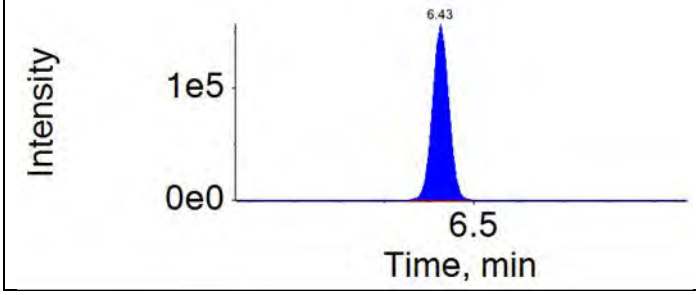


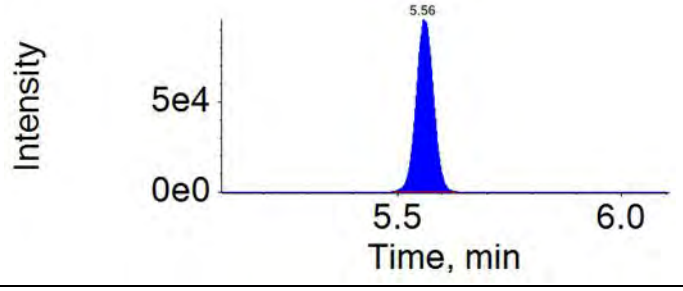
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



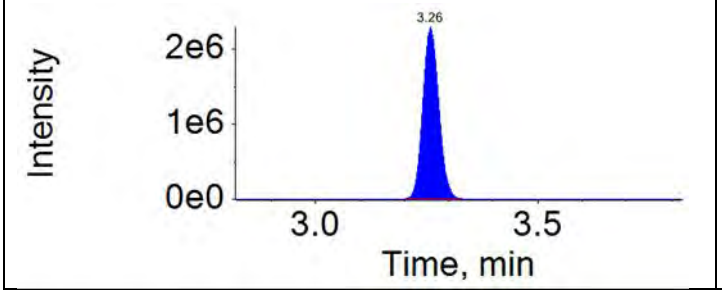


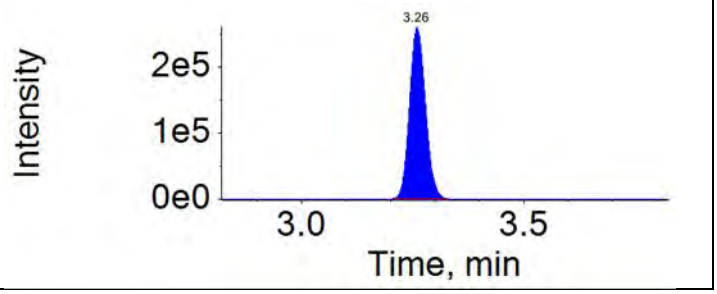
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

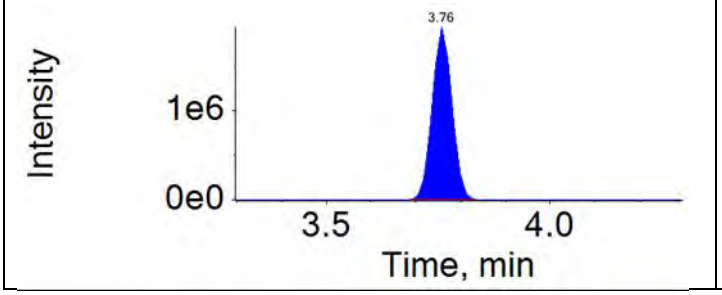
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

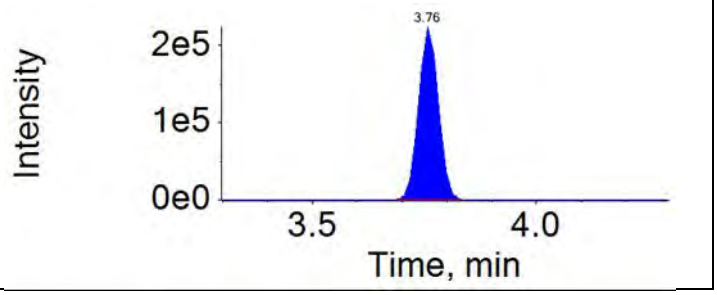
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



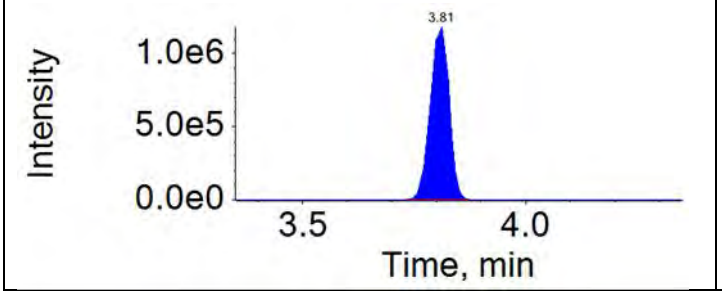


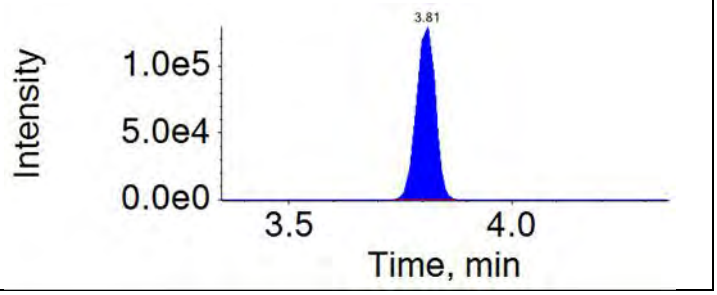
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



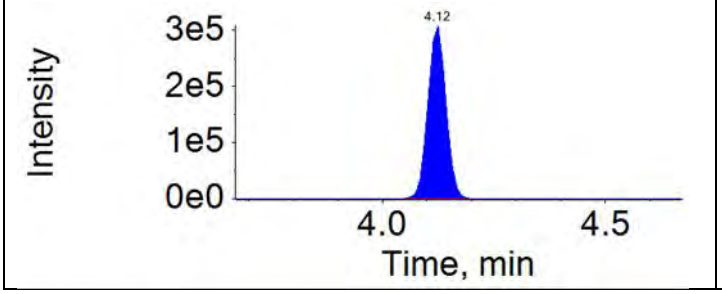


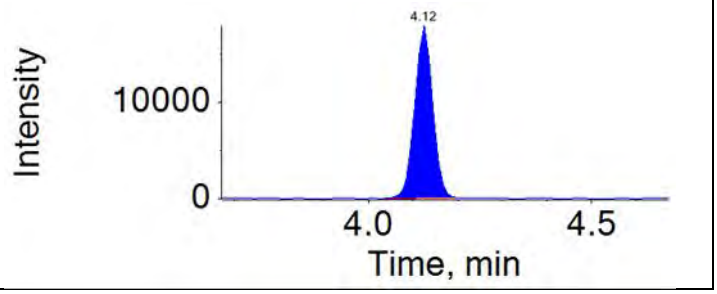
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

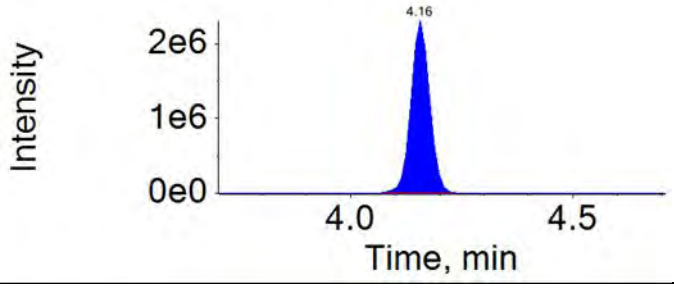
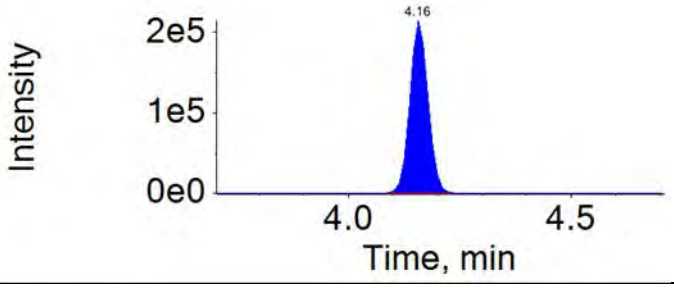


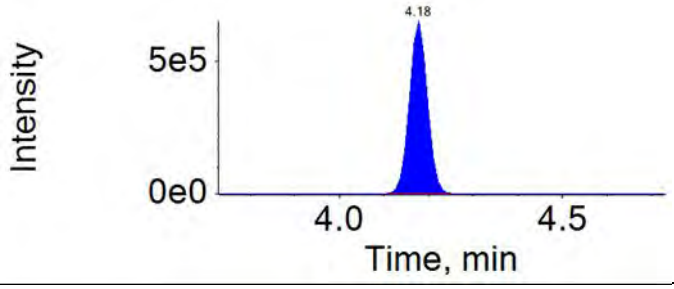
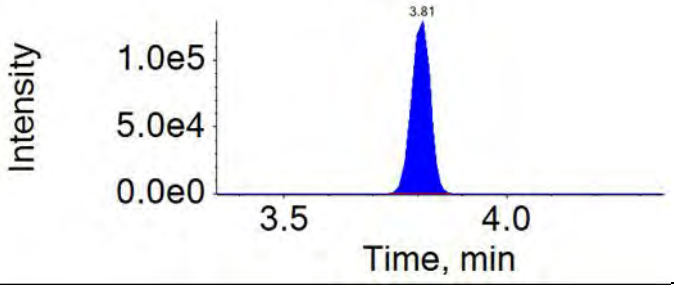


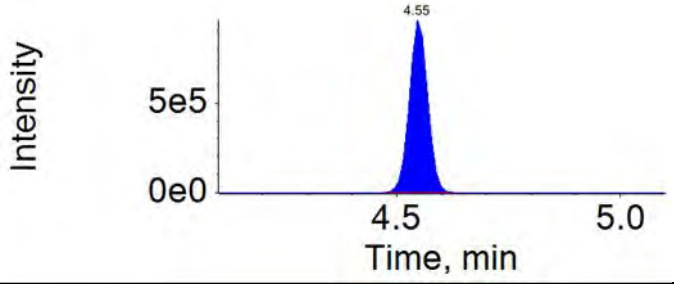
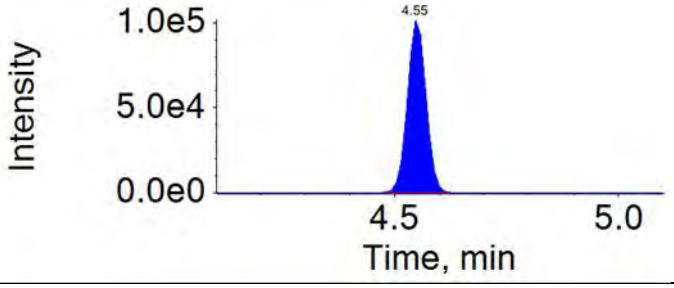
APPROVED
By JPT at 2:53 pm, 11/7/18

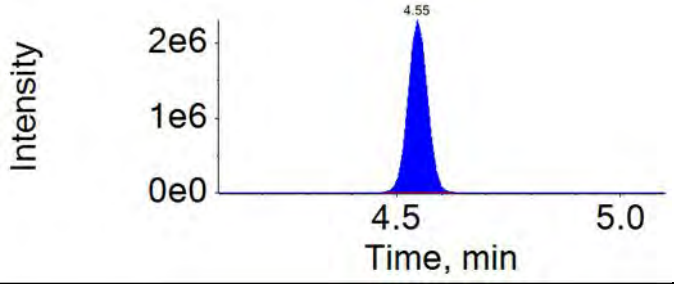
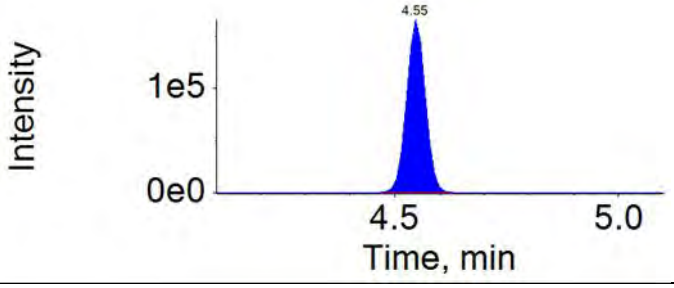
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

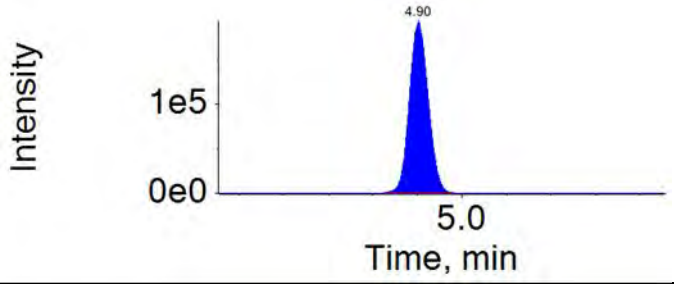
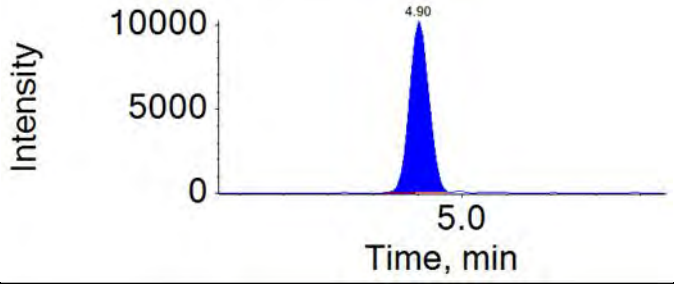
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

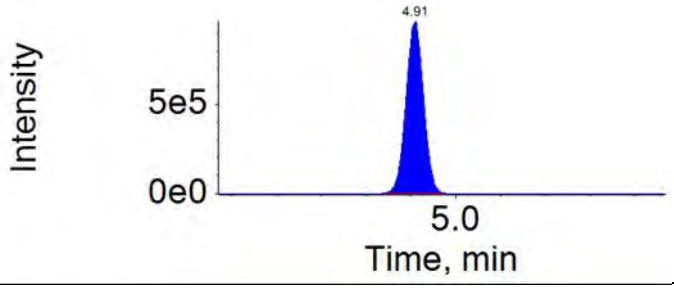
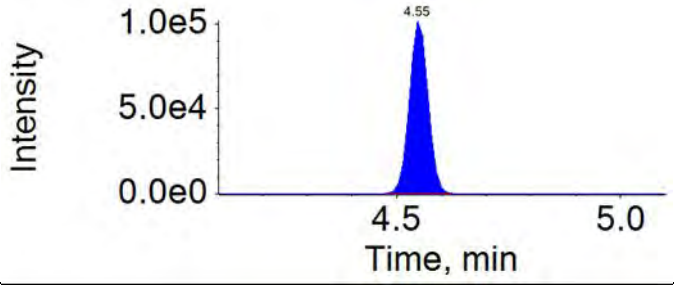
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

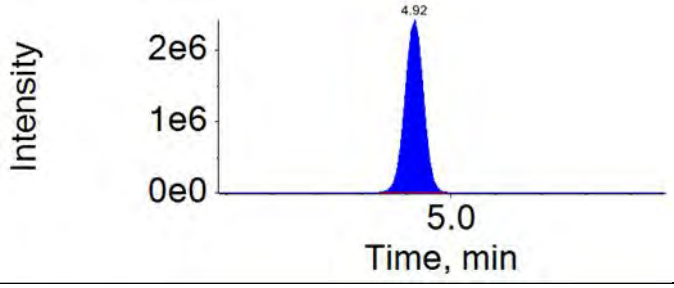
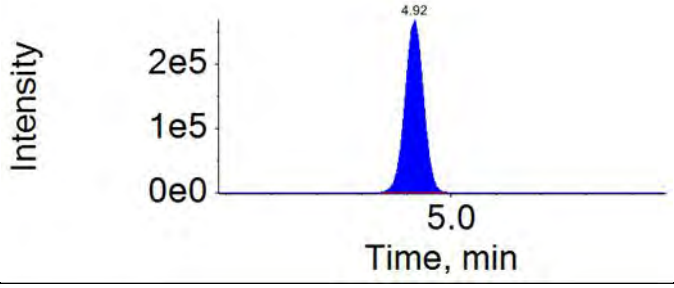
APPROVED
By JPT at 2:53 pm, 11/7/18

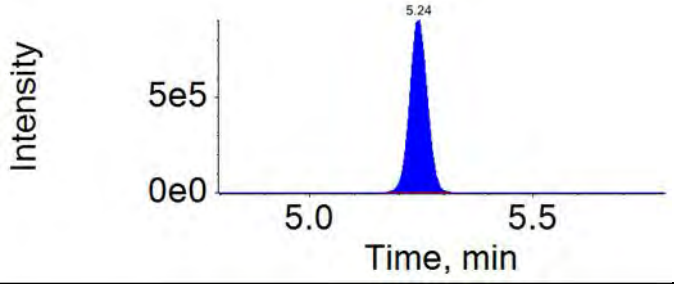
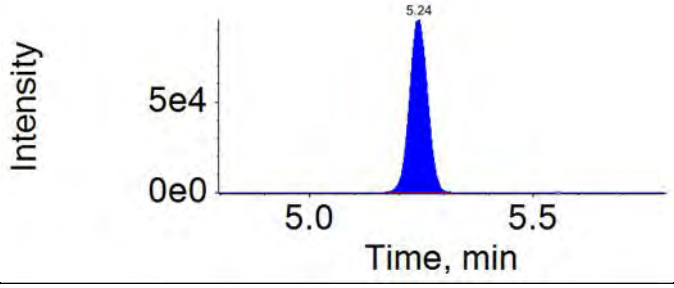
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

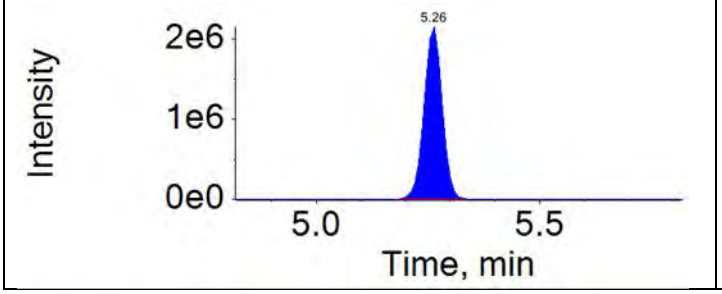
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

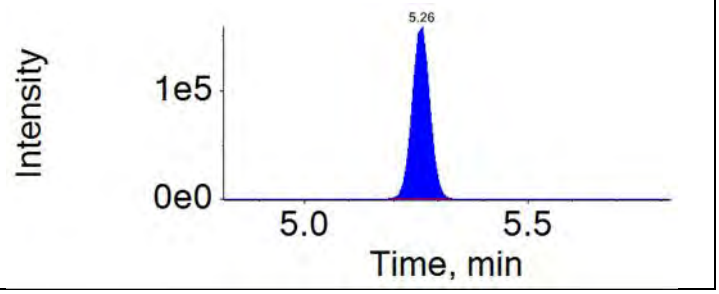
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

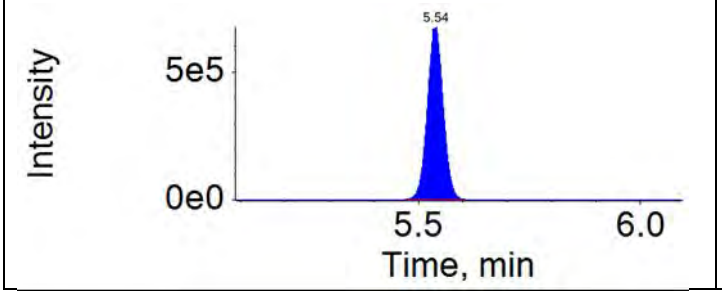
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

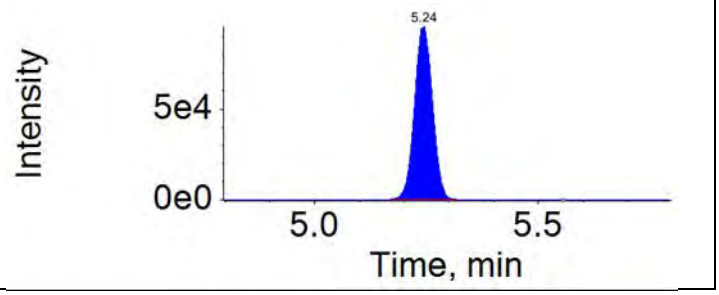
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



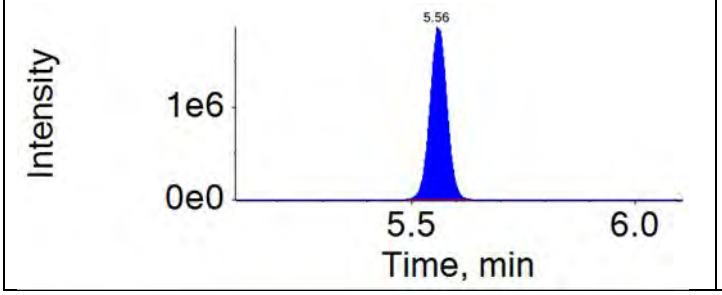


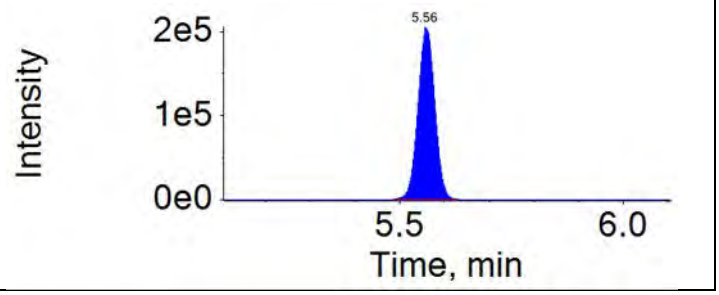
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



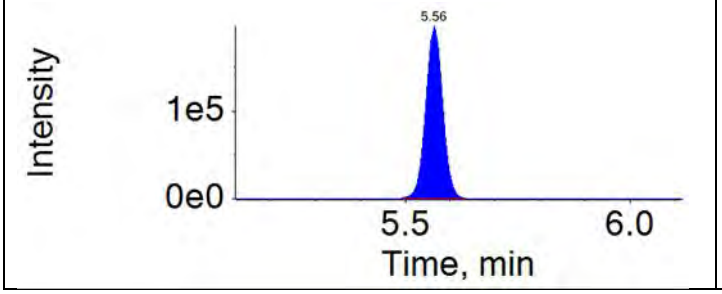


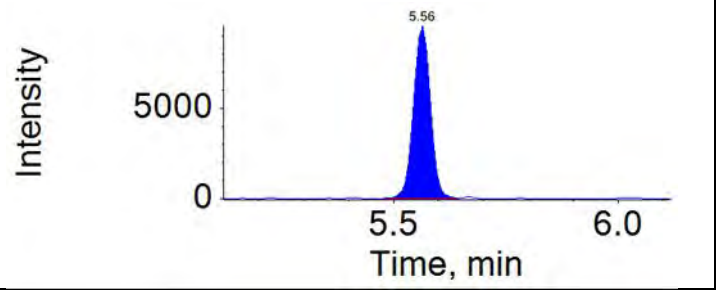
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

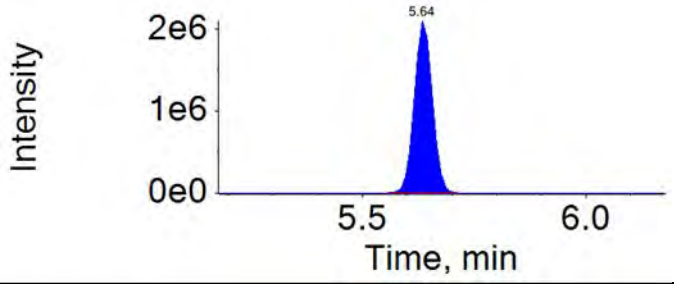
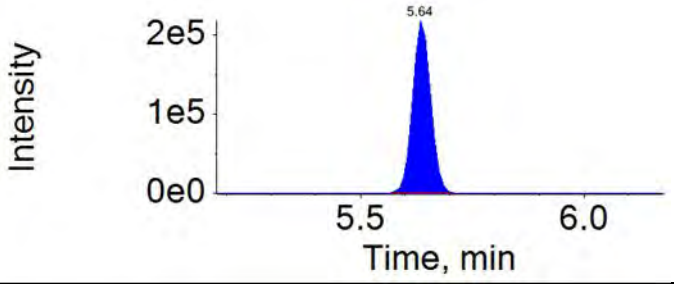


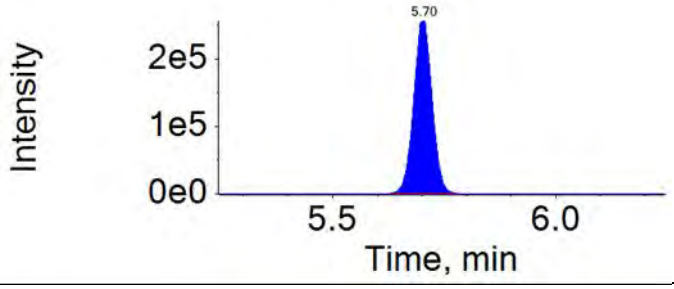
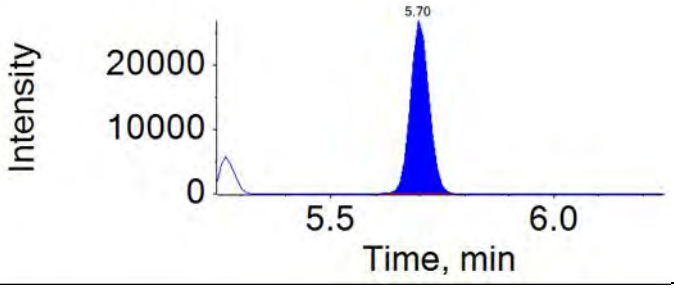


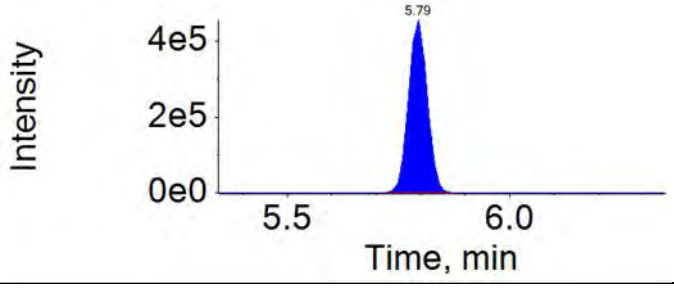
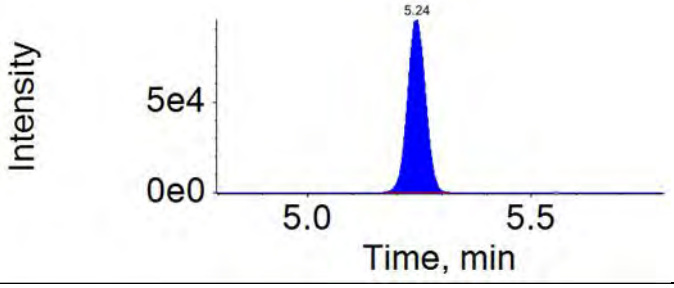
APPROVED
By JPT at 2:53 pm, 11/7/18

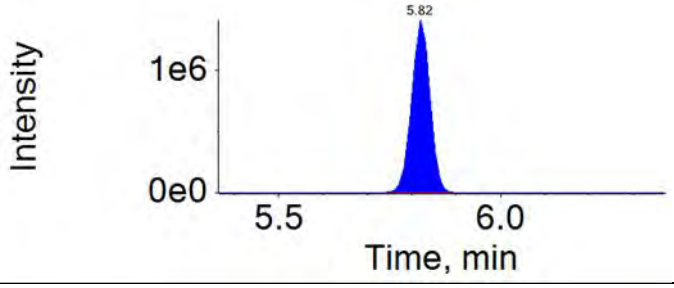
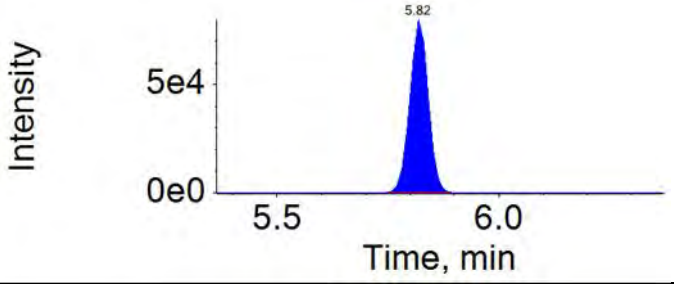
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

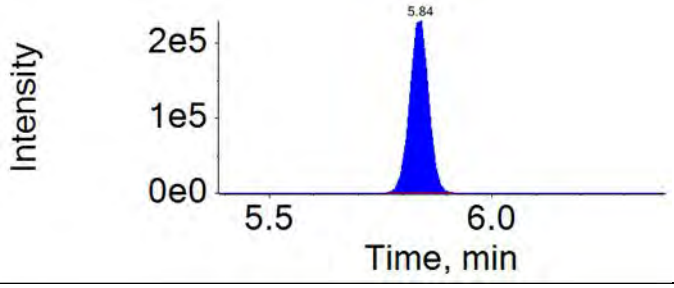
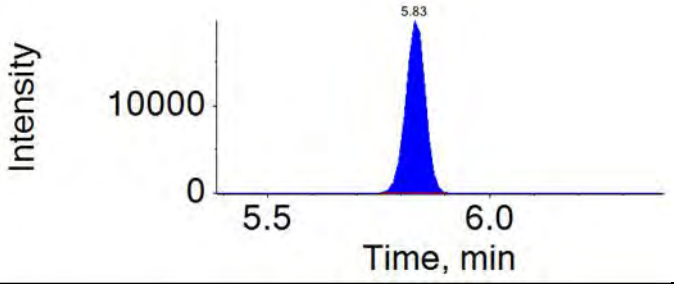
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

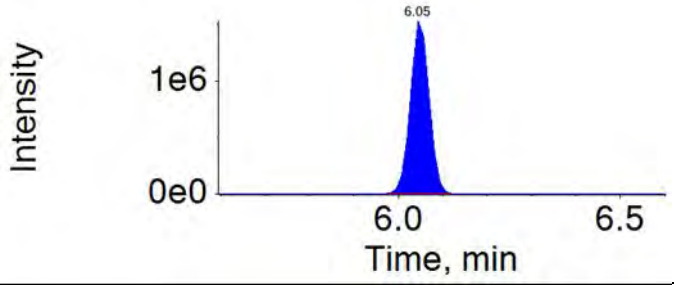
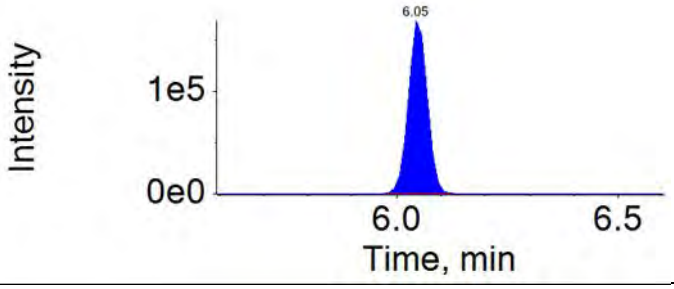
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

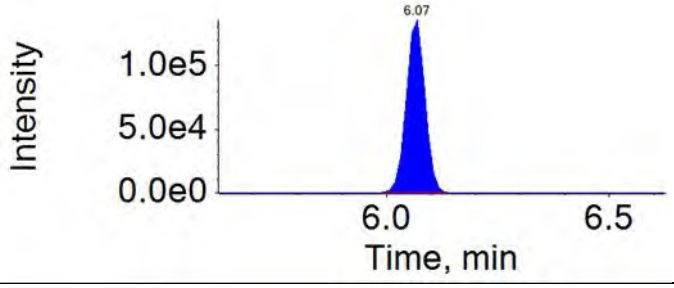
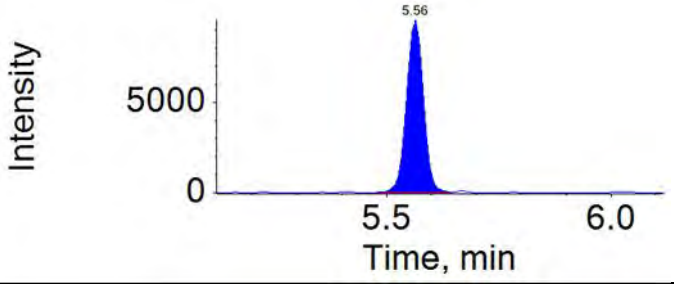
APPROVED
By JPT at 2:53 pm, 11/7/18

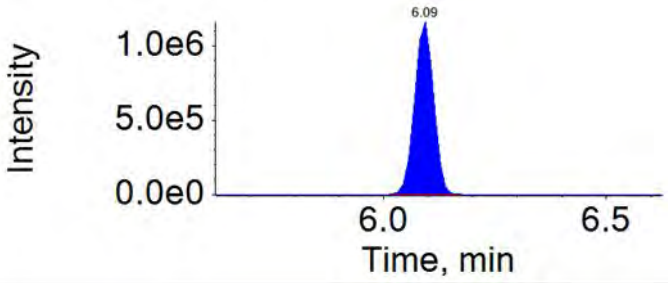
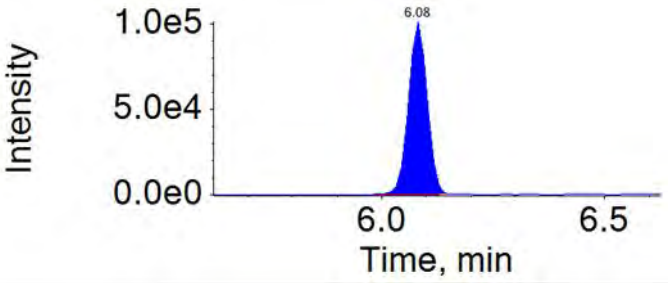
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

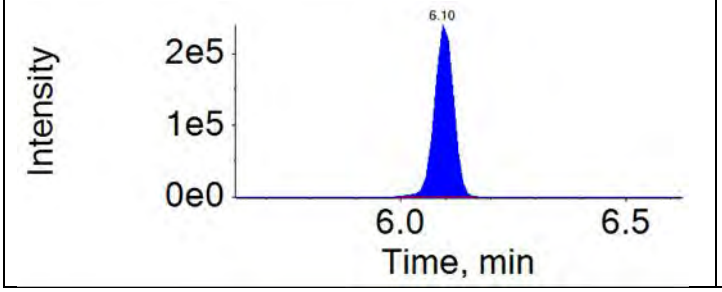
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

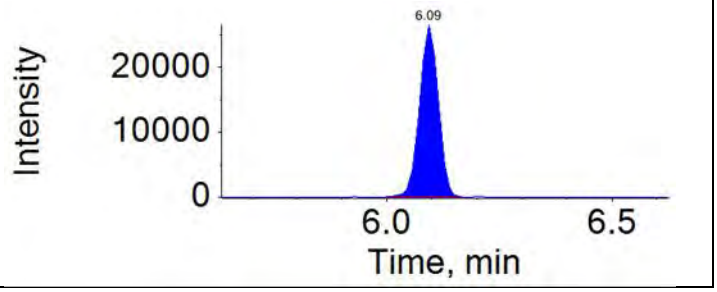
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

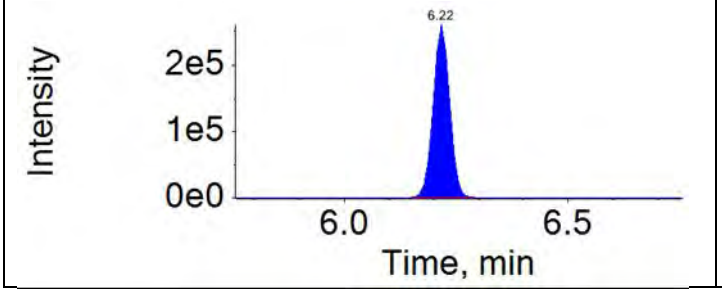
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

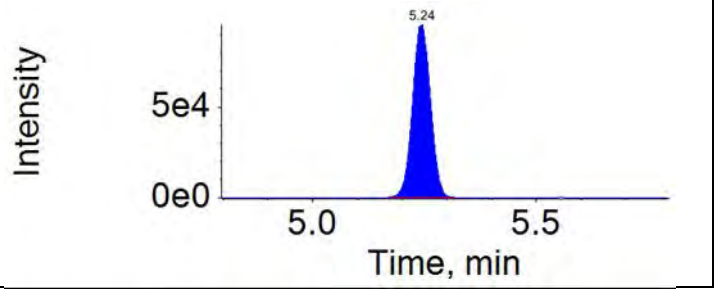
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



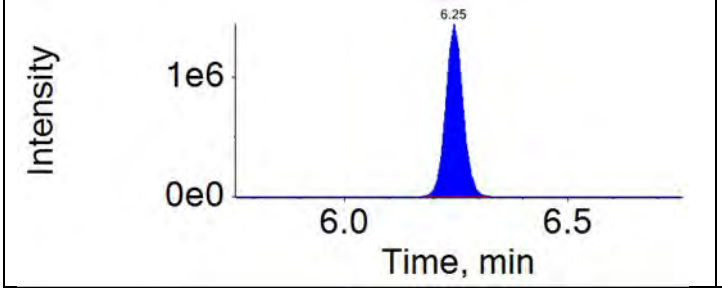


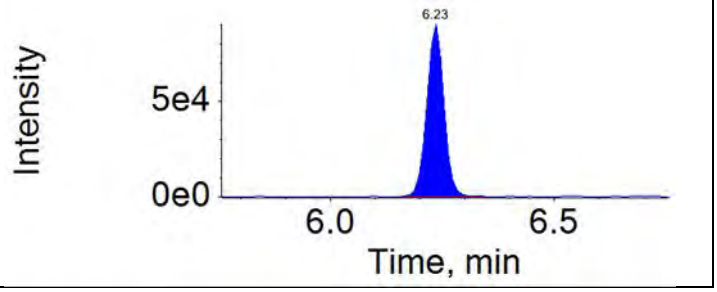
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



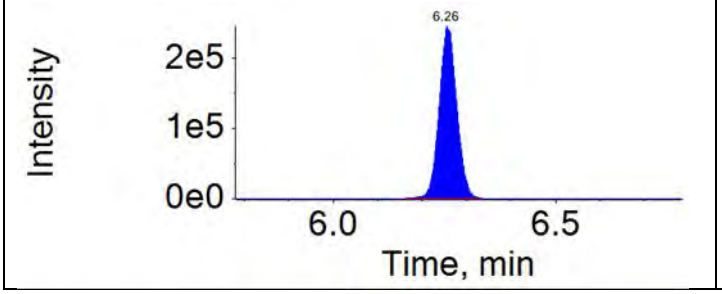


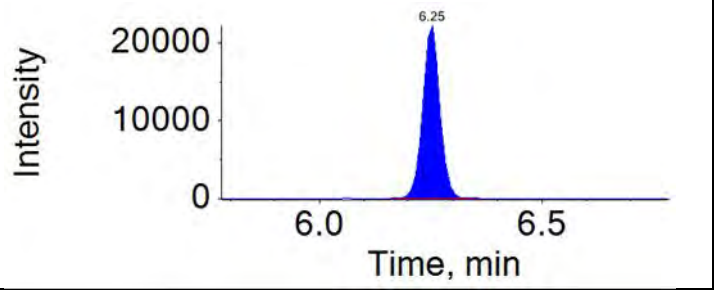
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

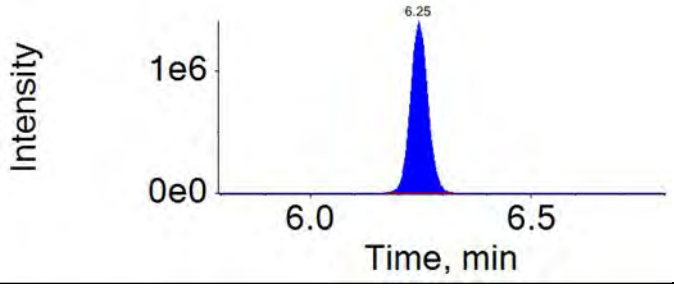
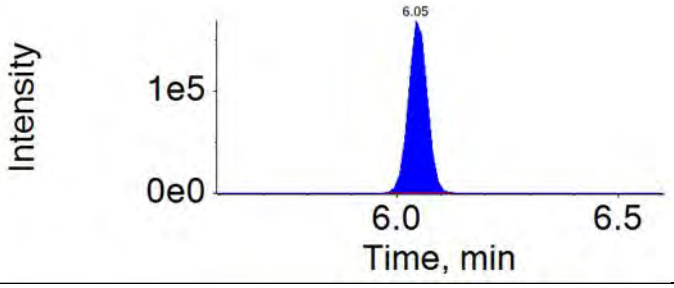


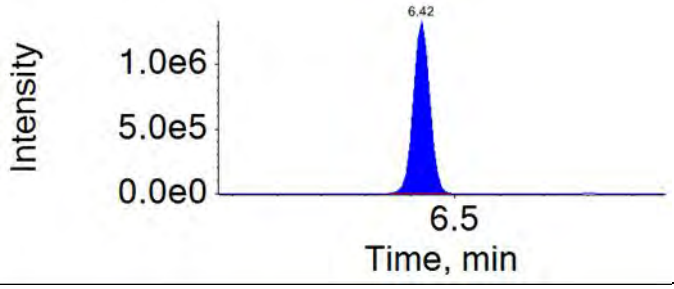
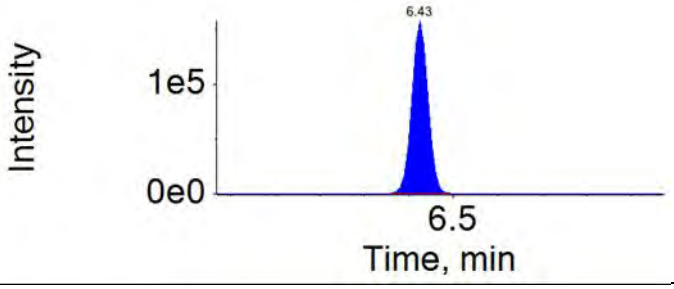


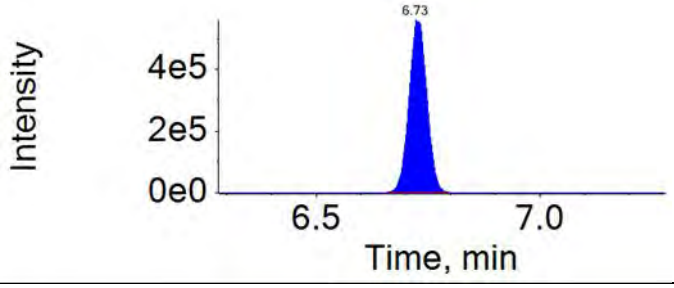
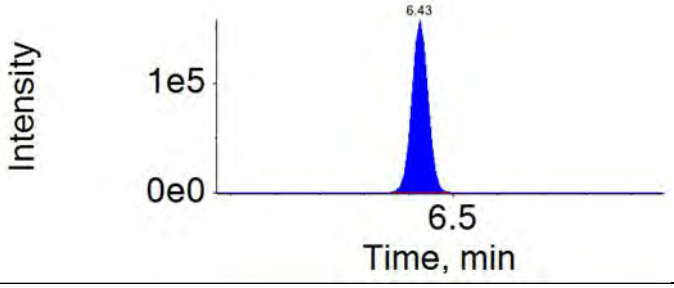
APPROVED
By JPT at 2:53 pm, 11/7/18

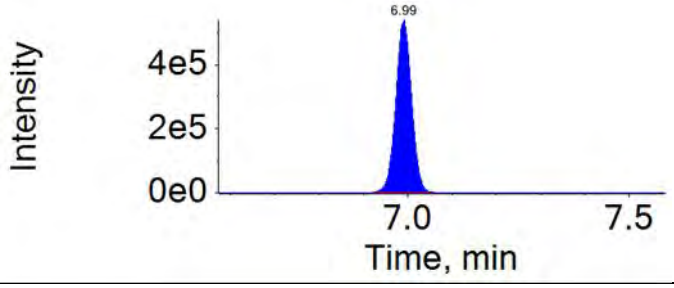
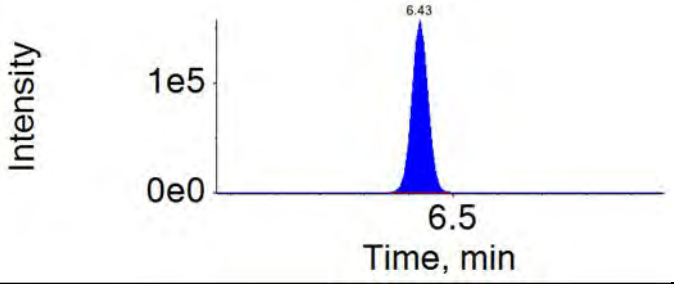
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-15.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	3508201.1	A	1.0000	1.0000			
PFBS_2	3.81	1.00	1286846.1	A	0.3576	0.3668	3	50	
4:2-FTS	4.12	1.00	866263.6	A	1.0000	1.0000			
4:2-FTS_2	4.12	1.00	524123.7	A	0.6359	0.6050	-5	50	
PFHxA	4.16	1.00	6739327.9	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	77061.9	A	0.0115	0.0114	0	50	
PFPeS	4.18	1.10	1823355.9	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	993764.2	A	0.5384	0.5450	1	50	
PFHxS	4.55	1.00	2760712.8	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	964116.9	A	0.3569	0.3492	-2	50	
PFHpA	4.55	1.00	6940304.7	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	395462.8	A	0.0577	0.0570	-1	50	
6:2-FTS	4.90	1.00	566692.8	A	1.0000	1.0000			
6:2-FTS_2	4.90	1.00	369783.6	A	0.6752	0.6525	-3	50	
PFHpS	4.91	1.08	2648512.9	A	1.0000	1.0000			
PFHpS_2	4.91	1.08	1077513.1	A	0.3950	0.4068	3	50	
PFOA	4.92	1.00	7023921.1	A	1.0000	1.0000			
PFOA_2	4.92	1.00	420903.3	A	0.0635	0.0599	-6	50	
PFOS	5.24	1.00	2487687.4	A	1.0000	1.0000			
PFOS_2	5.24	1.00	854704.9	A	0.3494	0.3436	-2	50	
PFNA	5.26	1.00	6070259.1	A	1.0000	1.0000			
PFNA_2	5.26	1.00	127695.8	A	0.0207	0.0210	2	50	
PFNS	5.54	1.06	1684601.2	A	1.0000	1.0000			
PFNS_2	5.54	1.06	776478.1	A	0.4890	0.4609	-6	50	
PFDA	5.56	1.00	4962332.7	A	1.0000	1.0000			
PFDA_2	5.56	1.00	33135.1	A	0.0057	0.0067	18	50	
8:2-FTS	5.56	1.00	516640.5	A	1.0000	1.0000			
8:2-FTS_2	5.56	1.00	308500.7	A	0.6169	0.5971	-3	50	
NMeFOSAA	5.70	1.00	740651.6	A	1.0000	1.0000			
NMeFOSAA_2	5.70	1.00	170978.8	A	0.2206	0.2308	5	50	
PFDS	5.79	1.11	1337416.6	A	1.0000	1.0000			
PFDS_2	5.79	1.10	697007.4	A	0.4648	0.5212	12	50	
PFUnDA	5.82	1.00	4071590.3	A	1.0000	1.0000			
PFUnDA_2	5.82	1.00	14961.6	A	0.0031	0.0037	17	50	
NEtFOSAA	5.84	1.00	685447.7	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	416391.3	A	0.6082	0.6075	0	50	
PFDoDA	6.05	1.00	4509578.7	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	57065.9	A	0.0109	0.0127	16	50	
10:2-FTS	6.07	1.09	395929.8	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	276017.2	A	0.7082	0.6971	-2	50	
PFTrDA	6.25	1.03	3829048.4	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	35358.1	A	0.0096	0.0092	-4	50	
PFTeDA	6.42	1.00	3381511.1	A	1.0000	1.0000			
PFTeDA_2	6.42	1.00	21143.9	A	0.0055	0.0063	13	50	
PFHxDA	6.73	1.05	1559604.6	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	97226.7	A	0.0596	0.0623	5	50	
PFODA	6.99	1.09	1340733.9	A	1.0000	1.0000			
PFODA_2	6.99	1.09	34220.3	A	0.0257	0.0255	-1	50	

APPROVED
By JPT at 2:53 pm, 11/7/18

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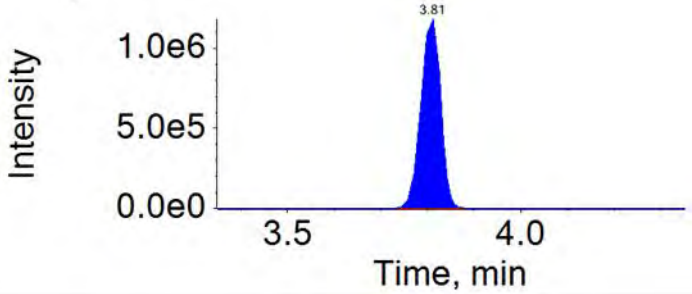
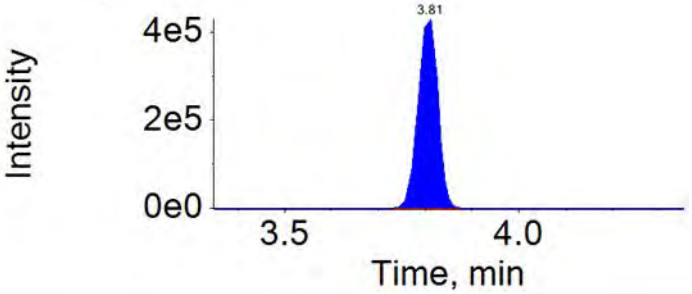
By umar at 5:23 pm, 11/9/18

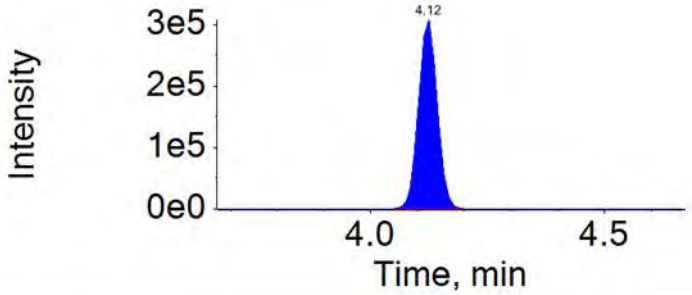
Component: PFBS
Primary Mass: 299.0 / 80.0



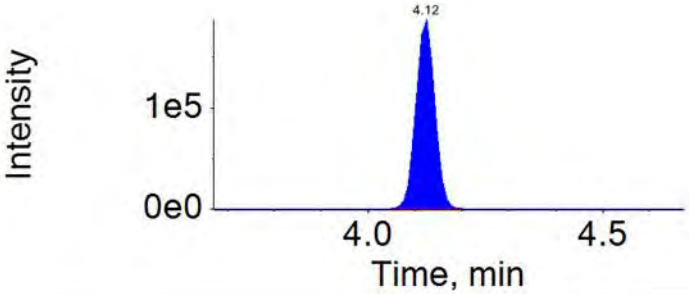
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



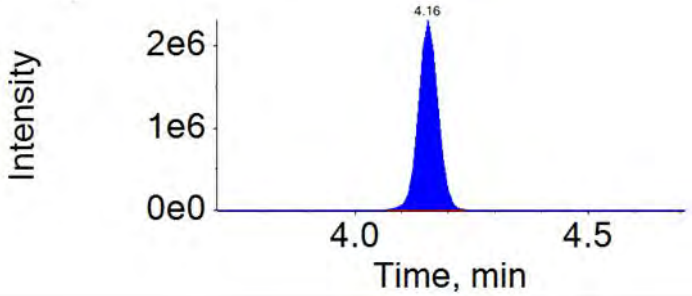
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



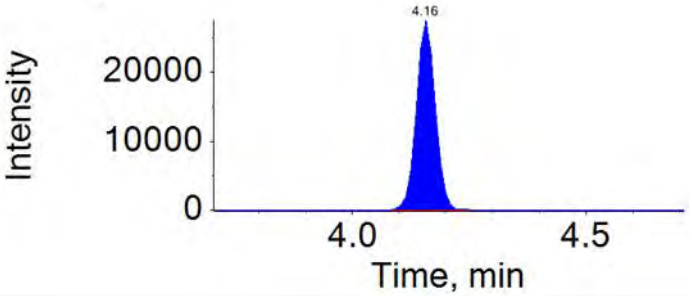
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



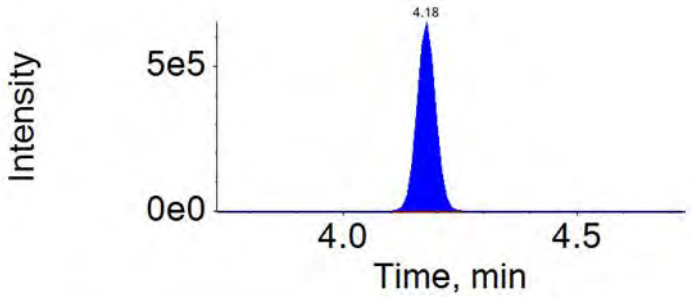
Component: PFHxA
Primary Mass: 313.0 / 269.0



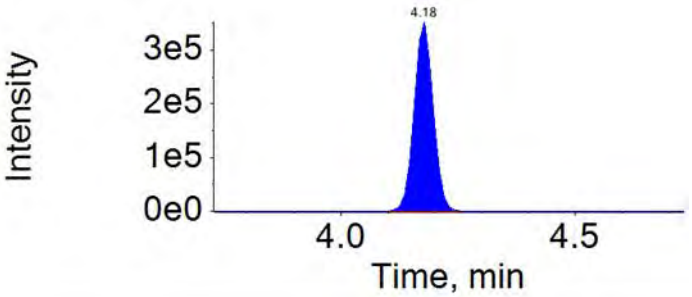
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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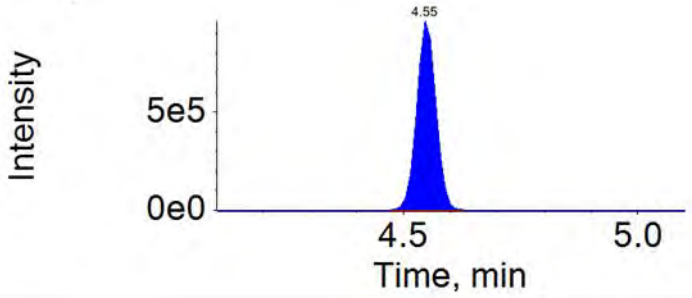
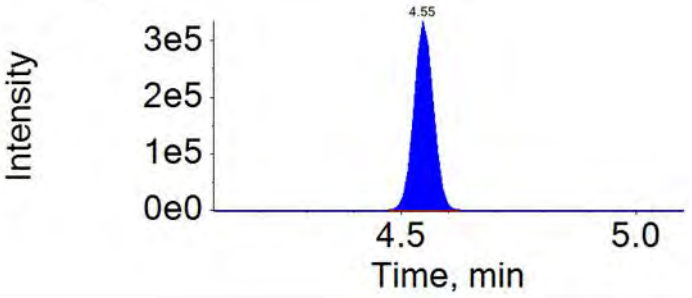
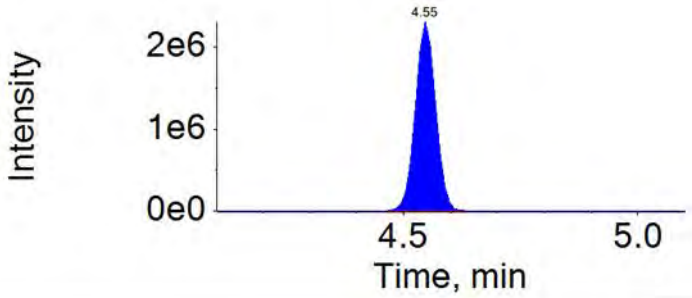
Component: PFHxS
Primary Mass: 399.0 / 80.0



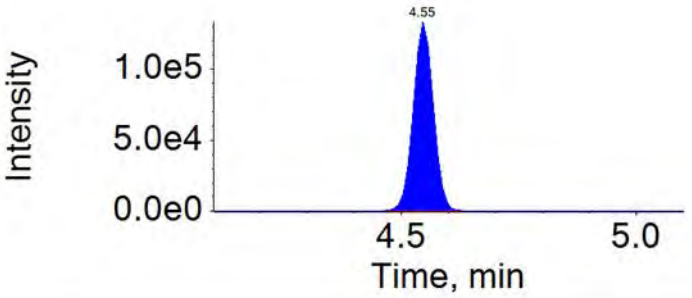
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



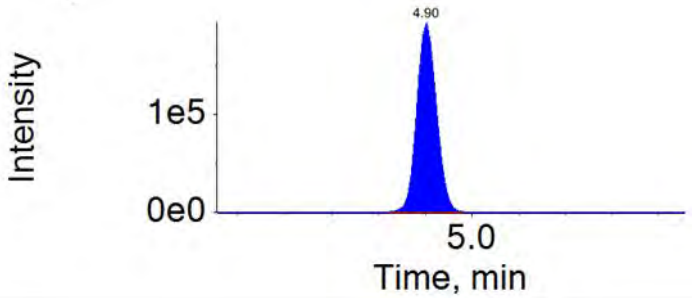
Component: PFHpA
Primary Mass: 363.0 / 319.0



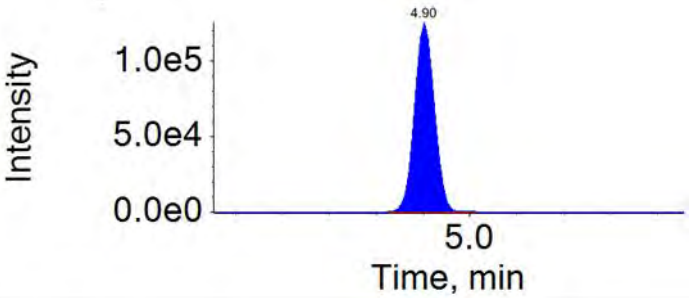
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



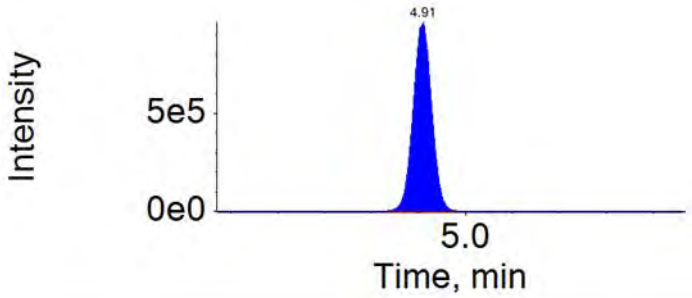
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



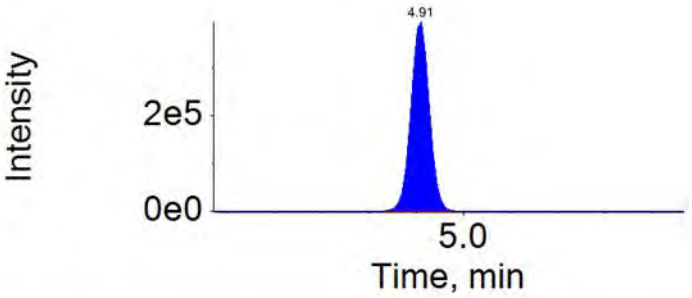
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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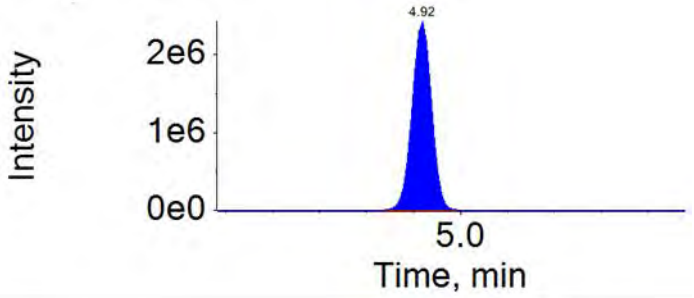
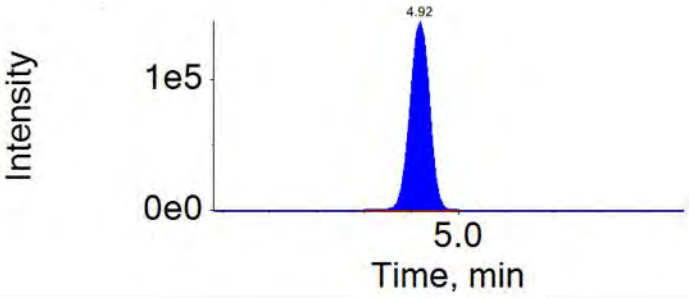
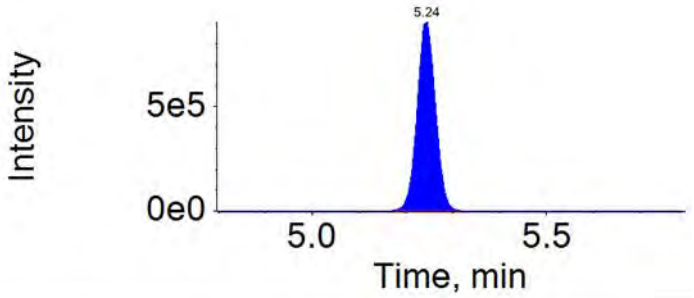
Component: PFOA
Primary Mass: 413.0 / 369.0



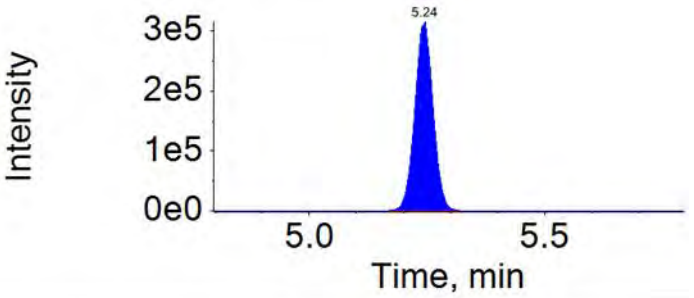
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



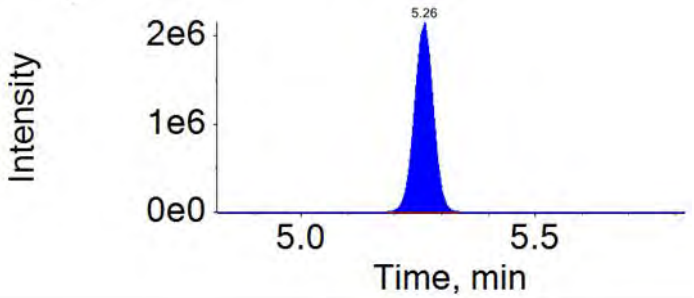
Component: PFOS
Primary Mass: 499.0 / 80.0



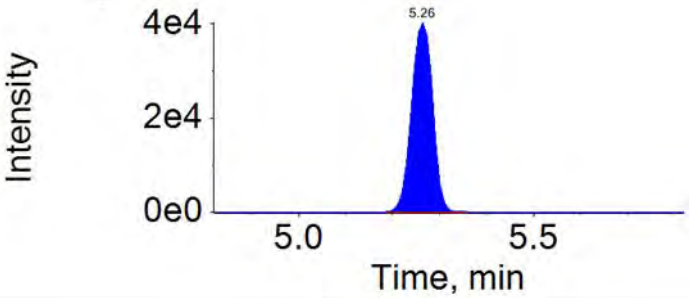
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



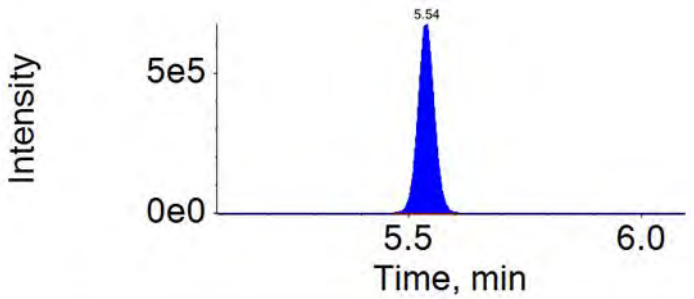
Component: PFNA
Primary Mass: 463.0 / 419.0



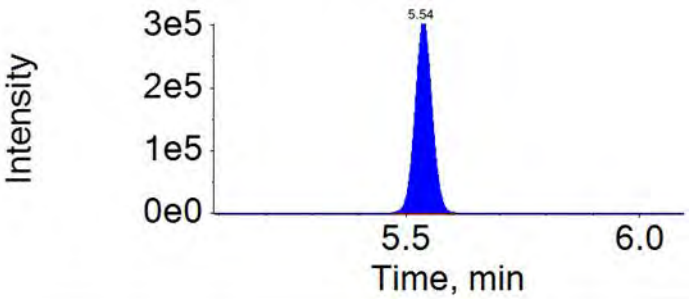
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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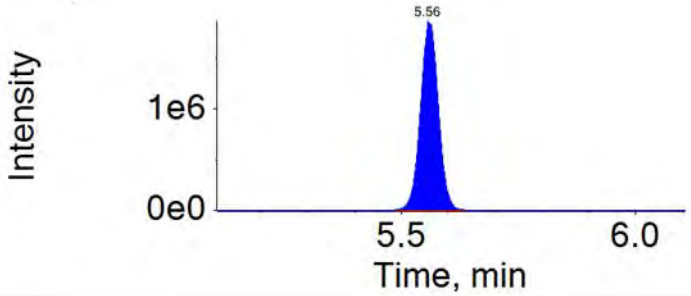
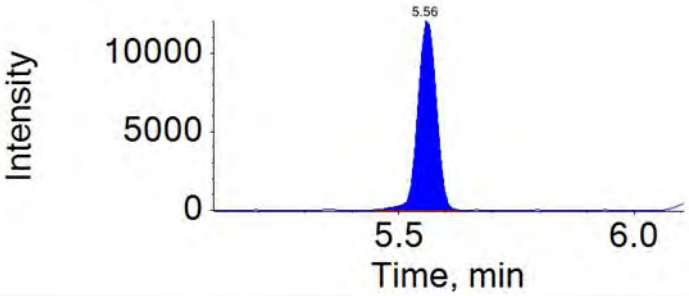
By umar at 5:23 pm, 11/9/18

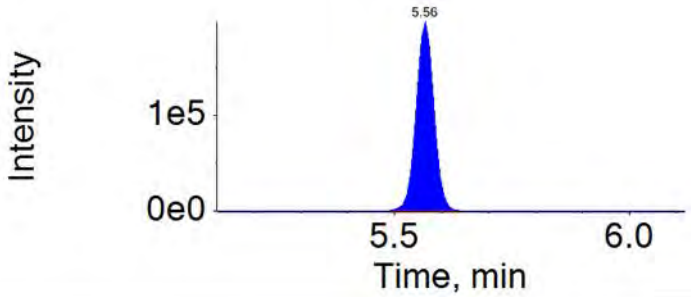
Component: PFDA
Primary Mass: 513.0 / 469.0



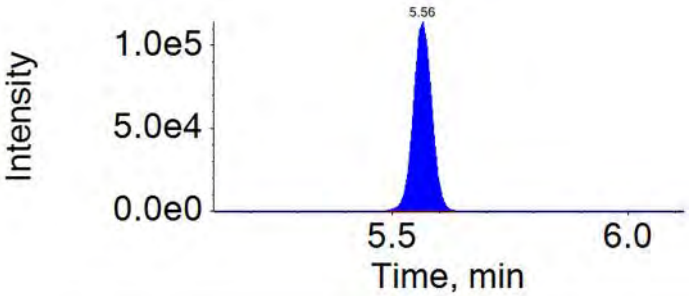
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



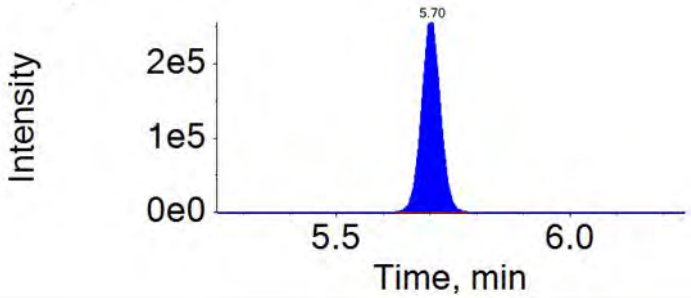
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



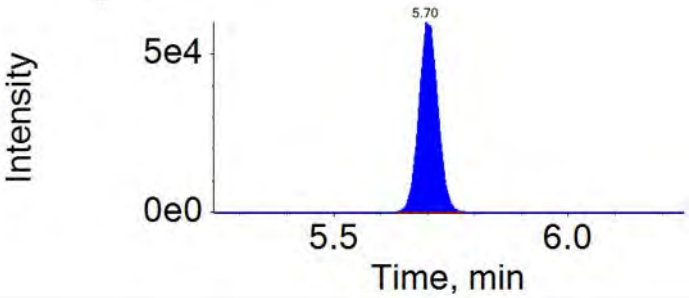
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



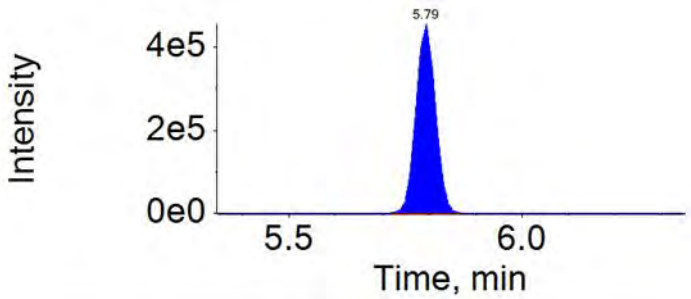
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



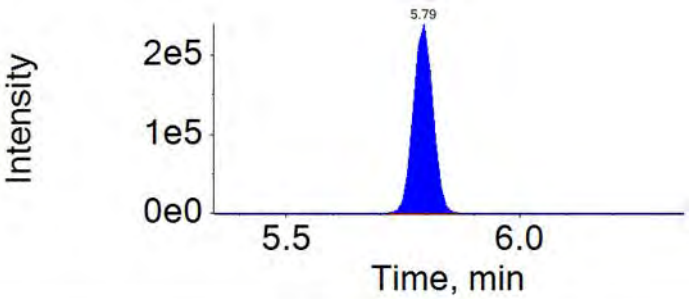
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



Component: PFDS_2
Secondary Mass: 599.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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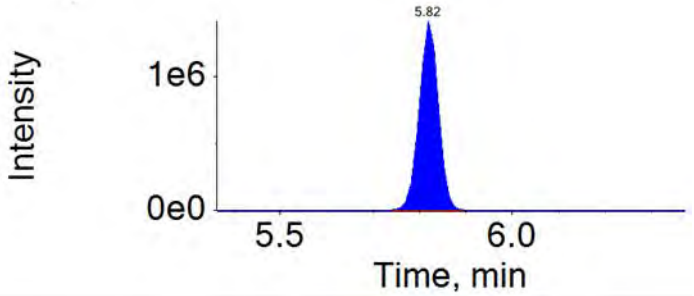
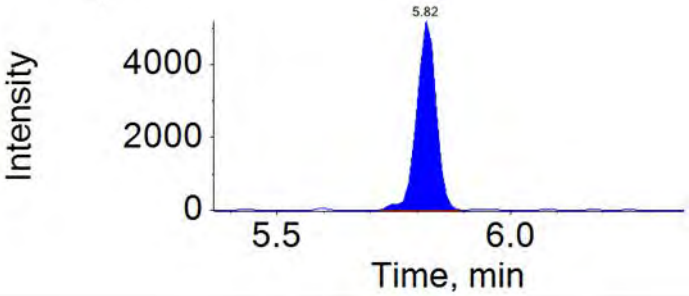
By umar at 5:23 pm, 11/9/18

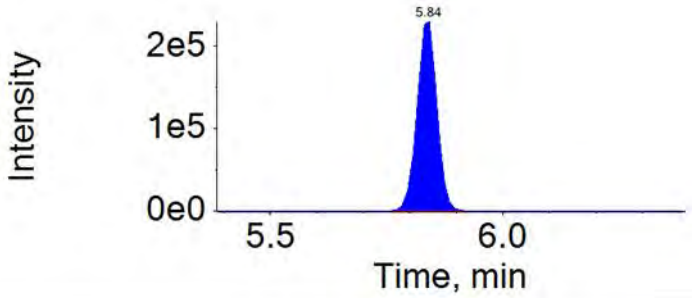
Component: PFUnDA
Primary Mass: 563.0 / 519.0



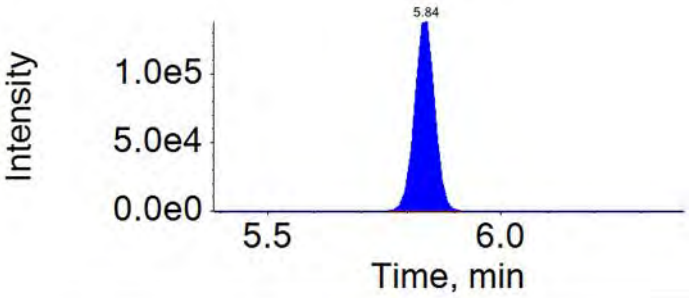
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



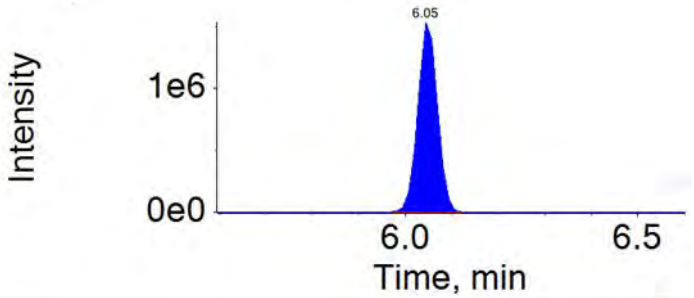
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



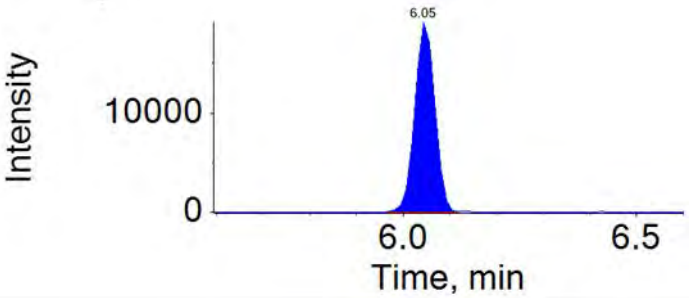
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



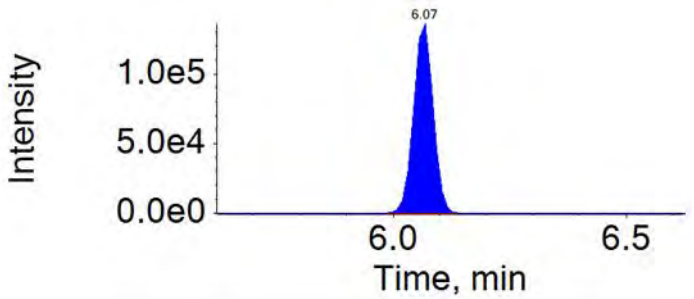
Component: PFDoDA
Primary Mass: 613.0 / 569.0



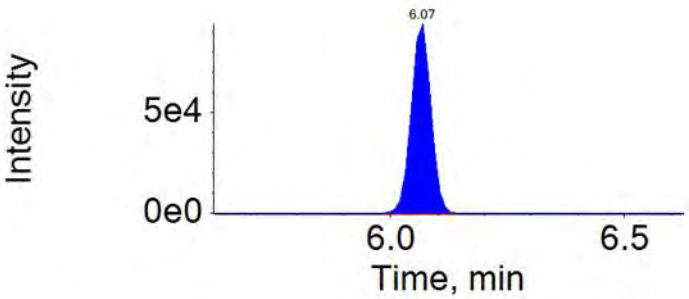
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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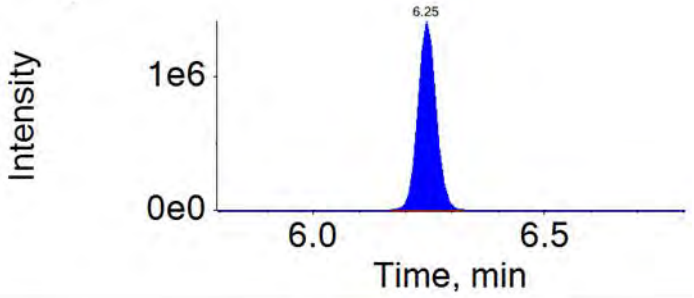
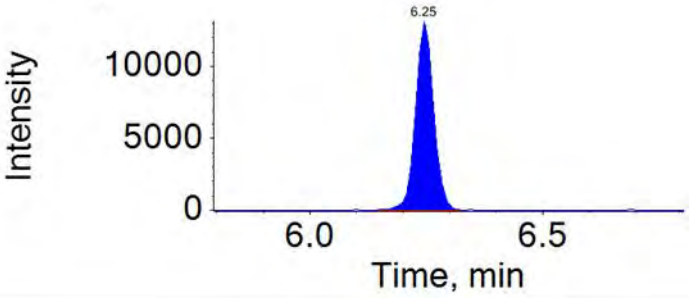
By umar at 5:23 pm, 11/9/18

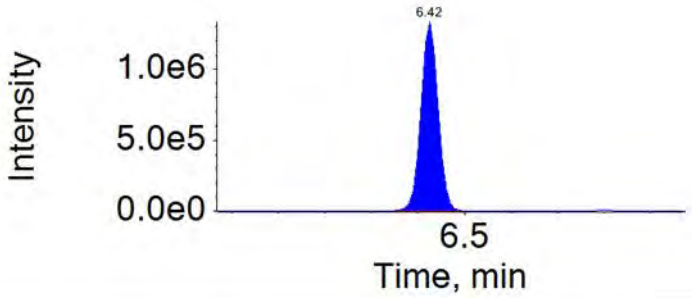
Component: PFTrDA
Primary Mass: 663.0 / 619.0



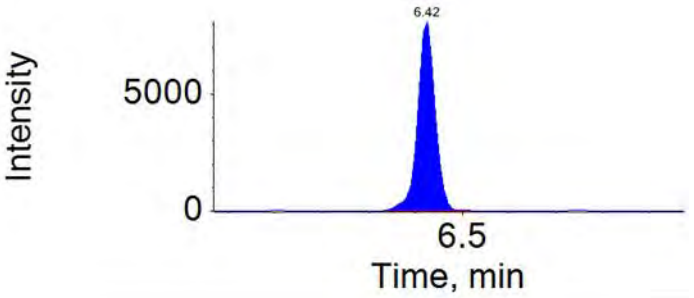
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



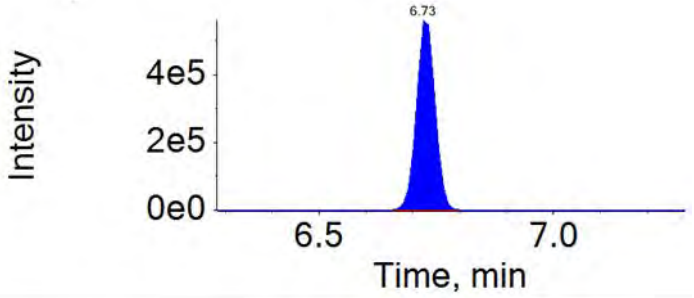
Component: PFTeDA
Primary Mass: 713.0 / 669.0



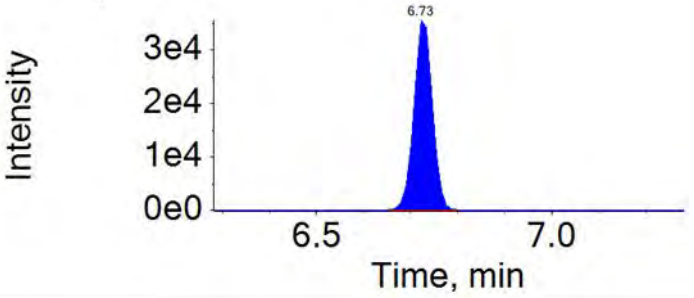
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



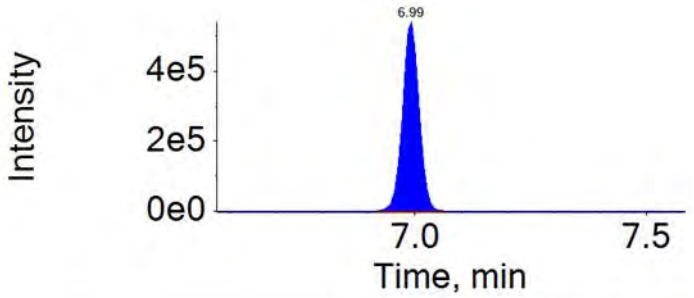
Component: PFHxDA
Primary Mass: 813.0 / 769.0



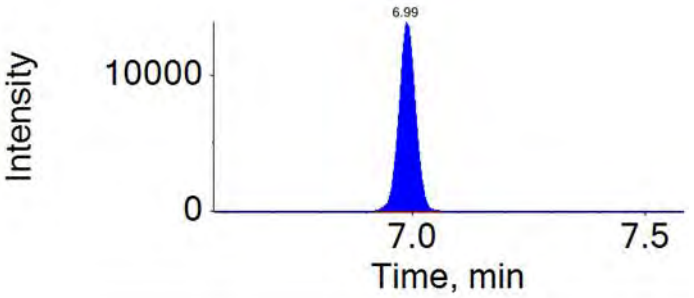
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL7			**Data File:**		18NOV07DCAL-16.wiff
Sample ID:	CALMOD71833E			**Acquis Date:**		2018-11-07T10:33:59
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	9			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	554647.4	730410.6	-24	50	
13C2-PFOA	5.0	419465.9	524423.6	-20	50	
13C4-PFOS	4.8	253720.8	274061.7	-7	50	
13C2-PFDA	5.0	258292.2	311442.1	-17	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	609686.1	13C3-PFBA	554647.4	1.099	5.000	5.087	102	70-130	
E13C5-PFPeA	628265.5	13C3-PFBA	554647.4	1.133	5.000	4.935	99	70-130	
E13C3-PFBS	381345.5	13C3-PFBA	554647.4	0.688	4.650	5.046	109	70-130	
E13C2-4:2-FTS	46334.2	13C2-PFOA	419465.9	0.110	4.670	4.984	107	70-130	
E13C5-PFHxA	571807.5	13C2-PFOA	419465.9	1.363	5.000	5.014	100	70-130	
E13C3-PFHxS	279859.6	13C2-PFOA	419465.9	0.667	4.730	4.790	101	70-130	
E13C4-PFHpA	457160.4	13C2-PFOA	419465.9	1.090	5.000	4.958	99	70-130	
E13C2-6:2-FTS	26549.1	13C2-PFOA	419465.9	0.063	4.750	4.221	89	70-130	
E13C8-PFOA	678914.6	13C2-PFOA	419465.9	1.619	5.000	4.513	90	70-130	
E13C8-PFOS	264295.9	13C4-PFOS	253720.8	1.042	4.780	4.606	96	70-130	
E13C9-PFNA	402916.7	13C4-PFOS	253720.8	1.588	5.000	4.338	87	70-130	
E13C6-PFDA	480927.9	13C2-PFDA	258292.2	1.862	5.000	4.682	94	70-130	
E13C2-8:2-FTS	24555.7	13C2-PFDA	258292.2	0.095	4.790	5.031	105	70-130	
E13C8-PFOSA	603296.1	13C2-PFDA	258292.2	2.336	5.000	5.097	102	70-130	
Ed3-NMeFOSAA	75408.7	13C2-PFDA	258292.2	0.292	5.000	5.429	109	70-130	
E13C7-PFUnDA	212399.8	13C2-PFDA	258292.2	0.822	5.000	4.744	95	70-130	
Ed5-NEtFOSAA	56963.1	13C2-PFDA	258292.2	0.221	5.000	5.104	102	70-130	
E13C2-PFDoDA	525971.8	13C2-PFDA	258292.2	2.036	5.000	5.490	110	70-130	
Ed7-NMePFOSAE	295395.3	13C2-PFDA	258292.2	1.144	5.000	5.318	106	70-130	
Ed3-NMePFOSA	80053.2	13C2-PFDA	258292.2	0.310	5.000	5.674	113	70-130	
Ed9-NEtPFOSAE	235038.0	13C2-PFDA	258292.2	0.910	5.000	5.197	104	70-130	
Ed5-NEtPFOSA	58686.1	13C2-PFDA	258292.2	0.227	5.000	5.261	105	70-130	
E13C2-PFTeDA	384058.1	13C2-PFDA	258292.2	1.487	5.000	5.353	107	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

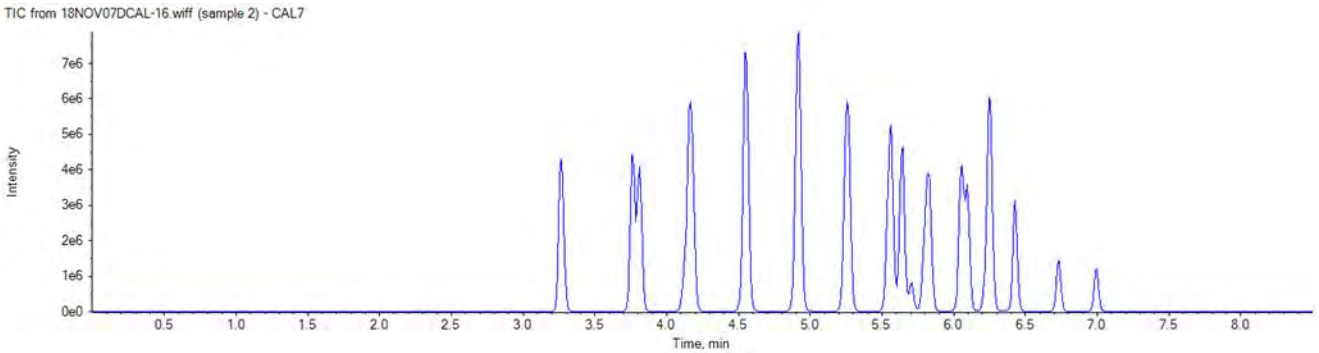
Analyte Quantitation Peak Table

Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-16.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	9954520.3		A	13C4-PFBA	3.26	609686.1	16.327	95.554
PFPeA	3.76	1.000	10229627.8		A	13C5-PFPeA	3.76	628265.5	16.282	96.765
PFBS	3.81	1.000	6474525.0		A	13C3-PFBS	3.81	381345.5	16.978	85.599
4:2-FTS	4.13	1.000	1576786.3		A	13C2-4:2-FTS	4.13	46334.2	34.031	91.487
PFHxA	4.16	1.000	11658104.6		A	13C5-PFHxA	4.16	571807.5	20.388	87.434
PFPeS	4.18	1.100	3615170.2		A	13C3-PFBS	3.81	381345.5	9.480	93.501
PFHxS	4.55	1.000	5196245.3		A	13C3-PFHxS	4.55	279859.6	18.567	94.113
PFHpA	4.55	1.000	11701142.2		A	13C4-PFHpA	4.55	457160.4	25.595	86.081
6:2-FTS	4.90	1.000	988785.9		A	13C2-6:2-FTS	4.91	26549.1	37.244	92.910
PFHpS	4.91	1.080	5085803.6		A	13C3-PFHxS	4.55	279859.6	18.173	95.074
PFOA	4.92	1.000	11562348.7		A	13C8-PFOA	4.92	678914.6	17.031	95.892
PFOS	5.25	1.000	4830627.6		A	13C8-PFOS	5.24	264295.9	18.277	94.776
PFNA	5.27	1.000	10279837.9		A	13C9-PFNA	5.26	402916.7	25.514	95.349
PFNS	5.54	1.060	3119908.2		A	13C8-PFOS	5.24	264295.9	11.805	93.596
PFDA	5.56	1.000	8415098.4		A	13C6-PFDA	5.56	480927.9	17.498	96.265
8:2-FTS	5.57	1.000	936483.2		A	13C2-8:2-FTS	5.57	24555.7	38.137	85.963
PFOSA	5.64	1.000	11064835.5		A	13C8-PFOSA	5.64	603296.1	18.341	99.141
NMeFOSAA	5.70	1.000	1450331.2		A	d3-NMeFOSAA	5.70	75408.7	19.233	98.963
PFDS	5.80	1.110	2660525.2		A	13C8-PFOS	5.24	264295.9	10.066	96.161
PFUnDA	5.82	1.000	7204782.9		A	13C7-PFUnDA	5.82	212399.8	33.921	97.277
NEtFOSAA	5.84	1.000	1317020.6		A	d5-NEtFOSAA	5.84	56963.1	23.121	99.363
PFDoDA	6.05	1.000	8211828.8		A	13C2-PFDoDA	6.05	525971.8	15.613	84.613
10:2-FTS	6.07	1.090	747804.5		A	13C2-8:2-FTS	5.57	24555.7	30.453	94.827
NMePFOSAE	6.09	1.000	6220772.1		A	d7-NMePFOSAE	6.08	295395.3	21.059	94.369
NMePFOSA	6.10	1.000	1386738.5		A	d3-NMePFOSA	6.10	80053.3	17.323	96.961
PFDoS	6.22	1.190	1333847.1		A	13C8-PFOS	5.24	264295.9	5.047	97.407
NEtPFOSAE	6.25	1.000	6995371.5		A	d9-NEtPFOSAE	6.24	235038.1	29.763	95.411
NEtPFOSA	6.26	1.000	1329706.9		A	d5-NEtPFOSA	6.26	58686.1	22.658	99.791
PFTrDA	6.25	1.030	6633128.3		A	13C2-PFDoDA	6.05	525971.8	12.611	79.528
PFTeDA	6.43	1.000	6426587.4		A	13C2-PFTeDA	6.43	384058.1	16.733	98.263
PFHxDA	6.73	1.050	3073572.7		A	13C2-PFTeDA	6.43	384058.1	8.003	99.343
PFODA	6.99	1.090	2676698.5		A	13C2-PFTeDA	6.43	384058.1	6.970	99.849

Total Ion Chromatogram

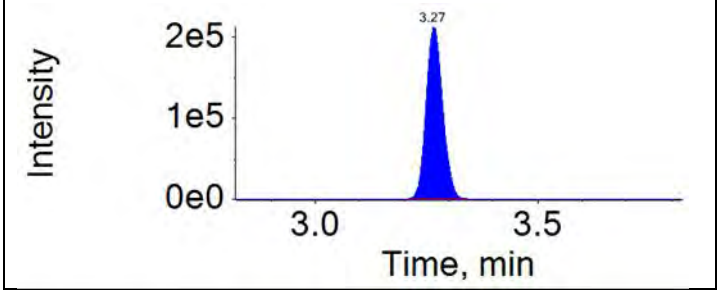


APPROVED
By JPT at 2:53 pm, 11/7/18

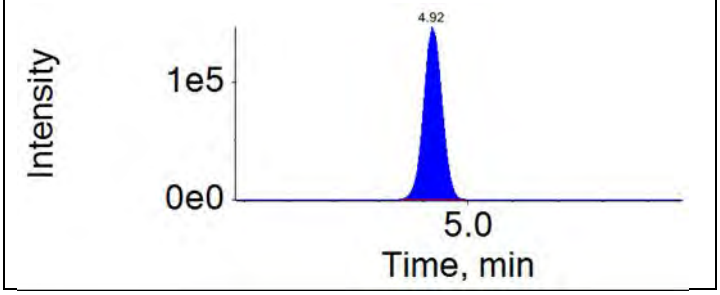
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

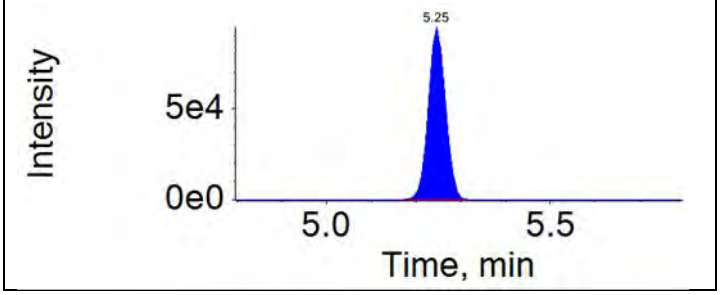
Injection Standard: 13C3-PFBA
216.0 / 172.0



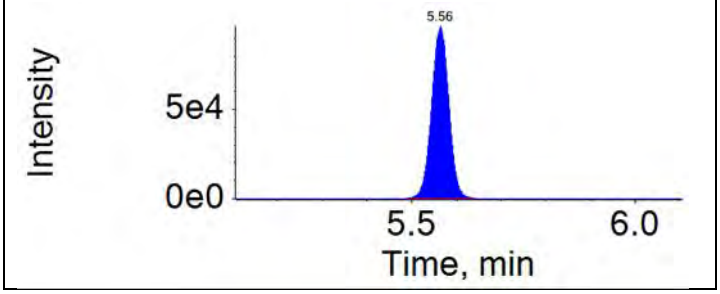
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



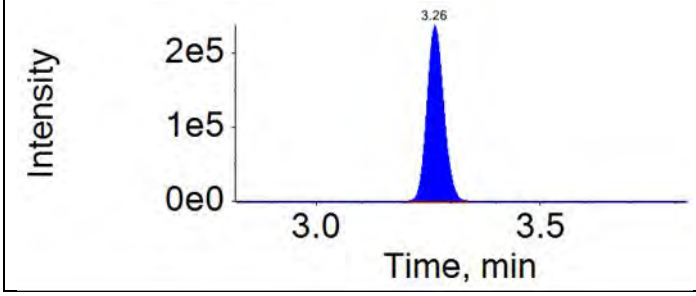
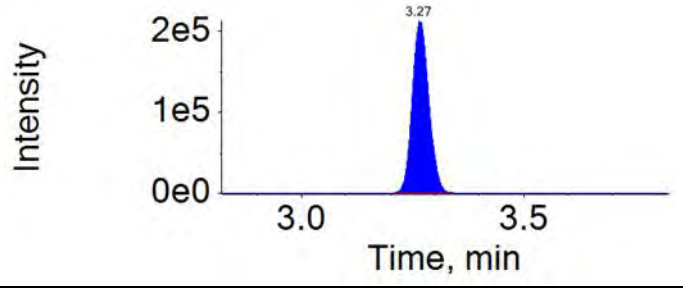
Injection Standard: 13C2-PFDA
515.0 / 470.0

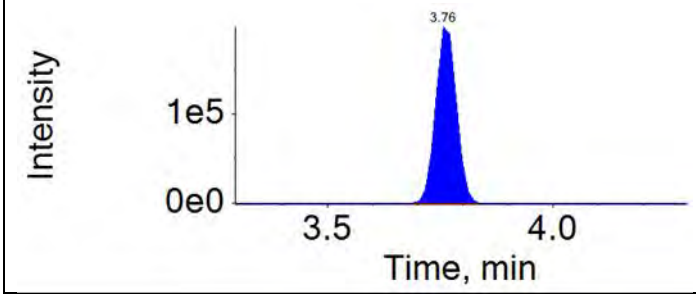
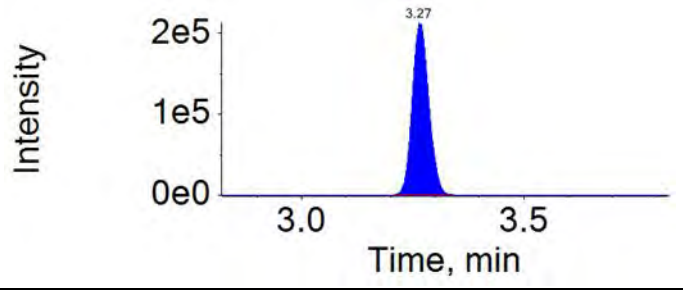


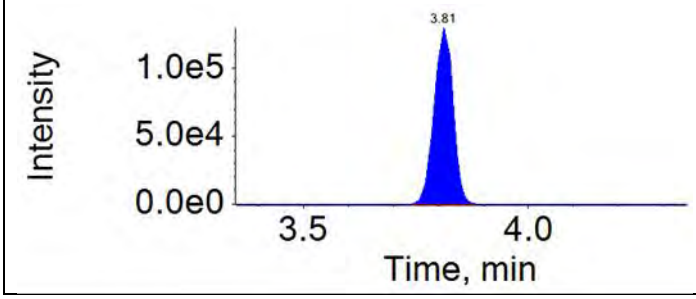
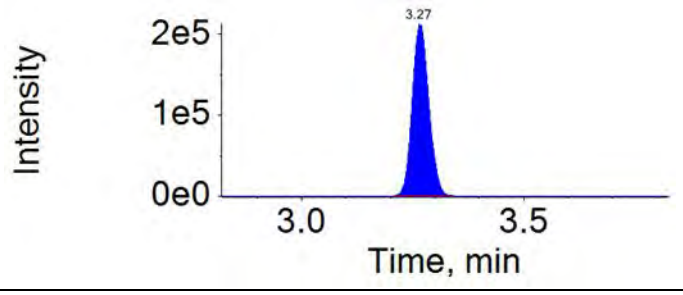
APPROVED
By JPT at 2:53 pm, 11/7/18

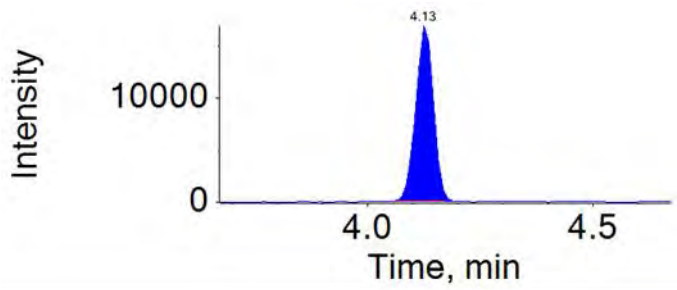
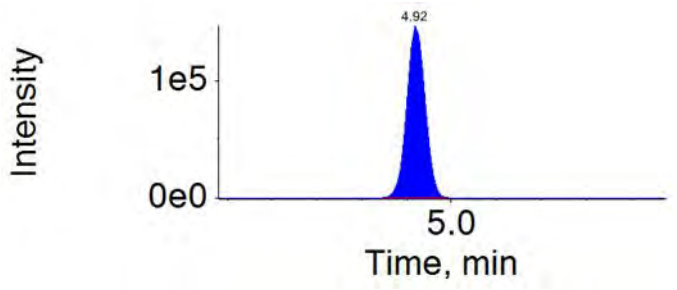
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

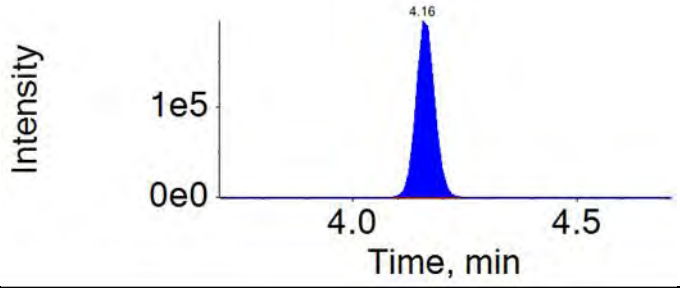
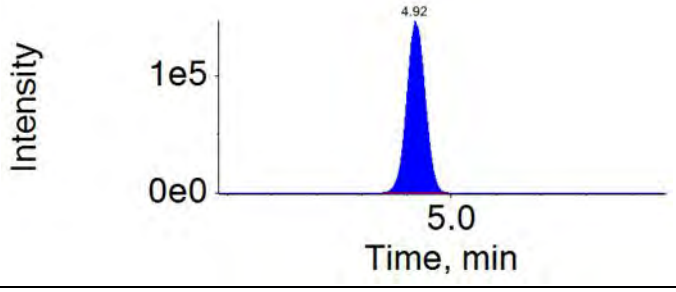
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

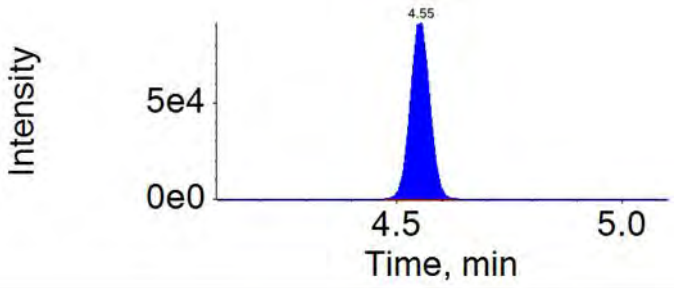
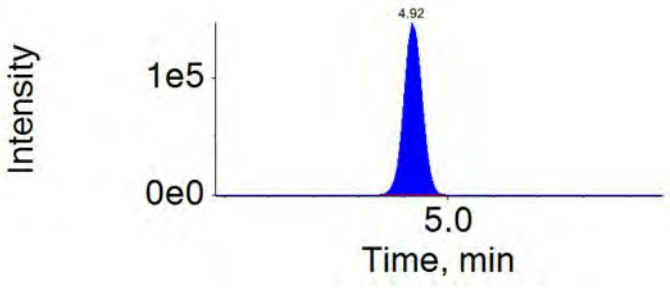
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

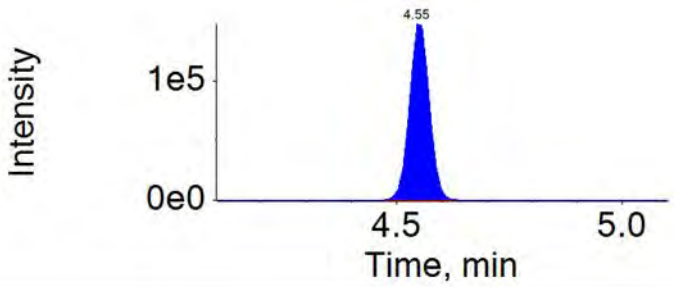
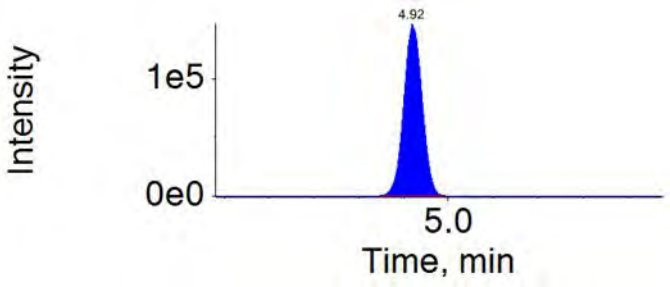
APPROVED
By JPT at 2:53 pm, 11/7/18

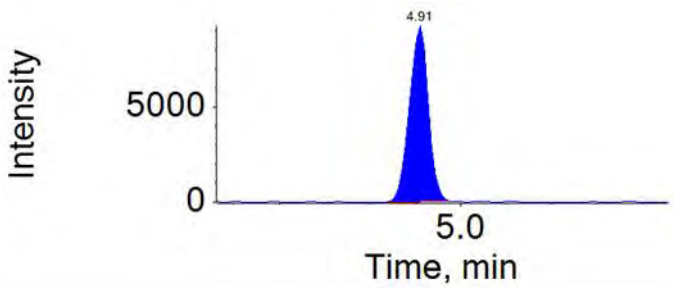
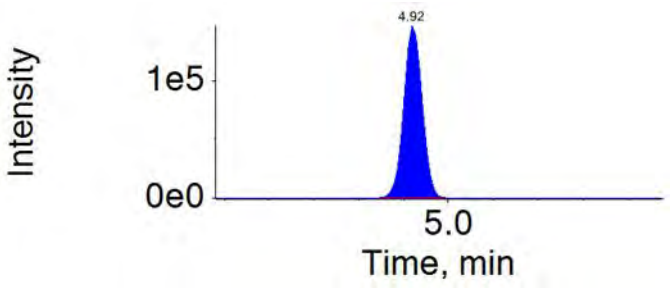
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

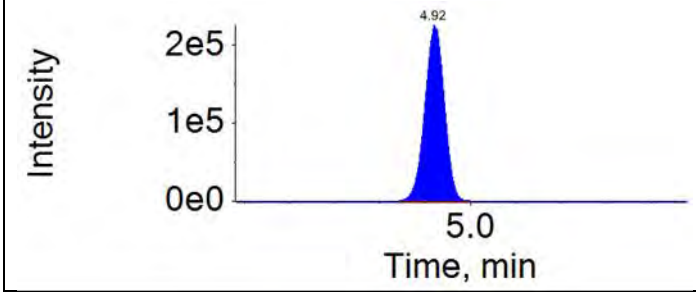
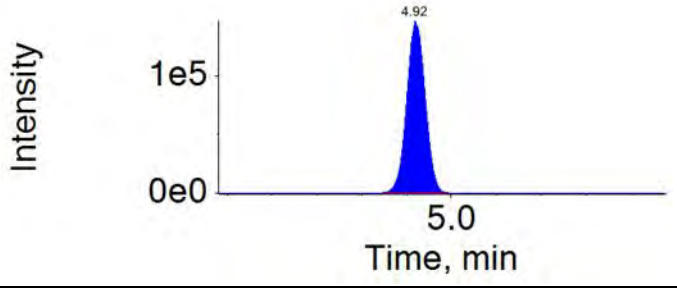
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

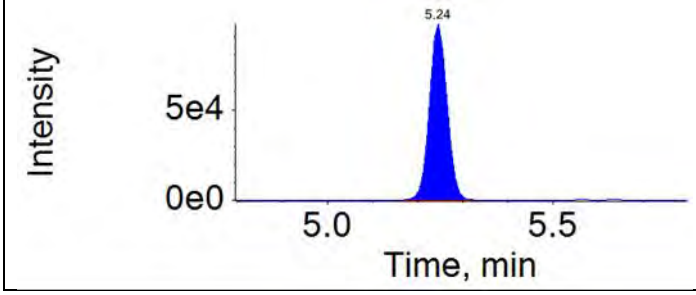
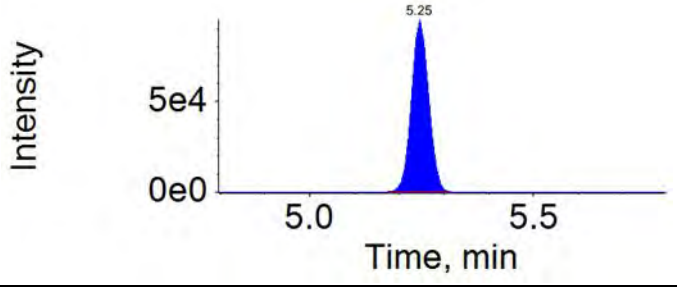
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

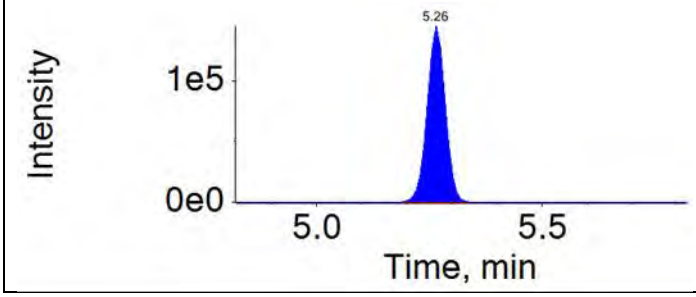
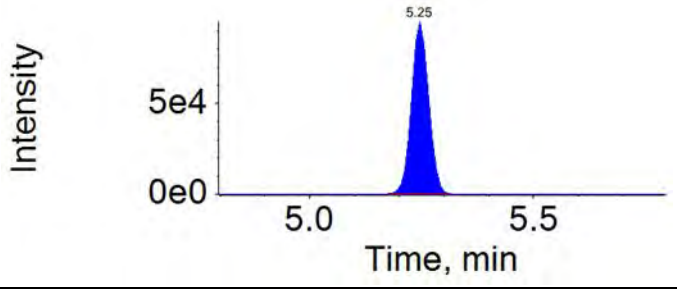
APPROVED
By JPT at 2:53 pm, 11/7/18

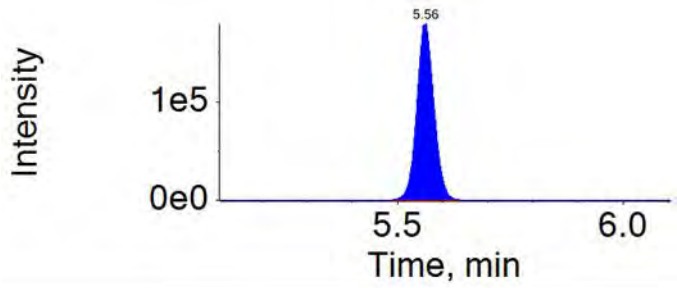
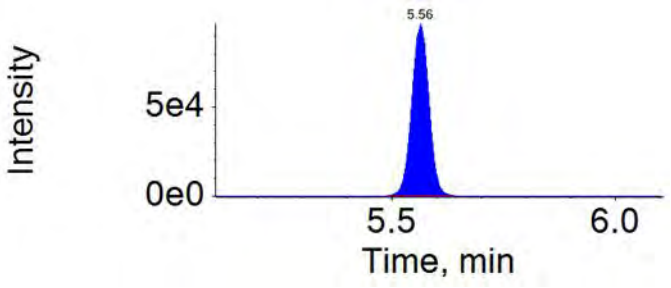
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

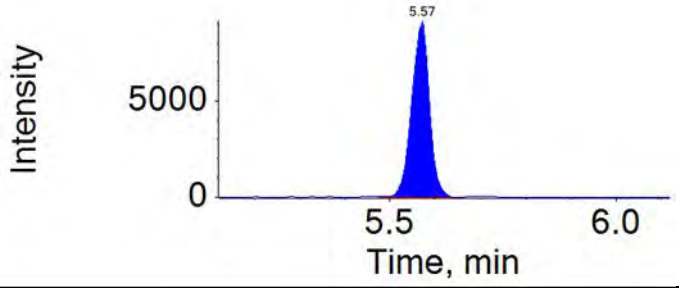
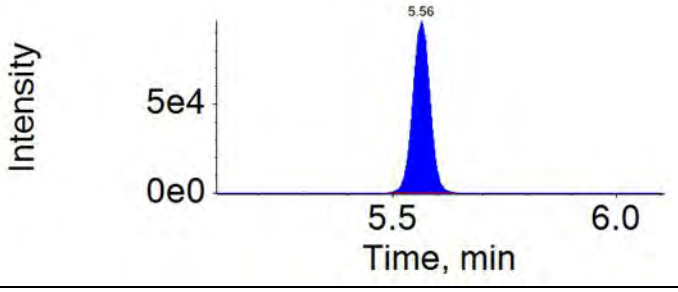
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

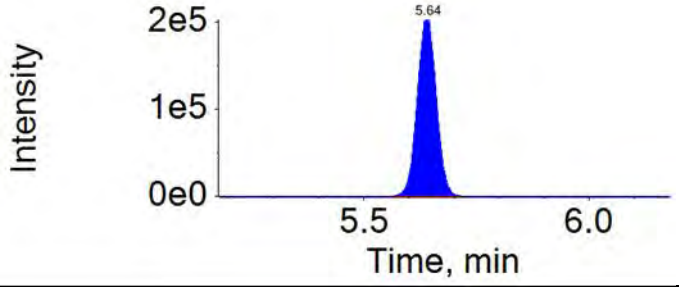
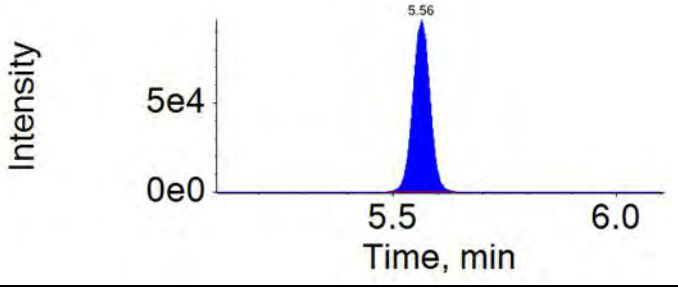
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

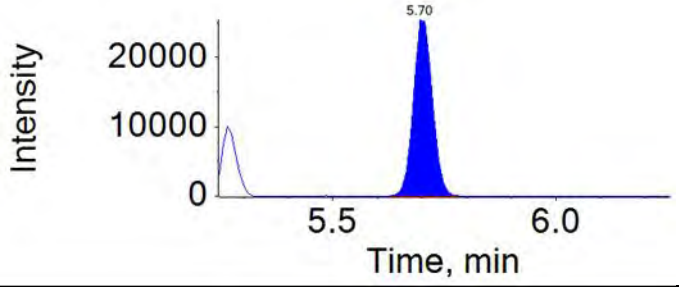
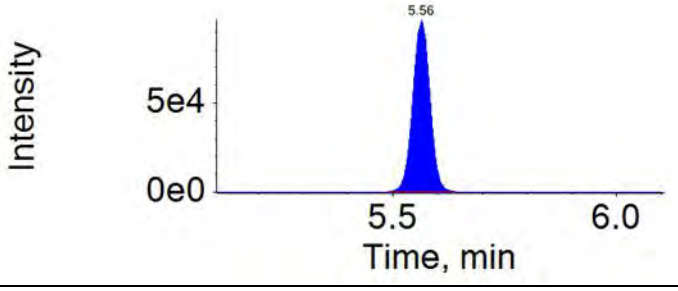
APPROVED
By JPT at 2:53 pm, 11/7/18

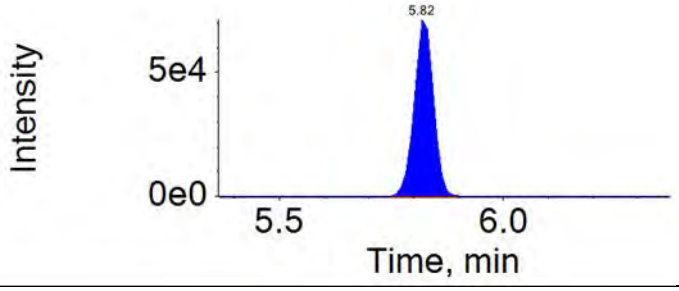
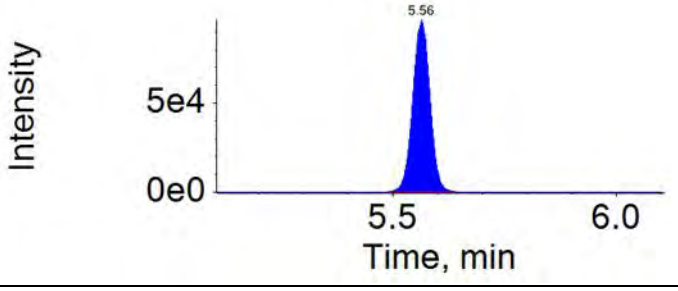
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

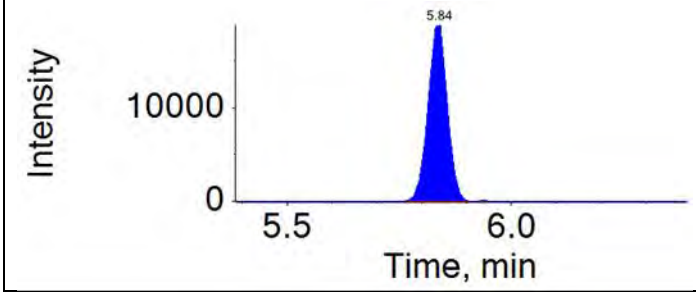
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

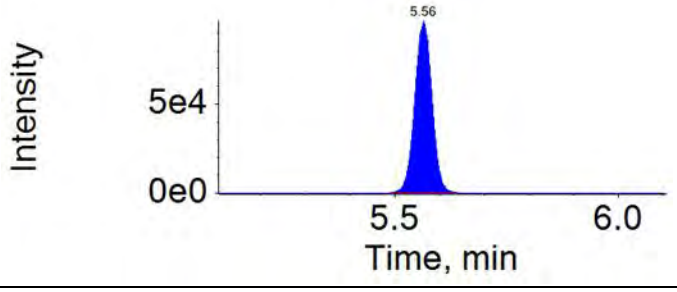
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

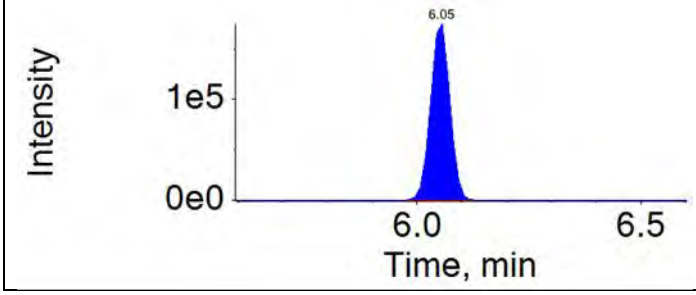
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

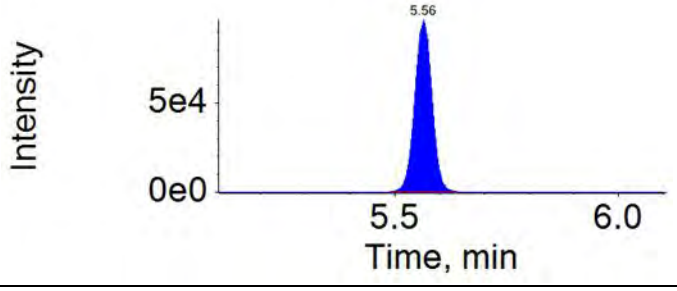
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



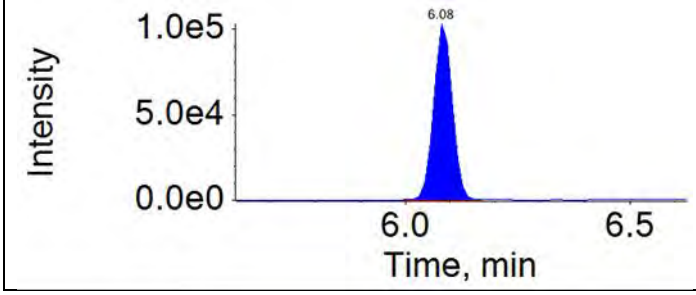


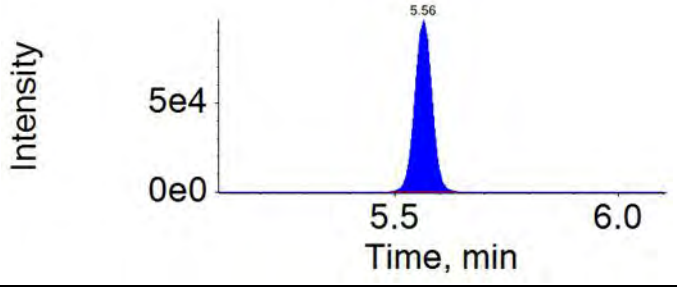
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



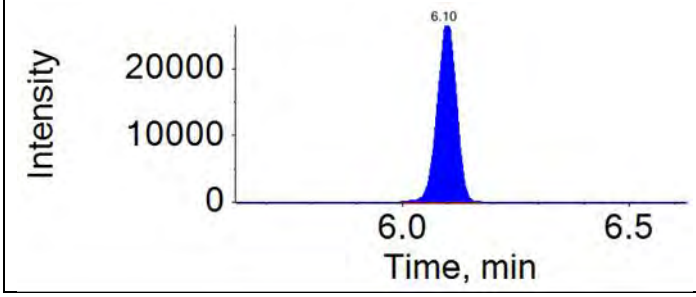


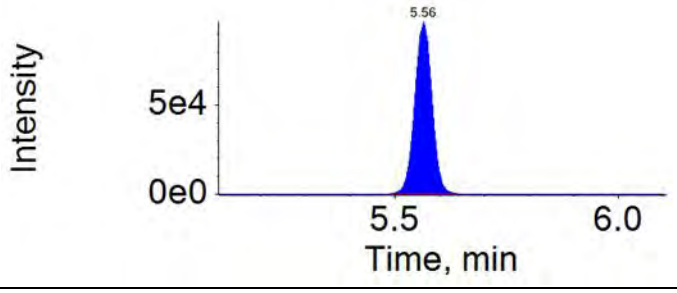
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



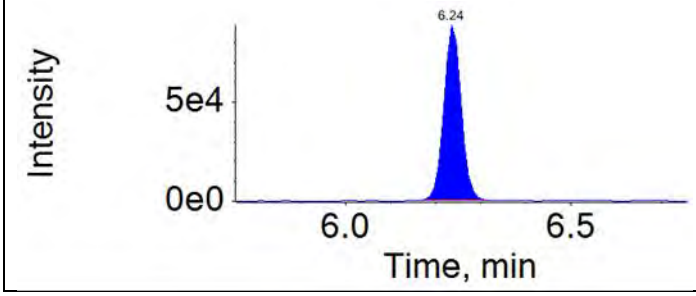


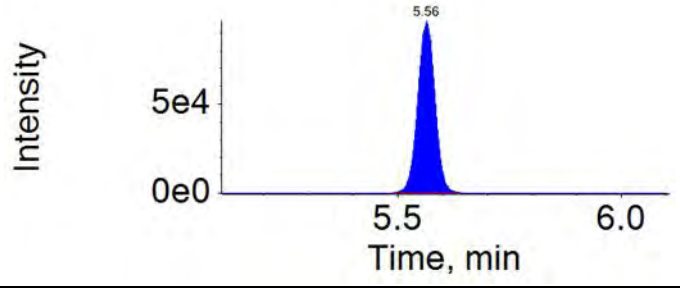
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

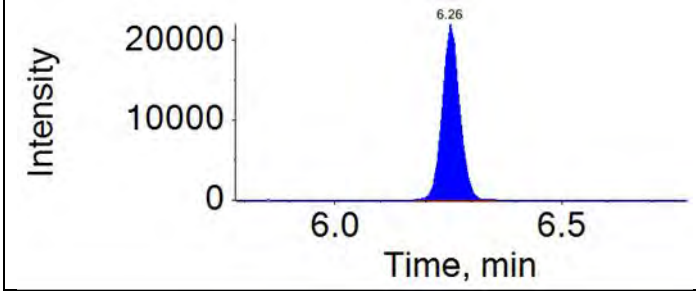
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

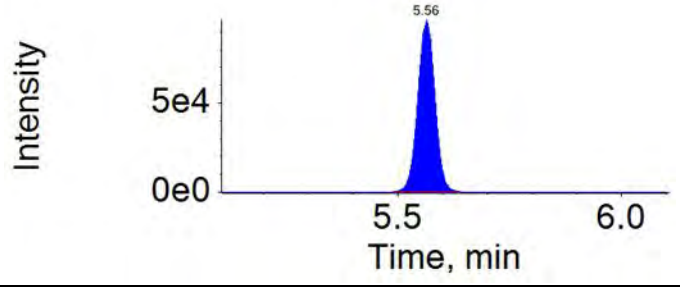
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



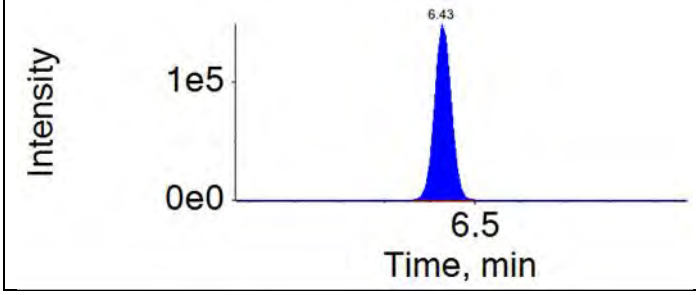


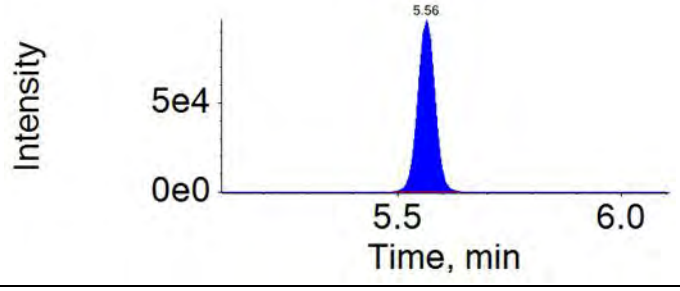
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

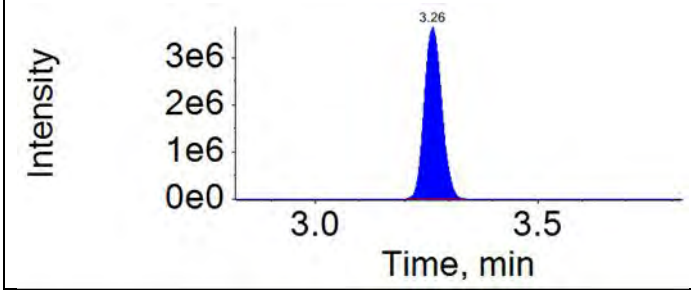
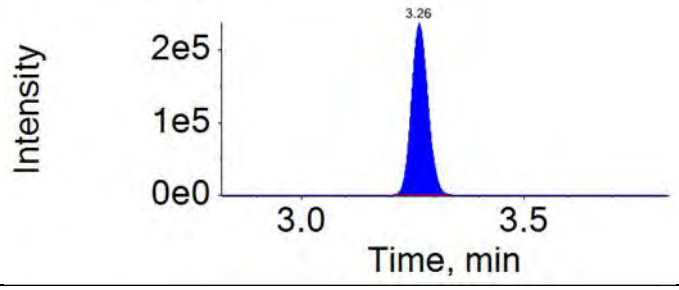


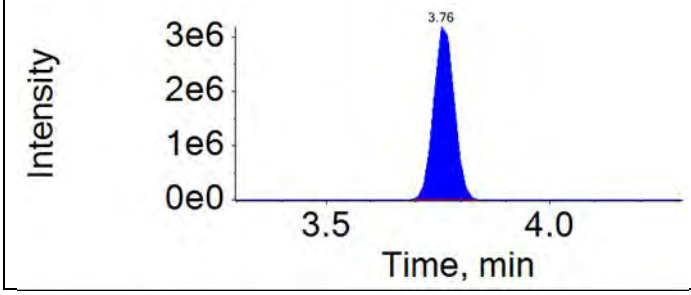
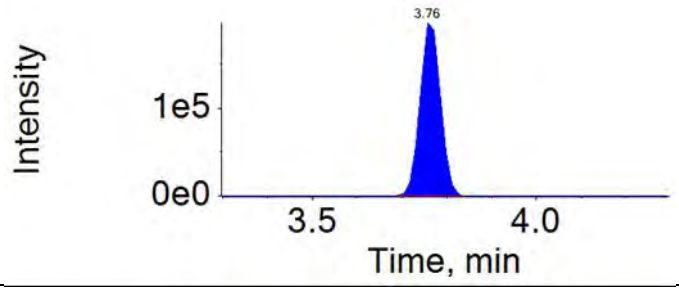


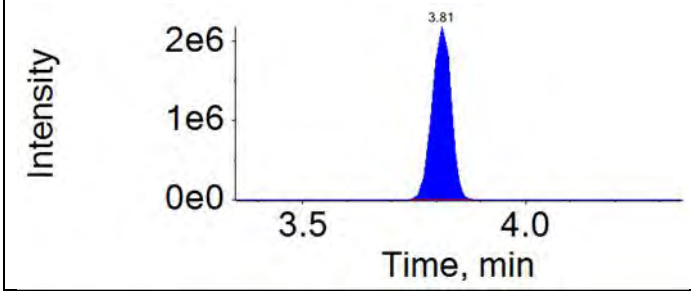
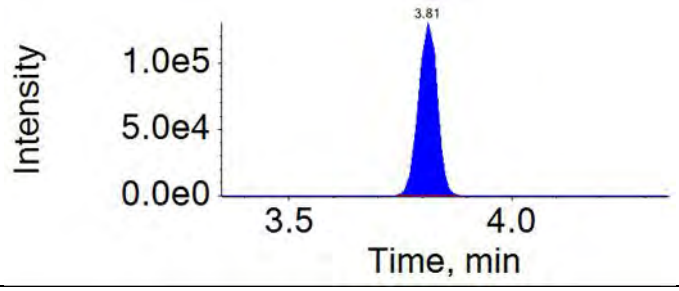
APPROVED
By JPT at 2:53 pm, 11/7/18

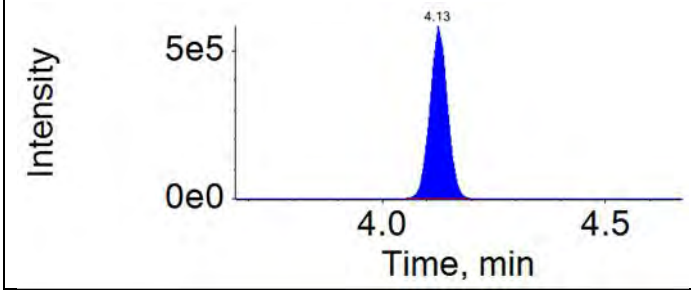
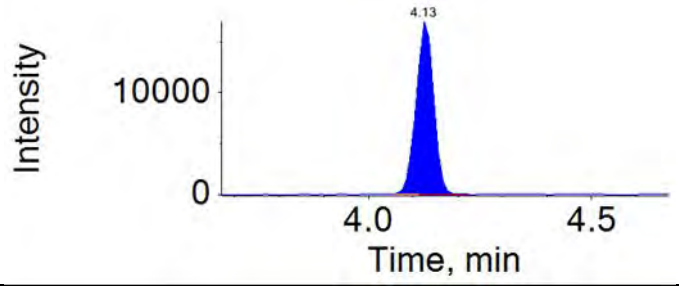
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

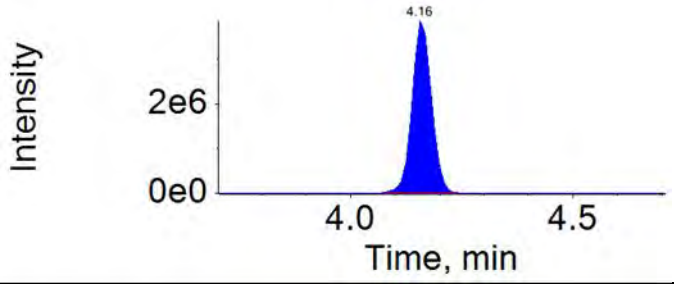
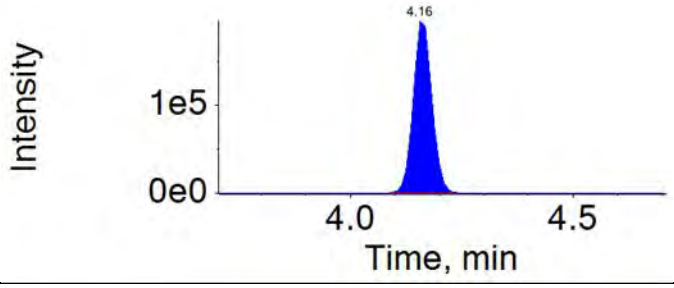
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

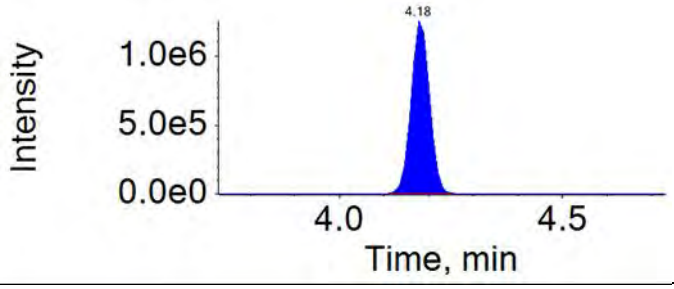
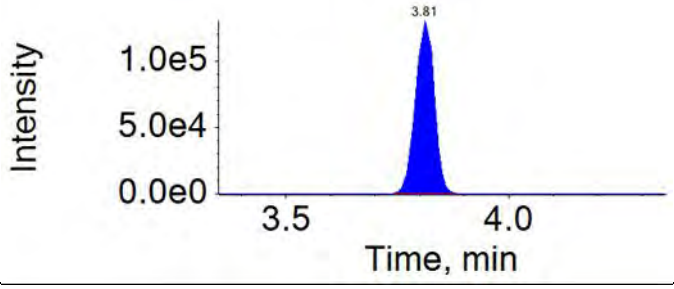
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

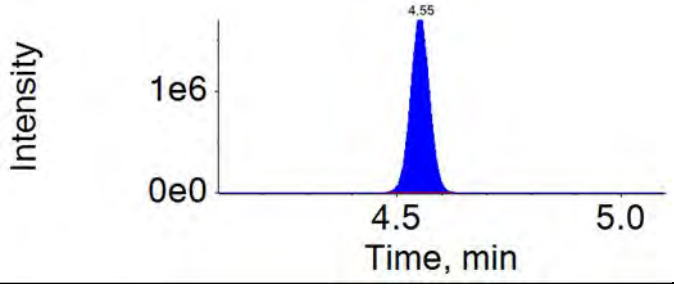
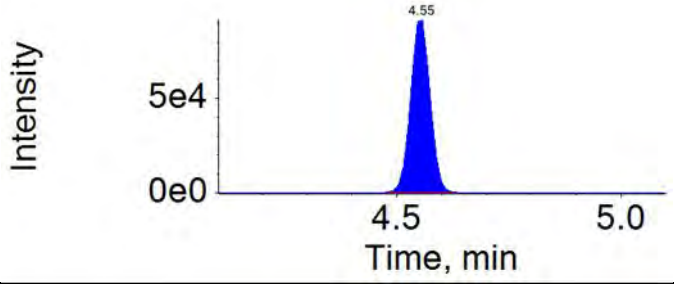
APPROVED
By JPT at 2:53 pm, 11/7/18

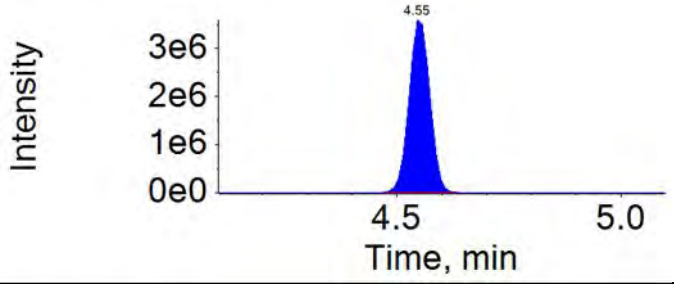
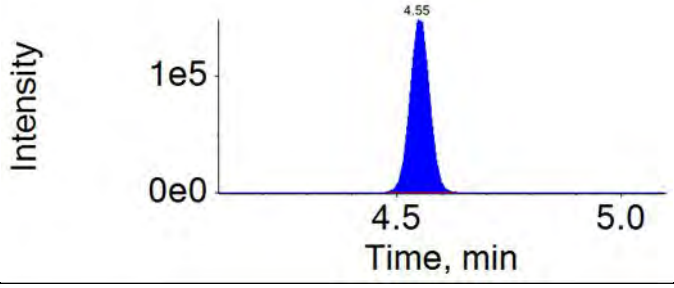
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

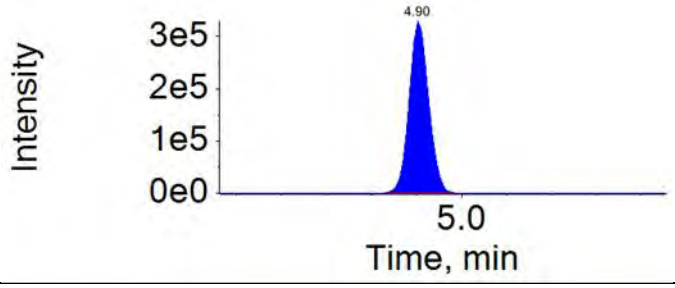
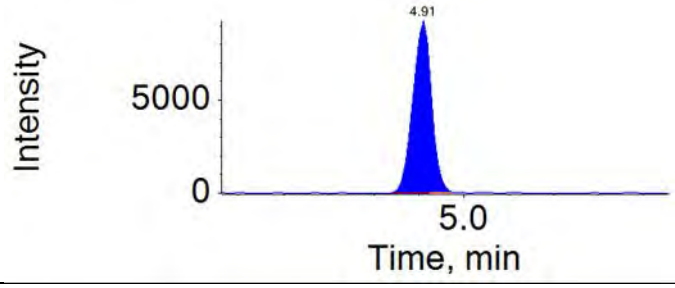
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

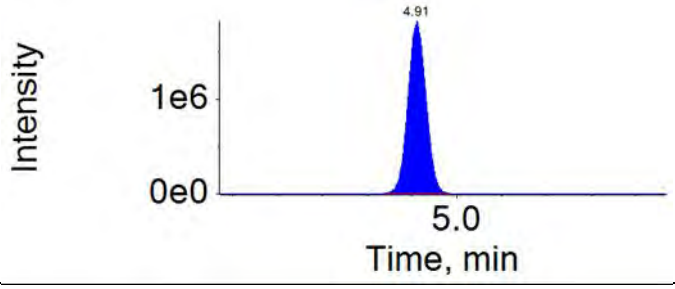
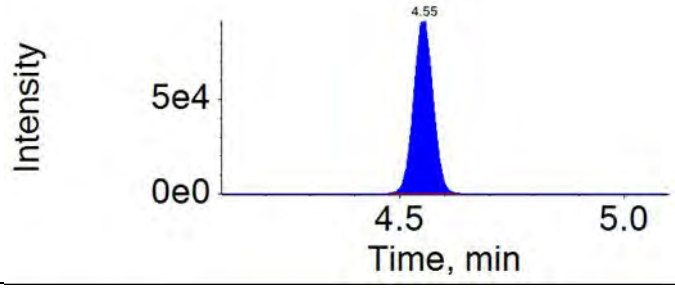
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

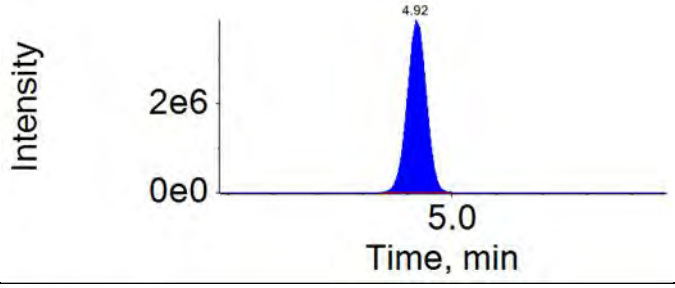
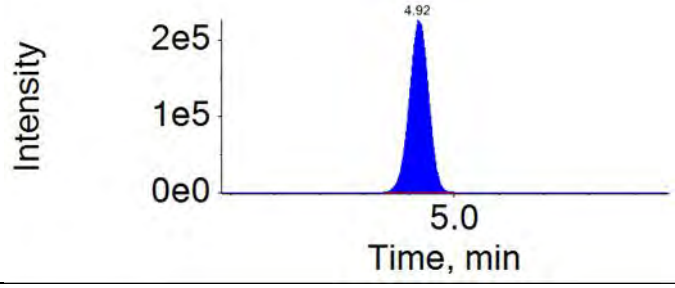
APPROVED
By JPT at 2:53 pm, 11/7/18

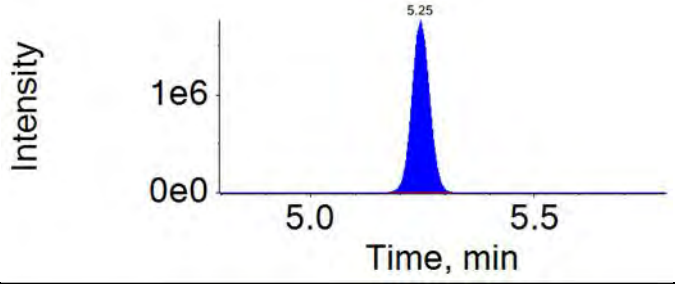
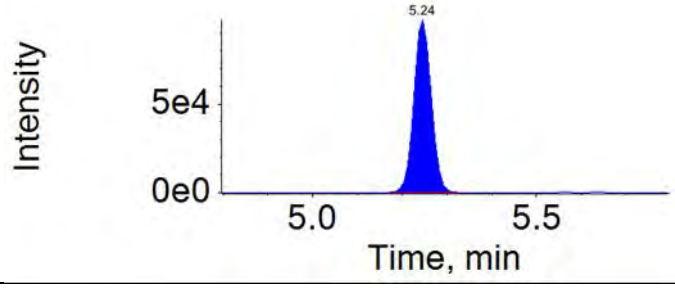
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

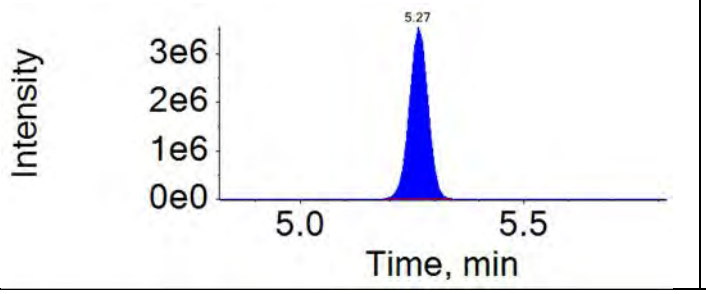
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

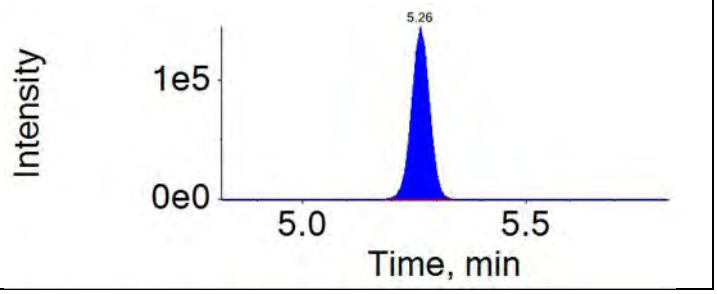
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

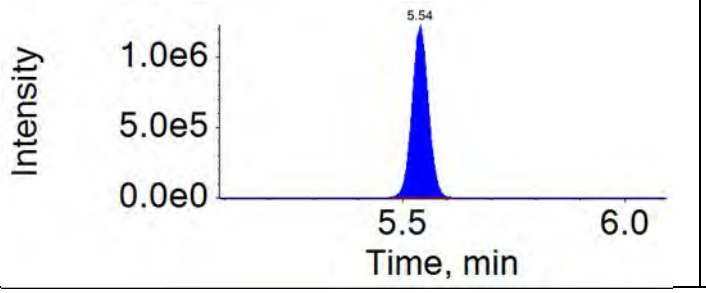
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

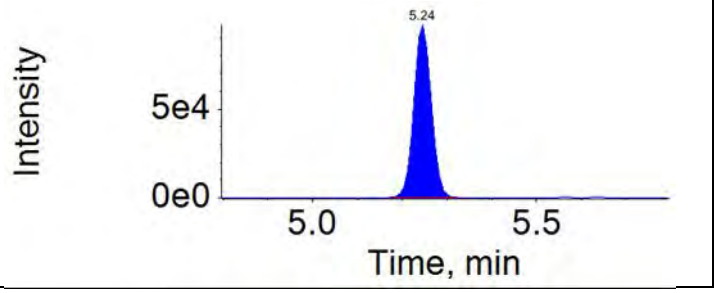
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



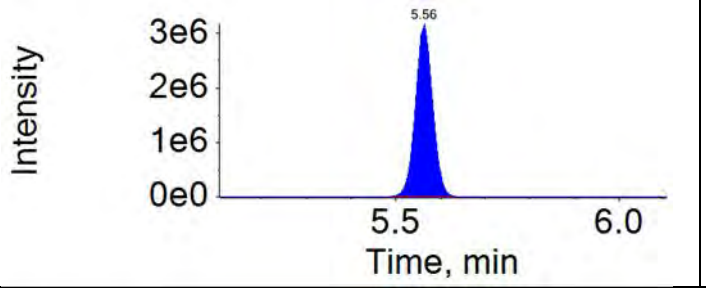


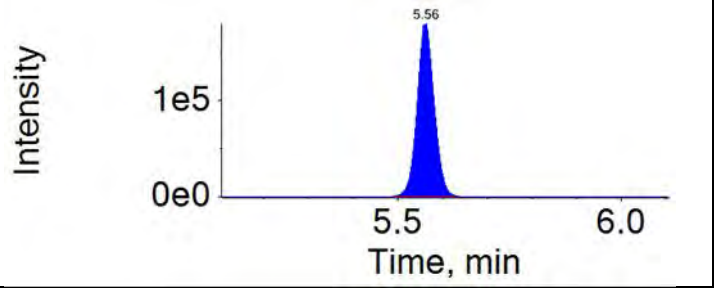
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



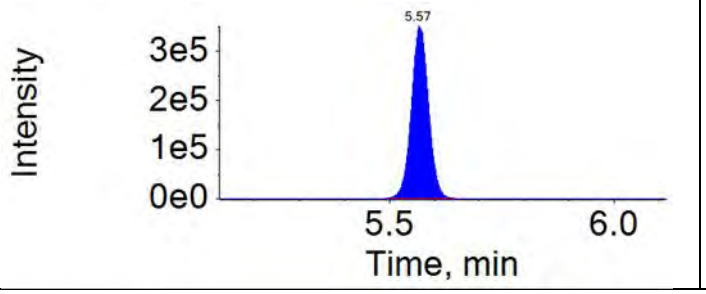


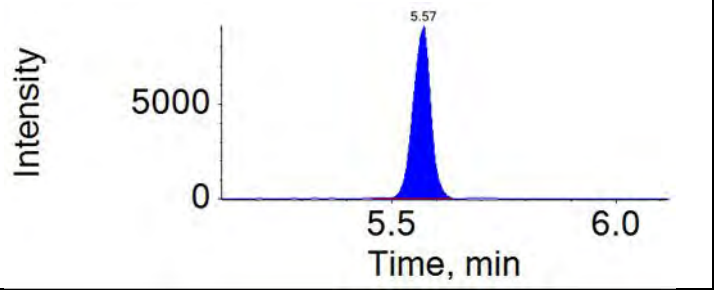
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

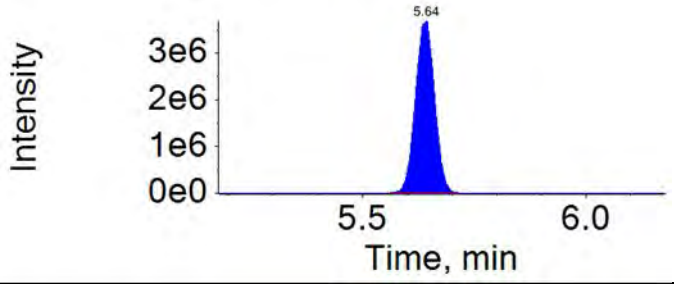
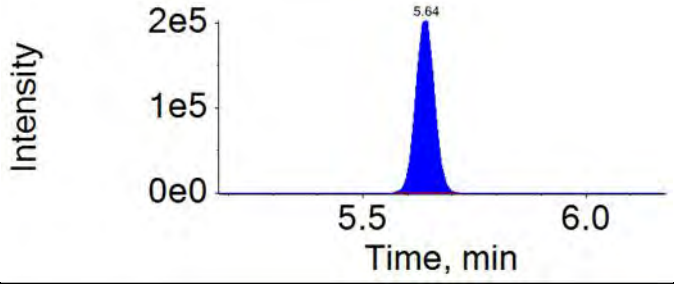


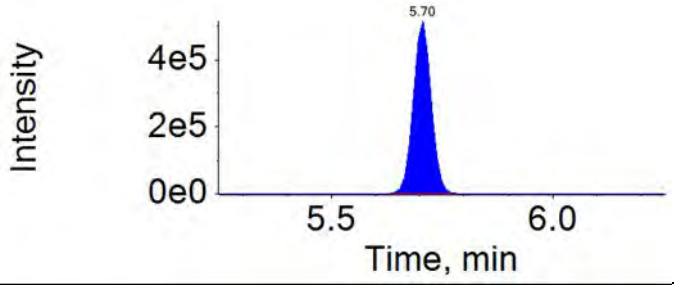
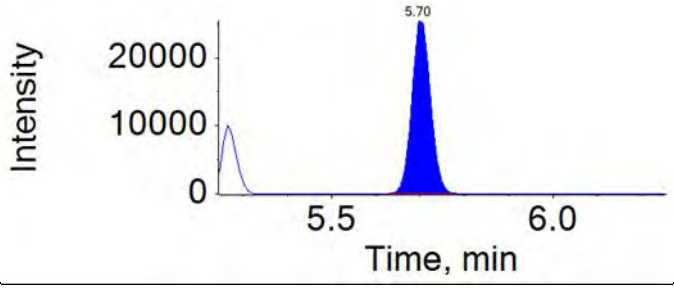


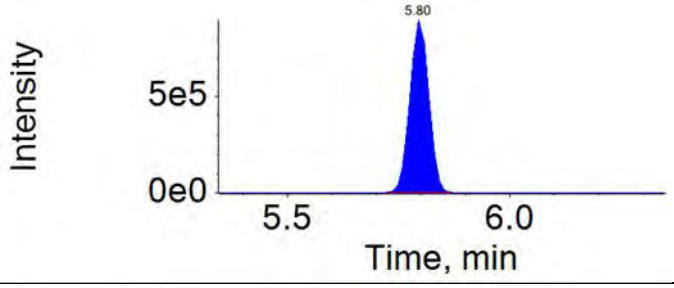
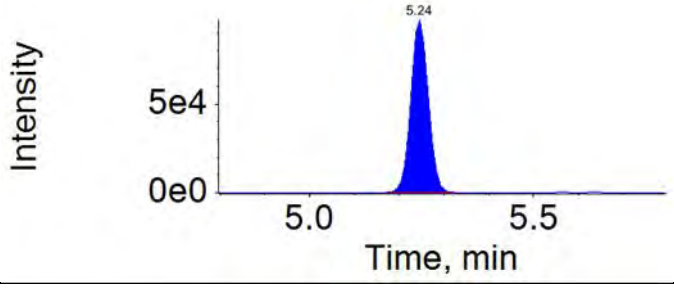
APPROVED
By JPT at 2:53 pm, 11/7/18

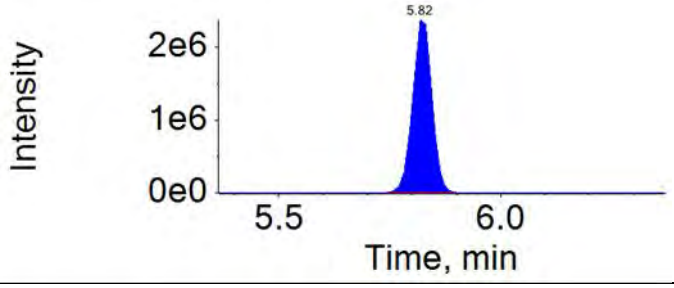
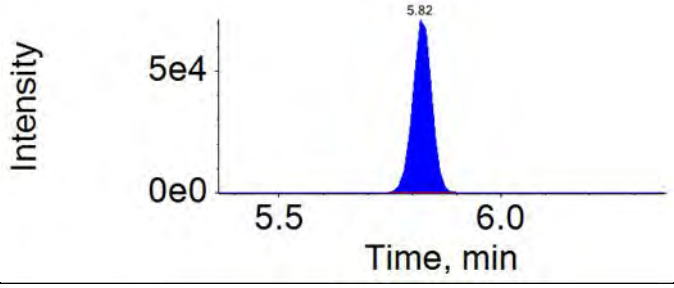
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

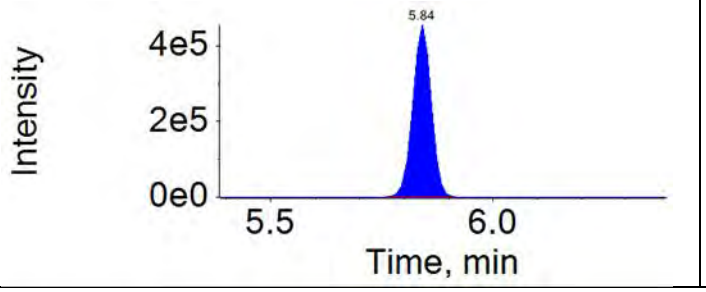
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

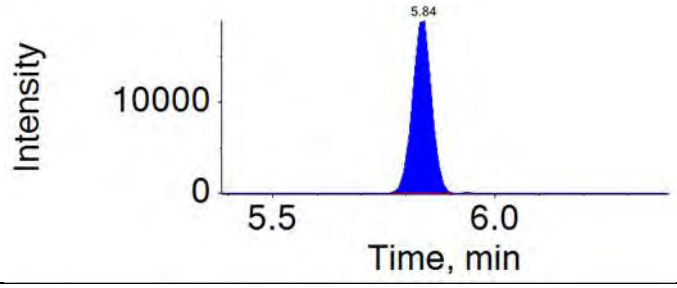
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

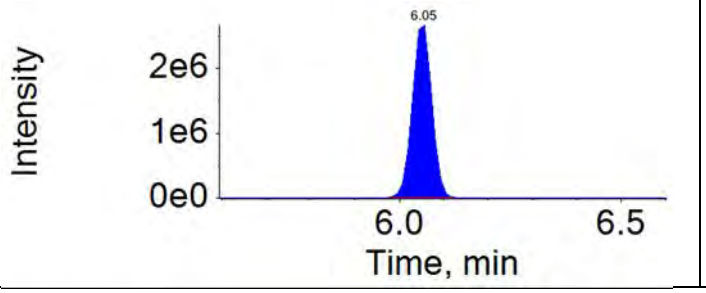
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

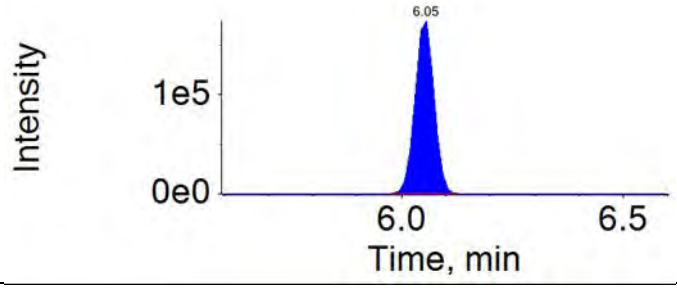
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



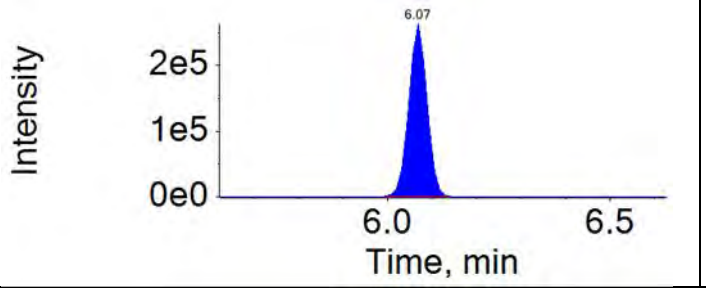


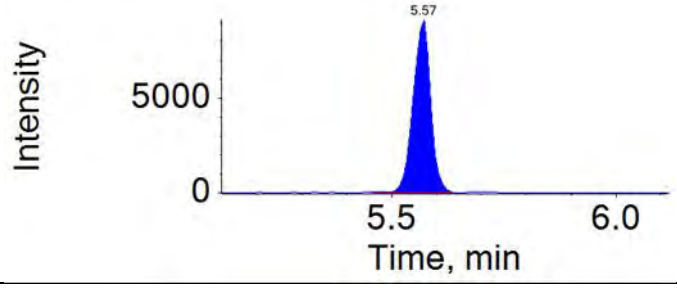
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



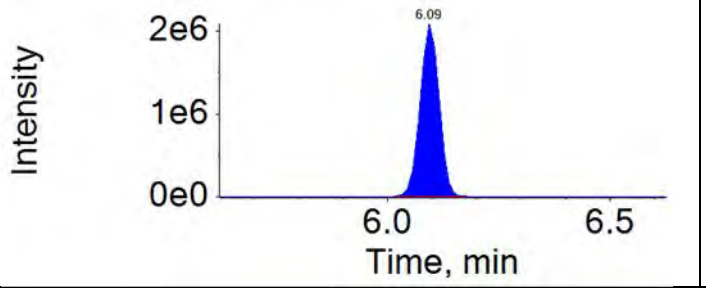


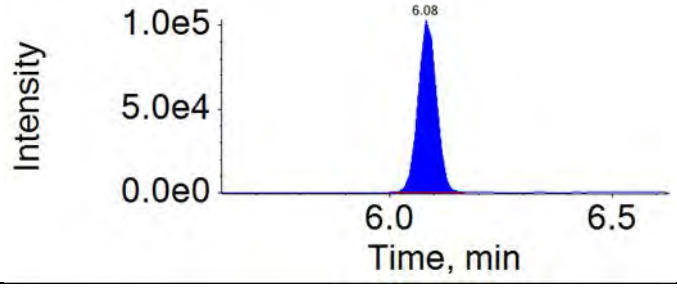
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





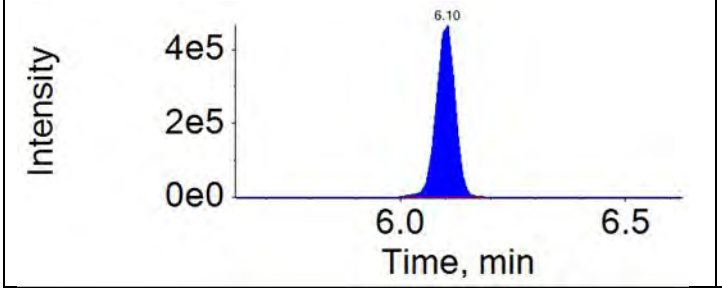
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0

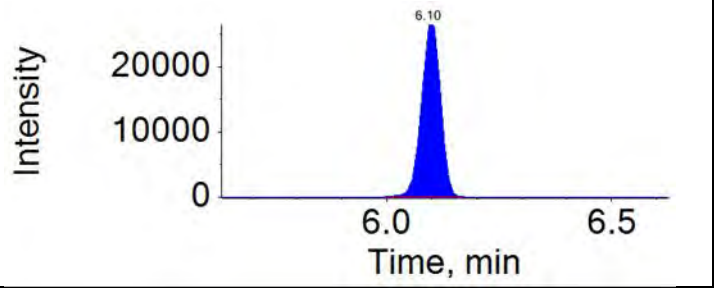




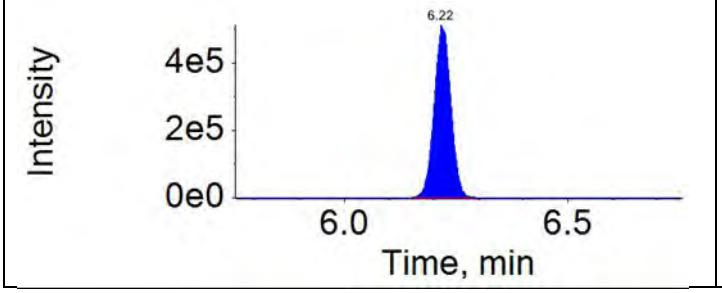
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

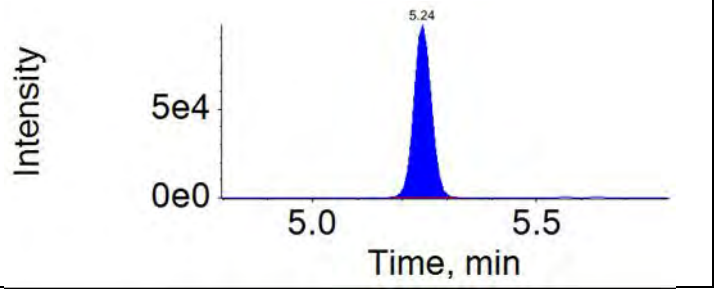
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



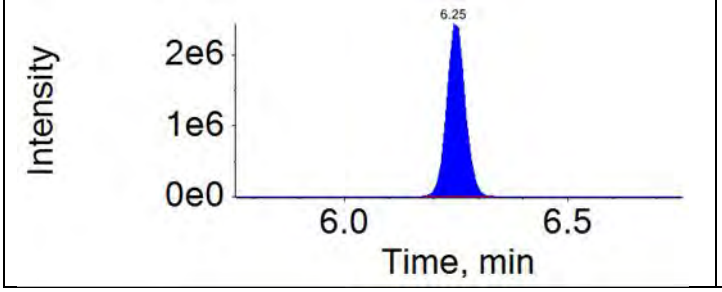


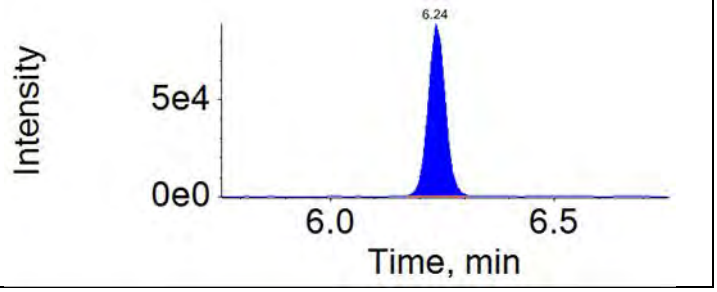
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



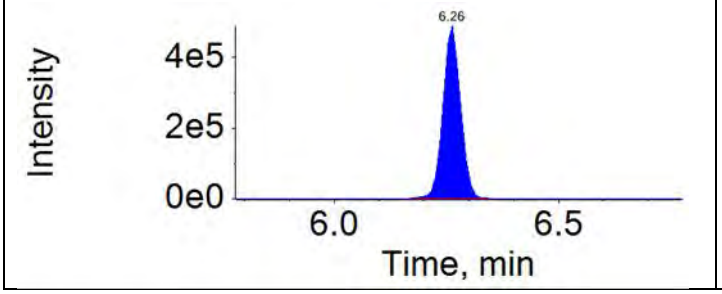


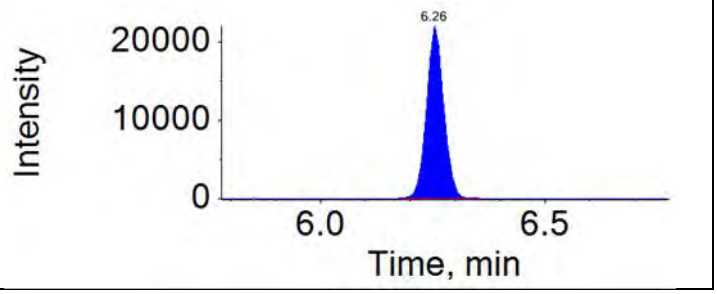
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0





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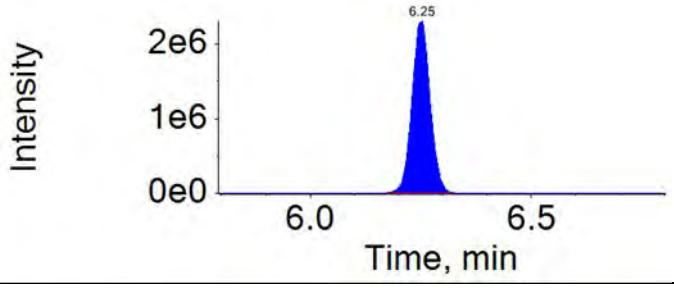
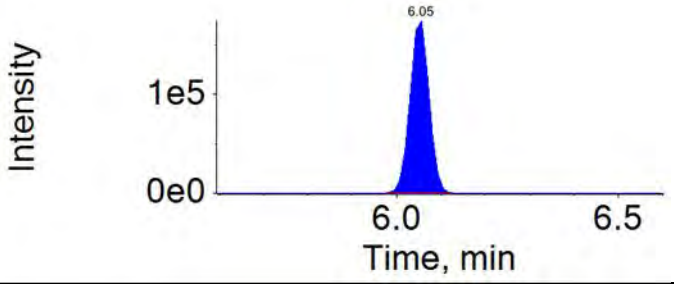
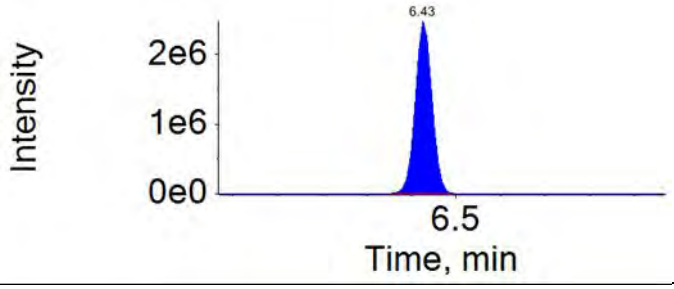
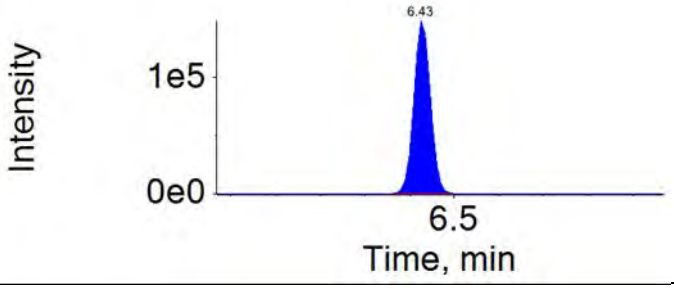
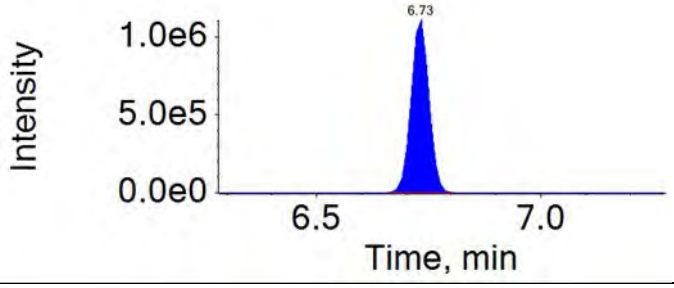
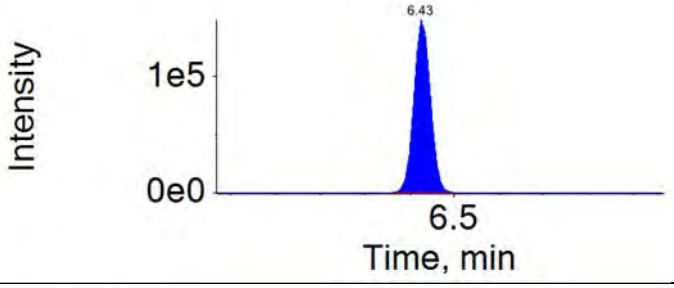
By JPT at 2:53 pm, 11/7/18

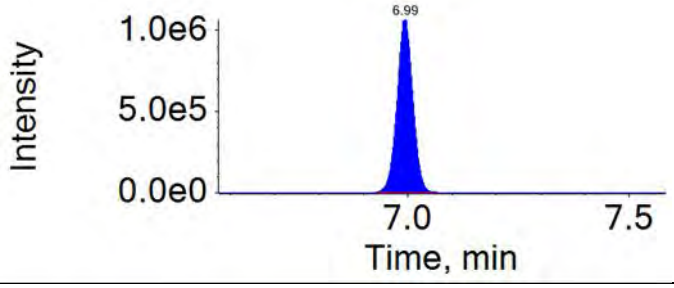
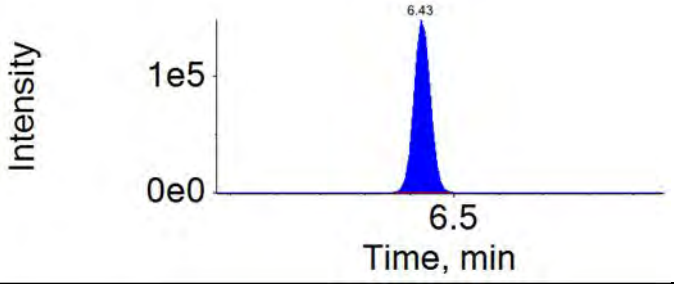
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

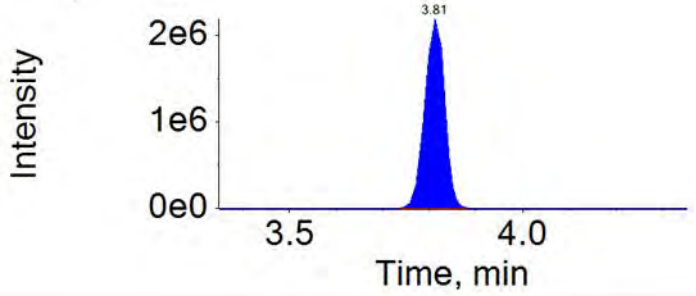
Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-16.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	6474525.0	A	1.0000	1.0000			
PFBS_2	3.81	1.00	2381935.1	A	0.3576	0.3679	3	50	
4:2-FTS	4.13	1.00	1576786.3	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	946320.6	A	0.6359	0.6002	-6	50	
PFHxA	4.16	1.00	11658104.6	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	146733.2	A	0.0115	0.0126	10	50	
PFPeS	4.18	1.10	3615170.2	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	1859405.8	A	0.5384	0.5143	-4	50	
PFHxS	4.55	1.00	5196245.3	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	1830260.3	A	0.3569	0.3522	-1	50	
PFHpA	4.55	1.00	11701142.2	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	676550.1	A	0.0577	0.0578	0	50	
6:2-FTS	4.90	1.00	988785.9	A	1.0000	1.0000			
6:2-FTS_2	4.90	1.00	625214.8	A	0.6752	0.6323	-6	50	
PFHpS	4.91	1.08	5085803.6	A	1.0000	1.0000			
PFHpS_2	4.91	1.08	2031737.5	A	0.3950	0.3995	1	50	
PFOA	4.92	1.00	11562348.7	A	1.0000	1.0000			
PFOA_2	4.92	1.00	711843.9	A	0.0635	0.0616	-3	50	
PFOS	5.25	1.00	4830627.6	A	1.0000	1.0000			
PFOS_2	5.24	1.00	1617879.0	A	0.3494	0.3349	-4	50	
PFNA	5.27	1.00	10279837.9	A	1.0000	1.0000			
PFNA_2	5.27	1.00	219746.5	A	0.0207	0.0214	3	50	
PFNS	5.54	1.06	3119908.2	A	1.0000	1.0000			
PFNS_2	5.54	1.06	1542771.9	A	0.4890	0.4945	1	50	
PFDA	5.56	1.00	8415098.4	A	1.0000	1.0000			
PFDA_2	5.56	1.00	58233.7	A	0.0057	0.0069	22	50	
8:2-FTS	5.57	1.00	936483.2	A	1.0000	1.0000			
8:2-FTS_2	5.57	1.00	547919.5	A	0.6169	0.5851	-5	50	
NMeFOSAA	5.70	1.00	1450331.2	A	1.0000	1.0000			
NMeFOSAA_2	5.70	1.00	350791.8	A	0.2206	0.2419	10	50	
PFDS	5.80	1.11	2660525.2	A	1.0000	1.0000			
PFDS_2	5.80	1.11	1326713.6	A	0.4648	0.4987	7	50	
PFUnDA	5.82	1.00	7204782.9	A	1.0000	1.0000			
PFUnDA_2	5.82	1.00	26281.4	A	0.0031	0.0036	16	50	
NEtFOSAA	5.84	1.00	1317020.6	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	819492.6	A	0.6082	0.6222	2	50	
PFDoDA	6.05	1.00	8211828.8	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	111190.9	A	0.0109	0.0135	24	50	
10:2-FTS	6.07	1.09	747804.5	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	511885.1	A	0.7082	0.6845	-3	50	
PFTrDA	6.25	1.03	6633128.3	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	66200.2	A	0.0096	0.0100	4	50	
PFTeDA	6.43	1.00	6426587.4	A	1.0000	1.0000			
PFTeDA_2	6.43	1.00	41133.5	A	0.0055	0.0064	16	50	
PFHxDA	6.73	1.05	3073572.7	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	192350.4	A	0.0596	0.0626	5	50	
PFODA	6.99	1.09	2676698.5	A	1.0000	1.0000			
PFODA_2	6.99	1.09	70338.4	A	0.0257	0.0263	2	50	

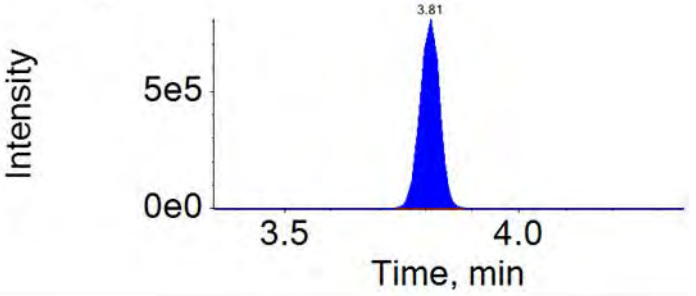
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

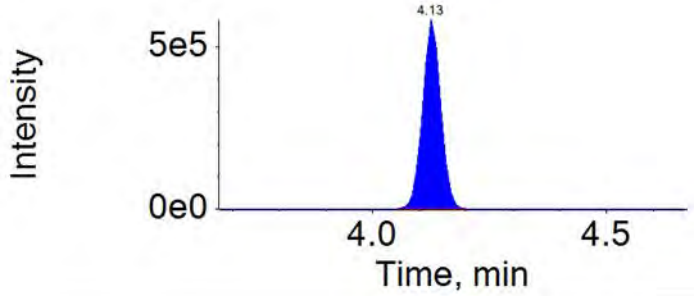
Component: PFBS
Primary Mass: 299.0 / 80.0



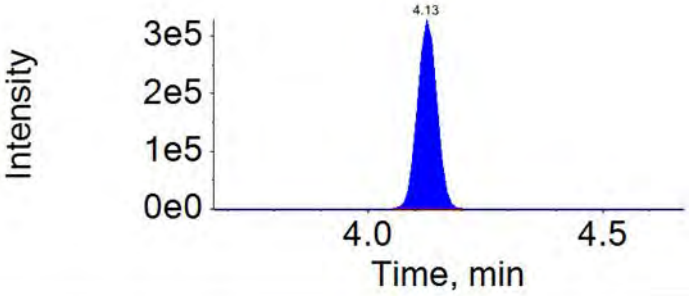
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



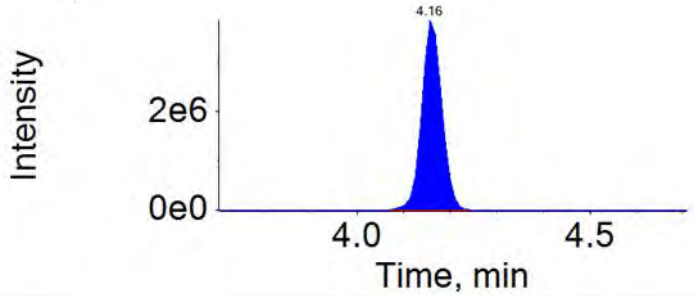
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



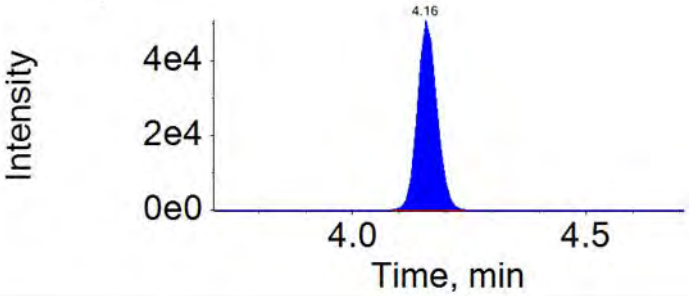
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



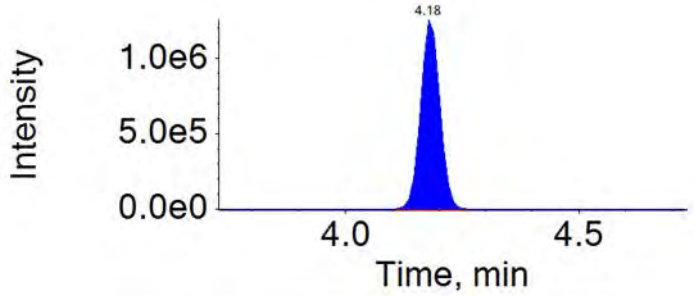
Component: PFHxA
Primary Mass: 313.0 / 269.0



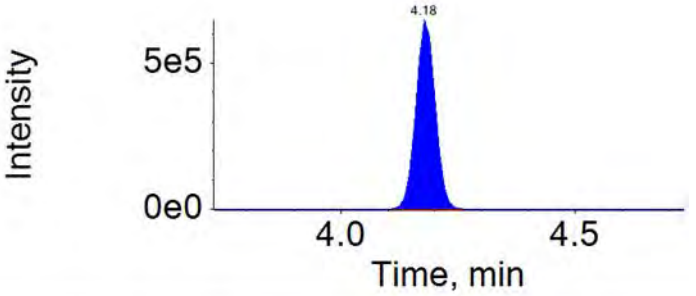
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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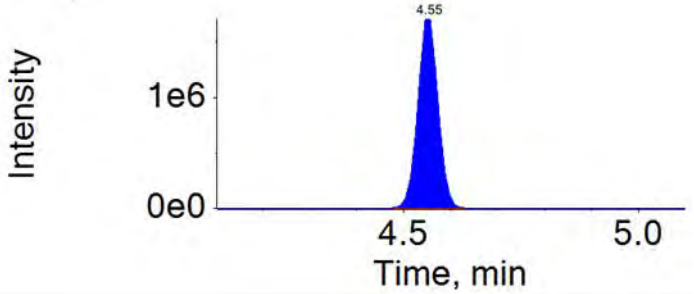
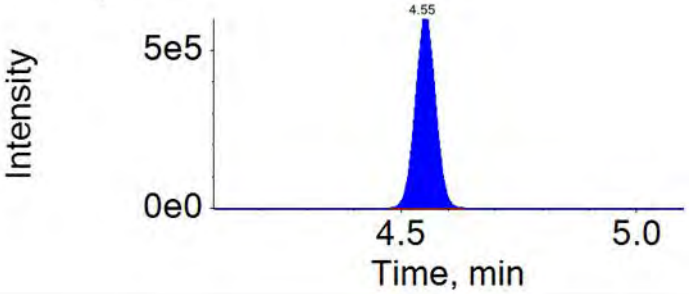
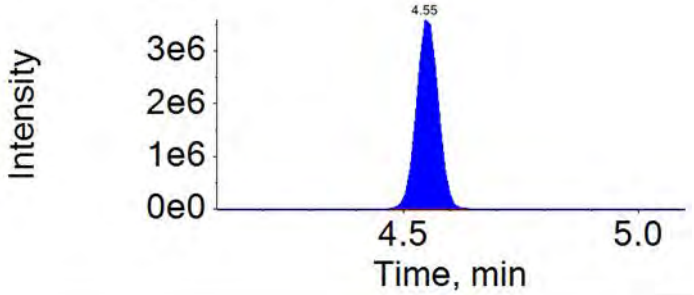
Component: PFHxS
Primary Mass: 399.0 / 80.0



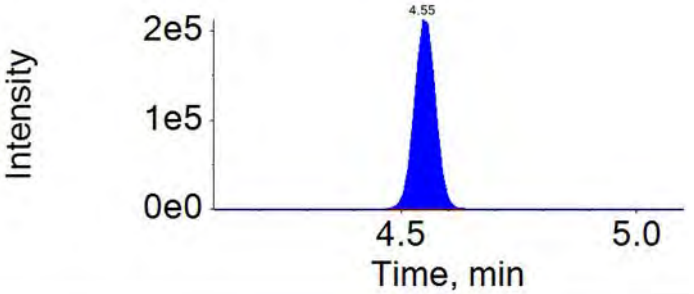
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



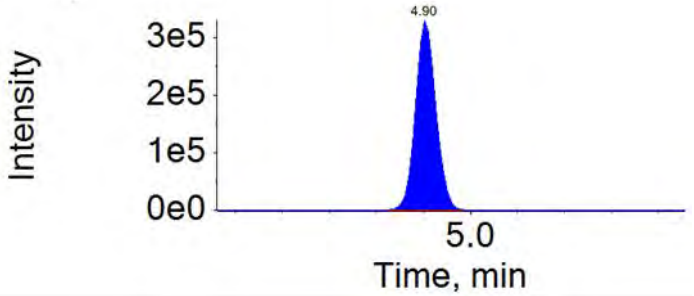
Component: PFHpA
Primary Mass: 363.0 / 319.0



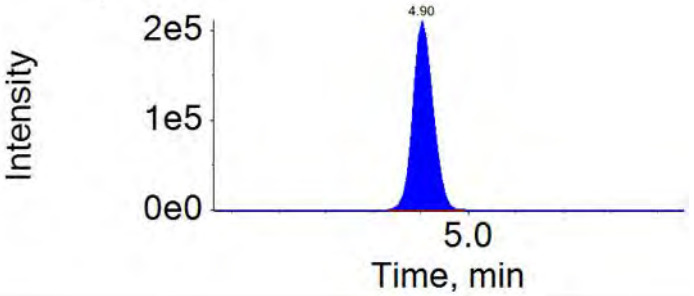
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



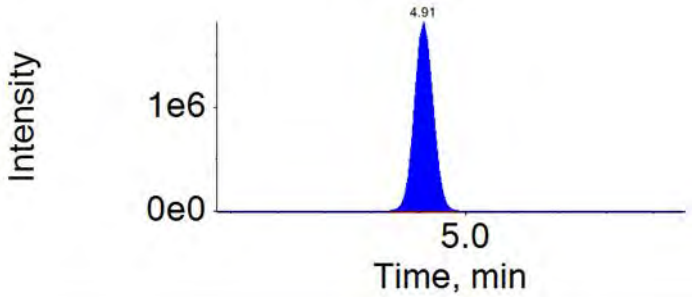
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



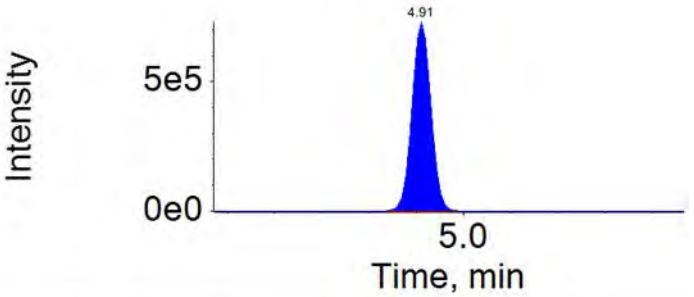
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By JPT at 2:53 pm, 11/7/18

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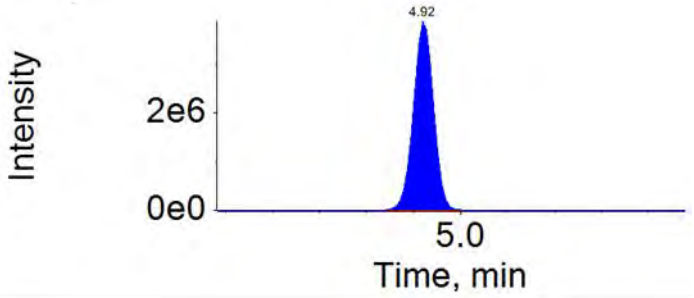
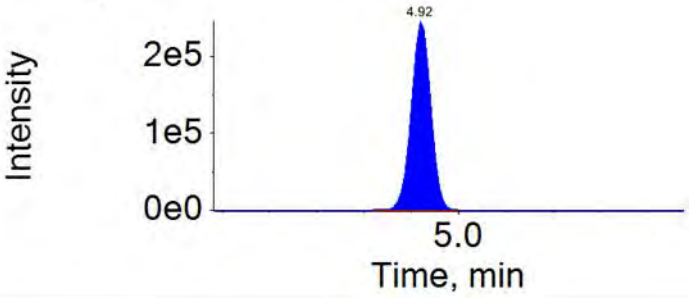
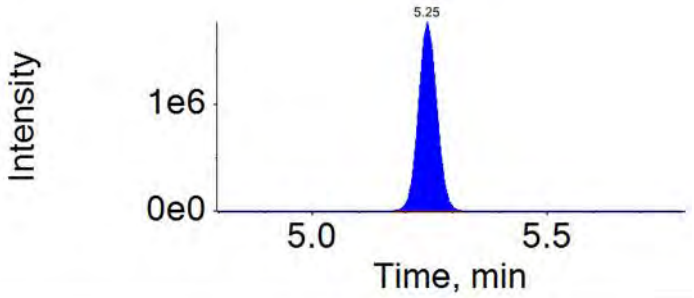
Component: PFOA
Primary Mass: 413.0 / 369.0



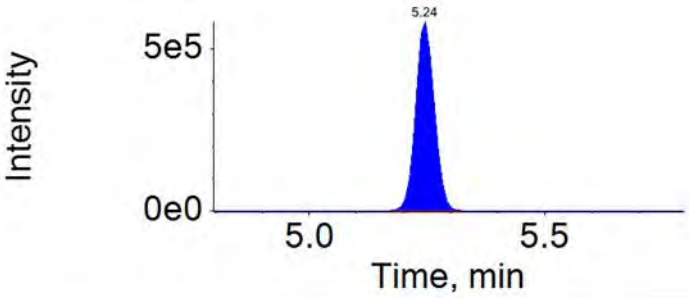
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



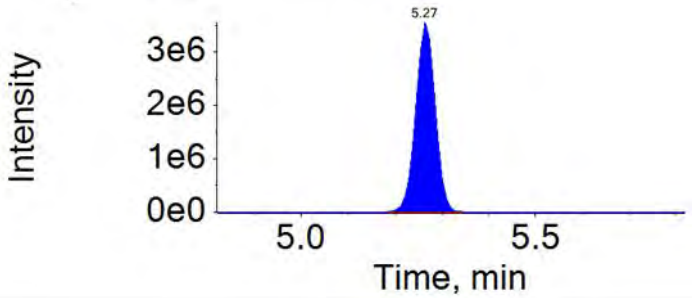
Component: PFOS
Primary Mass: 499.0 / 80.0



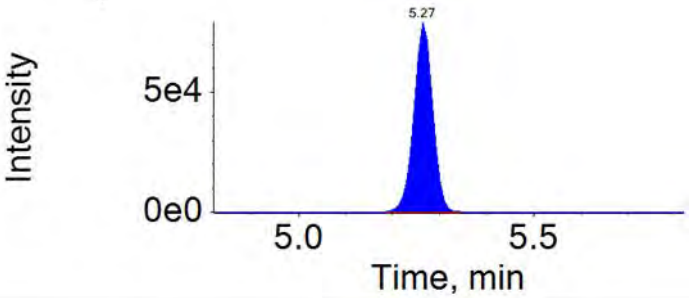
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



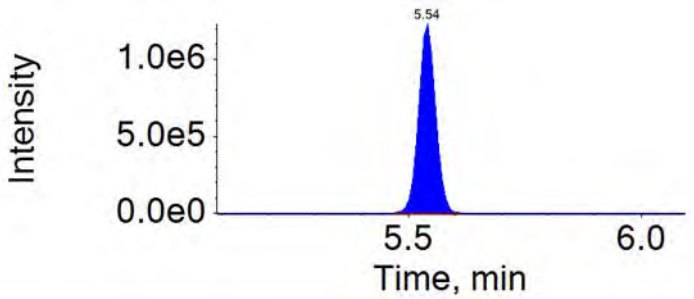
Component: PFNA
Primary Mass: 463.0 / 419.0



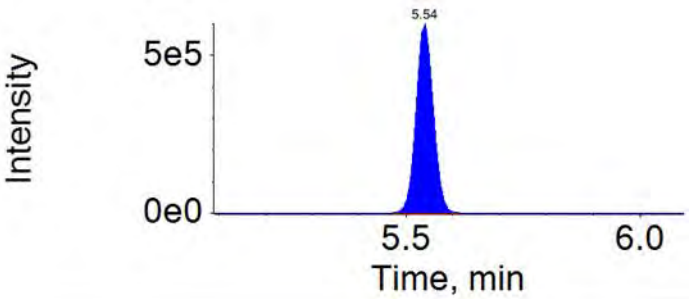
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



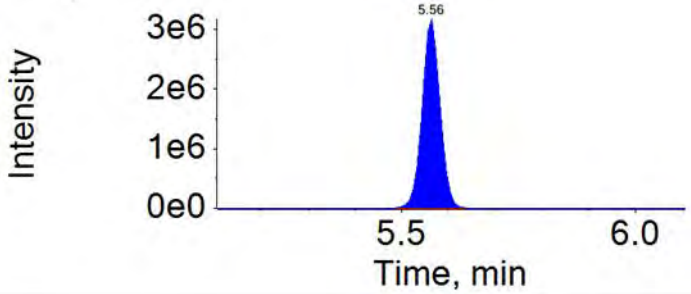
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



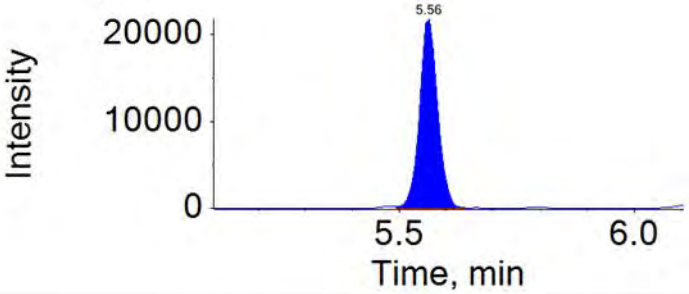
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

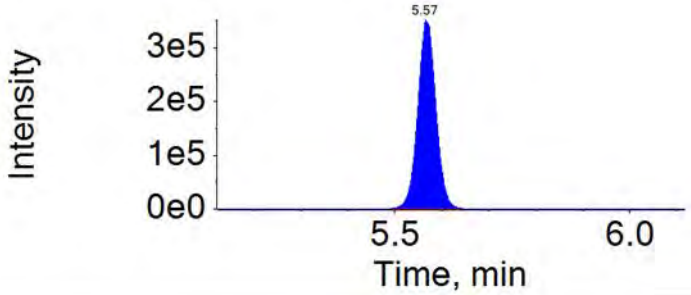
Component: PFDA
Primary Mass: 513.0 / 469.0



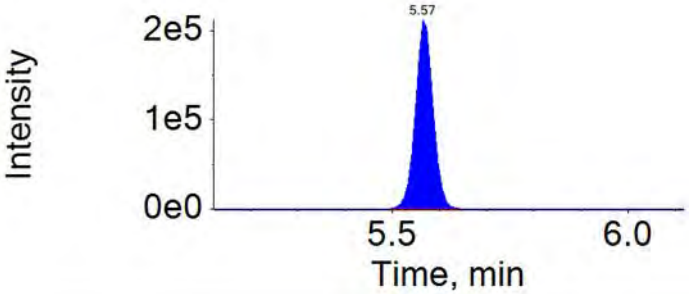
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



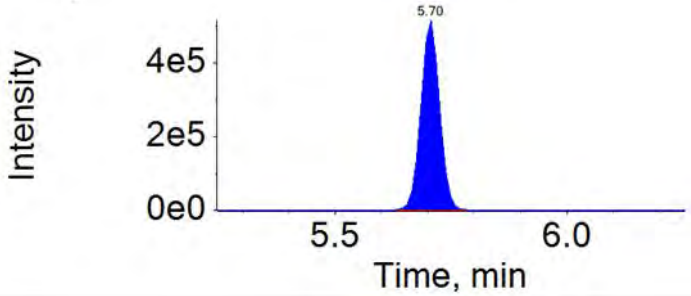
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



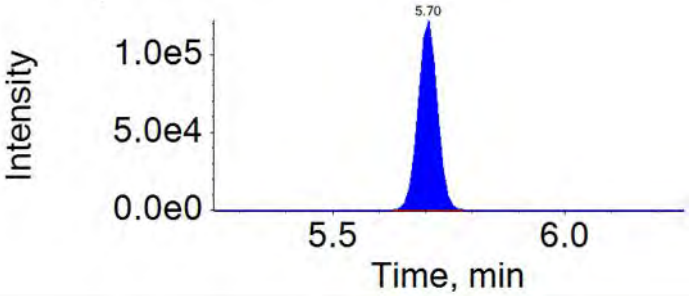
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



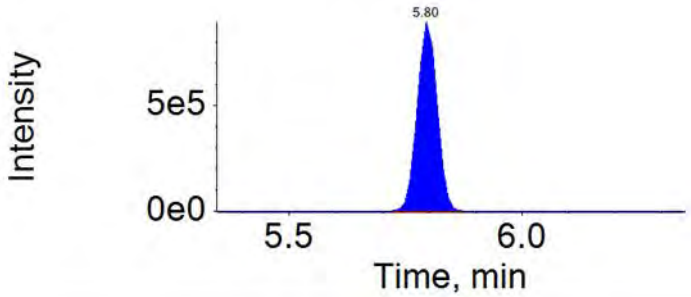
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



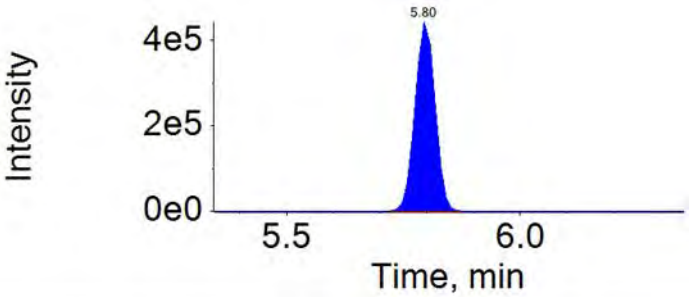
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



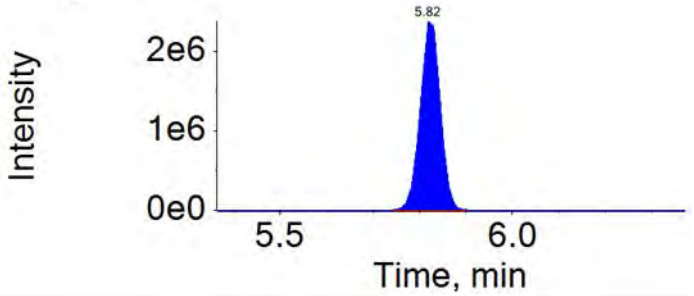
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



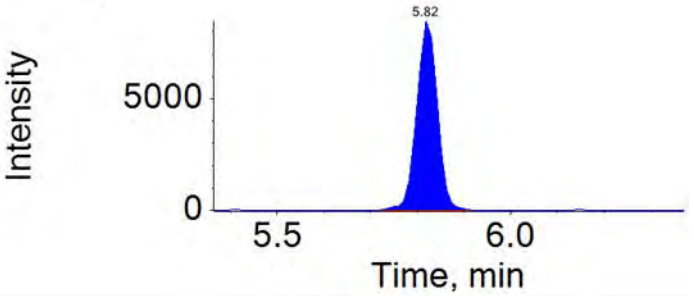
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

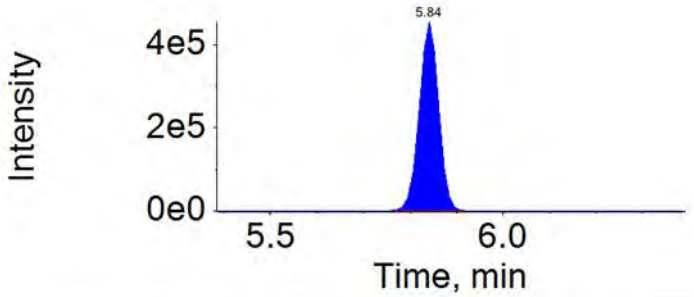
Component: PFUnDA
Primary Mass: 563.0 / 519.0



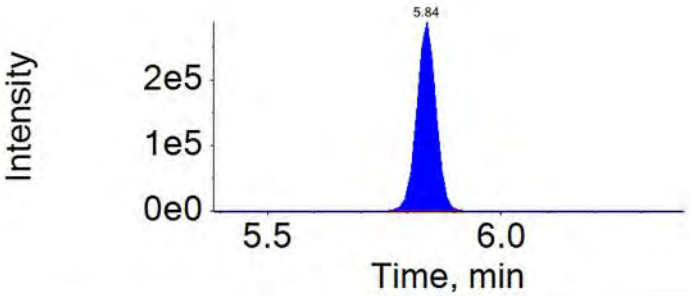
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



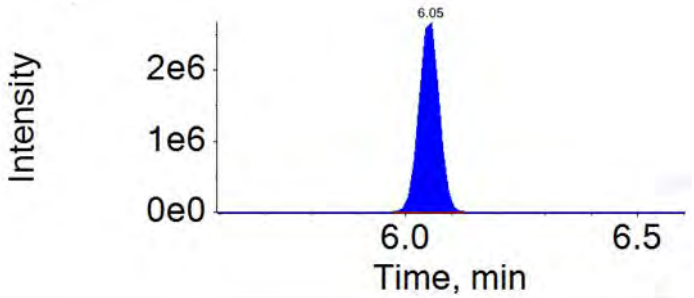
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



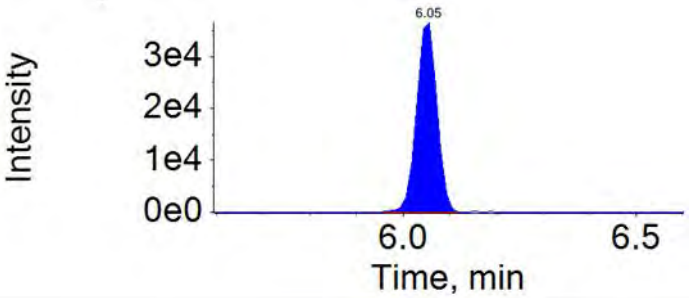
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



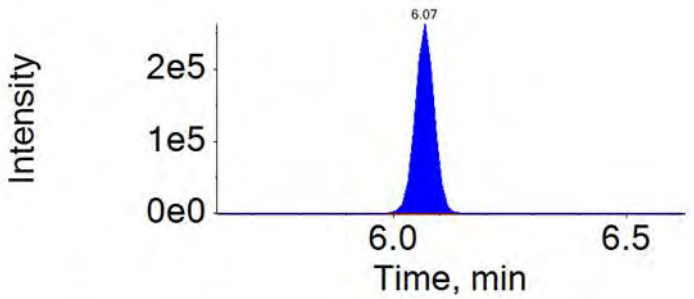
Component: PFDoDA
Primary Mass: 613.0 / 569.0



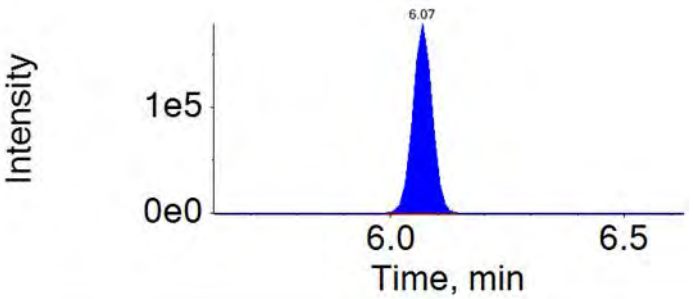
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



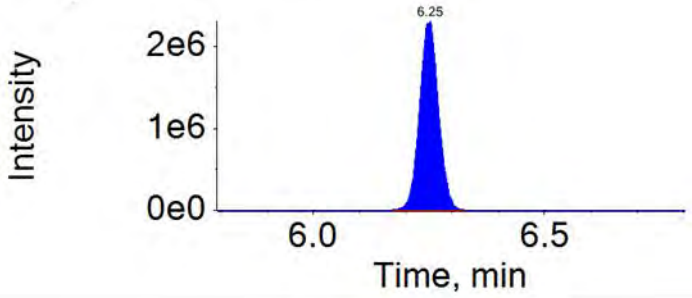
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



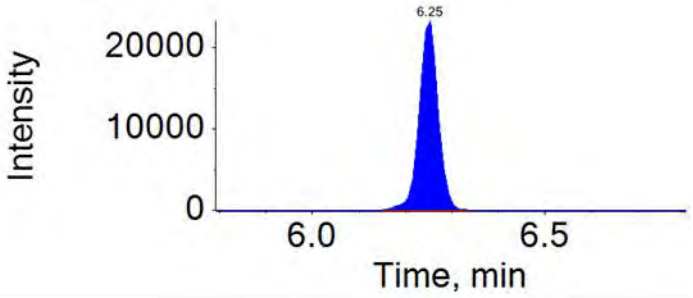
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

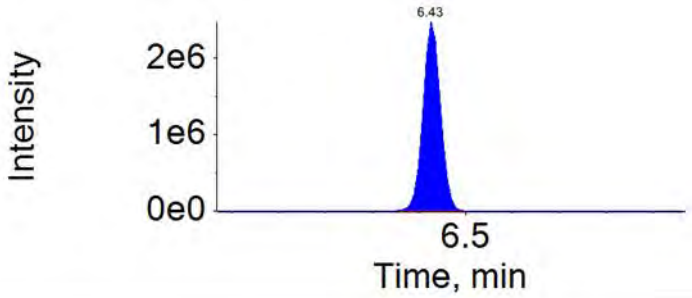
Component: PFTrDA
Primary Mass: 663.0 / 619.0



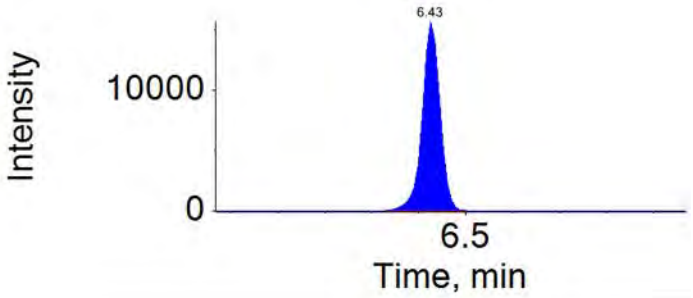
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



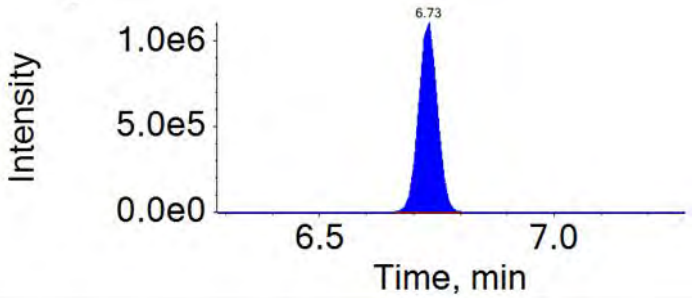
Component: PFTeDA
Primary Mass: 713.0 / 669.0



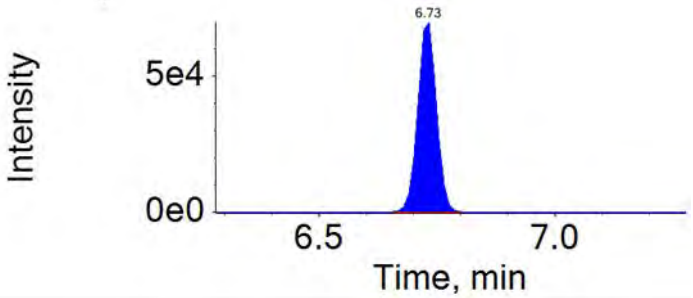
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



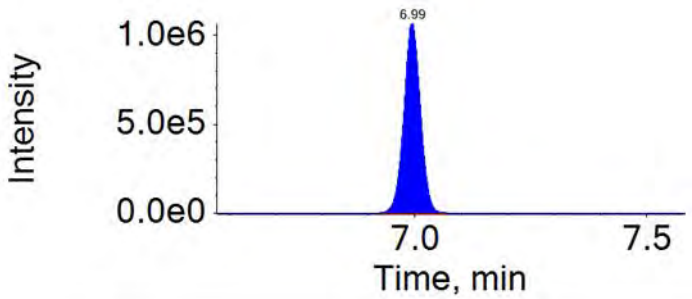
Component: PFHxDA
Primary Mass: 813.0 / 769.0



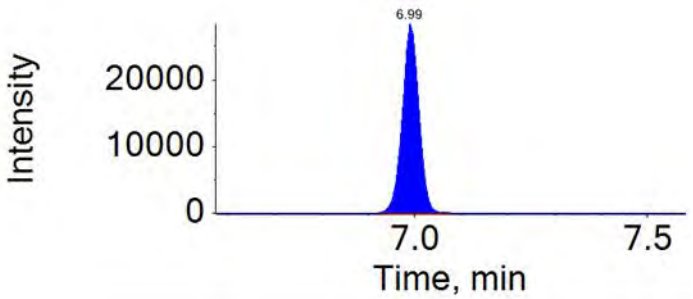
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	MDL			**Data File:**		18NOV07DCAL-09.wiff
Sample ID:	MDLMODX1833E			**Acquis Date:**		2018-11-07T09:30:56
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	2			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	727406.8	730410.6	0	50	
13C2-PFOA	5.0	526479.1	524423.6	0	50	
13C4-PFOS	4.8	275181.3	274061.7	0	50	
13C2-PFDA	5.0	315732.1	311442.1	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	807312.5	13C3-PFBA	727406.8	1.110	5.000	5.136	103	70-130	
E13C5-PFPeA	823702.7	13C3-PFBA	727406.8	1.132	5.000	4.933	99	70-130	
E13C3-PFBS	442660.1	13C3-PFBA	727406.8	0.609	4.650	4.466	96	70-130	
E13C2-4:2-FTS	52398.7	13C2-PFOA	526479.1	0.100	4.670	4.491	96	70-130	
E13C5-PFHxA	716268.2	13C2-PFOA	526479.1	1.360	5.000	5.004	100	70-130	
E13C3-PFHxS	335727.6	13C2-PFOA	526479.1	0.638	4.730	4.578	97	70-130	
E13C4-PFHpA	575860.3	13C2-PFOA	526479.1	1.094	5.000	4.976	100	70-130	
E13C2-6:2-FTS	41140.3	13C2-PFOA	526479.1	0.078	4.750	5.211	110	70-130	
E13C8-PFOA	972540.0	13C2-PFOA	526479.1	1.847	5.000	5.151	103	70-130	
E13C8-PFOS	290003.4	13C4-PFOS	275181.3	1.054	4.780	4.660	97	70-130	
E13C9-PFNA	494088.2	13C4-PFOS	275181.3	1.796	5.000	4.905	98	70-130	
E13C6-PFDA	660922.5	13C2-PFDA	315732.1	2.093	5.000	5.264	105	70-130	
E13C2-8:2-FTS	30155.0	13C2-PFDA	315732.1	0.096	4.790	5.054	106	70-130	
E13C8-PFOSA	682695.0	13C2-PFDA	315732.1	2.162	5.000	4.718	94	70-130	
Ed3-NMeFOSAA	79243.0	13C2-PFDA	315732.1	0.251	5.000	4.667	93	70-130	
E13C7-PFUnDA	280781.9	13C2-PFDA	315732.1	0.889	5.000	5.130	103	70-130	
Ed5-NEtFOSAA	64527.2	13C2-PFDA	315732.1	0.204	5.000	4.730	95	70-130	
E13C2-PFDoDA	600395.5	13C2-PFDA	315732.1	1.902	5.000	5.126	103	70-130	
Ed7-NMePFOSAE	326457.3	13C2-PFDA	315732.1	1.034	5.000	4.808	96	70-130	
Ed3-NMePFOSA	82534.2	13C2-PFDA	315732.1	0.261	5.000	4.786	96	70-130	
Ed9-NEtPFOSAE	271491.0	13C2-PFDA	315732.1	0.860	5.000	4.911	98	70-130	
Ed5-NEtPFOSA	69328.7	13C2-PFDA	315732.1	0.220	5.000	5.084	102	70-130	
E13C2-PFTeDA	418605.6	13C2-PFDA	315732.1	1.326	5.000	4.773	95	70-130	

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

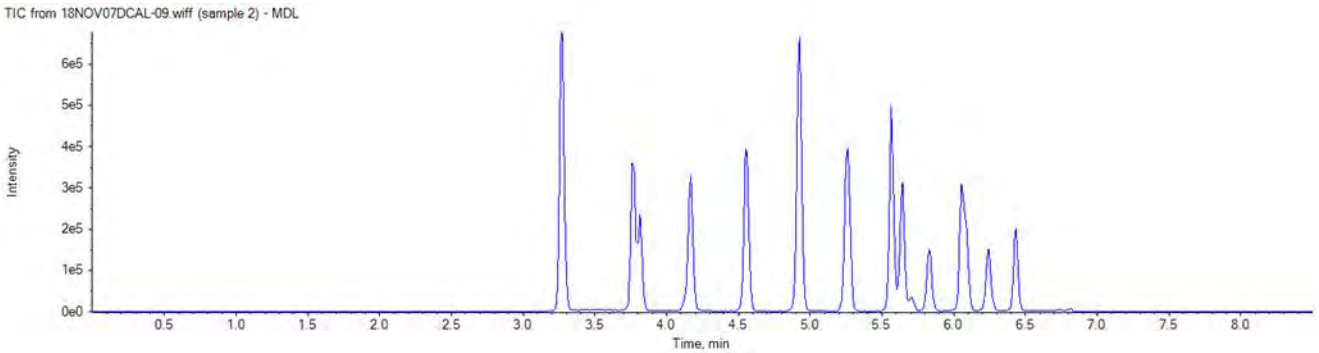
Analyte Quantitation Peak Table

Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-09.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	15305.2		A	13C4-PFBA	3.27	807312.5	0.019	0.111
PFPeA	3.76	1.000	17527.3		A	13C5-PFPeA	3.77	823702.7	0.021	0.126
PFBS	3.81	1.000	8179.1		A	13C3-PFBS	3.82	442660.1	0.018	0.093
4:2-FTS	4.14	1.000	2516.6		A	13C2-4:2-FTS	4.13	52398.7	0.048	0.129
PFHxA	4.16	1.000	19041.3		A	13C5-PFHxA	4.17	716268.2	0.027	0.114
PFPeS	4.18	1.100	4553.9		A	13C3-PFBS	3.82	442660.1	0.010	0.101
PFHxS	4.55	1.000	5720.4		A	13C3-PFHxS	4.55	335727.6	0.017	0.086
PFHpA	4.55	1.000	20611.7		A	13C4-PFHpA	4.55	575860.3	0.036	0.120
6:2-FTS	4.92	1.000	1337.7		A	13C2-6:2-FTS	4.91	41140.3	0.033	0.081
PFHpS	4.92	1.080	5811.8		A	13C3-PFHxS	4.55	335727.6	0.017	0.091
PFOA	4.92	1.000	21714.7		A	13C8-PFOA	4.92	972540.0	0.022	0.126
PFOS	5.25	1.000	7067.6		A	13C8-PFOS	5.25	290003.4	0.024	0.126
PFNA	5.27	1.000	14036.5		M	13C9-PFNA	5.27	494088.2	0.028	0.106
PFNS	5.54	1.060	4370.5		A	13C8-PFOS	5.25	290003.4	0.015	0.119
PFDA	5.57	1.000	13448.9		A	13C6-PFDA	5.57	660922.5	0.020	0.112
8:2-FTS	5.57	1.000	1277.3		A	13C2-8:2-FTS	5.57	30155.0	0.042	0.095
PFOSA	5.64	1.000	12732.2		A	13C8-PFOSA	5.64	682695.0	0.019	0.101
NMeFOSAA	5.71	1.000	1352.6		M	d3-NMeFOSAA	5.71	79243.0	0.017	0.088
PFDS	5.80	1.110	2949.3		A	13C8-PFOS	5.25	290003.4	0.010	0.097
PFUnDA	5.83	1.000	13003.8		A	13C7-PFUnDA	5.83	280781.9	0.046	0.133
NEtFOSAA	5.84	1.000	1823.4		A	d5-NEtFOSAA	5.84	64527.2	0.028	0.121
PFDoDA	6.05	1.000	12755.8		A	13C2-PFDoDA	6.05	600395.5	0.021	0.115
10:2-FTS	6.07	1.090	1033.2		A	13C2-8:2-FTS	5.57	30155.0	0.034	0.107
NMePFOSAE	6.10	1.000	8309.5		A	d7-NMePFOSAE	6.08	326457.3	0.025	0.114
NMePFOSA	6.10	1.000	1429.6		M	d3-NMePFOSA	6.10	82534.2	0.017	0.097
PFDoS	6.22	1.190	1360.5		A	13C8-PFOS	5.25	290003.4	0.005	0.091
NEtPFOSAE	6.25	1.000	9821.0		A	d9-NEtPFOSAE	6.24	271491.0	0.036	0.116
NEtPFOSA	6.26	1.000	1542.4		A	d5-NEtPFOSA	6.26	69328.7	0.022	0.098
PFTrDA	6.26	1.030	10576.8		M	13C2-PFDoDA	6.05	600395.5	0.018	0.111
PFTeDA	6.43	1.000	7741.6		A	13C2-PFTeDA	6.43	418605.6	0.018	0.109
PFHxDA	6.73	1.050	5030.0		A	13C2-PFTeDA	6.43	418605.6	0.012	0.149
PFODA	7.00	1.090	3044.8		A	13C2-PFTeDA	6.43	418605.6	0.007	0.104

Total Ion Chromatogram

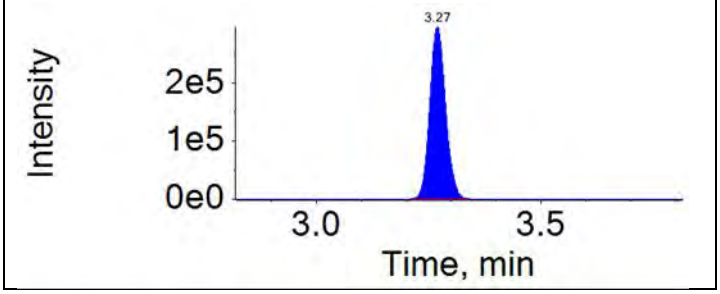


APPROVED
By JPT at 2:54 pm, 11/7/18

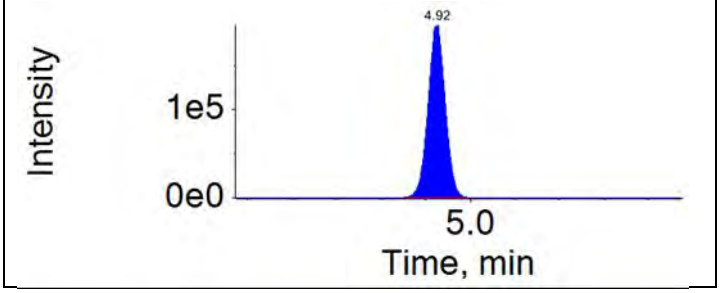
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

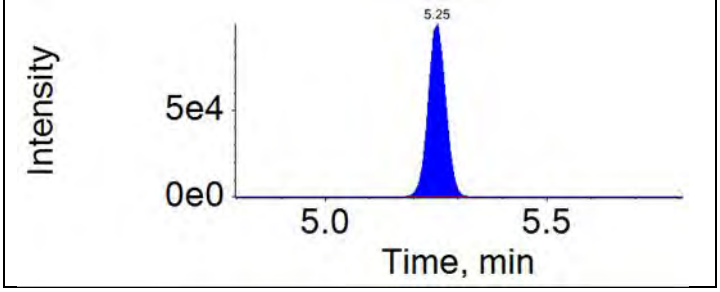
Injection Standard: 13C3-PFBA
216.0 / 172.0



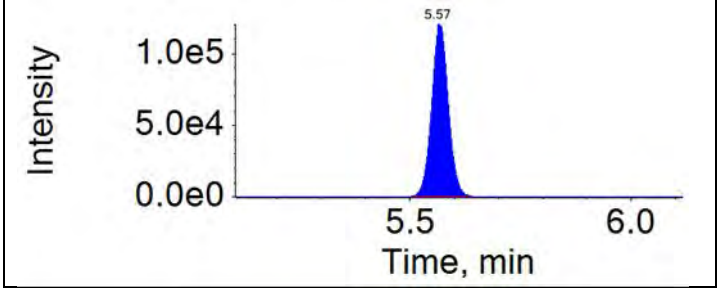
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

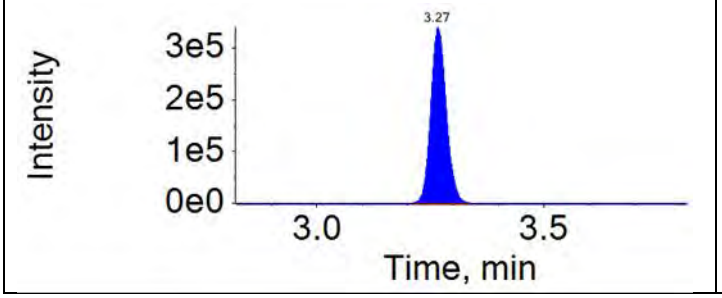


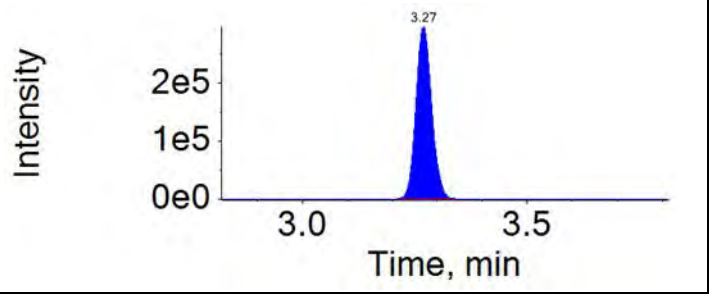
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

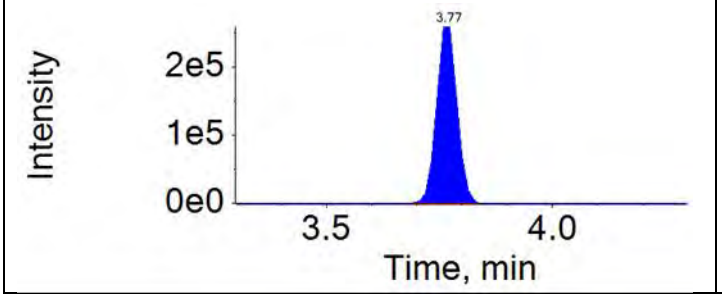
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

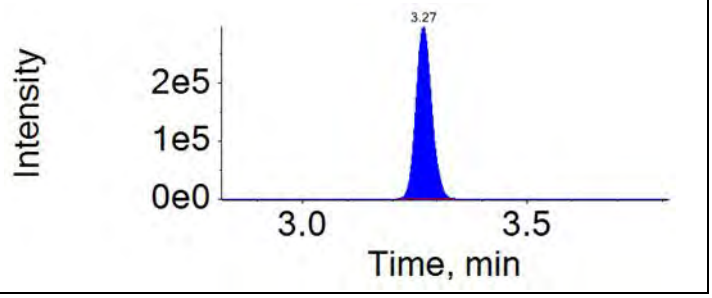
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



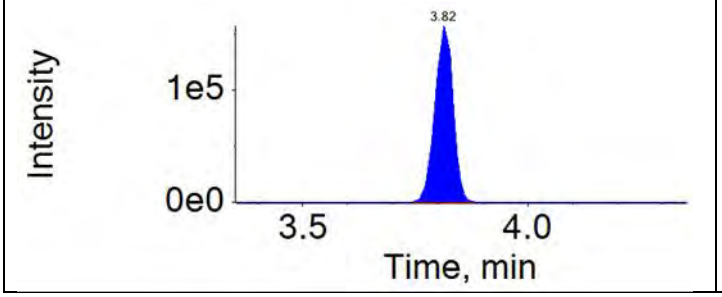


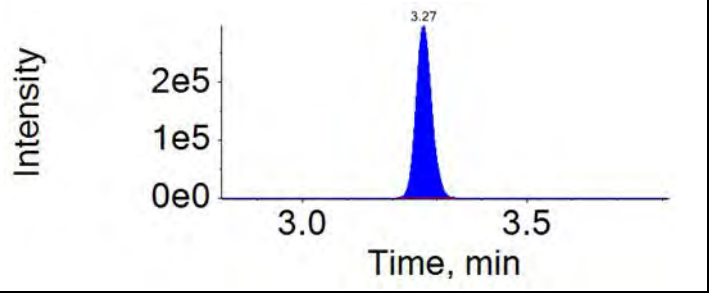
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



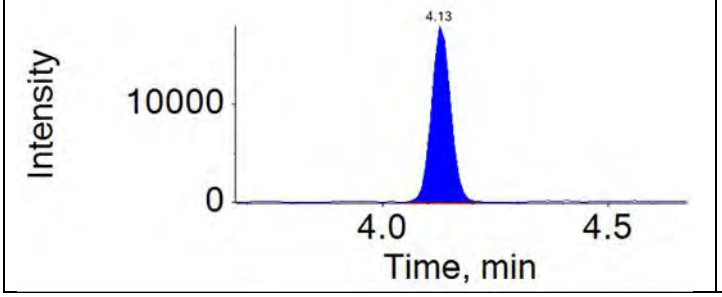


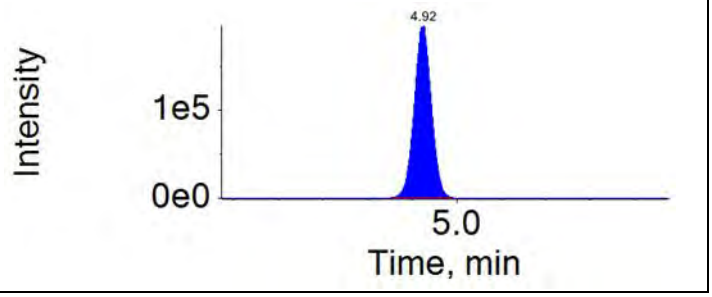
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0



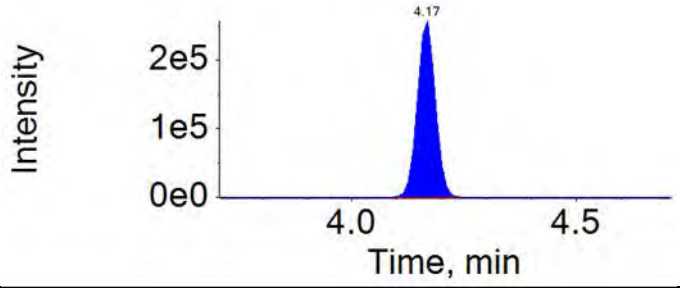
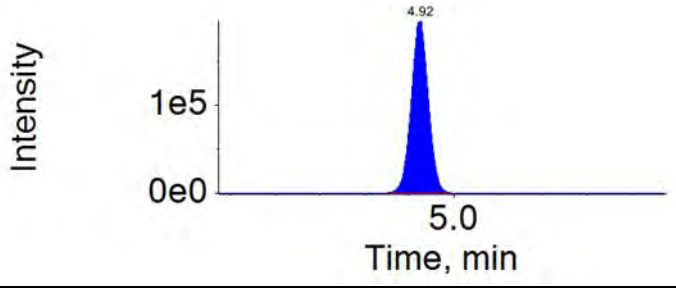


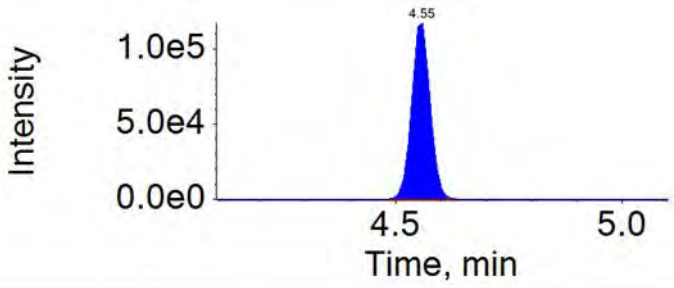
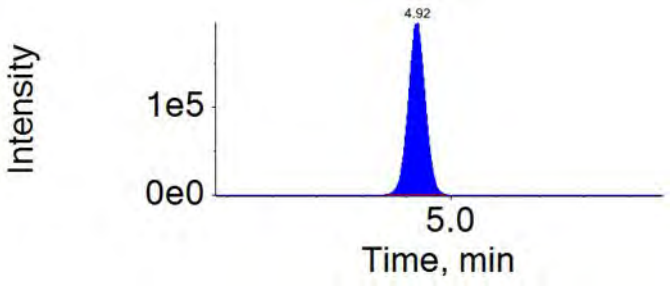
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

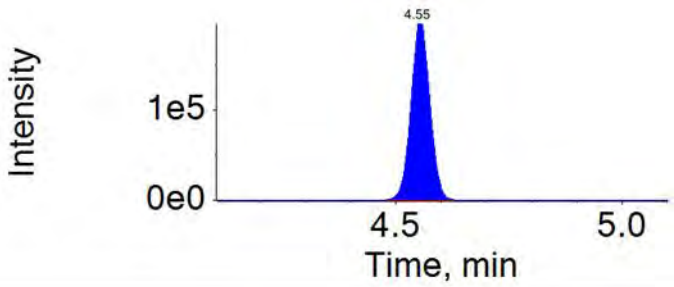
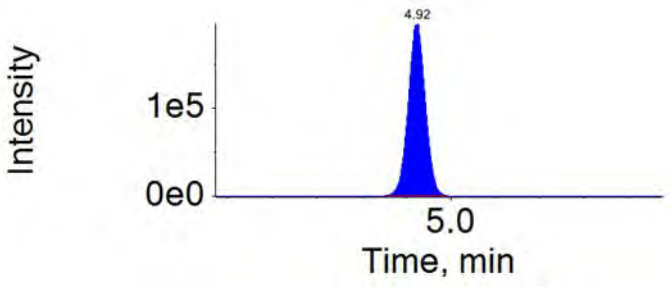


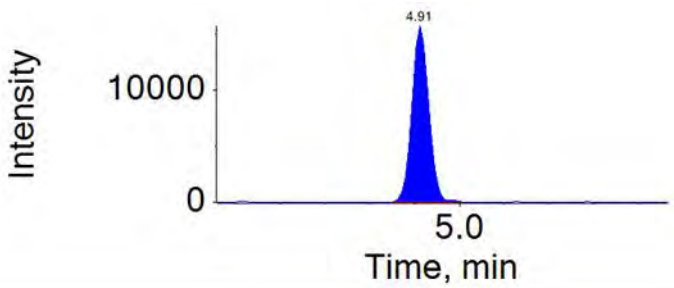
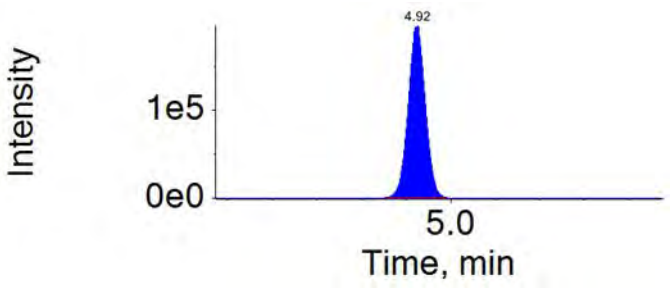


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

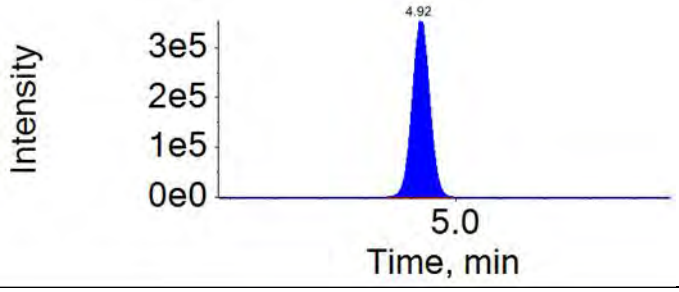
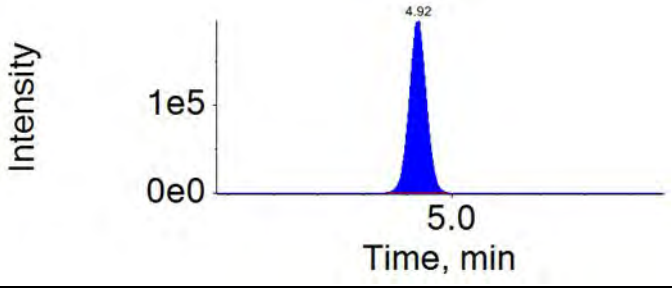
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

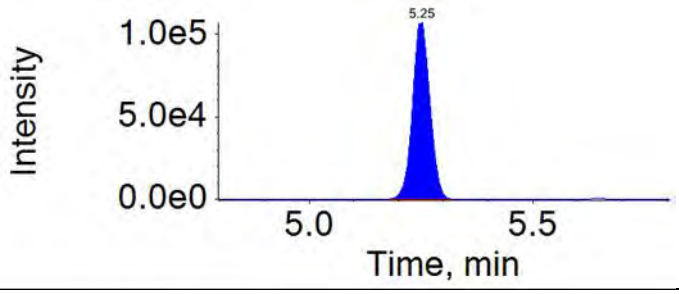
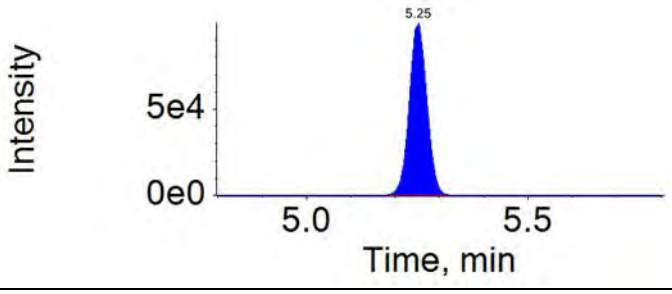
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

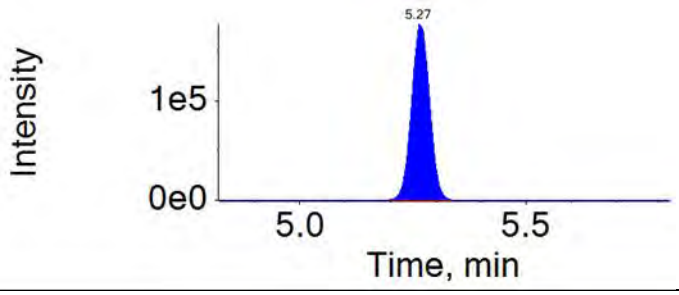
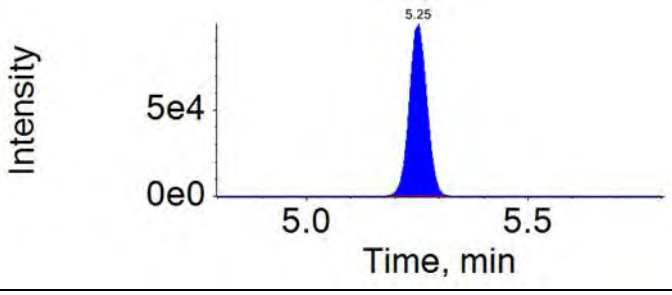
APPROVED
By JPT at 2:54 pm, 11/7/18

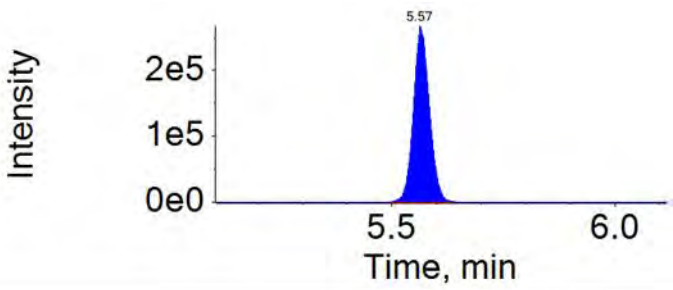
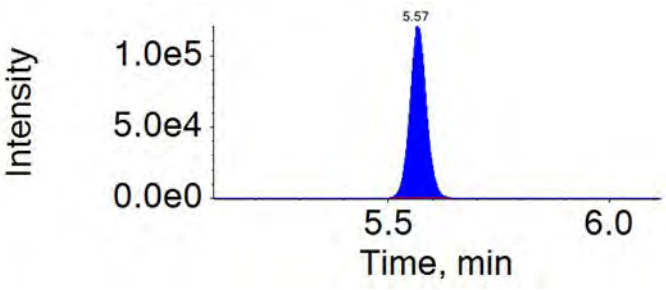
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

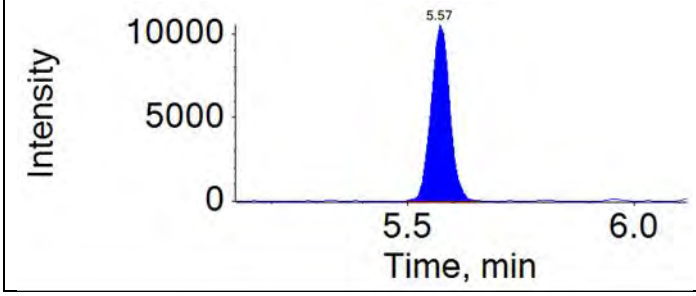
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

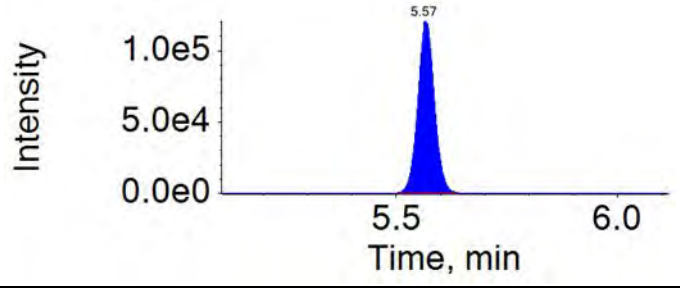
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

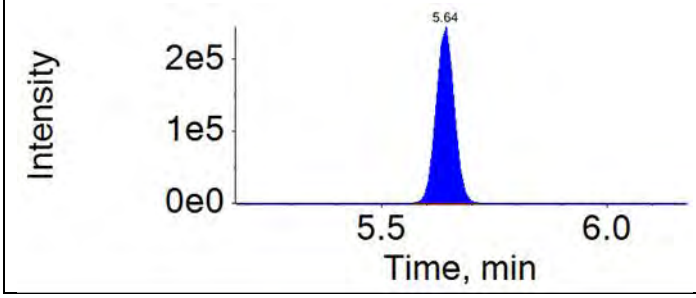
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

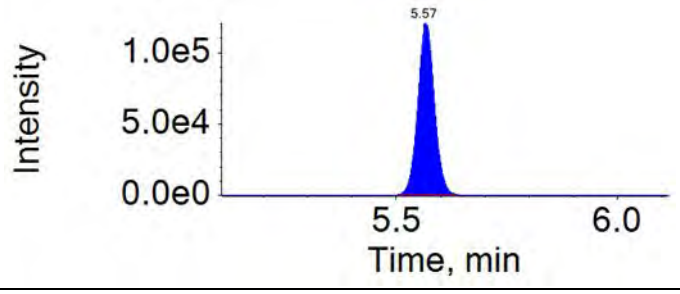
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



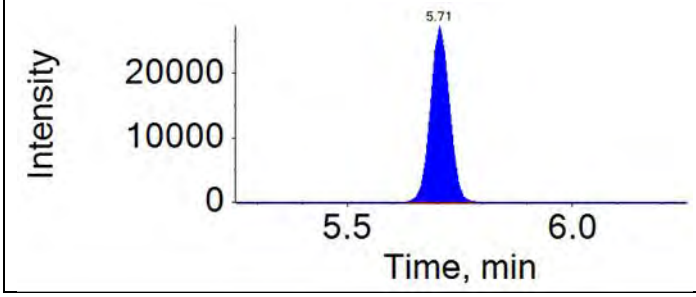


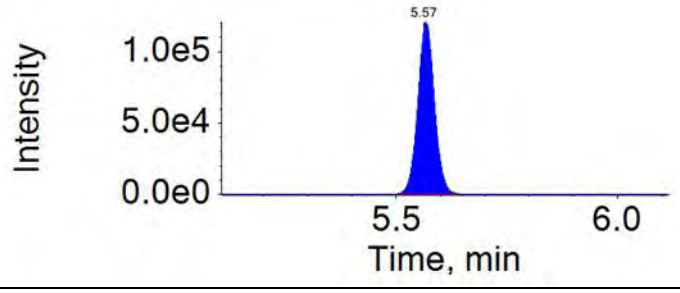
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



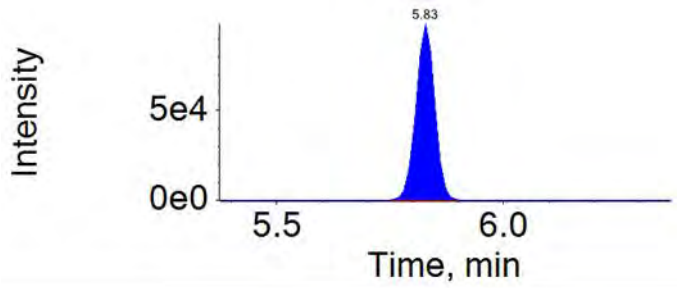


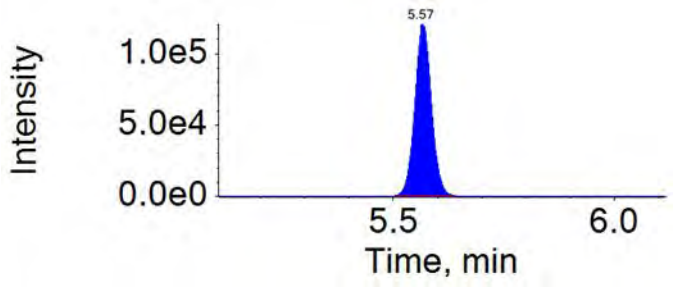
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

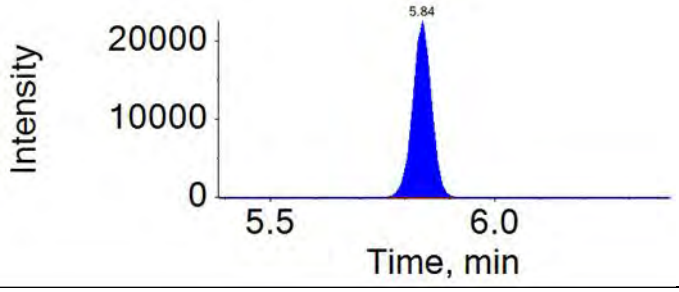
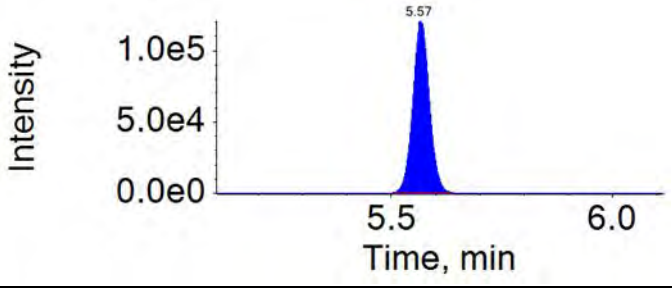


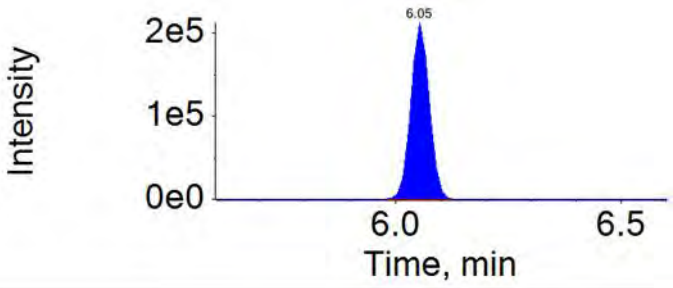
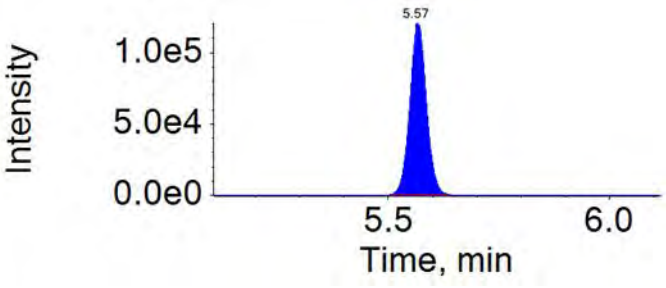


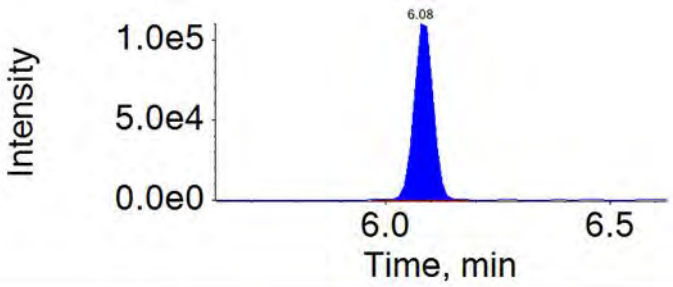
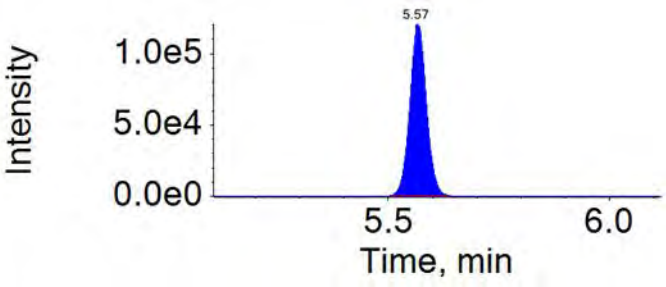
APPROVED
By JPT at 2:54 pm, 11/7/18

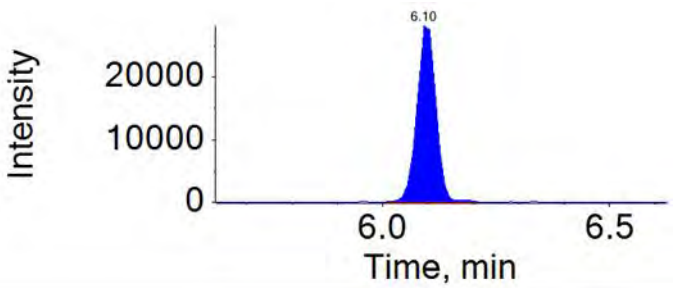
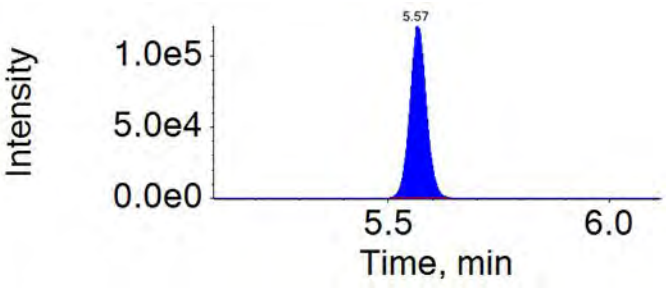
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

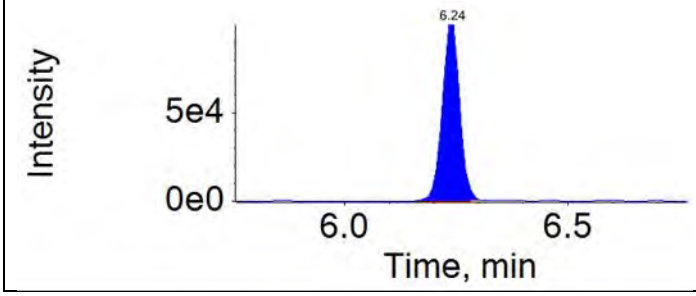
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

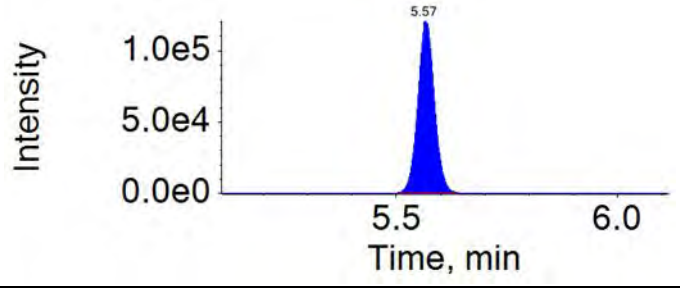
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

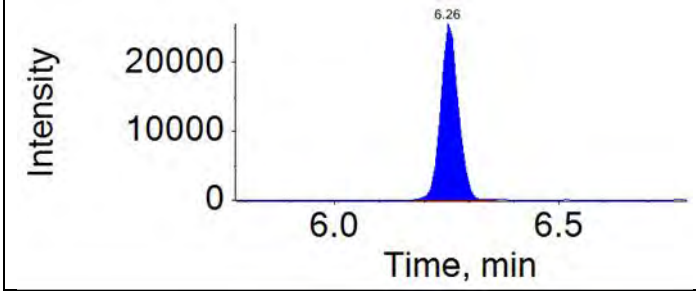
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

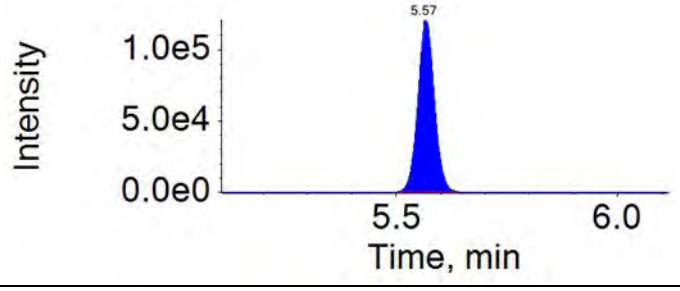
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



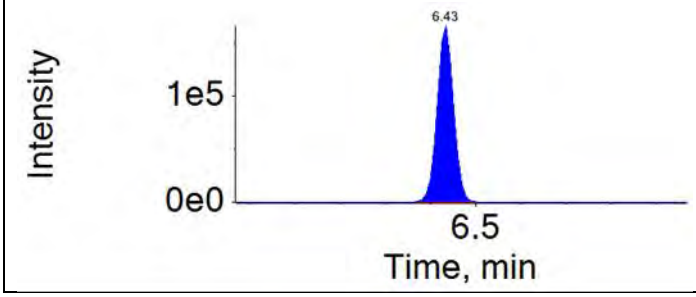


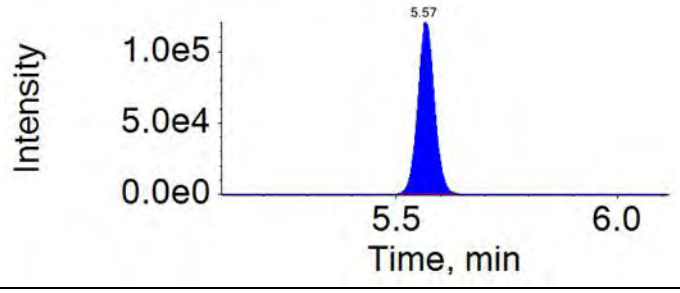
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

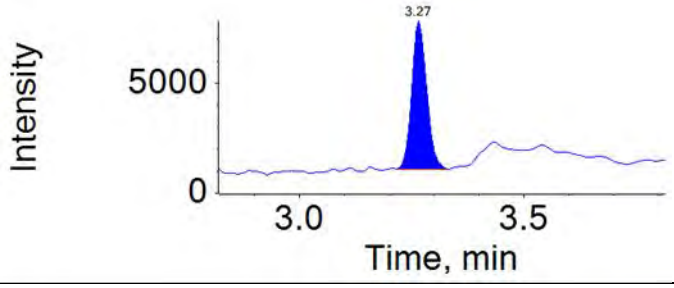
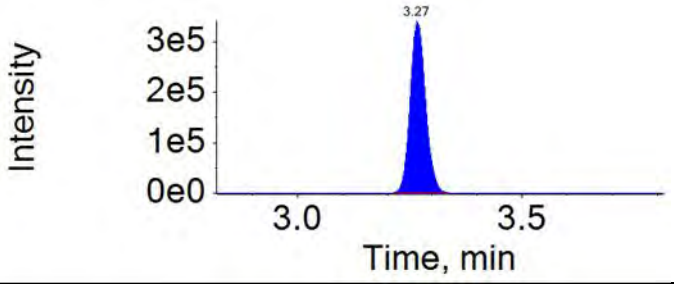


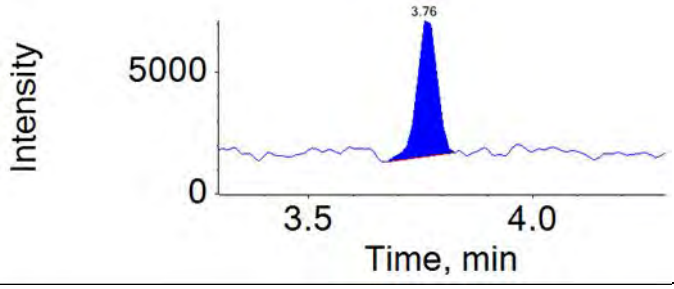
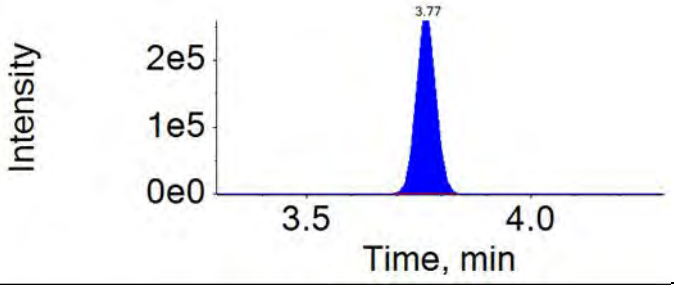


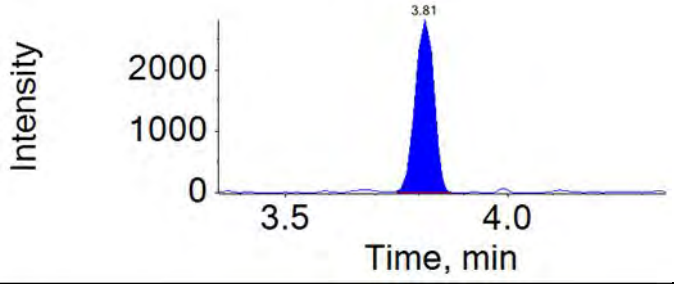
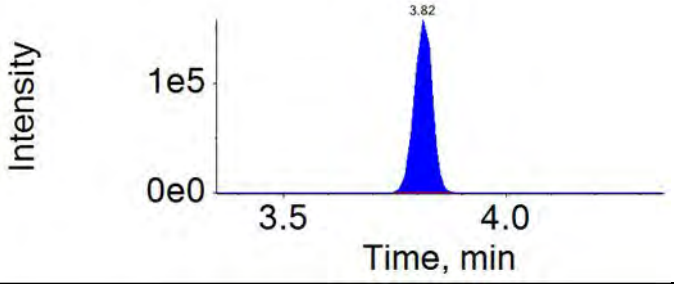
APPROVED
By JPT at 2:54 pm, 11/7/18

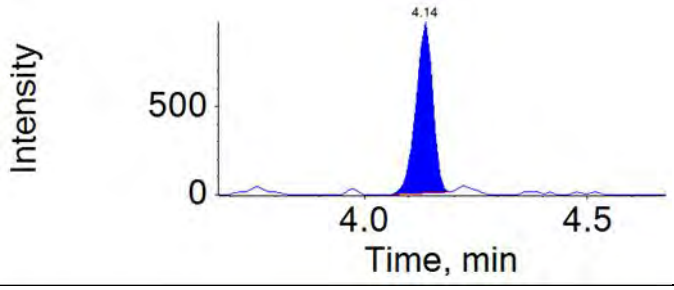
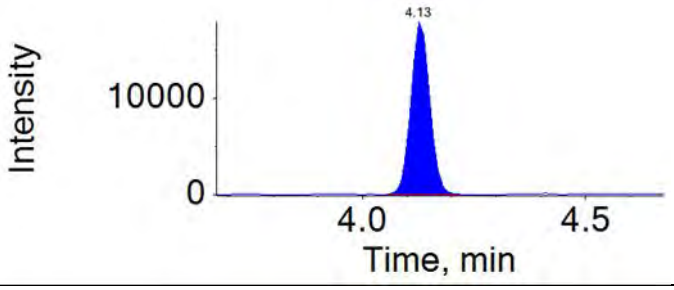
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

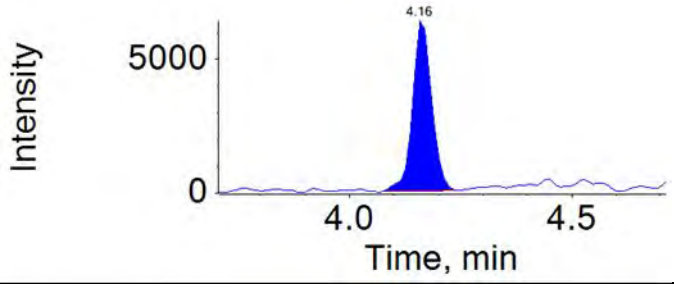
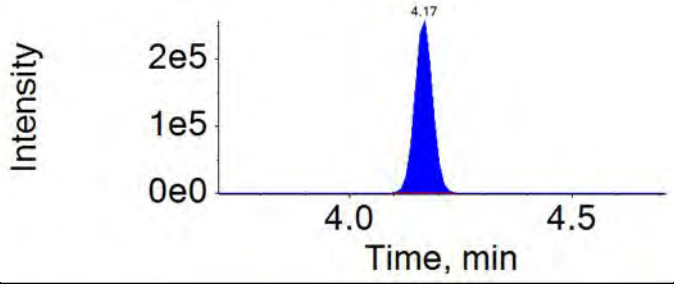
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

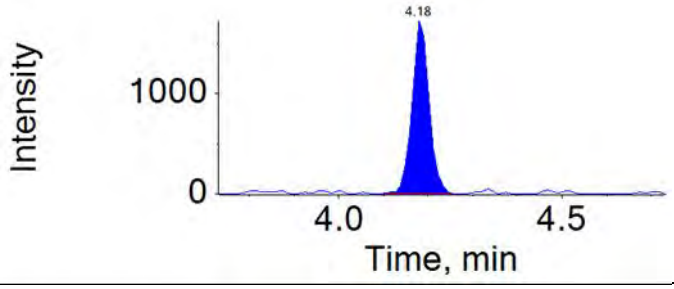
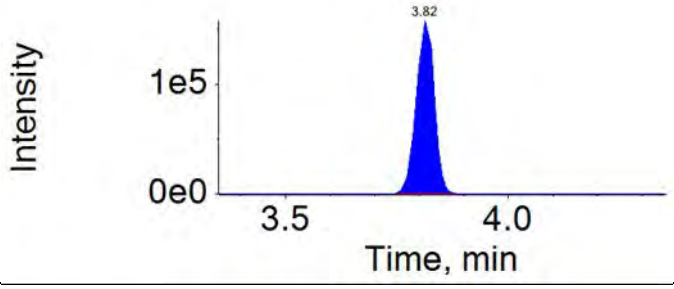
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

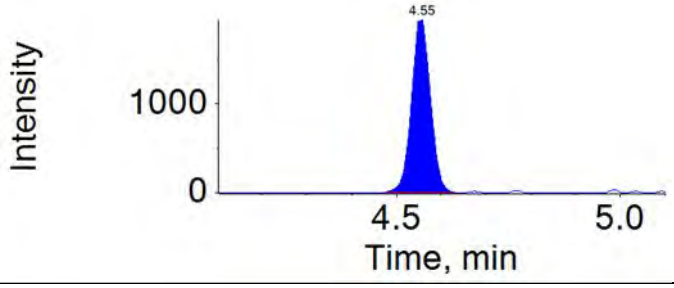
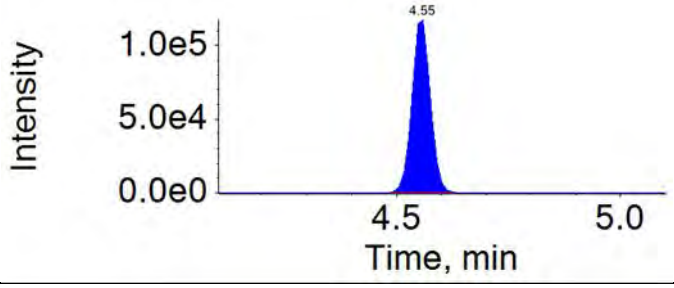
APPROVED
By JPT at 2:54 pm, 11/7/18

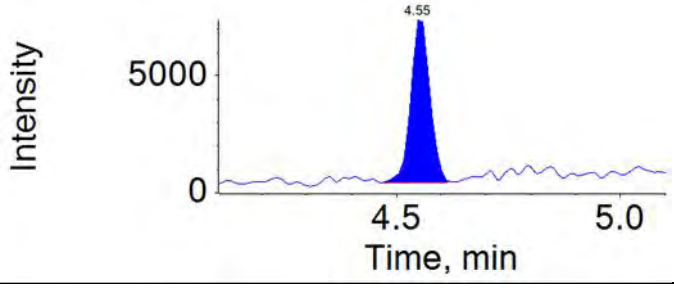
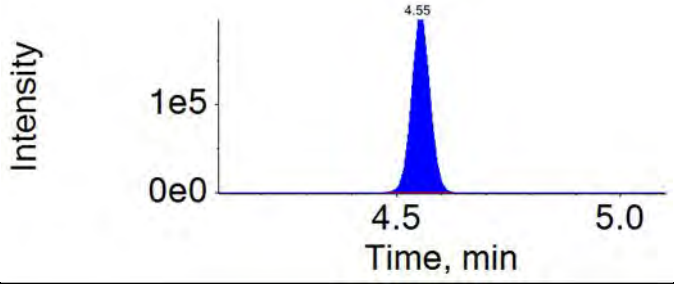
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

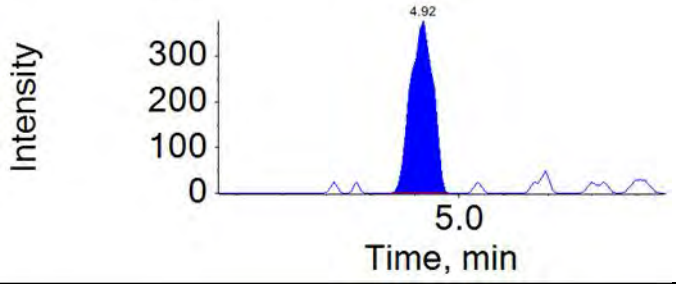
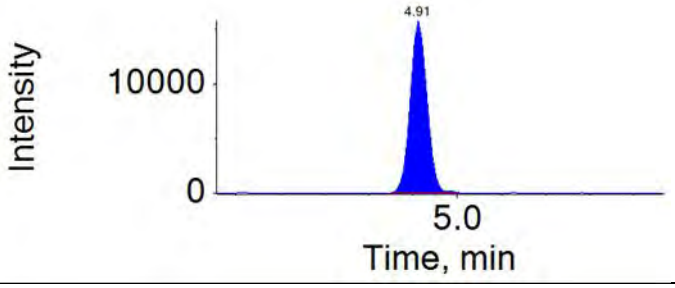
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

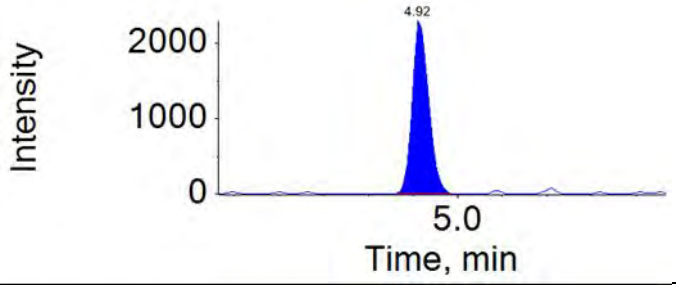
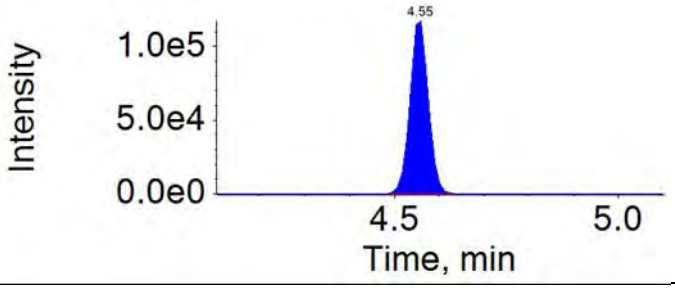
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

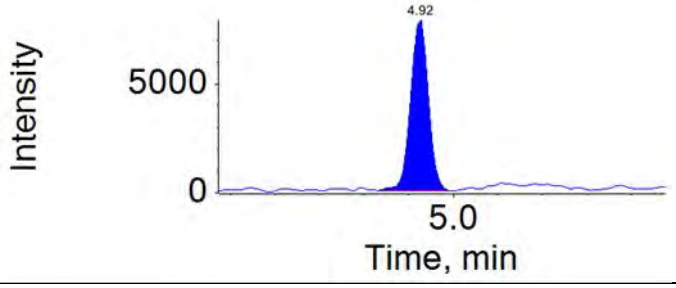
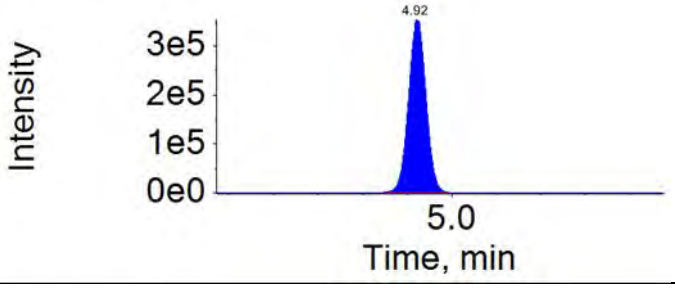
APPROVED
By JPT at 2:54 pm, 11/7/18

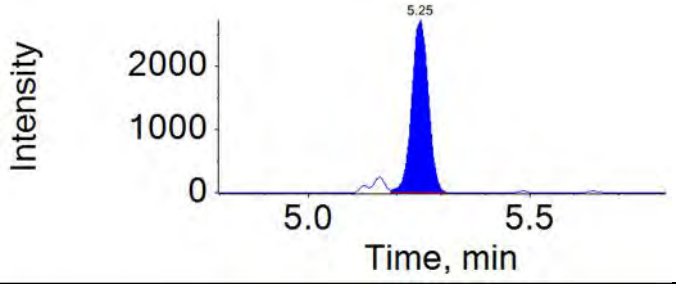
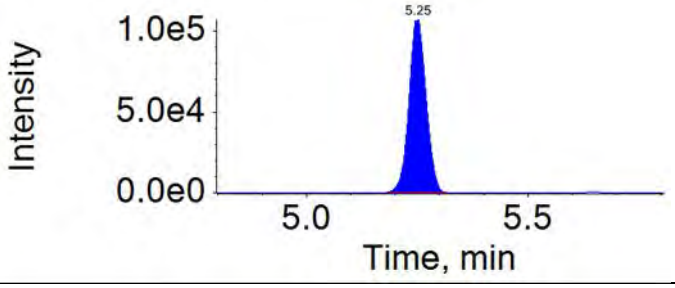
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

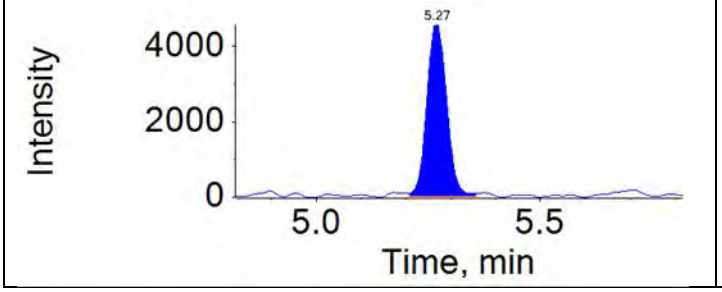
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

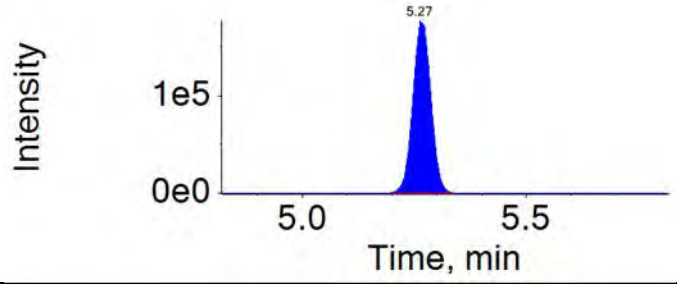
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

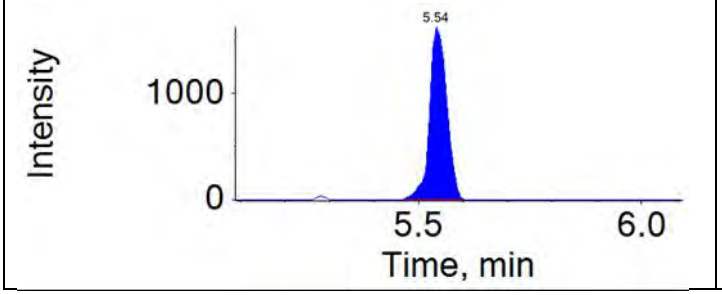
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

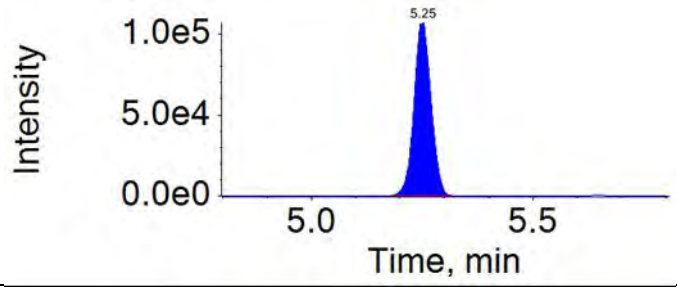
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



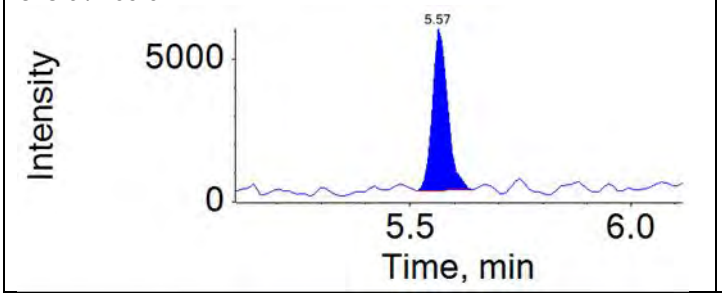


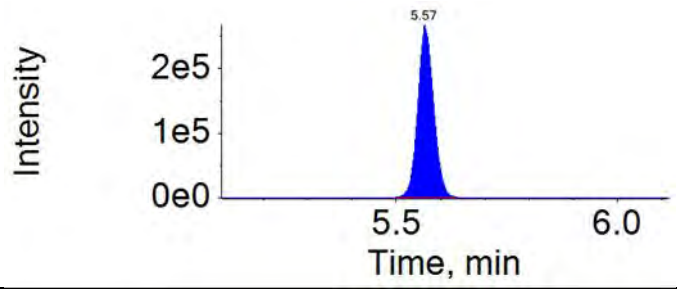
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



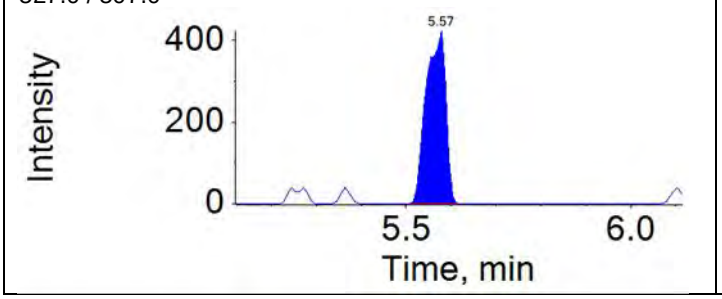


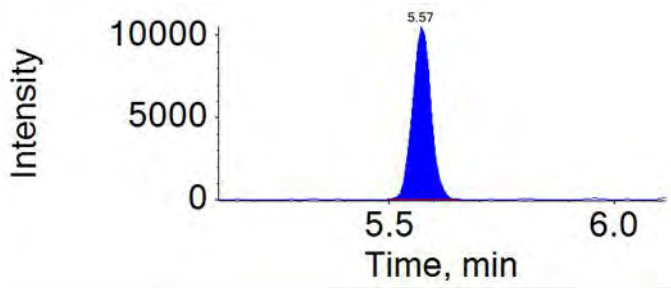
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

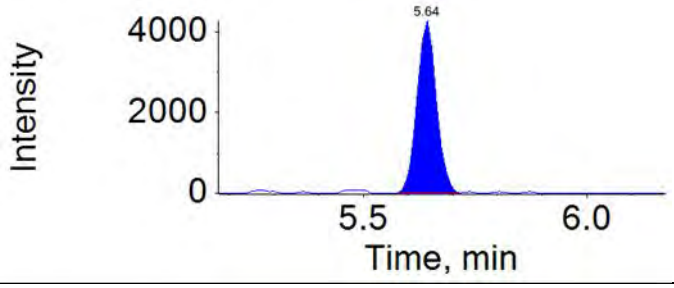
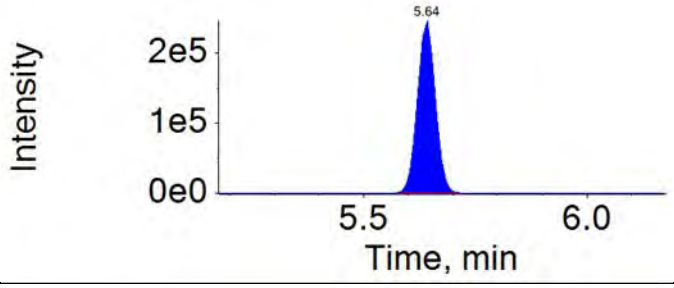


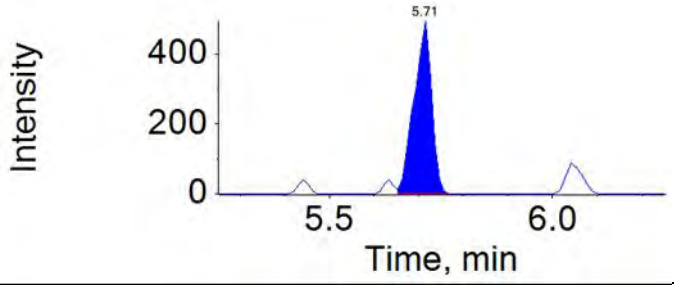
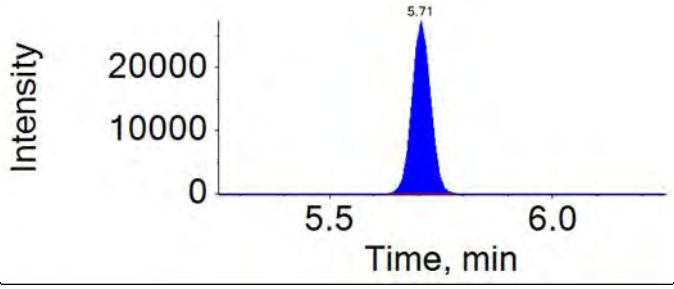


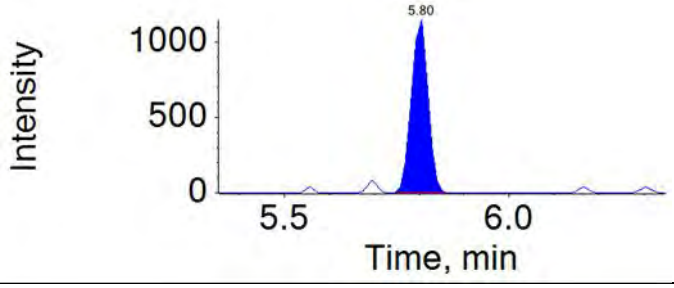
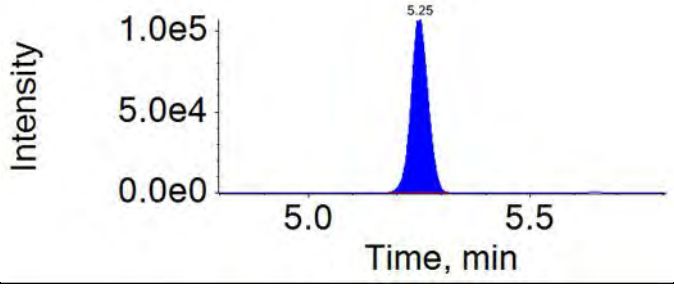
APPROVED
By JPT at 2:54 pm, 11/7/18

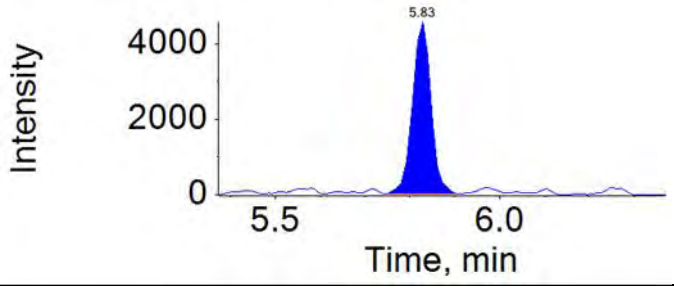
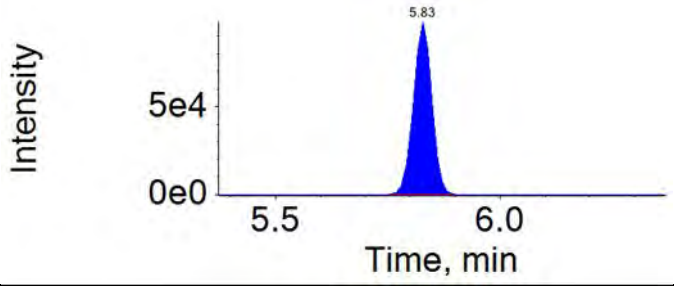
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

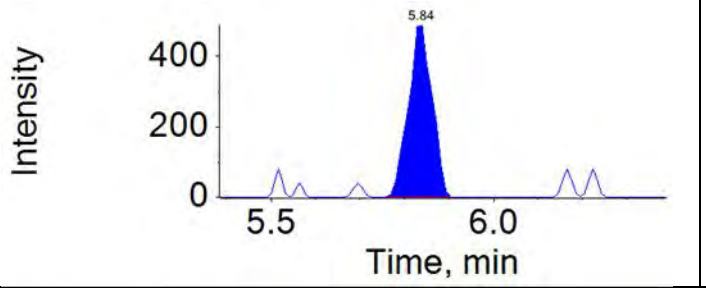
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

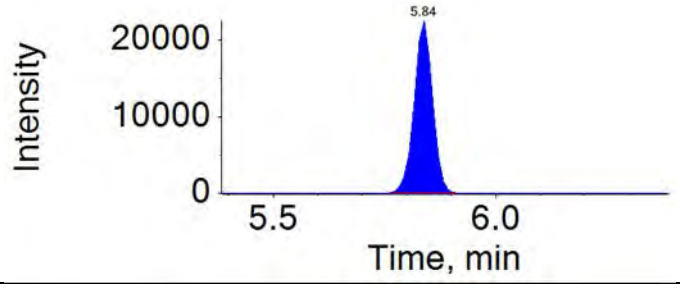
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

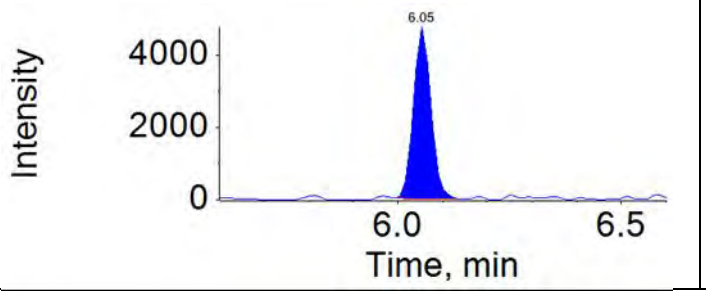
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

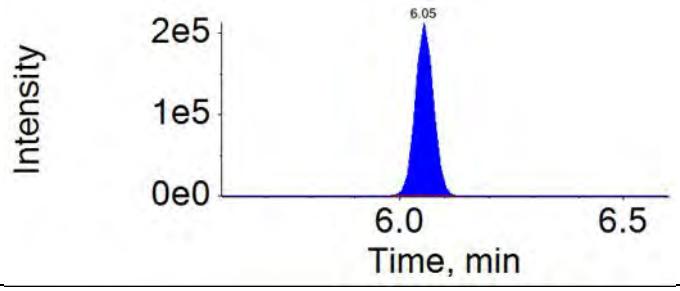
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



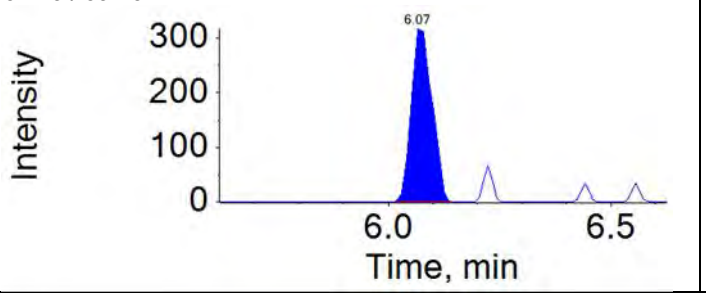


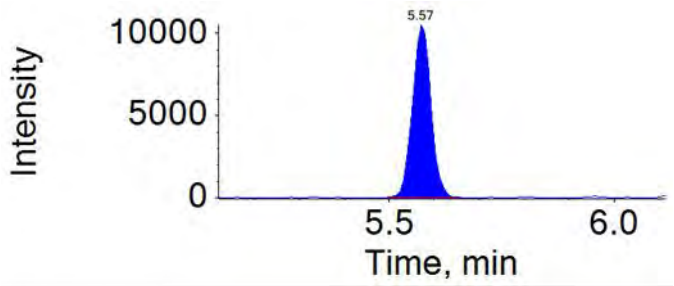
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



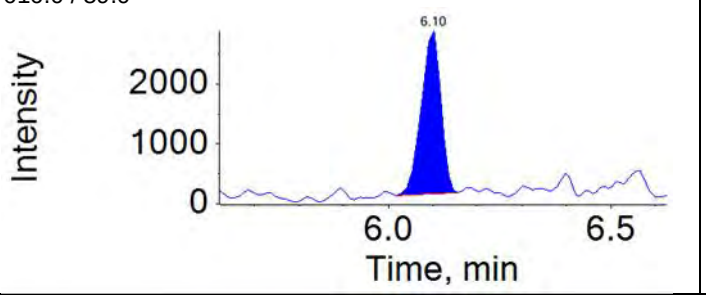


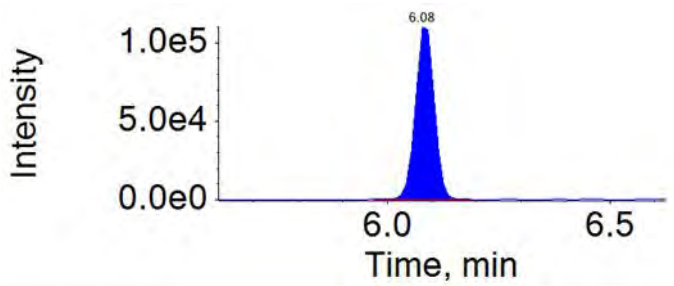
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



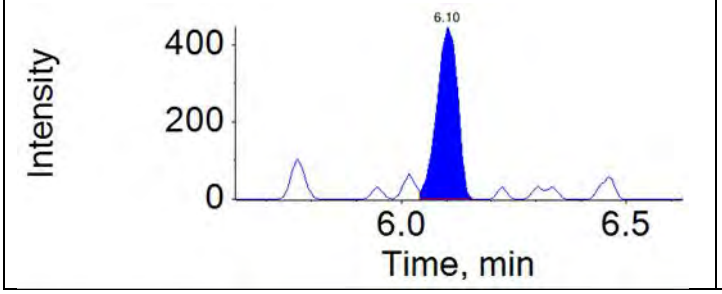


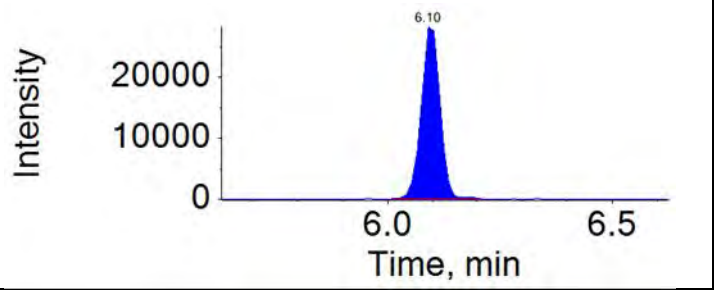
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

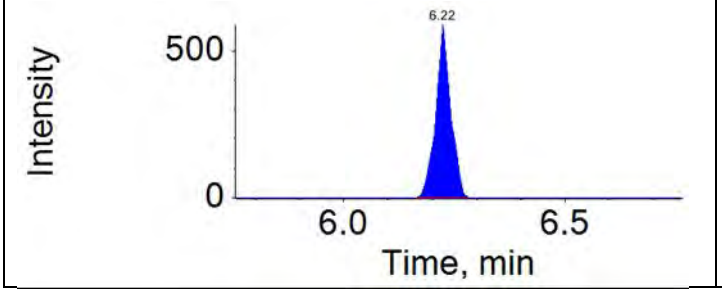
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

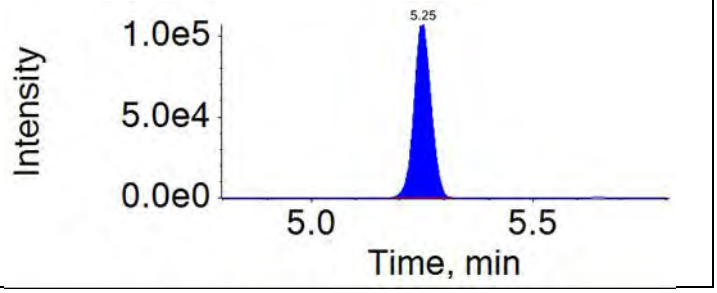
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



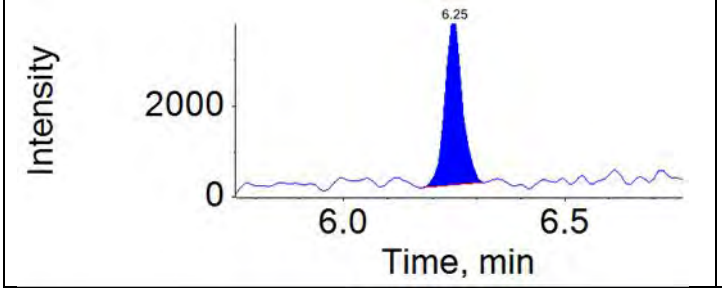


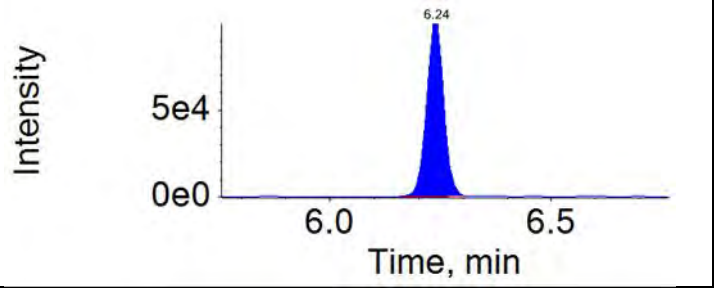
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



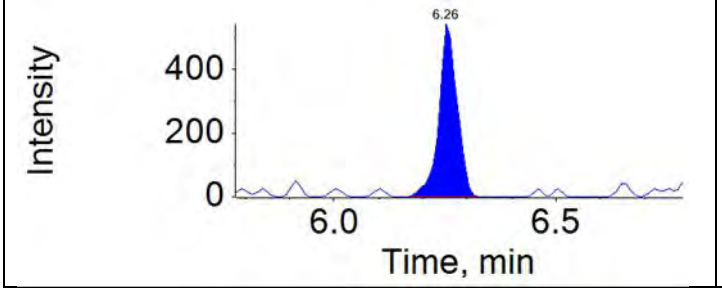


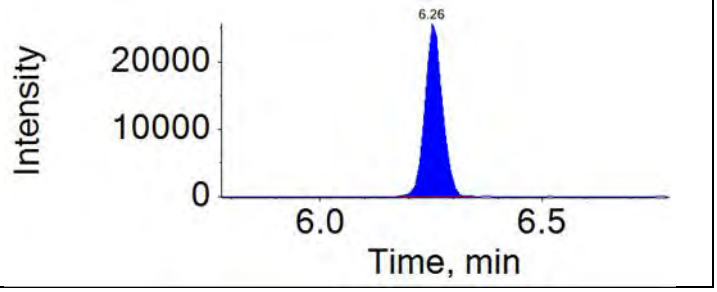
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

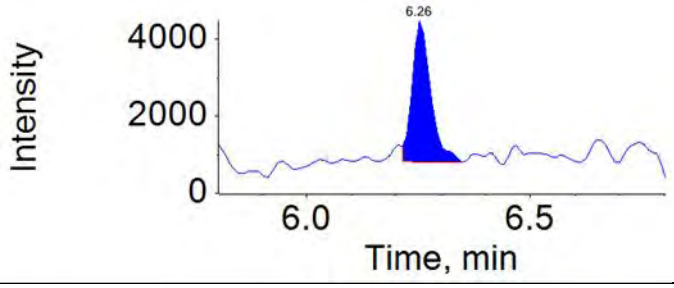
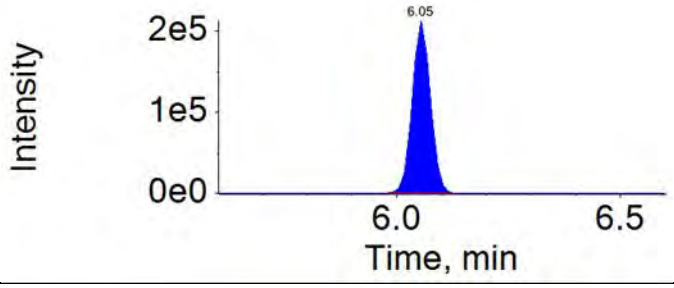


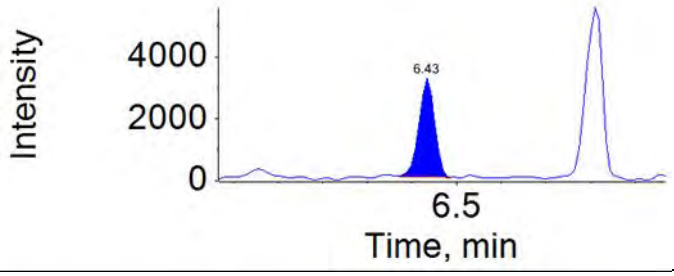
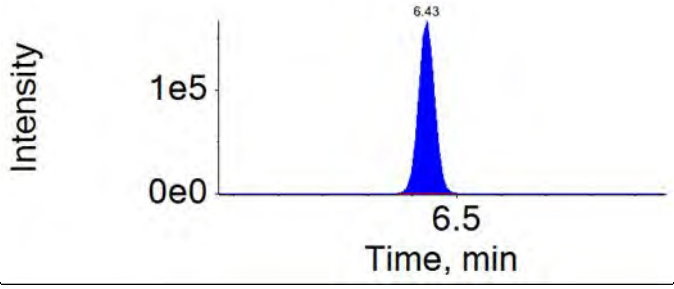


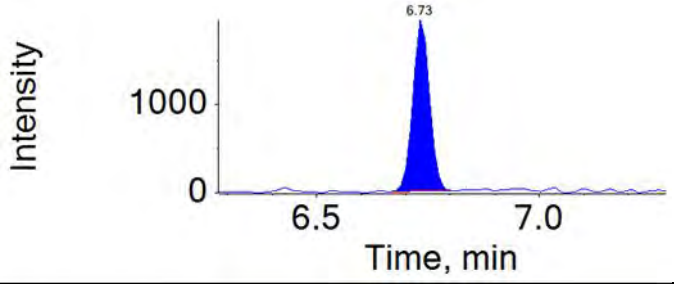
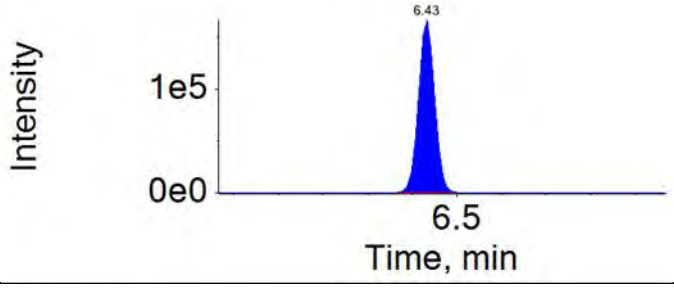
APPROVED
By JPT at 2:54 pm, 11/7/18

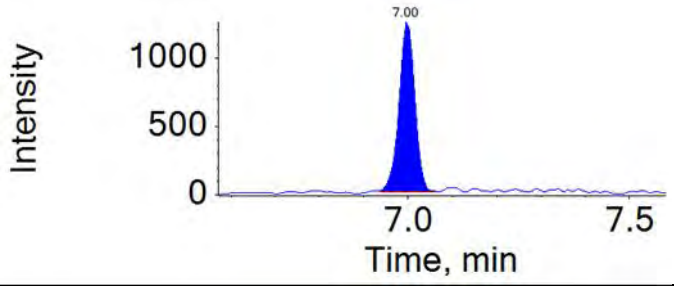
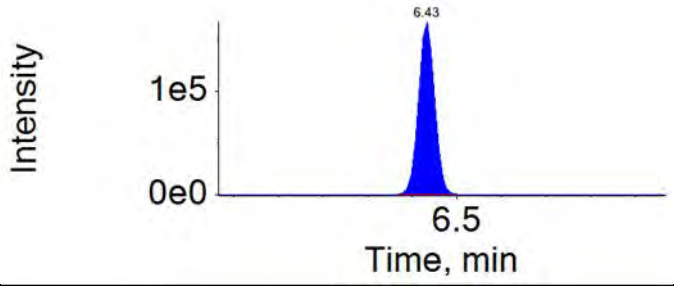
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

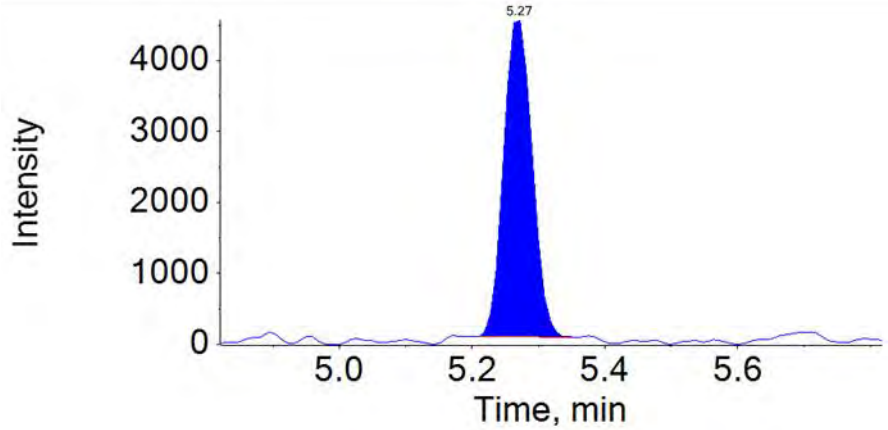
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

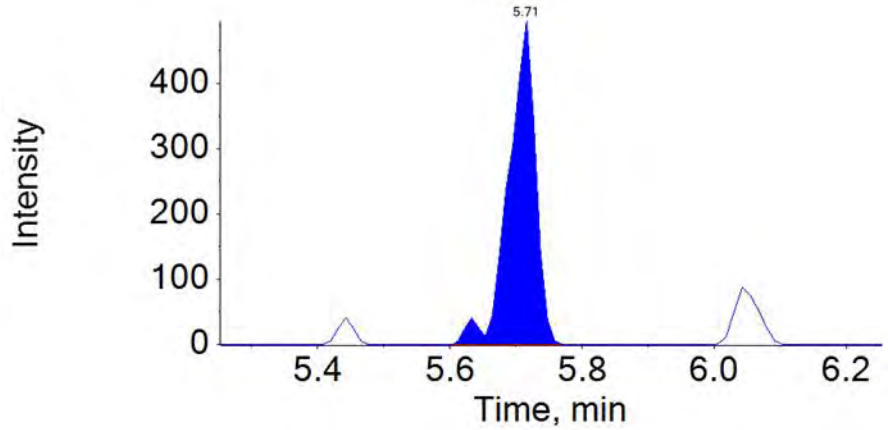
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFNA
RT (min.):
5.27
Peak Area:
13308.8
Mass Range:
463.0 / 419.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



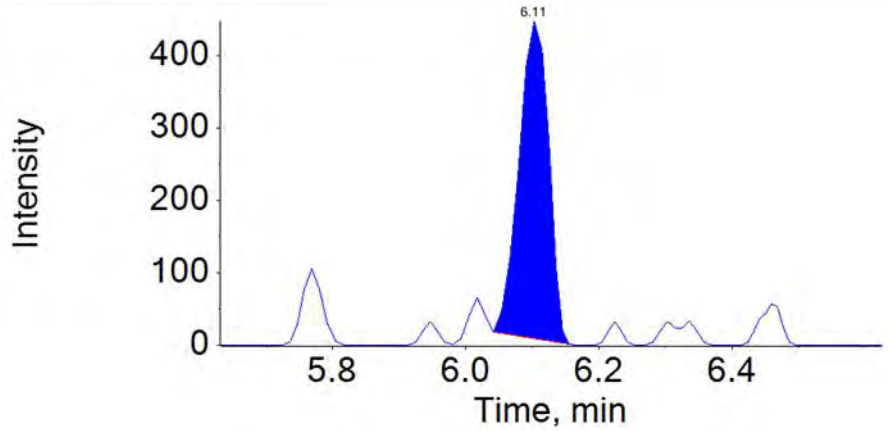
Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
1418.1
Mass Range:
570.0 / 419.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.11
Peak Area:
1361.1
Mass Range:
512.0 / 169.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

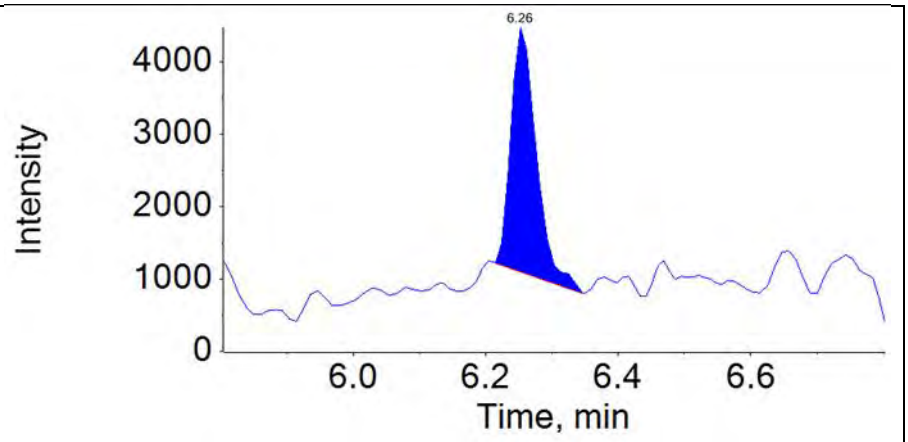
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFTrDA
RT (min.):
6.26
Peak Area:
8999.3
Mass Range:
663.0 / 619.0
File Name:
18NOV07DCAL-09.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Ion Ratio Report

Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-09.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	8179.1	A	1.0000	1.0000			
PFBS_2	3.81	1.00	3067.3	A	0.3576	0.3750	5	50	
4:2-FTS	4.14	1.00	2516.6	A	1.0000	1.0000			
4:2-FTS_2	4.13	1.00	1184.6	A	0.6359	0.4707	-26	50	
PFHxA	4.16	1.00	19041.3	A	1.0000	1.0000			
PFHxA_2	4.17	1.00	272.1	A	0.0115	0.0143	25	50	
PFPeS	4.18	1.10	4553.9	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	2517.9	A	0.5384	0.5529	3	50	
PFHxS	4.55	1.00	5720.4	A	1.0000	1.0000			
PFHxS_2	4.56	1.00	2255.5	A	0.3569	0.3943	10	50	
PFHpA	4.55	1.00	20611.7	A	1.0000	1.0000			
PFHpA_2	4.56	1.00	1062.3	A	0.0577	0.0515	-11	50	
6:2-FTS	4.92	1.00	1337.7	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	1232.9	A	0.6752	0.9217	37	50	
PFHpS	4.92	1.08	5811.8	A	1.0000	1.0000			
PFHpS_2	4.92	1.08	2272.0	A	0.3950	0.3909	-1	50	
PFOA	4.92	1.00	21714.7	A	1.0000	1.0000			
PFOA_2	4.92	1.00	1080.5	A	0.0635	0.0498	-22	50	
PFOS	5.25	1.00	7067.6	A	1.0000	1.0000			
PFOS_2	5.26	1.00	1948.3	A	0.3494	0.2757	-21	50	
PFNA	5.27	1.00	14036.5	M	1.0000	1.0000			
PFNA_2	5.25	1.00	631.4	A	0.0207	0.0450	118	50	OOS
PFNS	5.54	1.06	4370.5	A	1.0000	1.0000			
PFNS_2	5.54	1.06	1979.5	A	0.4890	0.4529	-7	50	
PFDA	5.57	1.00	13448.9	A	1.0000	1.0000			
PFDA_2	5.56	1.00	136.4	A	0.0057	0.0101	79	50	OOS
8:2-FTS	5.57	1.00	1277.3	A	1.0000	1.0000			
8:2-FTS_2	5.58	1.00	851.4	A	0.6169	0.6666	8	50	
NMeFOSAA	5.71	1.00	1352.6	M	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	451.3	A	0.2206	0.3336	51	50	OOS
PFDS	5.80	1.11	2949.3	A	1.0000	1.0000			
PFDS_2	5.80	1.11	1315.3	A	0.4648	0.4460	-4	50	
PFUnDA	5.83	1.00	13003.8	A	1.0000	1.0000			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	5.84	1.00	1823.4	A	1.0000	1.0000			
NEtFOSAA_2	5.83	1.00	670.0	A	0.6082	0.3675	-40	50	
PFDoDA	6.05	1.00	12755.8	A	1.0000	1.0000			
PFDoDA_2	6.07	1.00	250.5	A	0.0109	0.0196	80	50	OOS
10:2-FTS	6.07	1.09	1033.2	A	1.0000	1.0000			
10:2-FTS_2	6.08	1.09	898.7	A	0.7082	0.8698	23	50	
PFTrDA	6.26	1.03	10576.8	M	1.0000	1.0000			
PFTrDA_2	6.24	1.03	127.3	A	0.0096	0.0120	25	50	
PFTeDA	6.43	1.00	7741.6	A	1.0000	1.0000			
PFTeDA_2	6.42	1.00	40.1	A	0.0055	0.0052	-7	50	
PFHxDA	6.73	1.05	5030.0	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	165.8	A	0.0596	0.0330	-45	50	
PFODA	7.00	1.09	3044.8	A	1.0000	1.0000			
PFODA_2	7.00	1.09	76.0	A	0.0257	0.0250	-3	50	

APPROVED
By JPT at 2:54 pm, 11/7/18

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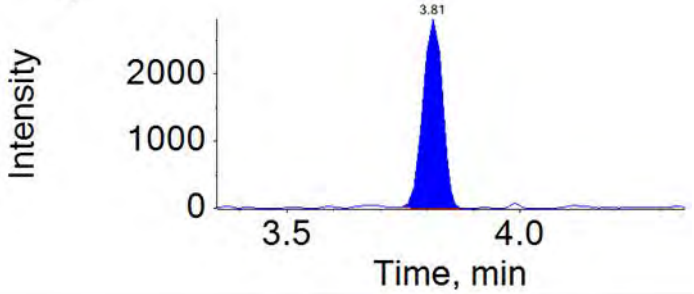
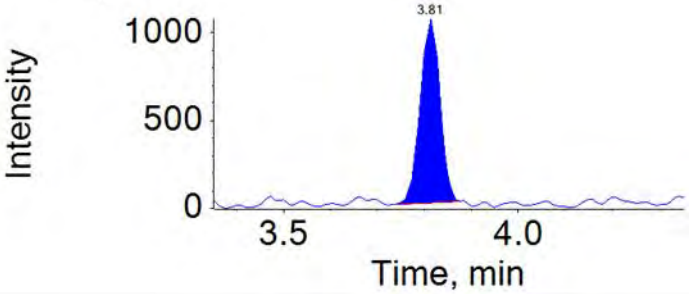
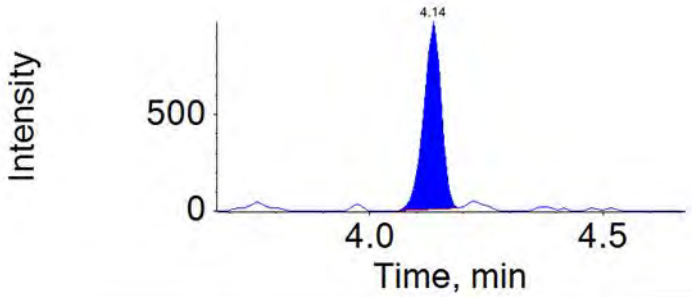
Component: PFBS
Primary Mass: 299.0 / 80.0



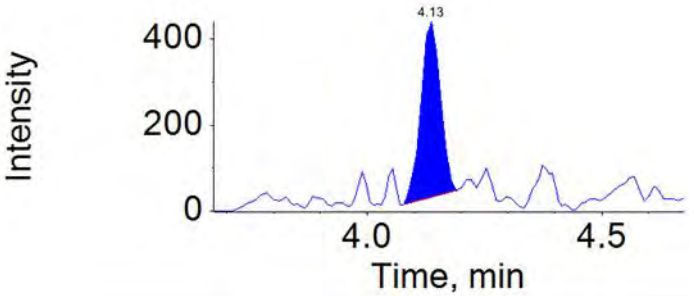
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



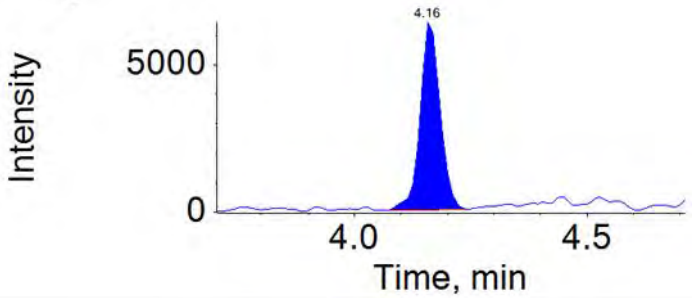
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



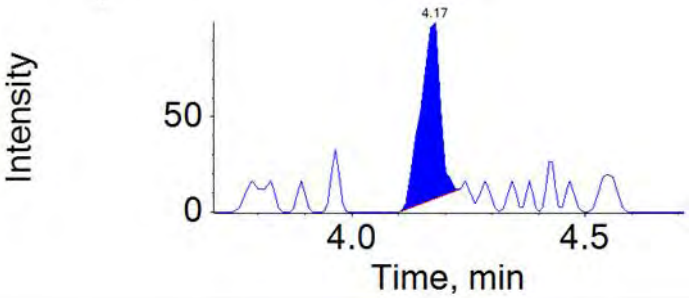
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



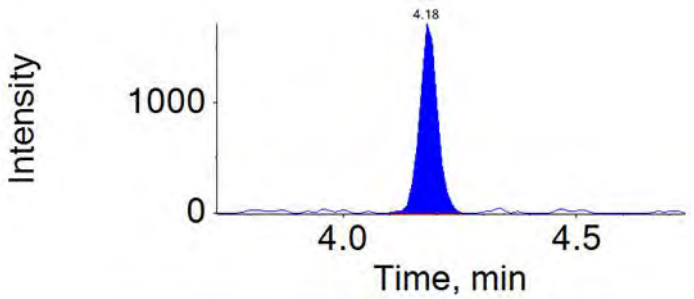
Component: PFHxA
Primary Mass: 313.0 / 269.0



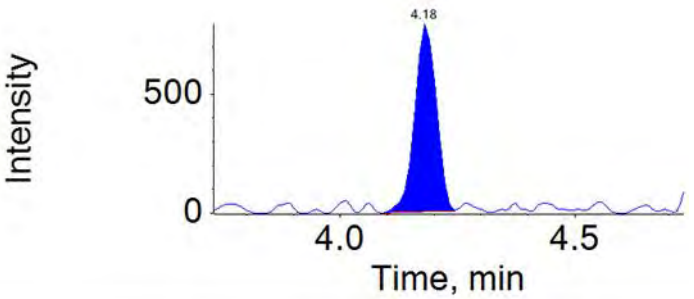
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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By JPT at 2:54 pm, 11/7/18

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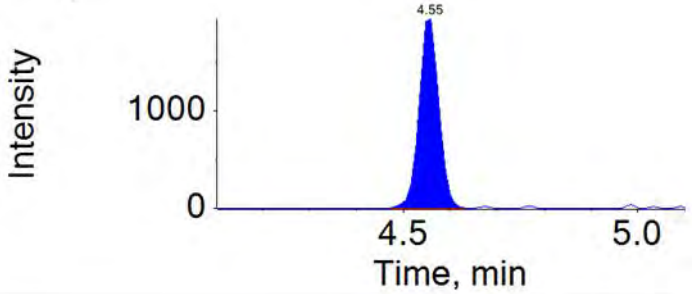
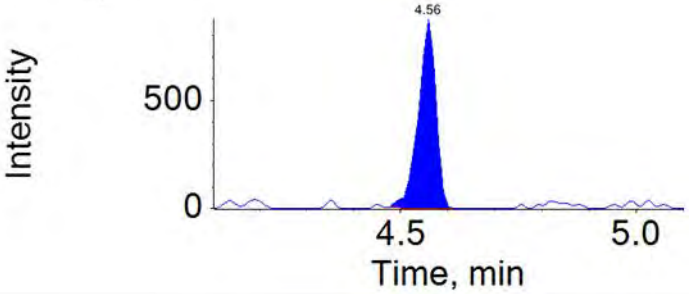
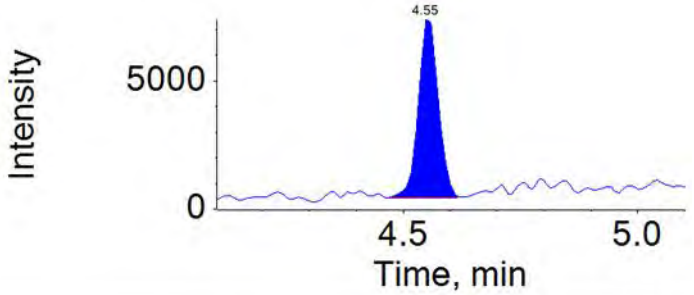
Component: PFHxS
Primary Mass: 399.0 / 80.0



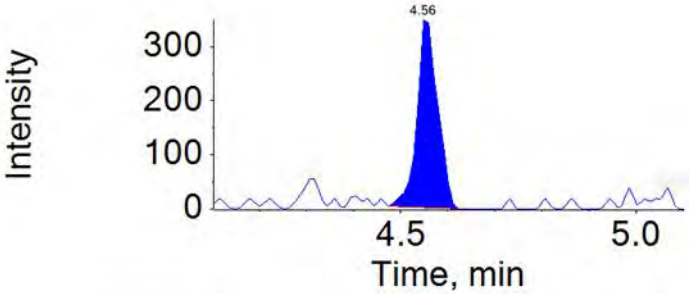
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



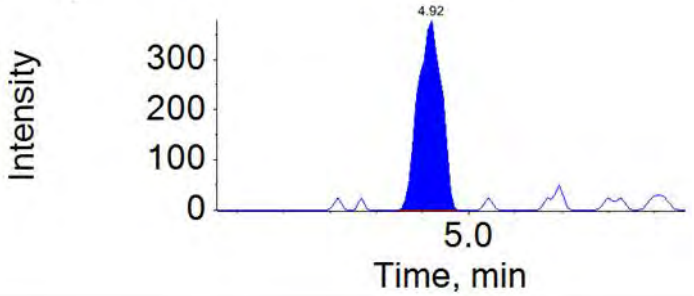
Component: PFHpA
Primary Mass: 363.0 / 319.0



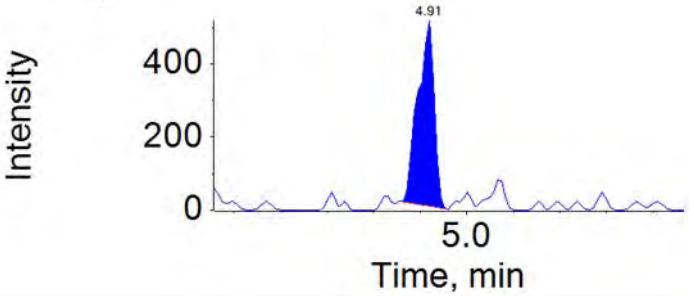
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



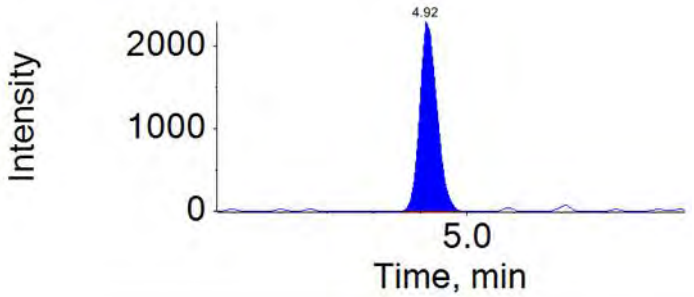
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



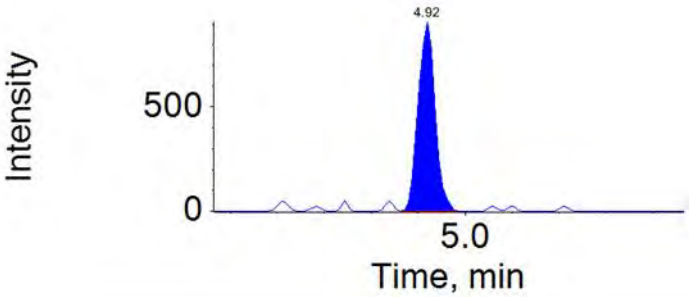
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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By JPT at 2:54 pm, 11/7/18

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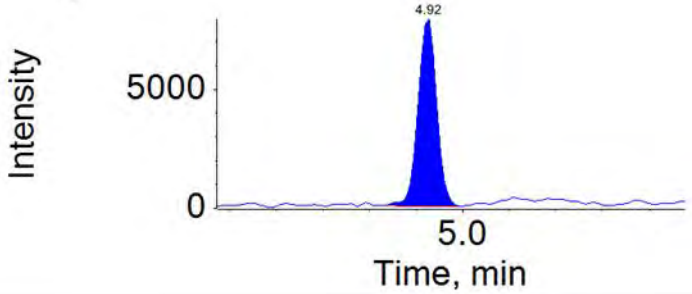
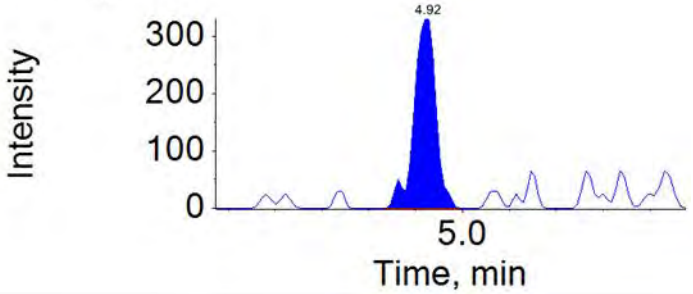
By umar at 5:24 pm, 11/9/18

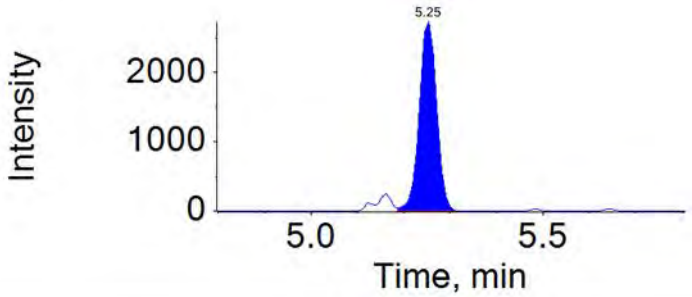
Component: PFOA
Primary Mass: 413.0 / 369.0



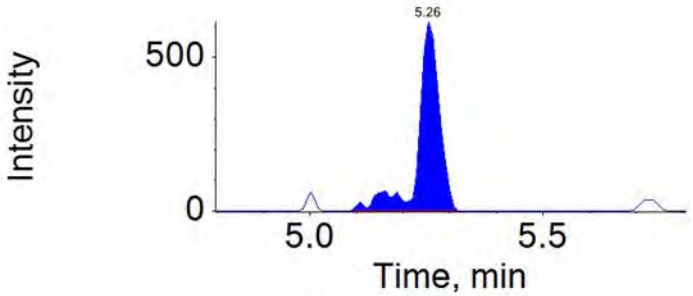
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



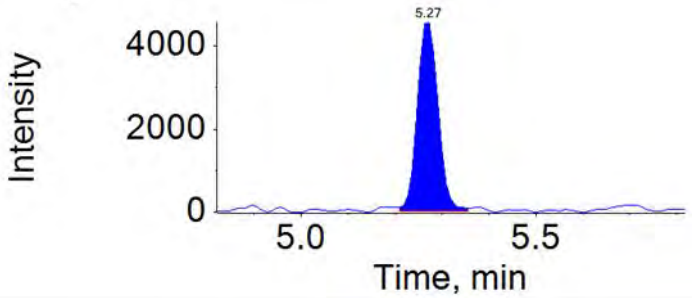
Component: PFOS
Primary Mass: 499.0 / 80.0



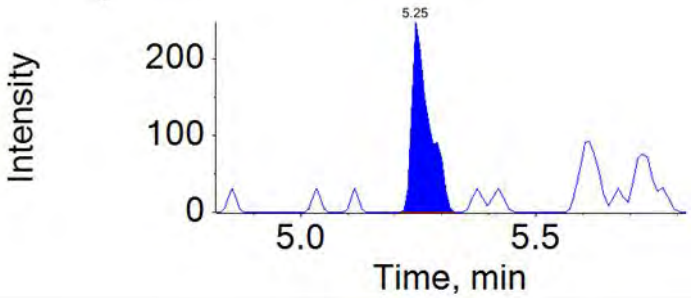
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



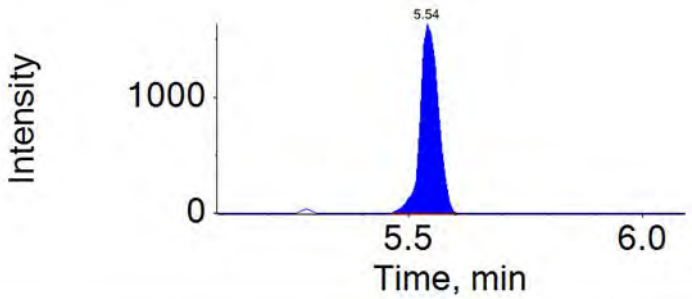
Component: PFNA
Primary Mass: 463.0 / 419.0



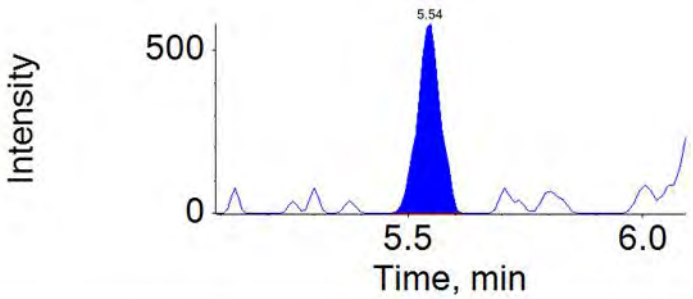
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



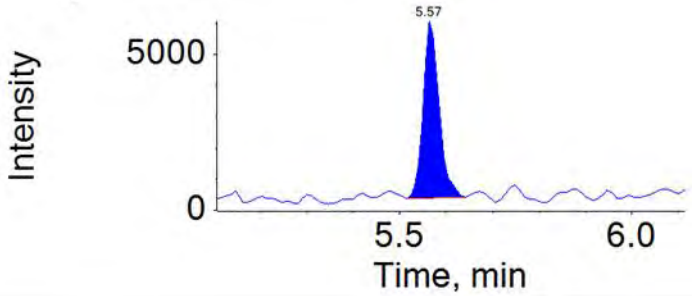
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



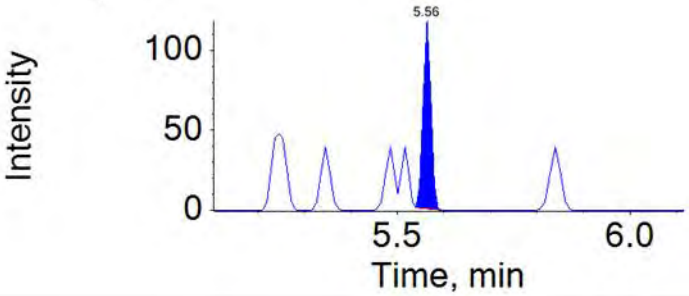
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

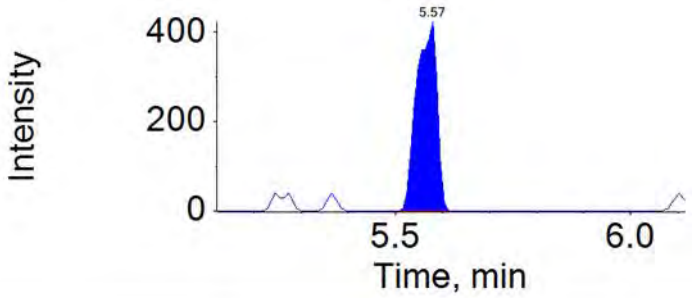
Component: PFDA
Primary Mass: 513.0 / 469.0



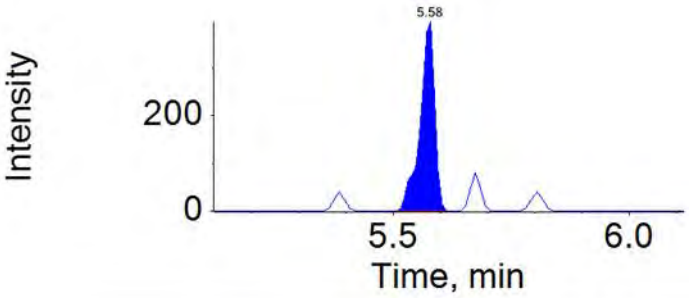
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



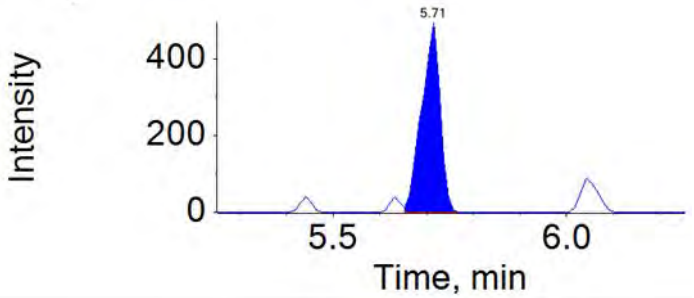
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



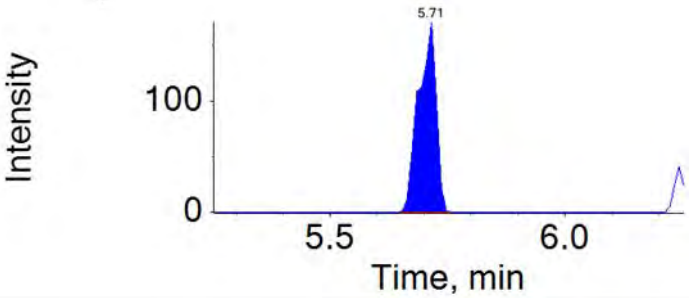
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



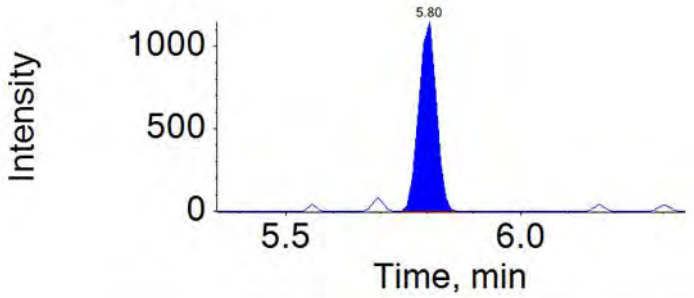
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



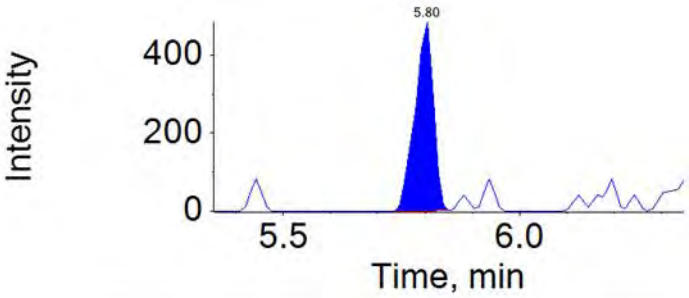
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



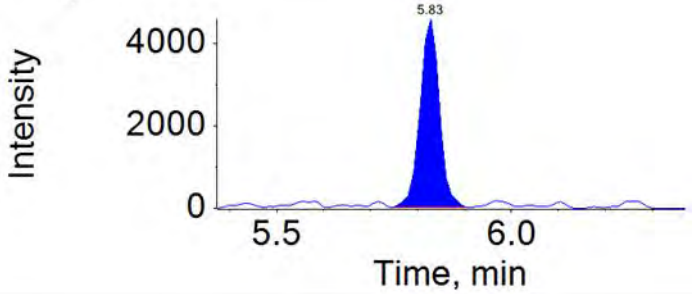
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



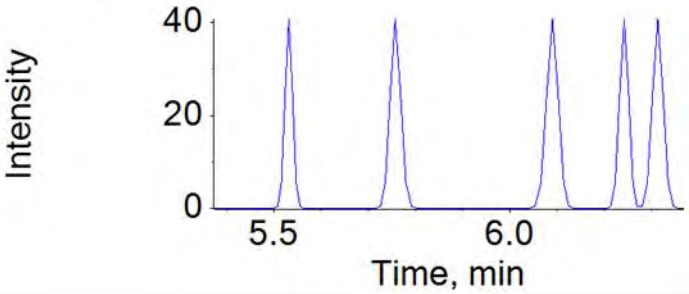
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

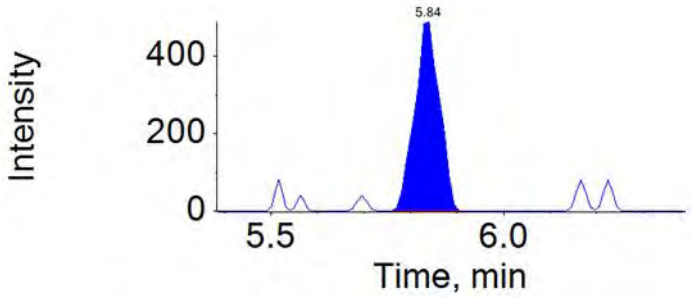
Component: PFUnDA
Primary Mass: 563.0 / 519.0



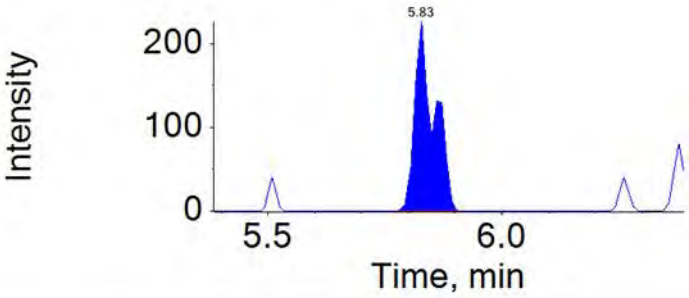
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



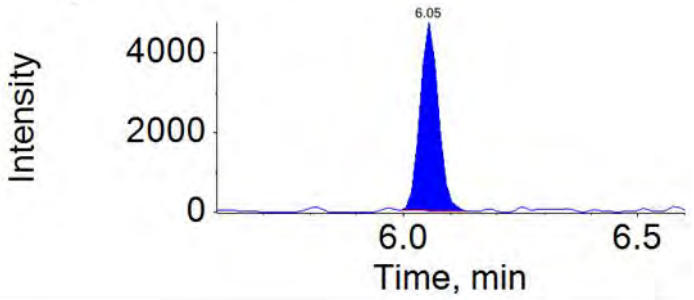
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



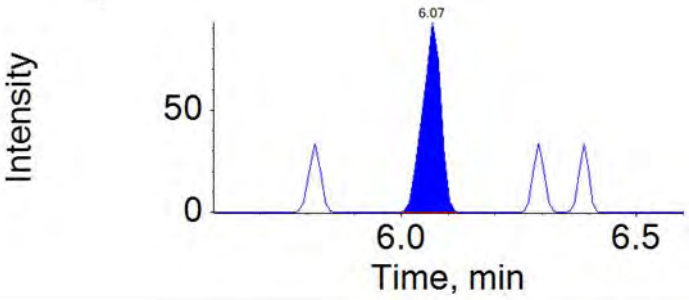
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



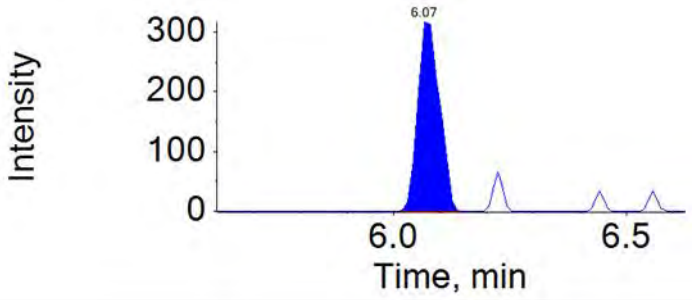
Component: PFDoDA
Primary Mass: 613.0 / 569.0



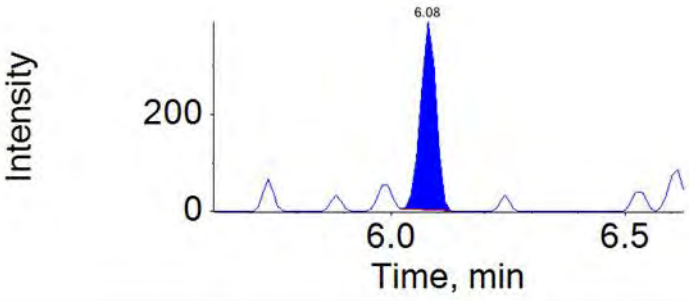
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



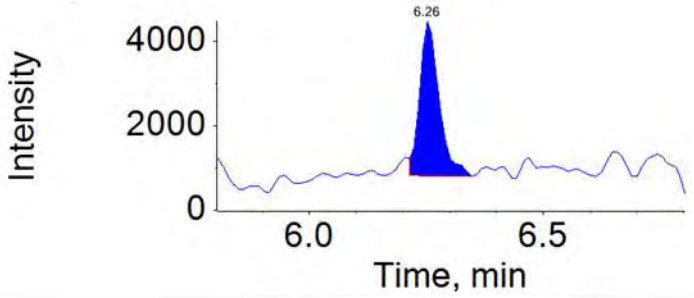
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



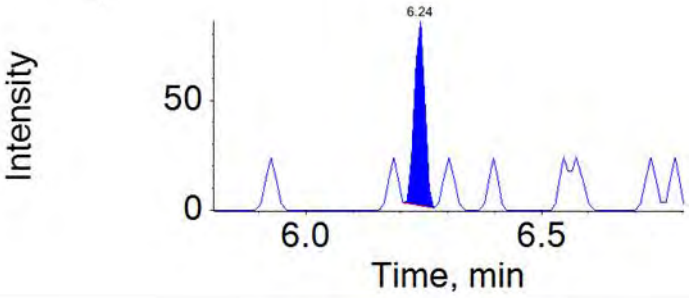
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

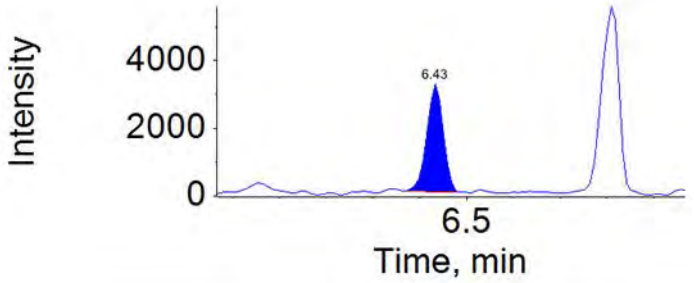
Component: PFTrDA
Primary Mass: 663.0 / 619.0



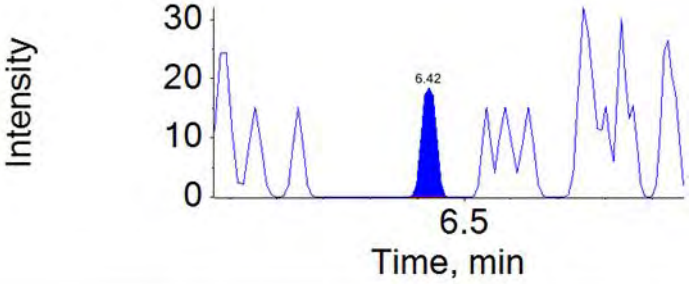
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



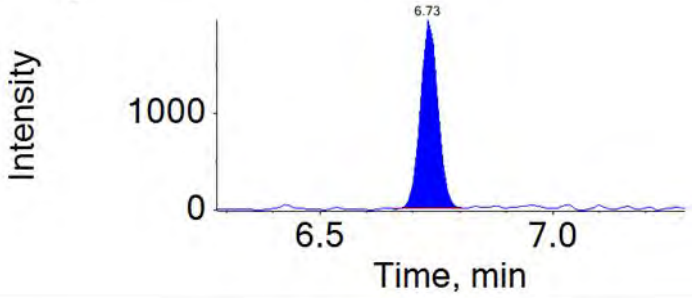
Component: PFTeDA
Primary Mass: 713.0 / 669.0



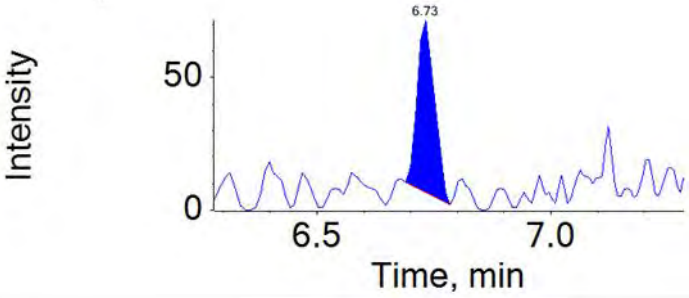
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



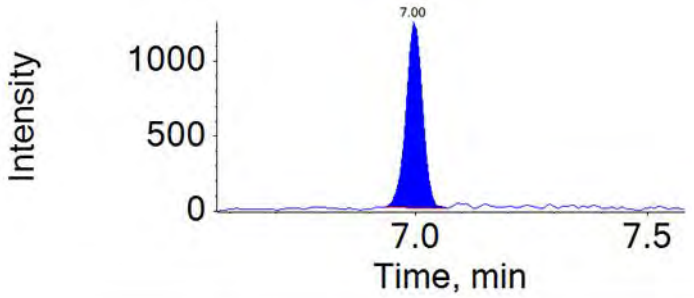
Component: PFHxDA
Primary Mass: 813.0 / 769.0



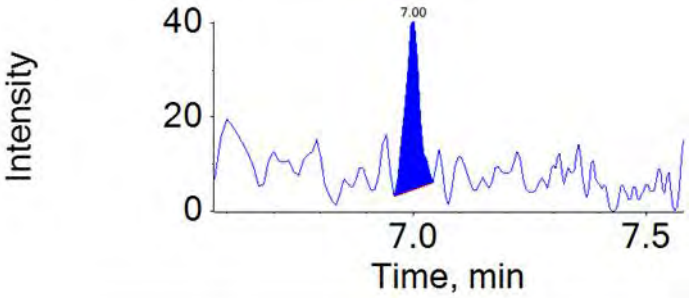
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV07DCAL-17.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-07T10:42:59
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	735610.3	730410.6	1	50	
13C2-PFOA	5.0	545052.0	524423.6	4	50	
13C4-PFOS	4.8	294815.1	274061.7	8	50	
13C2-PFDA	5.0	340045.1	311442.1	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	825928.3	13C3-PFBA	735610.3	1.123	5.000	5.196	104	70-130	
E13C5-PFPeA	881634.8	13C3-PFBA	735610.3	1.199	5.000	5.221	104	70-130	
E13C3-PFBS	456572.3	13C3-PFBA	735610.3	0.621	4.650	4.555	98	70-130	
E13C2-4:2-FTS	56024.0	13C2-PFOA	545052.0	0.103	4.670	4.638	99	70-130	
E13C5-PFHxA	745299.1	13C2-PFOA	545052.0	1.367	5.000	5.030	101	70-130	
E13C3-PFHxS	363559.9	13C2-PFOA	545052.0	0.667	4.730	4.788	101	70-130	
E13C4-PFHpA	680947.9	13C2-PFOA	545052.0	1.249	5.000	5.683	114	70-130	
E13C2-6:2-FTS	40789.9	13C2-PFOA	545052.0	0.075	4.750	4.990	105	70-130	
E13C8-PFOA	1030720.3	13C2-PFOA	545052.0	1.891	5.000	5.273	105	70-130	
E13C8-PFOS	325503.0	13C4-PFOS	294815.1	1.104	4.780	4.882	102	70-130	
E13C9-PFNA	562782.6	13C4-PFOS	294815.1	1.909	5.000	5.214	104	70-130	
E13C6-PFDA	680228.7	13C2-PFDA	340045.1	2.000	5.000	5.031	101	70-130	
E13C2-8:2-FTS	29365.3	13C2-PFDA	340045.1	0.086	4.790	4.570	95	70-130	
E13C8-PFOSA	750773.0	13C2-PFDA	340045.1	2.208	5.000	4.818	96	70-130	
Ed3-NMeFOSAA	84635.6	13C2-PFDA	340045.1	0.249	5.000	4.628	93	70-130	
E13C7-PFUnDA	301084.0	13C2-PFDA	340045.1	0.885	5.000	5.108	102	70-130	
Ed5-NEtFOSAA	71817.7	13C2-PFDA	340045.1	0.211	5.000	4.888	98	70-130	
E13C2-PFDoDA	636951.8	13C2-PFDA	340045.1	1.873	5.000	5.050	101	70-130	
Ed7-NMePFOSAE	359644.6	13C2-PFDA	340045.1	1.058	5.000	4.918	98	70-130	
Ed3-NMePFOSA	81798.8	13C2-PFDA	340045.1	0.241	5.000	4.404	88	70-130	
Ed9-NEtPFOSAE	287361.1	13C2-PFDA	340045.1	0.845	5.000	4.826	97	70-130	
Ed5-NEtPFOSA	66311.5	13C2-PFDA	340045.1	0.195	5.000	4.515	90	70-130	
E13C2-PFTeDA	458986.1	13C2-PFDA	340045.1	1.350	5.000	4.859	97	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

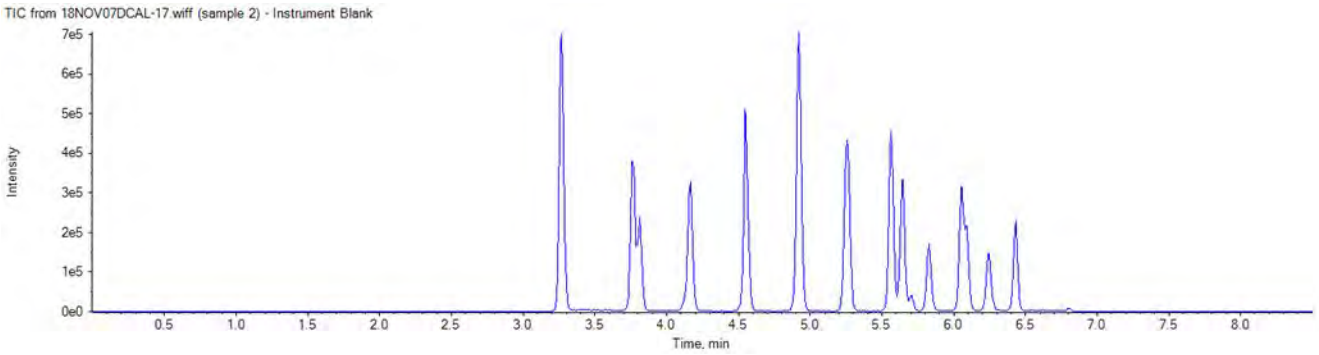
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-17.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	825928.3	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	881634.8	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456572.3	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	56024.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	745299.1	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	456572.3	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	363559.9	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	680947.9	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	40789.9	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	363559.9	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	1030720.3	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	325503.0	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	562782.6	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	325503.0	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	680228.7	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	29365.3	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	750773.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	84635.6	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	325503.0	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	301084.0	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	71817.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	636951.8	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	29365.3	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	359644.6	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	81798.8	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	325503.0	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	287361.1	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	66311.5	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	636951.8	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	458986.1	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	458986.1	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	458986.1	N/A	

Total Ion Chromatogram

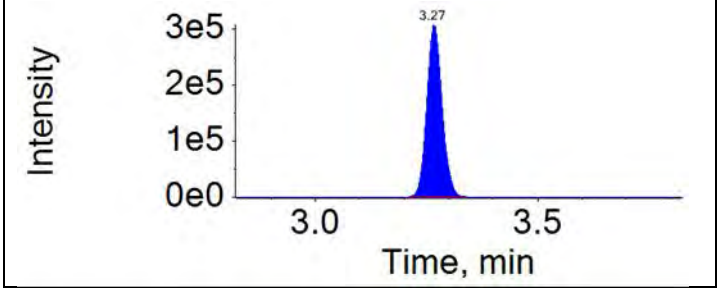


APPROVED
By JPT at 2:53 pm, 11/7/18

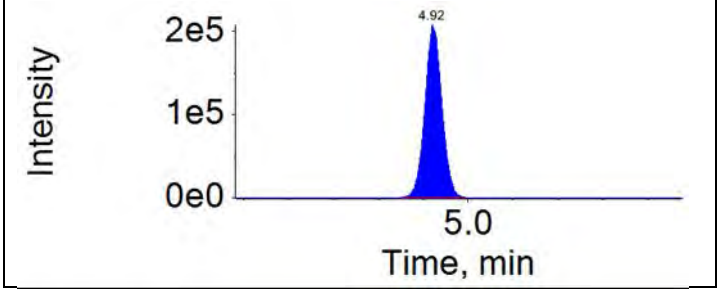
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

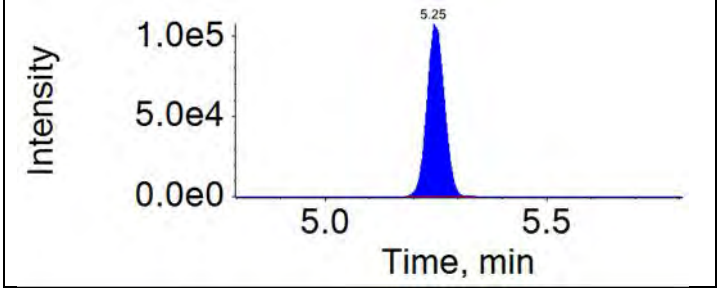
Injection Standard: 13C3-PFBA
216.0 / 172.0



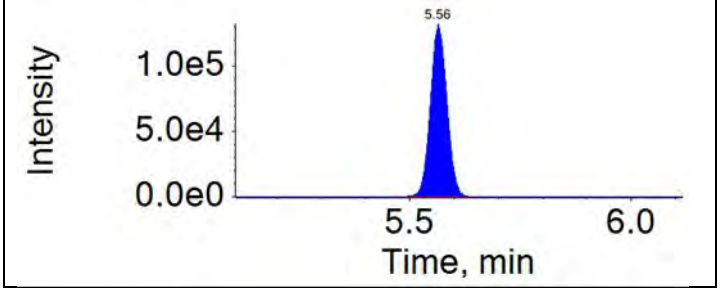
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



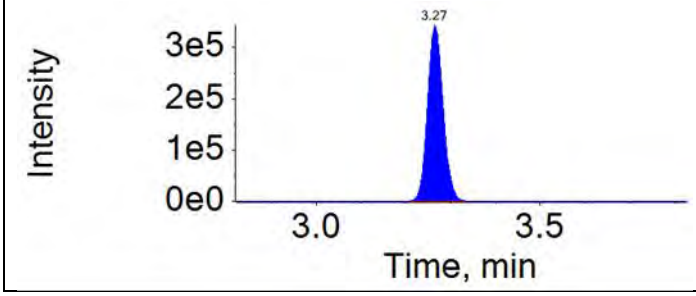
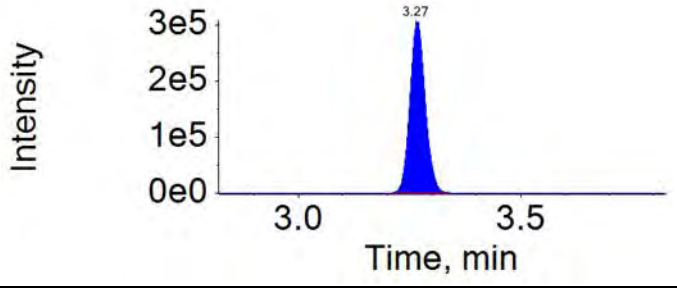
Injection Standard: 13C2-PFDA
515.0 / 470.0

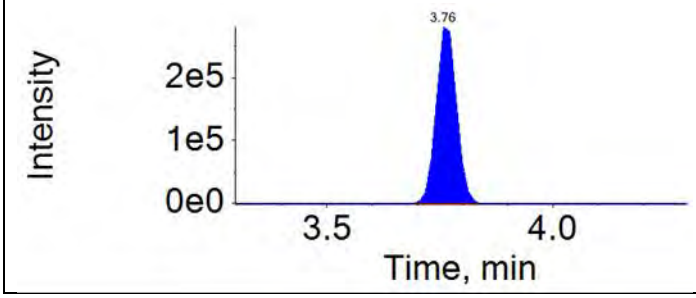
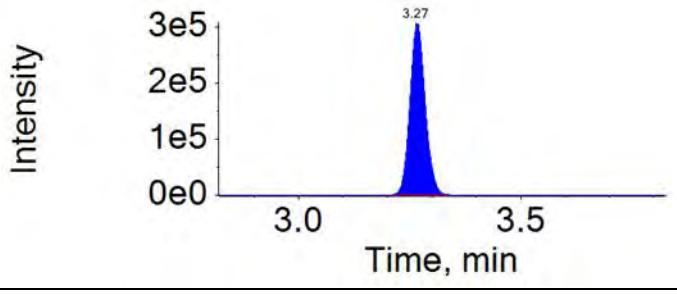


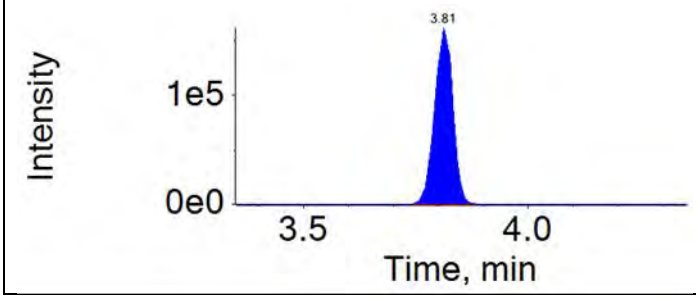
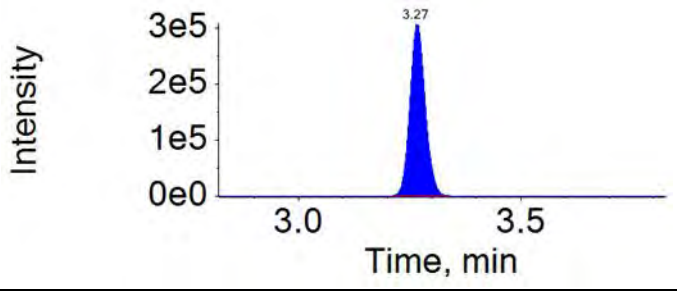
APPROVED
By JPT at 2:53 pm, 11/7/18

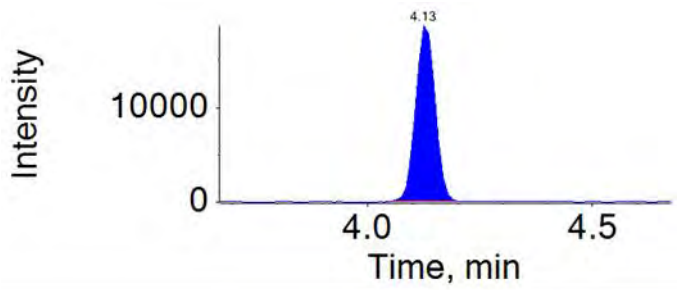
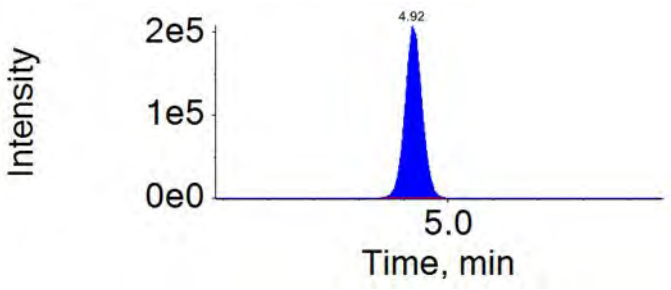
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

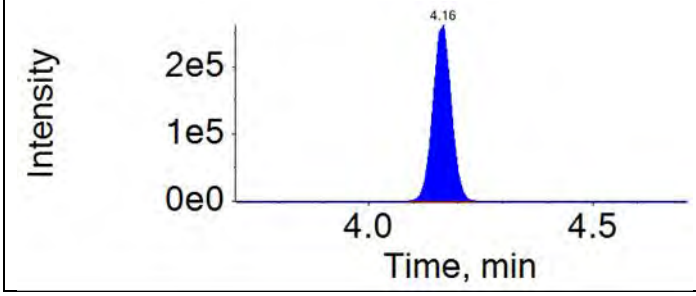
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

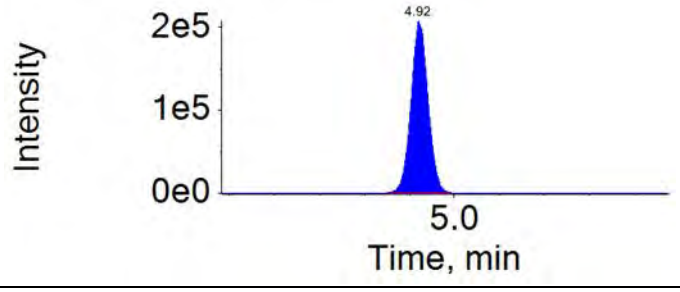
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

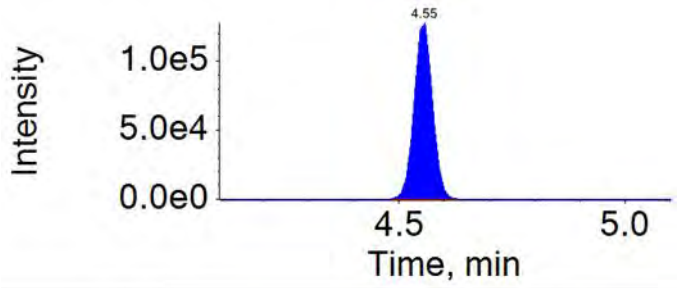
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

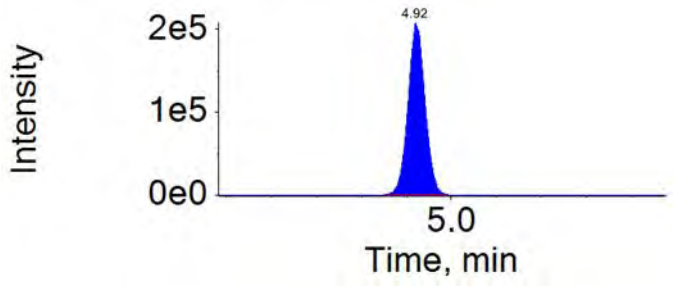
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



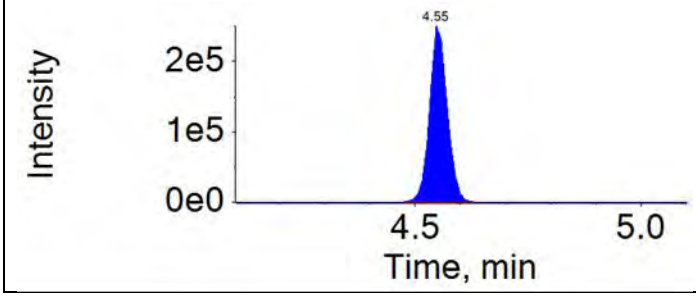


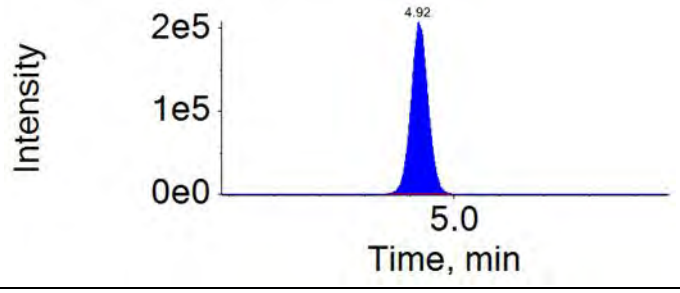
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



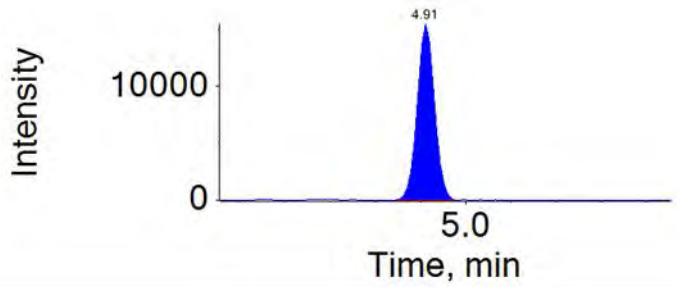


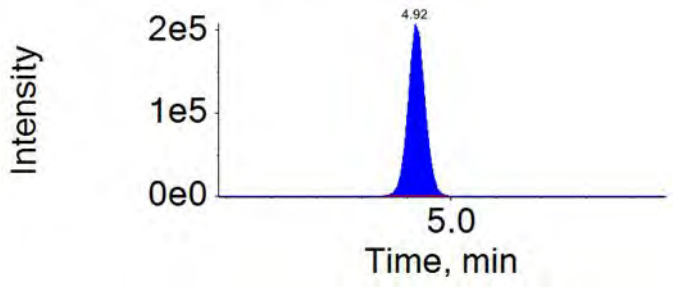
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

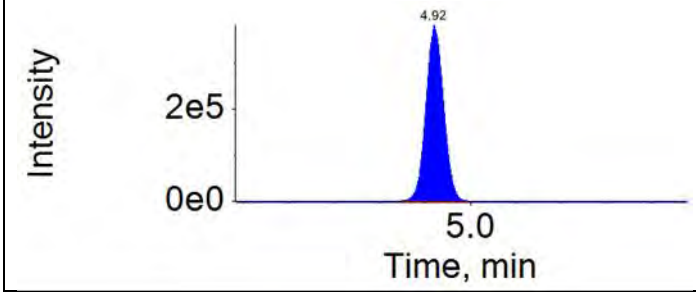
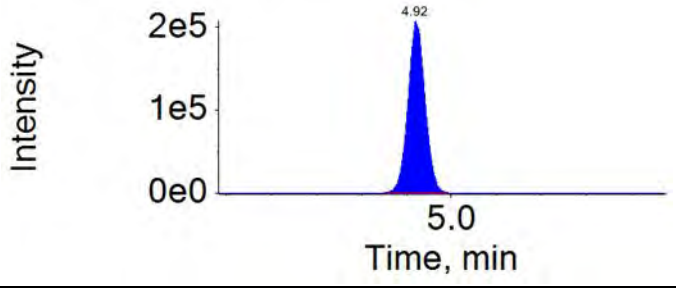


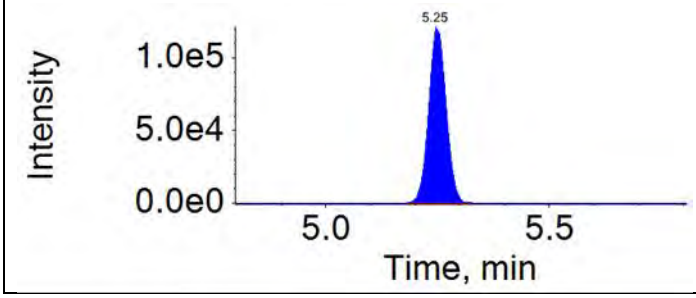
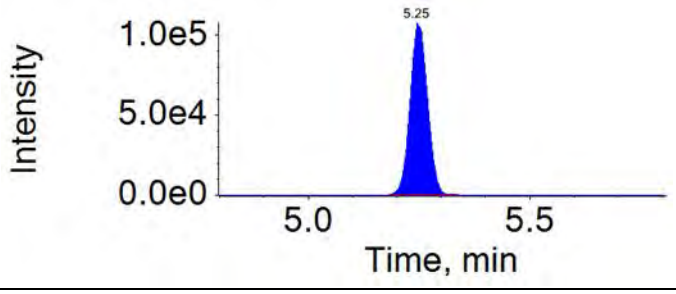


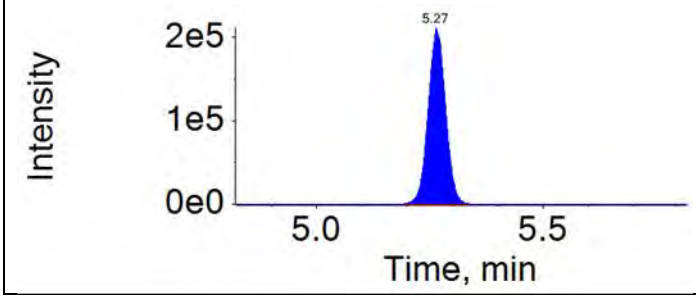
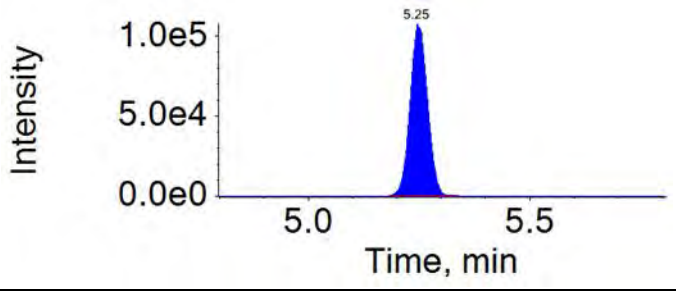
APPROVED
By JPT at 2:53 pm, 11/7/18

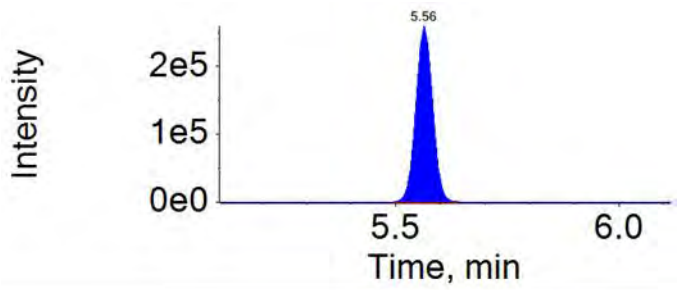
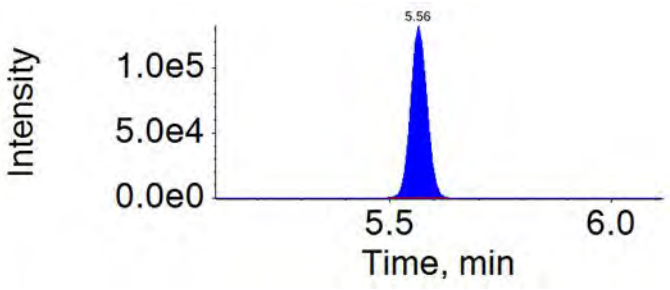
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

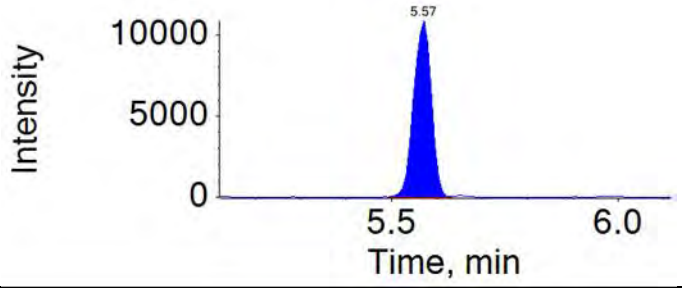
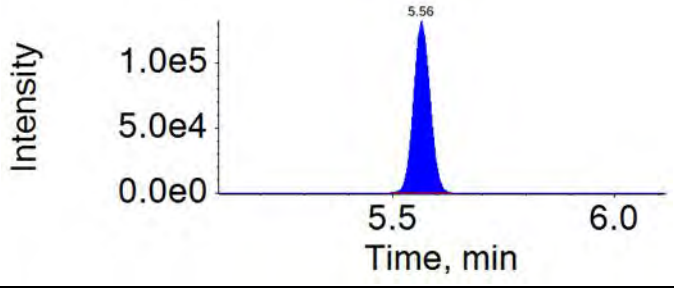
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

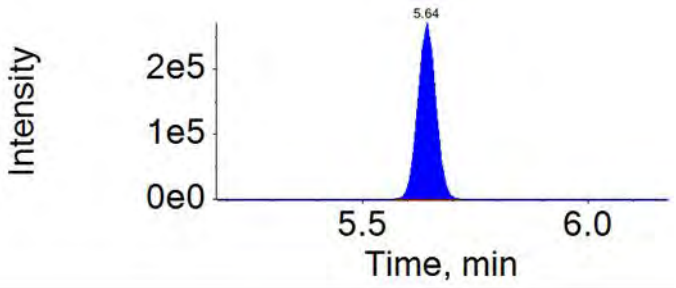
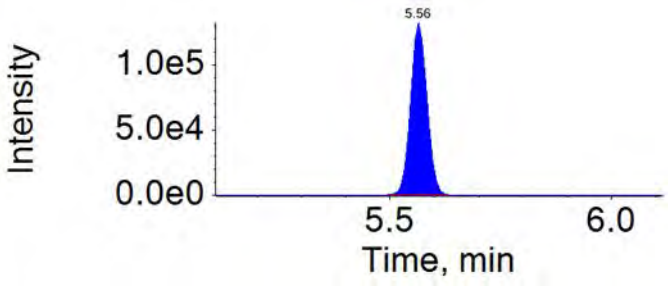
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

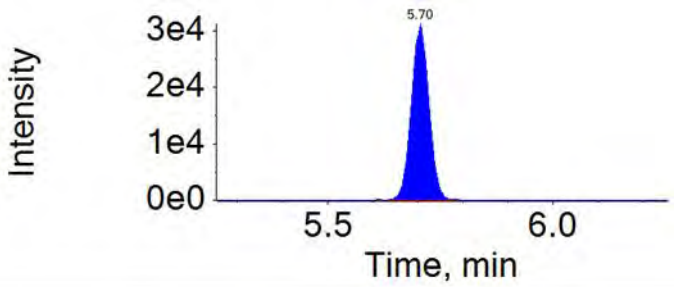
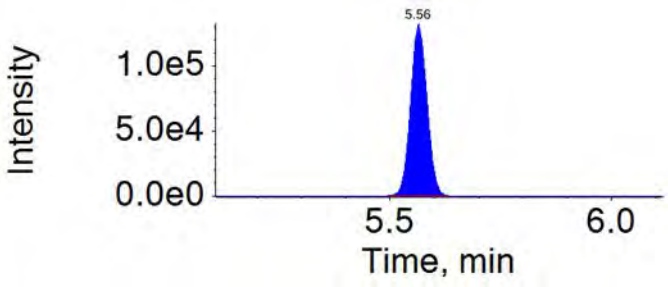
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

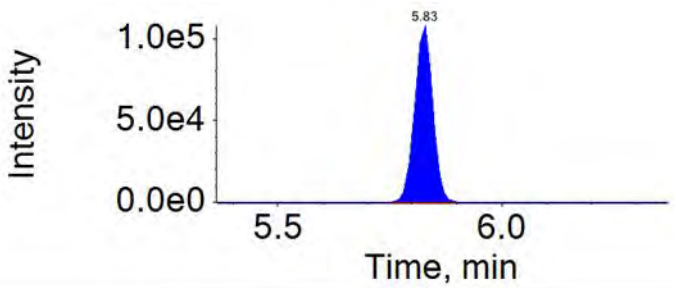
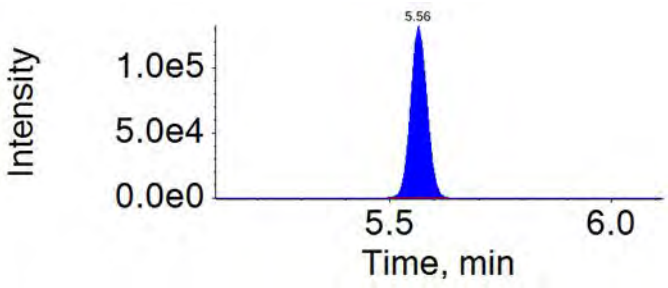
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

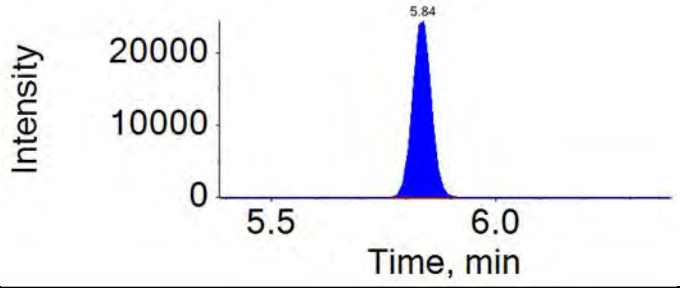
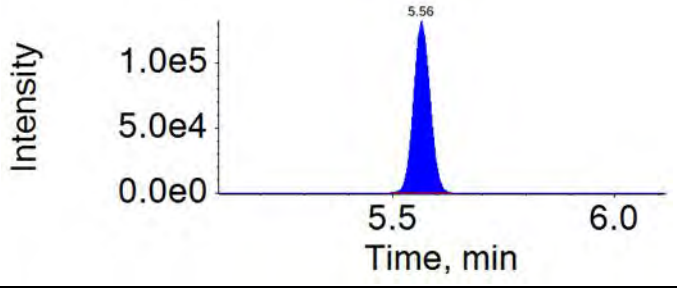
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

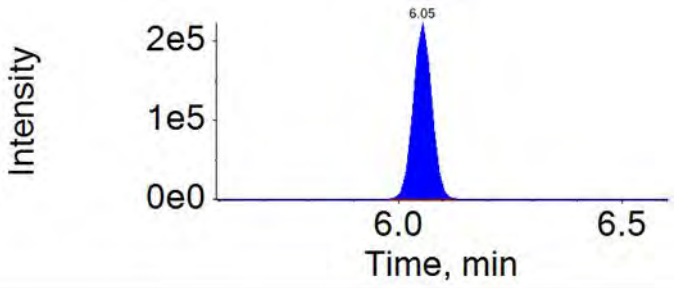
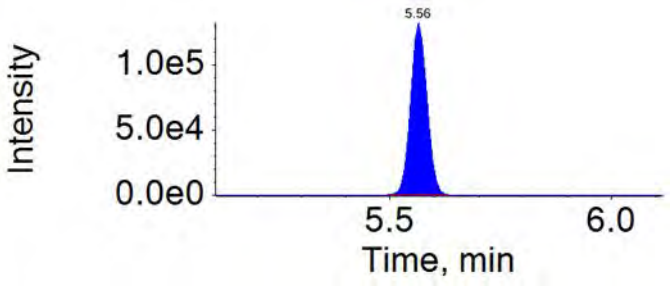
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

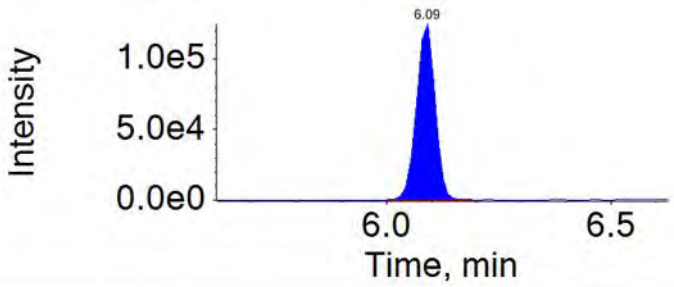
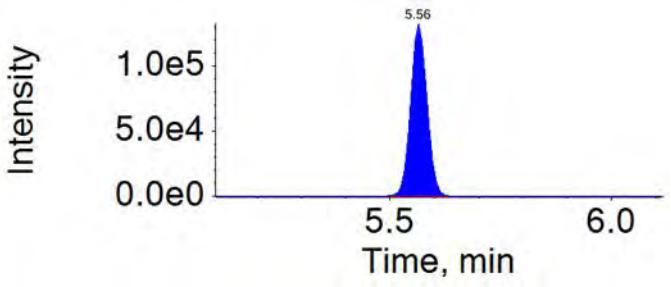
APPROVED
By JPT at 2:53 pm, 11/7/18

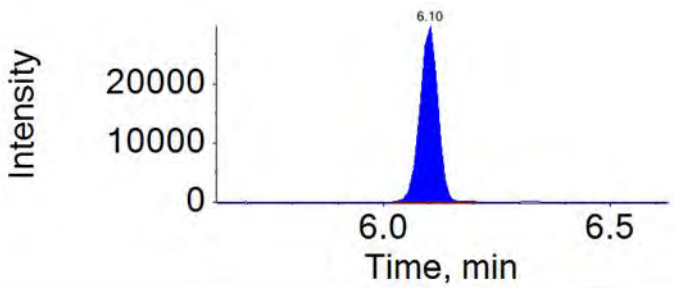
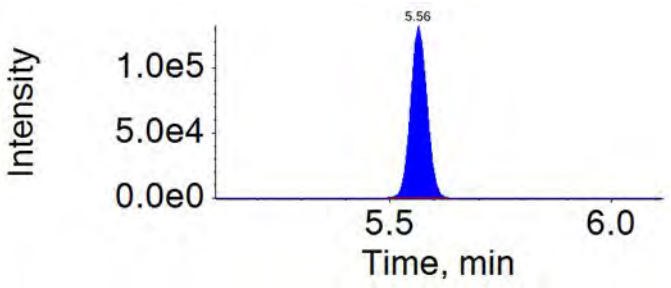
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

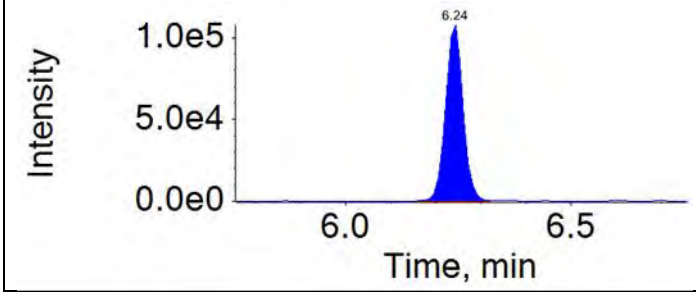
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

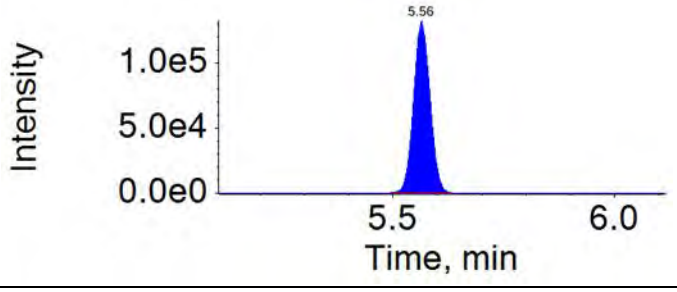
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

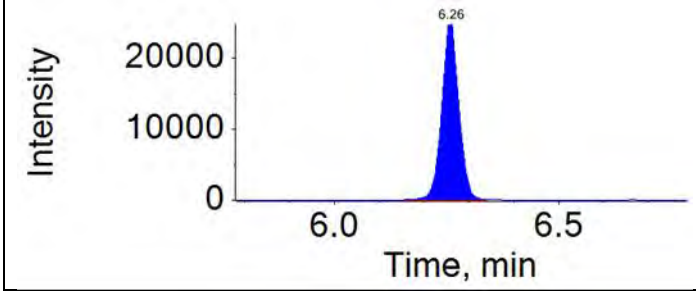
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

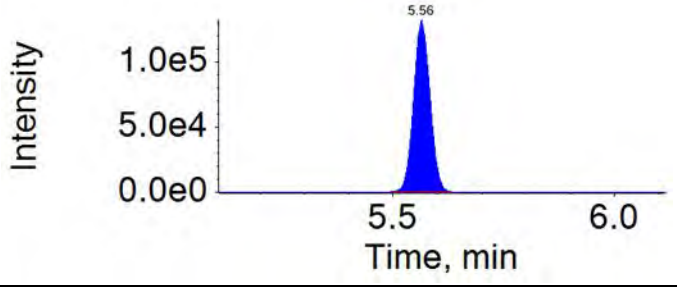
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



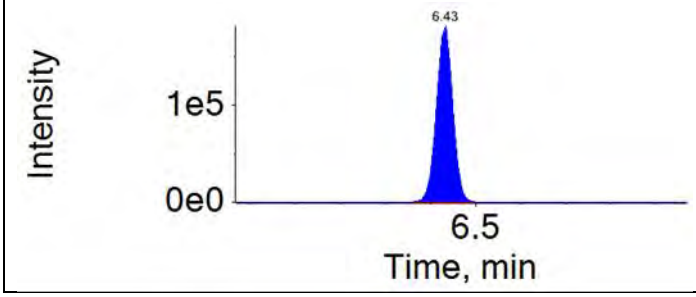


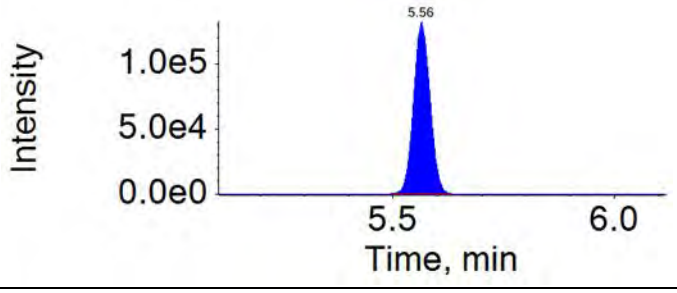
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



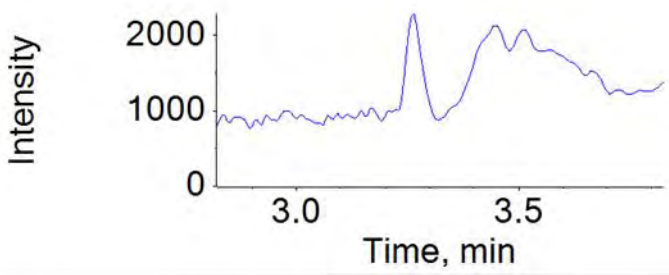


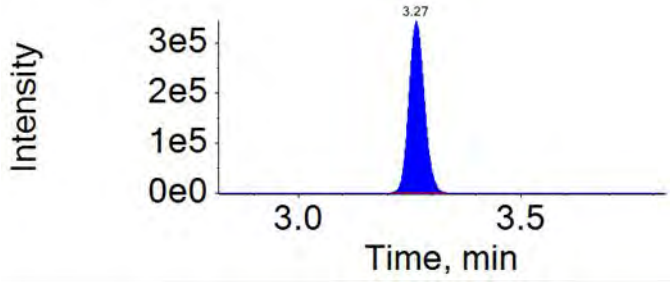
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

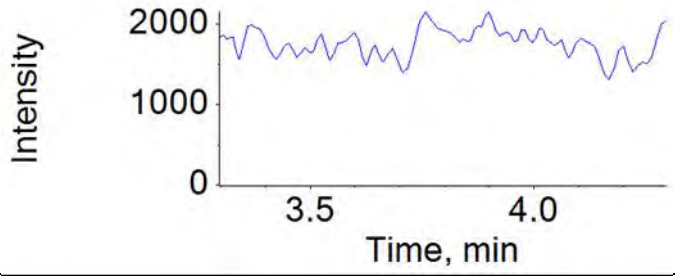
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

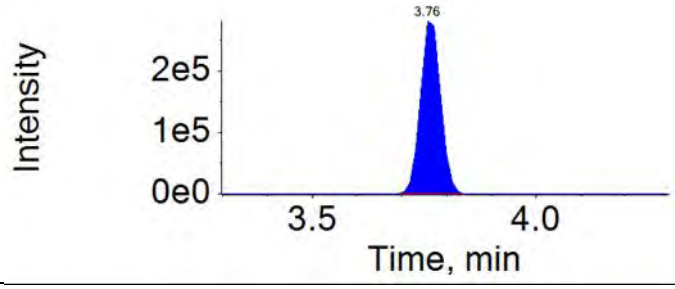
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



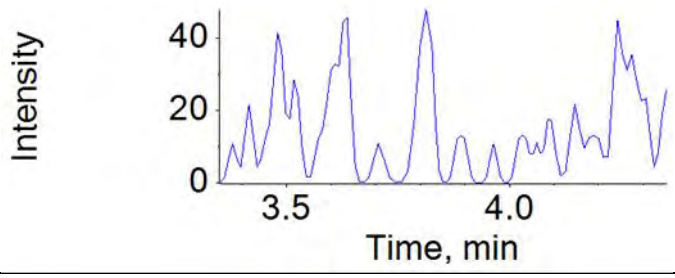


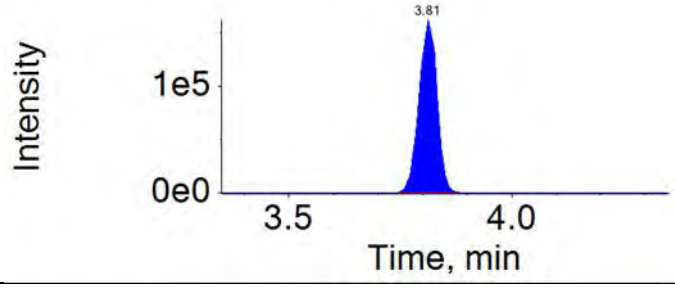
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



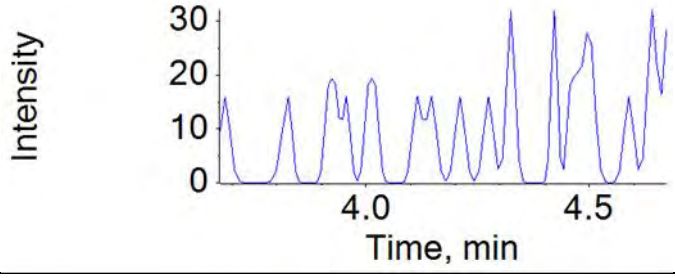


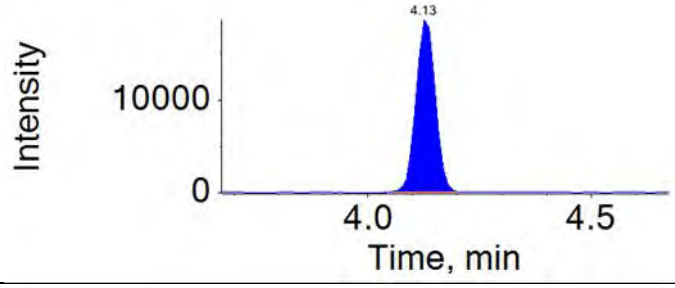
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



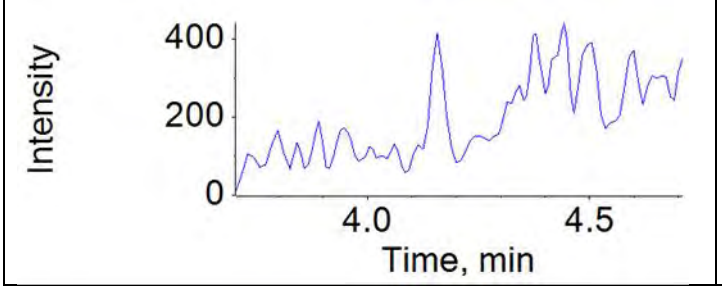


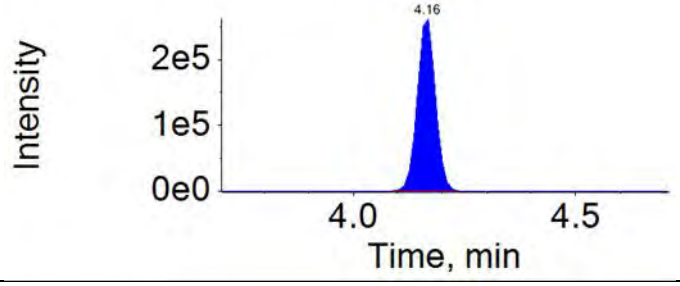
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

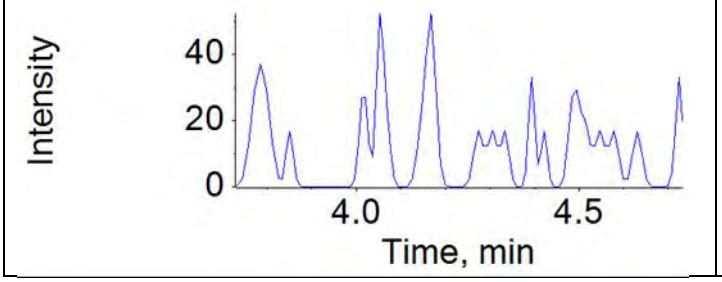
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

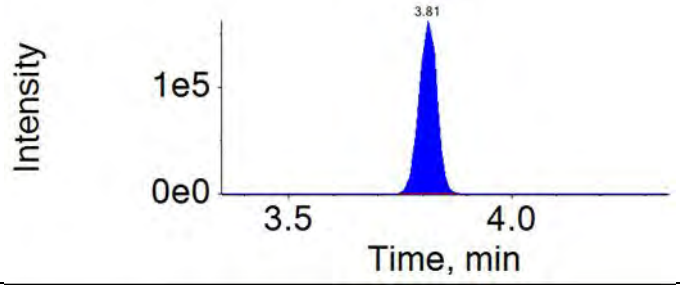
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



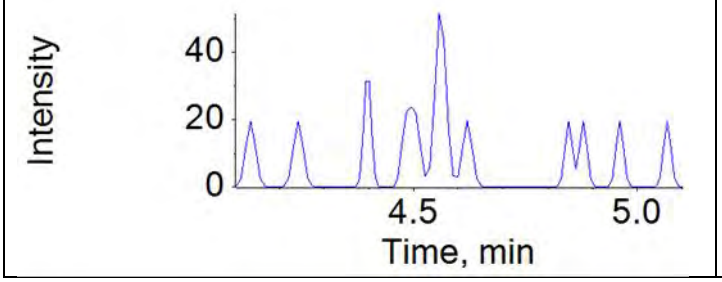


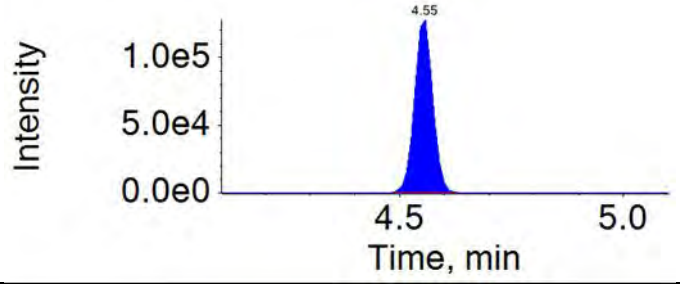
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



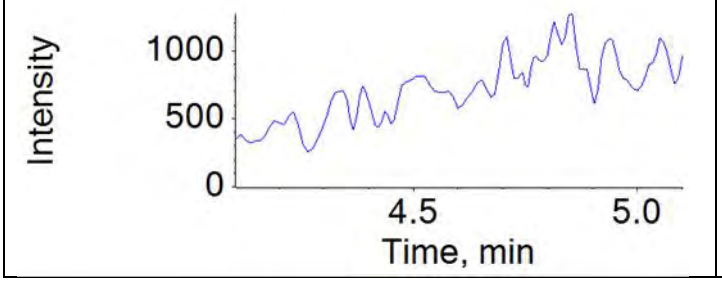


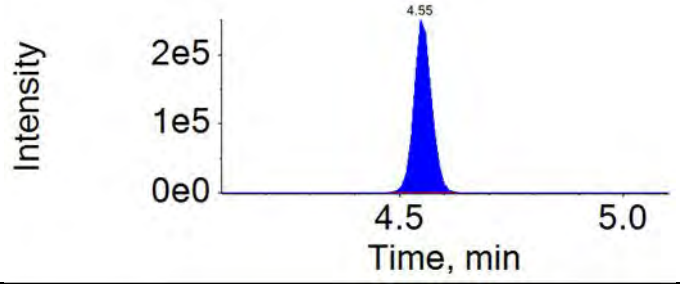
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

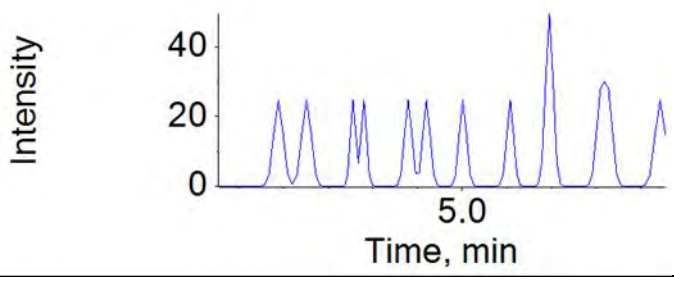
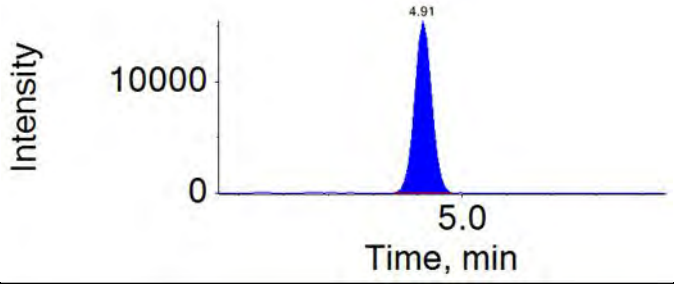


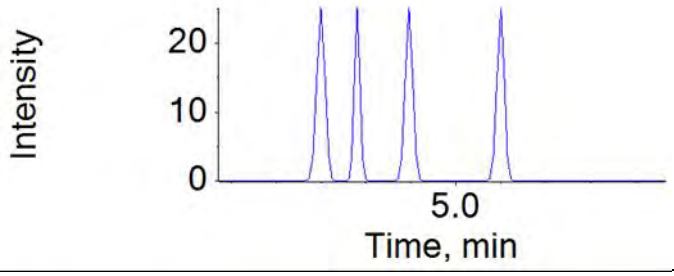
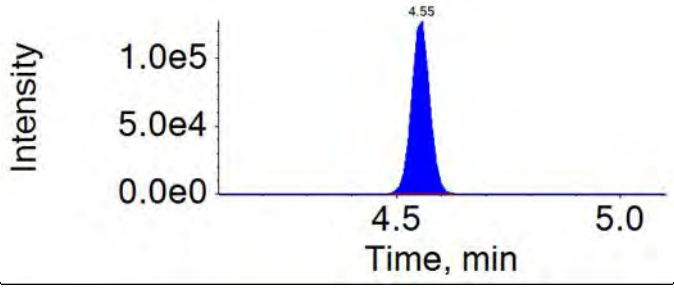


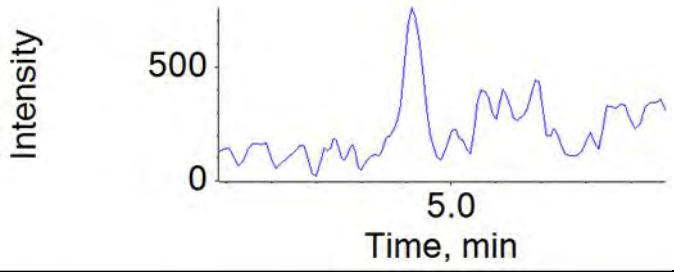
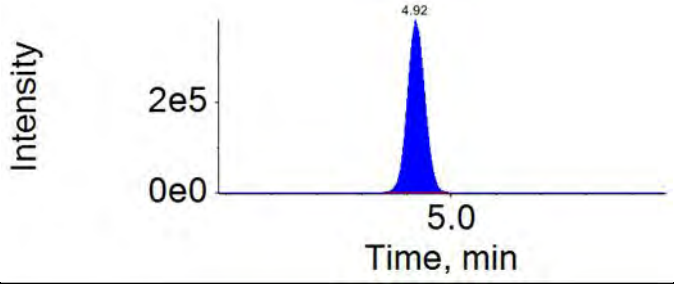
APPROVED
By JPT at 2:53 pm, 11/7/18

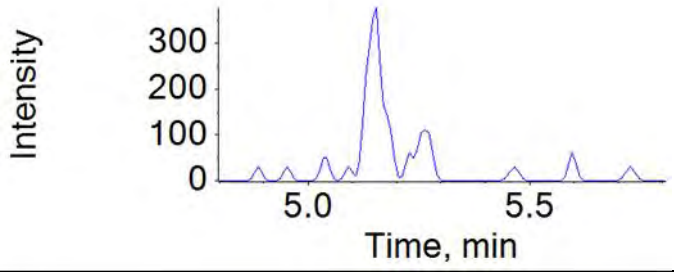
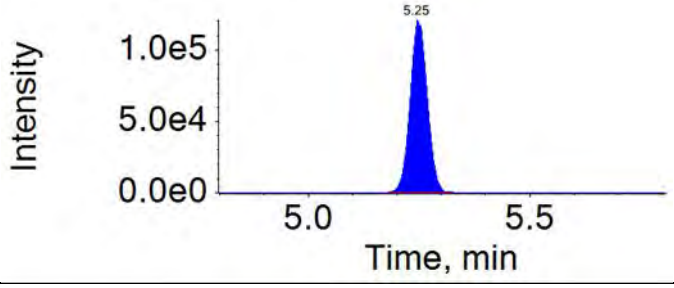
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

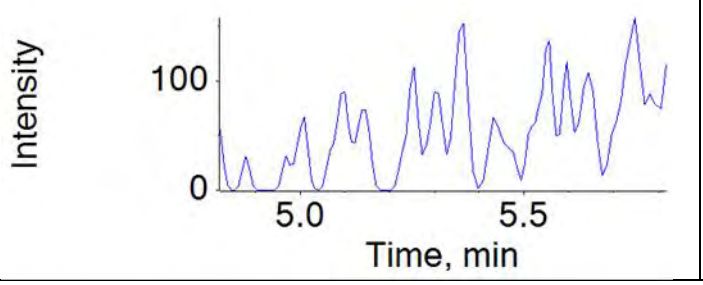
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

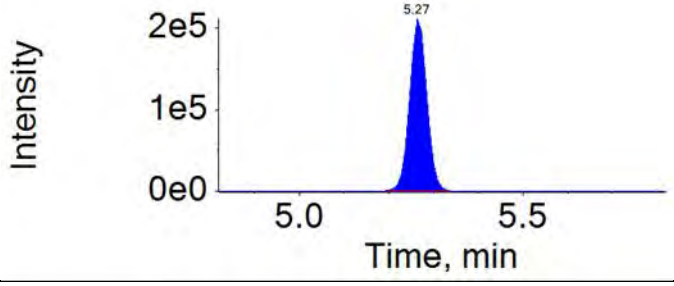
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

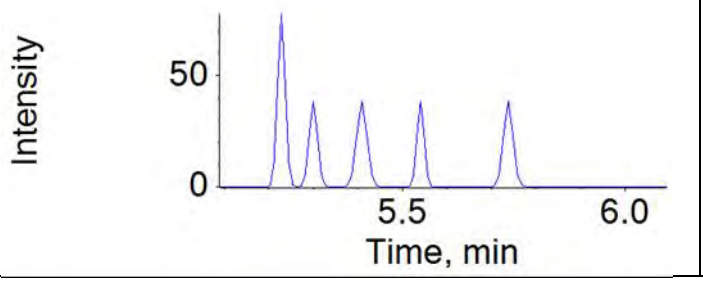
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

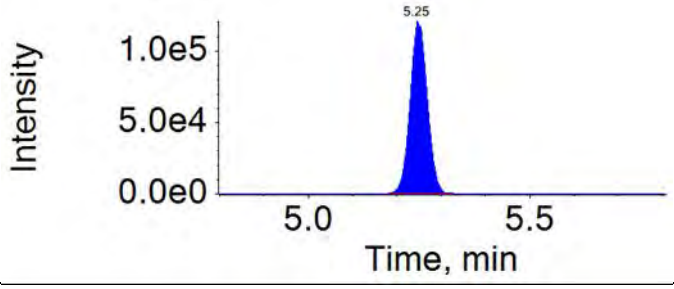
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



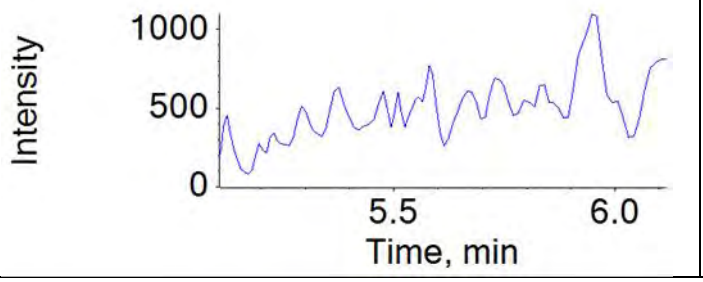


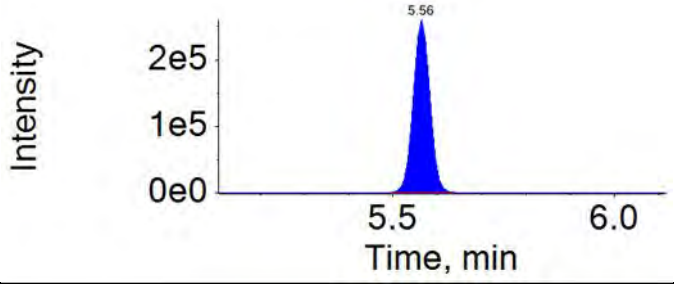
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



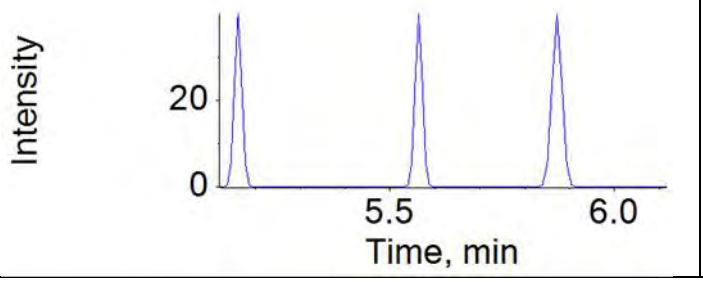


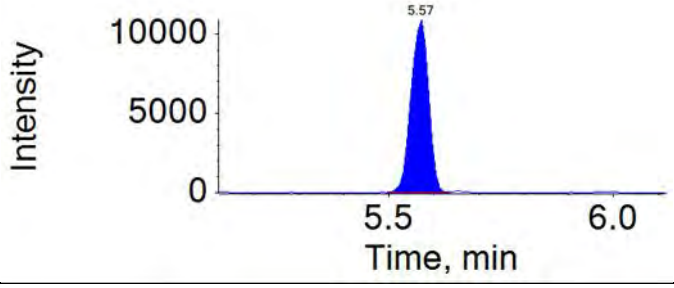
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



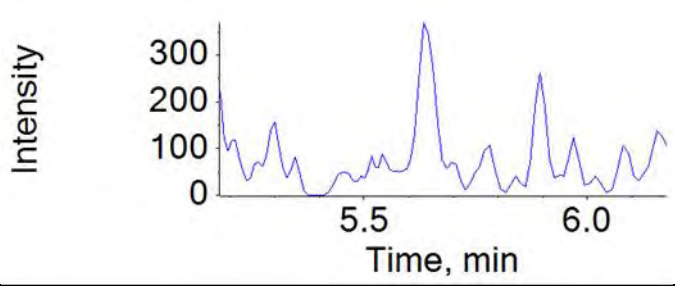


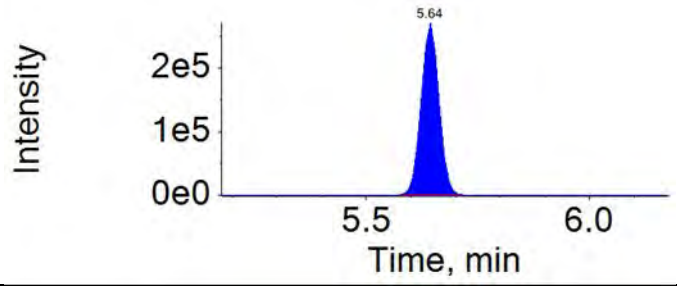
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

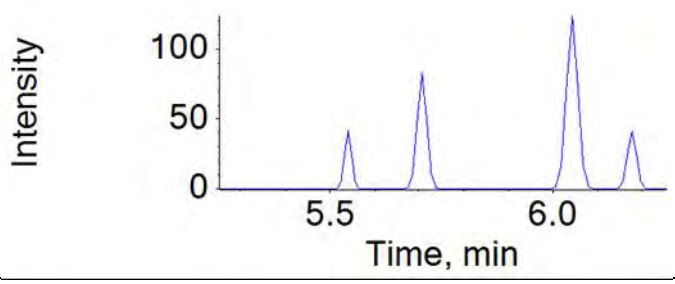
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

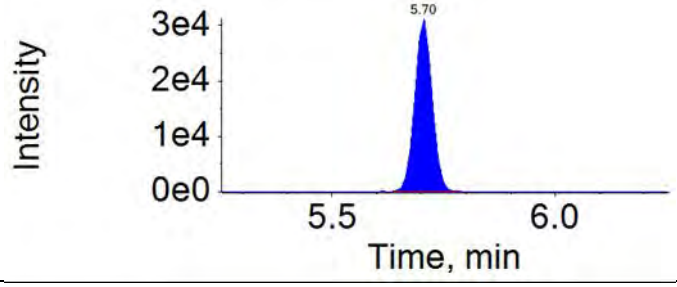
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



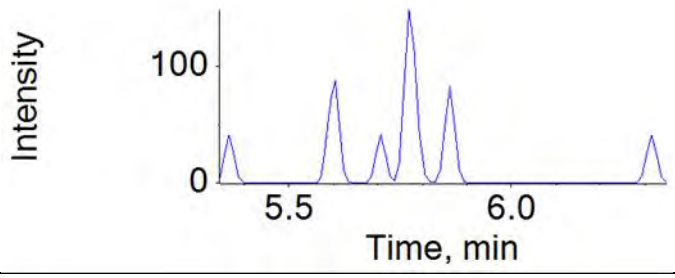


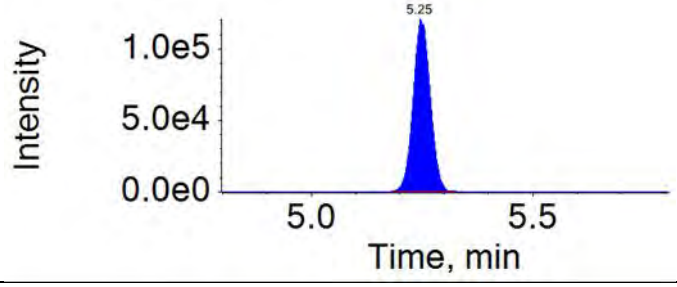
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



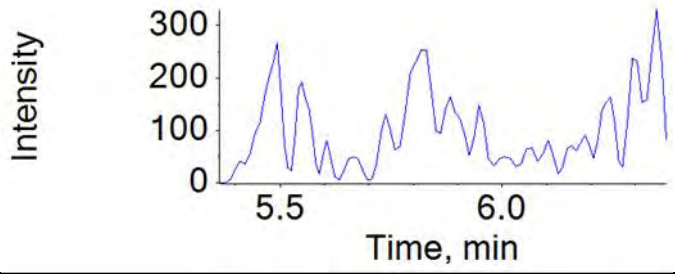


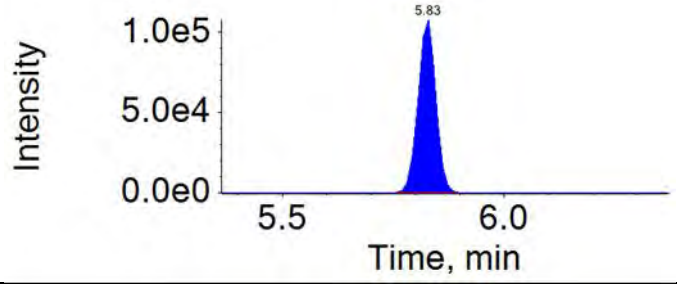
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

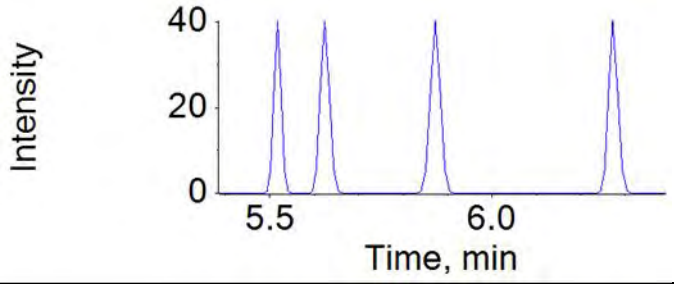
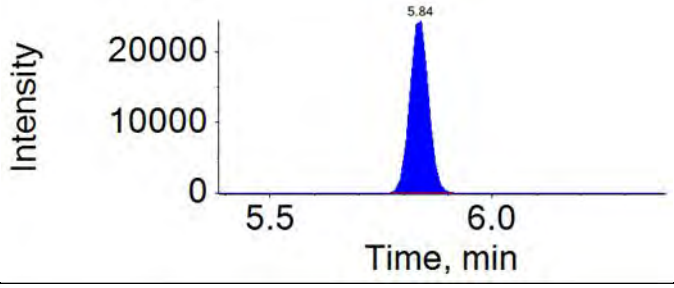


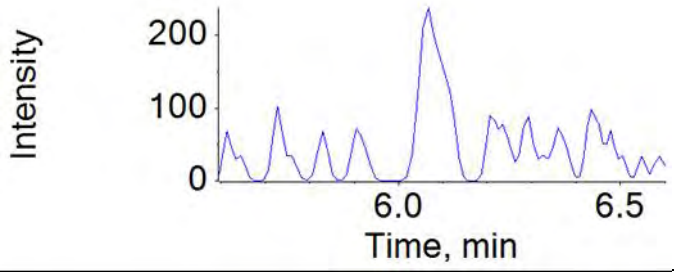
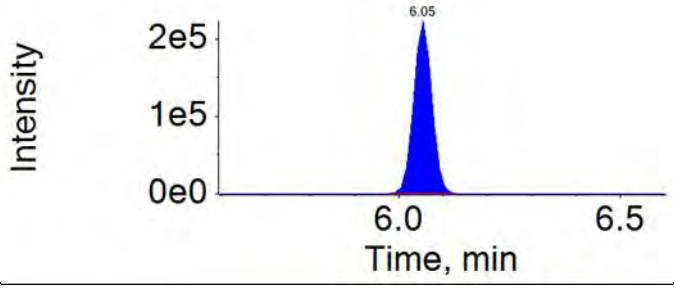


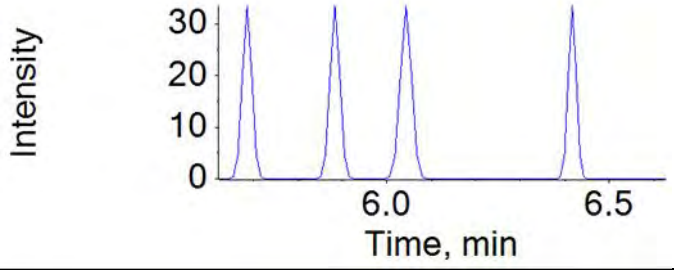
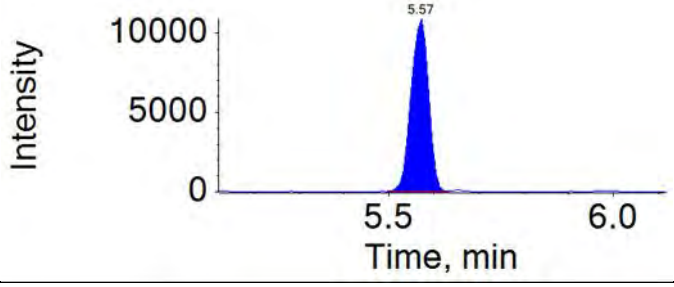
APPROVED
By JPT at 2:53 pm, 11/7/18

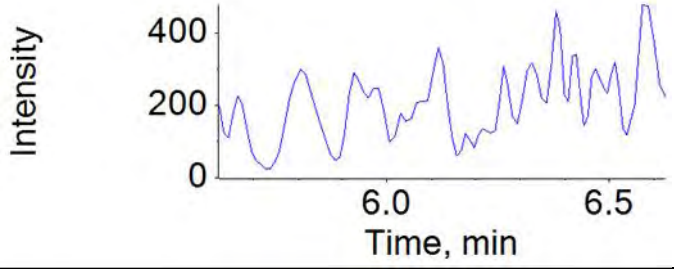
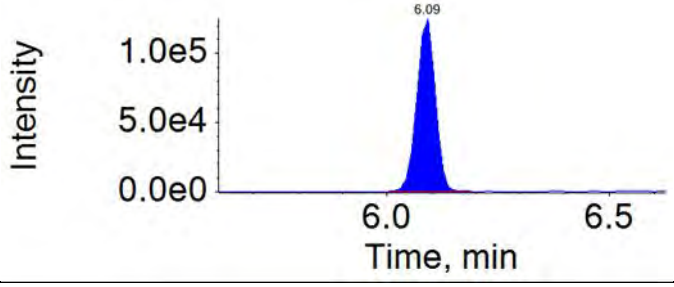
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

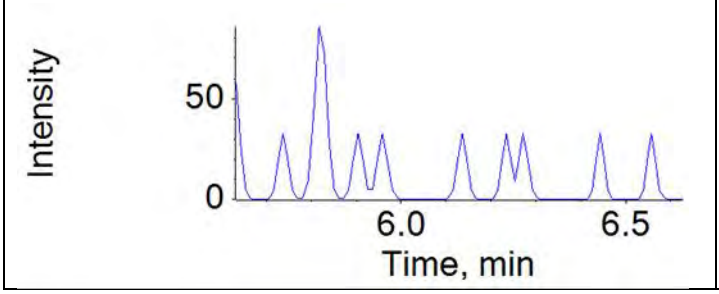
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

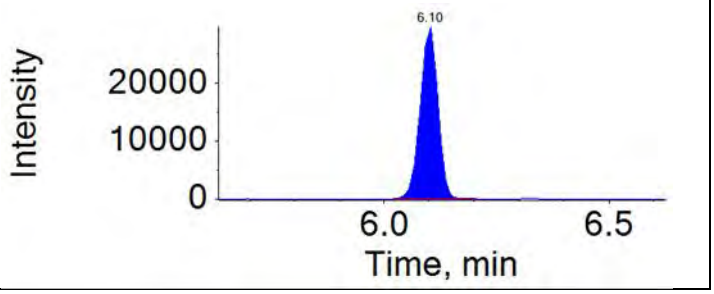
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

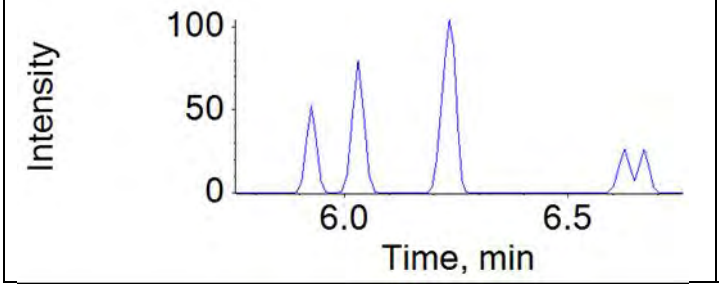
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

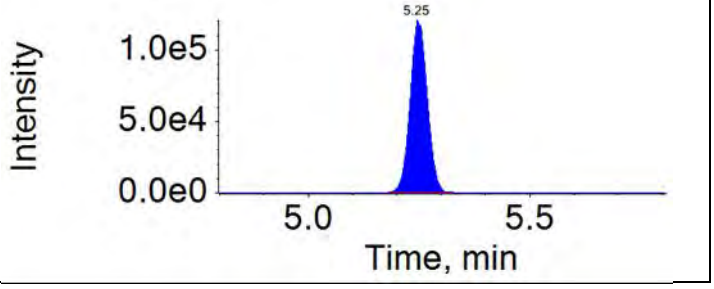
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



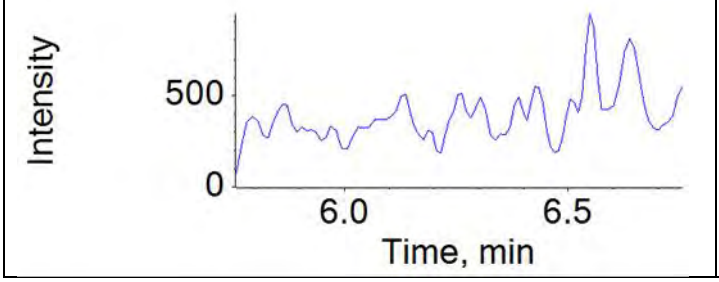


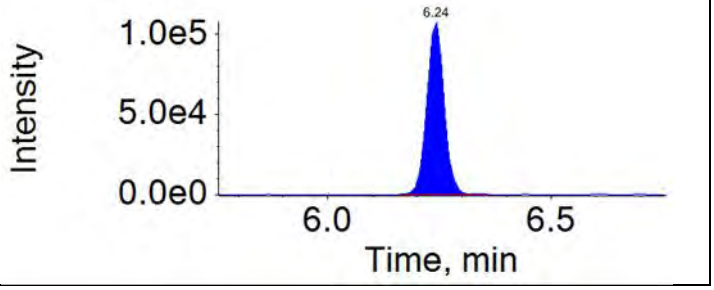
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



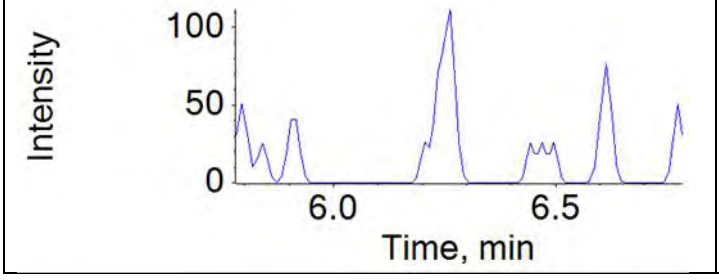


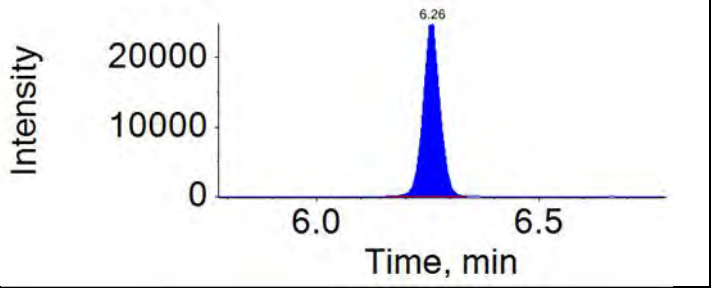
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





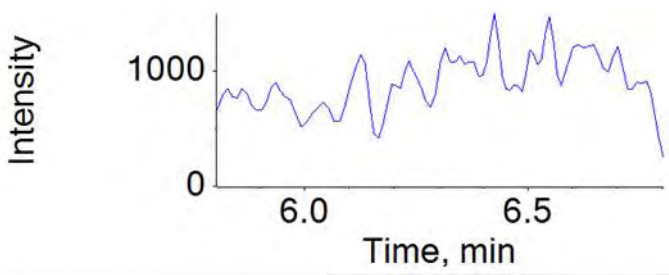
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

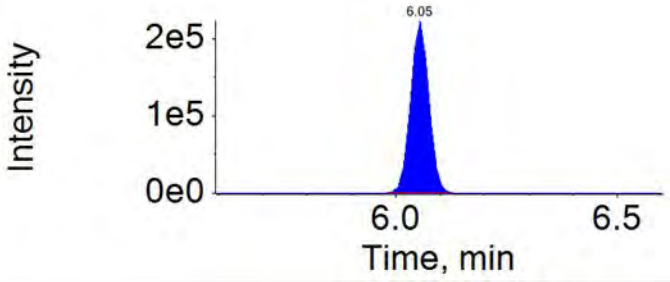




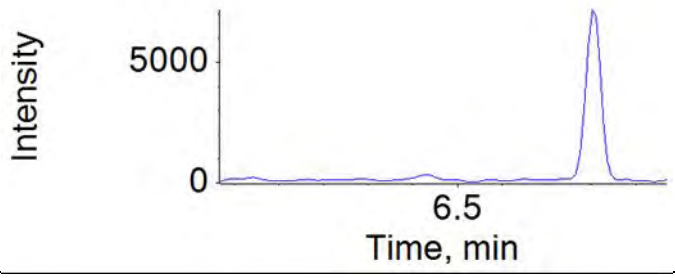
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

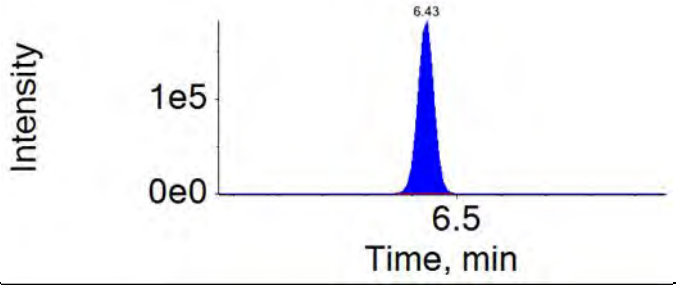
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



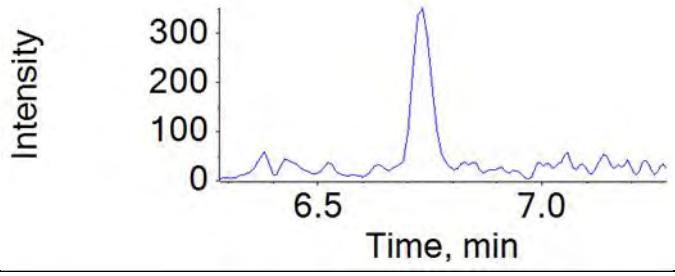


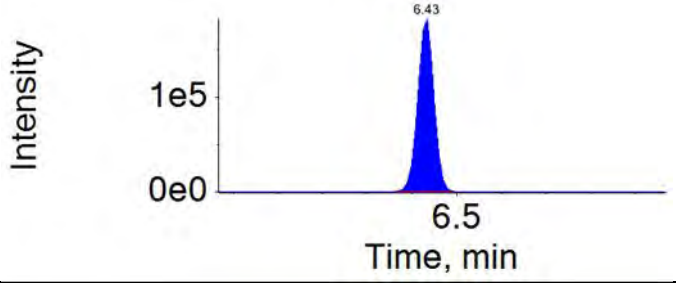
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



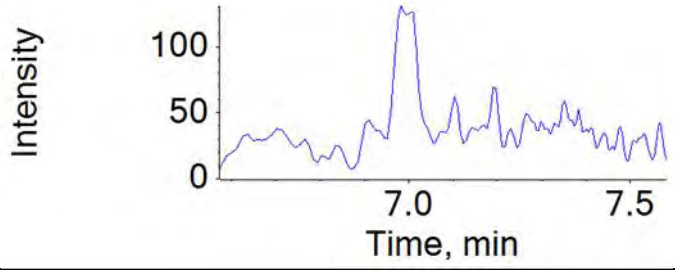


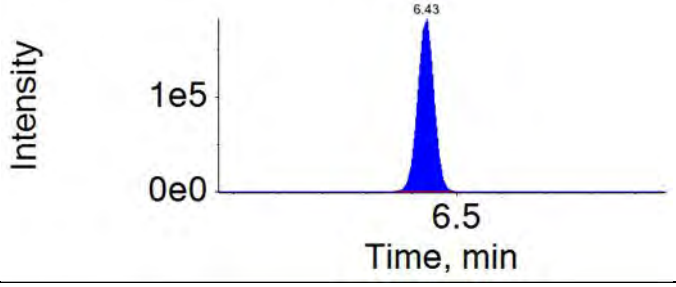
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

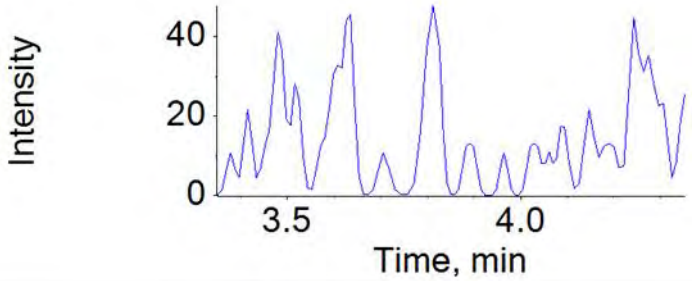
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-17.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	1.0000	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3576	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6359	N/A		50	
PFHxA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0115	N/A		50	
PFPeS	N/A	N/A	N/A	A	1.0000	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5384	N/A		50	
PFHxS	N/A	N/A	N/A	A	1.0000	N/A			
PFHxS_2	N/A	N/A	N/A	A	0.3569	N/A		50	
PFHpA	N/A	N/A	N/A	A	1.0000	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0577	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6752	N/A		50	
PFHpS	N/A	N/A	N/A	A	1.0000	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.3950	N/A		50	
PFOA	N/A	N/A	N/A	A	1.0000	N/A			
PFOA_2	N/A	N/A	N/A	A	0.0635	N/A		50	
PFOS	N/A	N/A	N/A	A	1.0000	N/A			
PFOS_2	N/A	N/A	N/A	A	0.3494	N/A		50	
PFNA	N/A	N/A	N/A	A	1.0000	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0207	N/A		50	
PFNS	N/A	N/A	N/A	A	1.0000	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4890	N/A		50	
PFDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0057	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.6169	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2206	N/A		50	
PFDS	N/A	N/A	N/A	A	1.0000	N/A			
PFDS_2	N/A	N/A	N/A	A	0.4648	N/A		50	
PFUnDA	N/A	N/A	N/A	A	1.0000	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.6082	N/A		50	
PFDoDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDoDA_2	N/A	N/A	N/A	A	0.0109	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.7082	N/A		50	
PFTrDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTrDA_2	N/A	N/A	N/A	A	0.0096	N/A		50	
PFTeDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTeDA_2	N/A	N/A	N/A	A	0.0055	N/A		50	
PFHxDA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0596	N/A		50	
PFODA	N/A	N/A	N/A	A	1.0000	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0257	N/A		50	

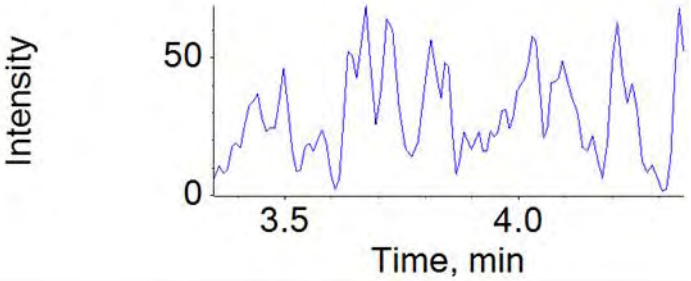
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

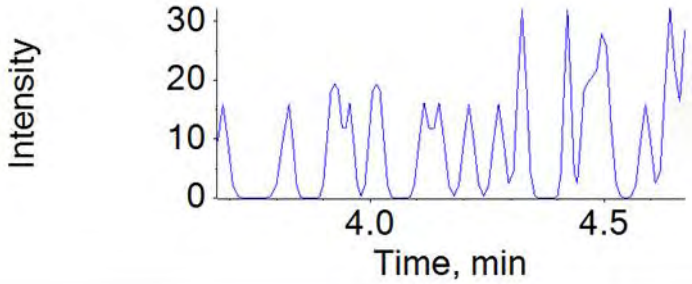
Component: PFBS
Primary Mass: 299.0 / 80.0



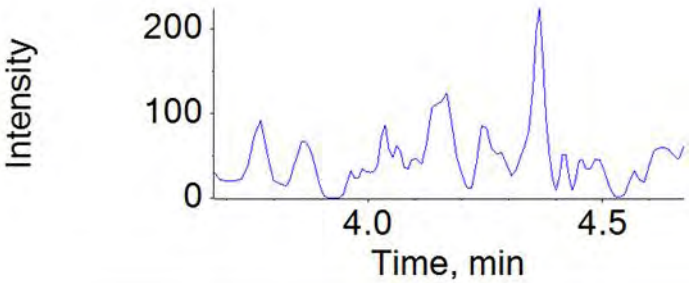
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



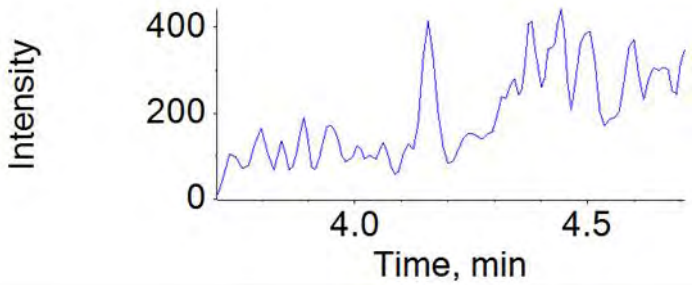
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



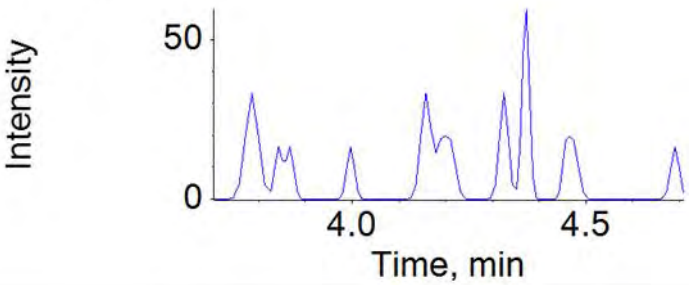
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



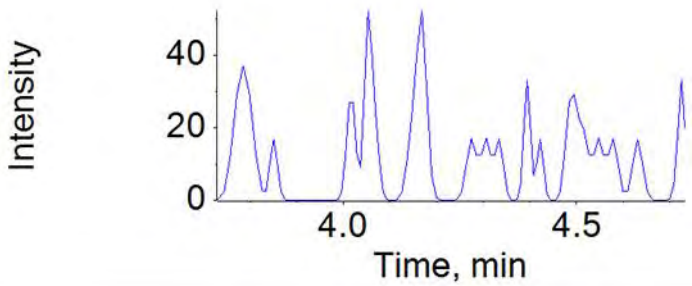
Component: PFHxA
Primary Mass: 313.0 / 269.0



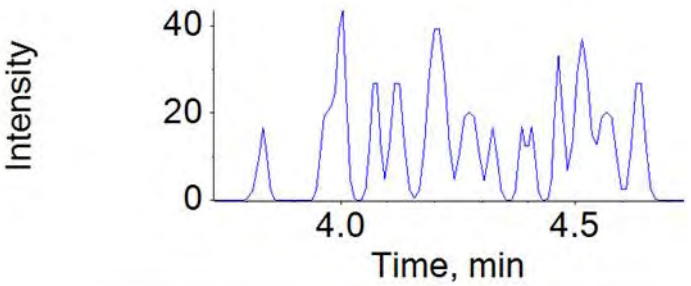
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



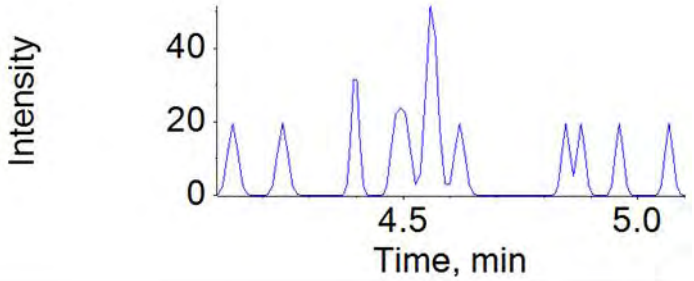
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



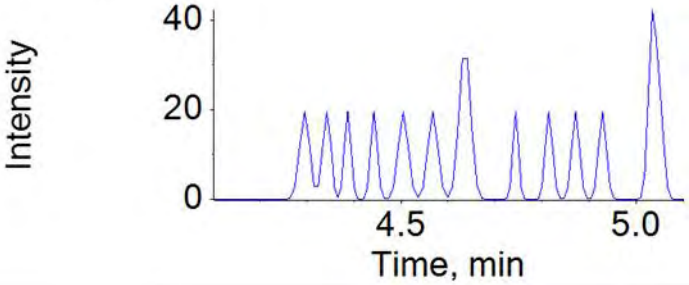
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

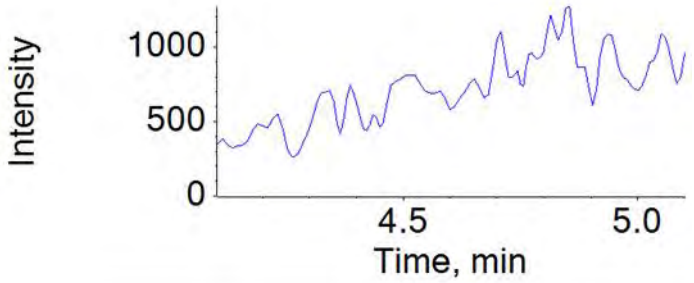
Component: PFHxS
Primary Mass: 399.0 / 80.0



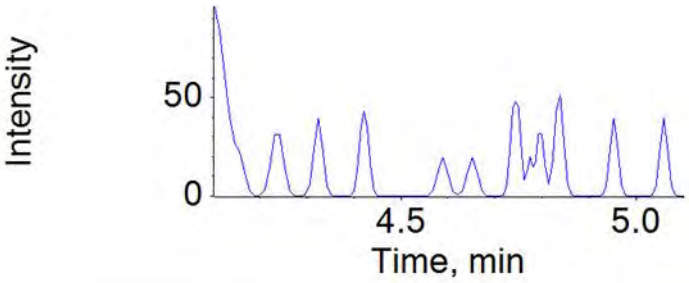
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



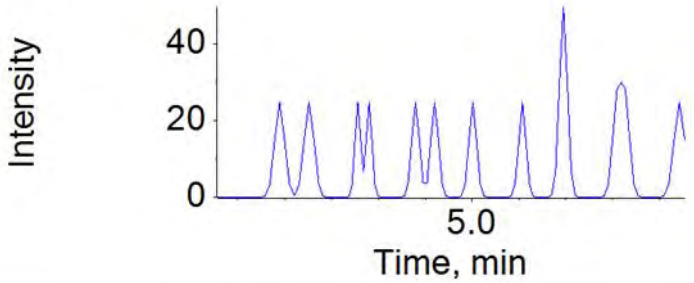
Component: PFHpA
Primary Mass: 363.0 / 319.0



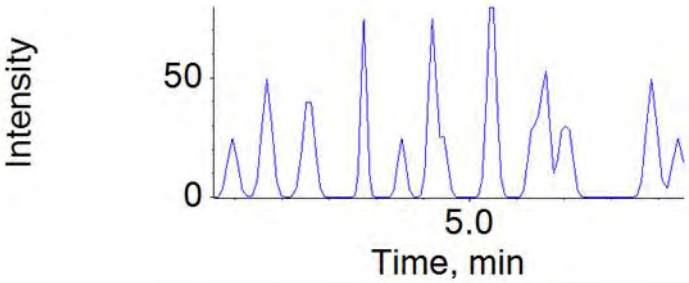
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



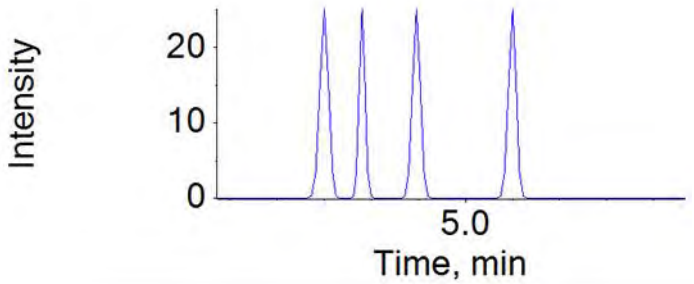
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



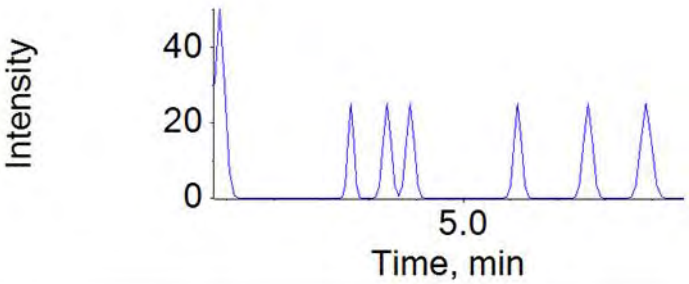
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



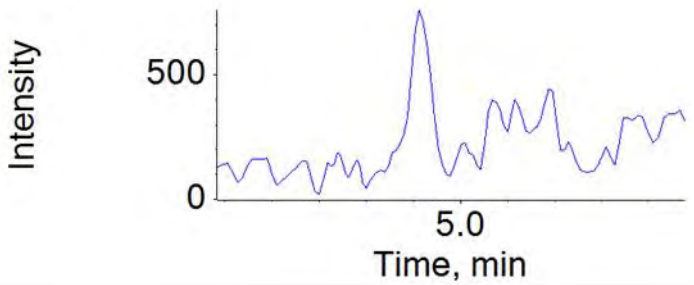
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



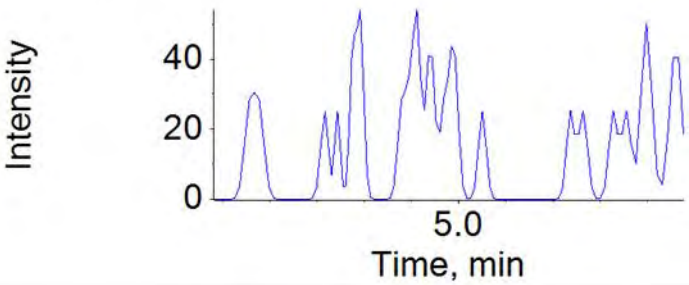
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

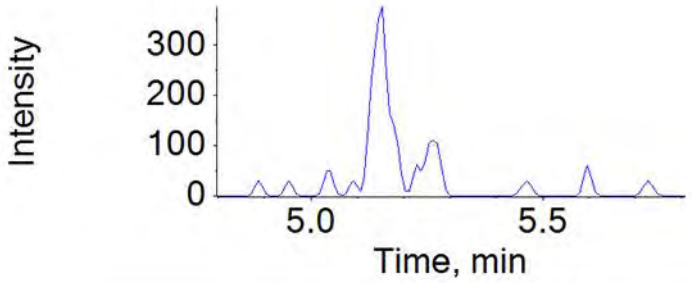
Component: PFOA
Primary Mass: 413.0 / 369.0



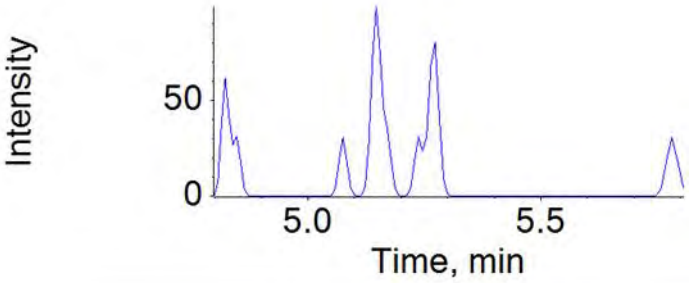
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



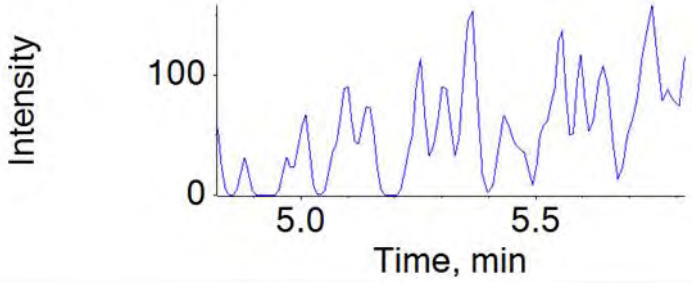
Component: PFOS
Primary Mass: 499.0 / 80.0



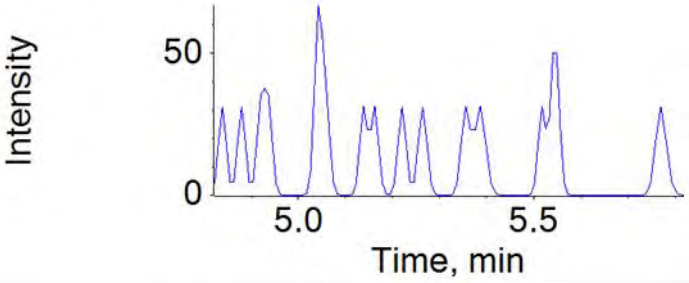
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



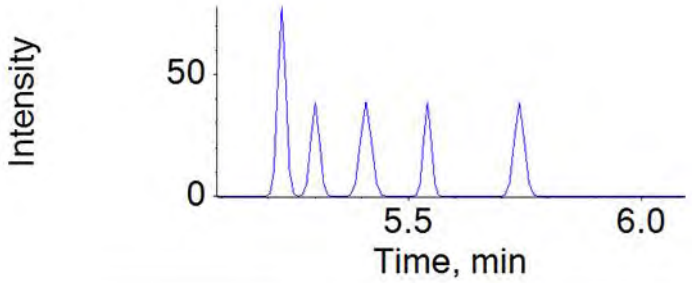
Component: PFNA
Primary Mass: 463.0 / 419.0



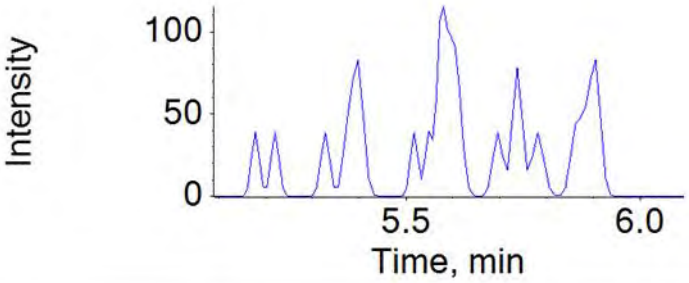
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



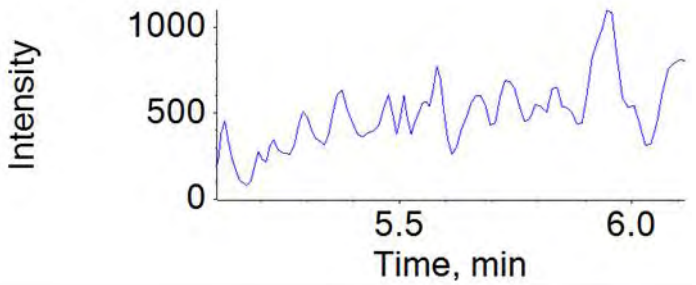
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



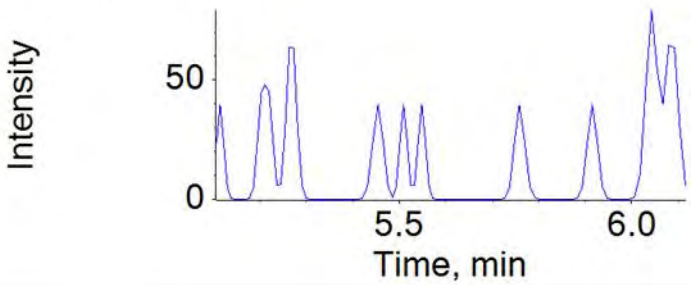
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

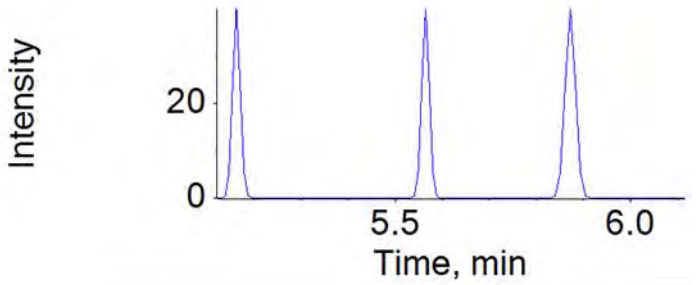
Component: PFDA
Primary Mass: 513.0 / 469.0



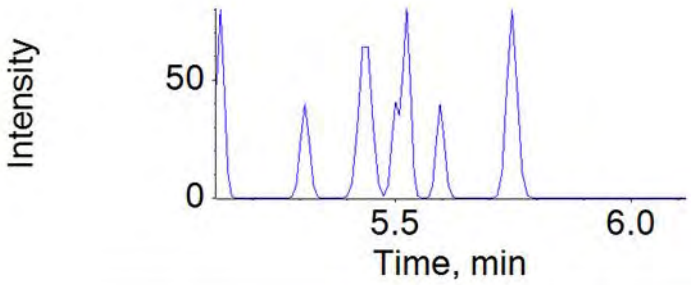
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



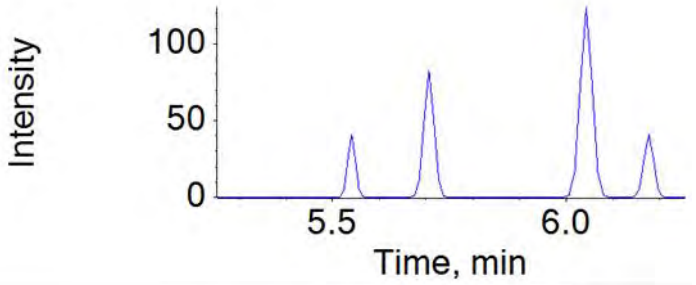
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



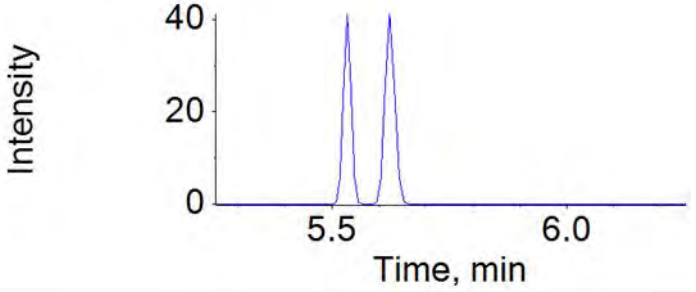
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



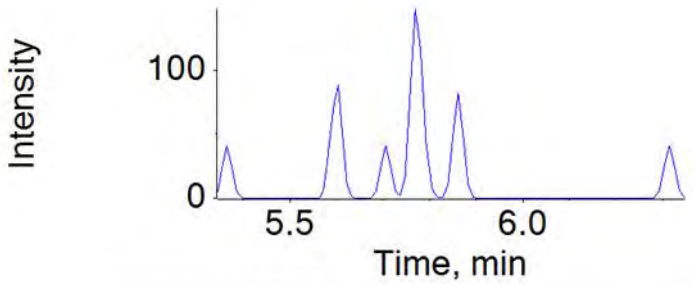
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



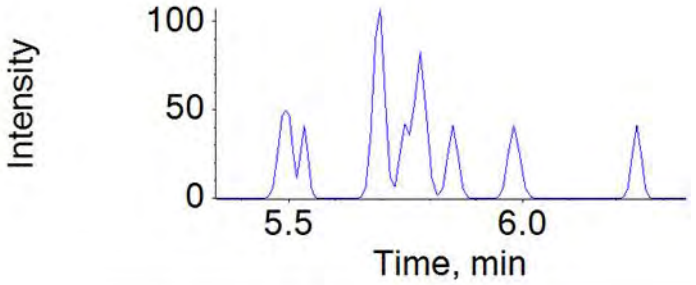
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



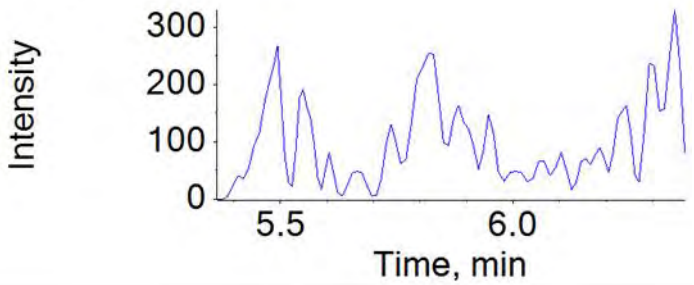
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



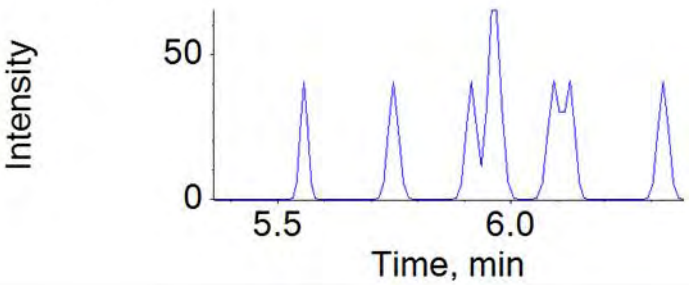
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

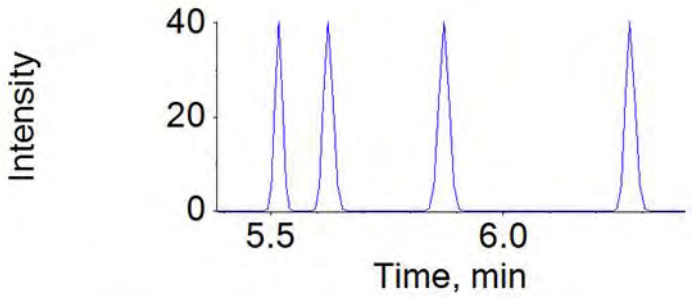
Component: PFUnDA
Primary Mass: 563.0 / 519.0



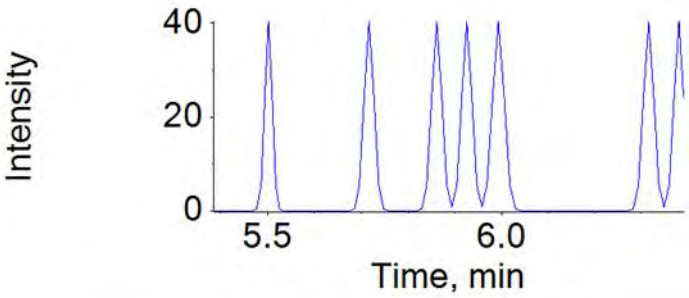
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



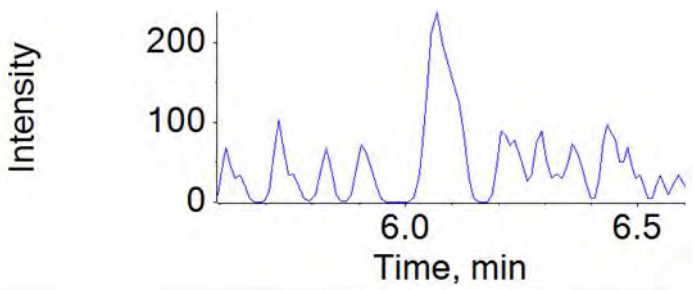
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



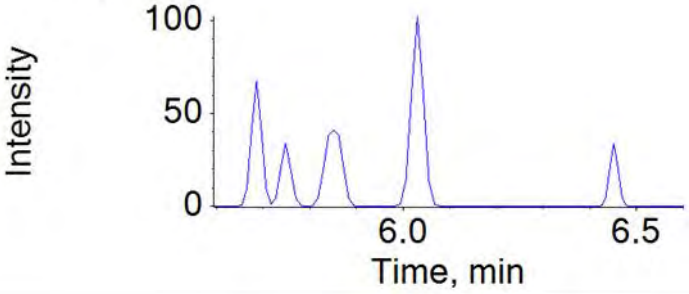
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



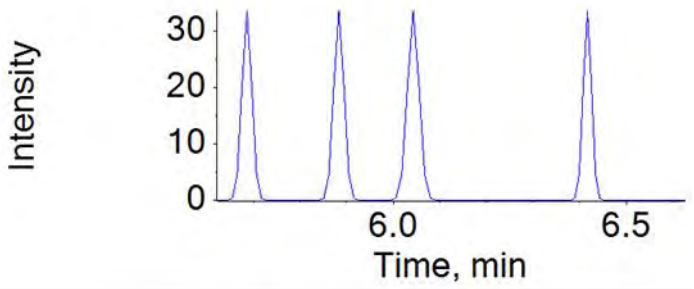
Component: PFDoDA
Primary Mass: 613.0 / 569.0



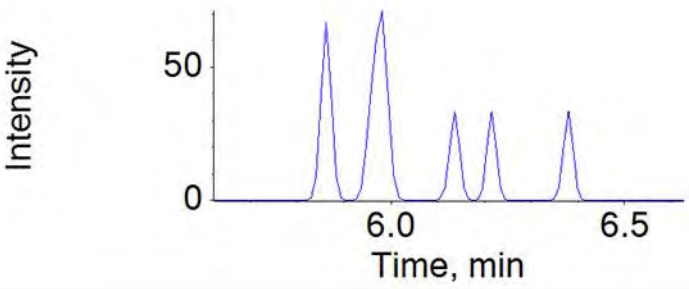
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



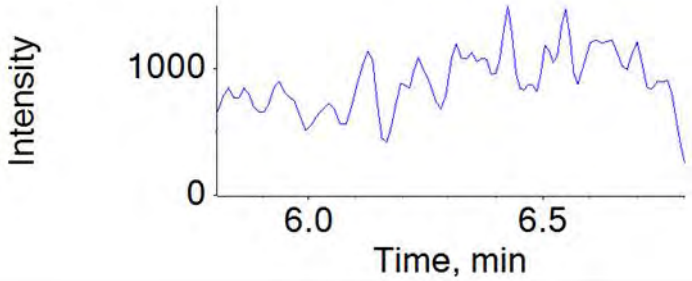
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



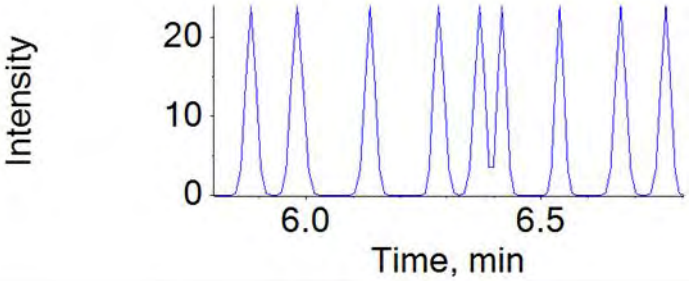
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

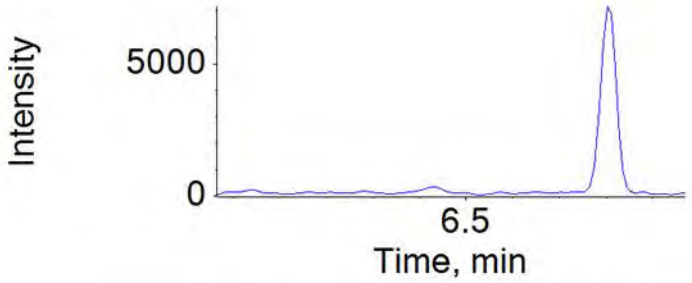
Component: PFTrDA
Primary Mass: 663.0 / 619.0



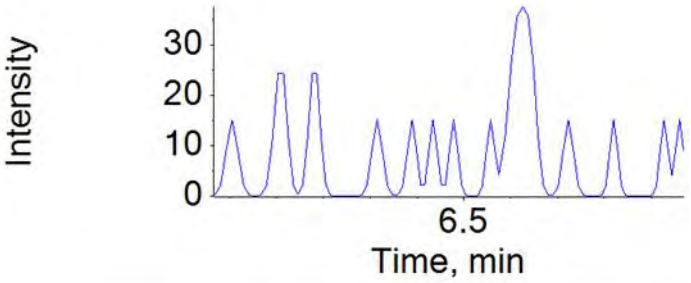
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



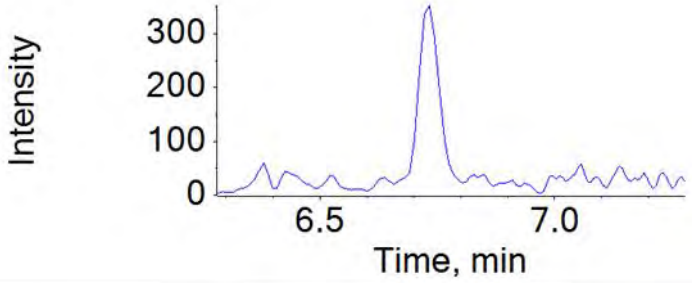
Component: PFTeDA
Primary Mass: 713.0 / 669.0



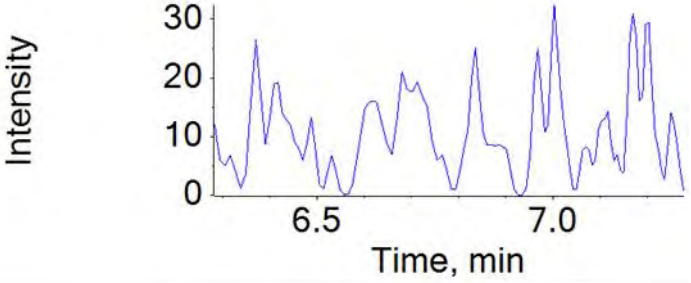
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



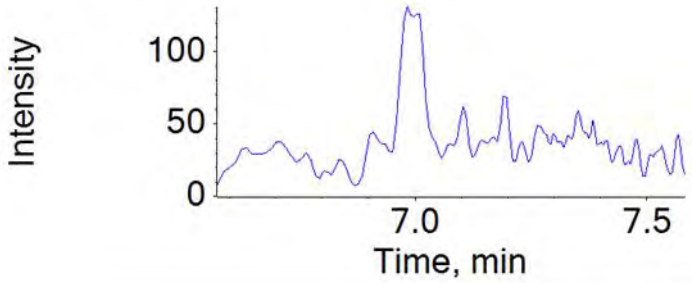
Component: PFHxDA
Primary Mass: 813.0 / 769.0



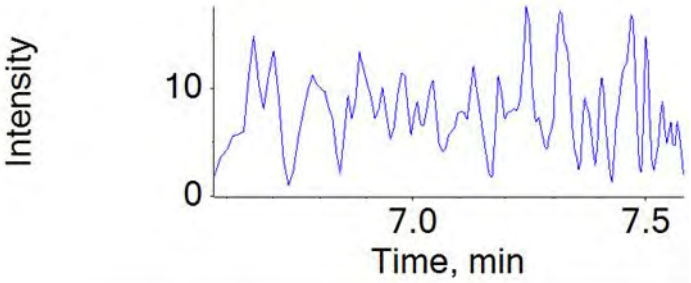
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	ICV			**Data File:**		18NOV07DCAL-18.wiff
Sample ID:	ICVMODX1833G			**Acquis Date:**		2018-11-07T10:51:59
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	10			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	748799.9	730410.6	3	50	
13C2-PFOA	5.0	501855.0	524423.6	-4	50	
13C4-PFOS	4.8	265586.7	274061.7	-3	50	
13C2-PFDA	5.0	309656.0	311442.1	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	809267.5	13C3-PFBA	748799.9	1.081	5.000	5.001	100	70-130	
E13C5-PFPeA	881218.2	13C3-PFBA	748799.9	1.177	5.000	5.127	103	70-130	
E13C3-PFBS	459507.5	13C3-PFBA	748799.9	0.614	4.650	4.504	97	70-130	
E13C2-4:2-FTS	53452.0	13C2-PFOA	501855.0	0.107	4.670	4.806	103	70-130	
E13C5-PFHxA	721013.6	13C2-PFOA	501855.0	1.437	5.000	5.285	106	70-130	
E13C3-PFHxS	351166.0	13C2-PFOA	501855.0	0.700	4.730	5.023	106	70-130	
E13C4-PFHpA	564695.4	13C2-PFOA	501855.0	1.125	5.000	5.119	102	70-130	
E13C2-6:2-FTS	37550.1	13C2-PFOA	501855.0	0.075	4.750	4.989	105	70-130	
E13C8-PFOA	985027.1	13C2-PFOA	501855.0	1.963	5.000	5.473	109	70-130	
E13C8-PFOS	289450.1	13C4-PFOS	265586.7	1.090	4.780	4.819	101	70-130	
E13C9-PFNA	531663.0	13C4-PFOS	265586.7	2.002	5.000	5.468	109	70-130	
E13C6-PFDA	669137.1	13C2-PFDA	309656.0	2.161	5.000	5.434	109	70-130	
E13C2-8:2-FTS	27983.4	13C2-PFDA	309656.0	0.090	4.790	4.782	100	70-130	
E13C8-PFOSA	741232.2	13C2-PFDA	309656.0	2.394	5.000	5.223	104	70-130	
Ed3-NMeFOSAA	76665.4	13C2-PFDA	309656.0	0.248	5.000	4.604	92	70-130	
E13C7-PFUnDA	292761.5	13C2-PFDA	309656.0	0.945	5.000	5.454	109	70-130	
Ed5-NEtFOSAA	78938.7	13C2-PFDA	309656.0	0.255	5.000	5.899	118	70-130	
E13C2-PFDoDA	580675.1	13C2-PFDA	309656.0	1.875	5.000	5.055	101	70-130	
Ed7-NMePFOSAE	334001.4	13C2-PFDA	309656.0	1.079	5.000	5.016	100	70-130	
Ed3-NMePFOSA	79719.1	13C2-PFDA	309656.0	0.257	5.000	4.713	94	70-130	
Ed9-NEtPFOSAE	293829.7	13C2-PFDA	309656.0	0.949	5.000	5.419	108	70-130	
Ed5-NEtPFOSA	65412.9	13C2-PFDA	309656.0	0.211	5.000	4.891	98	70-130	
E13C2-PFTeDA	427601.6	13C2-PFDA	309656.0	1.381	5.000	4.971	99	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

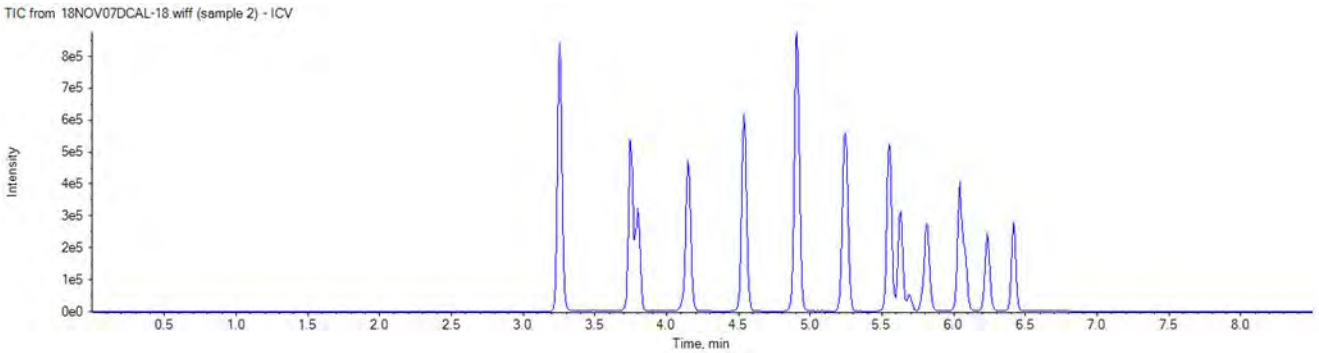
Analyte Quantitation Peak Table

Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-18.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	307777.1		A	13C4-PFBA	3.25	809267.5	0.380	2.226
PFPeA	3.75	1.000	325574.9		A	13C5-PFPeA	3.75	881218.2	0.369	2.196
PFBS	3.80	1.000	159719.5		A	13C3-PFBS	3.80	459507.5	0.348	1.752
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.11	53452.0	N/A	
PFHxA	4.15	1.000	397434.6		A	13C5-PFHxA	4.15	721013.6	0.551	2.364
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.80	459507.5	N/A	
PFHxS	4.54	1.000	126635.3		A	13C3-PFHxS	4.54	351166.0	0.361	1.828
PFHpA	4.54	1.000	390197.1		A	13C4-PFHpA	4.54	564695.4	0.691	2.324
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	37550.1	N/A	
PFHpS	4.90	1.080	126812.1		A	13C3-PFHxS	4.54	351166.0	0.361	1.889
PFOA	4.91	1.000	387215.1		M	13C8-PFOA	4.91	985027.1	0.393	2.213
PFOS	5.23	1.000	114911.8		M	13C8-PFOS	5.23	289450.1	0.397	2.059
PFNA	5.25	1.000	329644.4		A	13C9-PFNA	5.25	531663.0	0.620	2.317
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.23	289450.1	N/A	
PFDA	5.55	1.000	262760.0		A	13C6-PFDA	5.55	669137.1	0.393	2.160
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.55	27983.4	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.63	741232.2	N/A	
NMeFOSAA	5.69	1.000	33916.6		A	d3-NMeFOSAA	5.69	76665.4	0.442	2.276
PFDS	5.79	1.110	65962.5		A	13C8-PFOS	5.23	289450.1	0.228	2.177
PFUnDA	5.81	1.000	225137.5		A	13C7-PFUnDA	5.81	292761.5	0.769	2.205
NEtFOSAA	5.83	1.000	29687.2		A	d5-NEtFOSAA	5.82	78938.7	0.376	1.616
PFDoDA	6.04	1.000	232949.2		A	13C2-PFDoDA	6.04	580675.1	0.401	2.174
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.55	27983.4	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	334001.4	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.09	79719.1	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.23	289450.1	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.23	293829.7	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.25	65412.9	N/A	
PFTrDA	6.24	1.030	206908.4		A	13C2-PFDoDA	6.04	580675.1	0.356	2.247
PFTeDA	6.42	1.000	157975.3		A	13C2-PFTeDA	6.42	427601.6	0.369	2.169
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	427601.6	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	427601.6	N/A	

Total Ion Chromatogram

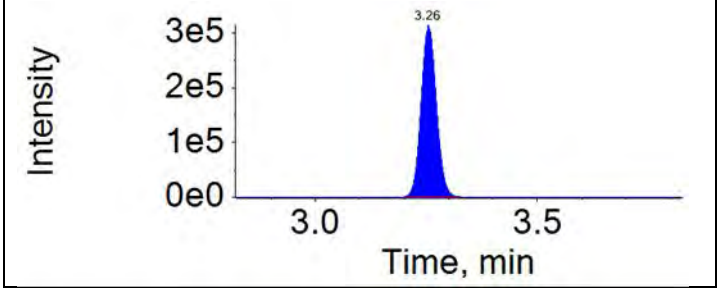


APPROVED
By JPT at 2:53 pm, 11/7/18

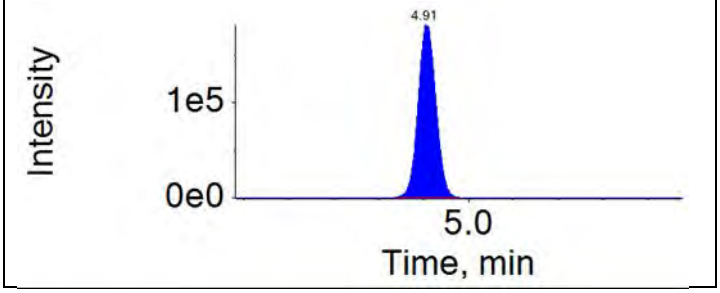
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

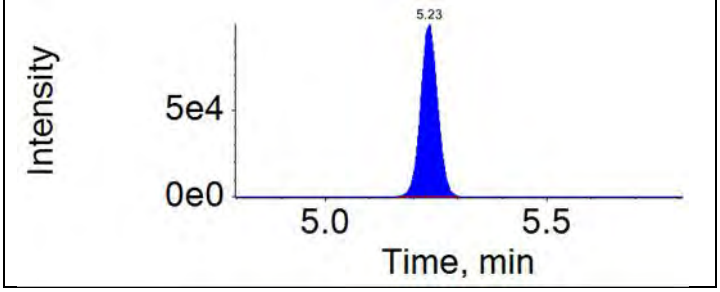
Injection Standard: 13C3-PFBA
216.0 / 172.0



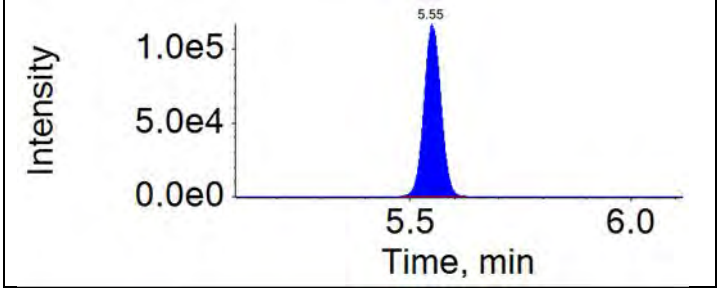
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



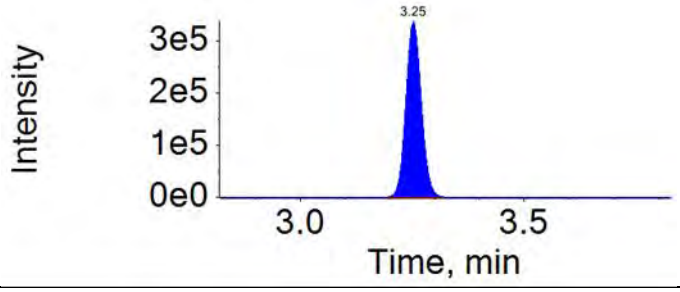
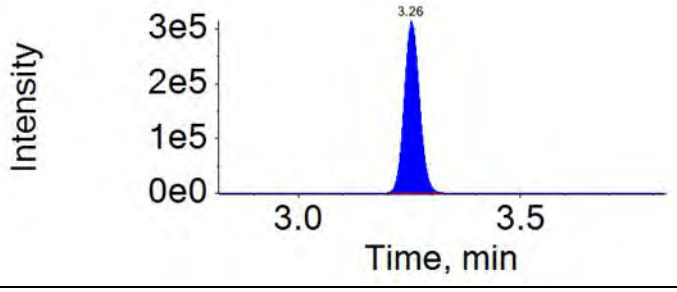
Injection Standard: 13C2-PFDA
515.0 / 470.0

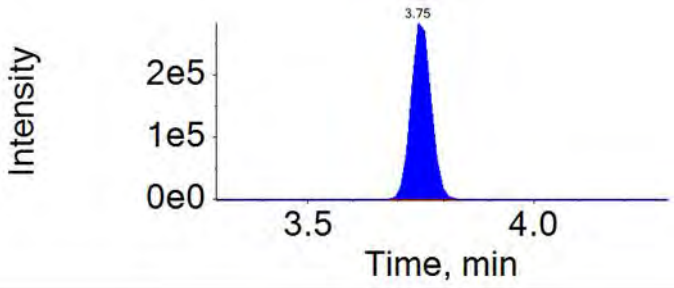
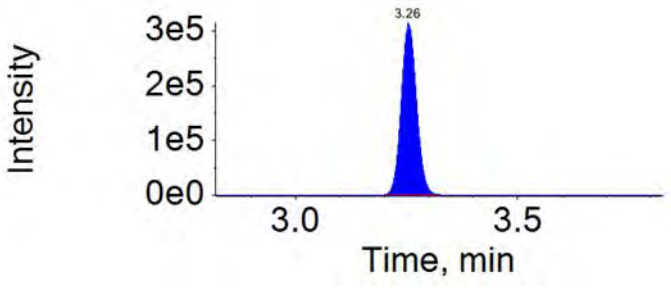


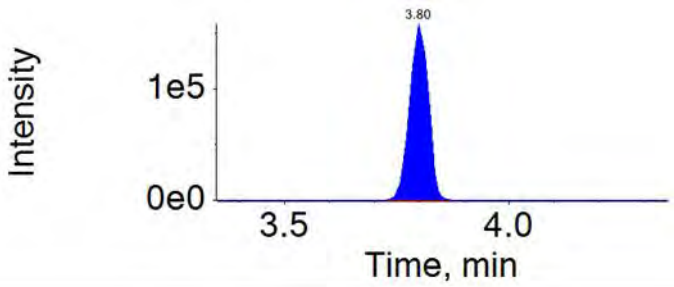
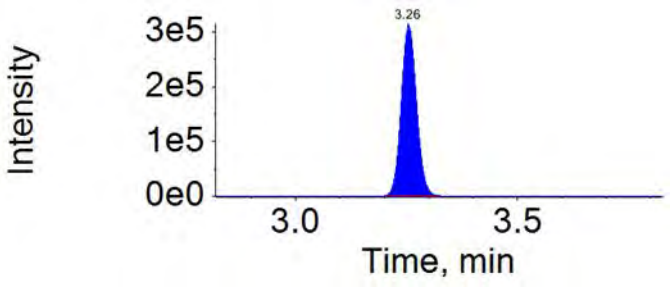
APPROVED
By JPT at 2:53 pm, 11/7/18

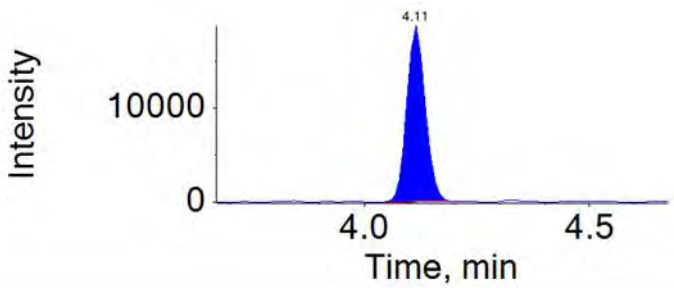
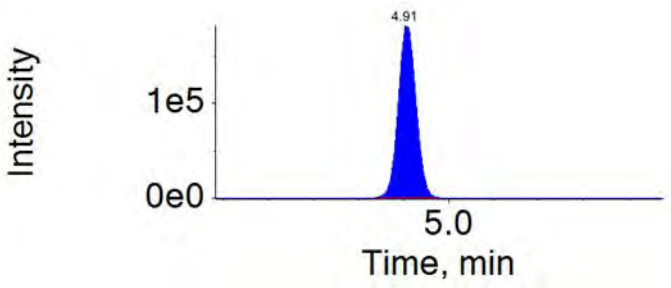
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

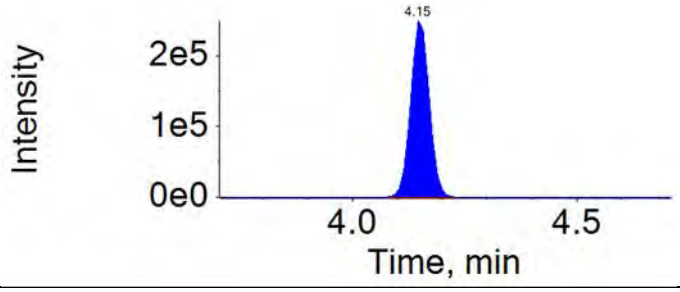
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

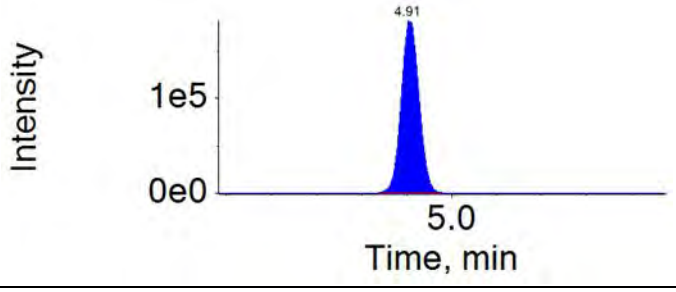
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

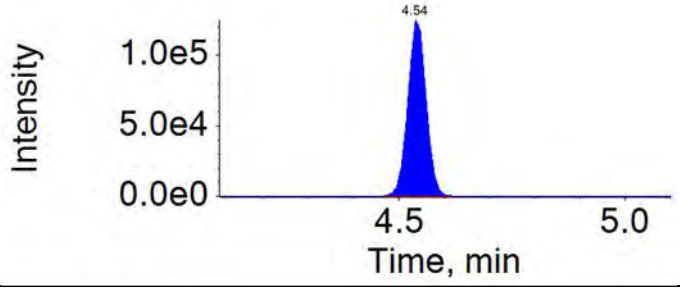
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

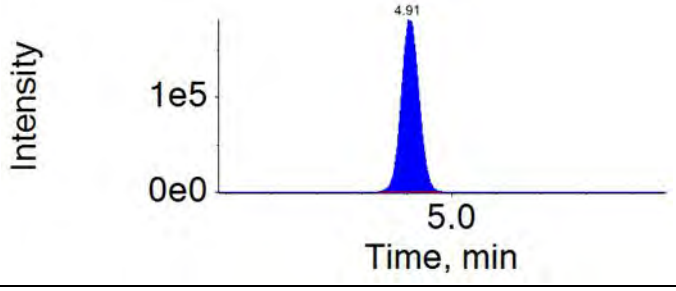
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



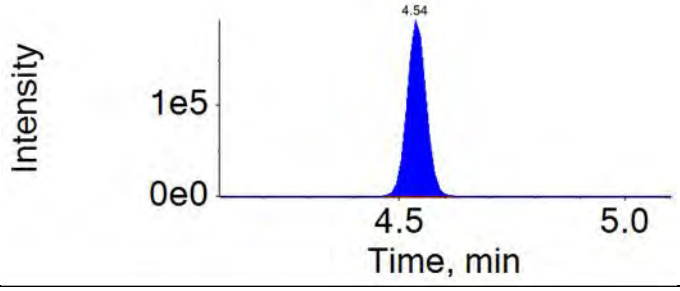


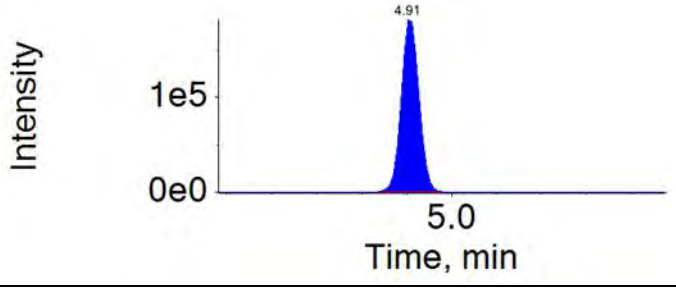
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



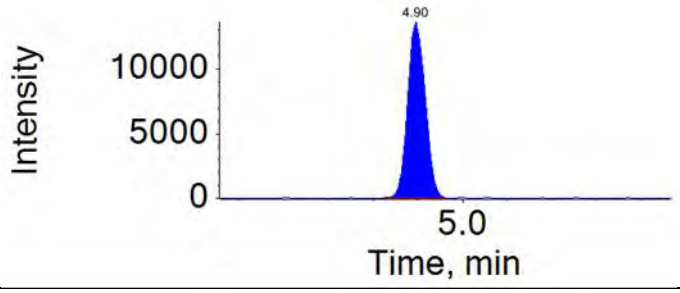


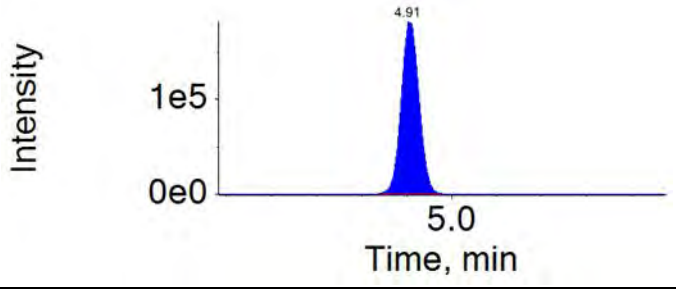
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

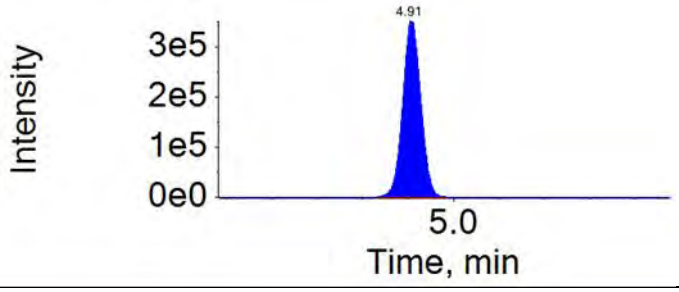
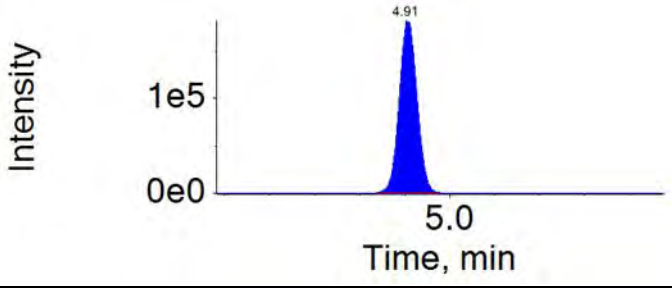


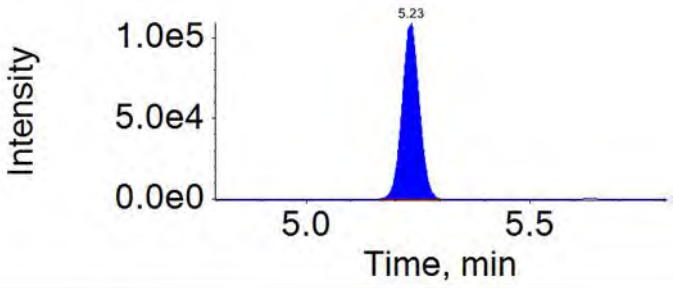
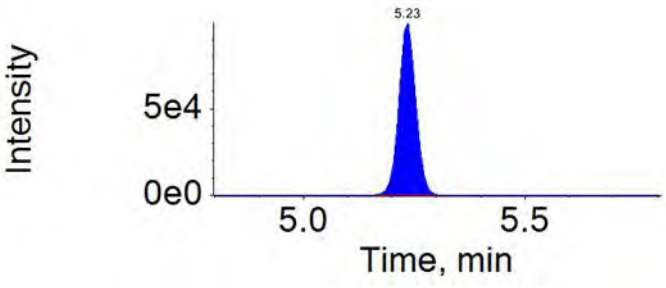


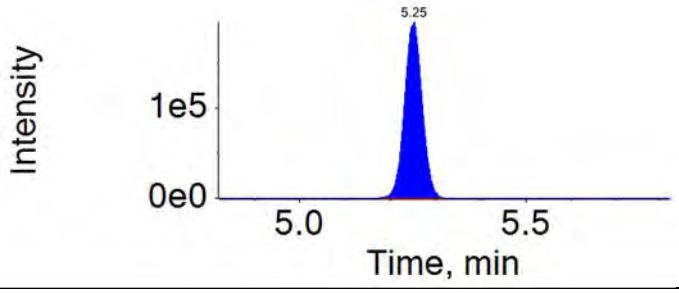
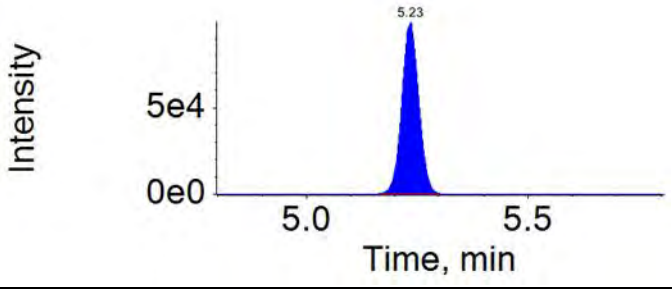
APPROVED
By JPT at 2:53 pm, 11/7/18

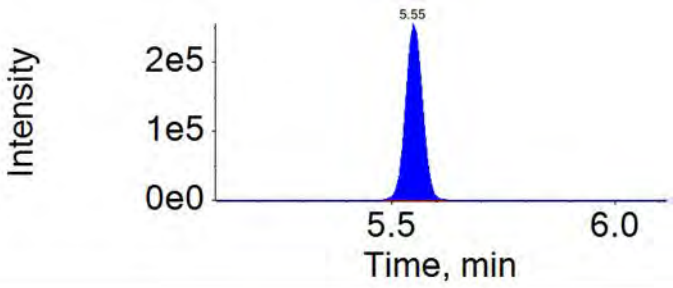
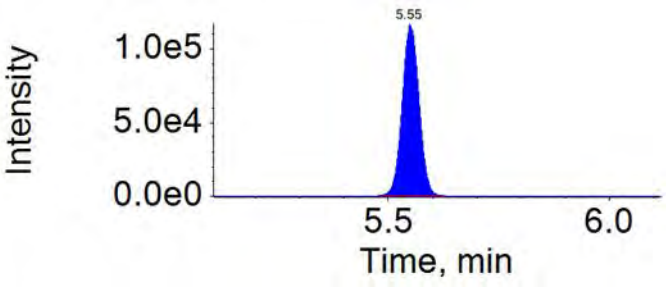
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

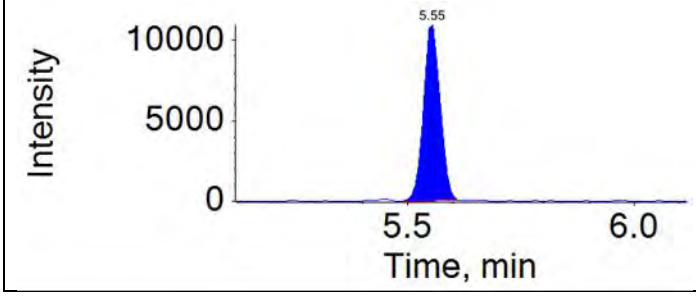
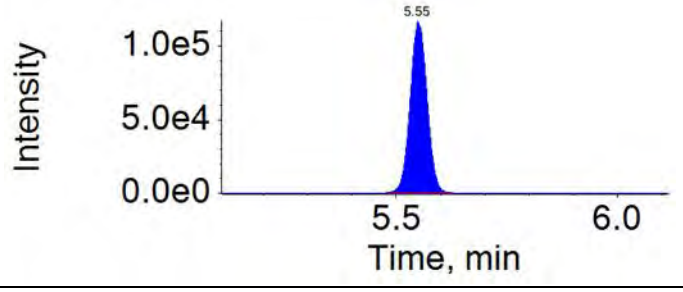
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

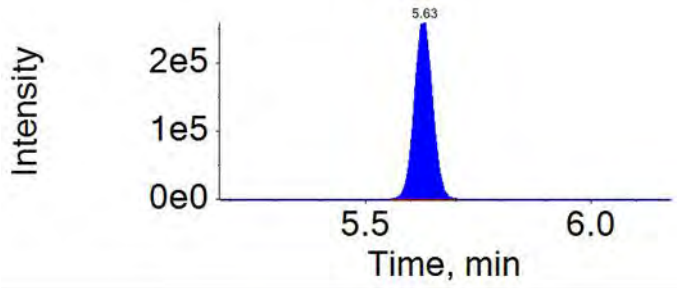
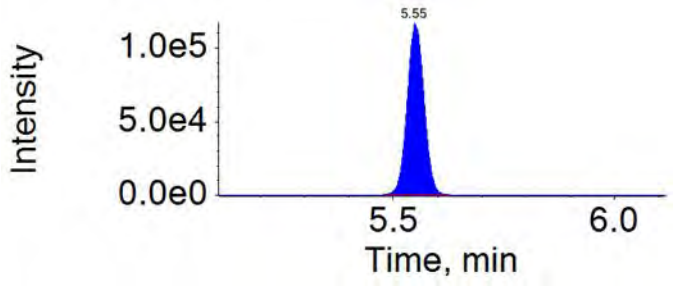
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

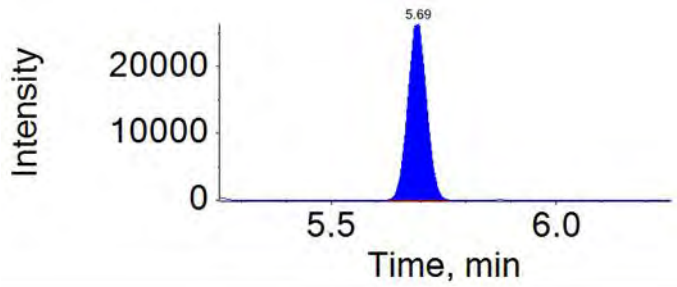
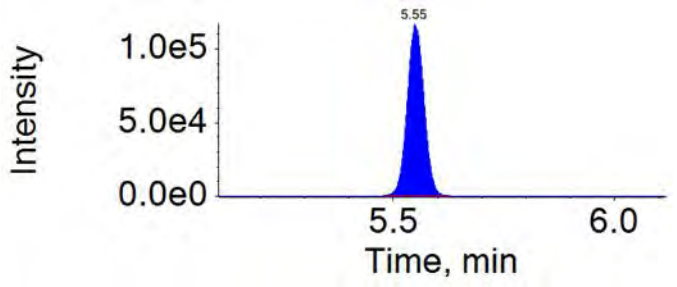
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

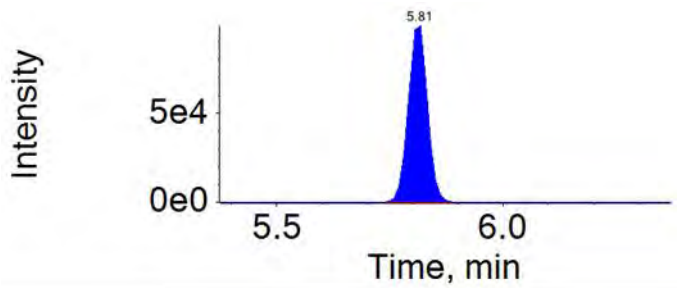
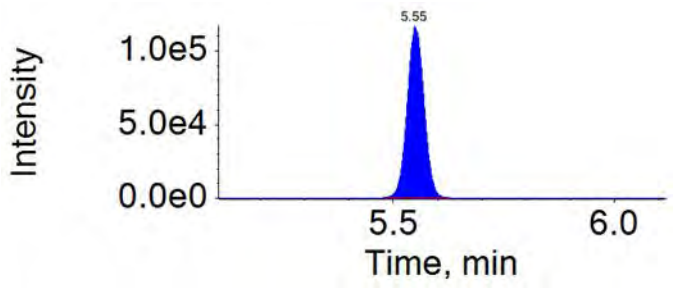
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

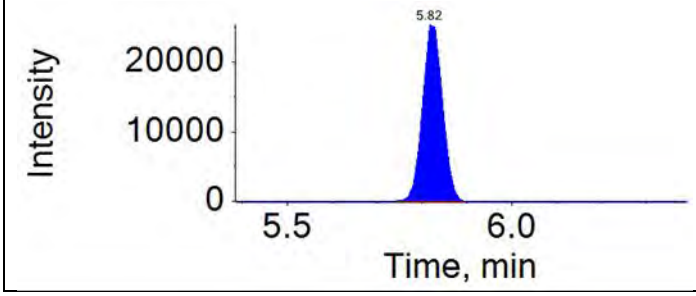
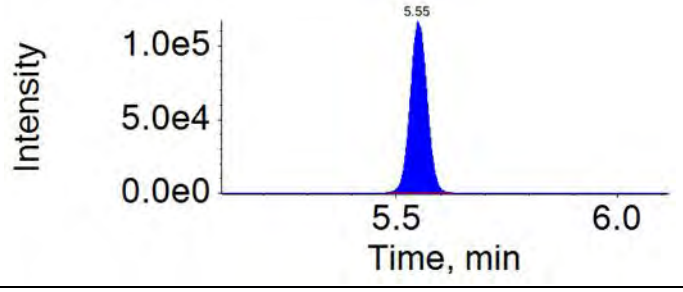
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

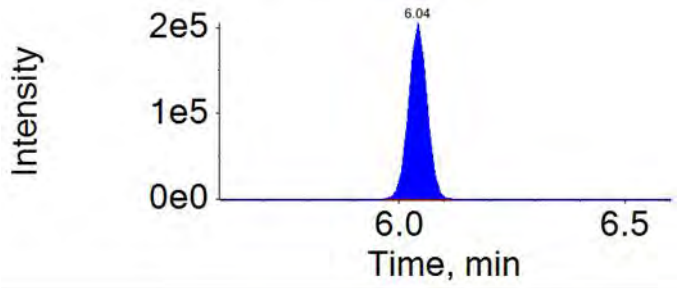
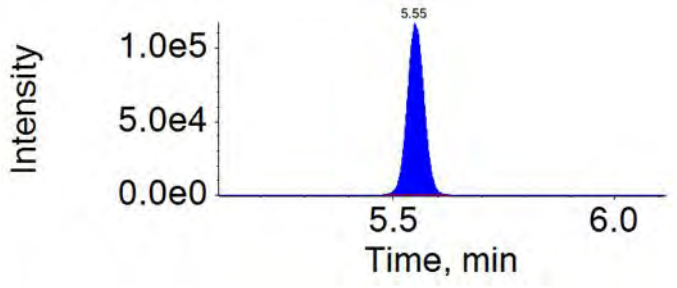
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

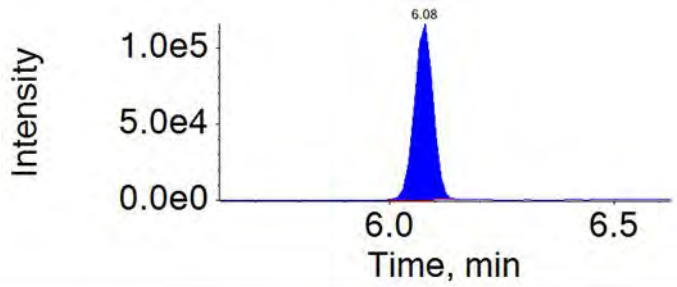
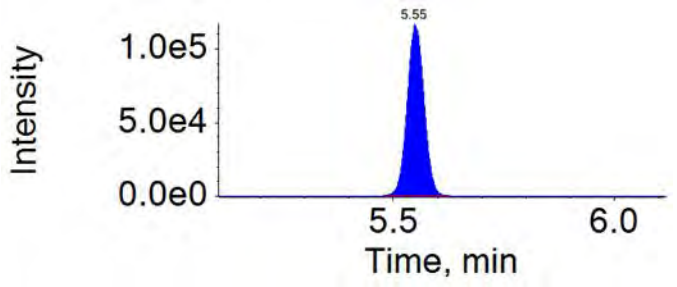
APPROVED
By JPT at 2:53 pm, 11/7/18

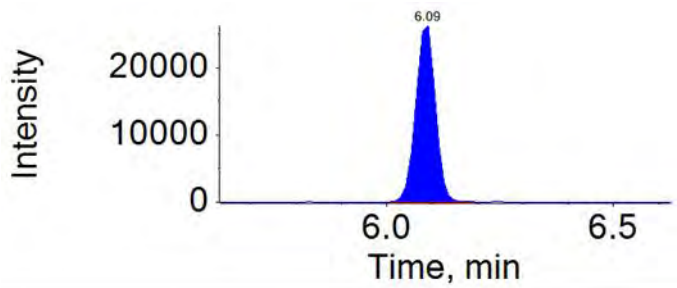
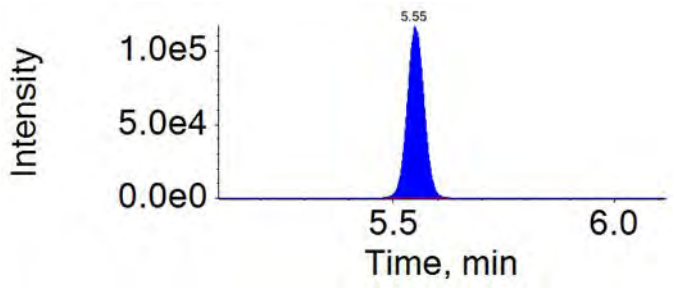
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

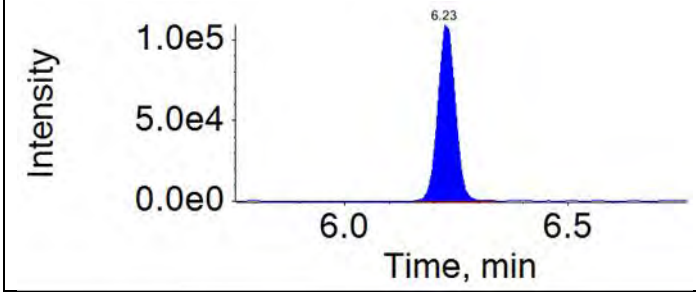
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

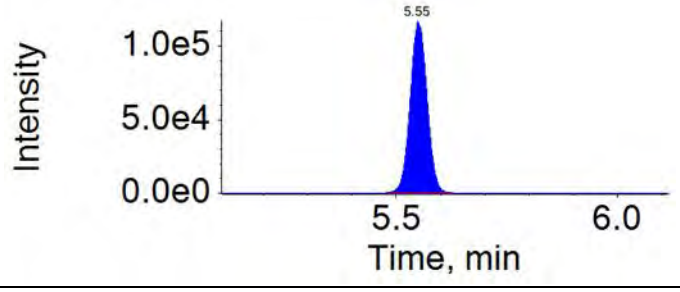
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

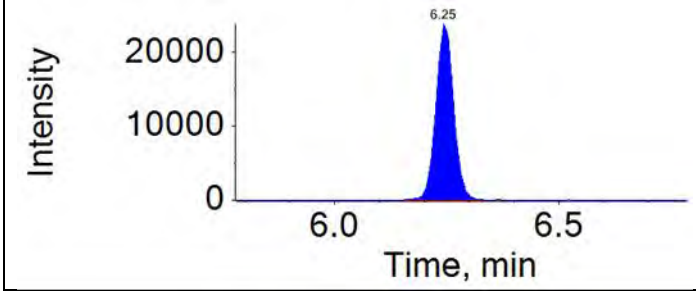
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

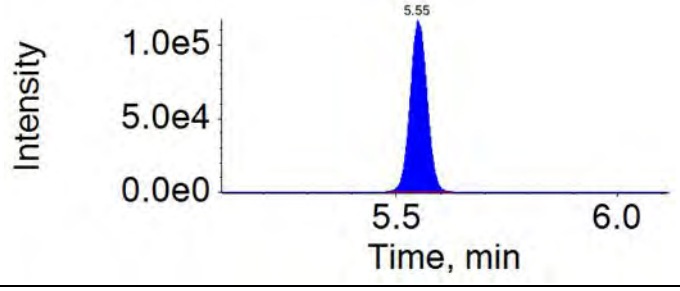
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



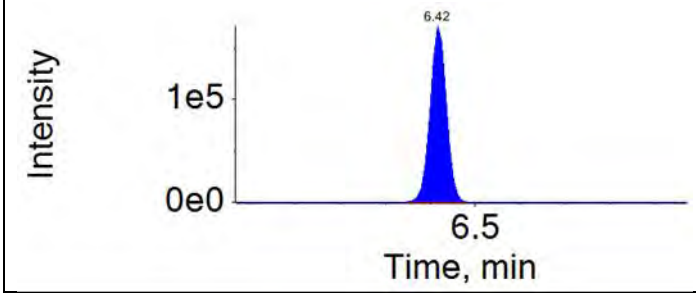


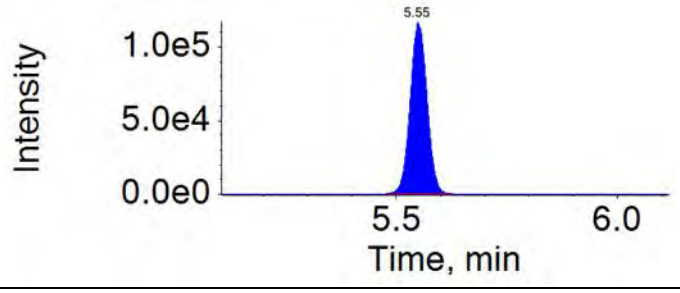
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



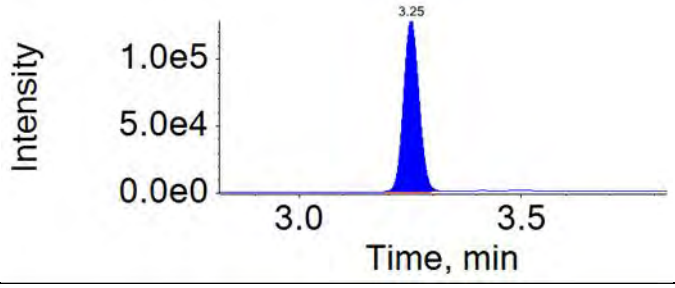


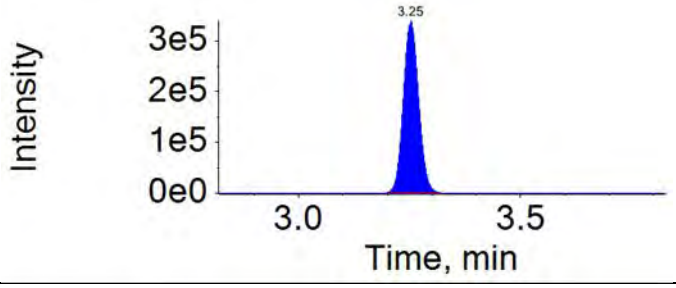
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

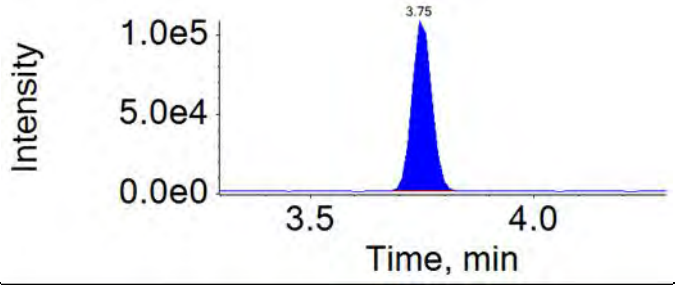
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

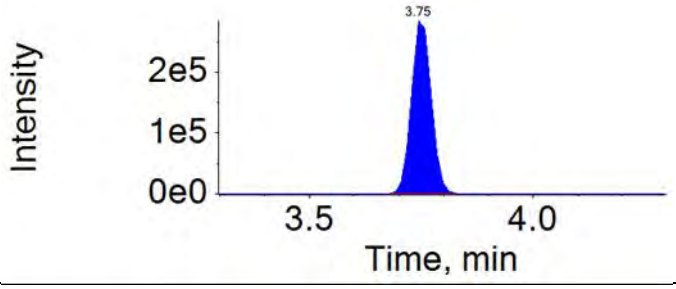
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



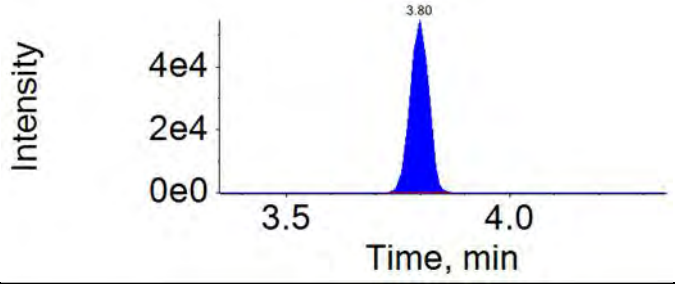


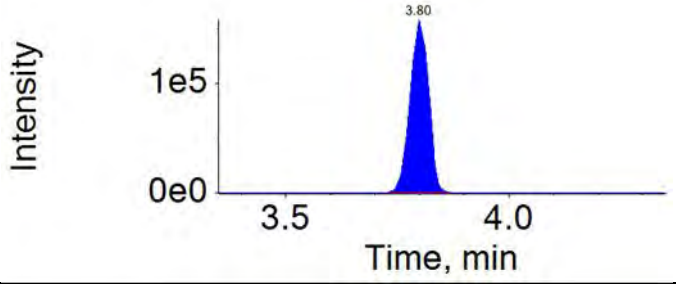
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



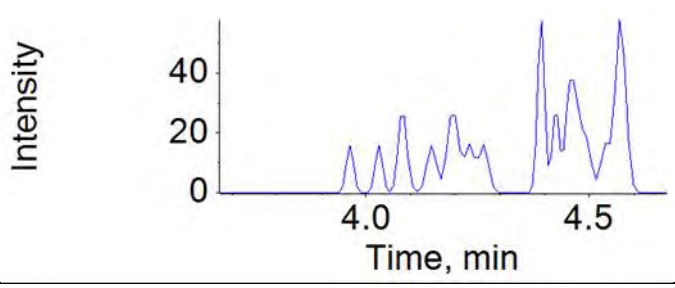


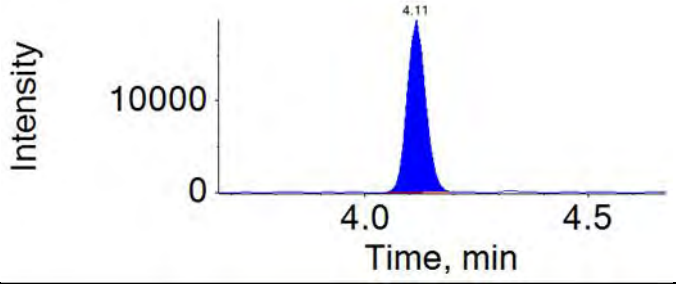
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



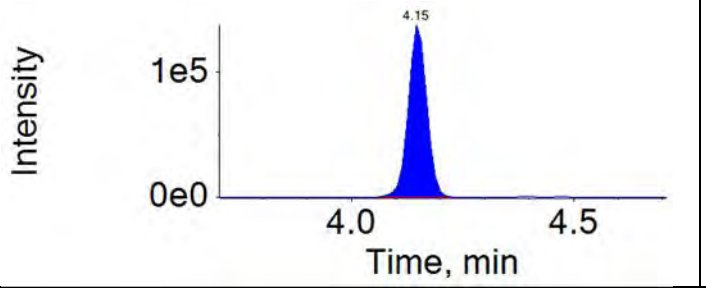


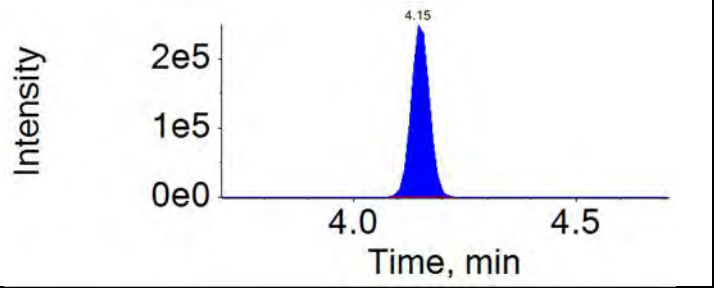
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

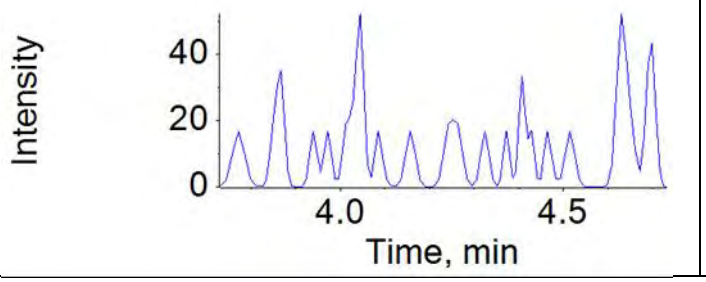
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

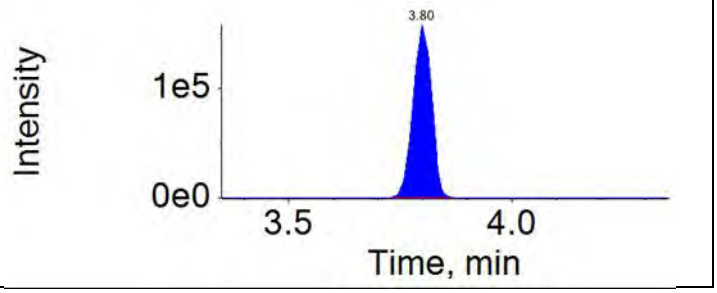
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



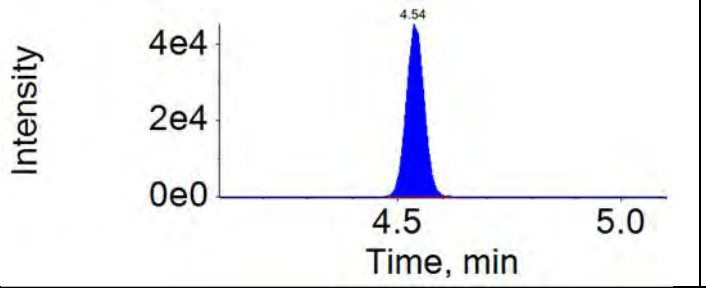


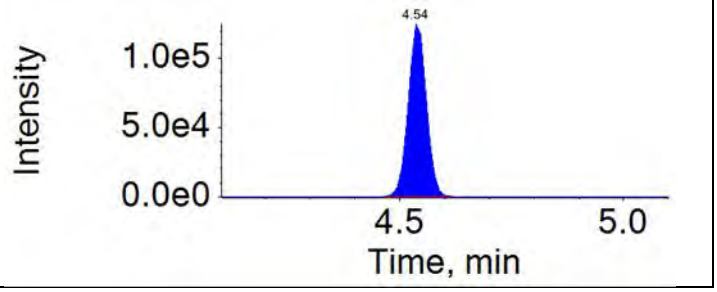
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



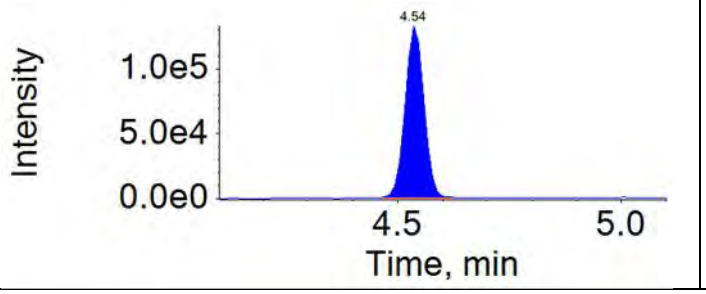


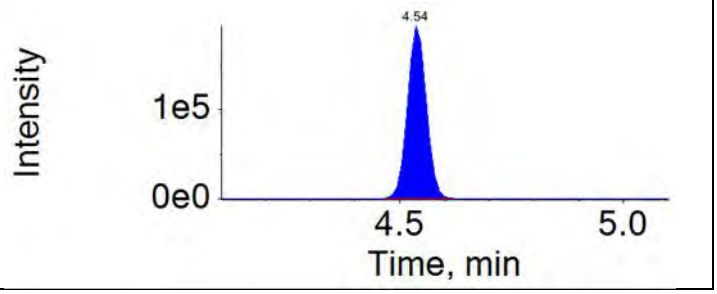
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



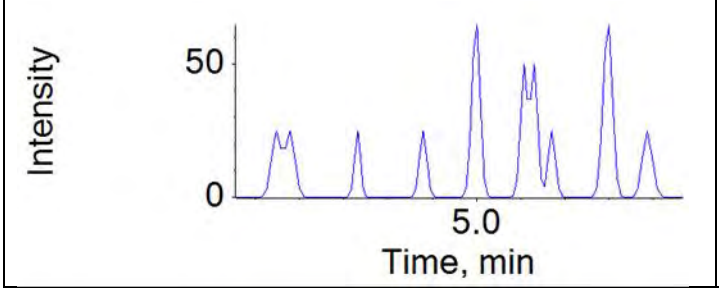


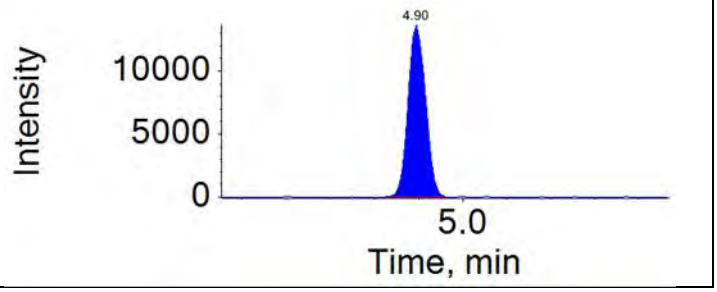
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

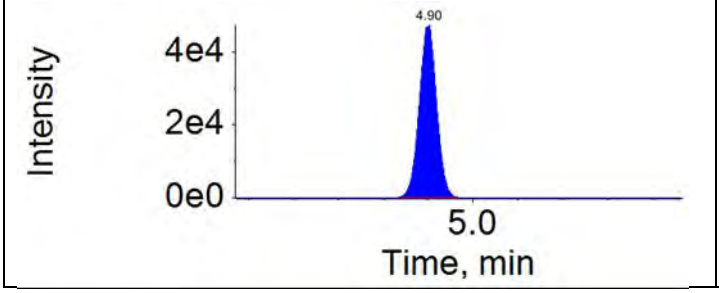
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

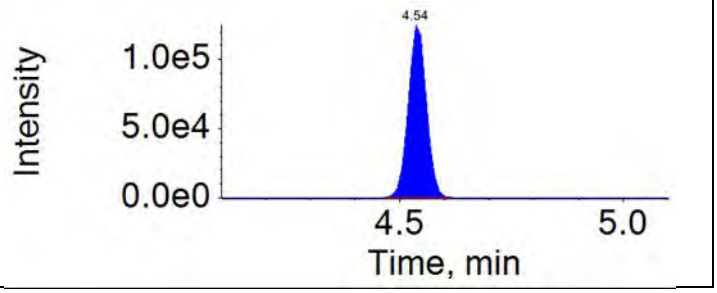
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



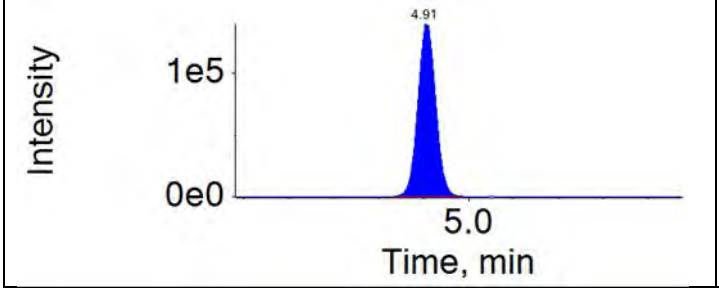


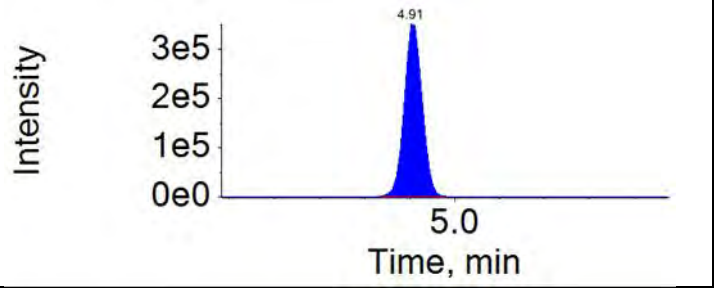
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



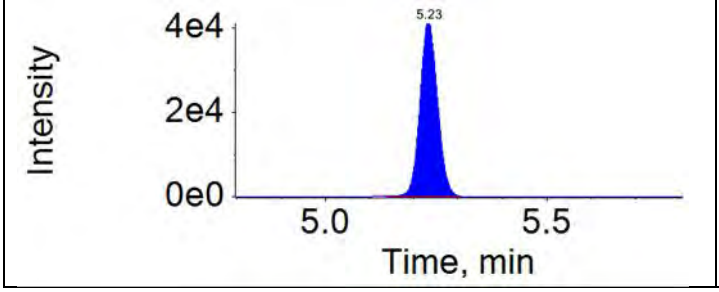


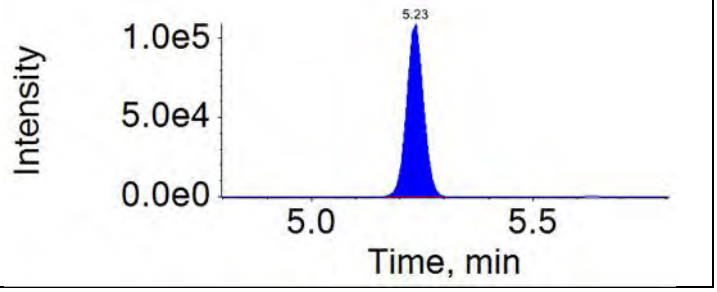
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



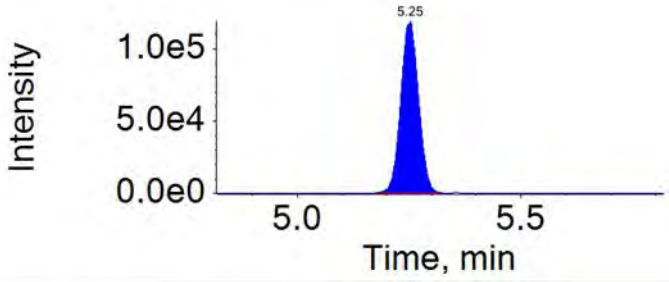


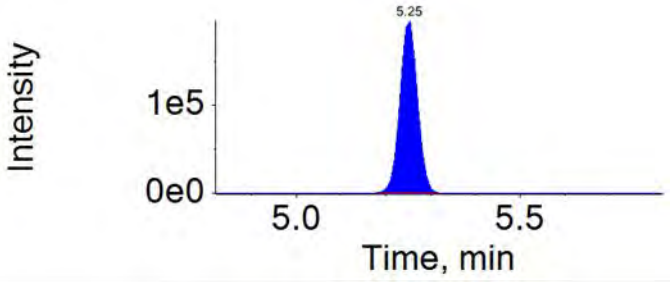
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

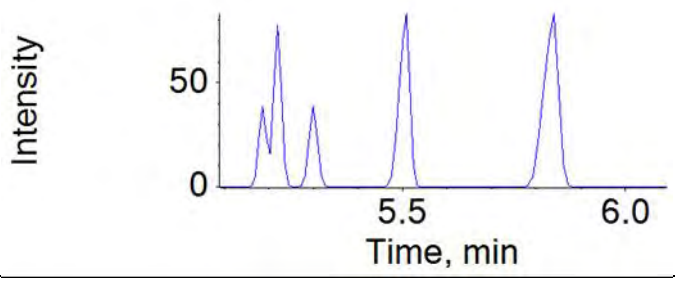
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

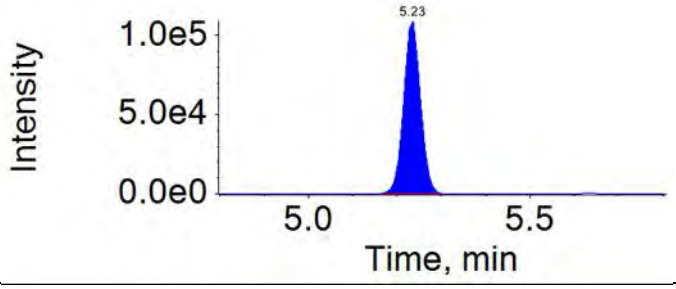
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



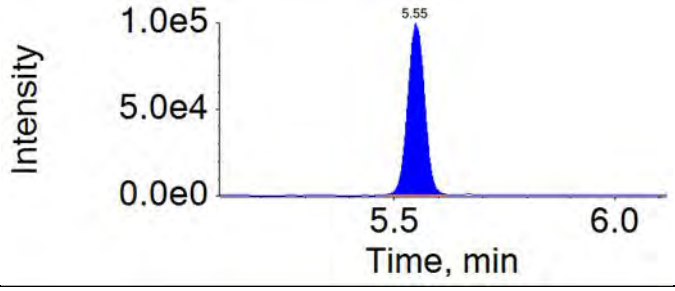


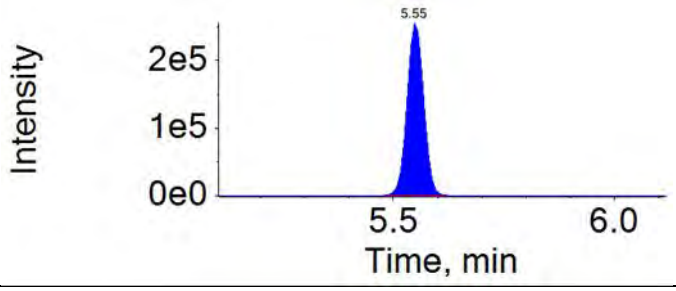
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



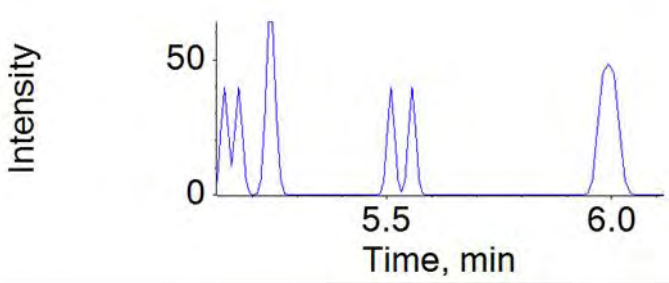


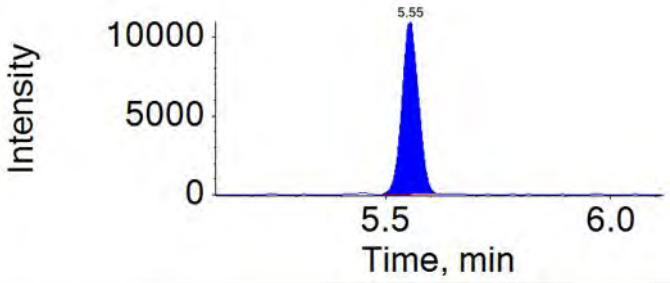
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

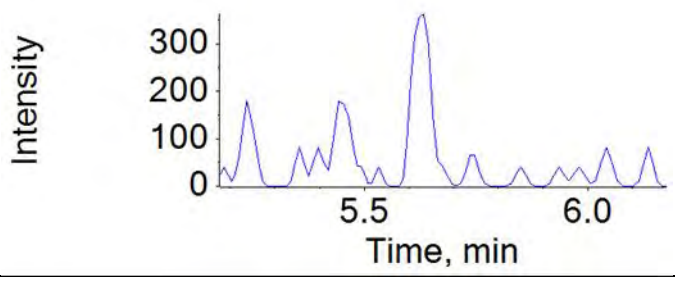
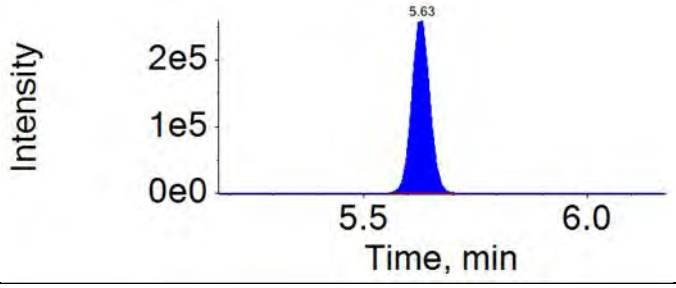


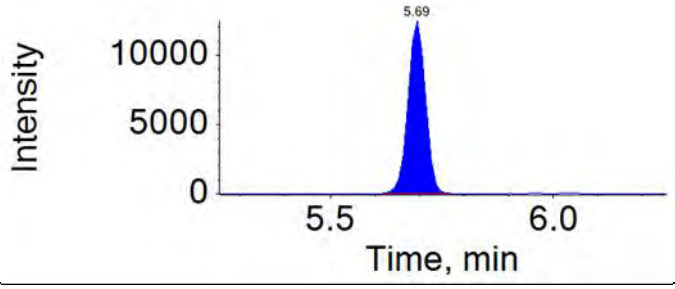
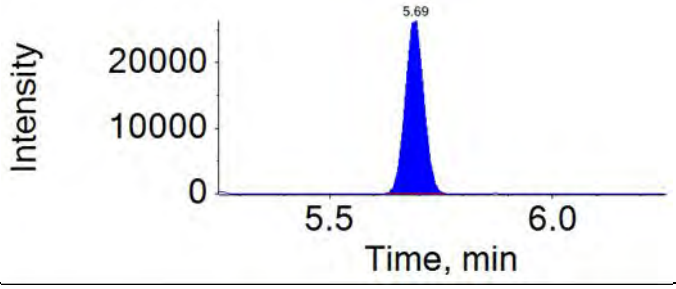


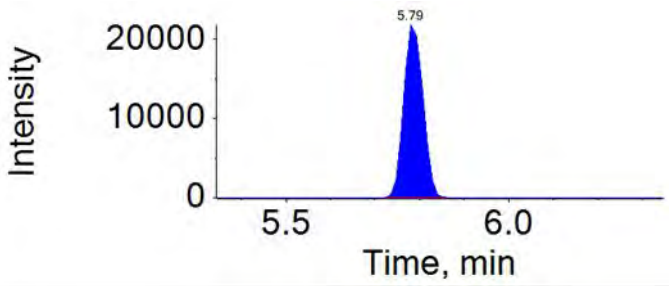
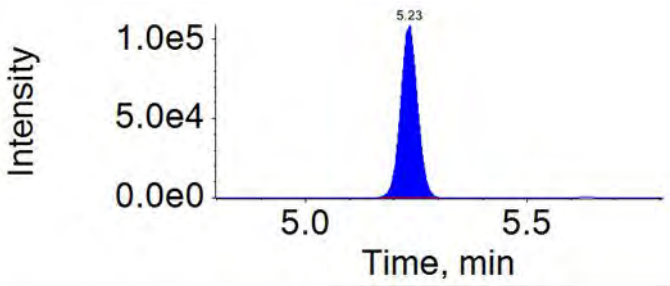
APPROVED
By JPT at 2:53 pm, 11/7/18

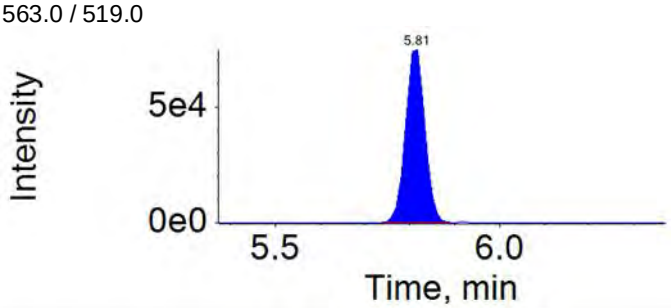
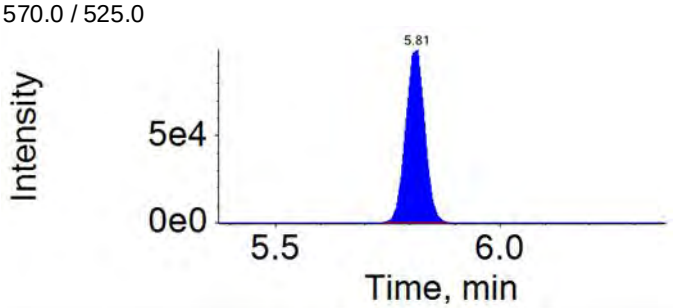
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

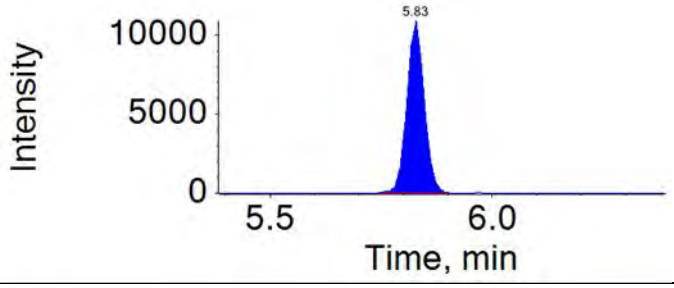
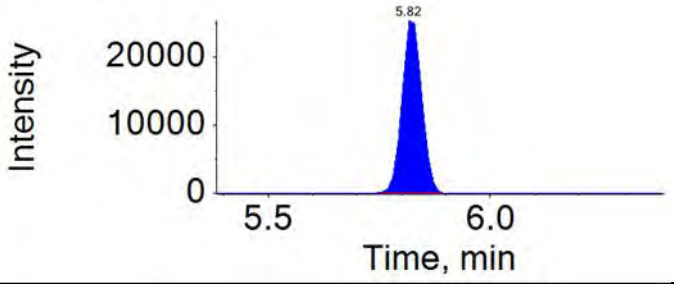
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

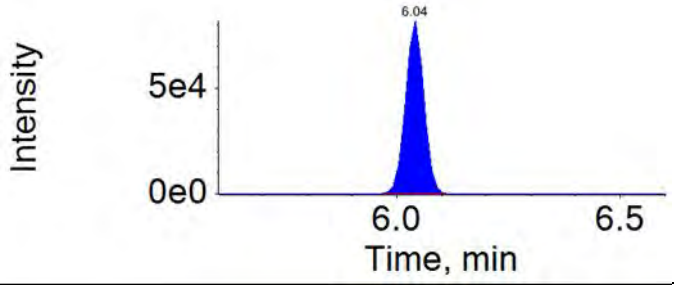
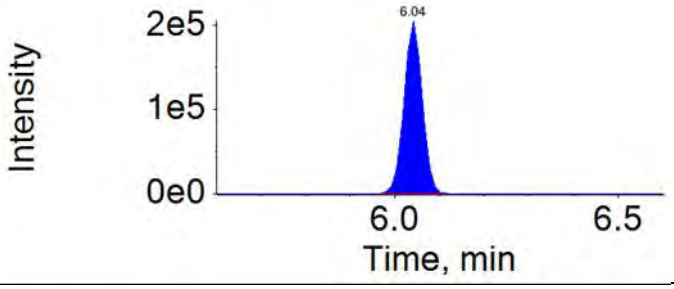
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

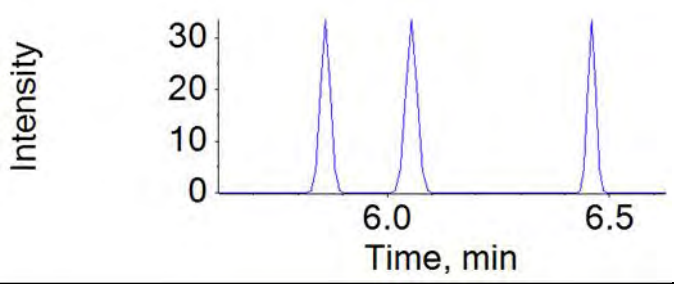
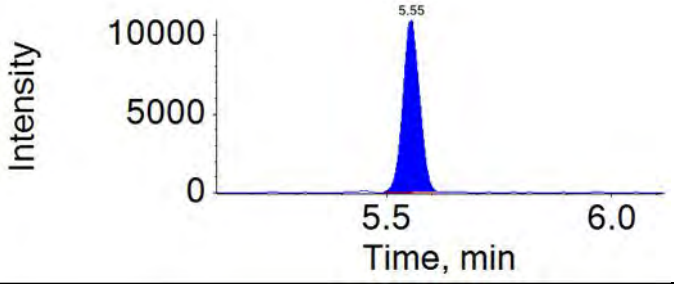
APPROVED
By JPT at 2:53 pm, 11/7/18

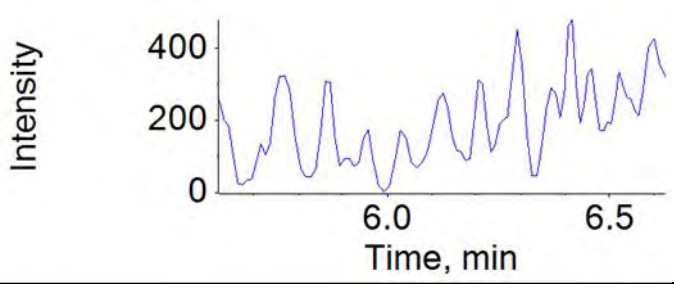
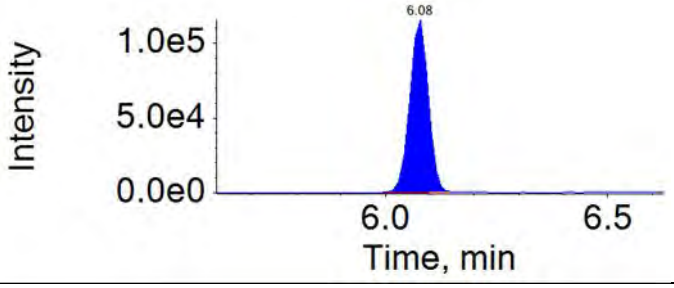
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

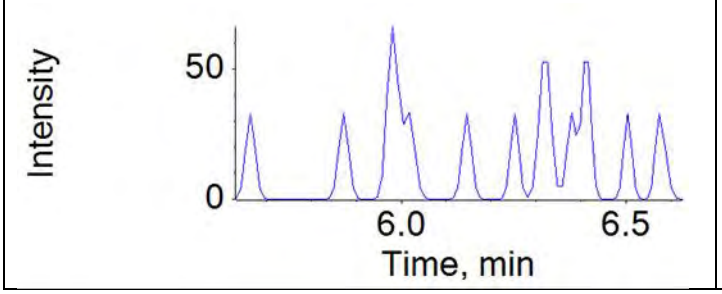
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

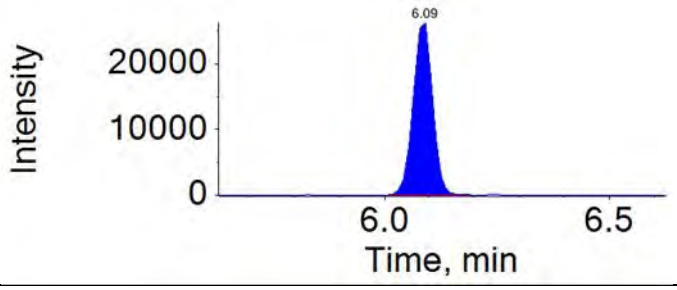
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

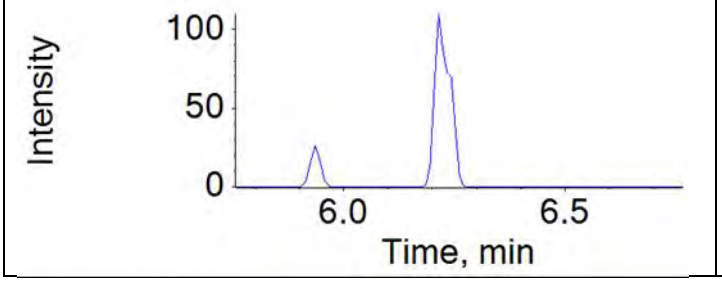
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

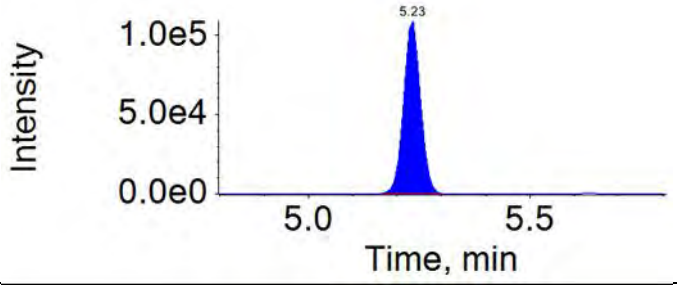
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



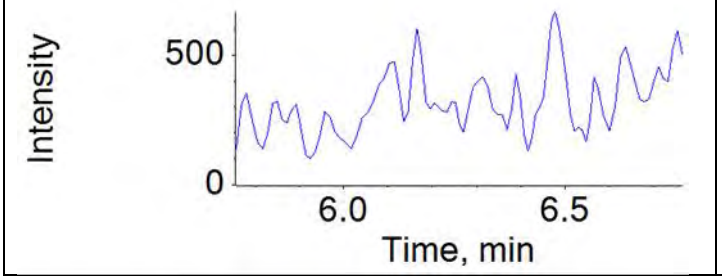


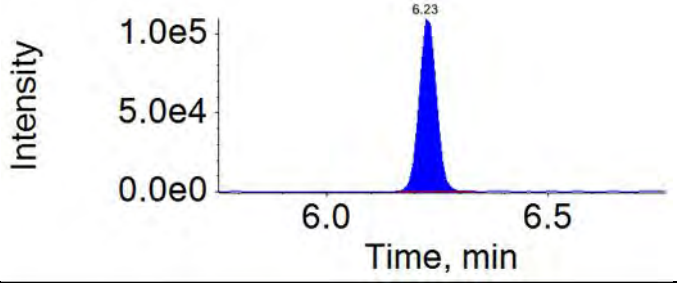
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



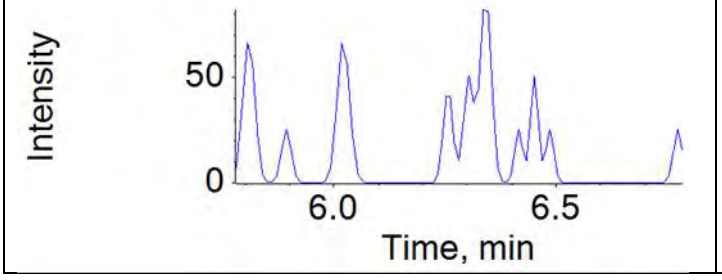


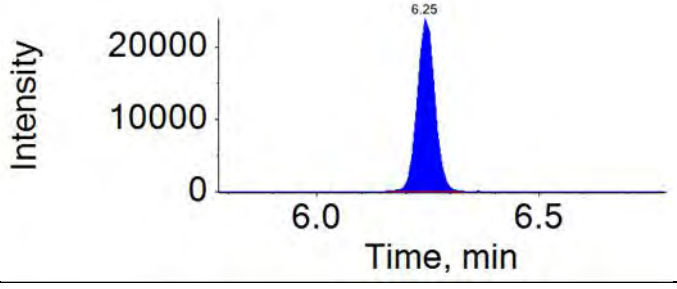
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



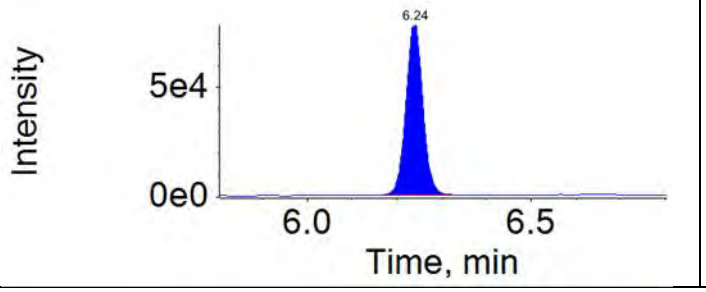


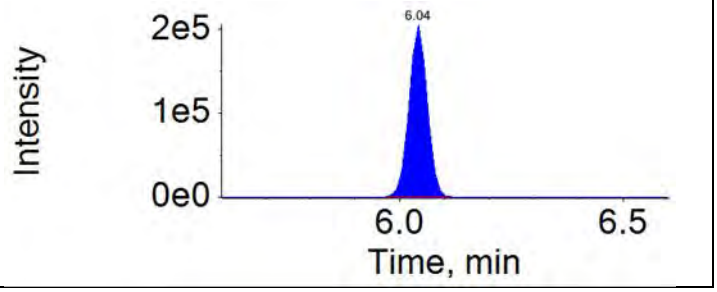
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

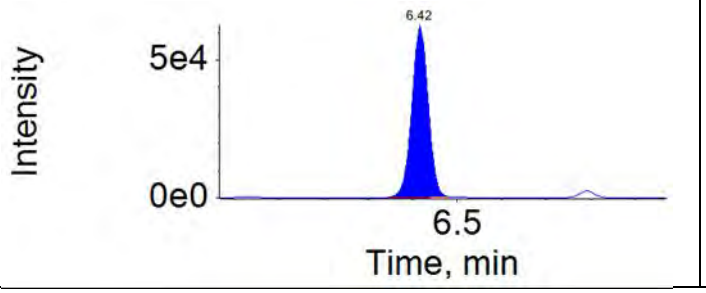
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

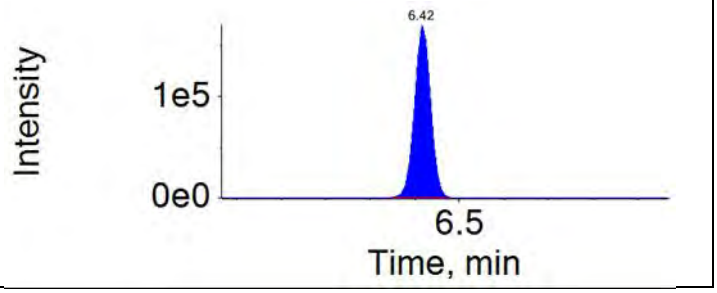
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



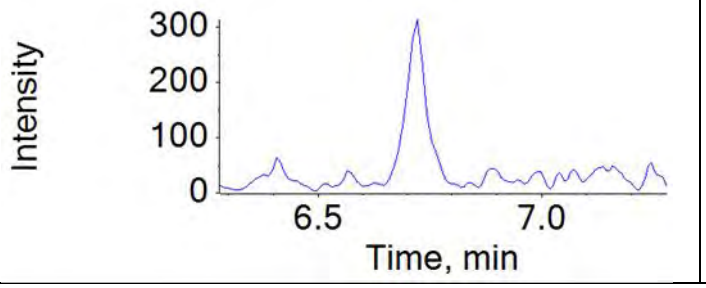


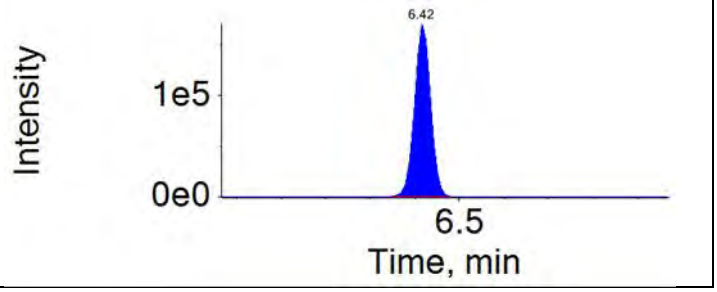
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



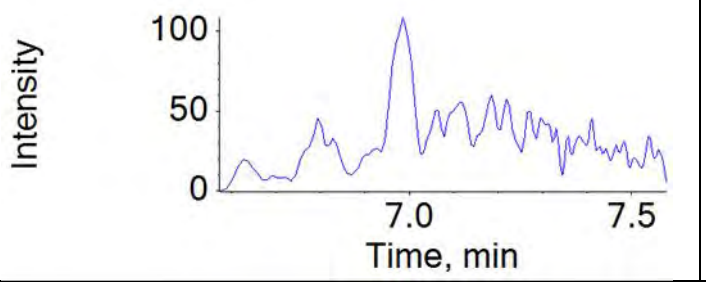


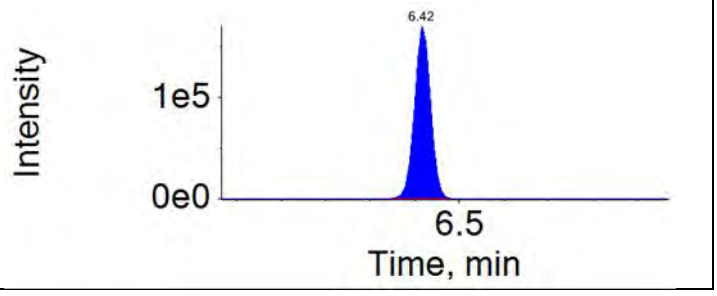
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



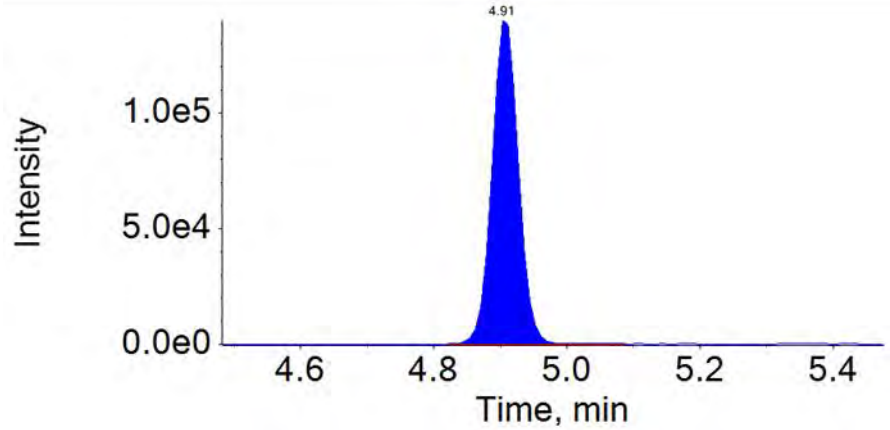


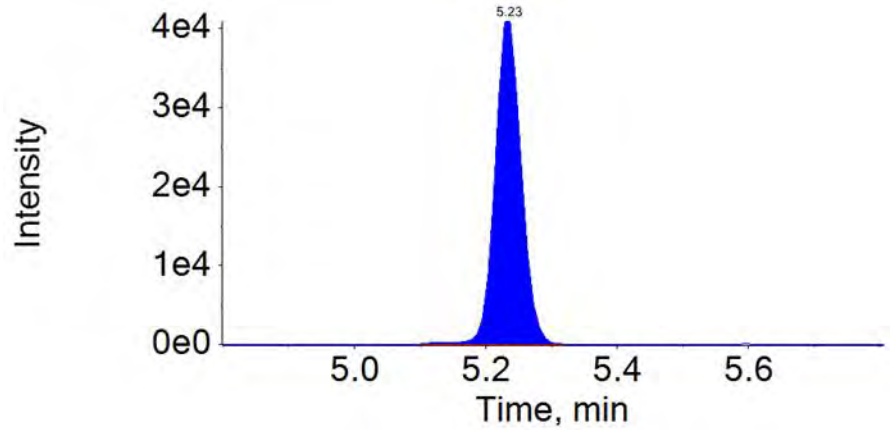
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: PFOA **RT (min.):** 4.91 **Peak Area:** 388249.1 **Mass Range:** 413.0 / 369.0 **File Name:** 18NOV07DCAL-18.wiff **Sample Name:** ICV	 **Integration Comment:** incorrect integration

Component Name: PFOS **RT (min.):** 5.23 **Peak Area:** 115469.0 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV07DCAL-18.wiff **Sample Name:** ICV	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

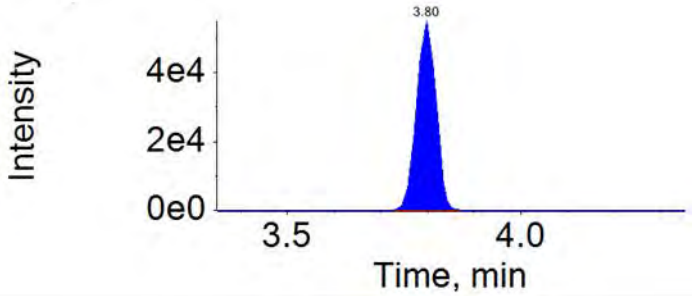
Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-18.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	159719.5	A	1.0000	1.0000			
PFBS_2	3.80	1.00	61541.1	A	0.3576	0.3853	8	50	
4:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6359	N/A		50	
PFHxA	4.15	1.00	397434.6	A	1.0000	1.0000			
PFHxA_2	4.15	1.00	3792.4	A	0.0115	0.0095	-17	50	
PFPeS	N/A	N/A	N/A	A	1.0000	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5384	N/A		50	
PFHxS	4.54	1.00	126635.3	A	1.0000	1.0000			
PFHxS_2	4.54	1.00	48242.3	A	0.3569	0.3810	7	50	
PFHpA	4.54	1.00	390197.1	A	1.0000	1.0000			
PFHpA_2	4.54	1.00	18822.2	A	0.0577	0.0482	-16	50	
6:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6752	N/A		50	
PFHpS	4.90	1.08	126812.1	A	1.0000	1.0000			
PFHpS_2	4.90	1.08	51068.7	A	0.3950	0.4027	2	50	
PFOA	4.91	1.00	387215.1	M	1.0000	1.0000			
PFOA_2	4.91	1.00	20820.8	A	0.0635	0.0538	-15	50	
PFOS	5.23	1.00	114911.8	M	1.0000	1.0000			
PFOS_2	5.23	1.00	40072.6	A	0.3494	0.3487	0	50	
PFNA	5.25	1.00	329644.4	A	1.0000	1.0000			
PFNA_2	5.25	1.00	6625.6	A	0.0207	0.0201	-3	50	
PFNS	N/A	N/A	N/A	A	1.0000	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4890	N/A		50	
PFDA	5.55	1.00	262760.0	A	1.0000	1.0000			
PFDA_2	5.55	1.00	2122.6	A	0.0057	0.0081	43	50	
8:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.6169	N/A		50	
NMeFOSAA	5.69	1.00	33916.6	A	1.0000	1.0000			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2206	N/A		50	
PFDS	5.79	1.11	65962.5	A	1.0000	1.0000			
PFDS_2	5.78	1.11	33540.9	A	0.4648	0.5085	9	50	
PFUnDA	5.81	1.00	225137.5	A	1.0000	1.0000			
PFUnDA_2	5.82	1.00	557.6	A	0.0031	0.0025	-21	50	
NEtFOSAA	5.83	1.00	29687.2	A	1.0000	1.0000			
NEtFOSAA_2	5.83	1.00	17691.0	A	0.6082	0.5959	-2	50	
PFDoDA	6.04	1.00	232949.2	A	1.0000	1.0000			
PFDoDA_2	6.04	1.00	3431.7	A	0.0109	0.0147	35	50	
10:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.7082	N/A		50	
PFTrDA	6.24	1.03	206908.4	A	1.0000	1.0000			
PFTrDA_2	6.24	1.03	2086.3	A	0.0096	0.0101	5	50	
PFTeDA	6.42	1.00	157975.3	A	1.0000	1.0000			
PFTeDA_2	6.41	1.00	879.0	A	0.0055	0.0056	0	50	
PFHxDA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0596	N/A		50	
PFODA	N/A	N/A	N/A	A	1.0000	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0257	N/A		50	

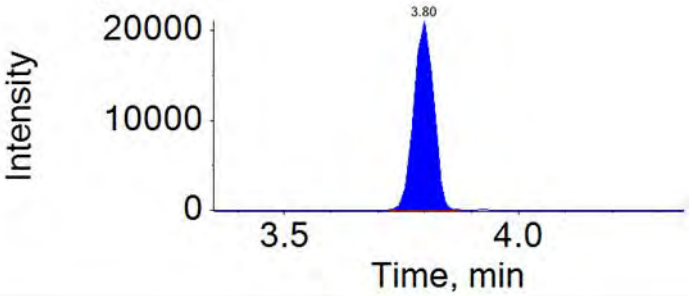
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

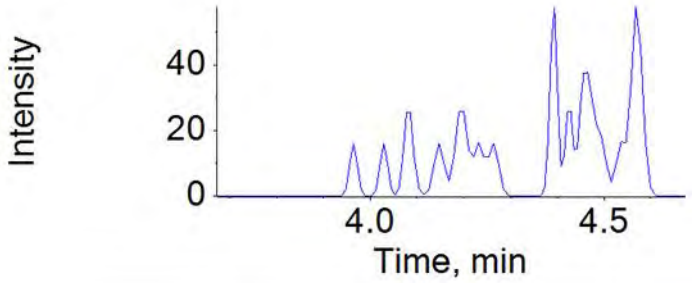
Component: PFBS
Primary Mass: 299.0 / 80.0



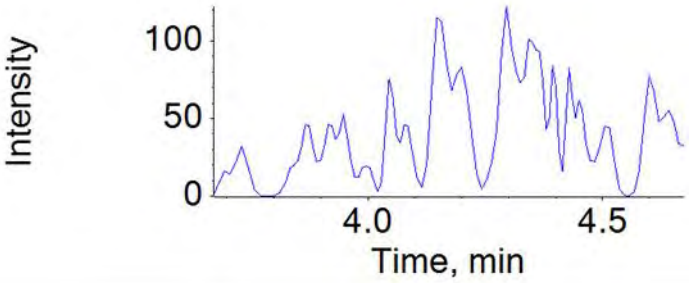
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



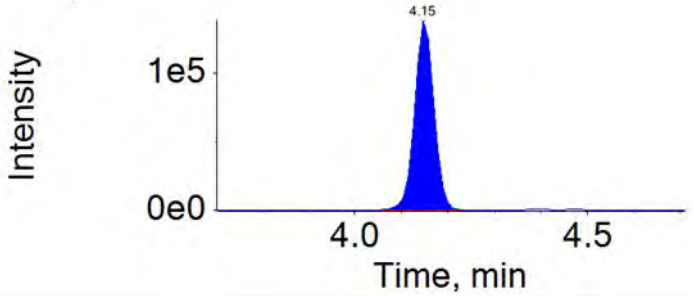
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



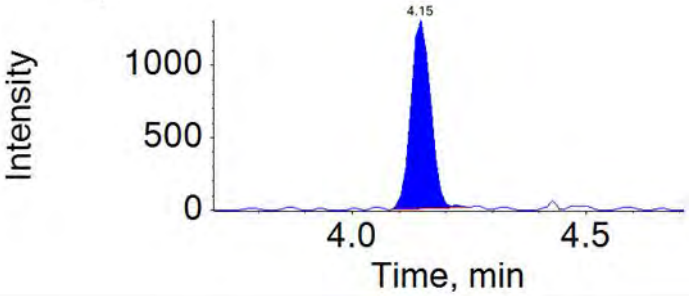
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



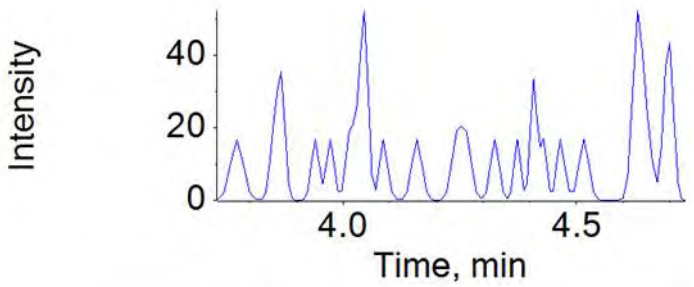
Component: PFHxA
Primary Mass: 313.0 / 269.0



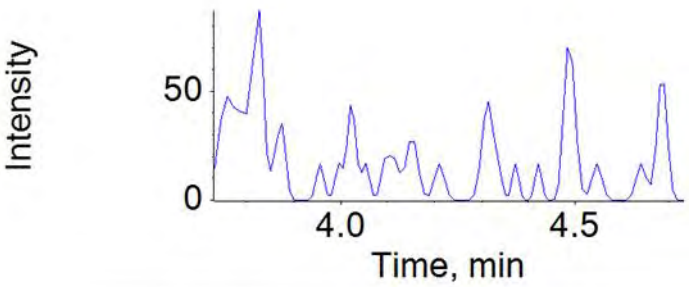
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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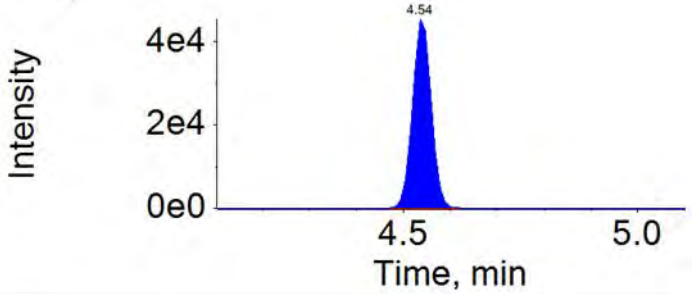
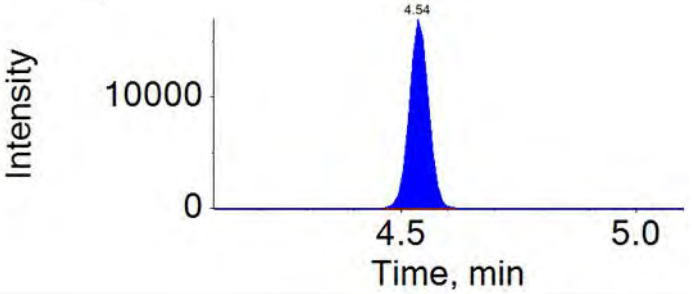
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

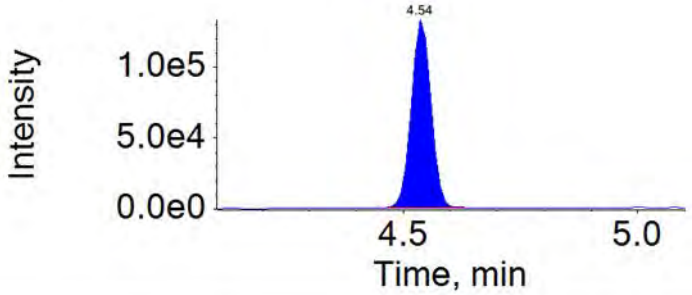
Component: PFHxS
Primary Mass: 399.0 / 80.0



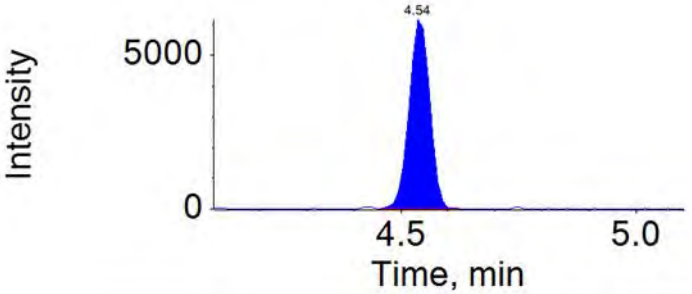
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



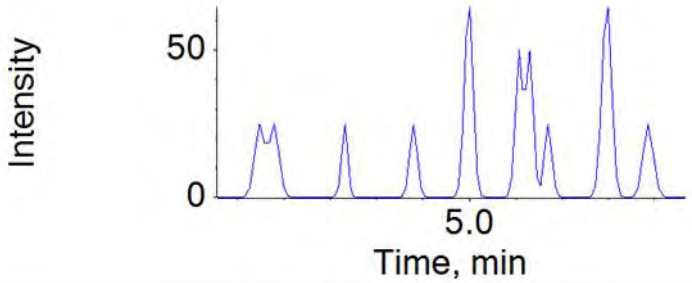
Component: PFHpA
Primary Mass: 363.0 / 319.0



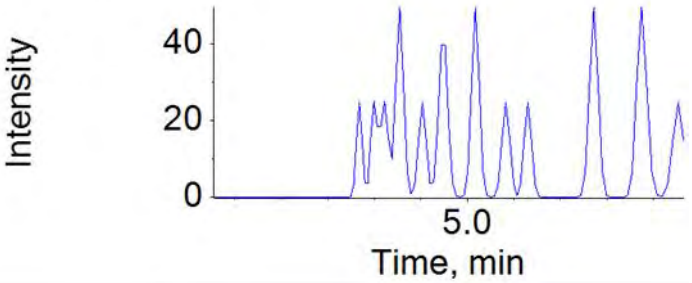
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



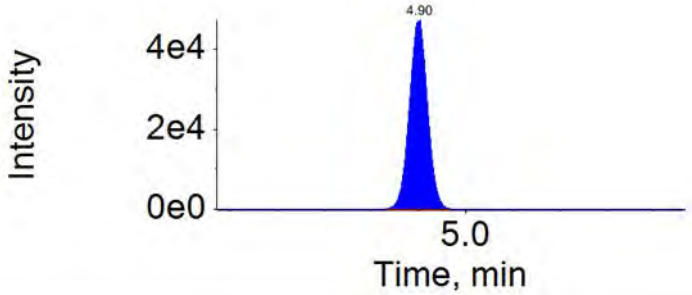
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



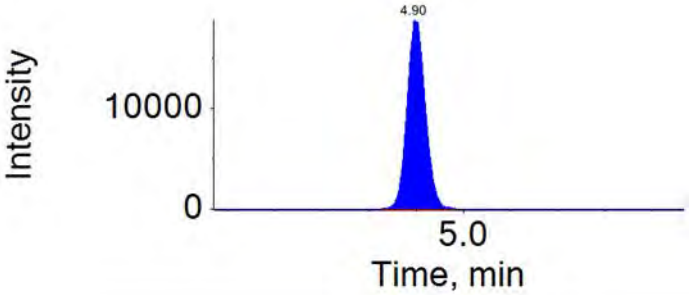
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



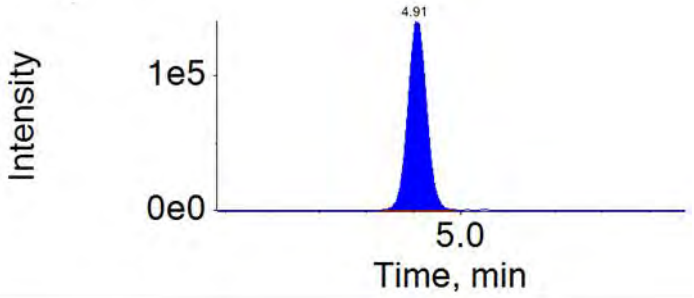
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



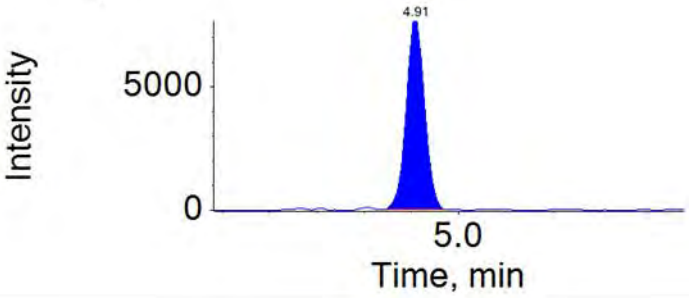
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

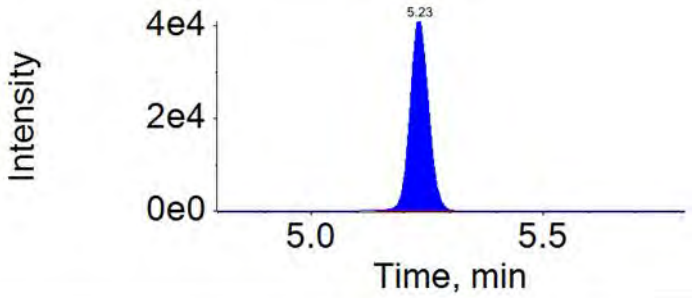
Component: PFOA
Primary Mass: 413.0 / 369.0



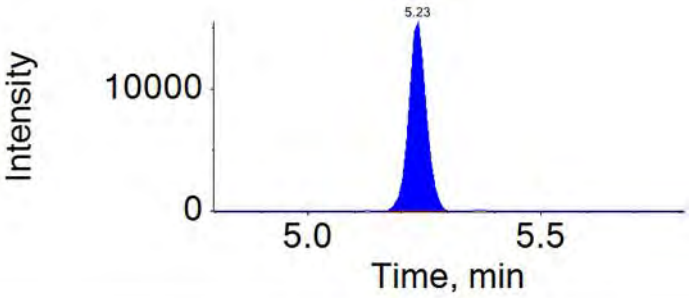
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



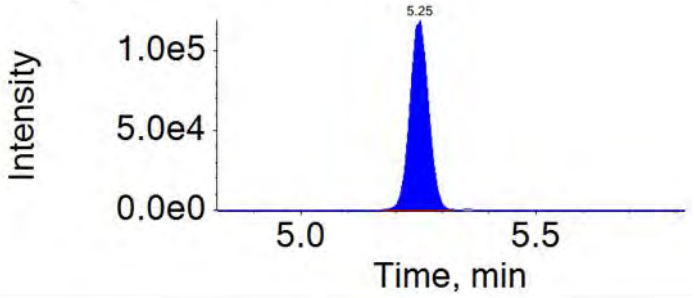
Component: PFOS
Primary Mass: 499.0 / 80.0



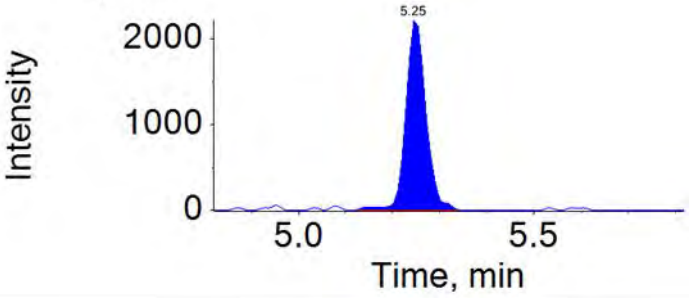
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



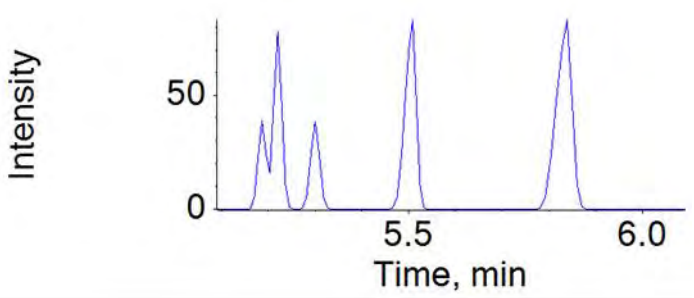
Component: PFNA
Primary Mass: 463.0 / 419.0



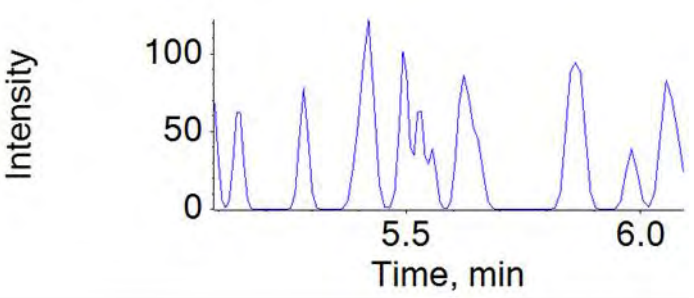
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



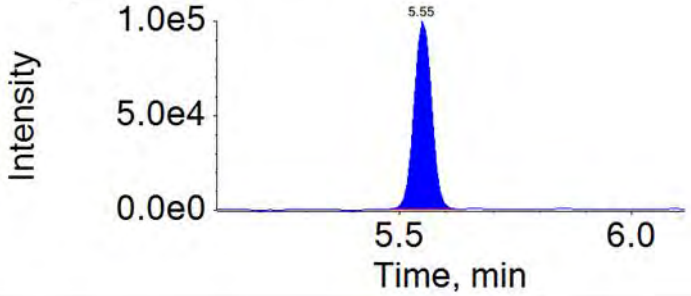
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



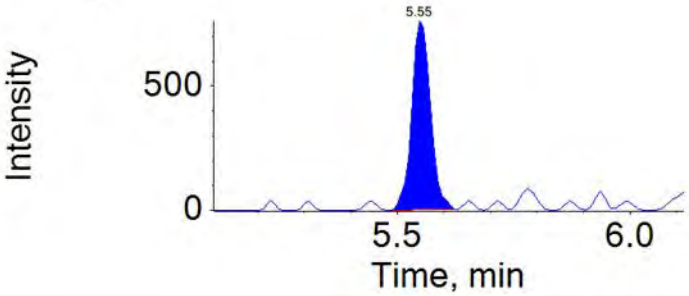
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

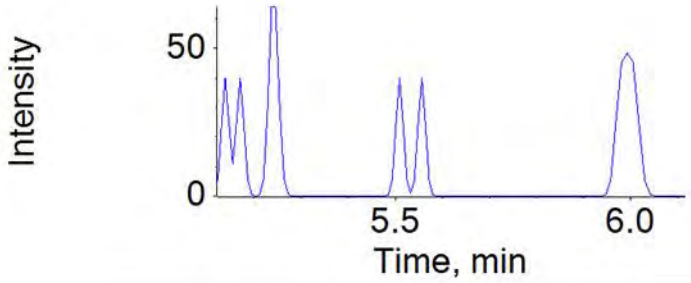
Component: PFDA
Primary Mass: 513.0 / 469.0



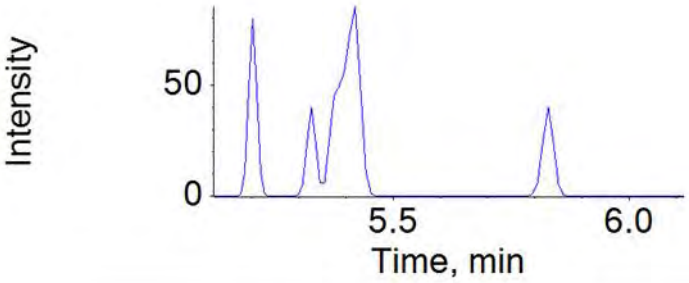
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



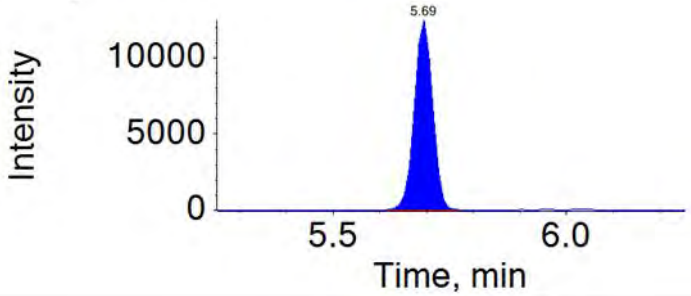
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



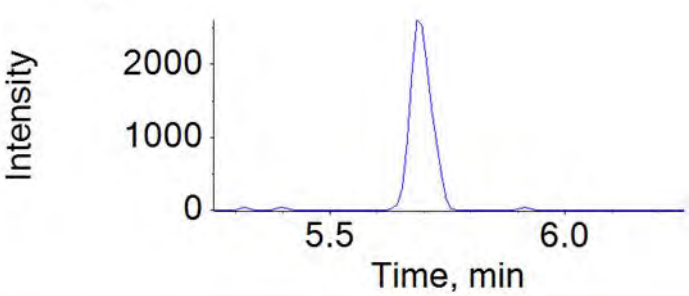
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



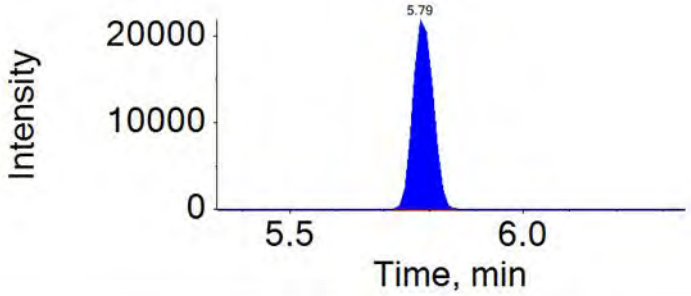
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



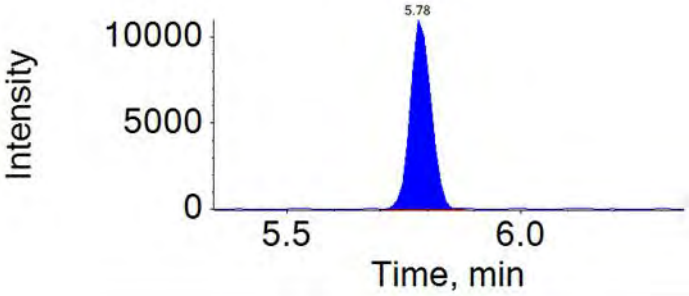
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



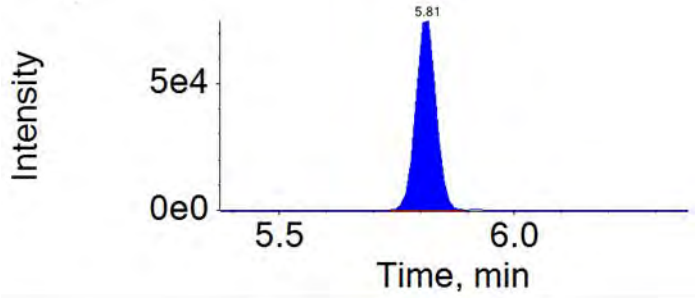
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



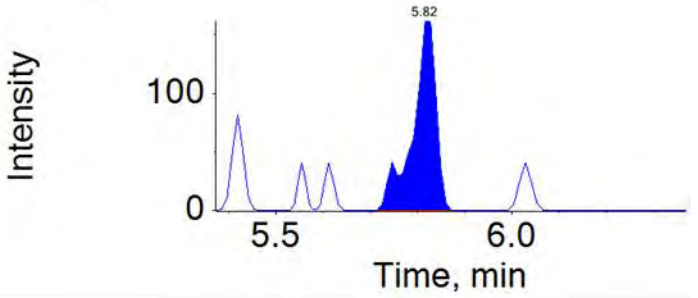
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

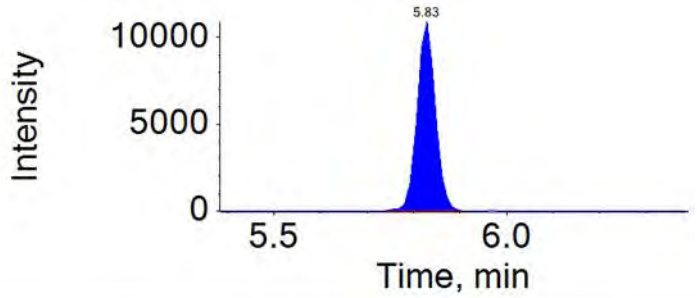
Component: PFUnDA
Primary Mass: 563.0 / 519.0



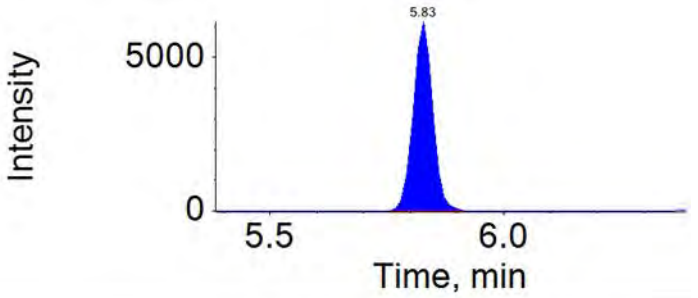
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



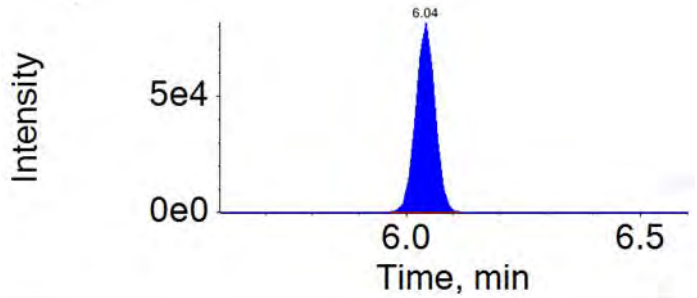
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



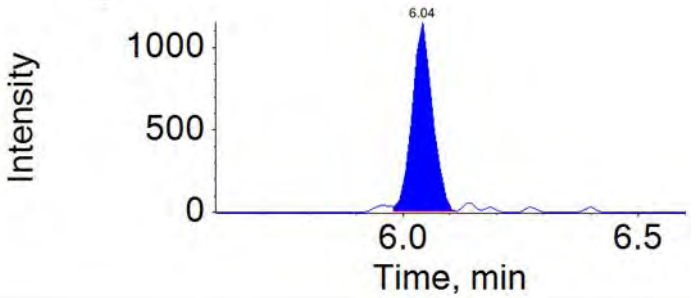
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



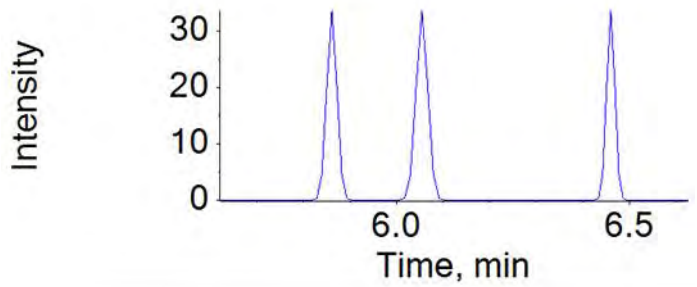
Component: PFDoDA
Primary Mass: 613.0 / 569.0



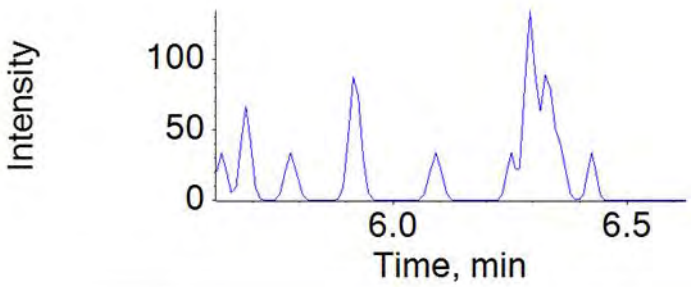
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



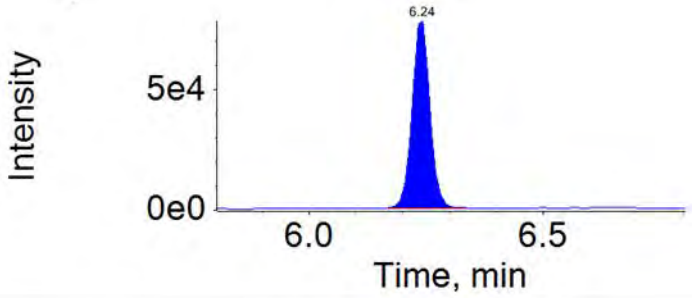
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



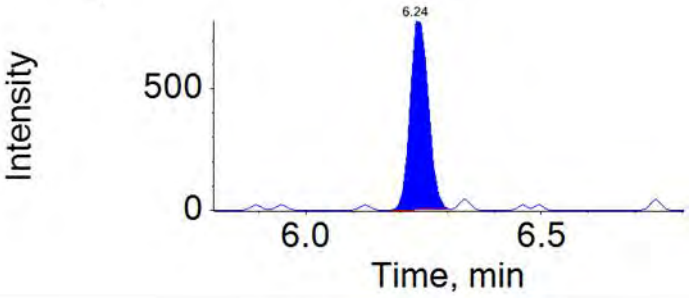
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

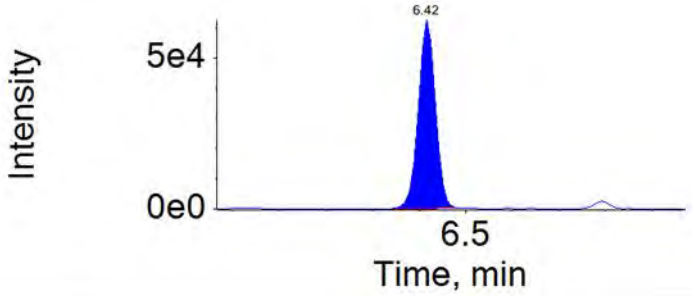
Component: PFTrDA
Primary Mass: 663.0 / 619.0



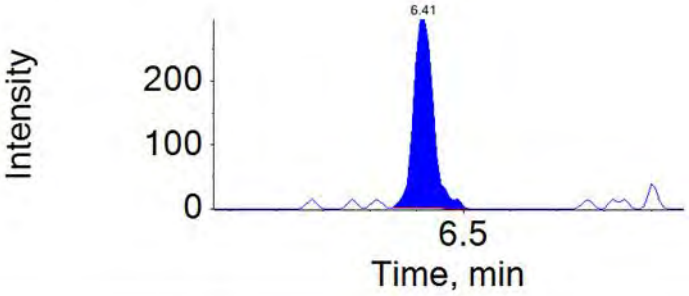
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



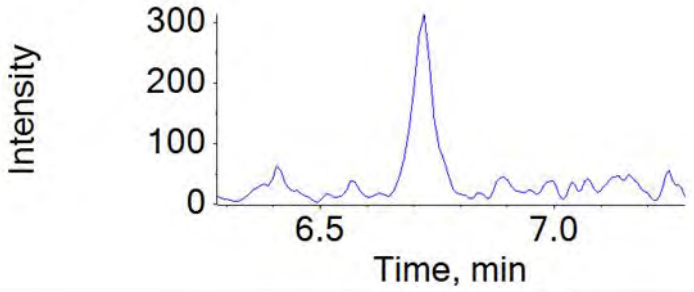
Component: PFTeDA
Primary Mass: 713.0 / 669.0



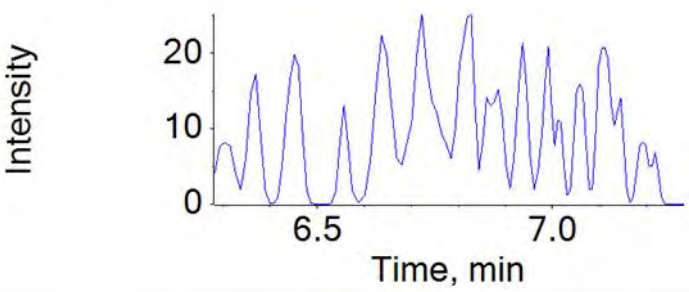
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



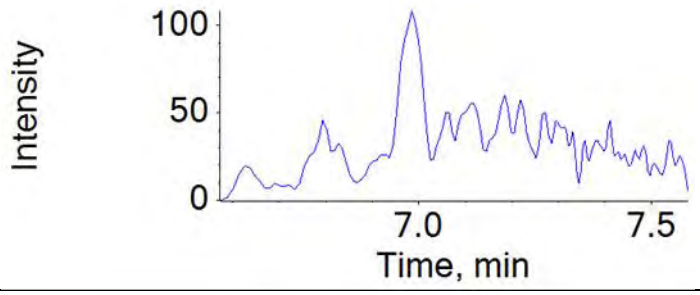
Component: PFHxDA
Primary Mass: 813.0 / 769.0



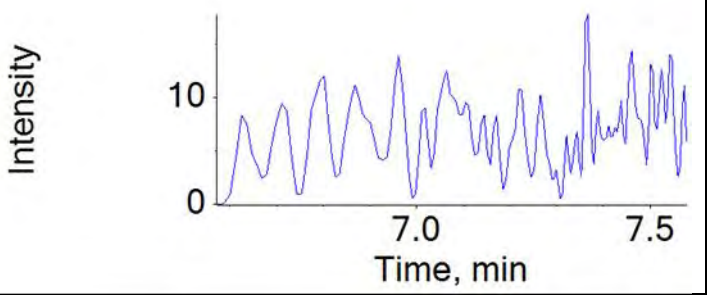
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	L+B CAL3			**Data File:**		18NOV07DCAL-19.wiff
Sample ID:	LBMODX1833D			**Acquis Date:**		2018-11-07T11:00:59
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	11			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	736211.8	730410.6	1	50	
13C2-PFOA	5.0	529333.9	524423.6	1	50	
13C4-PFOS	4.8	269502.4	274061.7	-2	50	
13C2-PFDA	5.0	314695.8	311442.1	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	798089.2	13C3-PFBA	736211.8	1.084	5.000	5.017	100	70-130	
E13C5-PFPeA	837606.5	13C3-PFBA	736211.8	1.138	5.000	4.956	99	70-130	
E13C3-PFBS	434778.6	13C3-PFBA	736211.8	0.591	4.650	4.334	93	70-130	
E13C2-4:2-FTS	52170.5	13C2-PFOA	529333.9	0.099	4.670	4.447	95	70-130	
E13C5-PFHxA	698718.6	13C2-PFOA	529333.9	1.320	5.000	4.856	97	70-130	
E13C3-PFHxS	338752.7	13C2-PFOA	529333.9	0.640	4.730	4.594	97	70-130	
E13C4-PFHpA	566540.4	13C2-PFOA	529333.9	1.070	5.000	4.869	97	70-130	
E13C2-6:2-FTS	34551.5	13C2-PFOA	529333.9	0.065	4.750	4.353	92	70-130	
E13C8-PFOA	967968.8	13C2-PFOA	529333.9	1.829	5.000	5.099	102	70-130	
E13C8-PFOS	276433.8	13C4-PFOS	269502.4	1.026	4.780	4.536	95	70-130	
E13C9-PFNA	490916.1	13C4-PFOS	269502.4	1.822	5.000	4.976	100	70-130	
E13C6-PFDA	634835.7	13C2-PFDA	314695.8	2.017	5.000	5.073	101	70-130	
E13C2-8:2-FTS	29224.4	13C2-PFDA	314695.8	0.093	4.790	4.914	103	70-130	
E13C8-PFOSA	714716.6	13C2-PFDA	314695.8	2.271	5.000	4.956	99	70-130	
Ed3-NMeFOSAA	78018.5	13C2-PFDA	314695.8	0.248	5.000	4.610	92	70-130	
E13C7-PFUnDA	277737.7	13C2-PFDA	314695.8	0.883	5.000	5.091	102	70-130	
Ed5-NEtFOSAA	76987.7	13C2-PFDA	314695.8	0.245	5.000	5.661	113	70-130	
E13C2-PFDoDA	545941.2	13C2-PFDA	314695.8	1.735	5.000	4.677	94	70-130	
Ed7-NMePFOSAE	329839.8	13C2-PFDA	314695.8	1.048	5.000	4.874	97	70-130	
Ed3-NMePFOSA	79724.2	13C2-PFDA	314695.8	0.253	5.000	4.638	93	70-130	
Ed9-NEtPFOSAE	275393.6	13C2-PFDA	314695.8	0.875	5.000	4.998	100	70-130	
Ed5-NEtPFOSA	64841.7	13C2-PFDA	314695.8	0.206	5.000	4.771	95	70-130	
E13C2-PFTeDA	416258.4	13C2-PFDA	314695.8	1.323	5.000	4.762	95	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

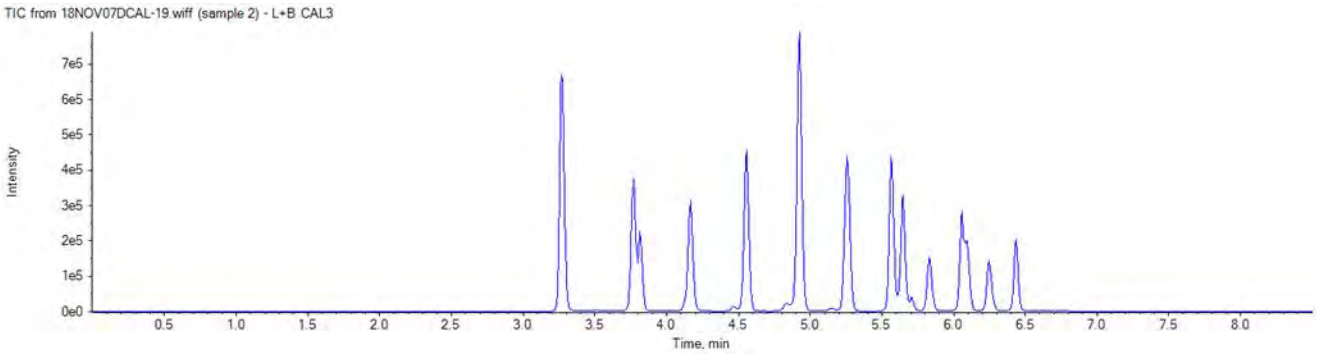
Analyte Quantitation Peak Table

Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-19.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	798089.2	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.77	837606.5	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.82	434778.6	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	52170.5	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.17	698718.6	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.82	434778.6	N/A	
PFHxS	4.56	1.000	140012.1		M	13C3-PFHxS	4.56	338752.7	0.413	2.095
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	566540.4	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	34551.5	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.56	338752.7	N/A	
PFOA	4.92	1.000	347563.0		M	13C8-PFOA	4.92	967968.8	0.359	2.022
PFOS	5.25	1.000	117649.0		M	13C8-PFOS	5.25	276433.8	0.426	2.207
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	490916.1	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	276433.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	634835.7	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	29224.4	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	714716.6	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	78018.5	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	276433.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	277737.7	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	76987.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	545941.2	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	29224.4	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	329839.8	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.11	79724.2	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	276433.8	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	275393.7	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	64841.7	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	545941.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	416258.4	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	416258.4	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.44	416258.4	N/A	

Total Ion Chromatogram

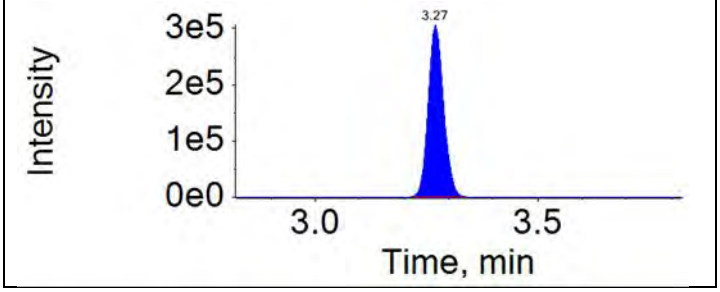


APPROVED
By JPT at 2:53 pm, 11/7/18

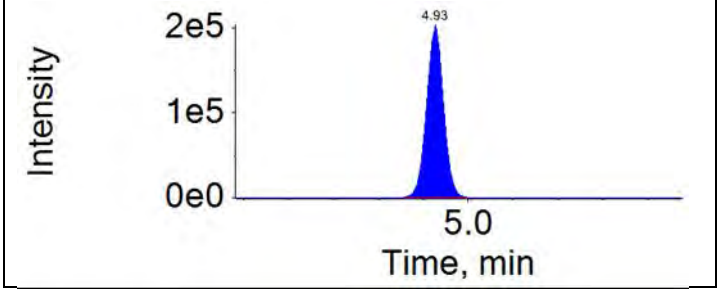
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

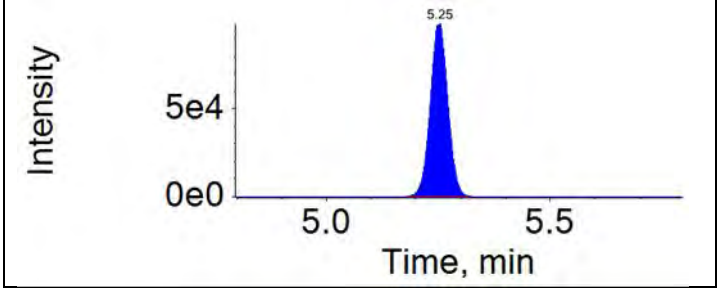
Injection Standard: 13C3-PFBA
216.0 / 172.0



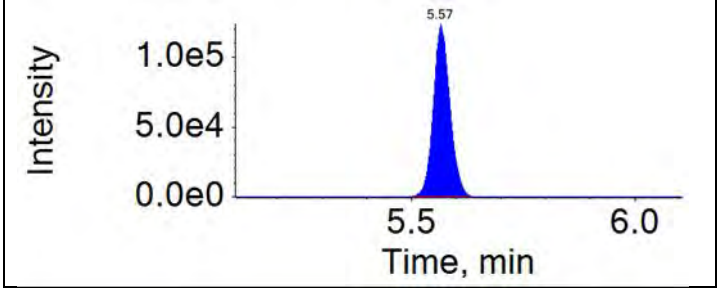
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



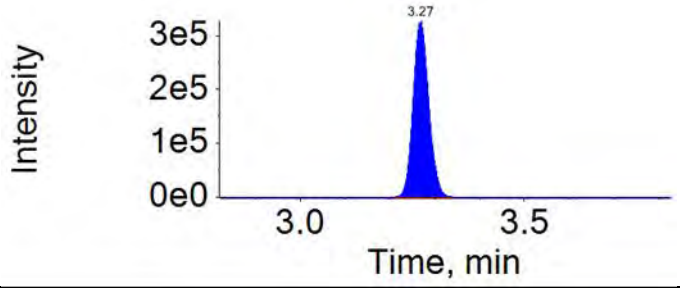
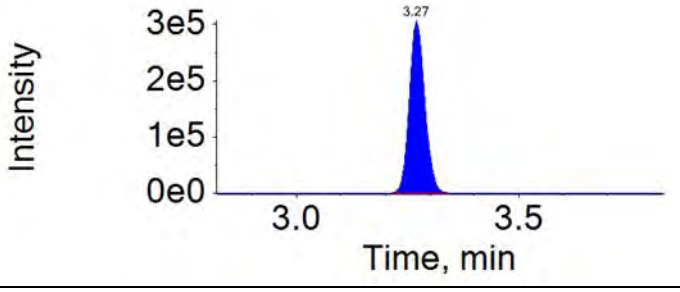
Injection Standard: 13C2-PFDA
515.0 / 470.0

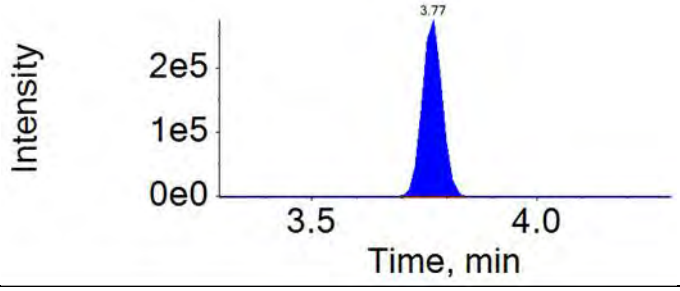
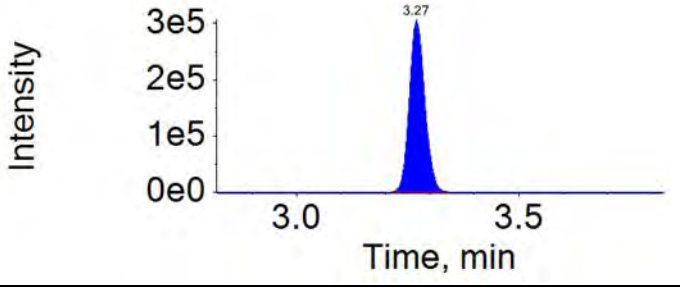


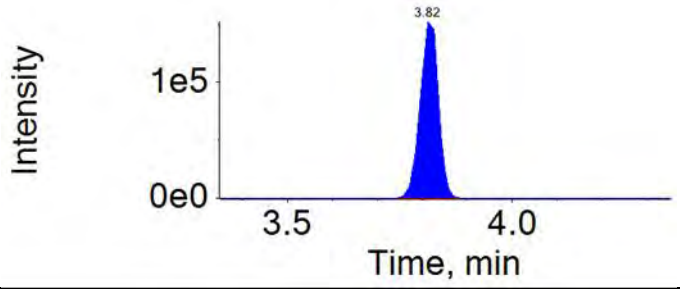
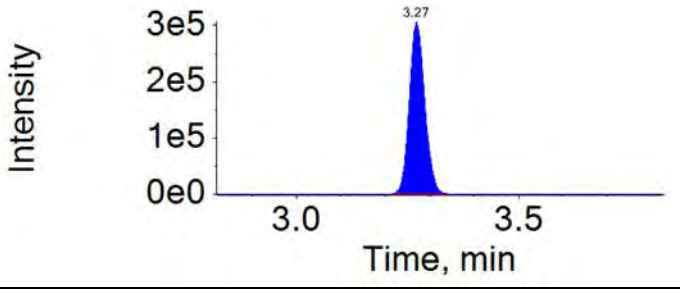
APPROVED
By JPT at 2:53 pm, 11/7/18

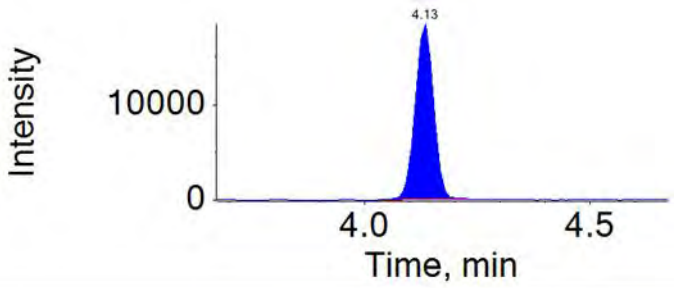
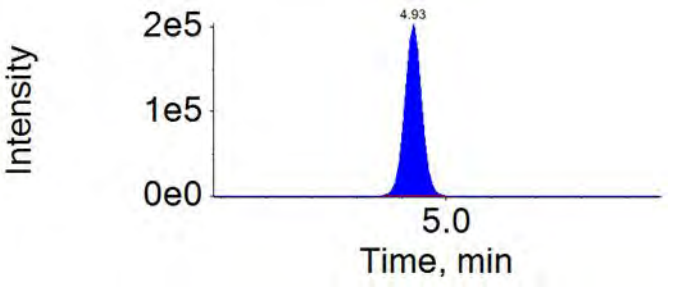
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

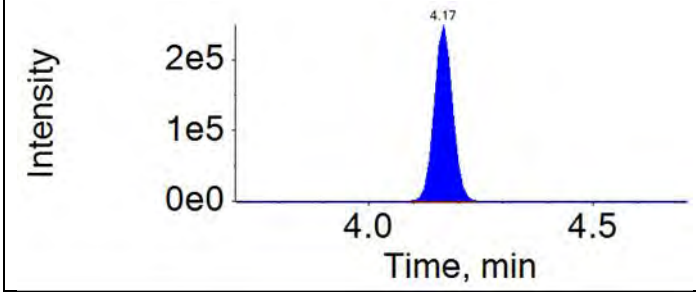
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

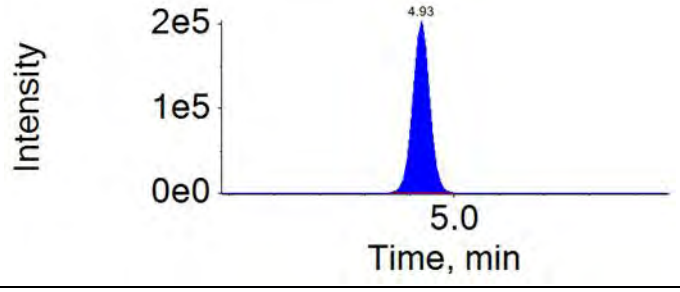
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

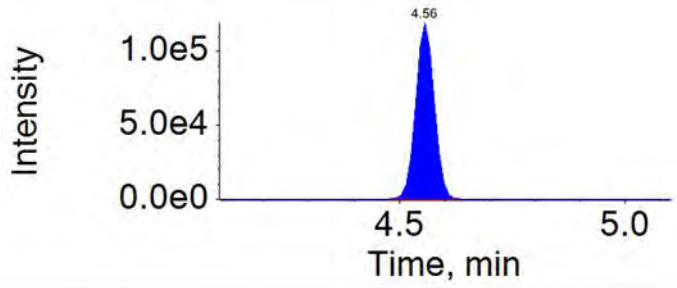
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

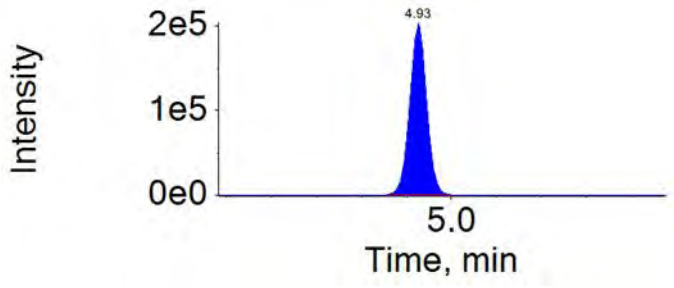
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



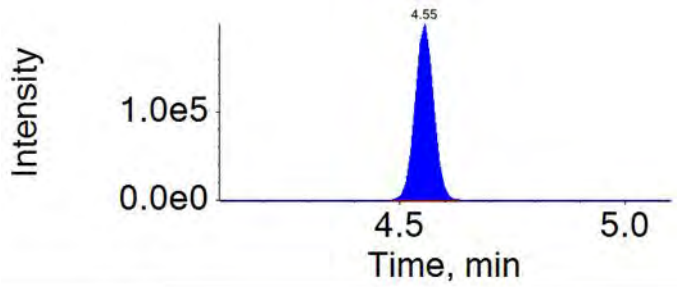


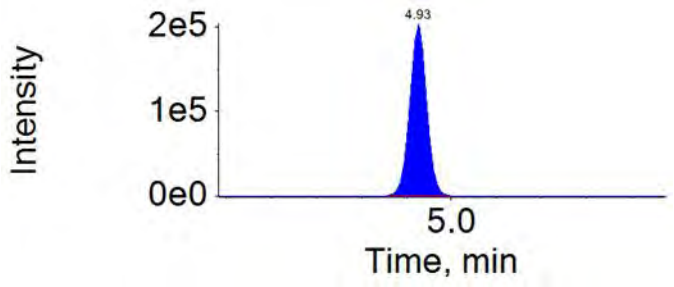
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



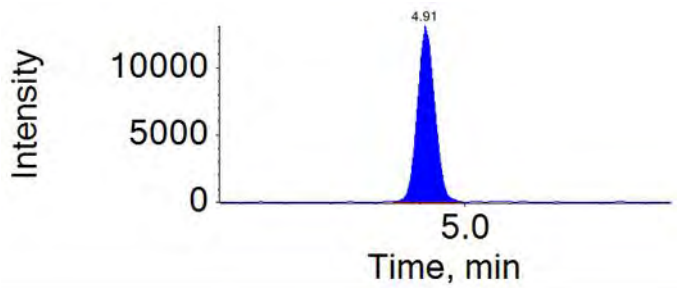


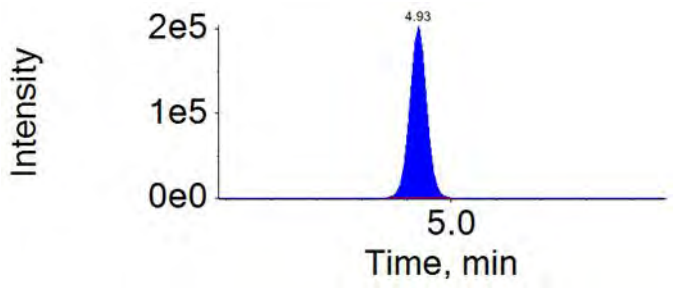
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

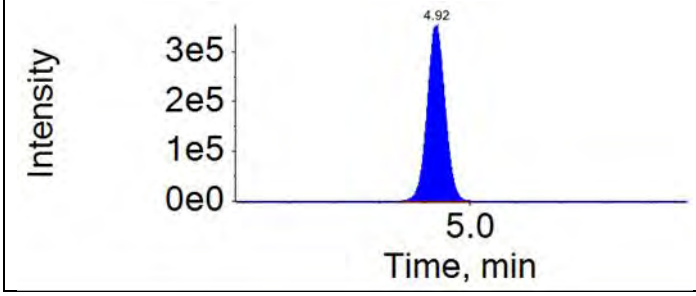
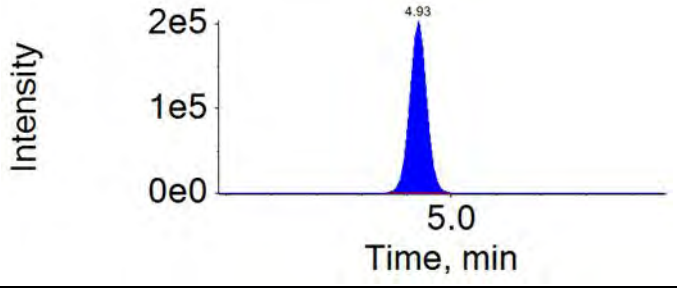


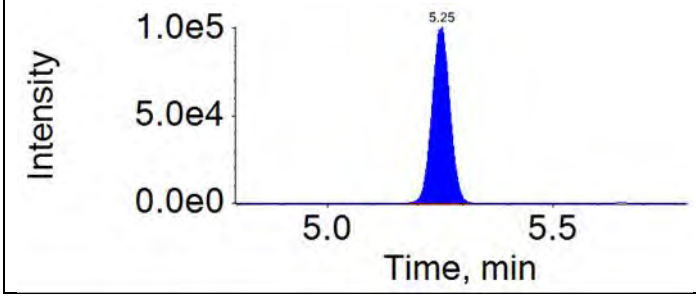
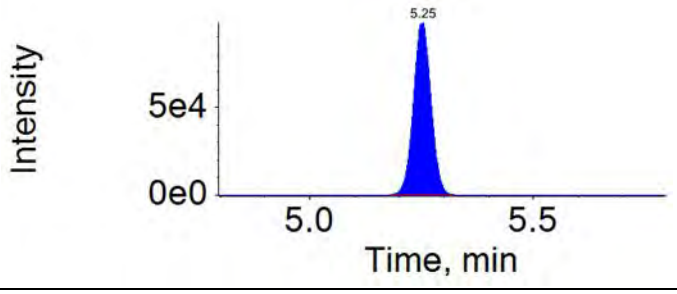


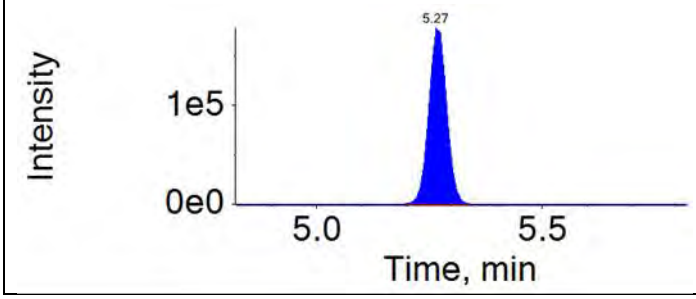
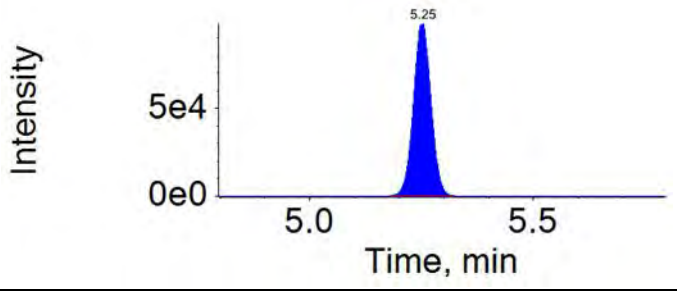
APPROVED
By JPT at 2:53 pm, 11/7/18

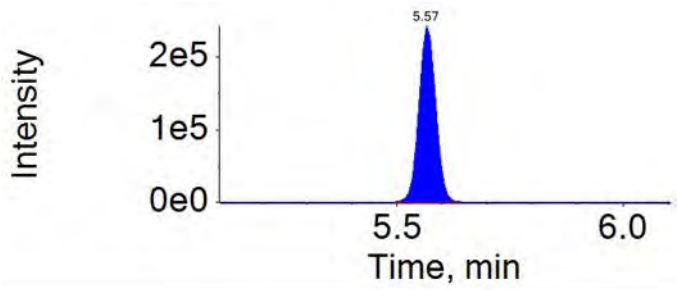
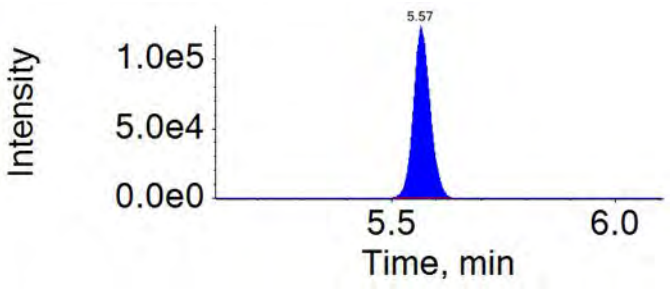
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

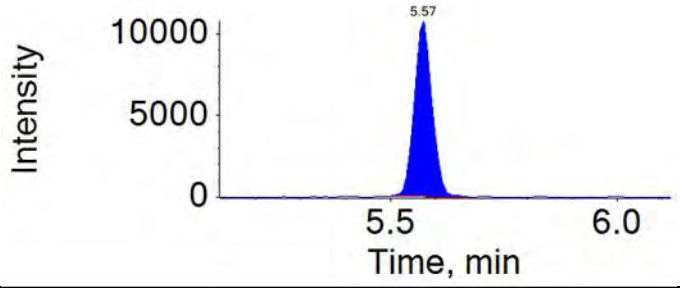
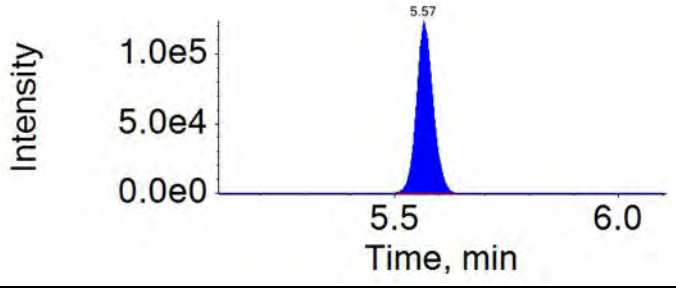
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

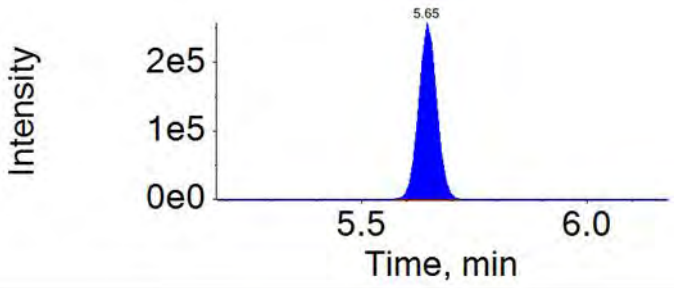
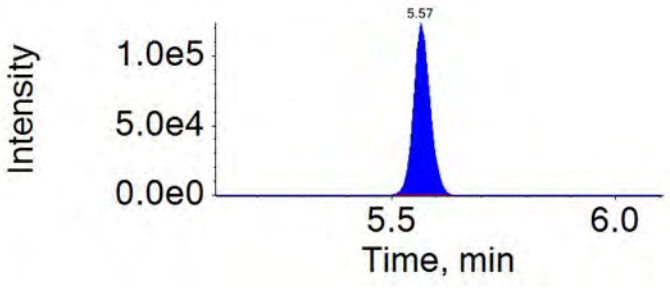
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

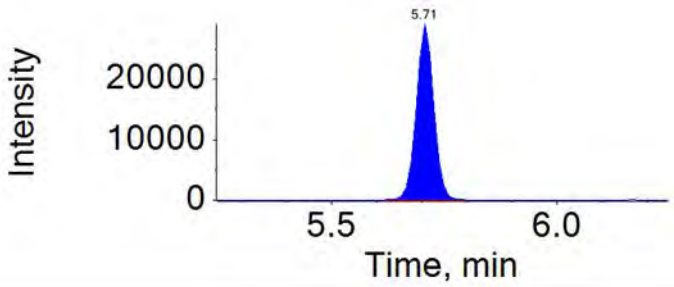
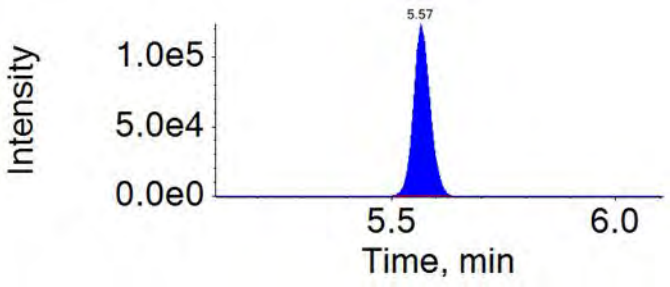
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

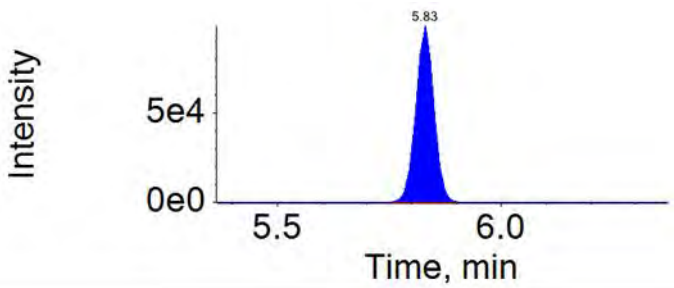
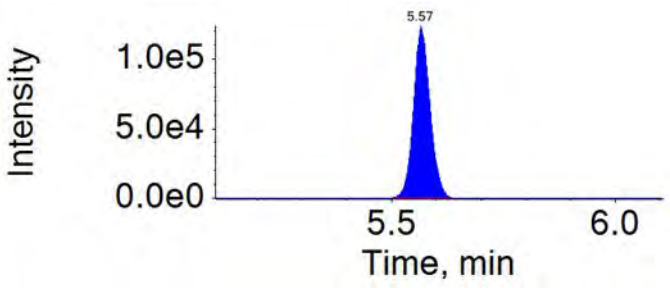
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

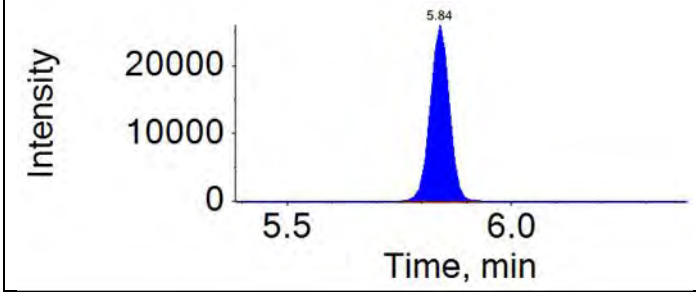
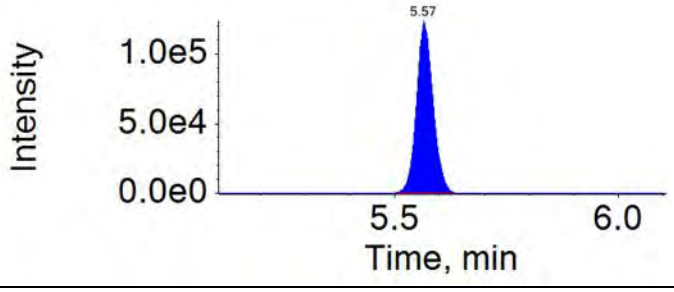
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

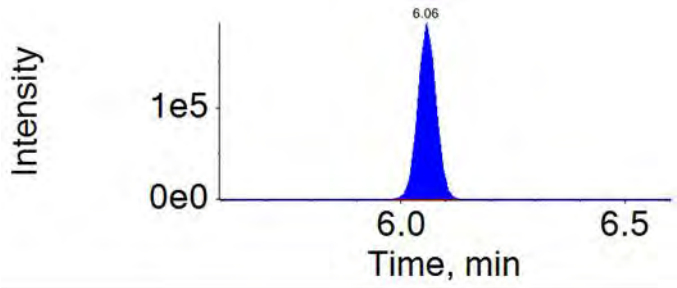
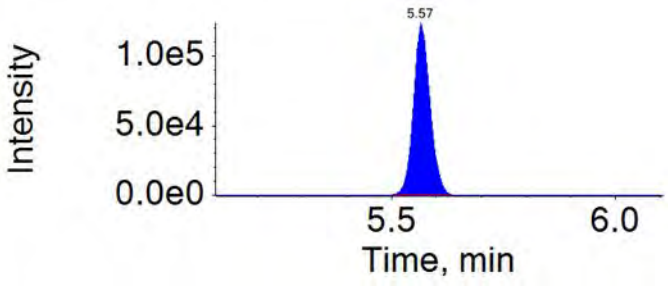
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

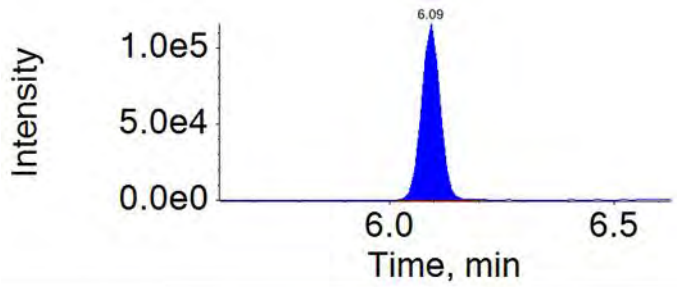
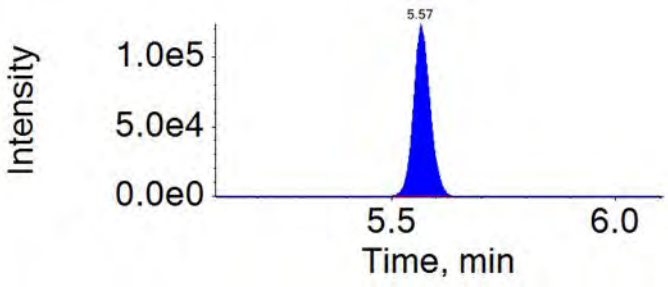
APPROVED
By JPT at 2:53 pm, 11/7/18

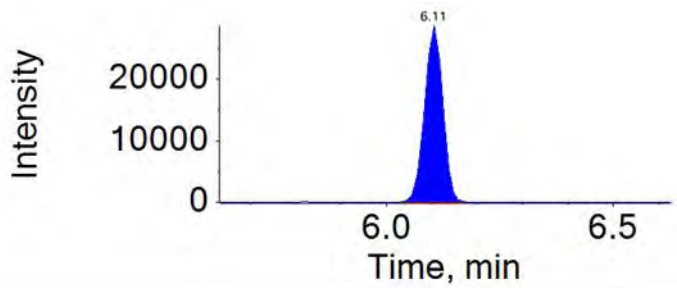
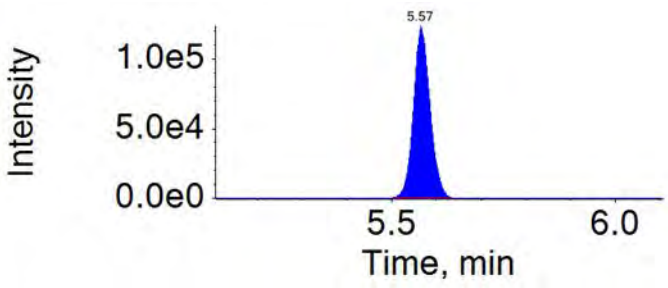
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

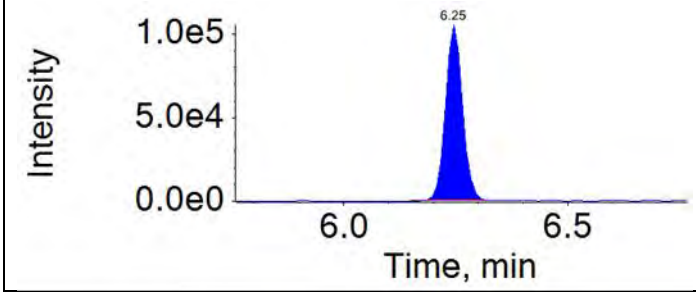
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

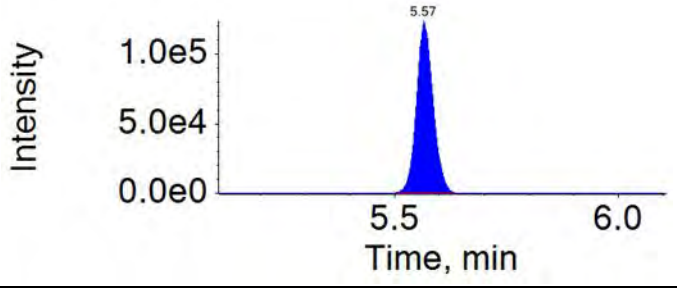
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

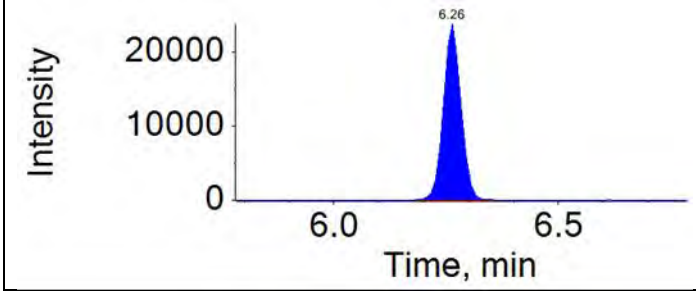
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

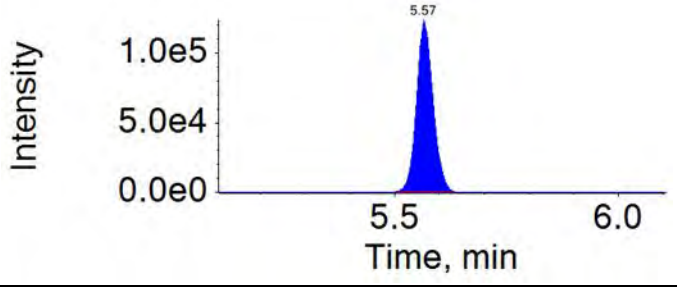
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



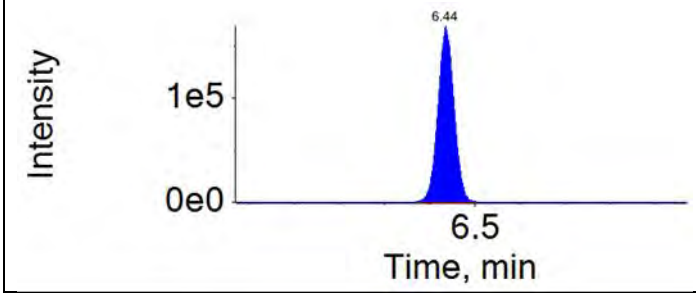


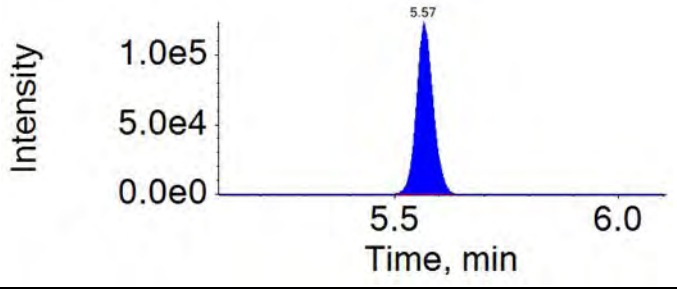
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



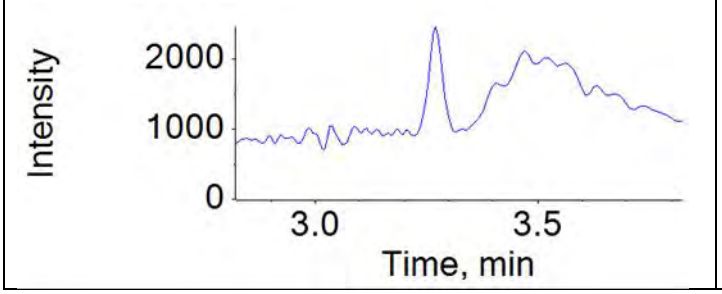


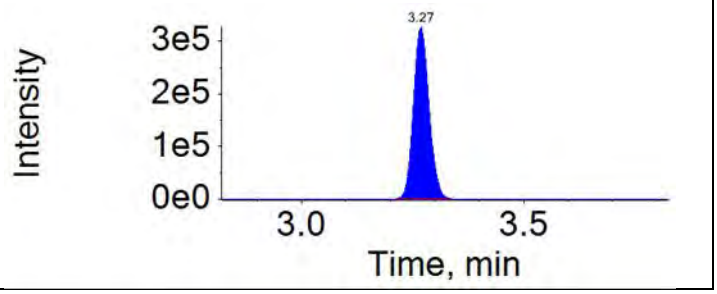
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

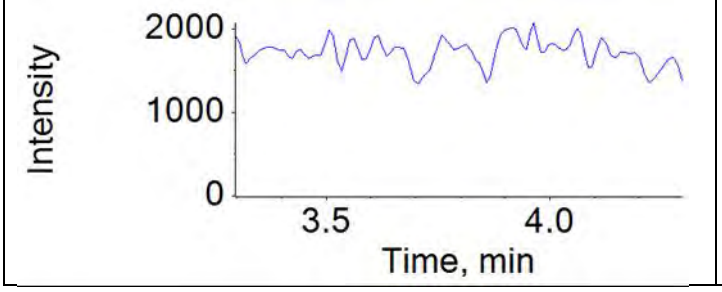
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

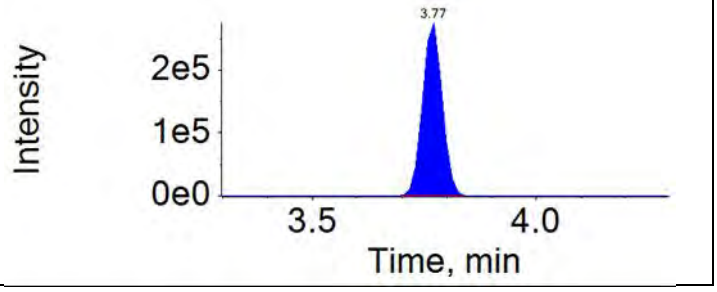
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



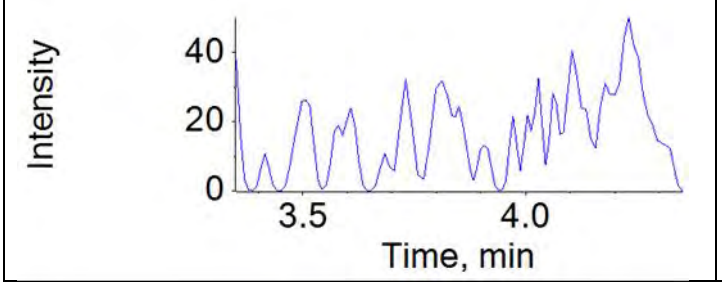


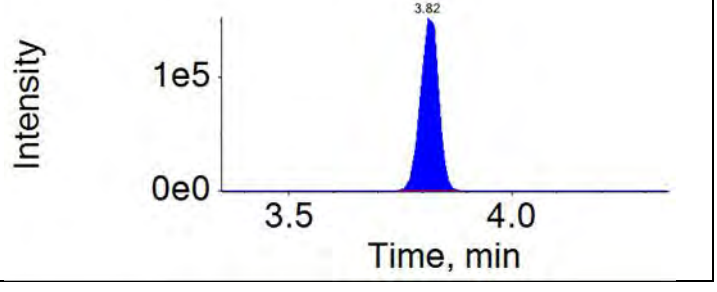
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



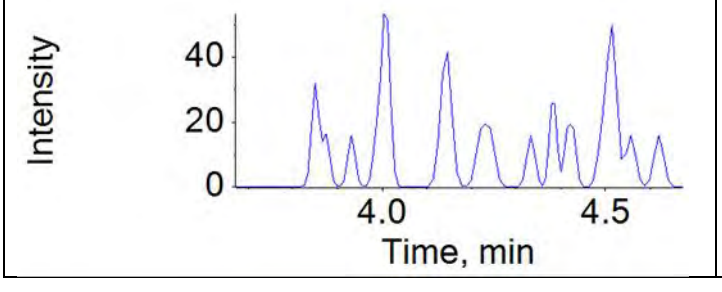


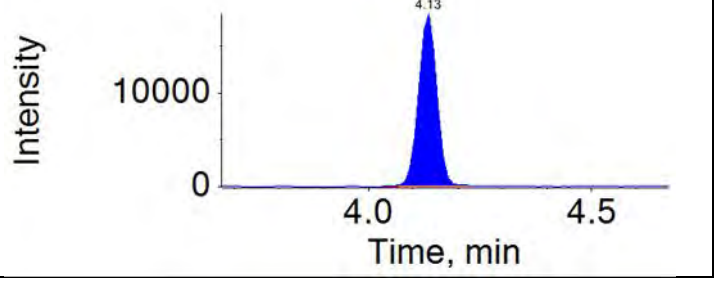
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



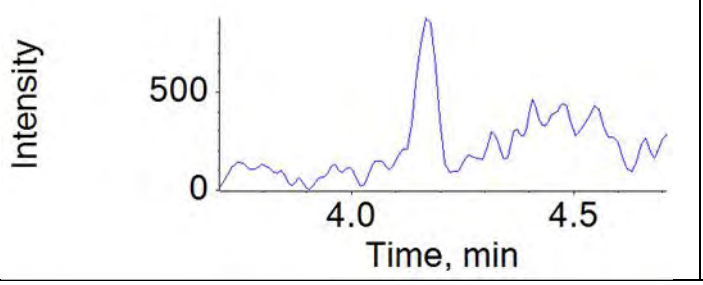


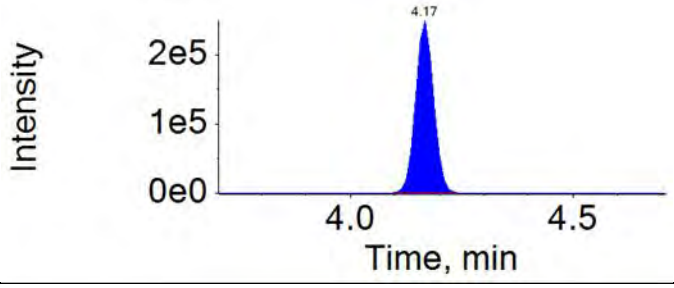
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

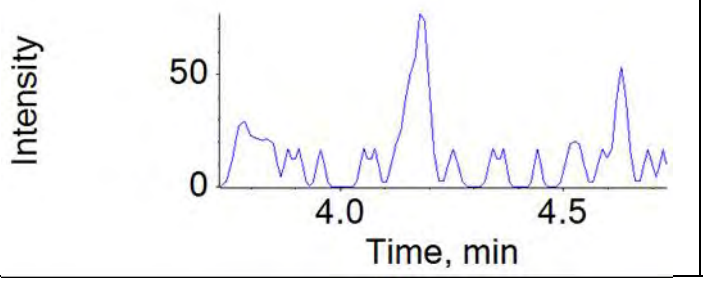
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

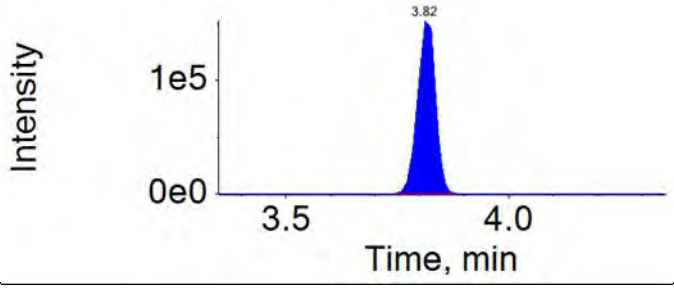
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



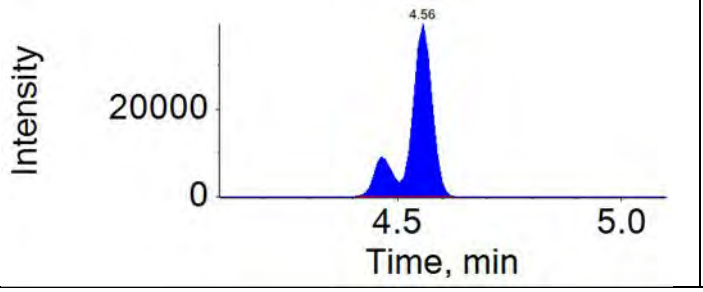


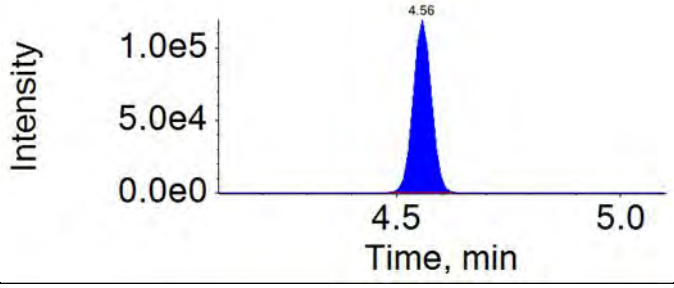
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



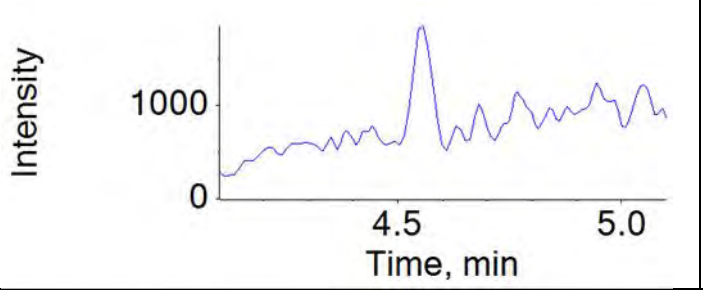


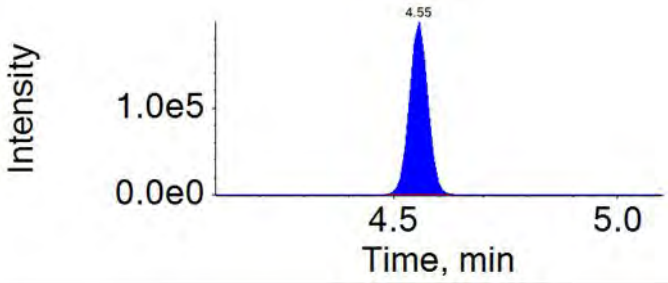
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

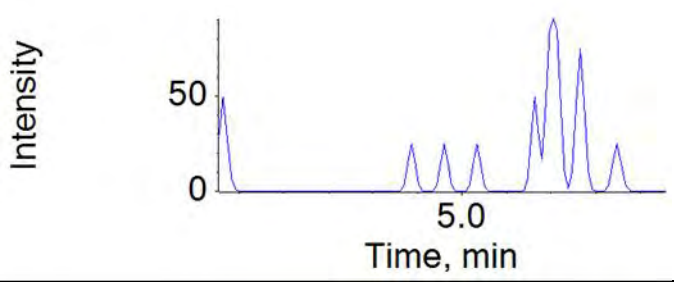
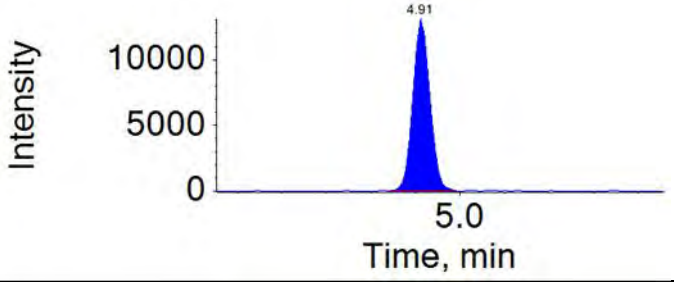


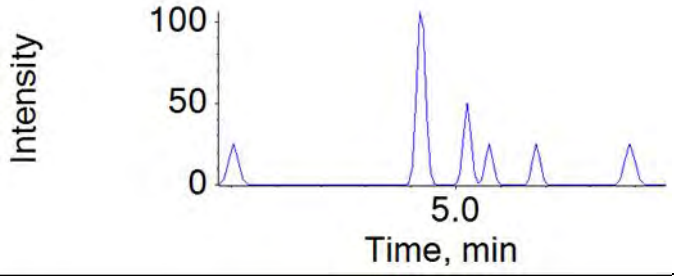
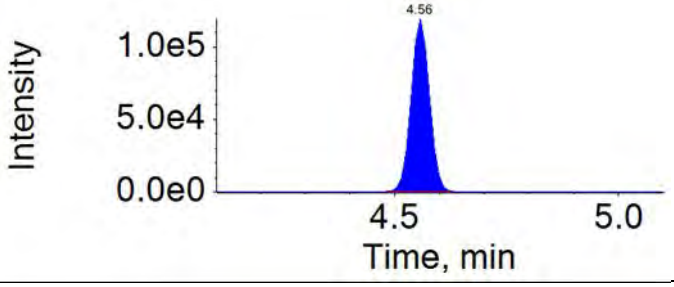


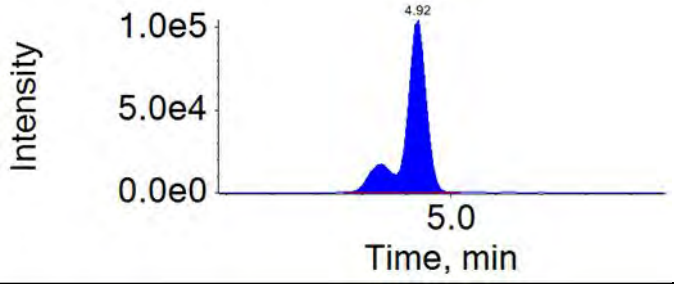
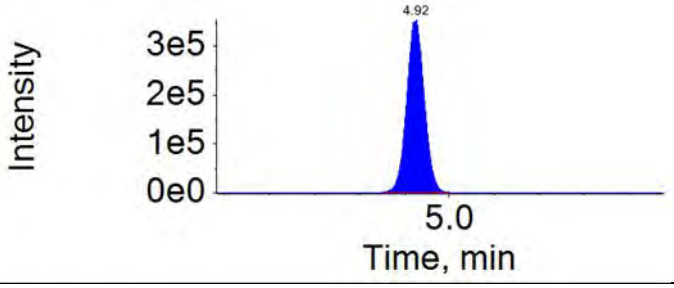
APPROVED
By JPT at 2:53 pm, 11/7/18

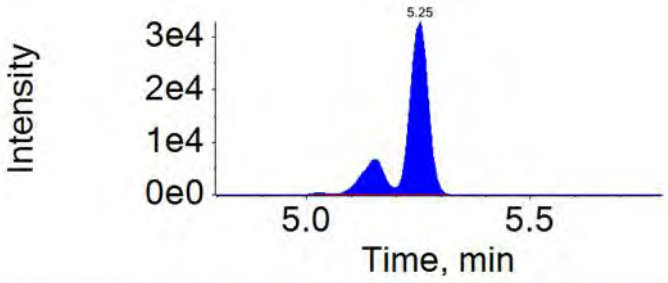
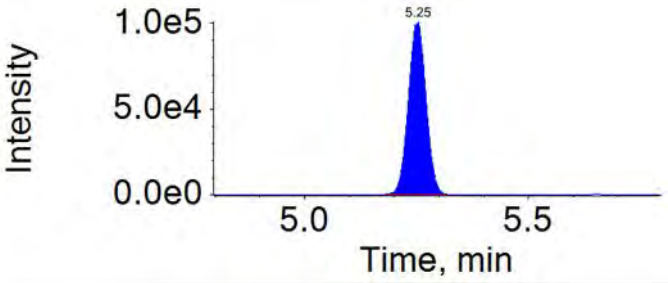
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

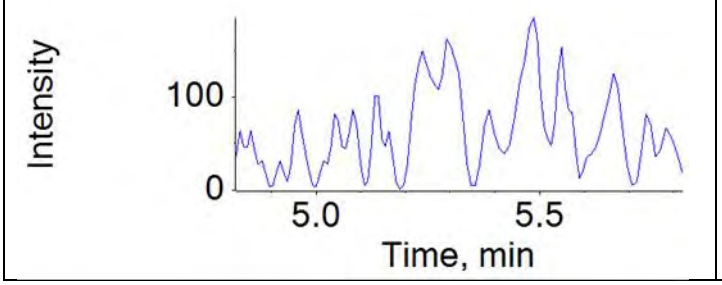
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

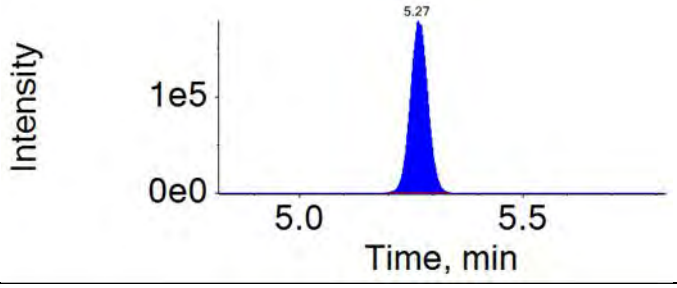
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

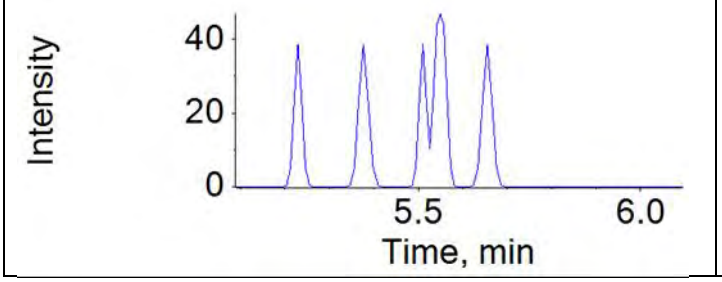
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

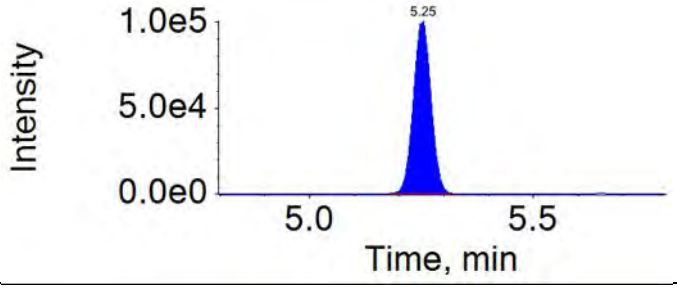
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



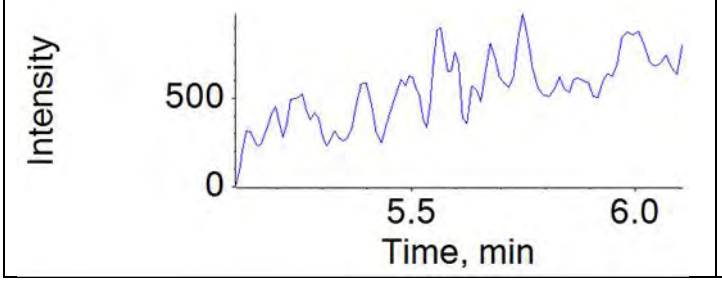


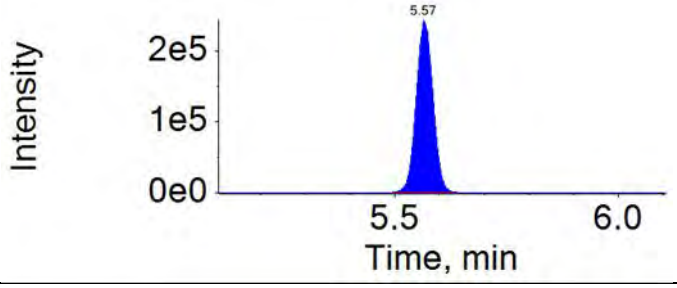
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



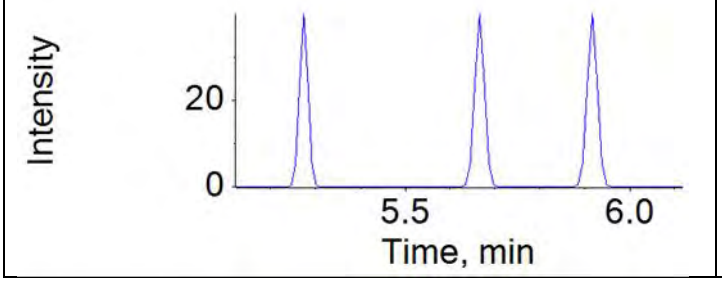


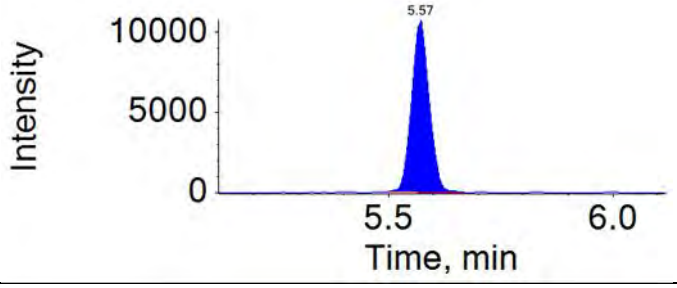
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

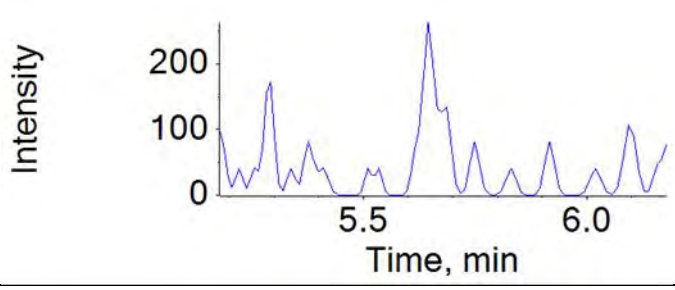
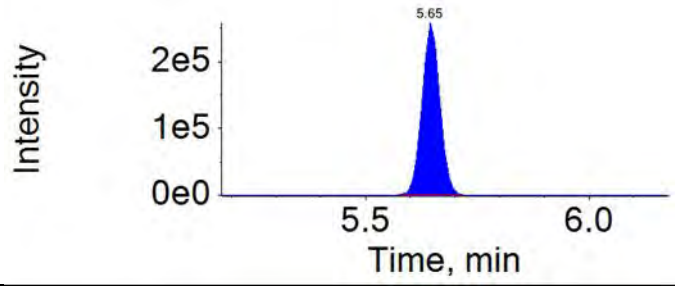


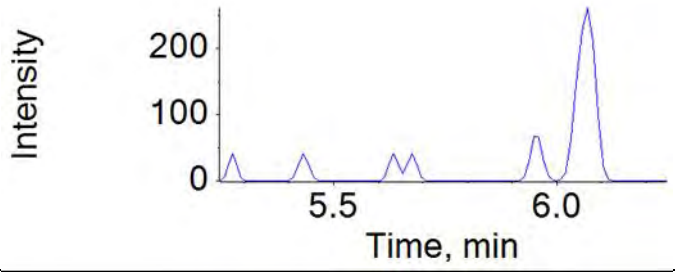
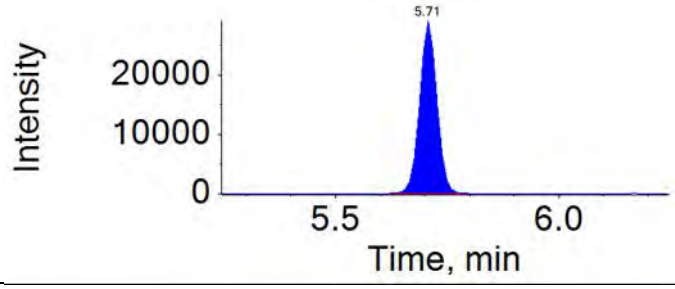


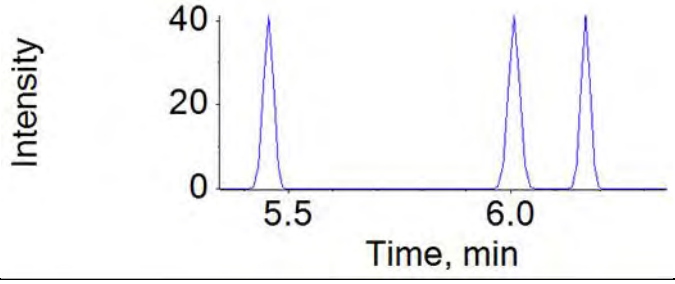
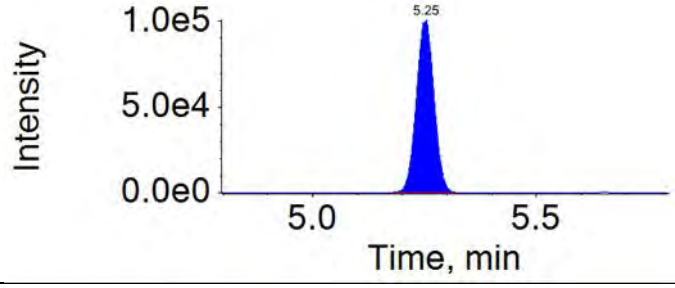
APPROVED
By JPT at 2:54 pm, 11/7/18

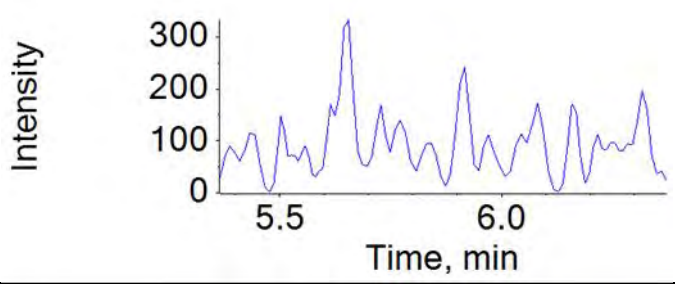
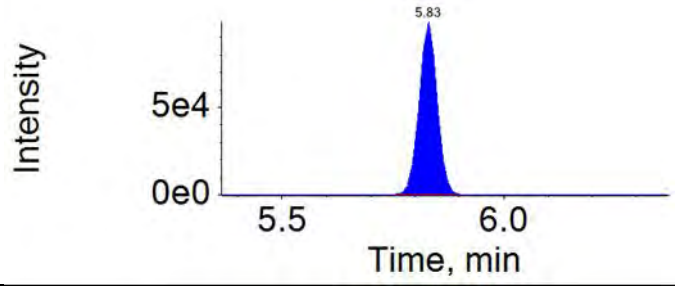
REVIEWED
By umar at 5:24 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

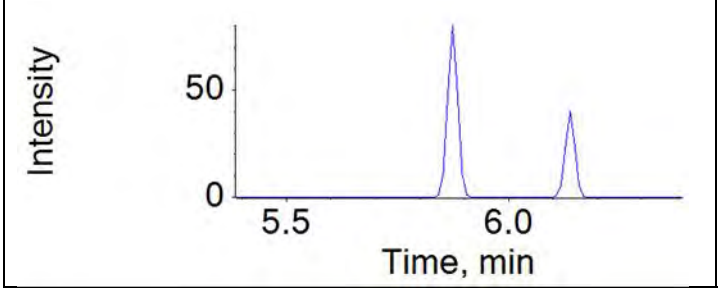
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

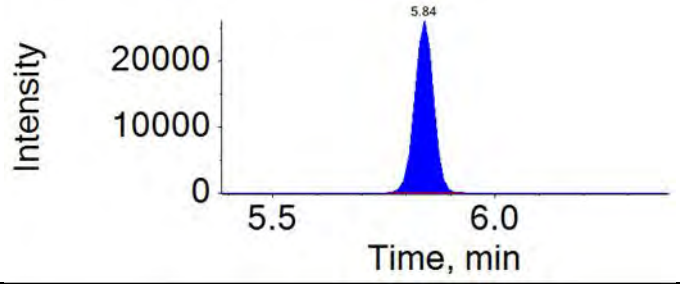
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

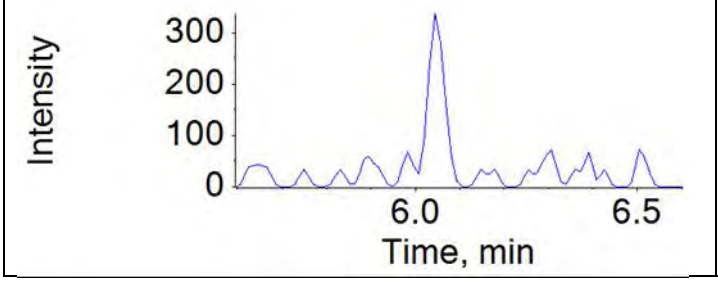
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

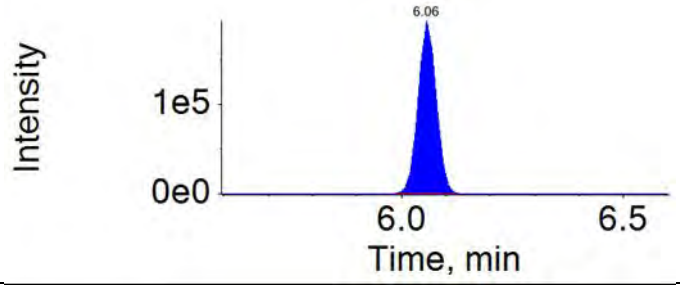
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



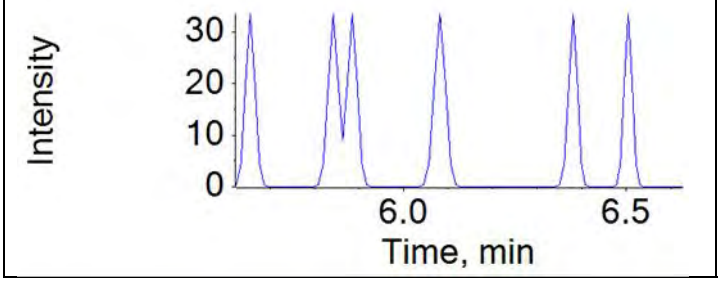


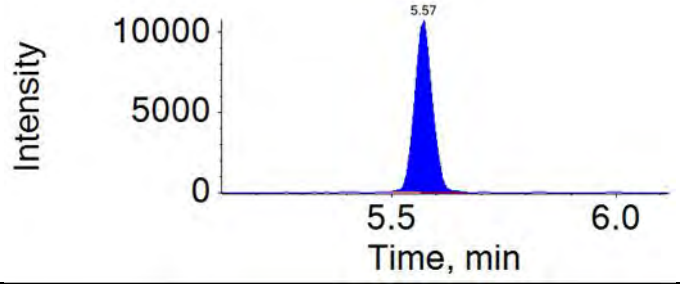
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



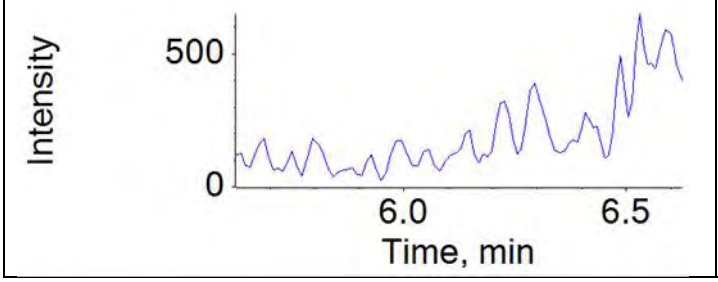


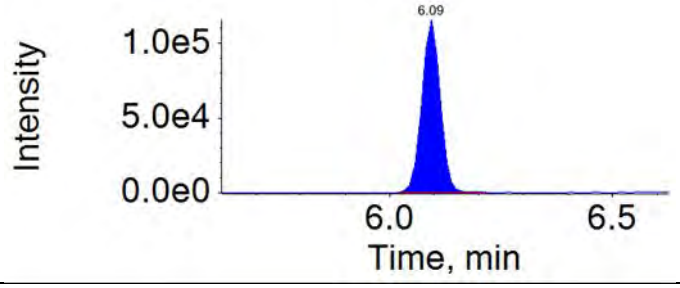
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



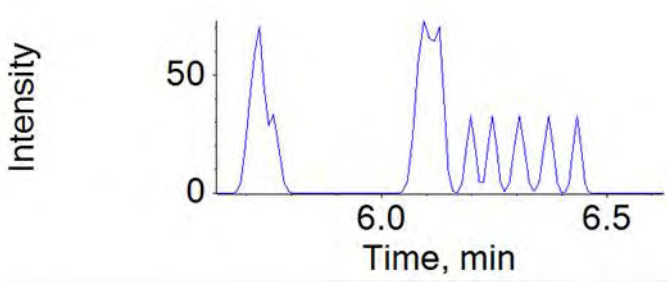


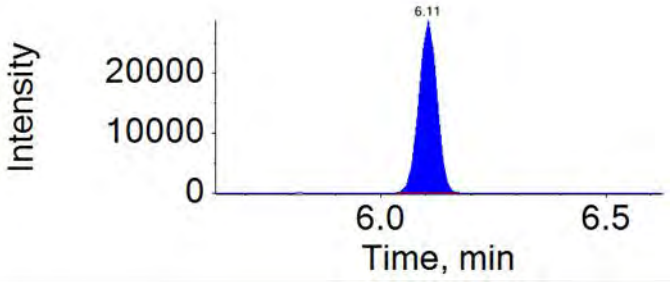
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

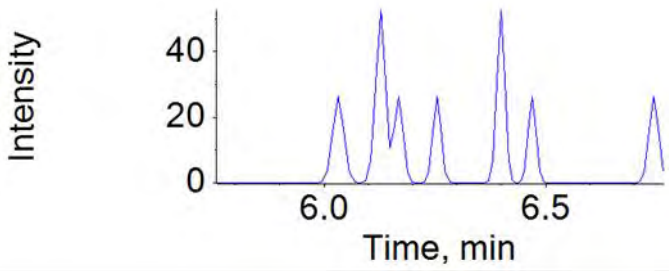
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

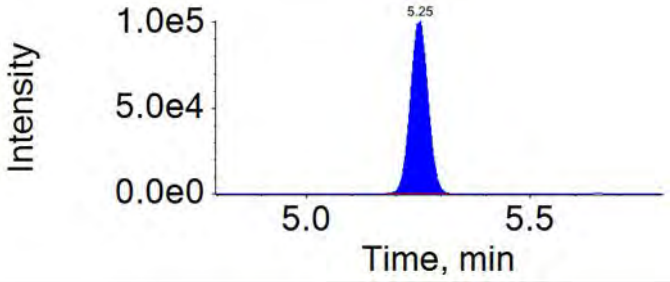
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



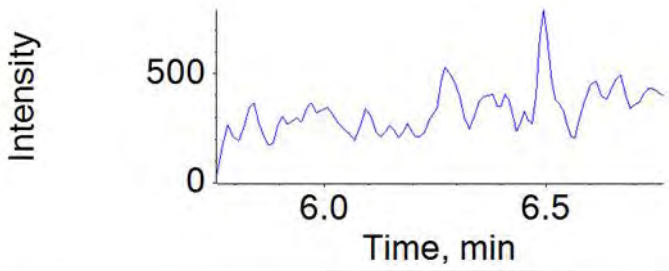


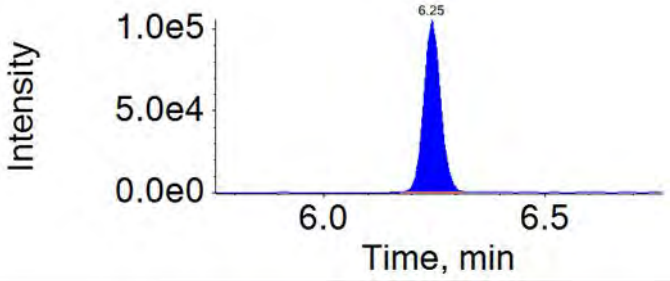
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



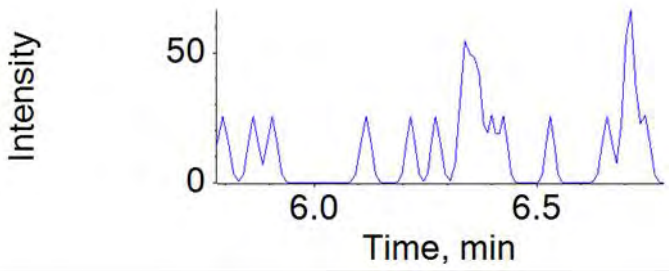


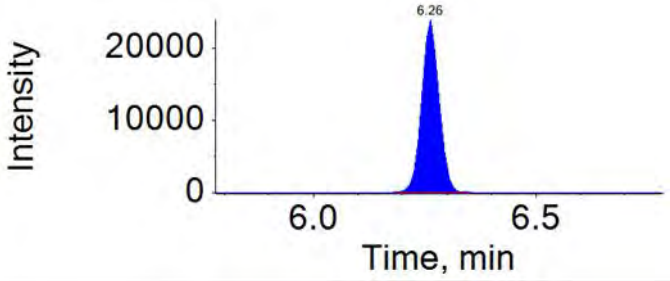
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





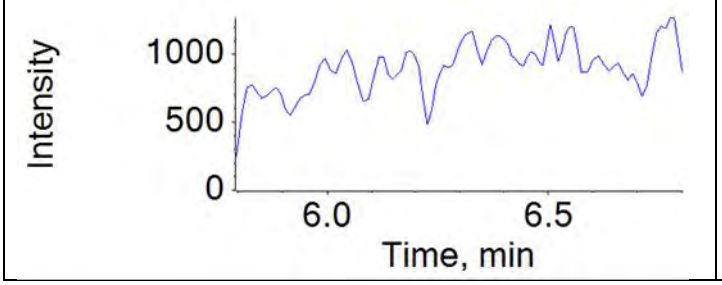
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

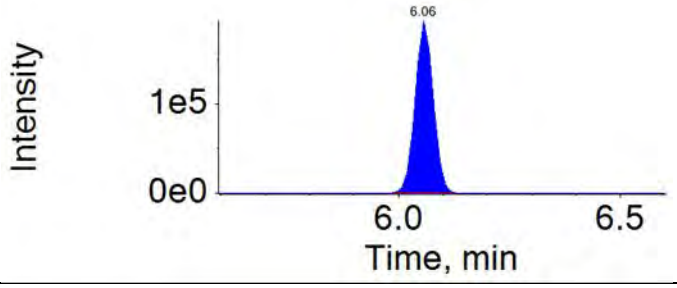




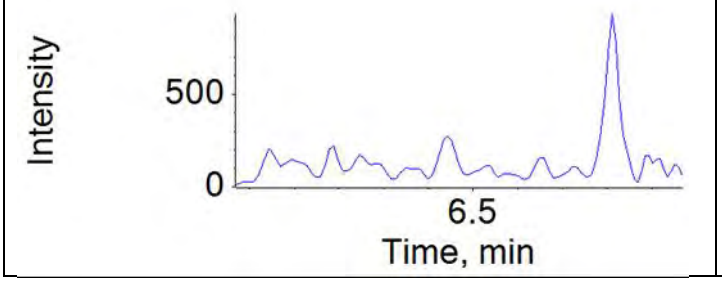
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

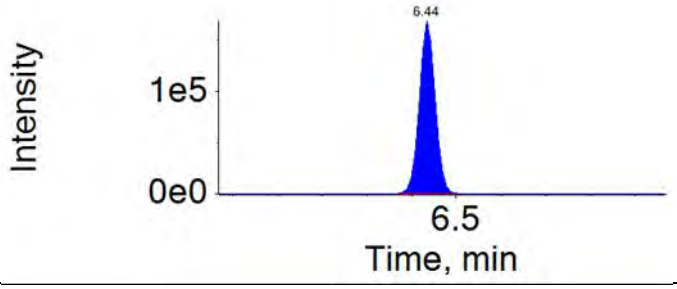
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



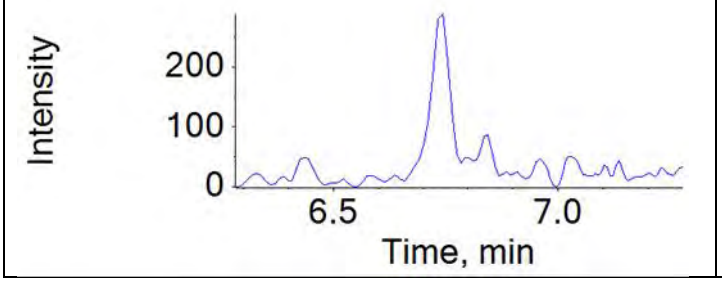


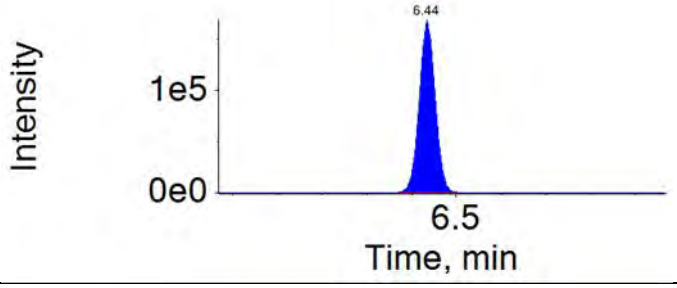
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



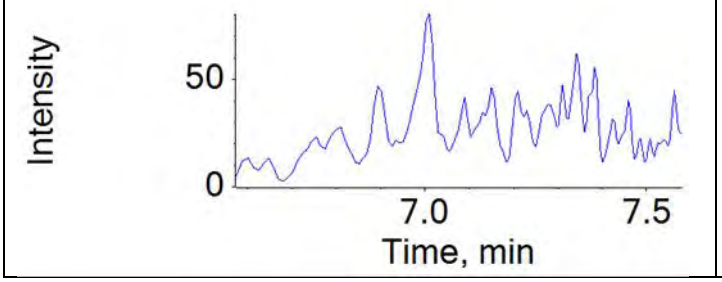


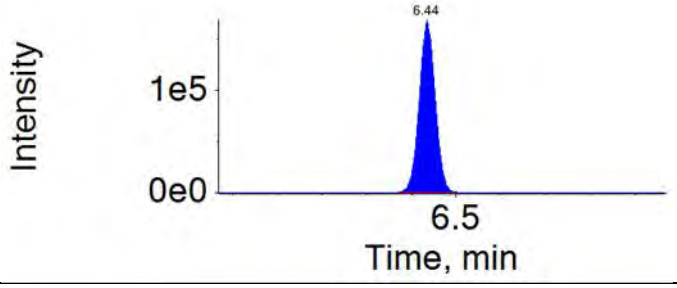
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0

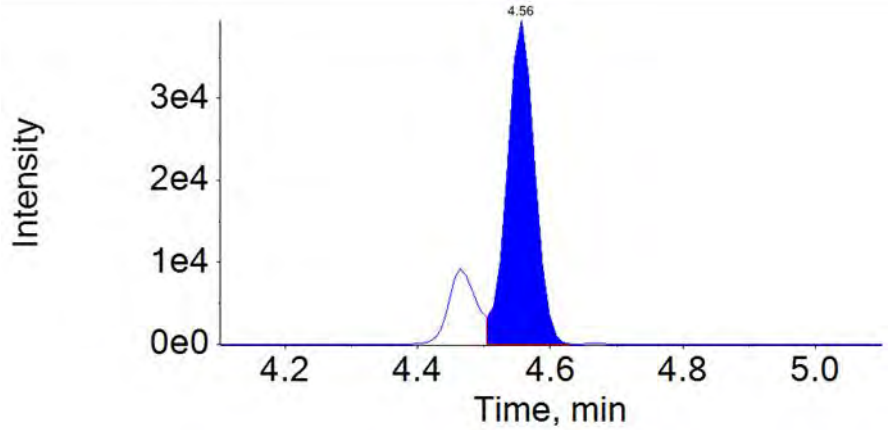


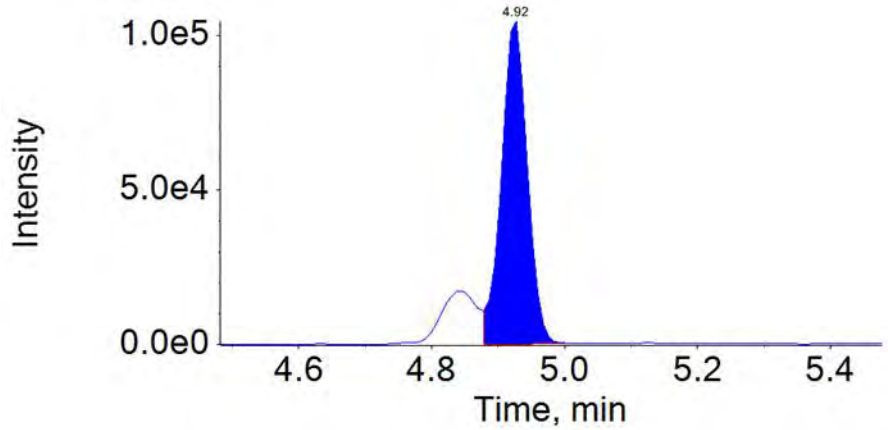


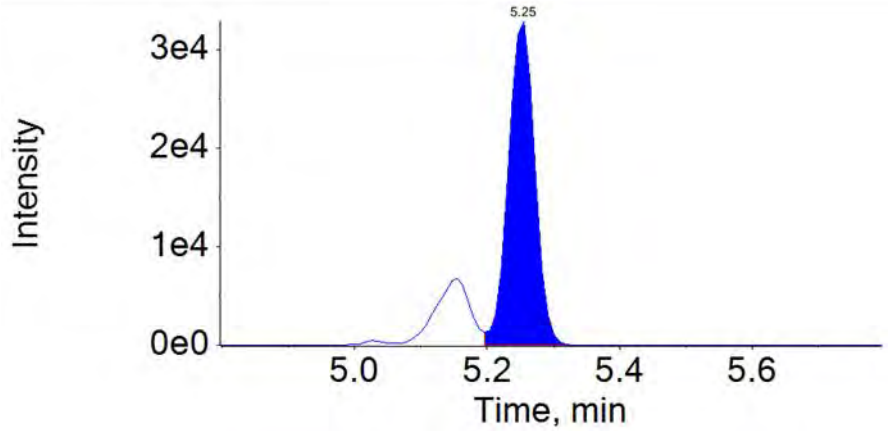
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: PFHxS **RT (min.):** 4.56 **Peak Area:** 113540.6 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV07DCAL-19.wiff **Sample Name:** L+B CAL3	 **Integration Comment:** incorrect integration

Component Name: PFOA **RT (min.):** 4.92 **Peak Area:** 284491.6 **Mass Range:** 413.0 / 369.0 **File Name:** 18NOV07DCAL-19.wiff **Sample Name:** L+B CAL3	 **Integration Comment:** incorrect integration

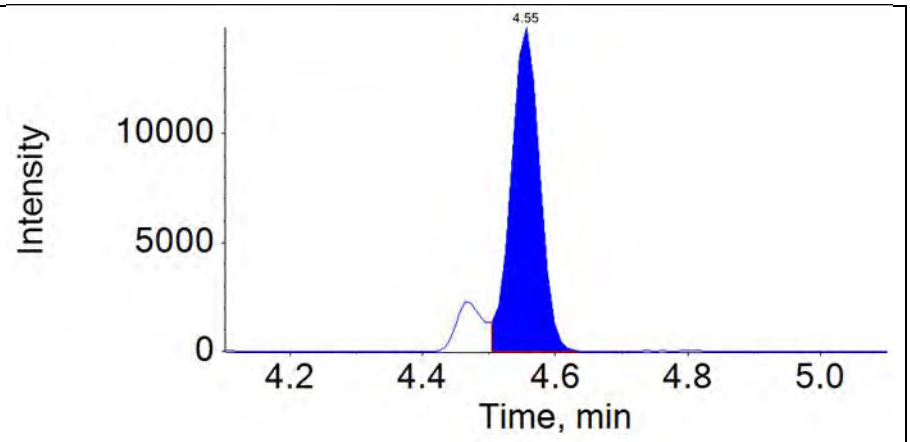
Component Name: PFOS **RT (min.):** 5.25 **Peak Area:** 91841.8 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV07DCAL-19.wiff **Sample Name:** L+B CAL3	 **Integration Comment:** incorrect integration

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

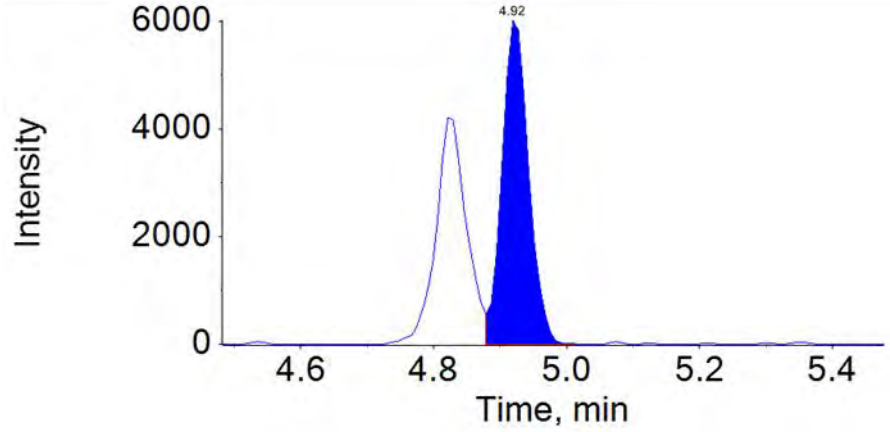
Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
44357.1
Mass Range:
399.0 / 99.0
File Name:
18NOV07DCAL-19.wiff
Sample Name:
L+B CAL3



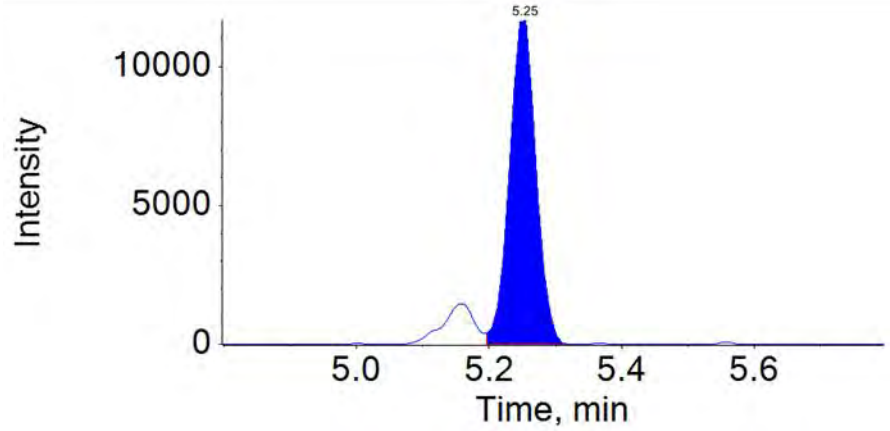
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
16848.6
Mass Range:
413.0 / 169.0
File Name:
18NOV07DCAL-19.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
32705.6
Mass Range:
499.0 / 99.0
File Name:
18NOV07DCAL-19.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Ion Ratio Report

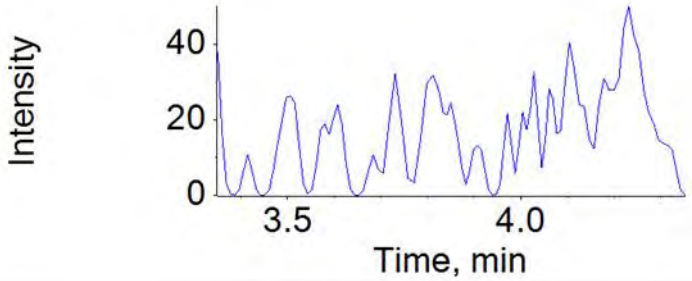
Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-19.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	1.0000	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3576	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6359	N/A		50	
PFHxA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0115	N/A		50	
PFPeS	N/A	N/A	N/A	A	1.0000	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.5384	N/A		50	
PFHxS	4.56	1.00	140012.1	M	1.0000	1.0000			
PFHxS_2	4.55	1.00	50830.8	M	0.3569	0.3630	2	50	
PFHpA	N/A	N/A	N/A	A	1.0000	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0577	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6752	N/A		50	
PFHpS	N/A	N/A	N/A	A	1.0000	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.3950	N/A		50	
PFOA	4.92	1.00	347563.0	M	1.0000	1.0000			
PFOA_2	4.90	0.99	30355.3	M	0.0635	0.0873	38	50	
PFOS	5.25	1.00	117649.0	M	1.0000	1.0000			
PFOS_2	5.25	1.00	37584.5	M	0.3494	0.3195	-9	50	
PFNA	N/A	N/A	N/A	A	1.0000	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0207	N/A		50	
PFNS	N/A	N/A	N/A	A	1.0000	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4890	N/A		50	
PFDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0057	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.6169	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2206	N/A		50	
PFDS	N/A	N/A	N/A	A	1.0000	N/A			
PFDS_2	N/A	N/A	N/A	A	0.4648	N/A		50	
PFUnDA	N/A	N/A	N/A	A	1.0000	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0031	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	1.0000	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.6082	N/A		50	
PFDoDA	N/A	N/A	N/A	A	1.0000	N/A			
PFDoDA_2	N/A	N/A	N/A	A	0.0109	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	1.0000	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.7082	N/A		50	
PFTrDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTrDA_2	N/A	N/A	N/A	A	0.0096	N/A		50	
PFTeDA	N/A	N/A	N/A	A	1.0000	N/A			
PFTeDA_2	N/A	N/A	N/A	A	0.0055	N/A		50	
PFHxDA	N/A	N/A	N/A	A	1.0000	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0596	N/A		50	
PFODA	N/A	N/A	N/A	A	1.0000	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0257	N/A		50	

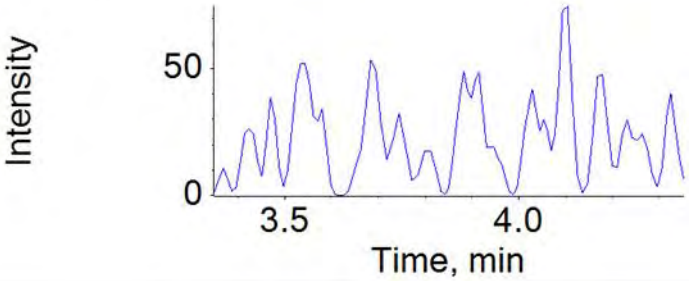
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

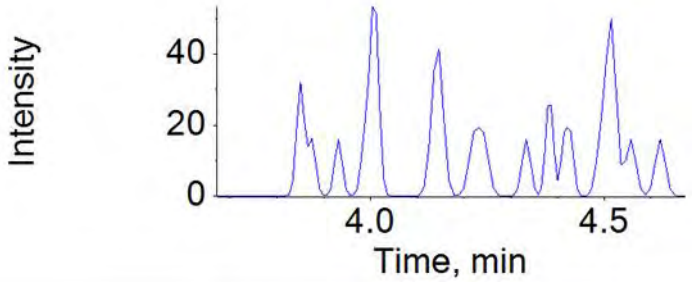
Component: PFBS
Primary Mass: 299.0 / 80.0



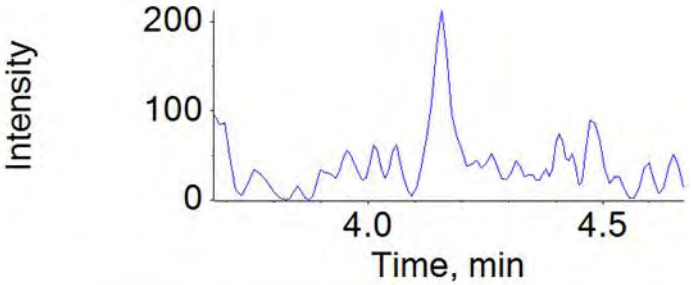
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



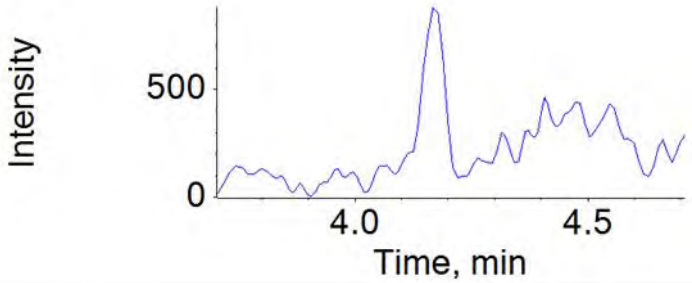
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



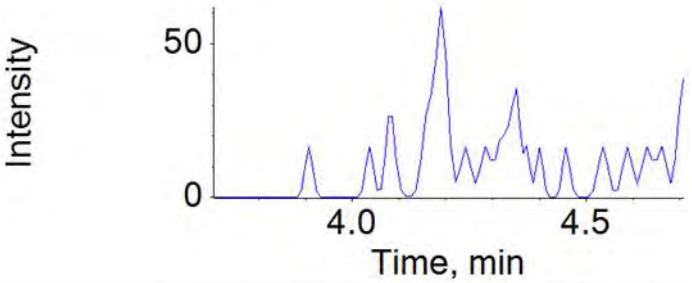
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



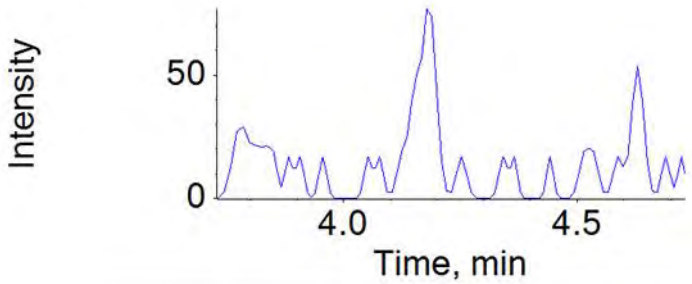
Component: PFHxA
Primary Mass: 313.0 / 269.0



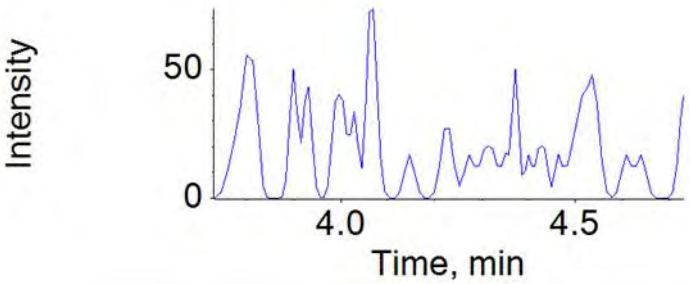
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



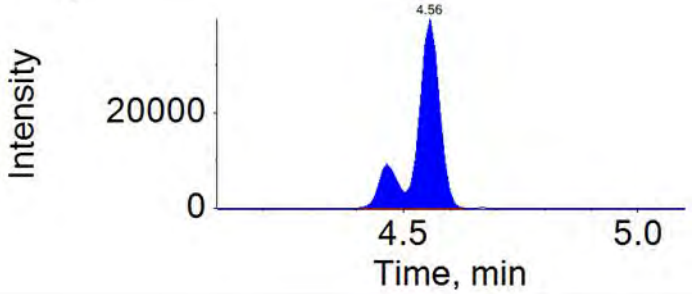
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



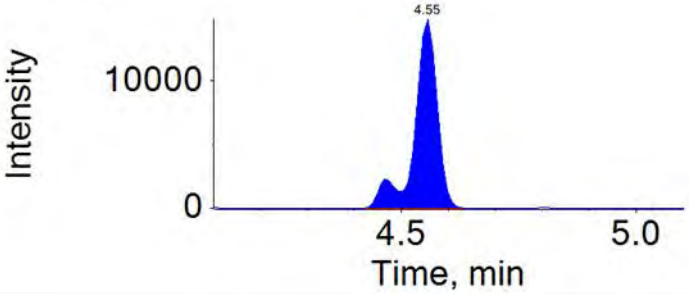
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

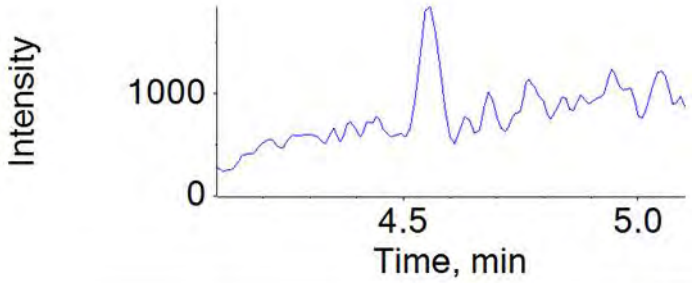
Component: PFHxS
Primary Mass: 399.0 / 80.0



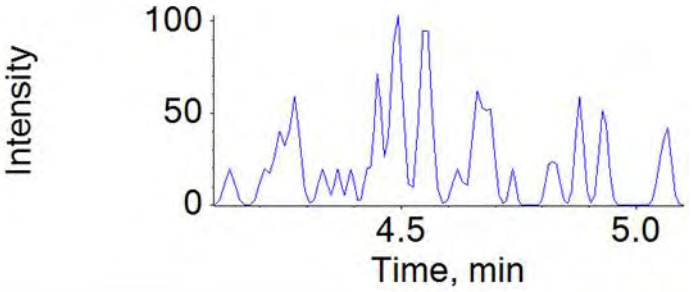
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



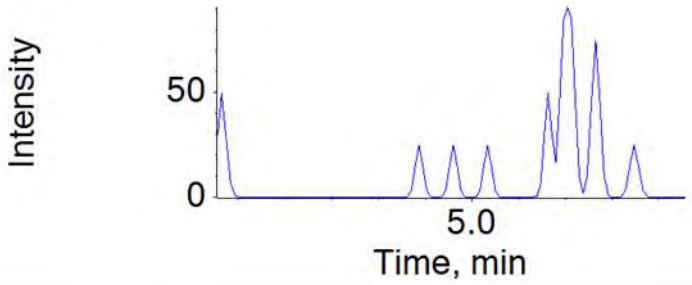
Component: PFHpA
Primary Mass: 363.0 / 319.0



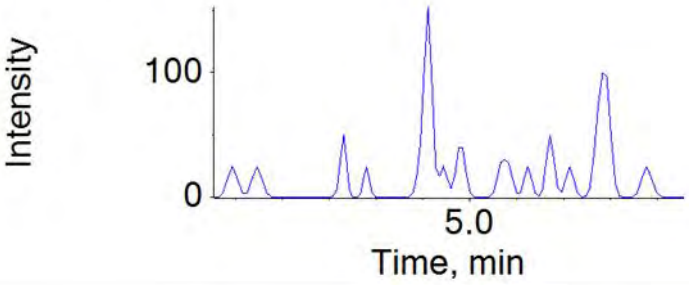
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



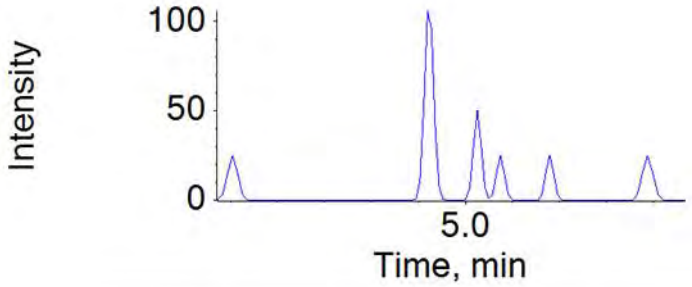
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



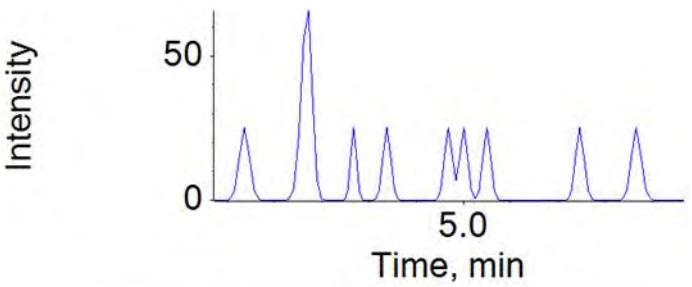
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



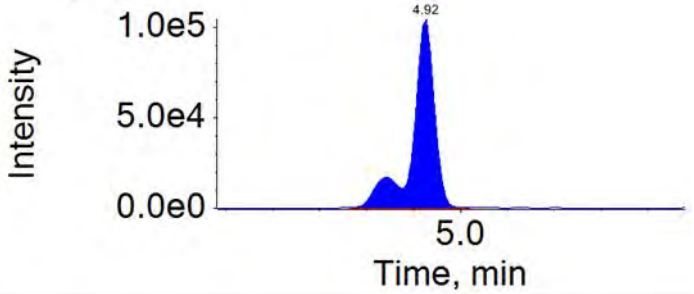
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



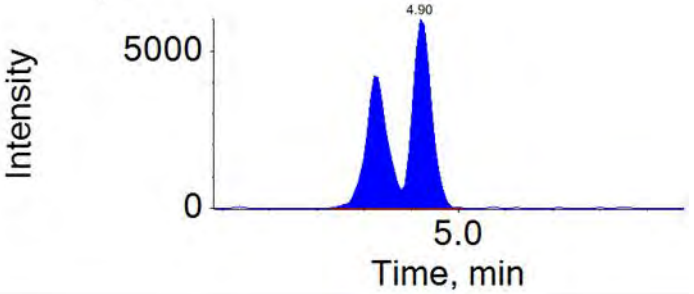
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

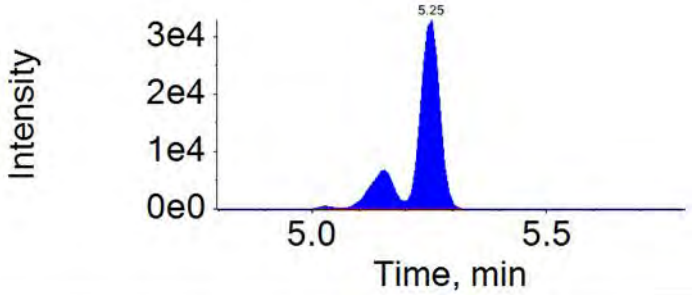
Component: PFOA
Primary Mass: 413.0 / 369.0



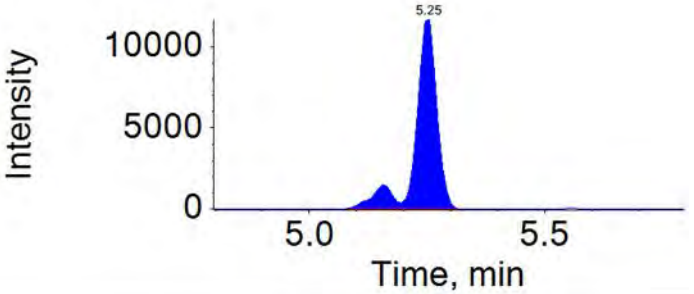
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



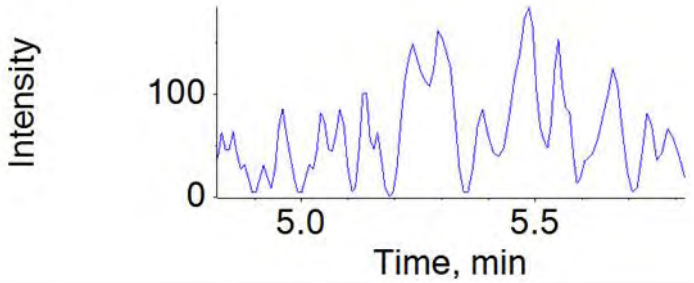
Component: PFOS
Primary Mass: 499.0 / 80.0



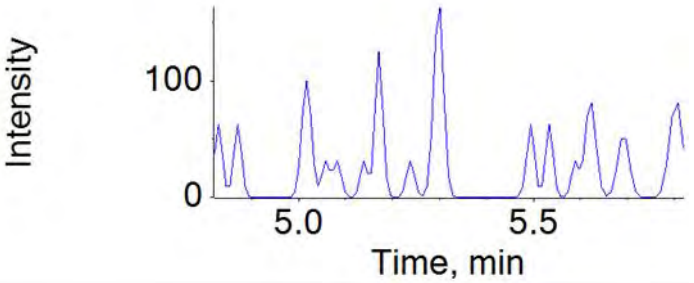
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



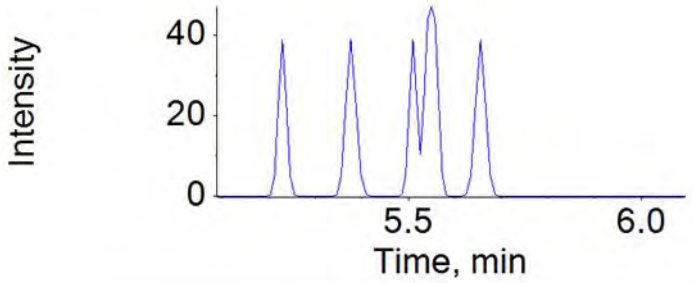
Component: PFNA
Primary Mass: 463.0 / 419.0



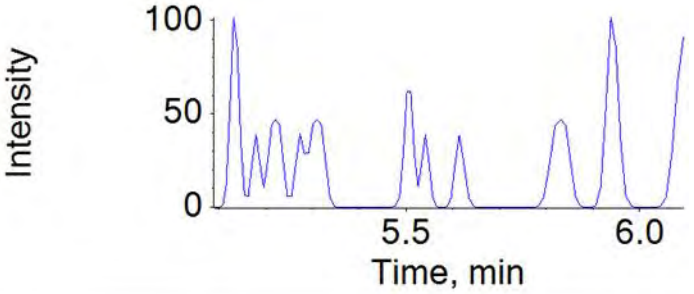
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



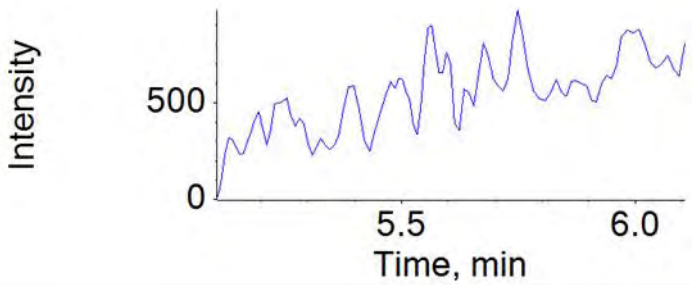
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



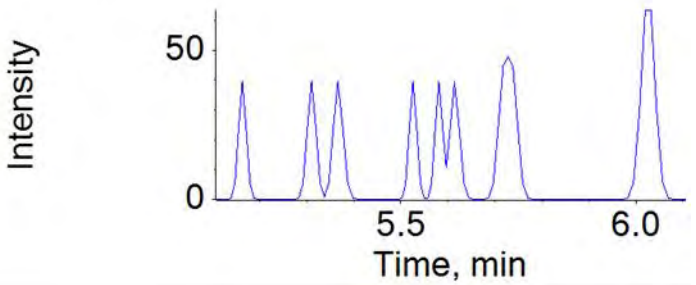
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

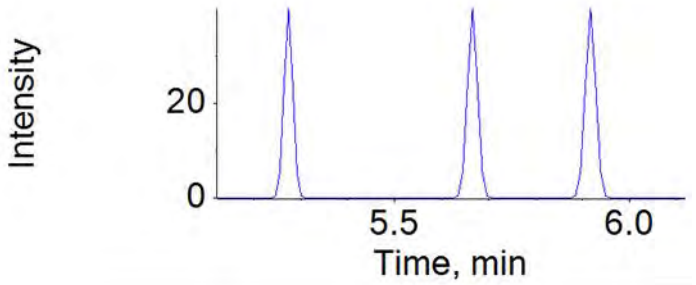
Component: PFDA
Primary Mass: 513.0 / 469.0



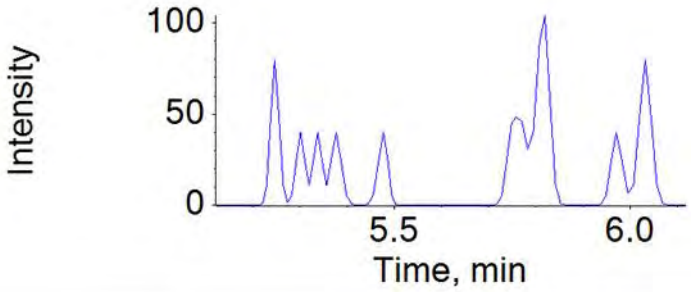
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



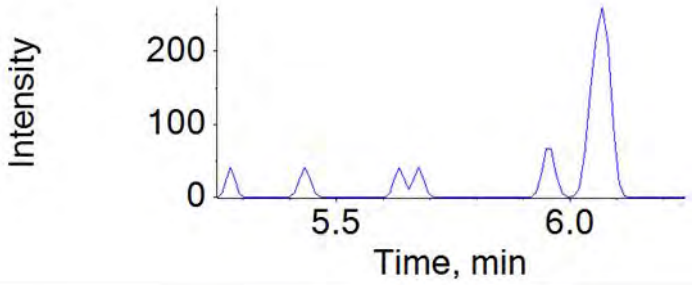
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



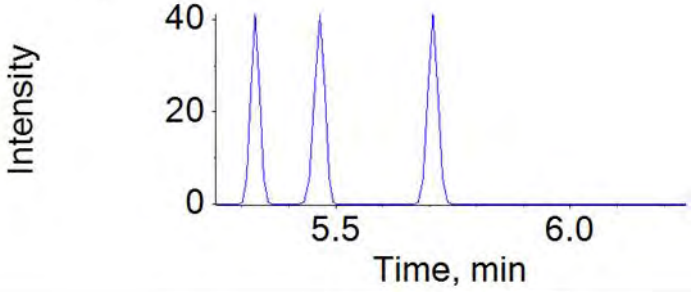
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



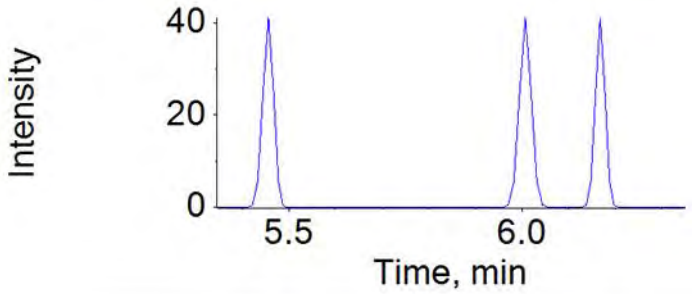
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



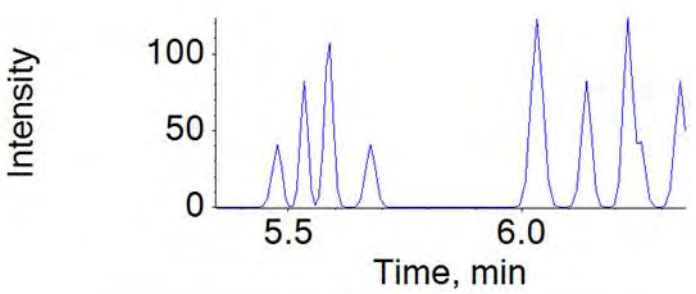
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



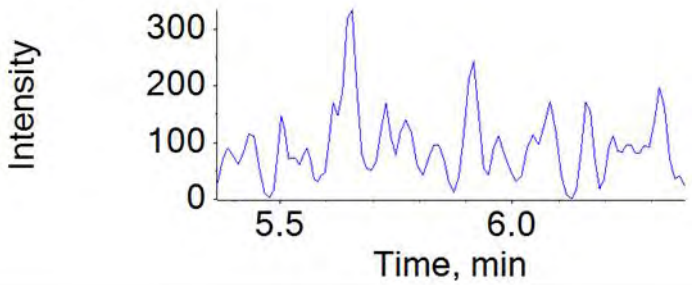
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



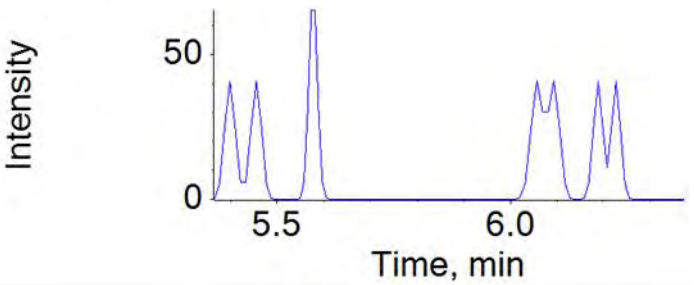
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

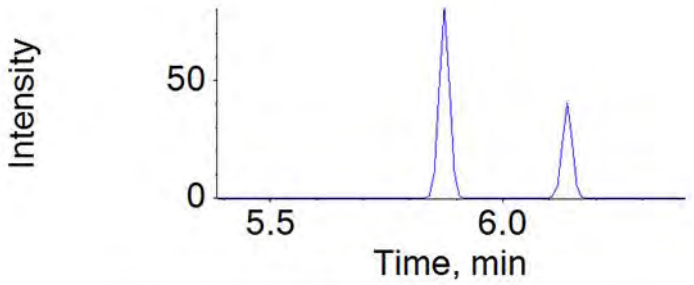
Component: PFUnDA
Primary Mass: 563.0 / 519.0



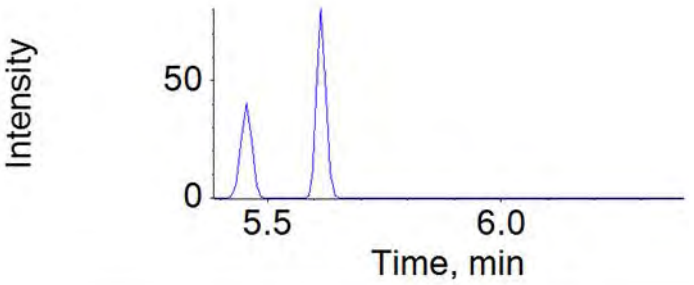
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



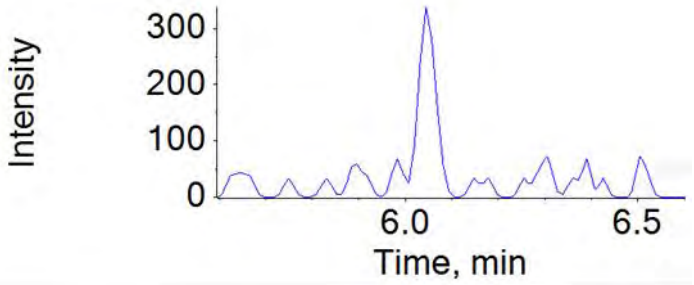
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



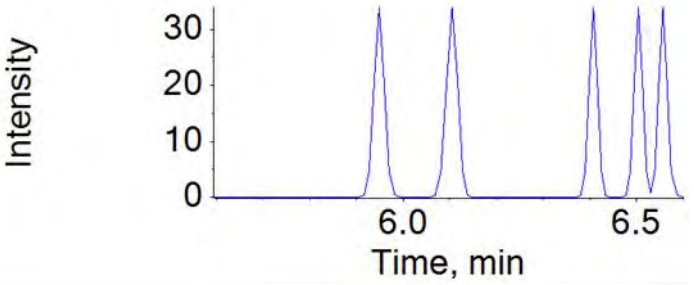
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



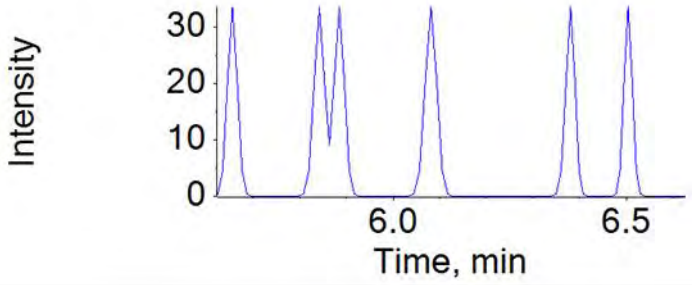
Component: PFDoDA
Primary Mass: 613.0 / 569.0



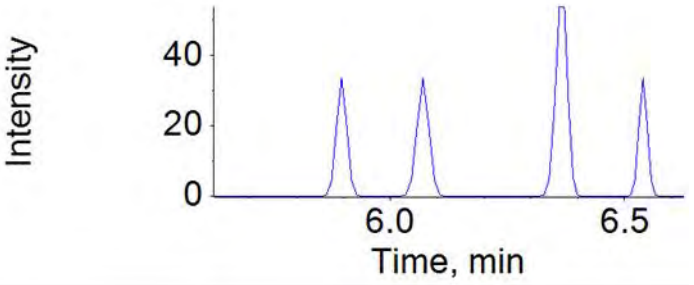
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



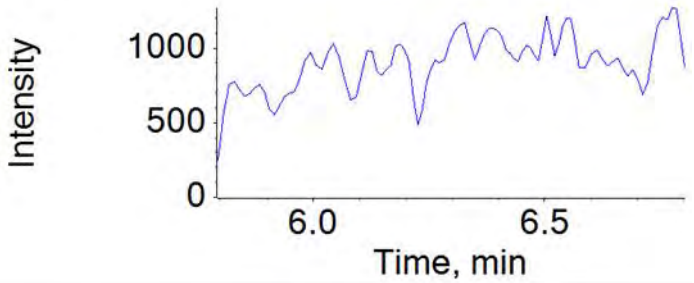
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



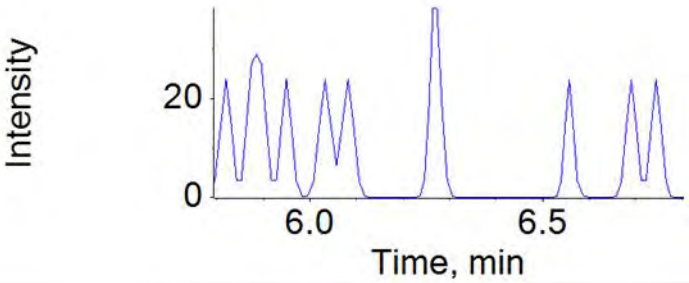
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

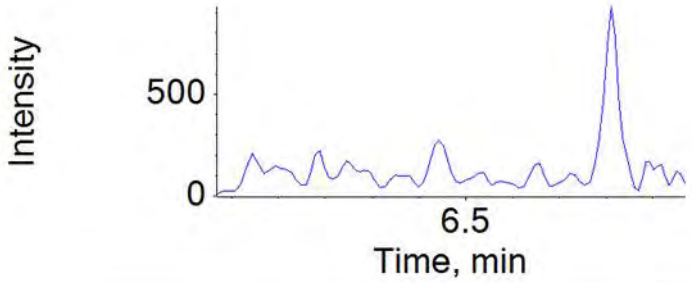
Component: PFTrDA
Primary Mass: 663.0 / 619.0



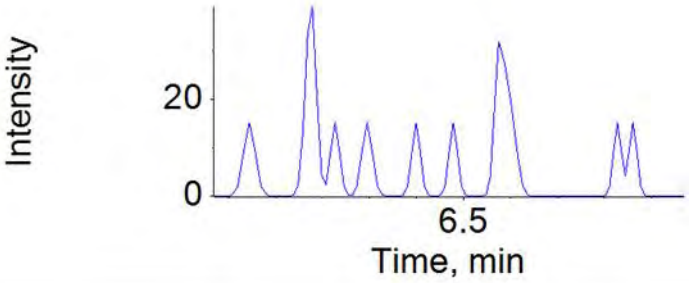
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



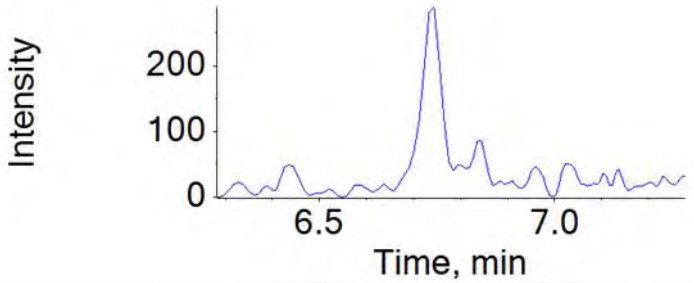
Component: PFTeDA
Primary Mass: 713.0 / 669.0



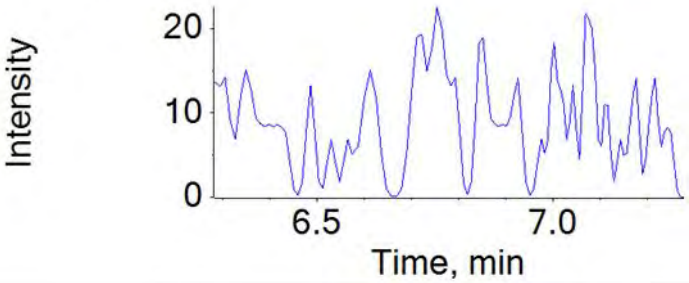
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



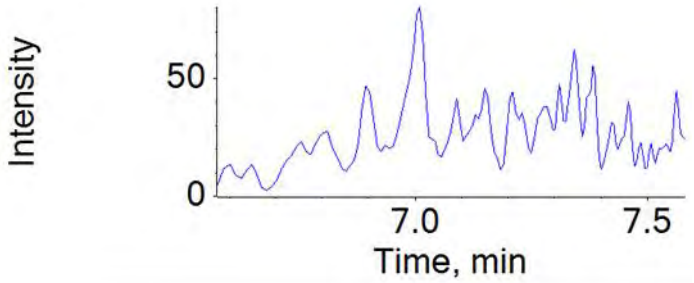
Component: PFHxDA
Primary Mass: 813.0 / 769.0



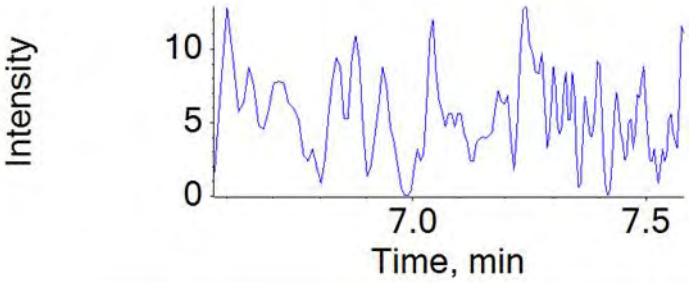
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



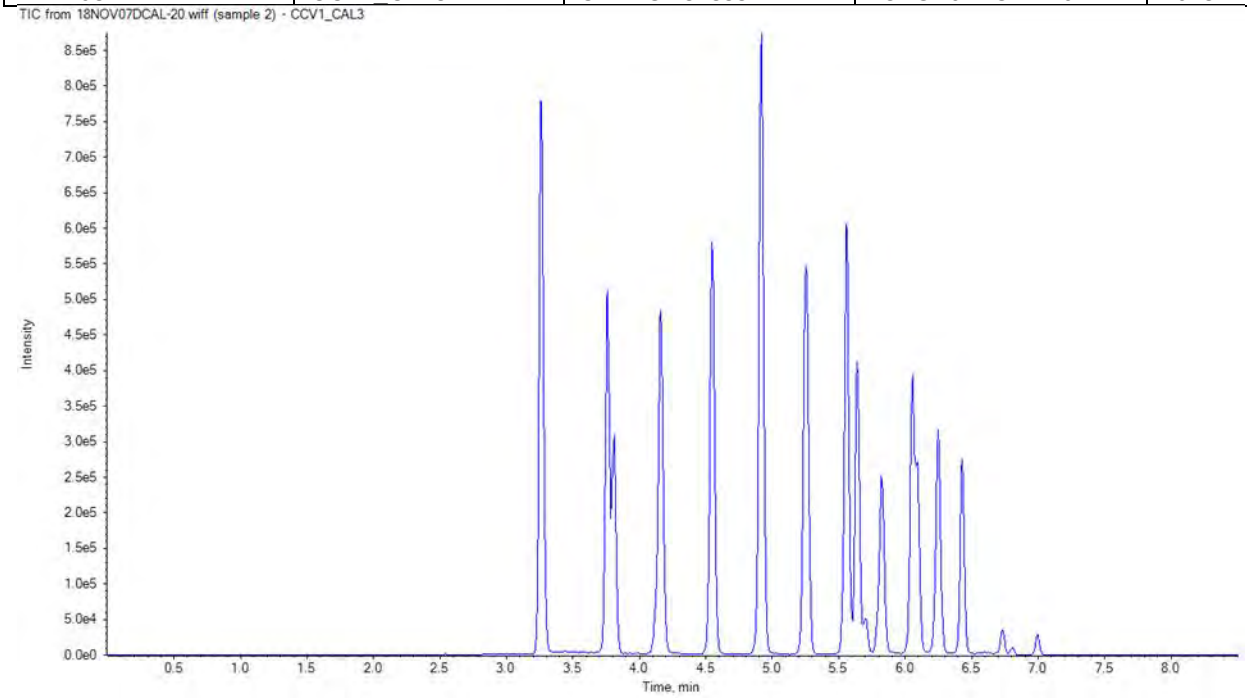
APPROVED
By JPT at 2:54 pm, 11/7/18

REVIEWED
By umar at 5:24 pm, 11/9/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALMOD31833F	18NOV07DCAL-20.wiff	2018-11-07T11:09:59



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	721701.6	730410.6	-1	50	
13C2-PFOA	5.0	512566.9	524423.6	-2	50	
13C4-PFOS	4.8	267946.3	274061.7	-2	50	
13C2-PFDA	5.0	316670.3	311442.1	2	50	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALMOD31833F	18NOV07DCAL-20.wiff	2018-11-07T11:09:59

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	278381.8	10	13C4-PFBA	780482.5	5.0	0.357	3.26	1.000	2.000	2.087	4	30	
PFPeA	286996.9	12	13C5-PFPeA	819317.3	5.0	0.350	3.76	1.000	2.000	2.082	4	30	
PFBS	155917.1	11	13C3-PFBS	430650.1	4.7	0.362	3.81	1.000	1.770	1.825	3	30	
4:2-FTS	41869.1	11	13C2-4:2-FTS	53424.6	4.7	0.784	4.13	1.000	1.980	2.107	6	30	
PFHxA	355844.6	12	13C5-PFHxA	678729.1	5.0	0.524	4.16	1.000	2.000	2.248	12	30	
PFPeS	84840.7	11	13C3-PFBS	430650.1	4.7	0.197	4.18	1.100	1.880	1.943	3	30	
PFHxS	126167.9	12	13C3-PFHxS	332171.0	4.7	0.380	4.55	1.000	1.890	1.925	2	30	
PFHpA	359438.8	12	13C4-PFHpA	553115.2	5.0	0.650	4.55	1.000	2.000	2.186	9	30	
6:2-FTS	30418.5	11	13C2-6:2-FTS	39617.7	4.8	0.768	4.91	1.000	2.090	1.915	-8	30	
PFHpS	118682.9	11	13C3-PFHxS	332171.0	4.7	0.357	4.91	1.080	1.900	1.869	-2	30	
PFOA	363186.2	11	13C8-PFOA	951797.5	5.0	0.382	4.92	1.000	2.000	2.148	7	30	
PFOS	113455.6	11	13C8-PFOS	281657.2	4.8	0.403	5.24	1.000	1.910	2.089	9	30	
PFNA	284061.5	11	13C9-PFNA	514994.9	5.0	0.552	5.26	1.000	2.000	2.061	3	30	
PFNS	70168.8	10	13C8-PFOS	281657.2	4.8	0.249	5.54	1.060	1.920	1.975	3	30	
PFDA	243089.4	11	13C6-PFDA	643202.5	5.0	0.378	5.56	1.000	2.000	2.079	4	30	
8:2-FTS	25674.2	11	13C2-8:2-FTS	27654.3	4.8	0.928	5.56	1.000	2.110	2.093	-1	30	
PFOSA	272309.7	12	13C8-PFOSA	710116.3	5.0	0.383	5.64	1.000	2.000	2.073	4	30	
NMeFOSAA	27107.5	12	d3-NMeFOSAA	85750.0	5.0	0.316	5.71	1.000	2.000	1.627	-19	30	
PFDS	57911.4	12	13C8-PFOS	281657.2	4.8	0.206	5.80	1.110	1.930	1.964	2	30	
PFUnDA	206684.1	12	13C7-PFUnDA	274326.2	5.0	0.753	5.82	1.000	2.000	2.161	8	30	
NEtFOSAA	29353.4	12	d5-NEtFOSAA	64529.1	5.0	0.455	5.84	1.000	2.000	1.955	-2	30	
PFDoDA	220745.0	12	13C2-PFDoDA	586710.7	5.0	0.376	6.05	1.000	2.000	2.039	2	30	
10:2-FTS	14526.2	12	13C2-8:2-FTS	27654.3	4.8	0.525	6.07	1.090	2.120	1.636	-23	30	
NMePFOSAE	157888.7	12	d7-NMePFOSAE	328201.0	5.0	0.481	6.10	1.000	2.000	2.156	8	30	
NMePFOSA	30788.7	12	d3-NMePFOSA	80699.5	5.0	0.382	6.10	1.000	2.000	2.136	7	30	
PFDoS	30510.8	11	13C8-PFOS	281657.2	4.8	0.108	6.22	1.190	1.940	2.091	8	30	
NEtPFOSAE	187574.4	11	d9-NEtPFOSAE	274277.4	5.0	0.684	6.25	1.000	2.000	2.192	10	30	
NEtPFOSA	29547.8	12	d5-NEtPFOSA	72708.8	5.0	0.406	6.26	1.000	2.000	1.790	-11	30	
PFTrDA	191338.9	11	13C2-PFDoDA	586710.7	5.0	0.326	6.25	1.030	2.000	2.057	3	30	
PFTeDA	153182.8	11	13C2-PFTeDA	429266.0	5.0	0.357	6.43	1.000	2.000	2.096	5	30	
PFHxDA	71156.3	11	13C2-PFTeDA	429266.0	5.0	0.166	6.73	1.050	2.000	2.058	3	30	
PFODA	60356.7	10	13C2-PFTeDA	429266.0	5.0	0.141	6.99	1.090	2.000	2.014	1	30	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV07DCAL 11/7/2018 2:18:30 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_CAL3			**Data File:**		18NOV07DCAL-20.wiff
Sample ID:	CALMOD31833F			**Acquis Date:**		2018-11-07T11:09:59
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCAL
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	721701.6	730410.6	-1	50	
13C2-PFOA	5.0	512566.9	524423.6	-2	50	
13C4-PFOS	4.8	267946.3	274061.7	-2	50	
13C2-PFDA	5.0	316670.3	311442.1	2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	780482.5	13C3-PFBA	721701.6	1.081	5.000	5.005	100	70-130	
E13C5-PFPeA	819317.3	13C3-PFBA	721701.6	1.135	5.000	4.946	99	70-130	
E13C3-PFBS	430650.1	13C3-PFBA	721701.6	0.597	4.650	4.379	94	70-130	
E13C2-4:2-FTS	53424.6	13C2-PFOA	512566.9	0.104	4.670	4.703	101	70-130	
E13C5-PFHxA	678729.1	13C2-PFOA	512566.9	1.324	5.000	4.871	97	70-130	
E13C3-PFHxS	332171.0	13C2-PFOA	512566.9	0.648	4.730	4.652	98	70-130	
E13C4-PFHpA	553115.2	13C2-PFOA	512566.9	1.079	5.000	4.909	98	70-130	
E13C2-6:2-FTS	39617.7	13C2-PFOA	512566.9	0.077	4.750	5.154	109	70-130	
E13C8-PFOA	951797.5	13C2-PFOA	512566.9	1.857	5.000	5.178	104	70-130	
E13C8-PFOS	281657.2	13C4-PFOS	267946.3	1.051	4.780	4.648	97	70-130	
E13C9-PFNA	514994.9	13C4-PFOS	267946.3	1.922	5.000	5.250	105	70-130	
E13C6-PFDA	643202.5	13C2-PFDA	316670.3	2.031	5.000	5.108	102	70-130	
E13C2-8:2-FTS	27654.3	13C2-PFDA	316670.3	0.087	4.790	4.621	96	70-130	
E13C8-PFOSA	710116.3	13C2-PFDA	316670.3	2.242	5.000	4.893	98	70-130	
Ed3-NMeFOSAA	85750.0	13C2-PFDA	316670.3	0.271	5.000	5.036	101	70-130	
E13C7-PFUnDA	274326.2	13C2-PFDA	316670.3	0.866	5.000	4.997	100	70-130	
Ed5-NEtFOSAA	64529.1	13C2-PFDA	316670.3	0.204	5.000	4.716	94	70-130	
E13C2-PFDoDA	586710.7	13C2-PFDA	316670.3	1.853	5.000	4.995	100	70-130	
Ed7-NMePFOSAE	328201.0	13C2-PFDA	316670.3	1.036	5.000	4.820	96	70-130	
Ed3-NMePFOSA	80699.5	13C2-PFDA	316670.3	0.255	5.000	4.665	93	70-130	
Ed9-NEtPFOSAE	274277.4	13C2-PFDA	316670.3	0.866	5.000	4.946	99	70-130	
Ed5-NEtPFOSA	72708.8	13C2-PFDA	316670.3	0.230	5.000	5.316	106	70-130	
E13C2-PFTeDA	429266.0	13C2-PFDA	316670.3	1.356	5.000	4.880	98	70-130	

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

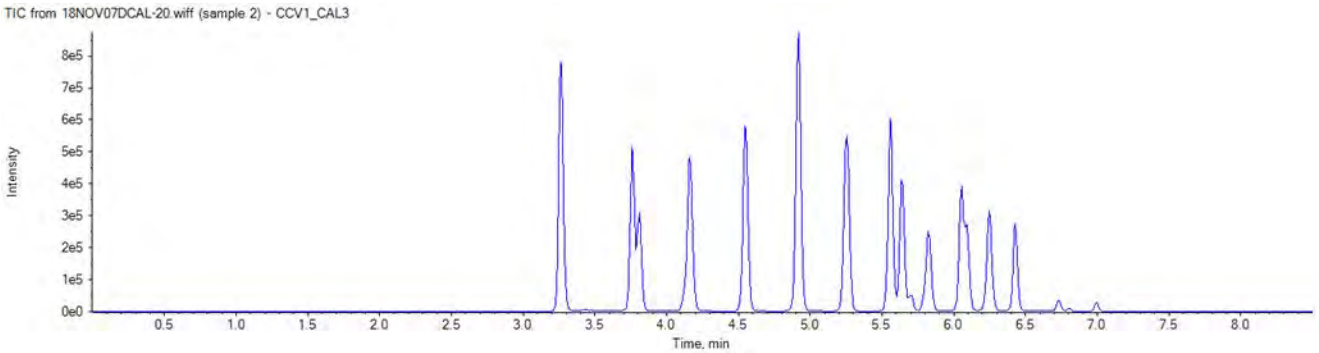
Analyte Quantitation Peak Table

Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-20.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	278381.8		A	13C4-PFBA	3.26	780482.5	0.357	2.087
PFPeA	3.76	1.000	286996.9		A	13C5-PFPeA	3.76	819317.3	0.350	2.082
PFBS	3.81	1.000	155917.1		A	13C3-PFBS	3.81	430650.1	0.362	1.825
4:2-FTS	4.13	1.000	41869.1		A	13C2-4:2-FTS	4.13	53424.6	0.784	2.107
PFHxA	4.16	1.000	355844.6		A	13C5-PFHxA	4.16	678729.1	0.524	2.248
PFPeS	4.18	1.100	84840.7		A	13C3-PFBS	3.81	430650.1	0.197	1.943
PFHxS	4.55	1.000	126167.9		A	13C3-PFHxS	4.55	332171.0	0.380	1.925
PFHpA	4.55	1.000	359438.8		A	13C4-PFHpA	4.55	553115.2	0.650	2.186
6:2-FTS	4.91	1.000	30418.5		A	13C2-6:2-FTS	4.91	39617.7	0.768	1.915
PFHpS	4.91	1.080	118682.9		A	13C3-PFHxS	4.55	332171.0	0.357	1.869
PFOA	4.92	1.000	363186.2		A	13C8-PFOA	4.92	951797.5	0.382	2.148
PFOS	5.24	1.000	113455.6		M	13C8-PFOS	5.24	281657.2	0.403	2.089
PFNA	5.26	1.000	284061.5		A	13C9-PFNA	5.26	514994.9	0.552	2.061
PFNS	5.54	1.060	70168.8		A	13C8-PFOS	5.24	281657.2	0.249	1.975
PFDA	5.56	1.000	243089.4		A	13C6-PFDA	5.56	643202.5	0.378	2.079
8:2-FTS	5.56	1.000	25674.2		A	13C2-8:2-FTS	5.56	27654.3	0.928	2.093
PFOSA	5.64	1.000	272309.7		A	13C8-PFOSA	5.64	710116.3	0.383	2.073
NMeFOSAA	5.71	1.000	27107.5		A	d3-NMeFOSAA	5.70	85750.0	0.316	1.627
PFDS	5.80	1.110	57911.4		A	13C8-PFOS	5.24	281657.2	0.206	1.964
PFUnDA	5.82	1.000	206684.1		A	13C7-PFUnDA	5.82	274326.2	0.753	2.161
NEtFOSAA	5.84	1.000	29353.4		A	d5-NEtFOSAA	5.84	64529.1	0.455	1.955
PFDoDA	6.05	1.000	220745.0		A	13C2-PFDoDA	6.05	586710.7	0.376	2.039
10:2-FTS	6.07	1.090	14526.2		A	13C2-8:2-FTS	5.56	27654.3	0.525	1.636
NMePFOSAE	6.10	1.000	157888.7		A	d7-NMePFOSAE	6.09	328201.0	0.481	2.156
NMePFOSA	6.10	1.000	30788.7		A	d3-NMePFOSA	6.10	80699.5	0.382	2.136
PFDoS	6.22	1.190	30510.8		A	13C8-PFOS	5.24	281657.2	0.108	2.091
NEtPFOSAE	6.25	1.000	187574.4		A	d9-NEtPFOSAE	6.24	274277.4	0.684	2.192
NEtPFOSA	6.26	1.000	29547.8		A	d5-NEtPFOSA	6.26	72708.8	0.406	1.790
PFTrDA	6.25	1.030	191338.9		A	13C2-PFDoDA	6.05	586710.7	0.326	2.057
PFTeDA	6.43	1.000	153182.8		A	13C2-PFTeDA	6.43	429266.0	0.357	2.096
PFHxDA	6.73	1.050	71156.3		A	13C2-PFTeDA	6.43	429266.0	0.166	2.058
PFODA	6.99	1.090	60356.7		A	13C2-PFTeDA	6.43	429266.0	0.141	2.014

Total Ion Chromatogram

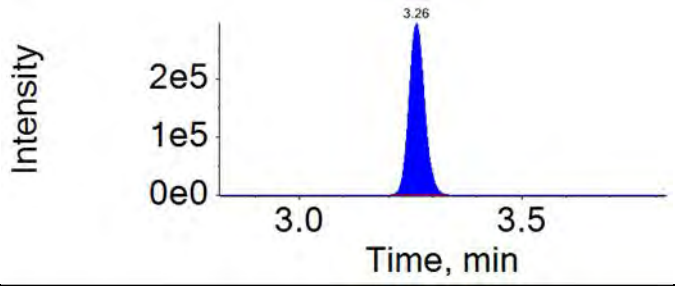


APPROVED
By JPT at 2:53 pm, 11/7/18

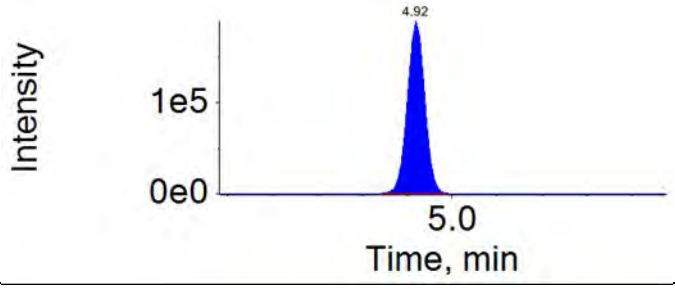
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

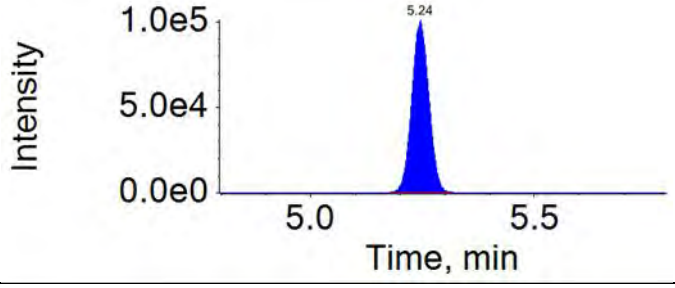
Injection Standard: 13C3-PFBA
216.0 / 172.0



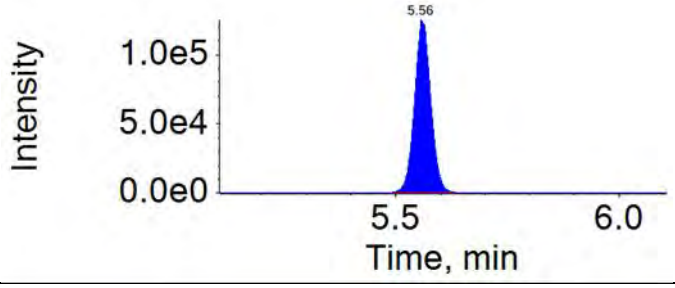
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

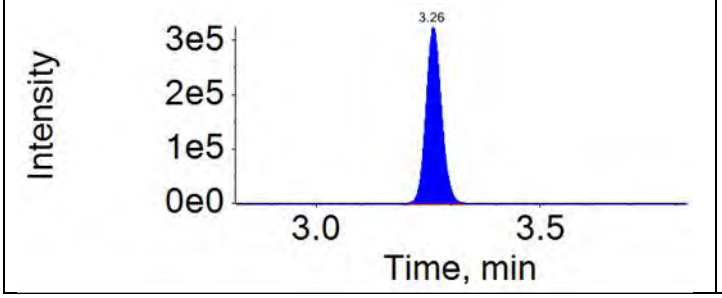


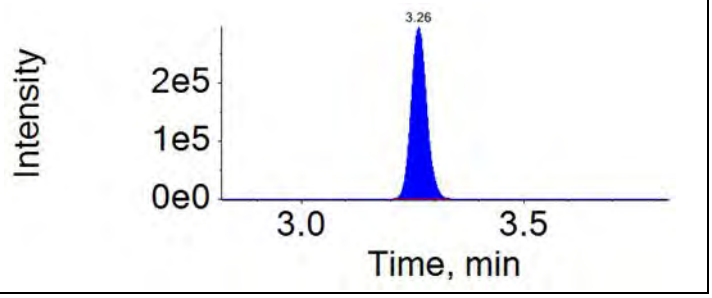
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

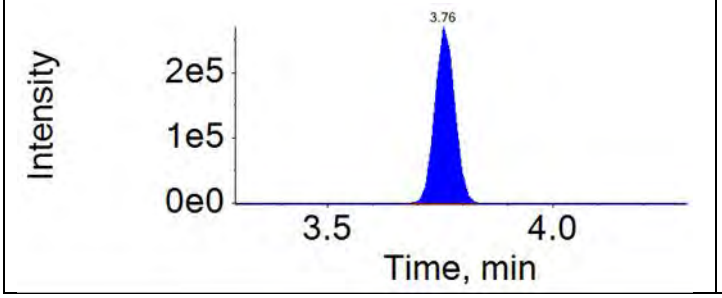
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

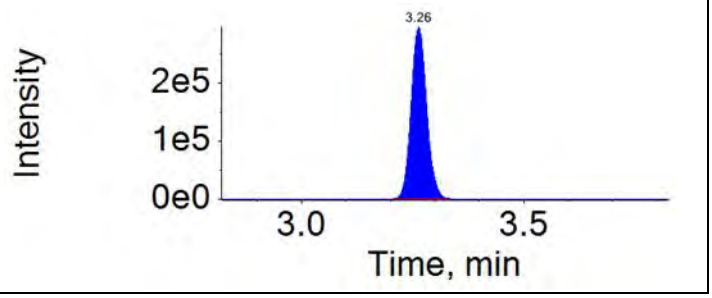
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



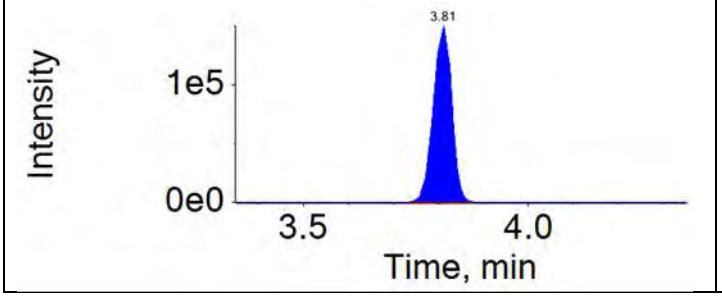


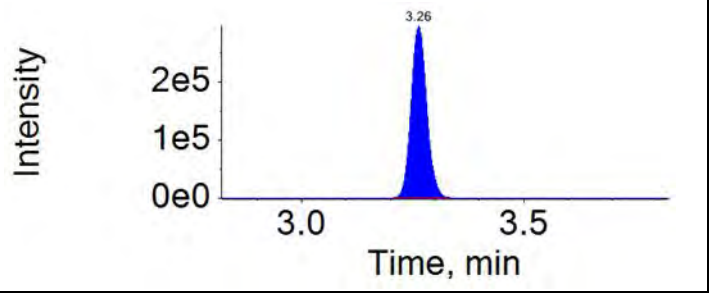
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



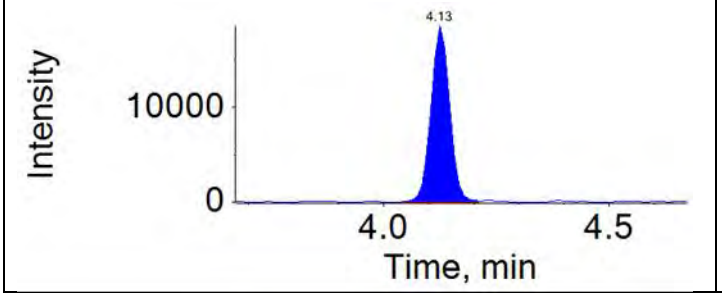


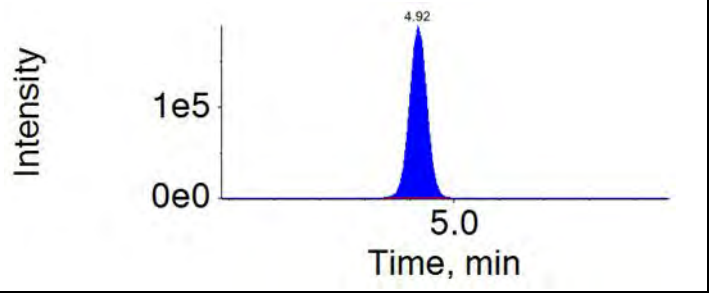
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

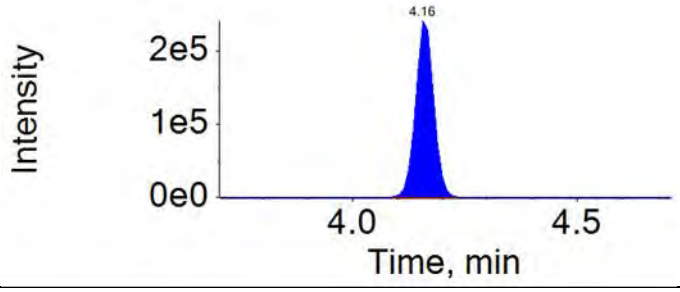
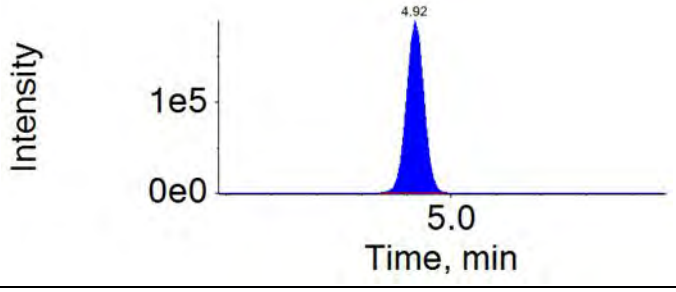


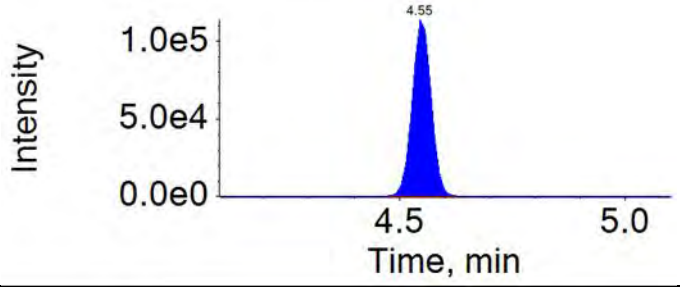
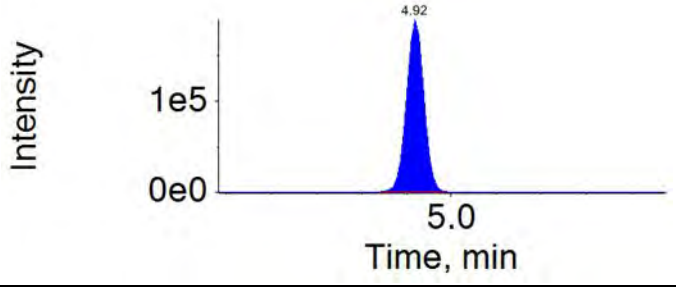


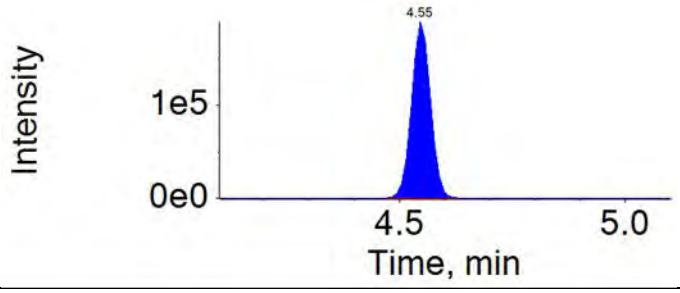
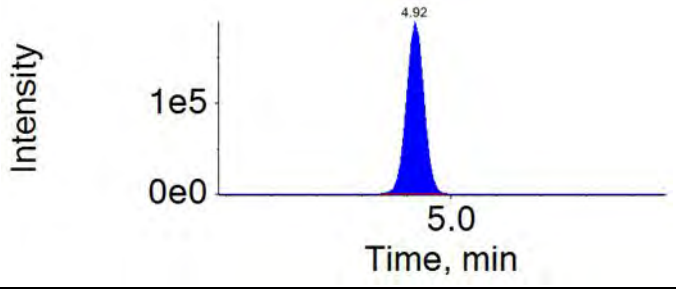
APPROVED
By JPT at 2:53 pm, 11/7/18

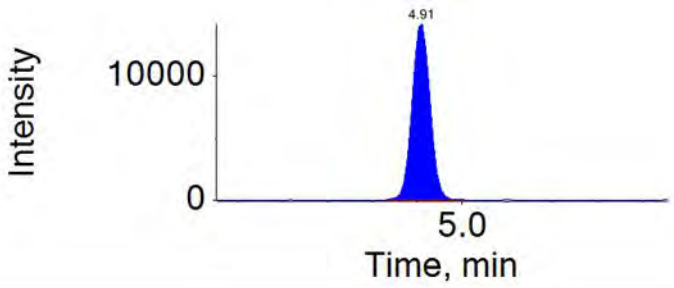
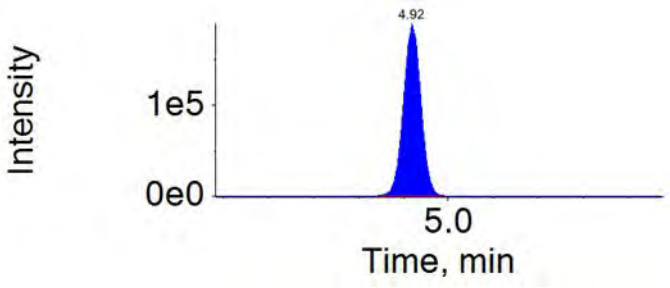
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

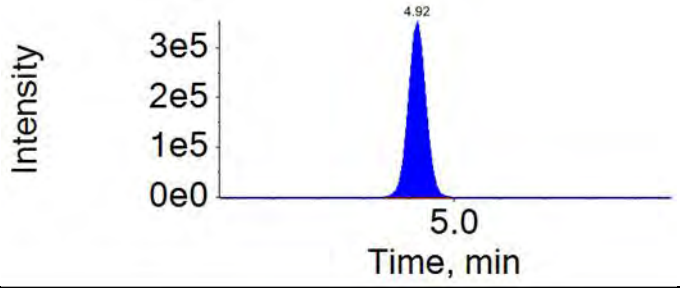
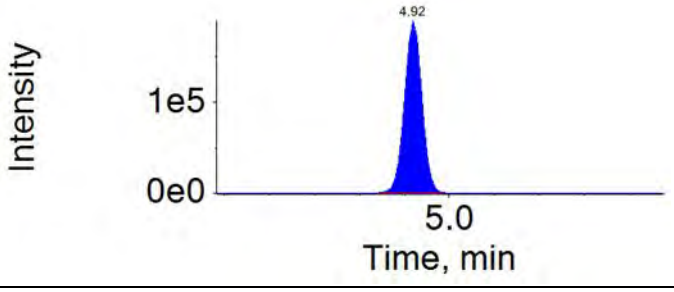
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

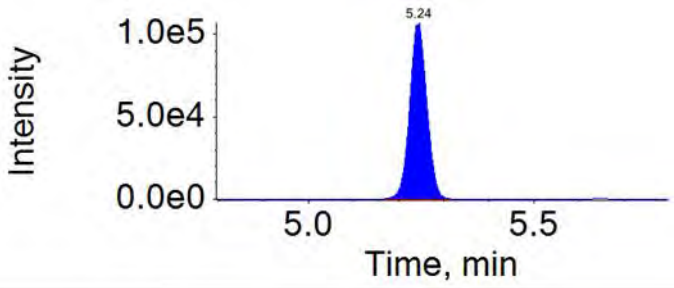
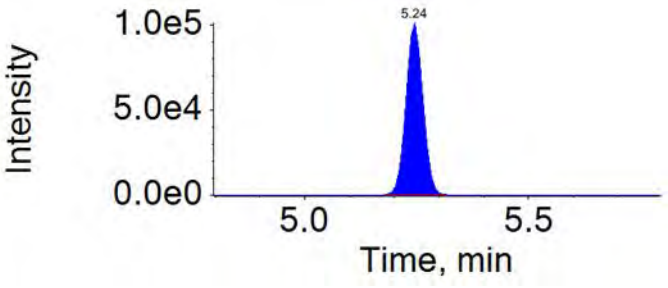
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

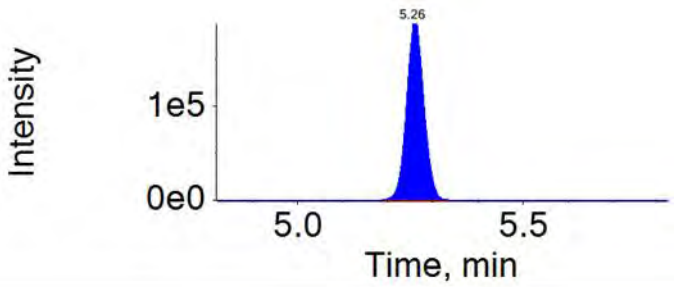
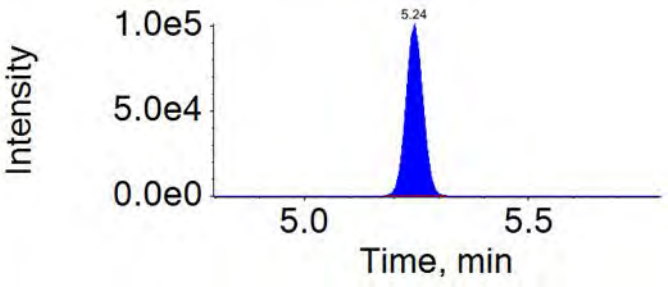
APPROVED
By JPT at 2:53 pm, 11/7/18

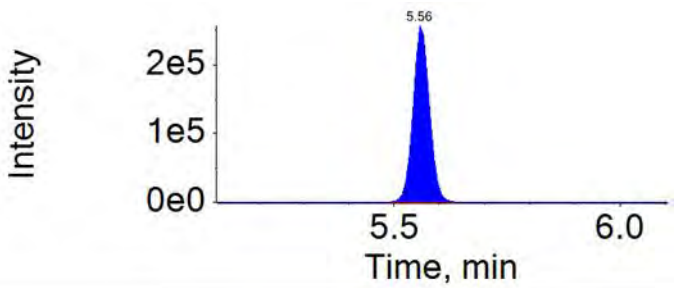
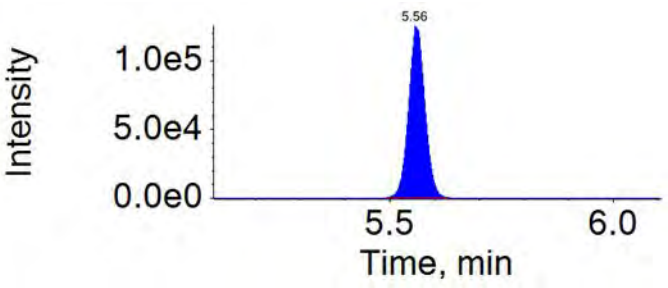
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

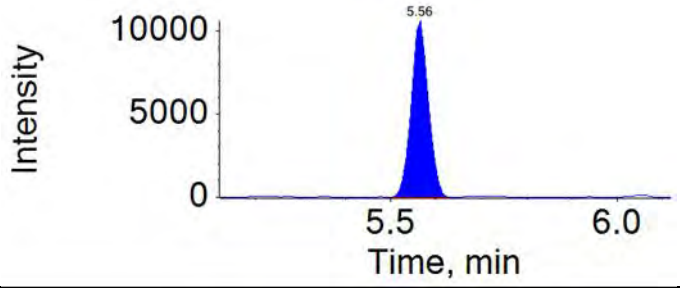
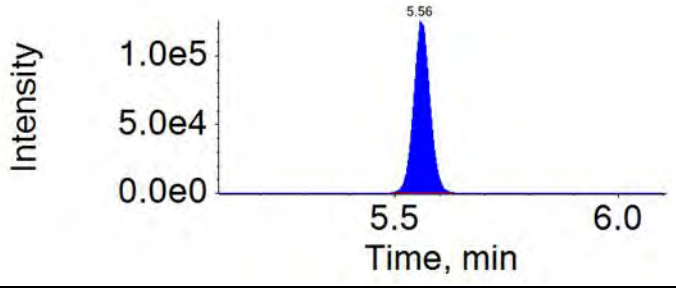
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

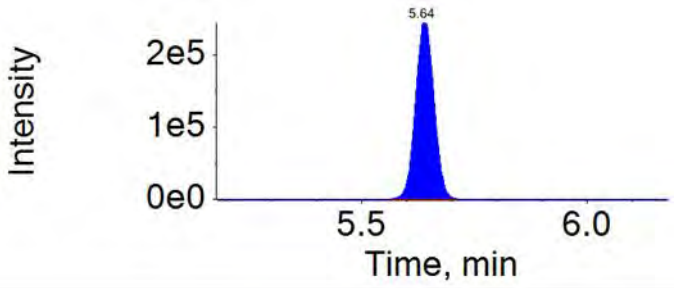
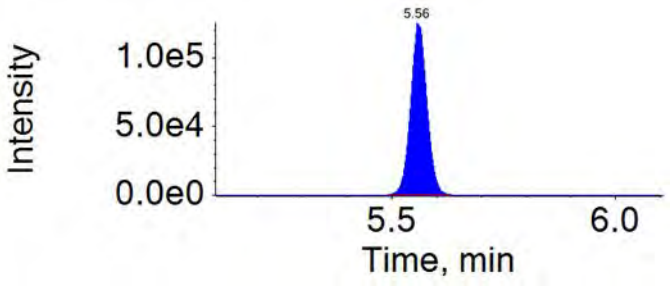
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

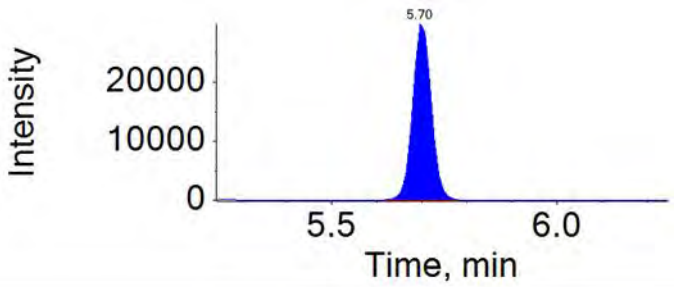
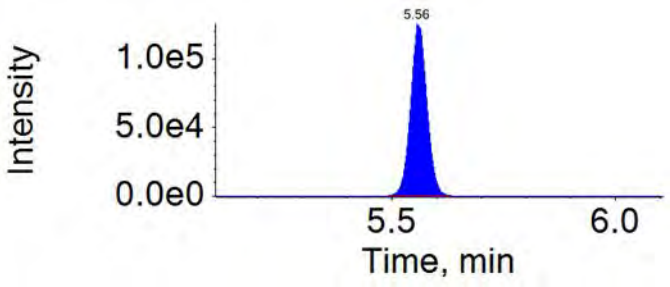
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

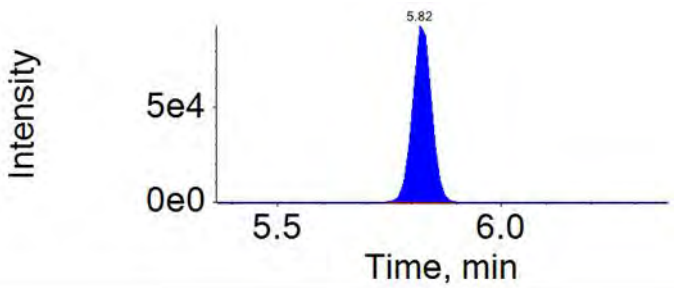
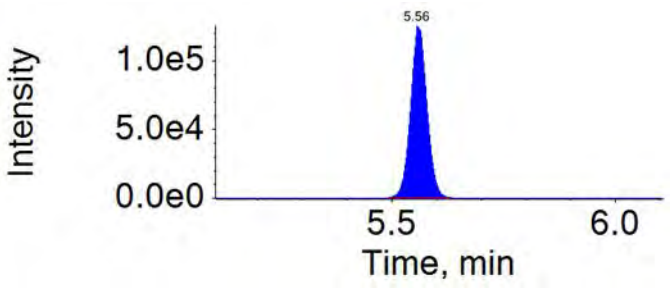
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

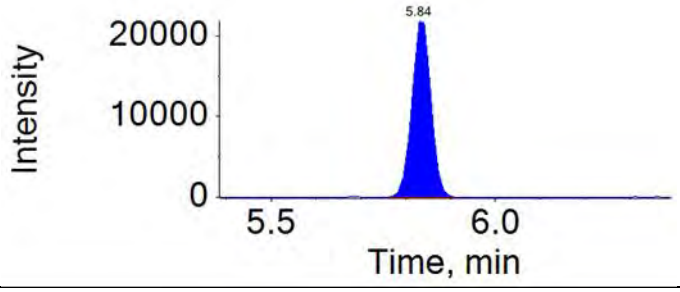
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

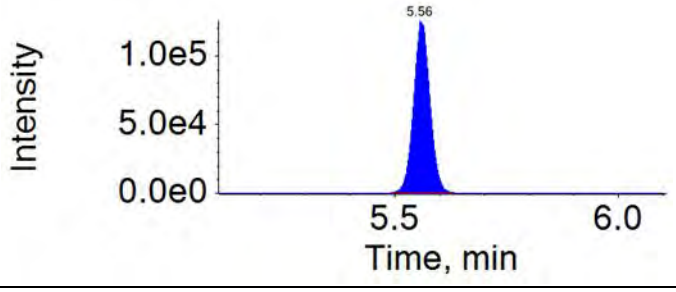
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

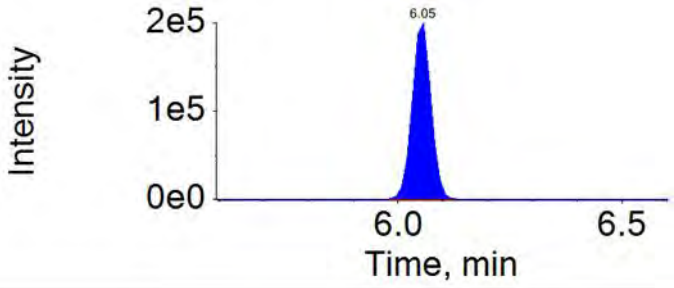
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

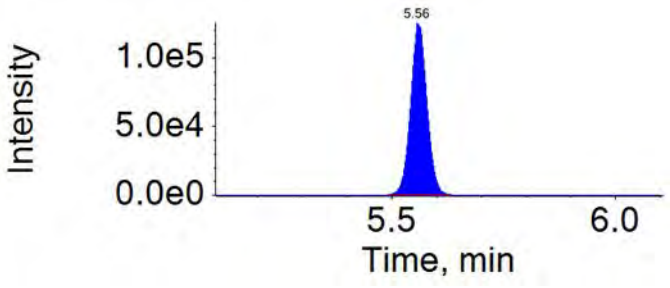
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



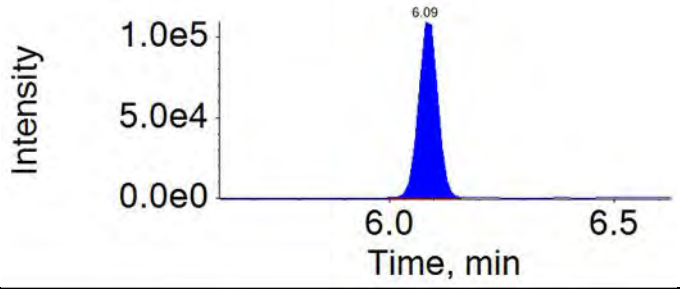


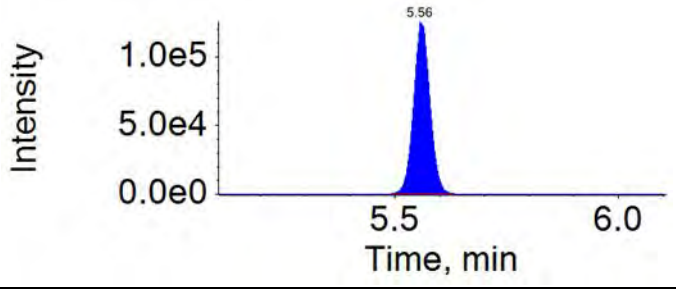
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



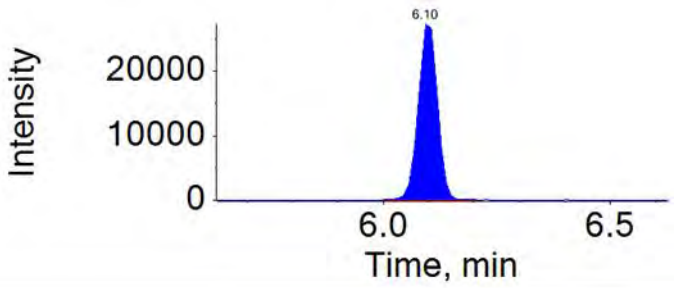


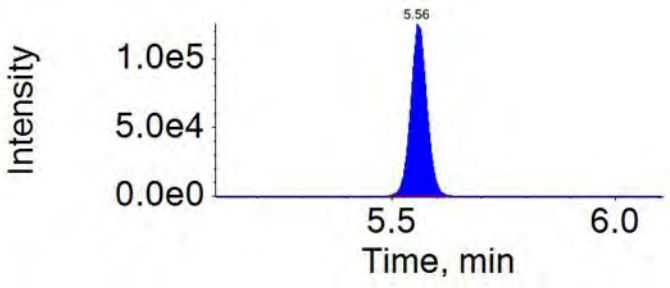
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



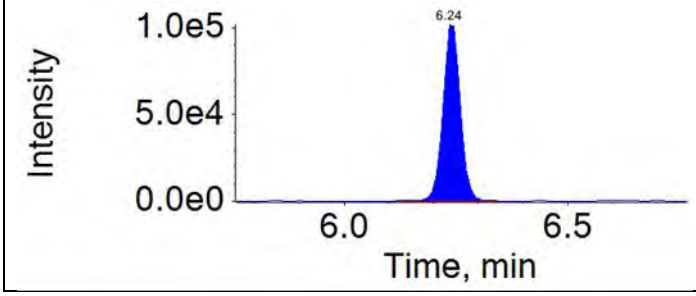


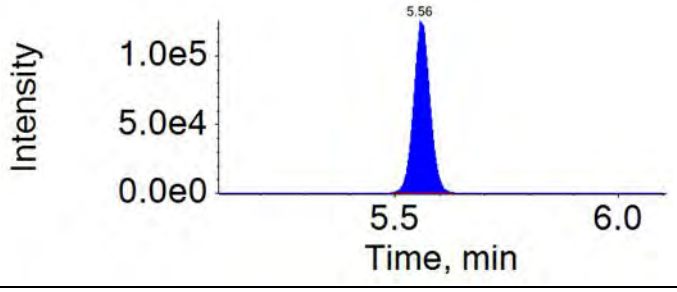
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

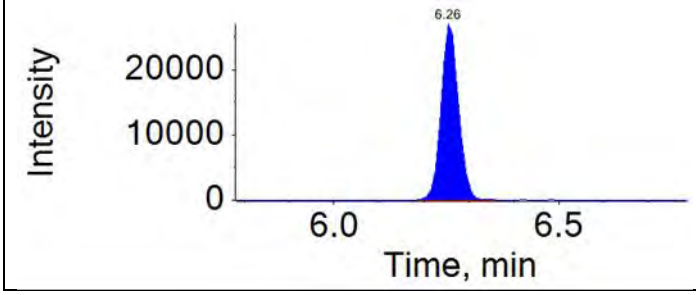
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

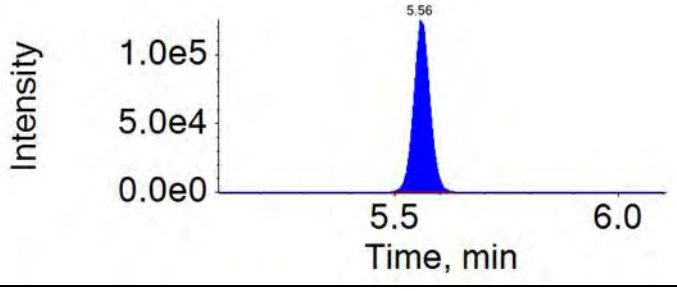
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



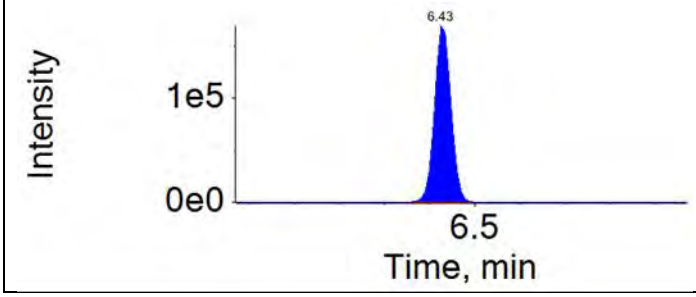


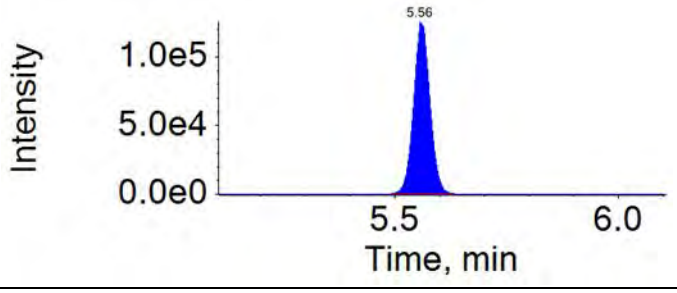
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

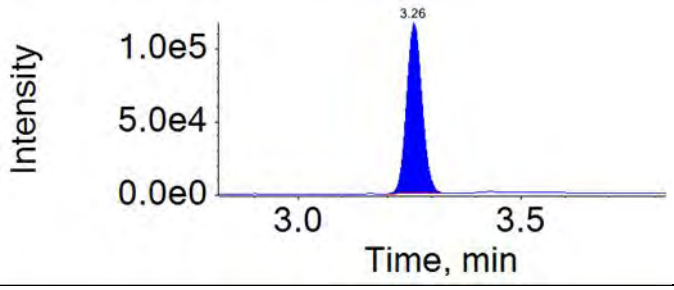
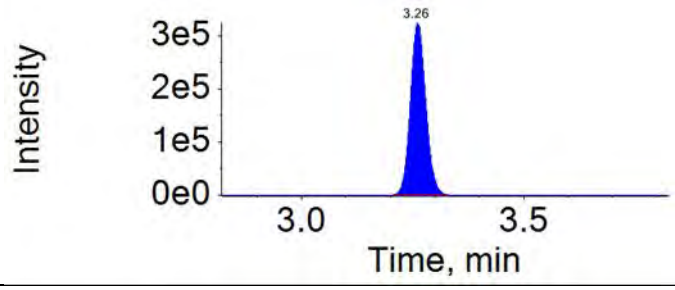


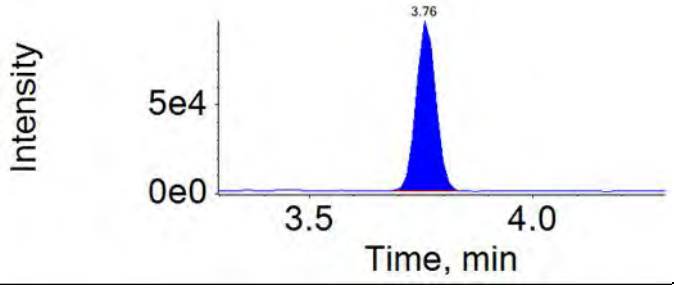
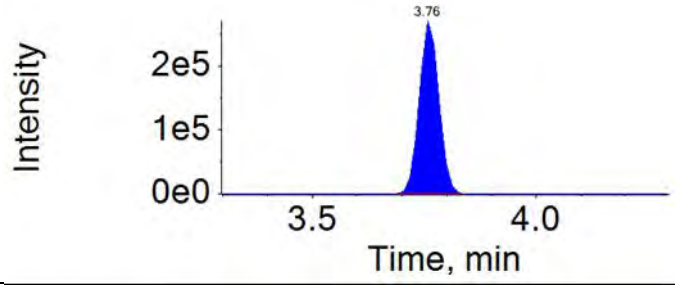


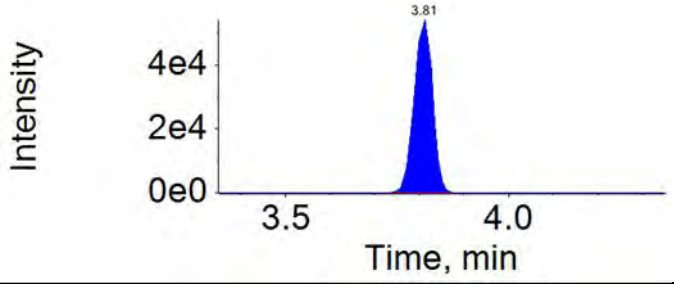
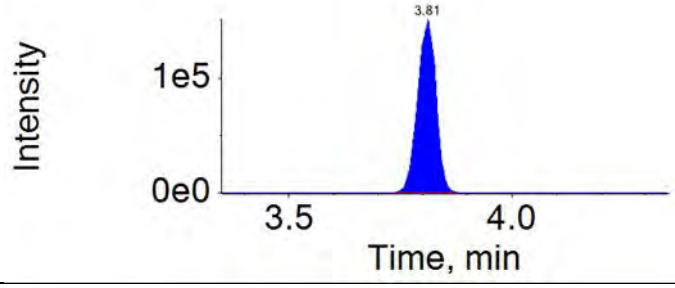
APPROVED
By JPT at 2:53 pm, 11/7/18

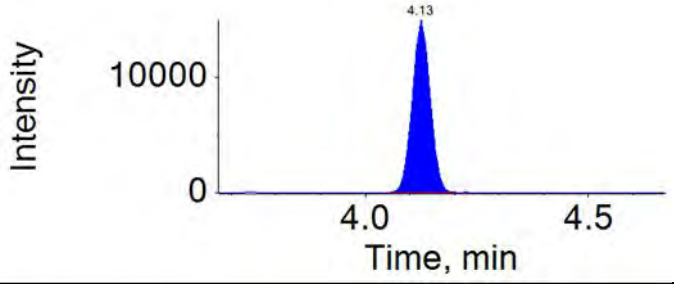
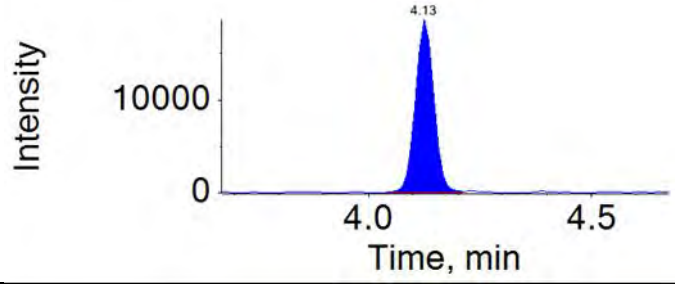
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

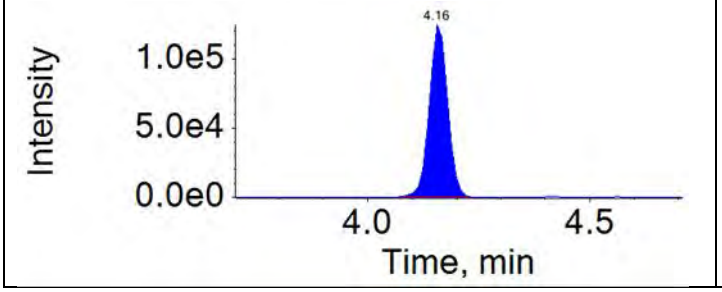
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

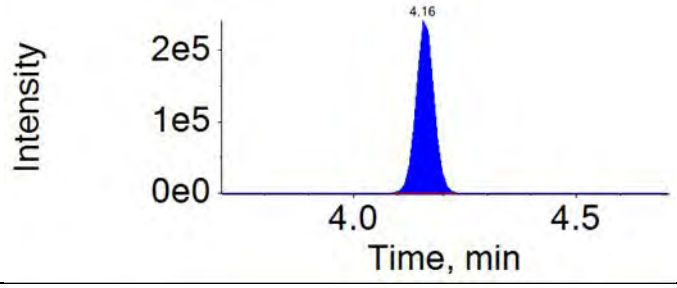
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

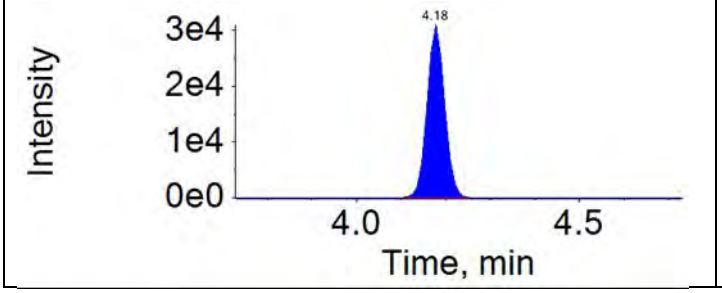
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

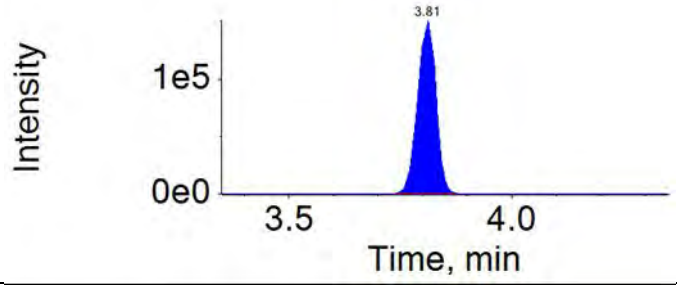
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



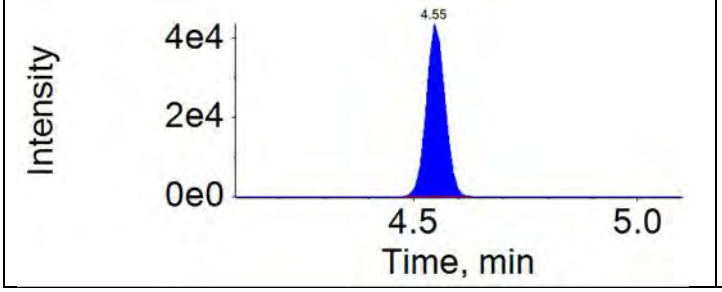


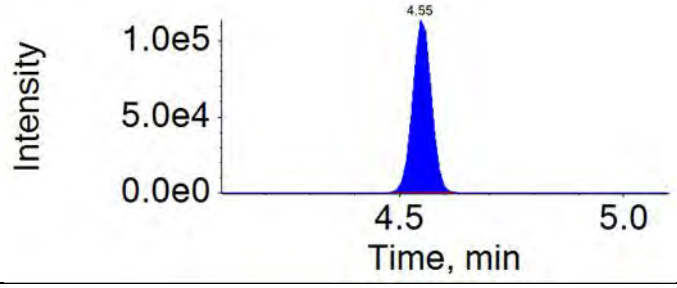
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



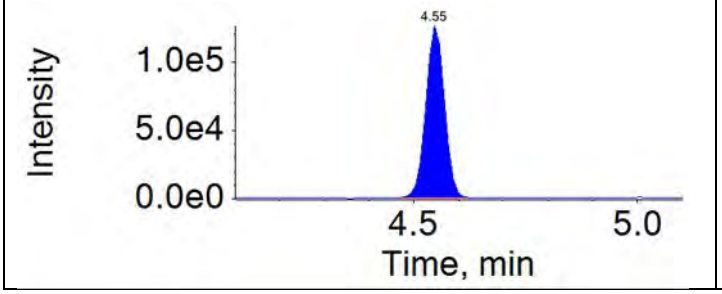


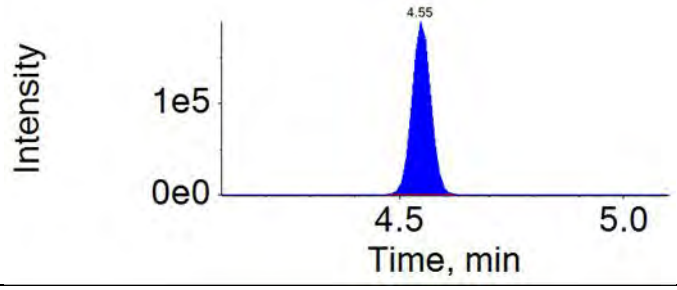
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

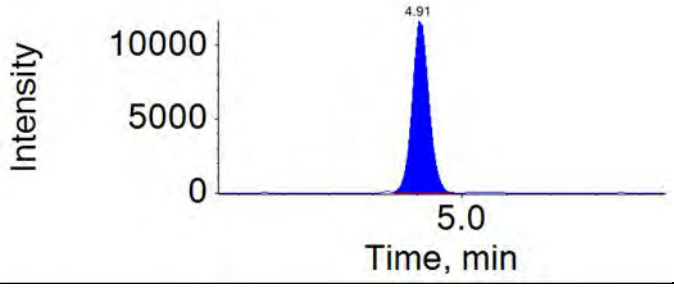
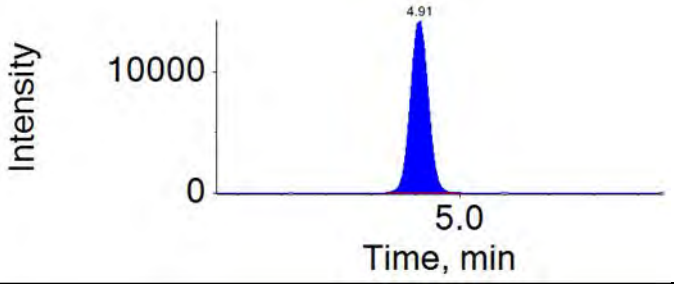


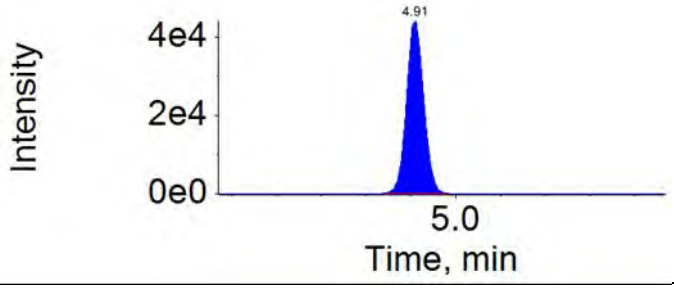
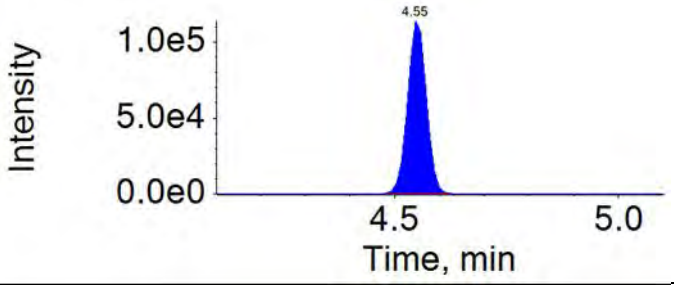


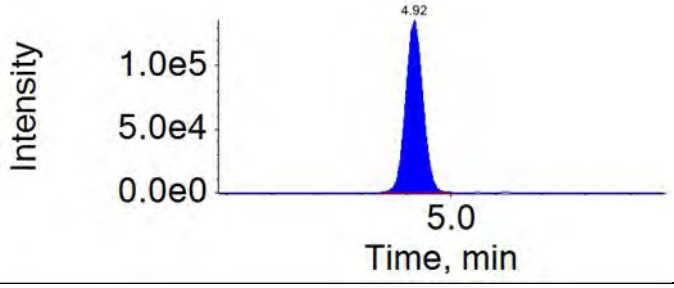
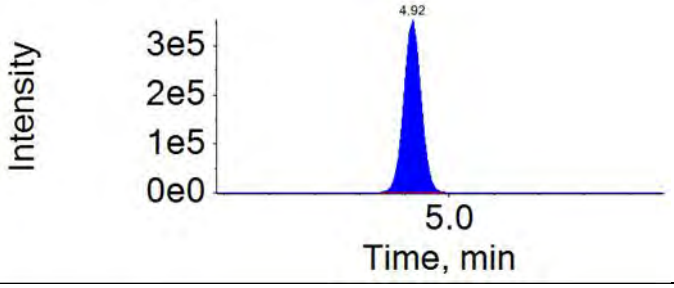
APPROVED
By JPT at 2:53 pm, 11/7/18

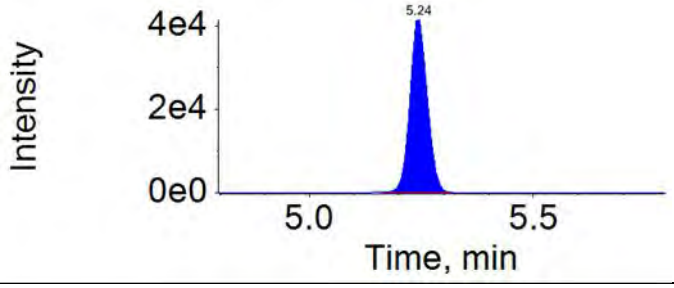
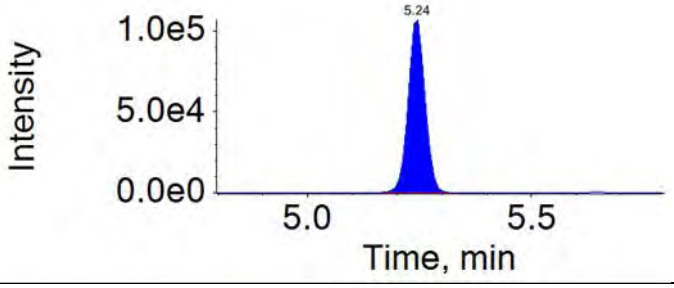
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

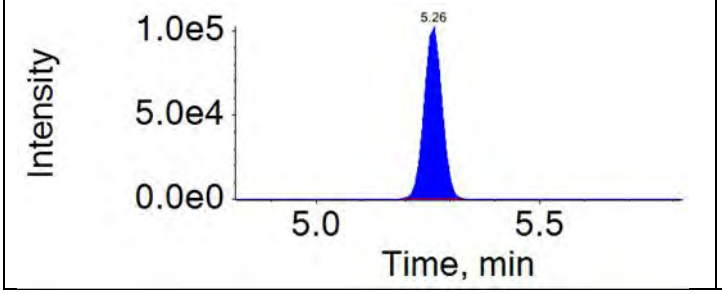
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

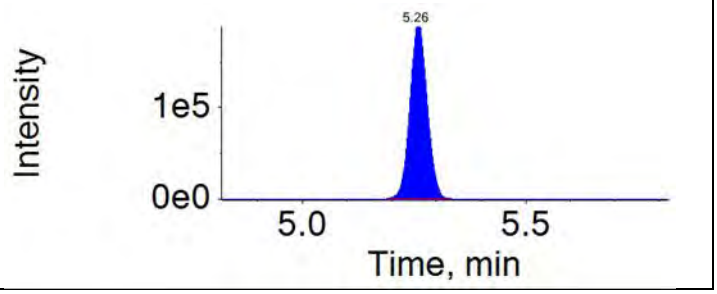
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

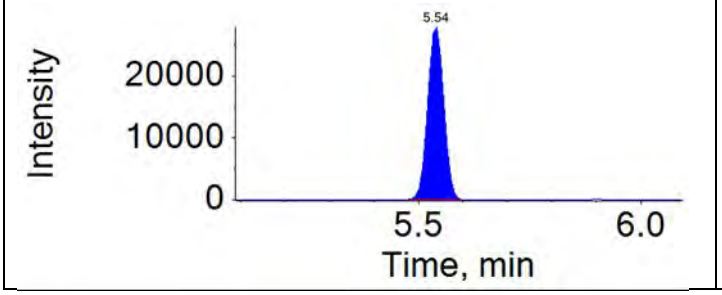
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

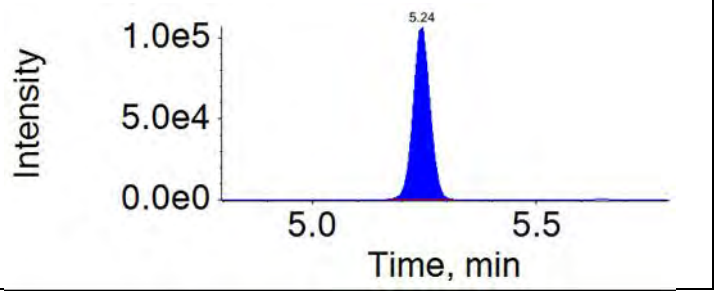
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



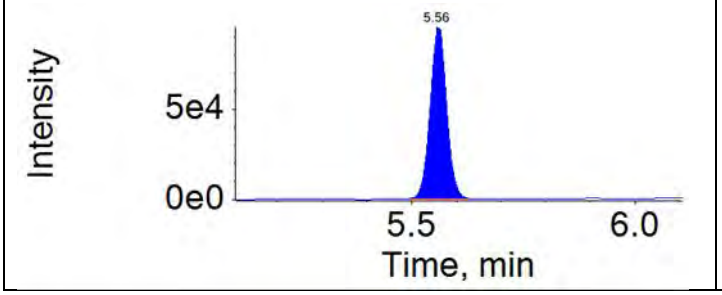


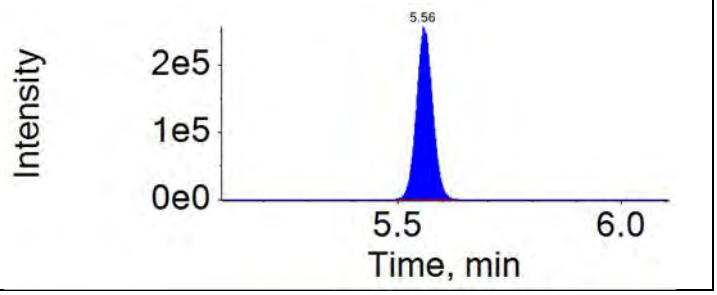
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



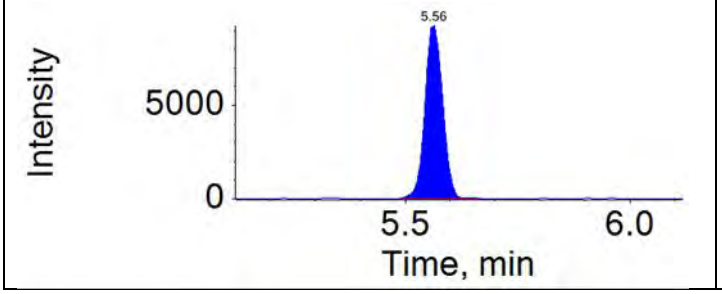


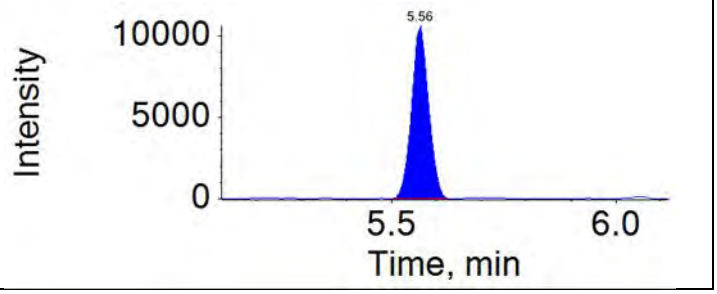
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



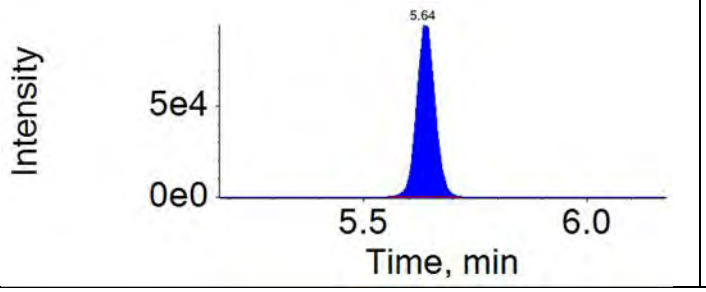


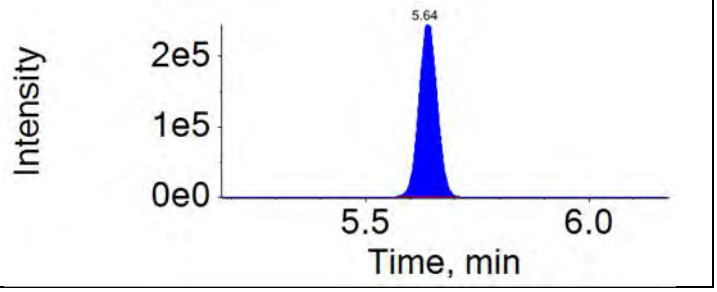
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

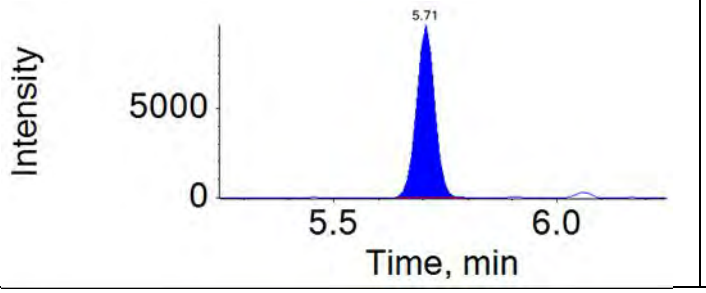
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

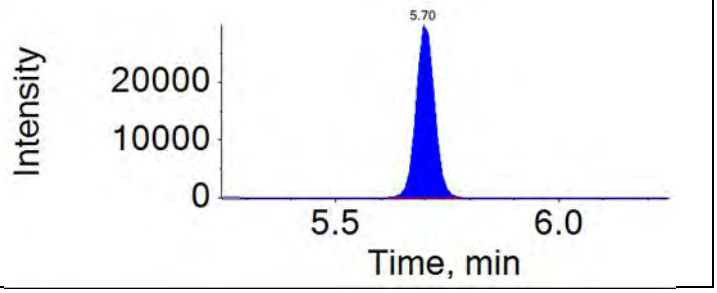
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



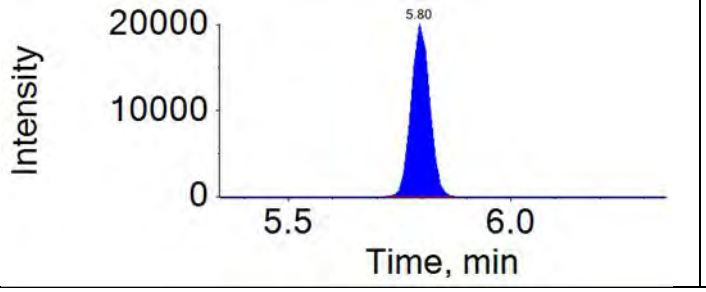


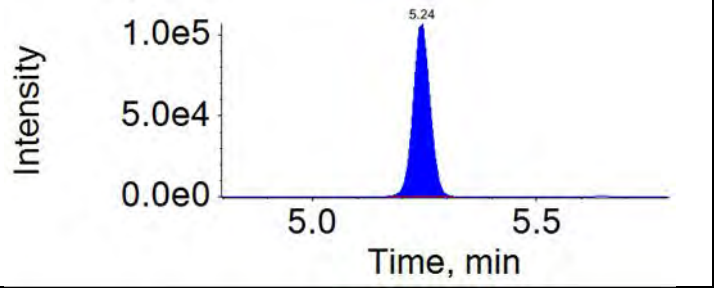
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



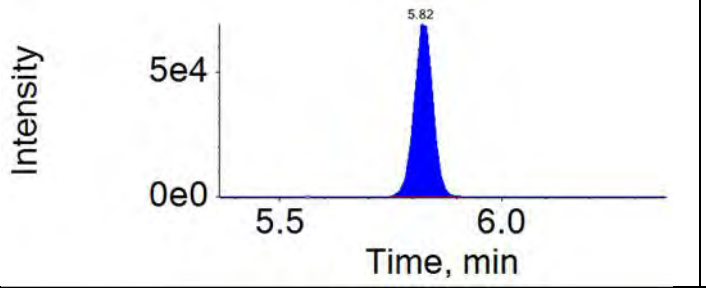


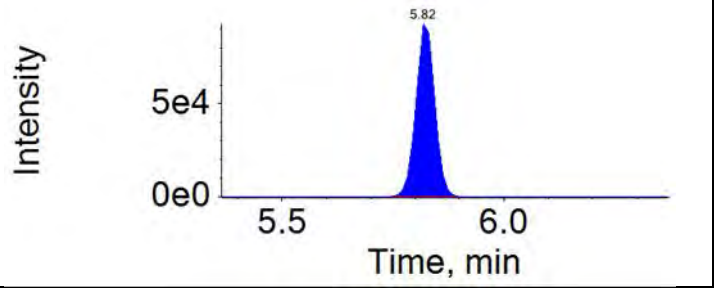
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



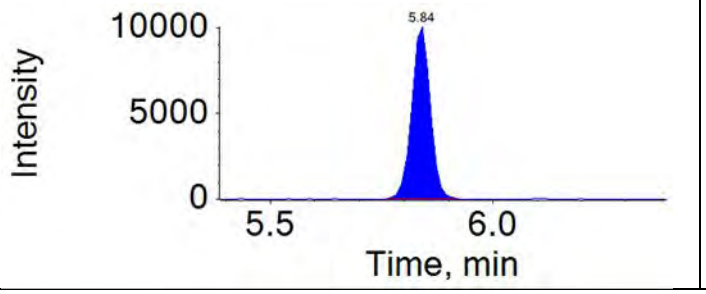


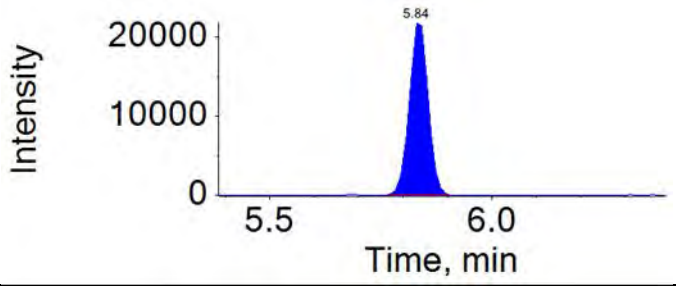
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

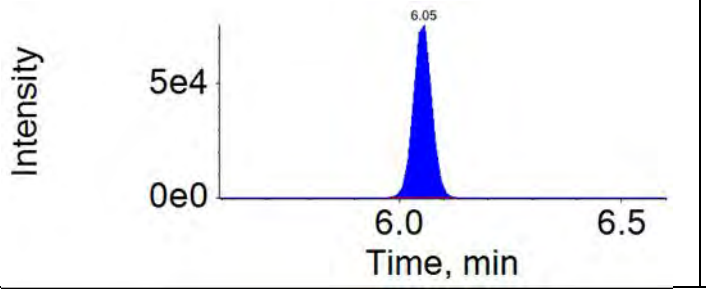
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

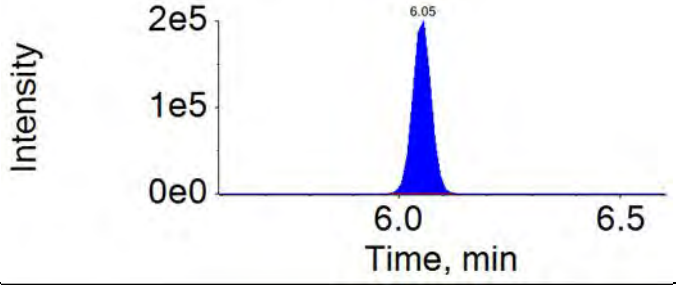
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



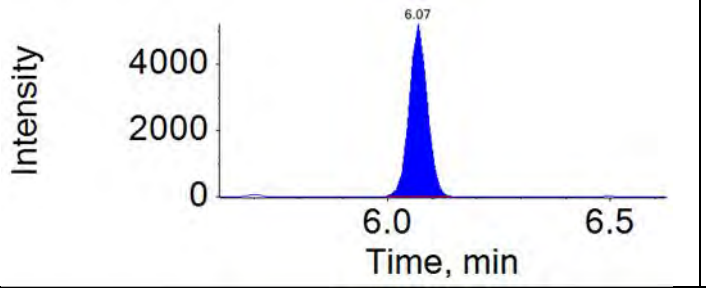


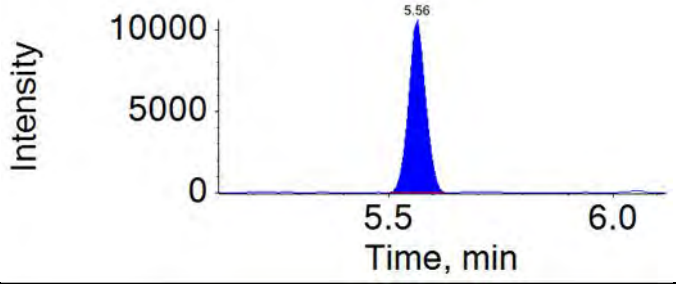
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



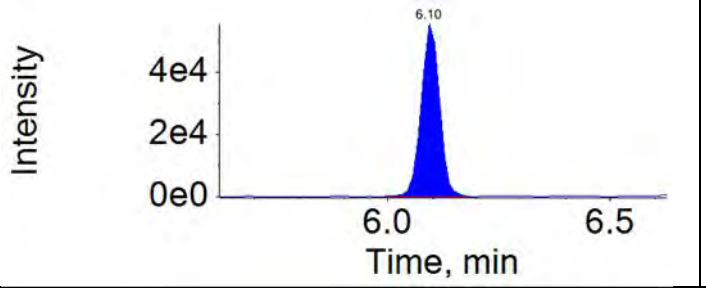


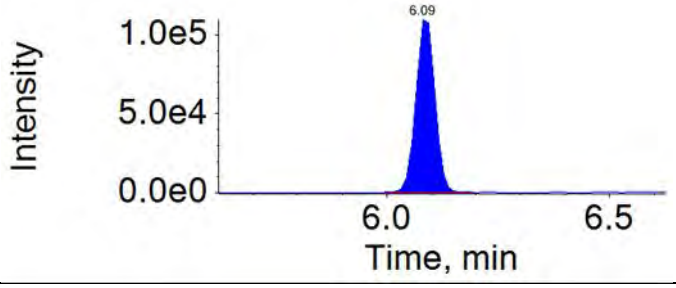
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0

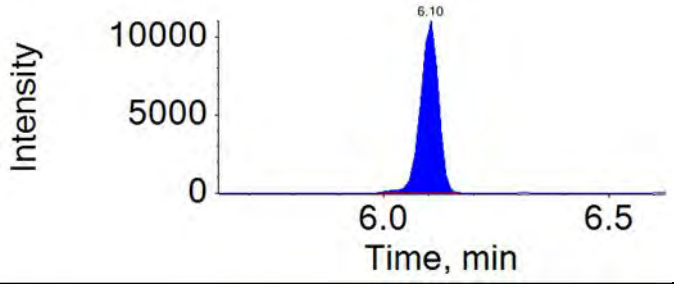
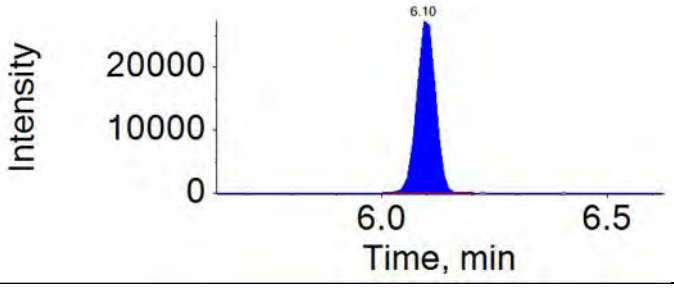


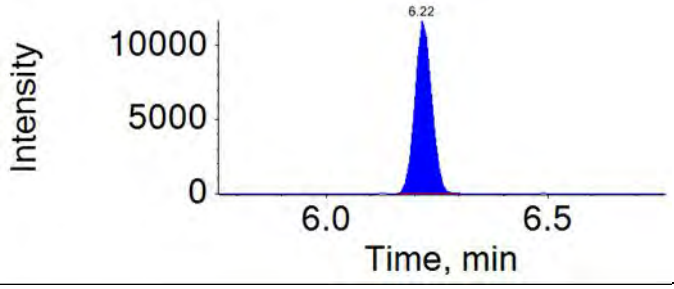
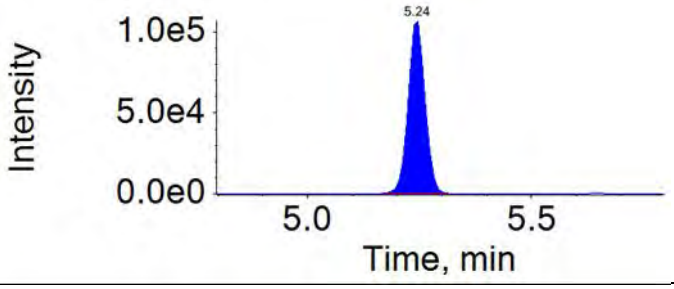


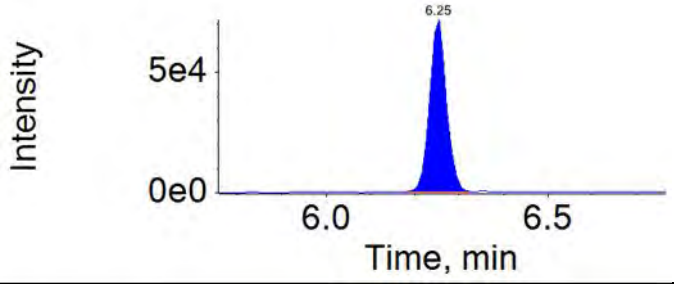
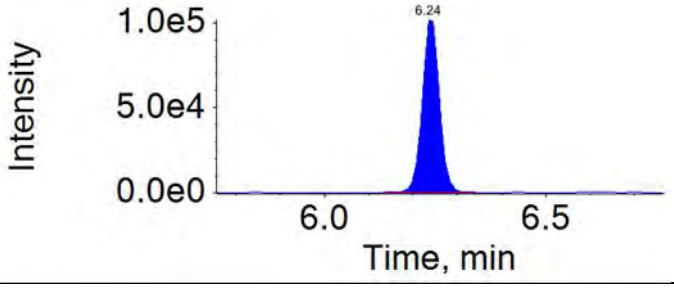
APPROVED
By JPT at 2:53 pm, 11/7/18

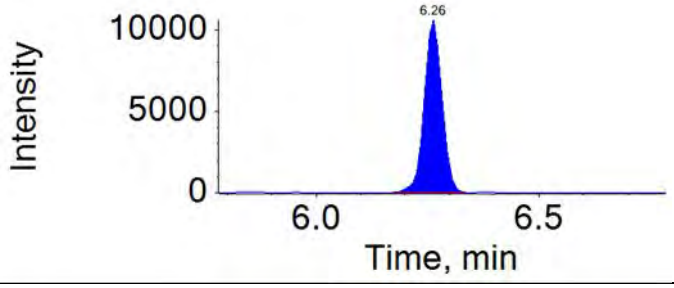
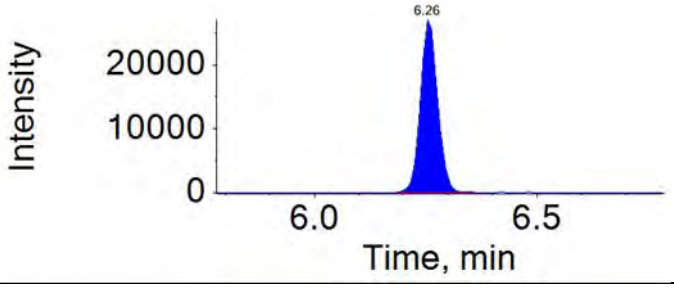
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0
	

Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0
	

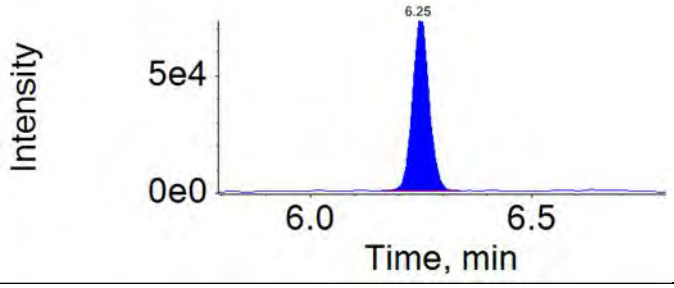
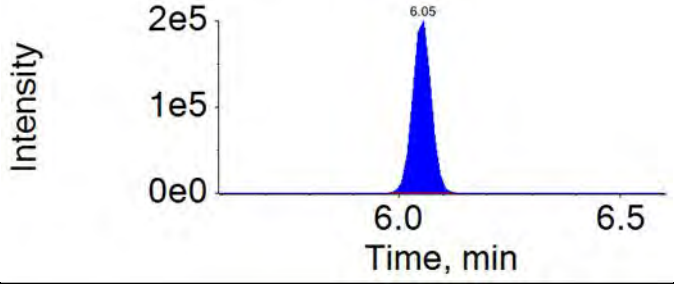
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0
	

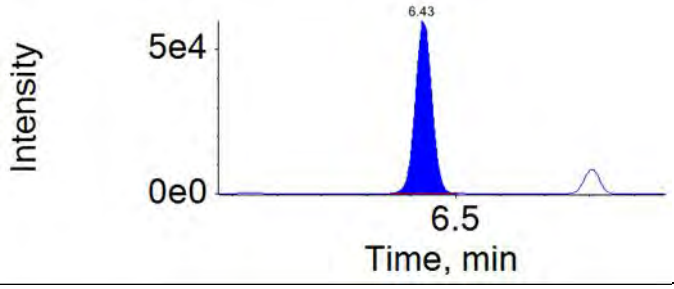
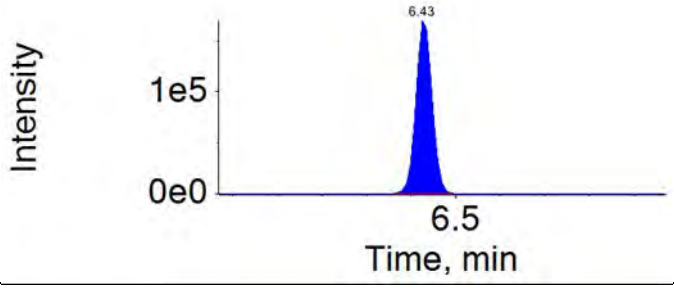
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0
	

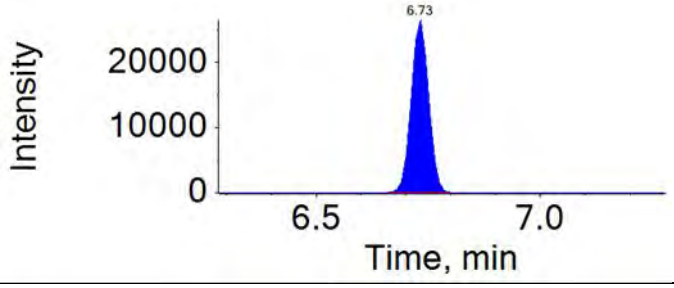
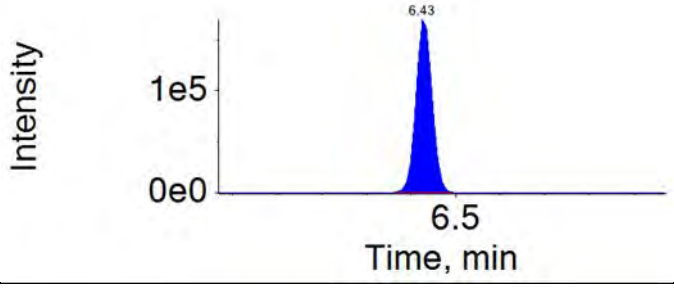
APPROVED
By JPT at 2:53 pm, 11/7/18

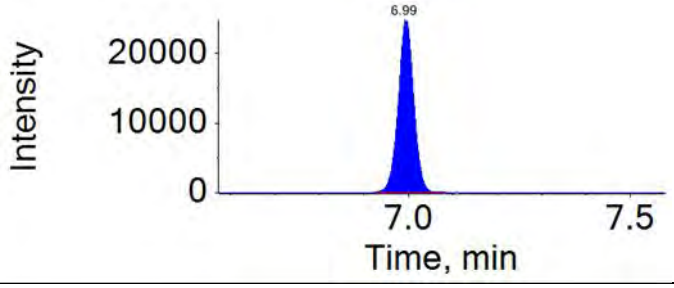
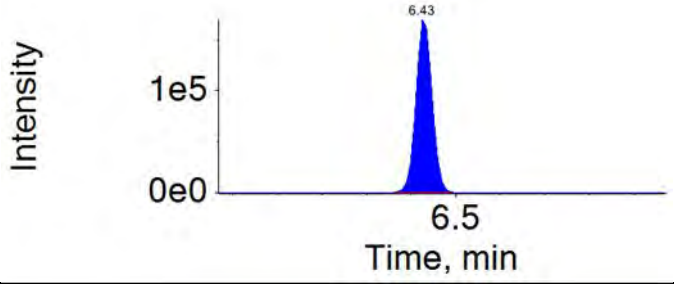
REVIEWED
By umar at 5:23 pm, 11/9/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCAL 11/7/2018 2:18:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

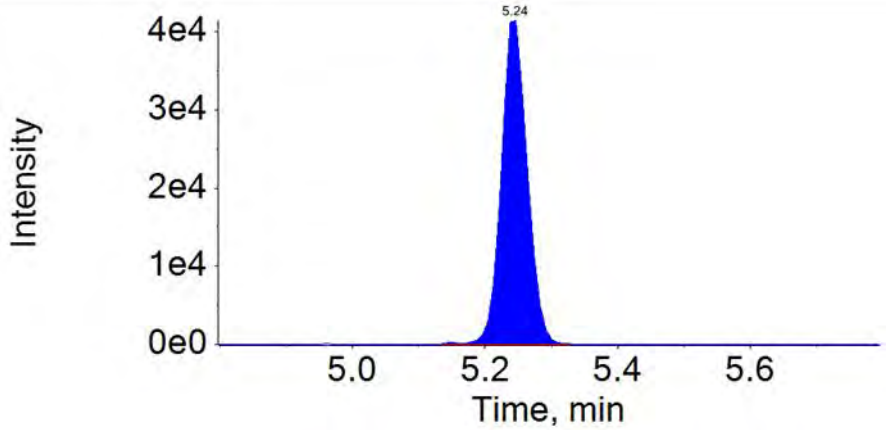
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
113697.4
Mass Range:
499.0 / 80.0
File Name:
18NOV07DCAL-20.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Results Table Name: 18NOV07DCAL
Results Table Date: 11/7/2018 2:18:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Ion Ratio Report

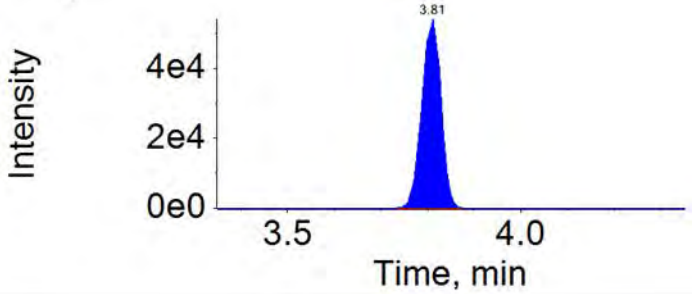
Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07DCAL-20.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	155917.1	A	1.0000	1.0000			
PFBS_2	3.81	1.00	59330.4	A	0.3576	0.3805	6	50	
4:2-FTS	4.13	1.00	41869.1	A	1.0000	1.0000			
4:2-FTS_2	4.12	1.00	22969.1	A	0.6359	0.5486	-14	50	
PFHxA	4.16	1.00	355844.6	A	1.0000	1.0000			
PFHxA_2	4.16	1.00	4420.8	A	0.0115	0.0124	8	50	
PFPeS	4.18	1.10	84840.7	A	1.0000	1.0000			
PFPeS_2	4.18	1.10	44612.7	A	0.5384	0.5258	-2	50	
PFHxS	4.55	1.00	126167.9	A	1.0000	1.0000			
PFHxS_2	4.55	1.00	44496.5	A	0.3569	0.3527	-1	50	
PFHpA	4.55	1.00	359438.8	A	1.0000	1.0000			
PFHpA_2	4.55	1.00	17557.5	A	0.0577	0.0488	-15	50	
6:2-FTS	4.91	1.00	30418.5	A	1.0000	1.0000			
6:2-FTS_2	4.91	1.00	19338.5	A	0.6752	0.6357	-6	50	
PFHpS	4.91	1.08	118682.9	A	1.0000	1.0000			
PFHpS_2	4.91	1.08	47884.4	A	0.3950	0.4035	2	50	
PFOA	4.92	1.00	363186.2	A	1.0000	1.0000			
PFOA_2	4.92	1.00	21404.0	A	0.0635	0.0589	-7	50	
PFOS	5.24	1.00	113455.6	M	1.0000	1.0000			
PFOS_2	5.25	1.00	38360.0	A	0.3494	0.3381	-3	50	
PFNA	5.26	1.00	284061.5	A	1.0000	1.0000			
PFNA_2	5.26	1.00	5433.5	A	0.0207	0.0191	-8	50	
PFNS	5.54	1.06	70168.8	A	1.0000	1.0000			
PFNS_2	5.54	1.06	34369.0	A	0.4890	0.4898	0	50	
PFDA	5.56	1.00	243089.4	A	1.0000	1.0000			
PFDA_2	5.56	1.00	1775.1	A	0.0057	0.0073	29	50	
8:2-FTS	5.56	1.00	25674.2	A	1.0000	1.0000			
8:2-FTS_2	5.56	1.00	17540.1	A	0.6169	0.6832	11	50	
NMeFOSAA	5.71	1.00	27107.5	A	1.0000	1.0000			
NMeFOSAA_2	5.71	1.00	6964.7	A	0.2206	0.2569	16	50	
PFDS	5.80	1.11	57911.4	A	1.0000	1.0000			
PFDS_2	5.80	1.11	30519.9	A	0.4648	0.5270	13	50	
PFUnDA	5.82	1.00	206684.1	A	1.0000	1.0000			
PFUnDA_2	5.82	1.00	912.7	A	0.0031	0.0044	40	50	
NEtFOSAA	5.84	1.00	29353.4	A	1.0000	1.0000			
NEtFOSAA_2	5.84	1.00	17948.8	A	0.6082	0.6115	1	50	
PFDoDA	6.05	1.00	220745.0	A	1.0000	1.0000			
PFDoDA_2	6.05	1.00	3019.9	A	0.0109	0.0137	25	50	
10:2-FTS	6.07	1.09	14526.2	A	1.0000	1.0000			
10:2-FTS_2	6.07	1.09	13571.8	A	0.7082	0.9343	32	50	
PFTrDA	6.25	1.03	191338.9	A	1.0000	1.0000			
PFTrDA_2	6.25	1.03	1915.2	A	0.0096	0.0100	4	50	
PFTeDA	6.43	1.00	153182.8	A	1.0000	1.0000			
PFTeDA_2	6.42	1.00	1214.6	A	0.0055	0.0079	43	50	
PFHxDA	6.73	1.05	71156.3	A	1.0000	1.0000			
PFHxDA_2	6.73	1.05	4385.3	A	0.0596	0.0616	3	50	
PFODA	6.99	1.09	60356.7	A	1.0000	1.0000			
PFODA_2	6.99	1.09	1801.4	A	0.0257	0.0298	16	50	

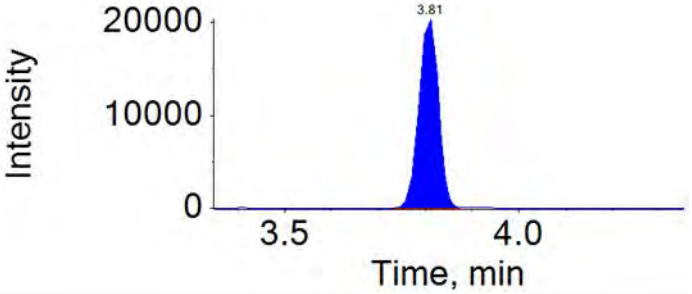
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

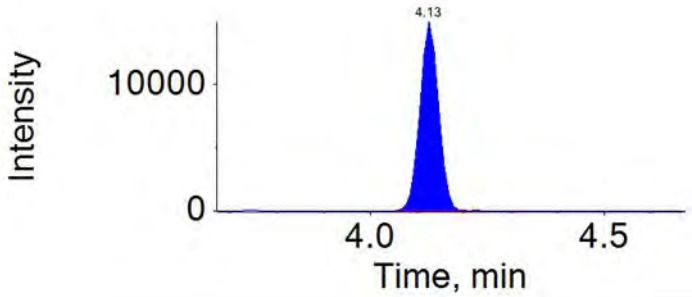
Component: PFBS
Primary Mass: 299.0 / 80.0



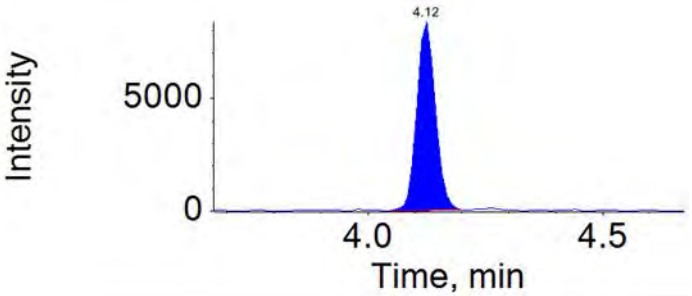
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



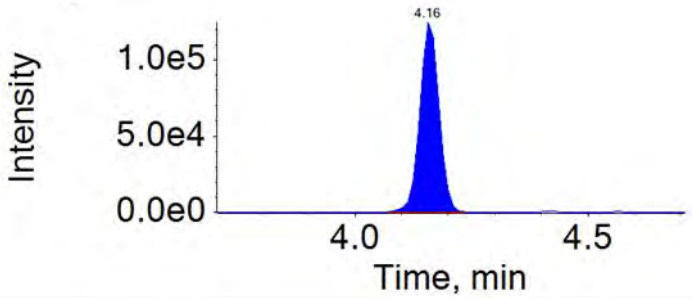
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



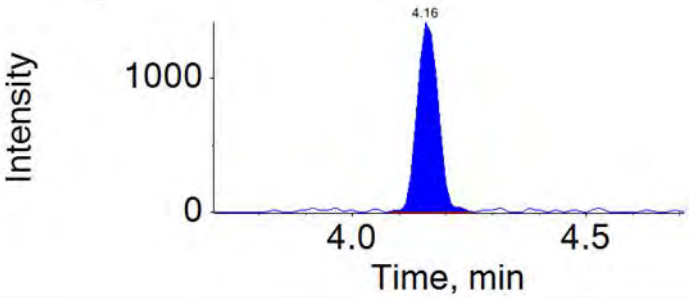
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



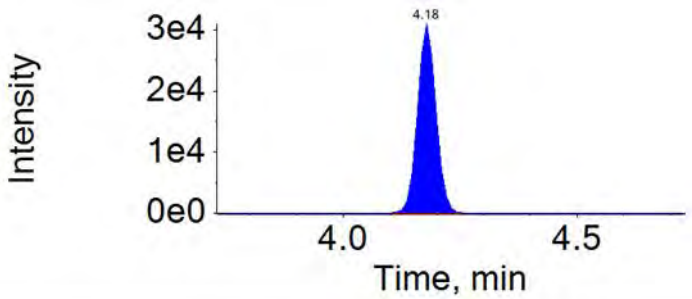
Component: PFHxA
Primary Mass: 313.0 / 269.0



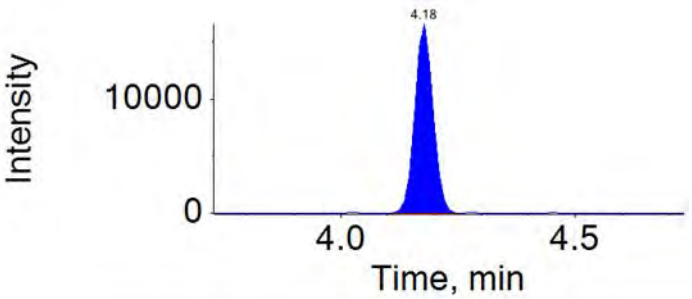
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



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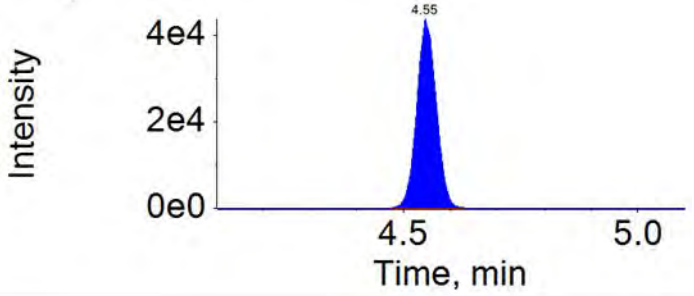
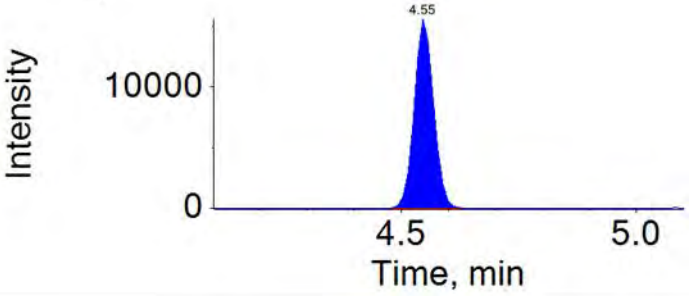
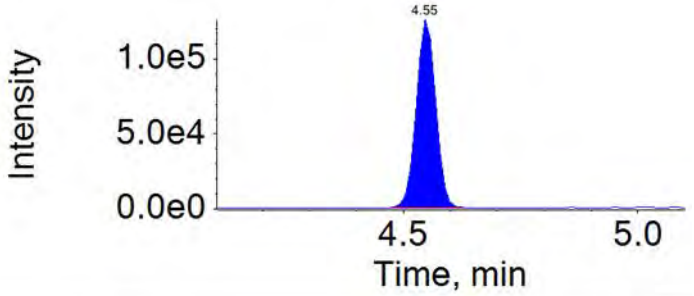
Component: PFHxS
Primary Mass: 399.0 / 80.0



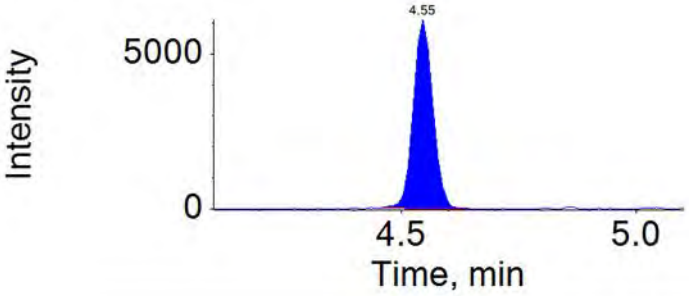
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



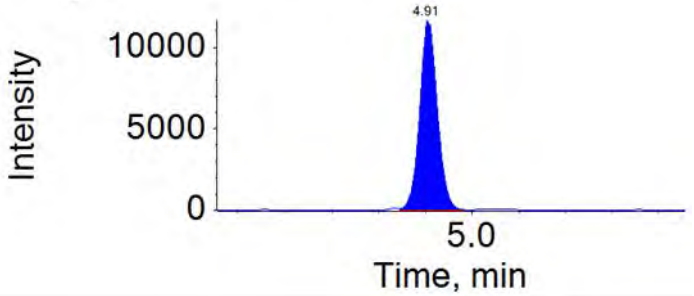
Component: PFHpA
Primary Mass: 363.0 / 319.0



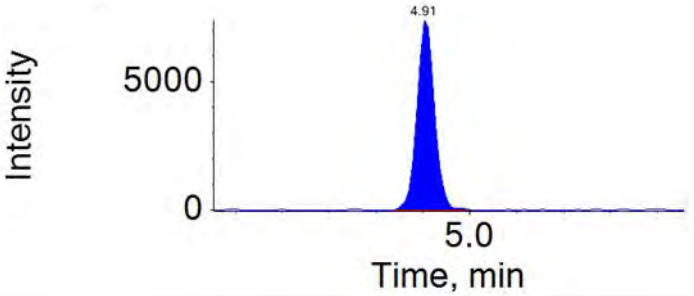
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



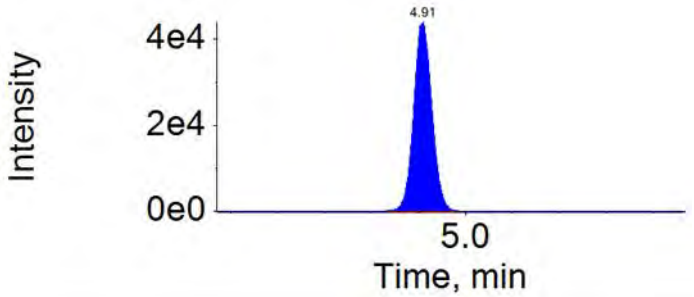
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



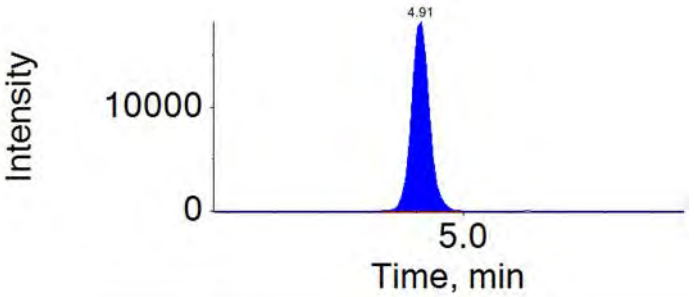
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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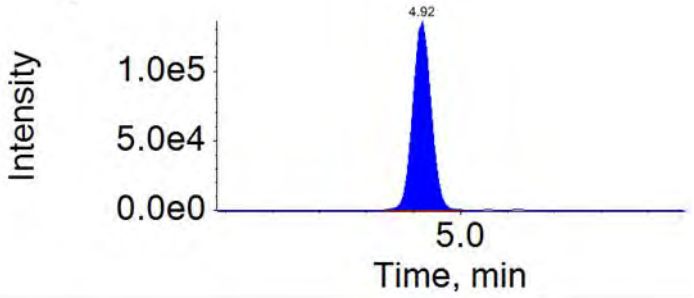
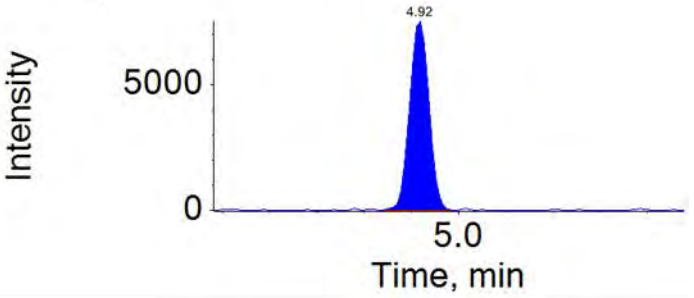
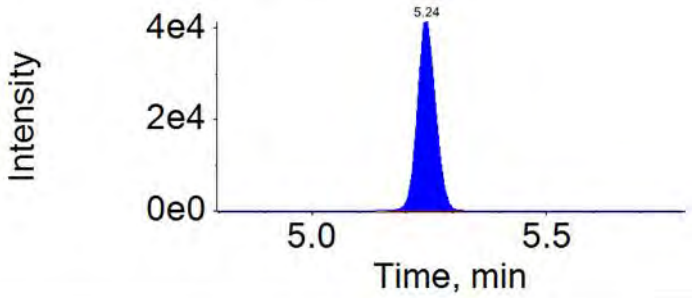
Component: PFOA
Primary Mass: 413.0 / 369.0



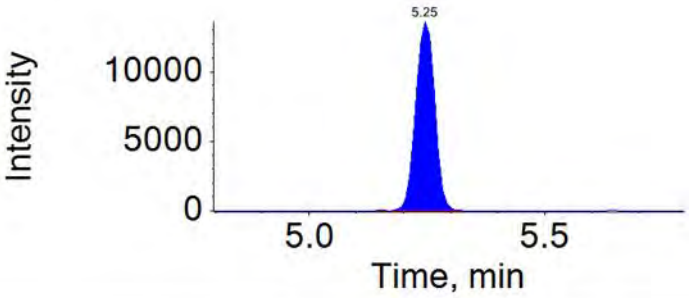
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



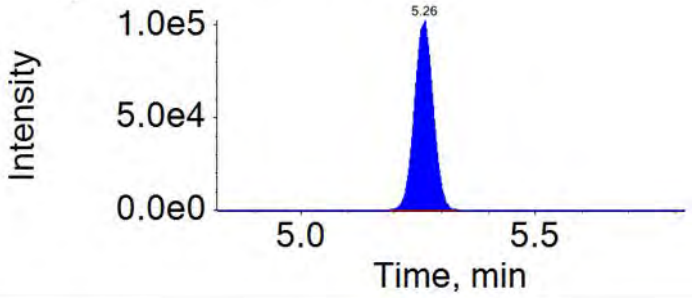
Component: PFOS
Primary Mass: 499.0 / 80.0



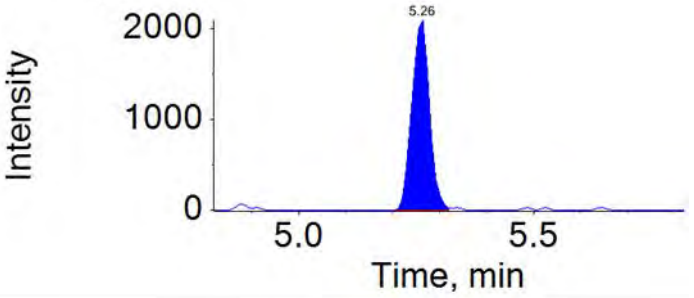
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



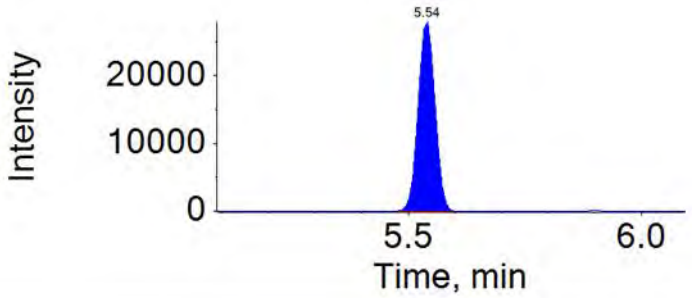
Component: PFNA
Primary Mass: 463.0 / 419.0



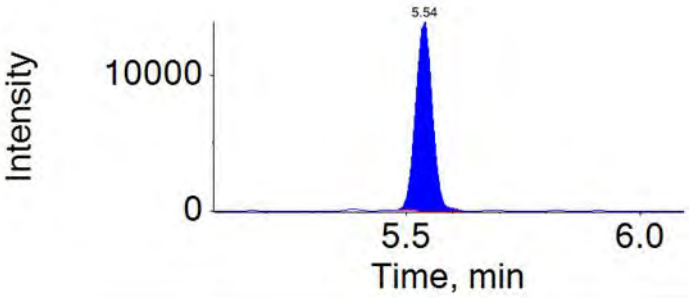
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



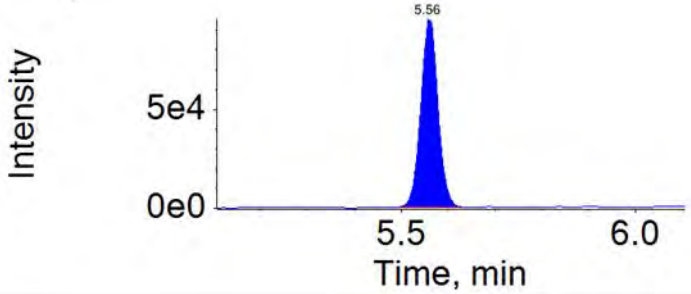
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



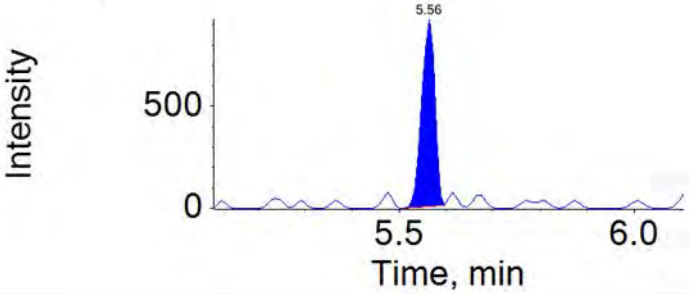
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

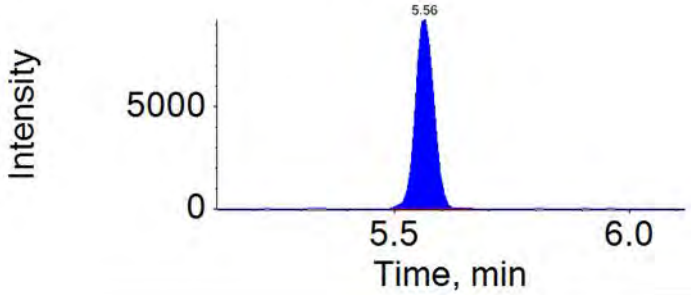
Component: PFDA
Primary Mass: 513.0 / 469.0



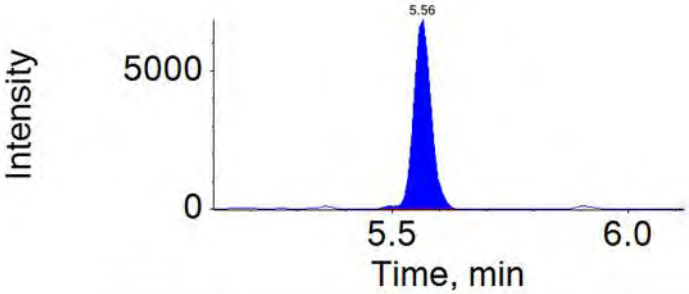
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



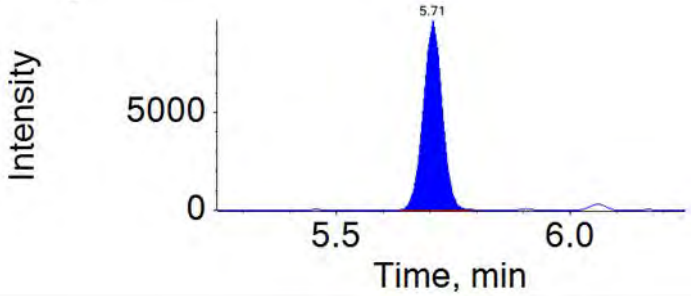
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



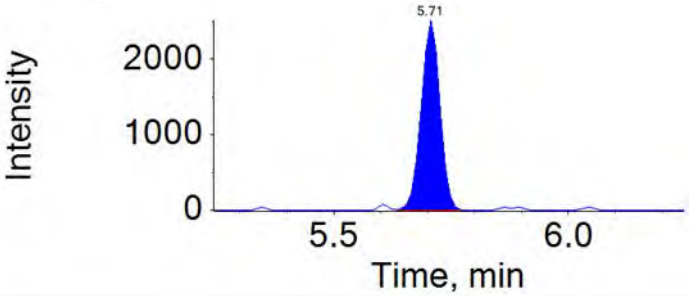
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



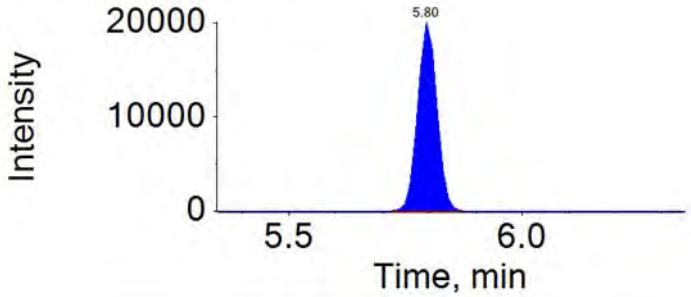
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



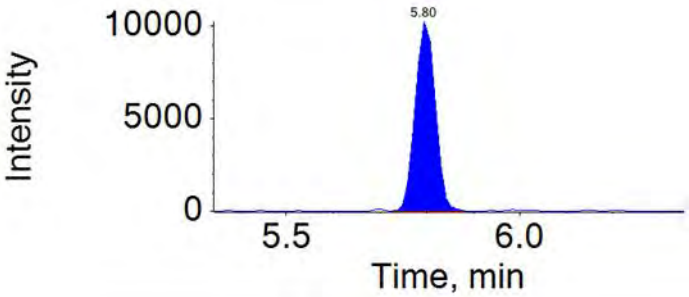
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



Component: PFDS_2
Secondary Mass: 599.0 / 99.0



APPROVED
By JPT at 2:53 pm, 11/7/18

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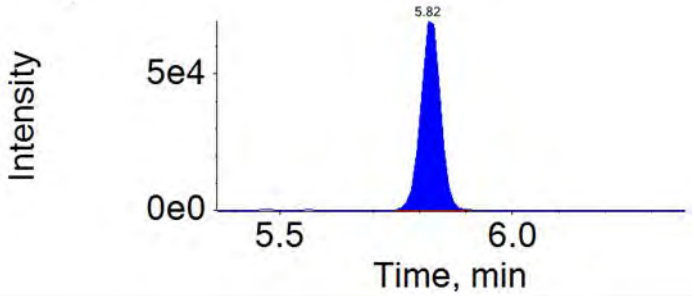
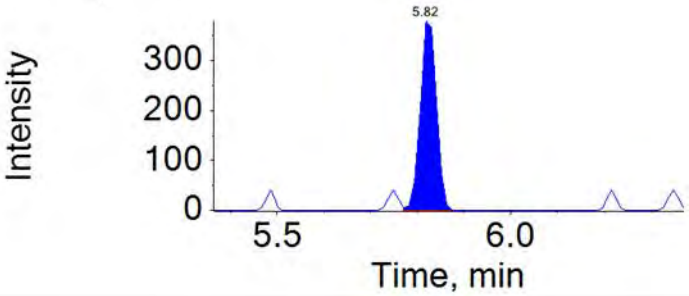
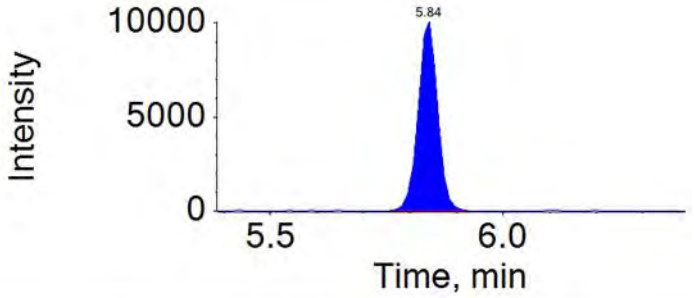
Component: PFUnDA
Primary Mass: 563.0 / 519.0



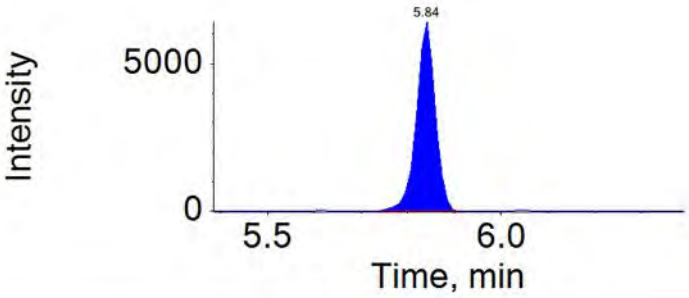
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



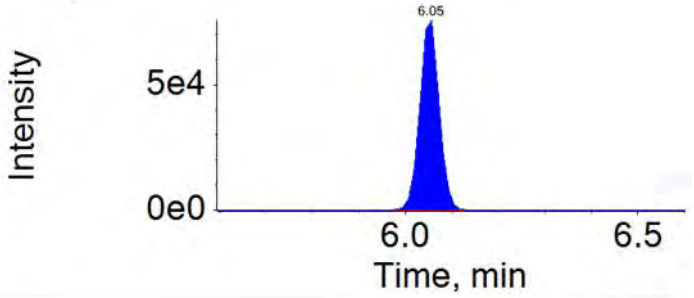
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



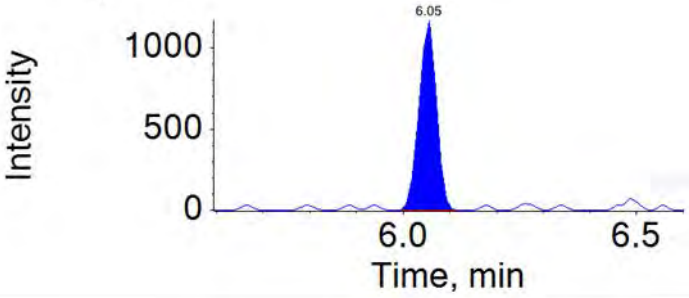
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



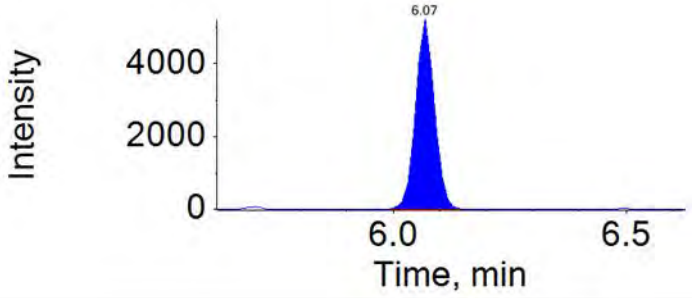
Component: PFDoDA
Primary Mass: 613.0 / 569.0



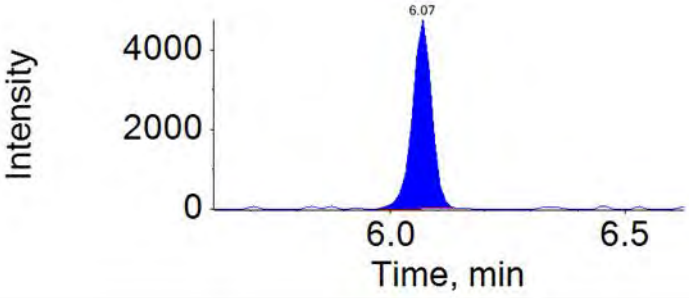
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



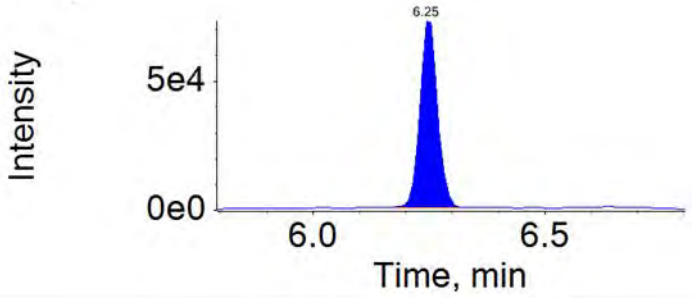
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



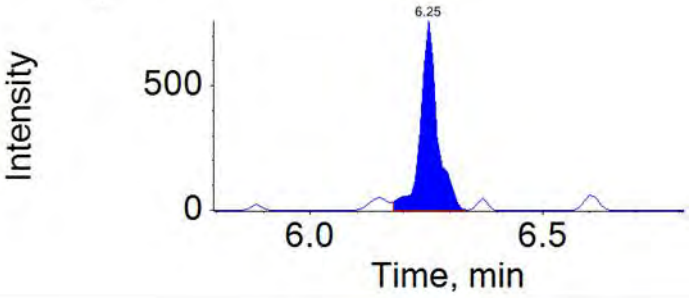
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

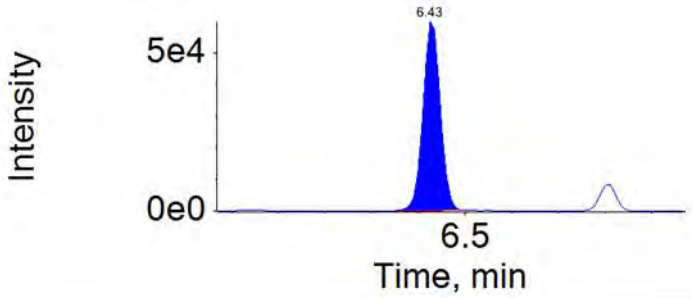
Component: PFTrDA
Primary Mass: 663.0 / 619.0



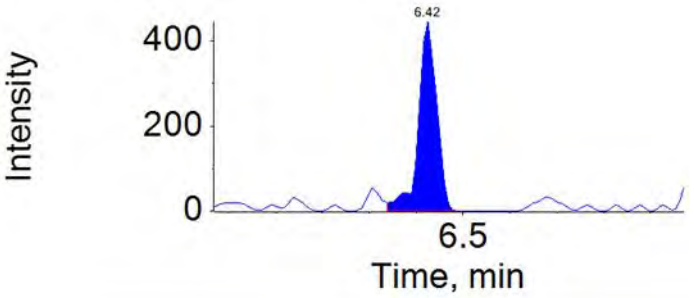
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



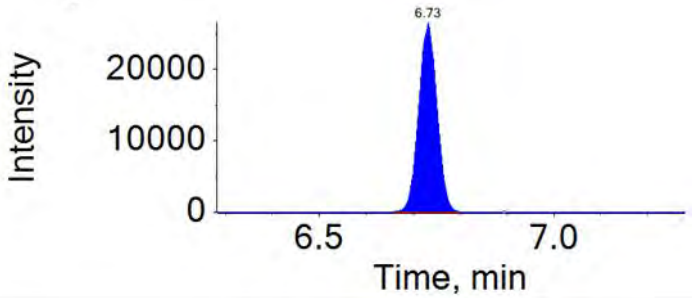
Component: PFTeDA
Primary Mass: 713.0 / 669.0



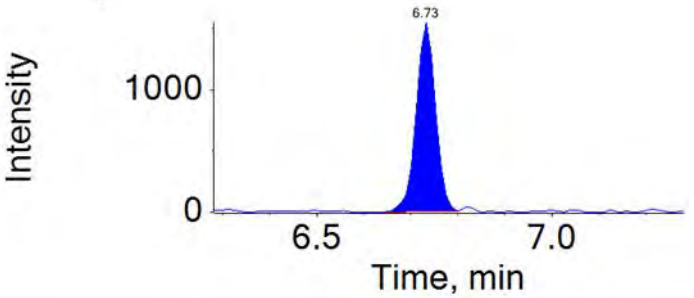
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



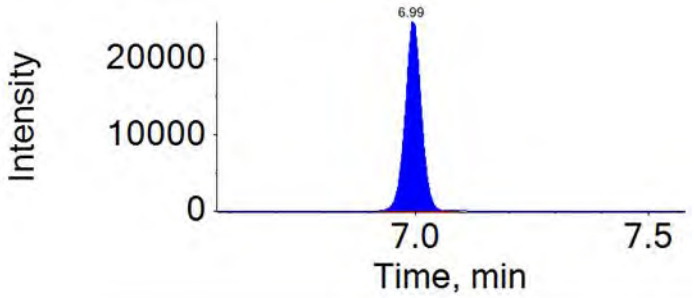
Component: PFHxDA
Primary Mass: 813.0 / 769.0



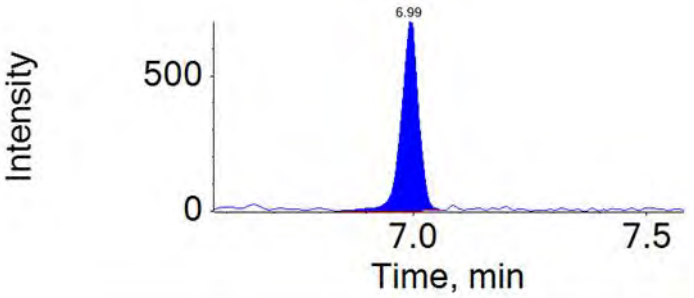
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



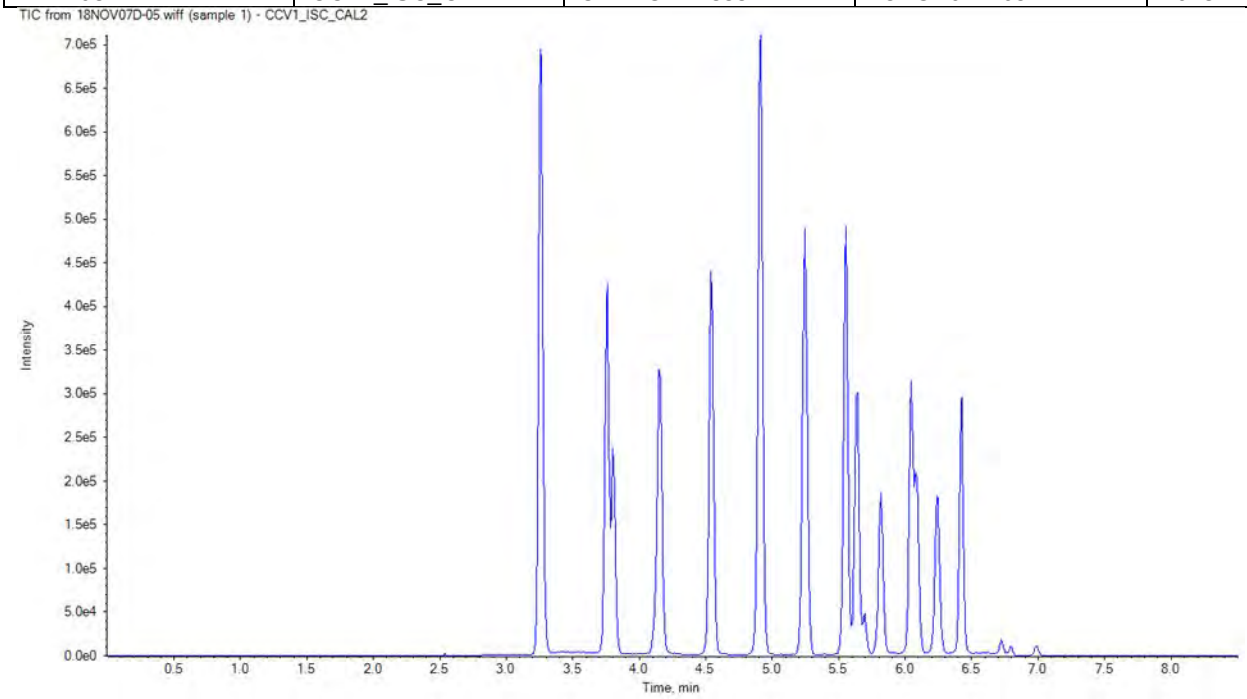
APPROVED
By JPT at 2:53 pm, 11/7/18

REVIEWED
By umar at 5:23 pm, 11/9/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALMOD21833F	18NOV07D-05.wiff	2018-11-07T11:56:44



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	723636.3	730410.6	-1	50	
13C2-PFOA	5.0	521176.2	524423.6	-1	50	
13C4-PFOS	4.8	281409.0	274061.7	3	50	
13C2-PFDA	5.0	314201.1	311442.1	1	50	

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALMOD21833F	18NOV07D-05.wiff	2018-11-07T11:56:44

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	72943.4	10	13C4-PFBA	778381.3	5.0	0.094	3.26	1.000	0.500	0.548	10	30	
PFPeA	77938.7	12	13C5-PFPeA	833775.0	5.0	0.093	3.76	1.000	0.500	0.556	11	30	
PFBS	39168.4	12	13C3-PFBS	424213.4	4.7	0.092	3.81	1.000	0.440	0.466	6	30	
4:2-FTS	9925.9	11	13C2-4:2-FTS	58255.4	4.7	0.170	4.12	1.000	0.467	0.458	-2	30	
PFHxA	88074.7	12	13C5-PFHxA	698561.1	5.0	0.126	4.15	1.000	0.500	0.541	8	30	
PFPeS	20913.0	12	13C3-PFBS	424213.4	4.7	0.049	4.17	1.100	0.469	0.486	4	30	
PFHxS	30387.3	12	13C3-PFHxS	352931.4	4.7	0.086	4.54	1.000	0.473	0.436	-8	30	
PFHpA	90462.4	12	13C4-PFHpA	560291.0	5.0	0.161	4.54	1.000	0.500	0.543	9	30	
6:2-FTS	8938.2	11	13C2-6:2-FTS	41536.9	4.8	0.215	4.90	1.000	0.474	0.537	13	30	
PFHpS	30992.6	11	13C3-PFHxS	352931.4	4.7	0.088	4.90	1.080	0.476	0.459	-3	30	
PFOA	99629.5	11	13C8-PFOA	987341.0	5.0	0.101	4.91	1.000	0.500	0.568	14	30	
PFOS	30525.5	11	13C8-PFOS	307801.9	4.8	0.099	5.24	1.000	0.478	0.514	8	30	
PFNA	74628.2	11	13C9-PFNA	538549.9	5.0	0.139	5.25	1.000	0.500	0.518	4	30	
PFNS	16672.5	11	13C8-PFOS	307801.9	4.8	0.054	5.53	1.060	0.480	0.429	-11	30	
PFDA	58204.1	11	13C6-PFDA	661143.8	5.0	0.088	5.55	1.000	0.500	0.484	-3	30	
8:2-FTS	6912.4	11	13C2-8:2-FTS	33696.5	4.8	0.205	5.56	1.000	0.479	0.462	-3	30	
PFOSA	64296.7	12	13C8-PFOSA	674275.2	5.0	0.095	5.64	1.000	0.500	0.515	3	30	
NMeFOSAA	7609.0	12	d3-NMeFOSAA	83963.9	5.0	0.091	5.69	1.000	0.500	0.466	-7	30	
PFDS	13804.1	11	13C8-PFOS	307801.9	4.8	0.045	5.79	1.110	0.482	0.428	-11	30	
PFUnDA	55119.4	11	13C7-PFUnDA	290057.1	5.0	0.190	5.82	1.000	0.500	0.545	9	30	
NEtFOSAA	9115.6	11	d5-NEtFOSAA	67534.8	5.0	0.135	5.83	1.000	0.500	0.580	16	30	
PFDoDA	59030.8	12	13C2-PFDoDA	612086.9	5.0	0.096	6.04	1.000	0.500	0.523	5	30	
10:2-FTS	4422.0	12	13C2-8:2-FTS	33696.5	4.8	0.131	6.06	1.090	0.482	0.409	-15	30	
NMePFOSAE	40895.8	12	d7-NMePFOSAE	337249.9	5.0	0.121	6.09	1.000	0.500	0.543	9	30	
NMePFOSA	8204.0	11	d3-NMePFOSA	80989.7	5.0	0.101	6.10	1.000	0.500	0.567	13	30	
PFDoS	7792.8	11	13C8-PFOS	307801.9	4.8	0.025	6.21	1.190	0.484	0.489	1	30	
NEtPFOSAE	49160.3	11	d9-NEtPFOSAE	271867.0	5.0	0.181	6.25	1.000	0.500	0.580	16	30	
NEtPFOSA	7779.2	11	d5-NEtPFOSA	68493.6	5.0	0.114	6.26	1.000	0.500	0.500	0	30	
PFTrDA	52443.4	11	13C2-PFDoDA	612086.9	5.0	0.086	6.24	1.030	0.500	0.540	8	30	
PFTeDA	46434.9	11	13C2-PFTeDA	533368.0	5.0	0.087	6.42	1.000	0.500	0.511	2	30	
PFHxDA	28219.3	11	13C2-PFTeDA	533368.0	5.0	0.053	6.72	1.050	0.500	0.657	31	30	OOS
PFODA	24584.2	10	13C2-PFTeDA	533368.0	5.0	0.046	6.99	1.090	0.500	0.660	32	30	OOS

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV07D-05.wiff
Sample ID:	CALMOD21833F			**Acquis Date:**		2018-11-07T11:56:44
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCCV1-4_DOD
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	723636.3	730410.6	-1	50	
13C2-PFOA	5.0	521176.2	524423.6	-1	50	
13C4-PFOS	4.8	281409.0	274061.7	3	50	
13C2-PFDA	5.0	314201.1	311442.1	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	778381.3	13C3-PFBA	723636.3	1.076	5.000	4.978	100	70-130	
E13C5-PFPeA	833775.0	13C3-PFBA	723636.3	1.152	5.000	5.019	100	70-130	
E13C3-PFBS	424213.4	13C3-PFBA	723636.3	0.586	4.650	4.302	93	70-130	
E13C2-4:2-FTS	58255.4	13C2-PFOA	521176.2	0.112	4.670	5.044	108	70-130	
E13C5-PFHxA	698561.1	13C2-PFOA	521176.2	1.340	5.000	4.930	99	70-130	
E13C3-PFHxS	352931.4	13C2-PFOA	521176.2	0.677	4.730	4.861	103	70-130	
E13C4-PFHpA	560291.0	13C2-PFOA	521176.2	1.075	5.000	4.891	98	70-130	
E13C2-6:2-FTS	41536.9	13C2-PFOA	521176.2	0.080	4.750	5.315	112	70-130	
E13C8-PFOA	987341.0	13C2-PFOA	521176.2	1.894	5.000	5.283	106	70-130	
E13C8-PFOS	307801.9	13C4-PFOS	281409.0	1.094	4.780	4.837	101	70-130	
E13C9-PFNA	538549.9	13C4-PFOS	281409.0	1.914	5.000	5.228	105	70-130	
E13C6-PFDA	661143.8	13C2-PFDA	314201.1	2.104	5.000	5.292	106	70-130	
E13C2-8:2-FTS	33696.5	13C2-PFDA	314201.1	0.107	4.790	5.675	118	70-130	
E13C8-PFOSA	674275.2	13C2-PFDA	314201.1	2.146	5.000	4.683	94	70-130	
Ed3-NMeFOSAA	83963.9	13C2-PFDA	314201.1	0.267	5.000	4.969	99	70-130	
E13C7-PFUnDA	290057.1	13C2-PFDA	314201.1	0.923	5.000	5.325	107	70-130	
Ed5-NEtFOSAA	67534.7	13C2-PFDA	314201.1	0.215	5.000	4.974	99	70-130	
E13C2-PFDoDA	612086.9	13C2-PFDA	314201.1	1.948	5.000	5.252	105	70-130	
Ed7-NMePFOSAE	337249.9	13C2-PFDA	314201.1	1.073	5.000	4.991	100	70-130	
Ed3-NMePFOSA	80989.7	13C2-PFDA	314201.1	0.258	5.000	4.719	94	70-130	
Ed9-NEtPFOSAE	271867.0	13C2-PFDA	314201.1	0.865	5.000	4.941	99	70-130	
Ed5-NEtPFOSA	68493.6	13C2-PFDA	314201.1	0.218	5.000	5.048	101	70-130	
E13C2-PFTeDA	533368.0	13C2-PFDA	314201.1	1.698	5.000	6.111	122	70-130	

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

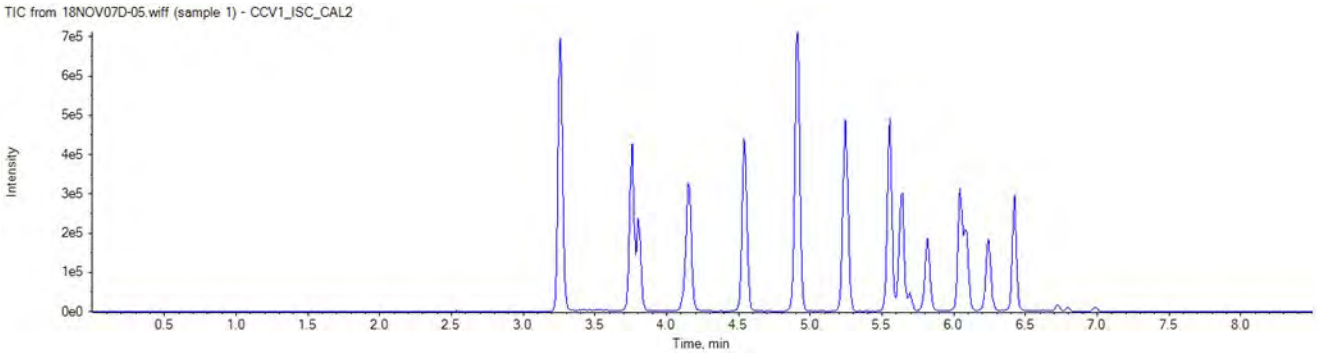
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV07D-05.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	72943.4		A	13C4-PFBA	3.26	778381.3	0.094	0.548
PFPeA	3.76	1.000	77938.7		A	13C5-PFPeA	3.76	833775.0	0.093	0.556
PFBS	3.81	1.000	39168.4		A	13C3-PFBS	3.81	424213.4	0.092	0.466
4:2-FTS	4.12	1.000	9925.9		A	13C2-4:2-FTS	4.12	58255.4	0.170	0.458
PFHxA	4.15	1.000	88074.7		A	13C5-PFHxA	4.15	698561.1	0.126	0.541
PFPeS	4.17	1.100	20913.0		A	13C3-PFBS	3.81	424213.4	0.049	0.486
PFHxS	4.54	1.000	30387.3		A	13C3-PFHxS	4.54	352931.4	0.086	0.436
PFHpA	4.54	1.000	90462.4		A	13C4-PFHpA	4.54	560291.0	0.161	0.543
6:2-FTS	4.90	1.000	8938.2		A	13C2-6:2-FTS	4.90	41536.9	0.215	0.537
PFHpS	4.90	1.080	30992.6		A	13C3-PFHxS	4.54	352931.4	0.088	0.459
PFOA	4.91	1.000	99629.5		A	13C8-PFOA	4.91	987341.0	0.101	0.568
PFOS	5.24	1.000	30525.5		M	13C8-PFOS	5.24	307801.9	0.099	0.514
PFNA	5.25	1.000	74628.2		A	13C9-PFNA	5.25	538549.9	0.139	0.518
PFNS	5.53	1.060	16672.5		A	13C8-PFOS	5.24	307801.9	0.054	0.429
PFDA	5.55	1.000	58204.1		A	13C6-PFDA	5.55	661143.8	0.088	0.484
8:2-FTS	5.56	1.000	6912.4		A	13C2-8:2-FTS	5.56	33696.5	0.205	0.462
PFOSA	5.64	1.000	64296.7		A	13C8-PFOSA	5.64	674275.2	0.095	0.515
NMeFOSAA	5.69	1.000	7609.0		A	d3-NMeFOSAA	5.69	83963.9	0.091	0.466
PFDS	5.79	1.110	13804.1		A	13C8-PFOS	5.24	307801.9	0.045	0.428
PFUnDA	5.82	1.000	55119.4		M	13C7-PFUnDA	5.82	290057.1	0.190	0.545
NEtFOSAA	5.83	1.000	9115.6		M	d5-NEtFOSAA	5.83	67534.8	0.135	0.580
PFDoDA	6.04	1.000	59030.8		A	13C2-PFDoDA	6.04	612086.9	0.096	0.523
10:2-FTS	6.06	1.090	4422.0		A	13C2-8:2-FTS	5.56	33696.5	0.131	0.409
NMePFOSAE	6.09	1.000	40895.8		A	d7-NMePFOSAE	6.08	337249.9	0.121	0.543
NMePFOSA	6.10	1.000	8204.0		A	d3-NMePFOSA	6.10	80989.7	0.101	0.567
PFDoS	6.21	1.190	7792.8		A	13C8-PFOS	5.24	307801.9	0.025	0.489
NEtPFOSAE	6.25	1.000	49160.3		A	d9-NEtPFOSAE	6.24	271867.0	0.181	0.580
NEtPFOSA	6.26	1.000	7779.2		A	d5-NEtPFOSA	6.26	68493.6	0.114	0.500
PFTrDA	6.24	1.030	52443.4		A	13C2-PFDoDA	6.04	612086.9	0.086	0.540
PFTeDA	6.42	1.000	46434.9		A	13C2-PFTeDA	6.42	533368.0	0.087	0.511
PFHxDA	6.72	1.050	28219.3		A	13C2-PFTeDA	6.42	533368.0	0.053	0.657
PFODA	6.99	1.090	24584.2		A	13C2-PFTeDA	6.42	533368.0	0.046	0.660

Total Ion Chromatogram

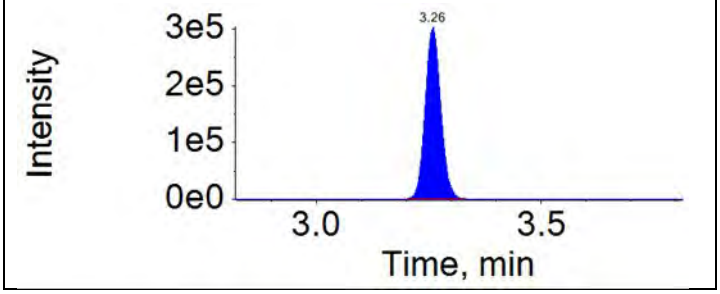


APPROVED
By MCD at 6:31 pm, 11/7/18

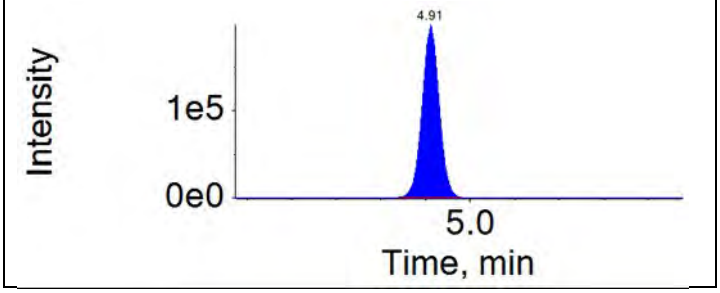
REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

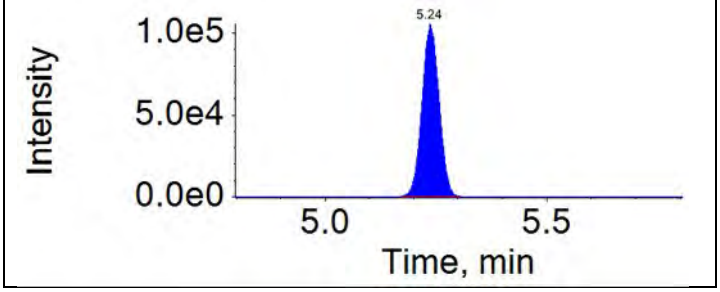
Injection Standard: 13C3-PFBA
216.0 / 172.0



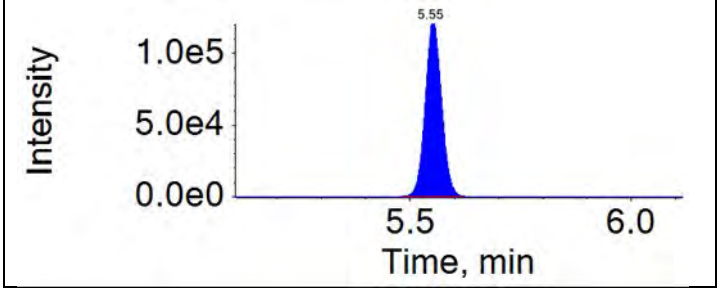
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

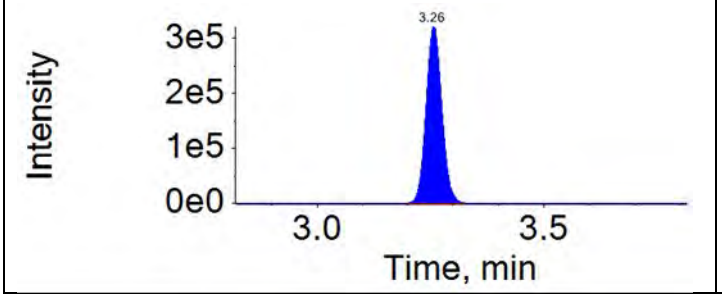


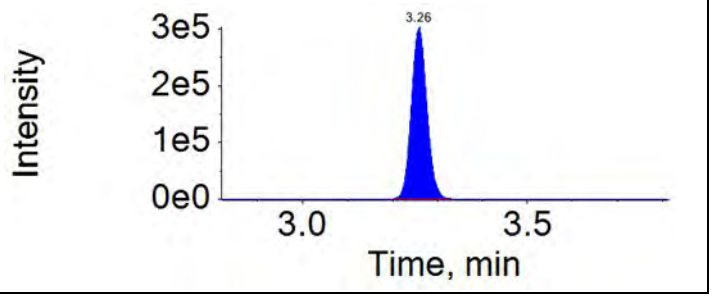
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

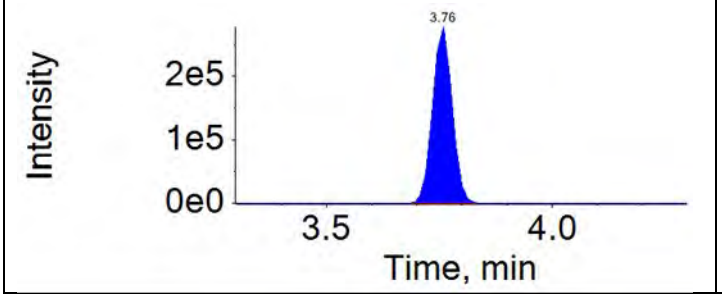
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

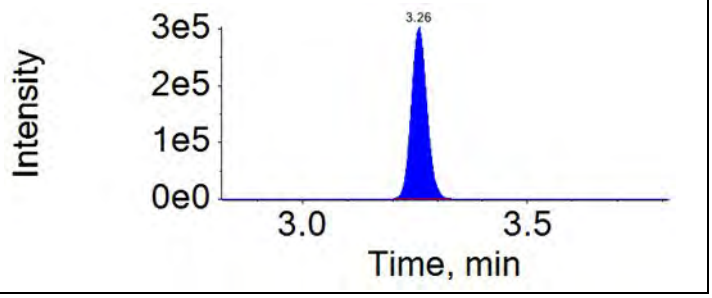
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



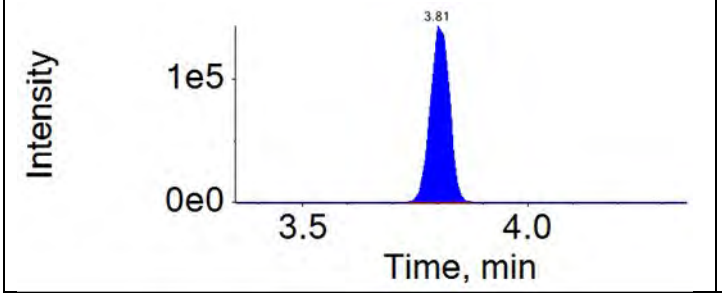


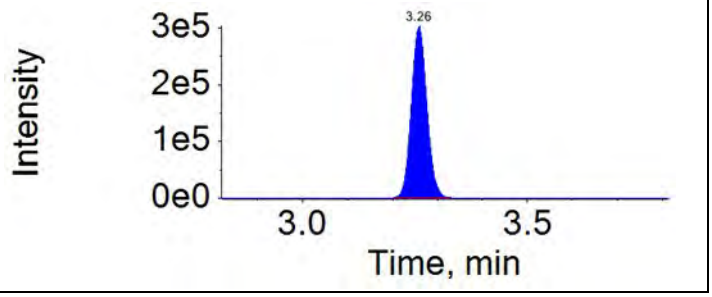
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



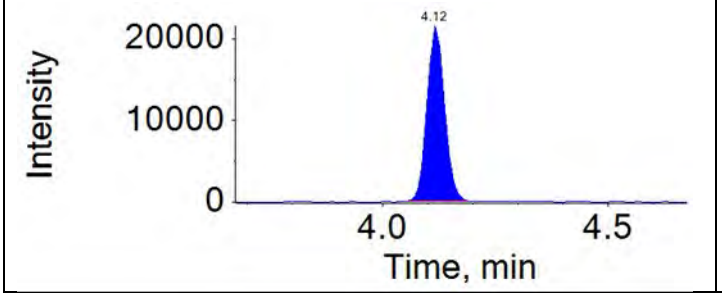


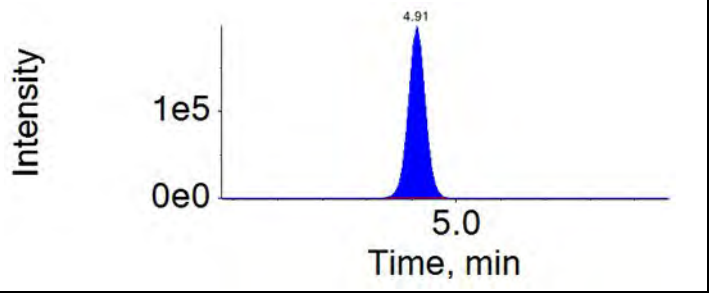
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





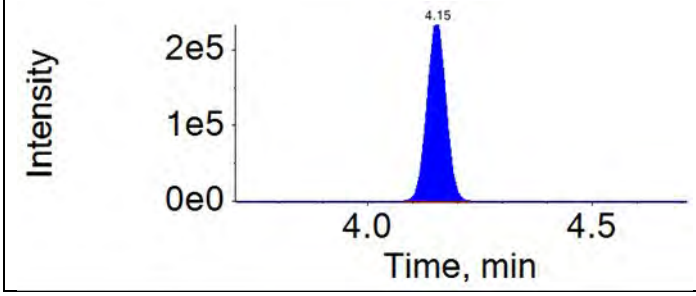
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

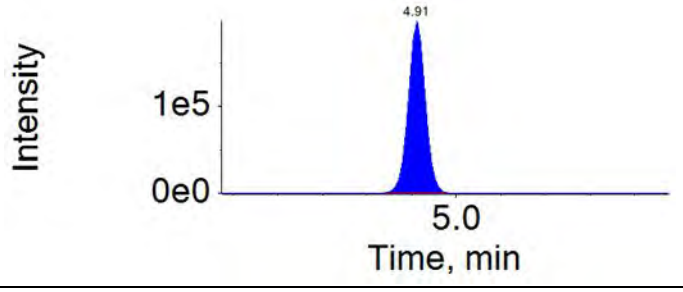




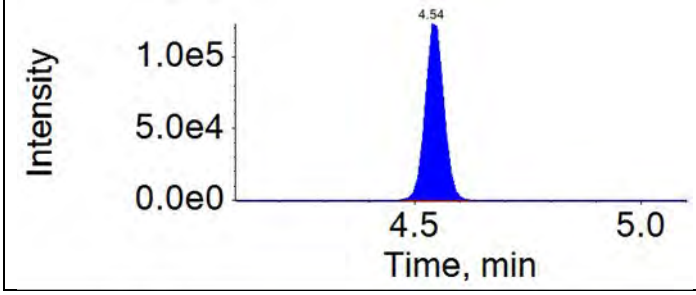
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

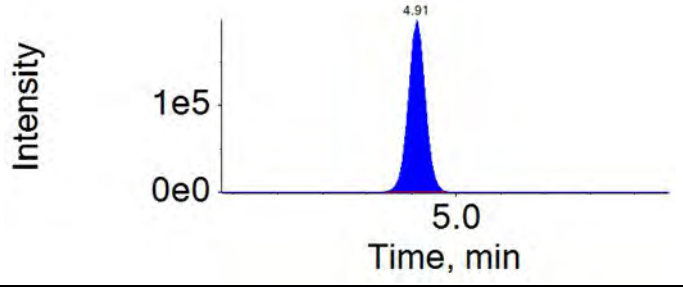
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



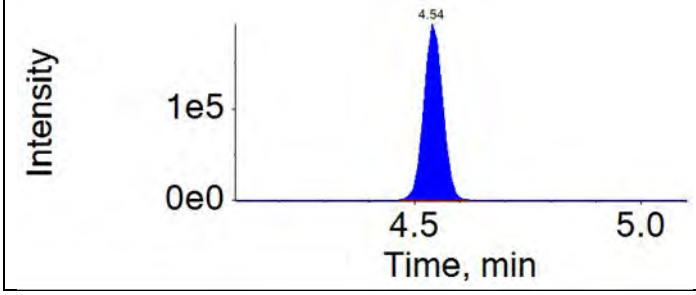


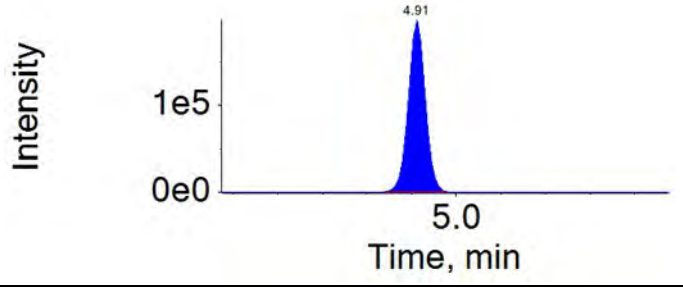
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



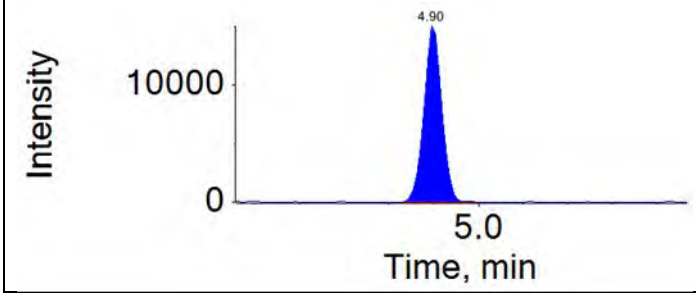


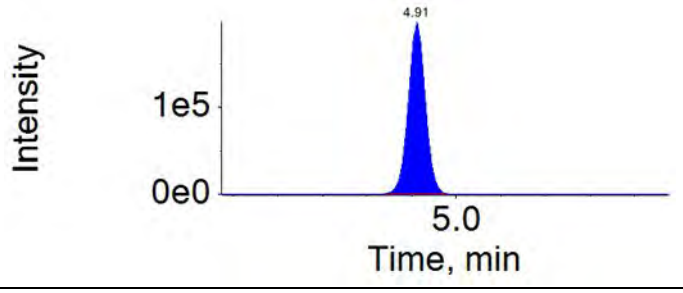
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



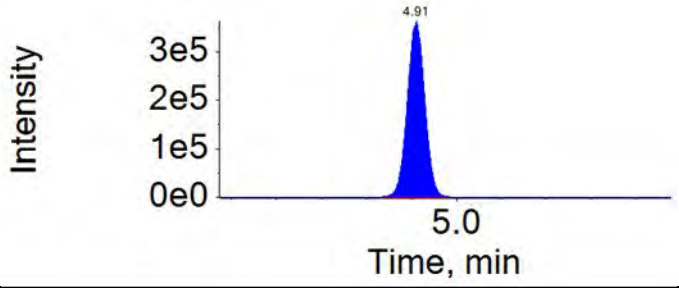


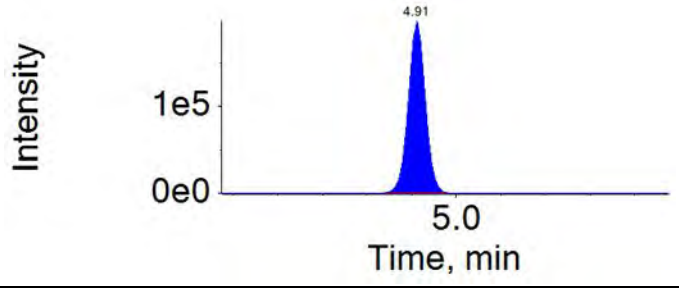
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

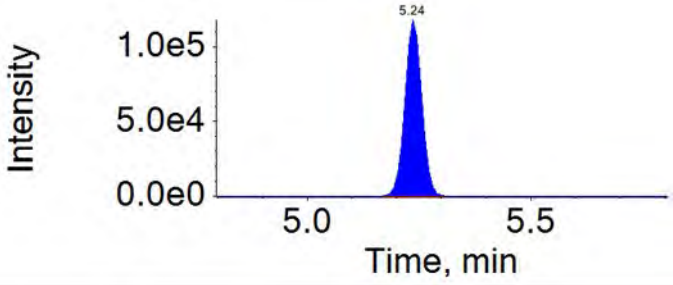
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

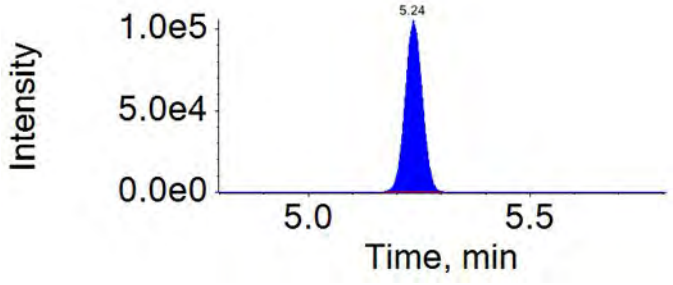
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



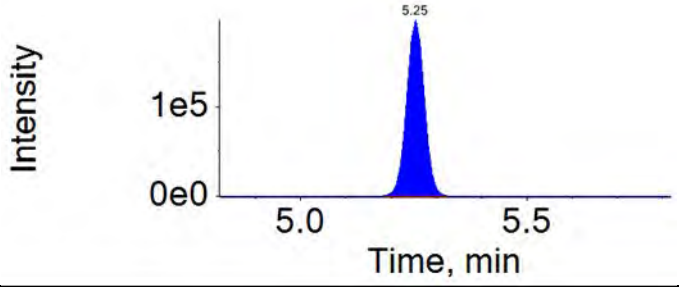


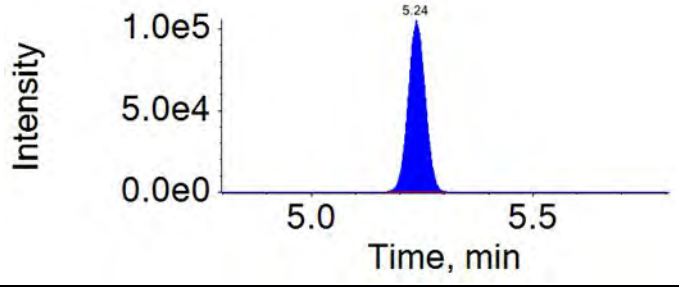
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



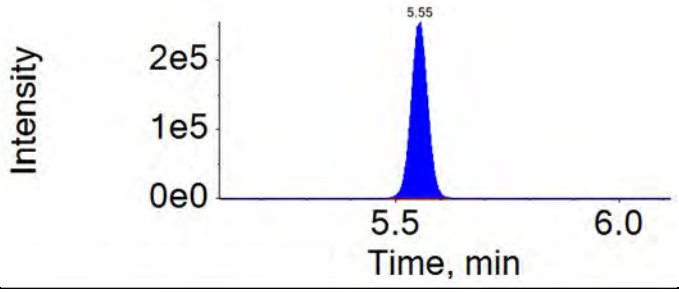


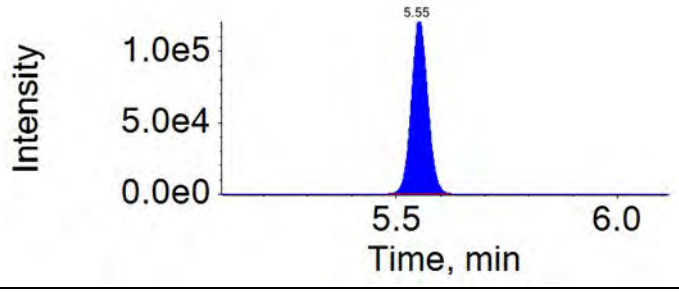
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0



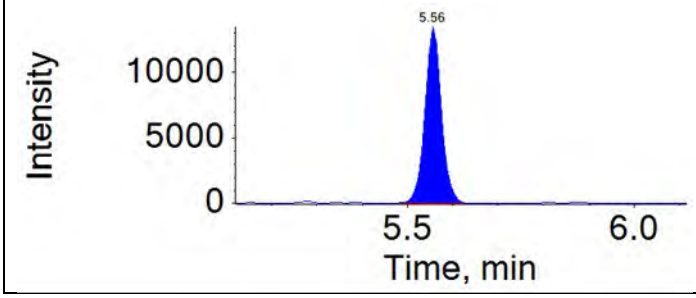


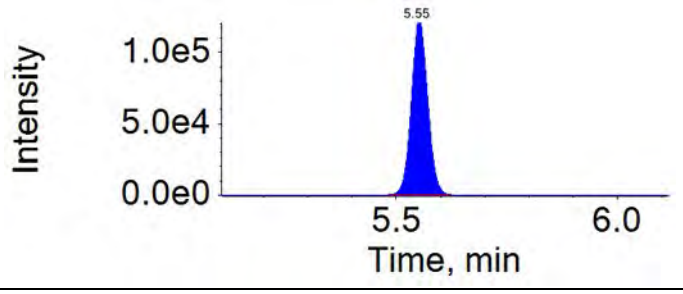
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

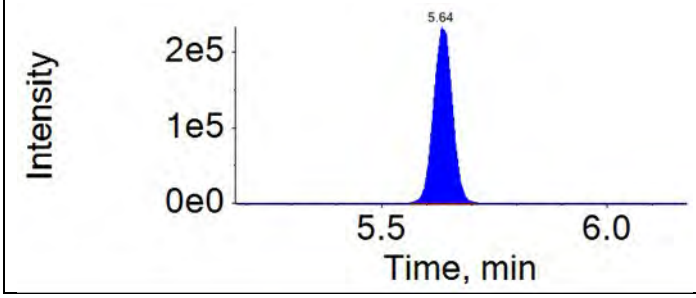
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

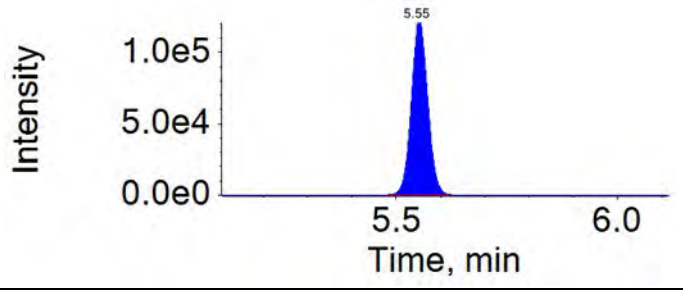
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



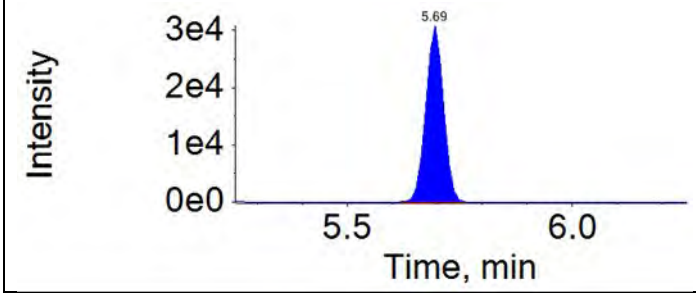


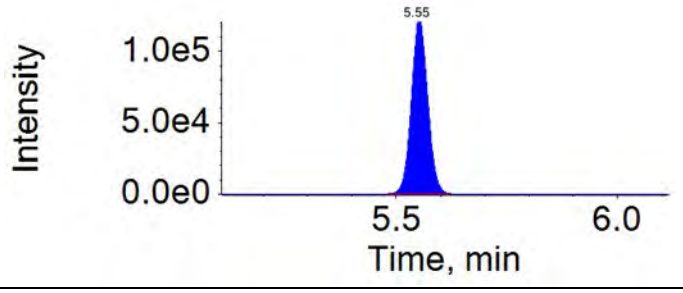
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



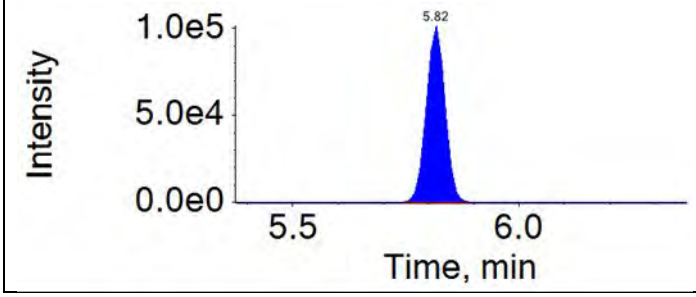


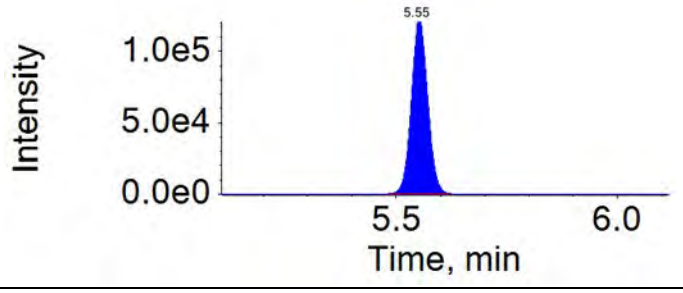
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



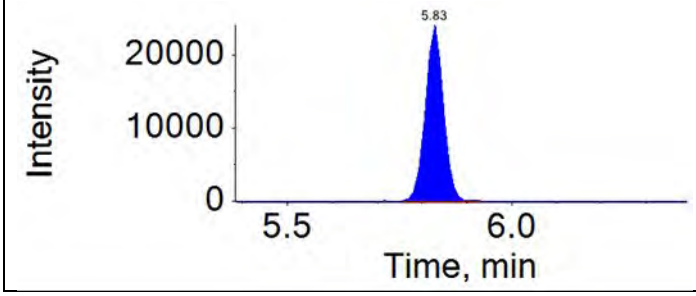


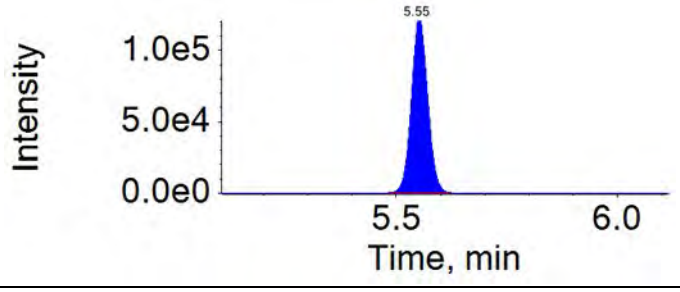
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

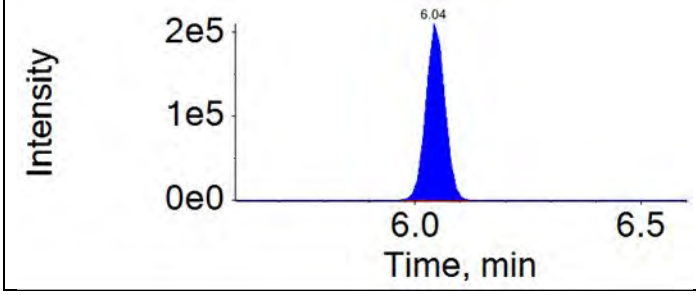
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

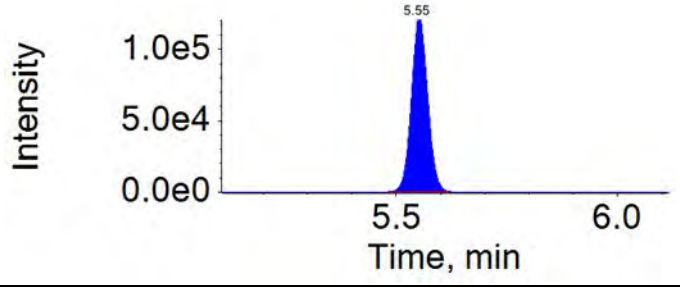
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



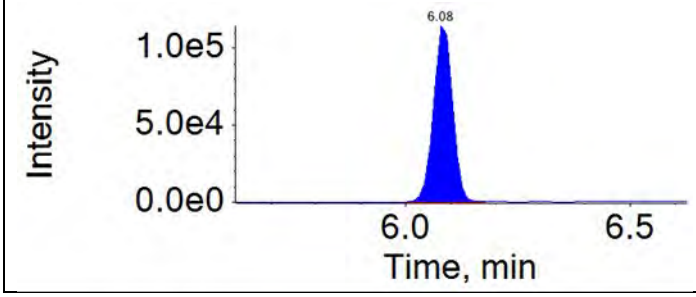


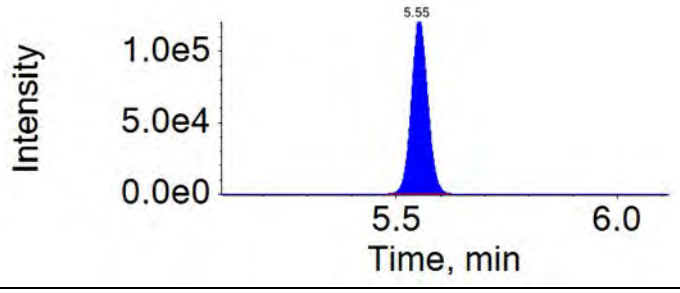
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



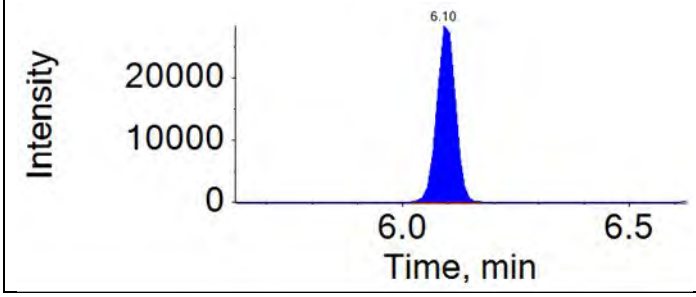


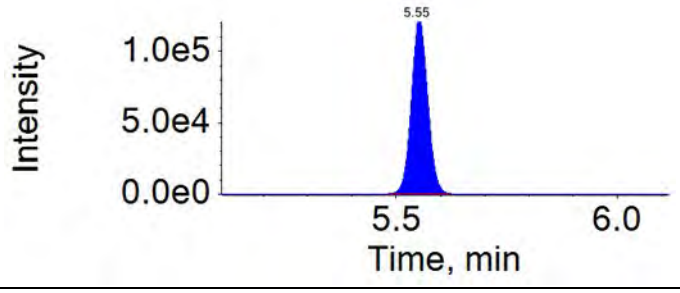
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





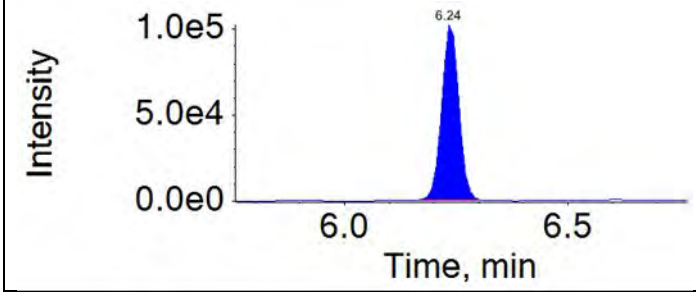
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

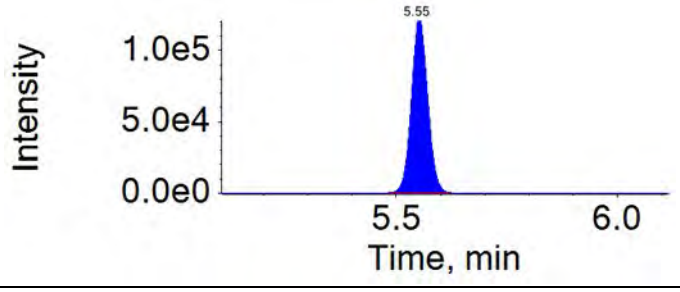




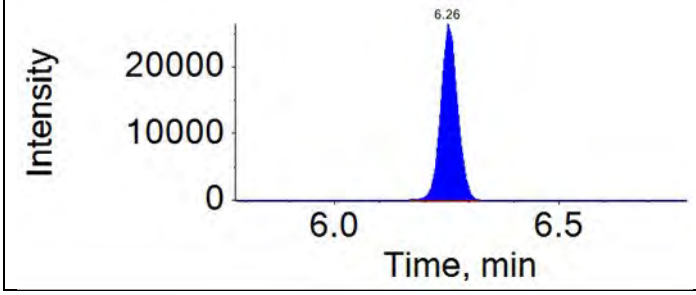
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

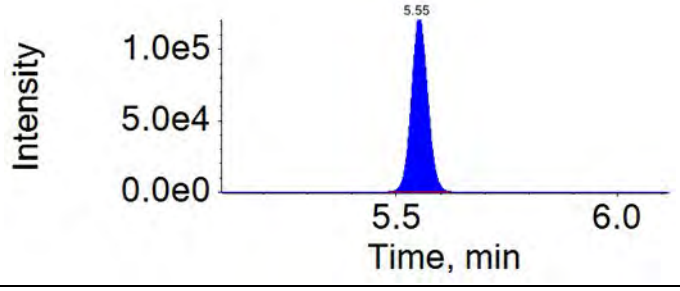
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



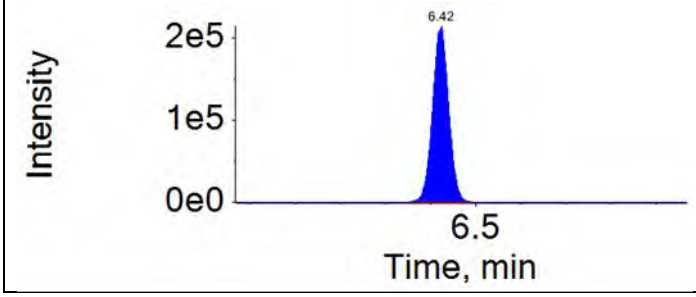


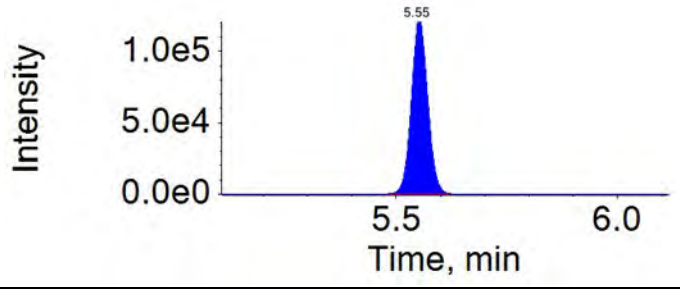
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



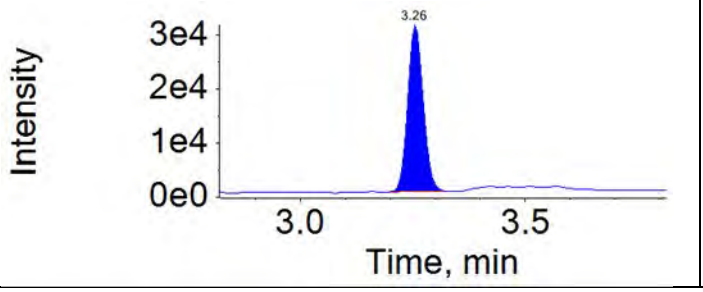


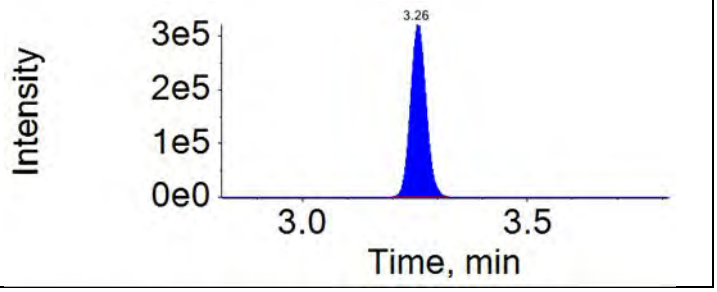
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

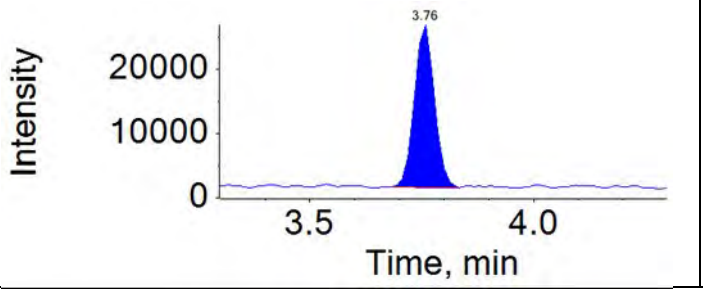
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

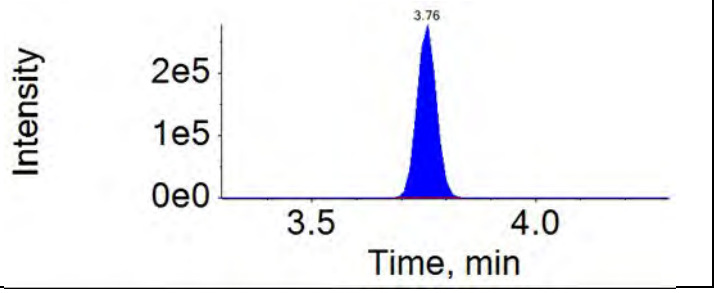
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



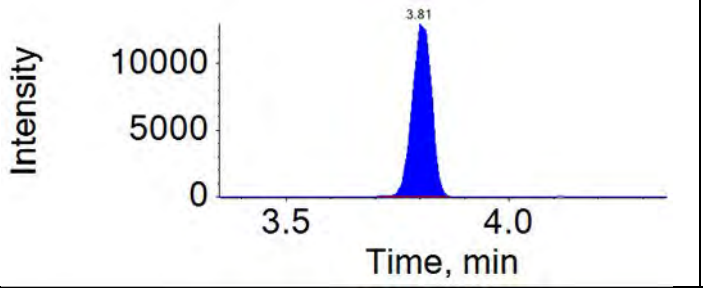


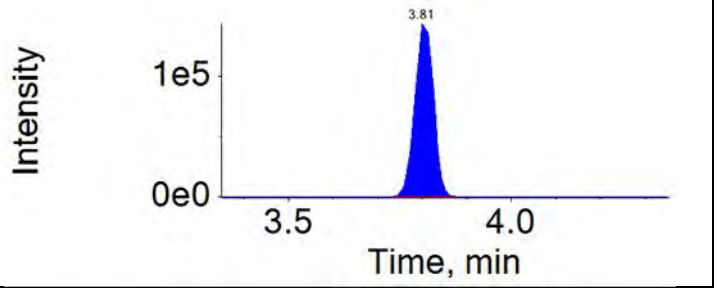
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



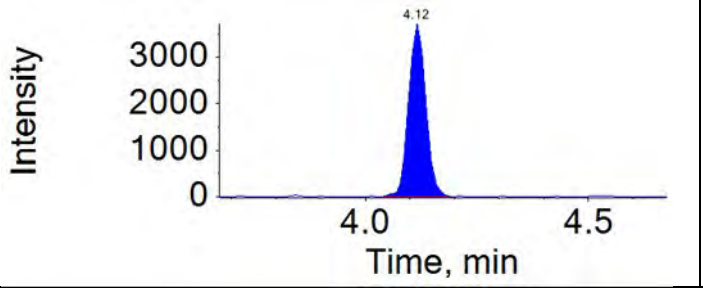


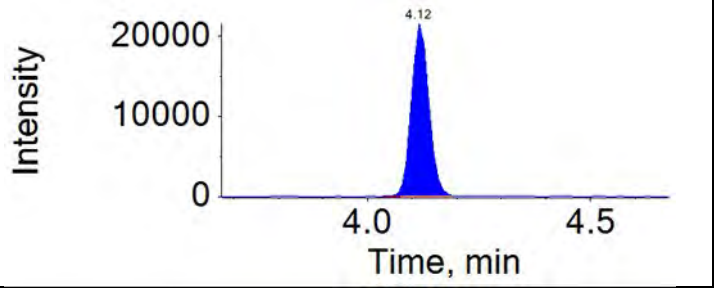
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



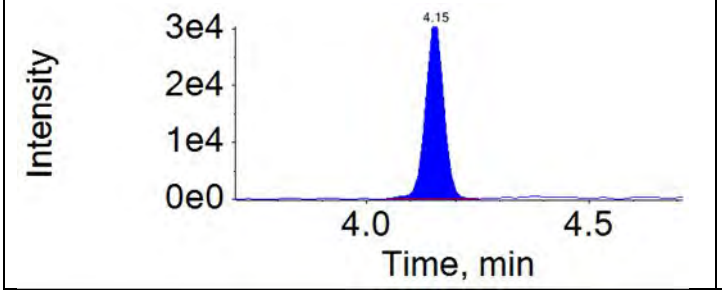


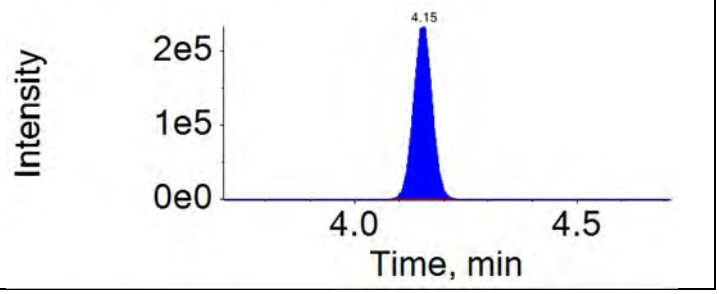
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

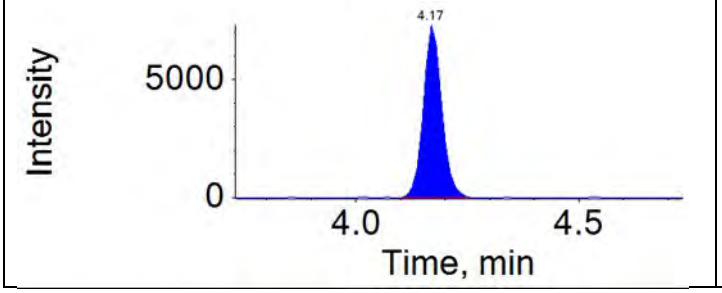
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

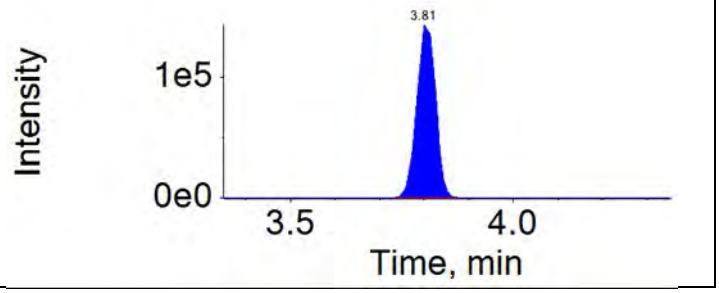
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



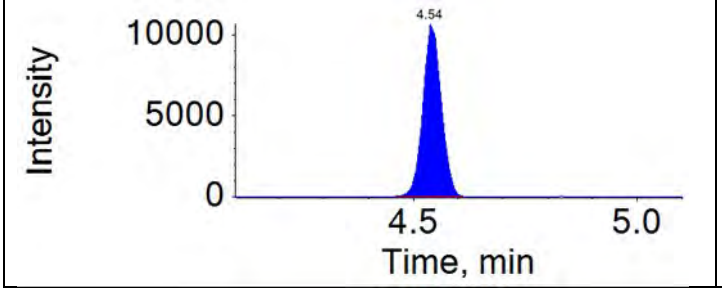


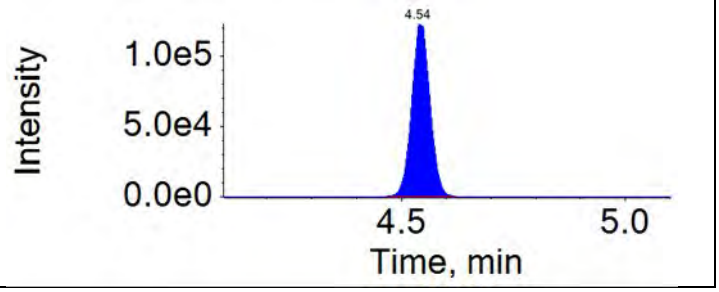
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



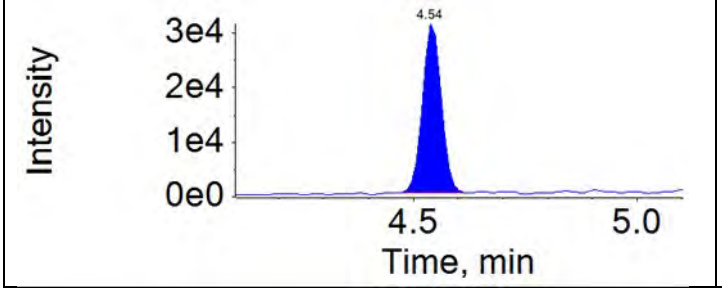


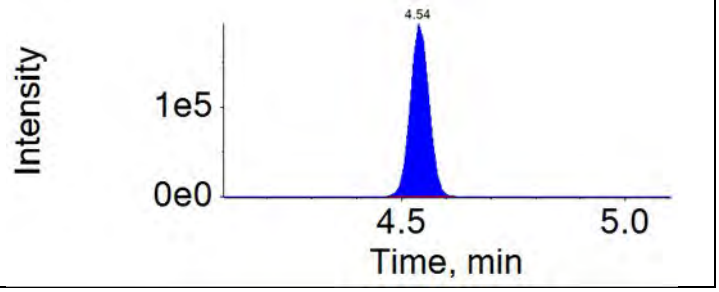
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



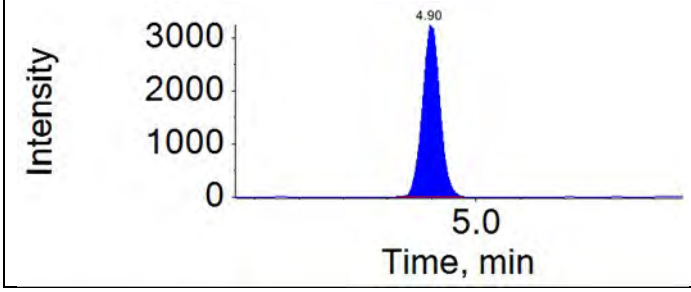


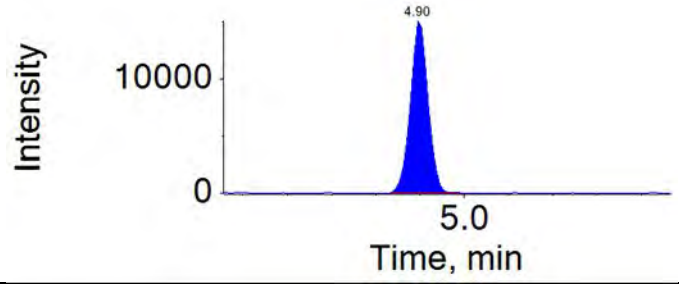
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

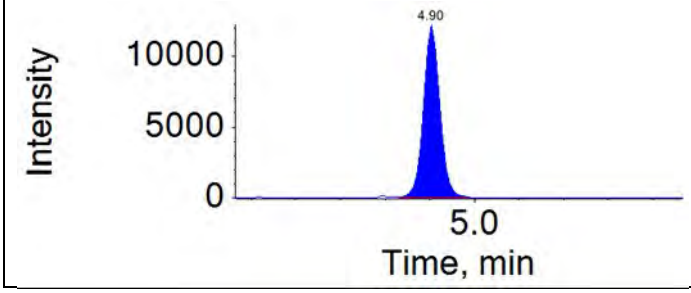
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

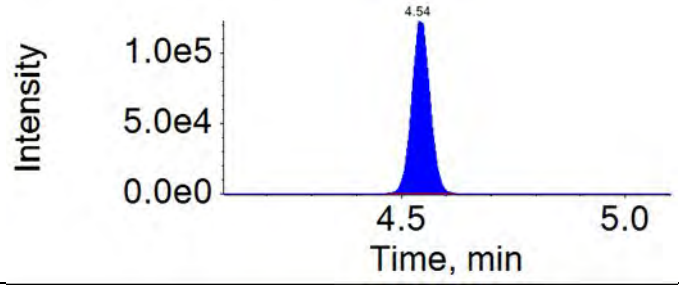
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



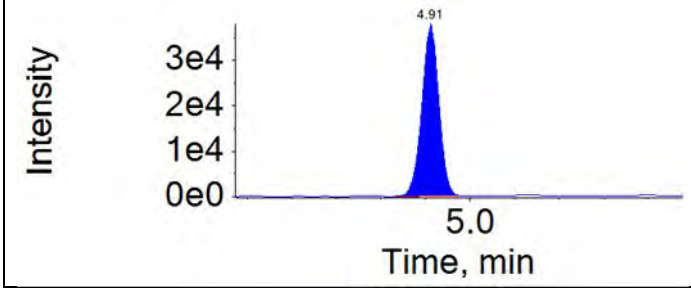


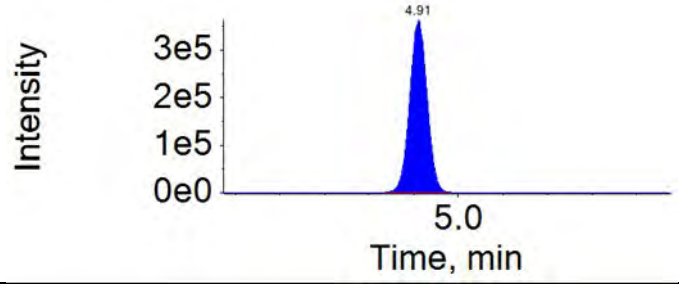
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



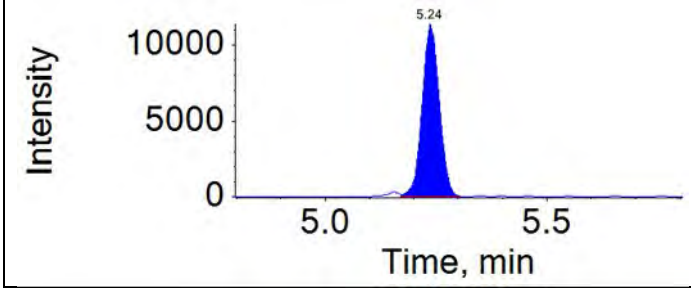


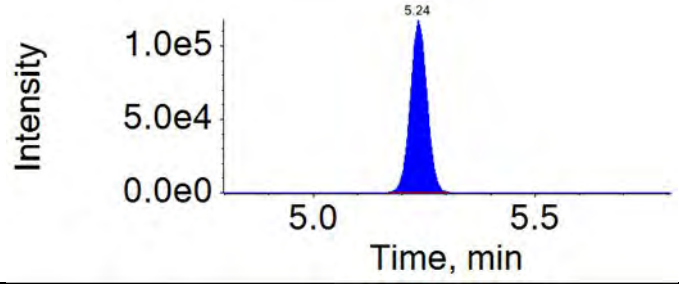
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



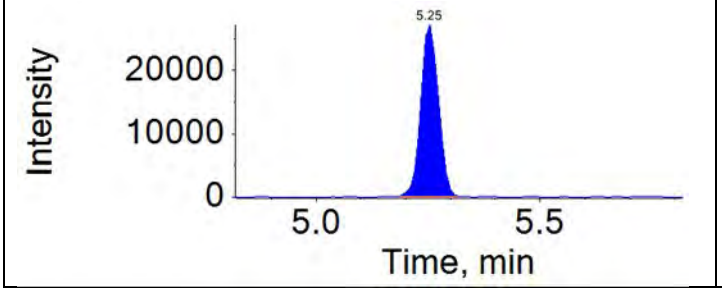


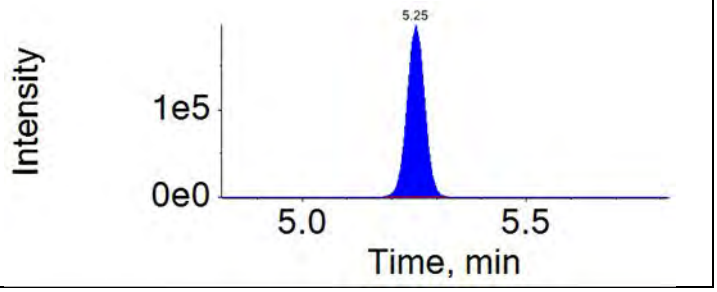
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

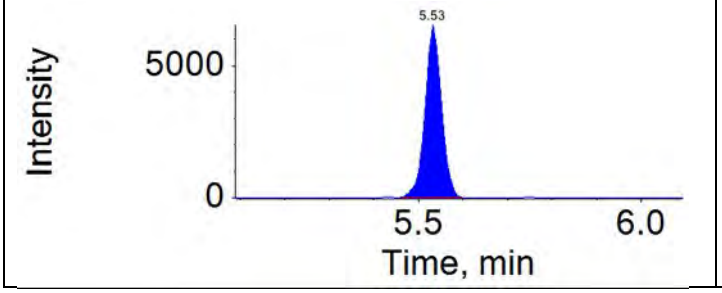
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

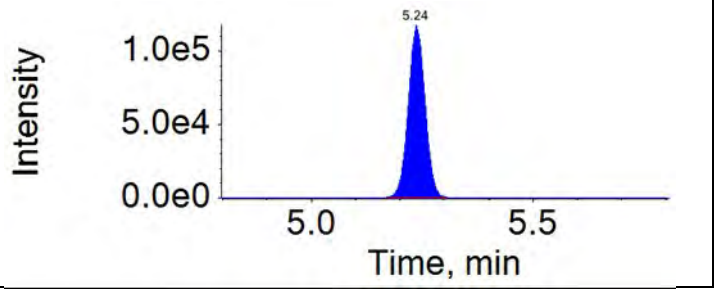
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



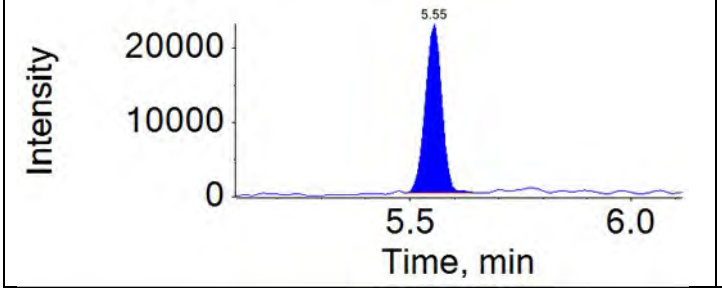


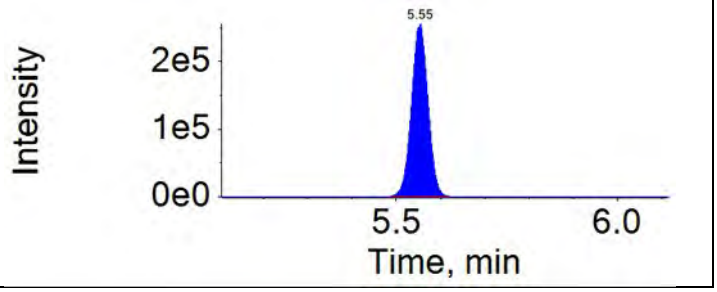
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



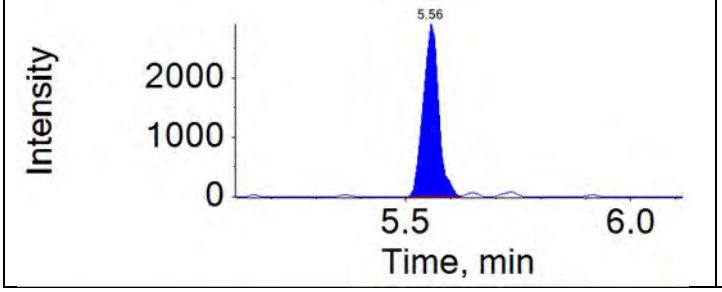


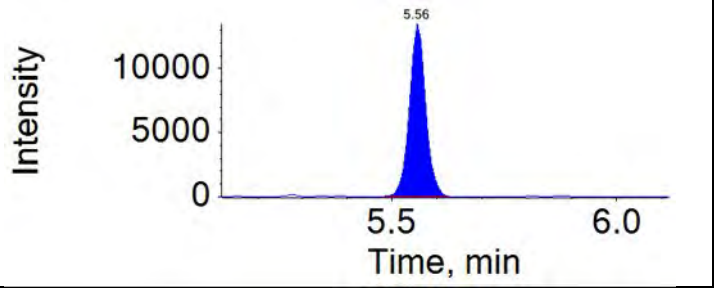
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



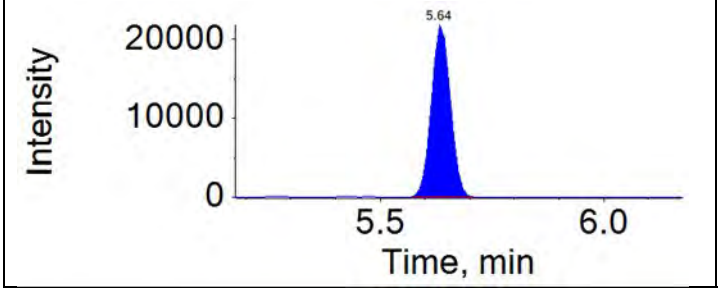


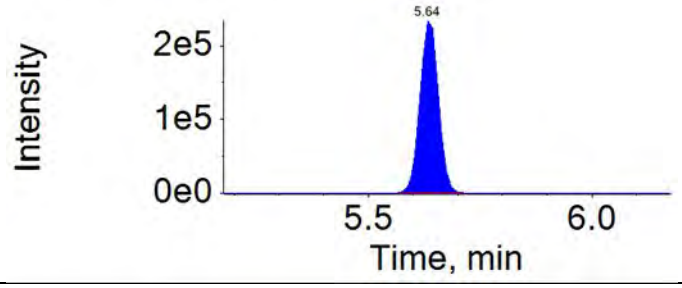
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

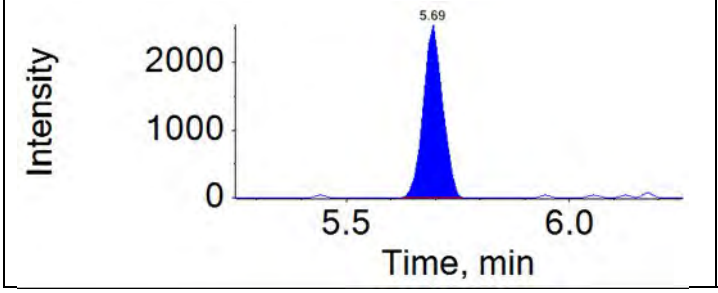
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

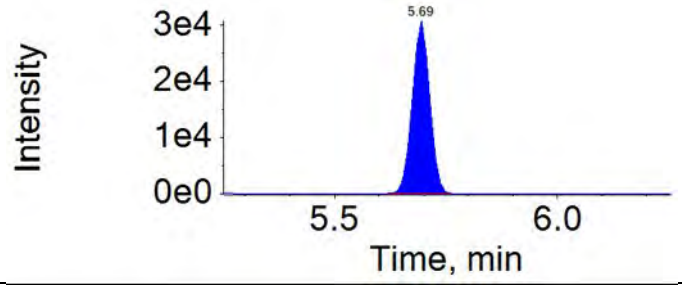
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



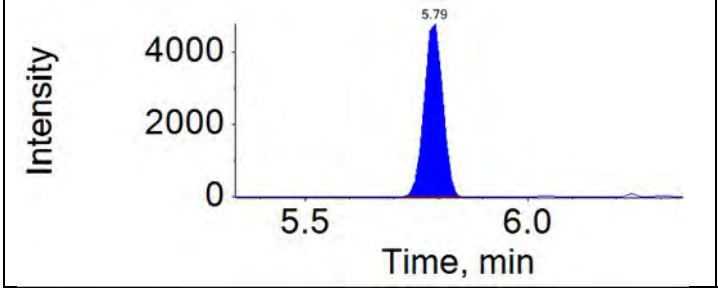


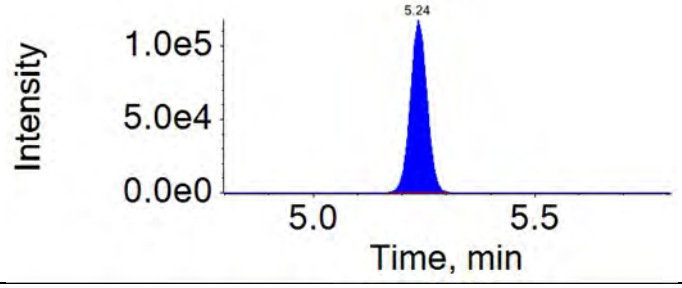
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



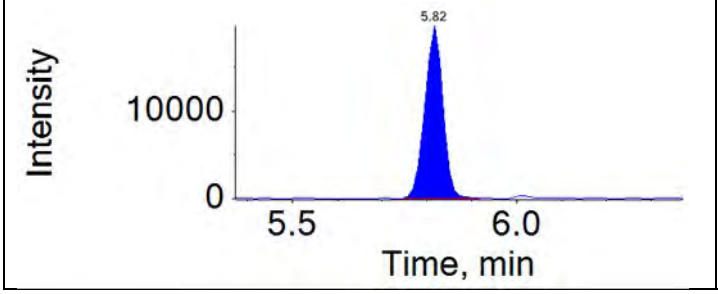


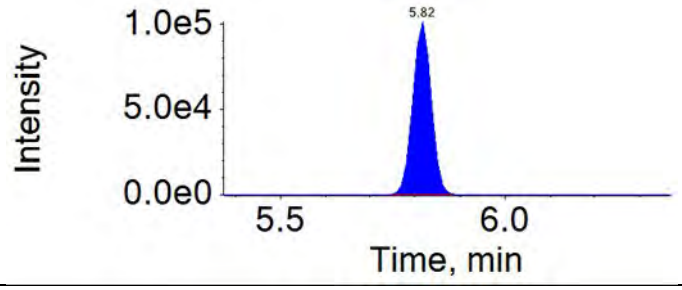
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



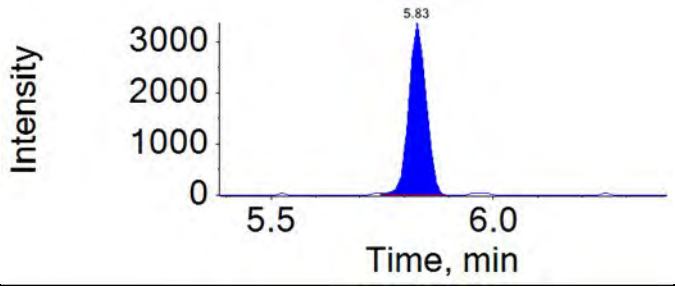


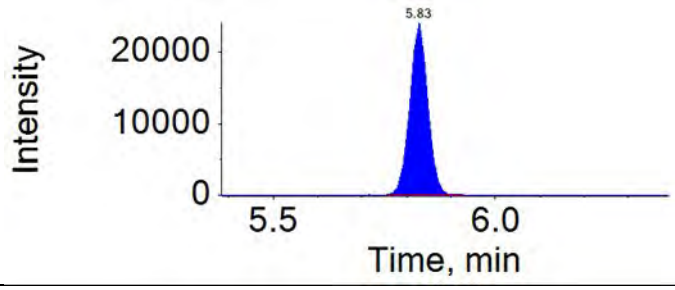
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

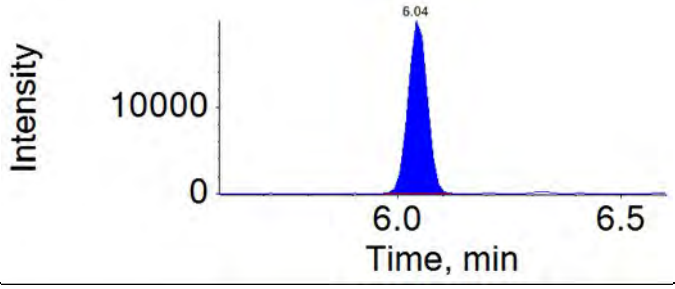
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

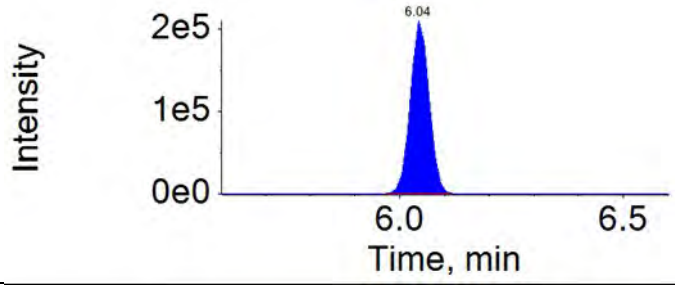
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



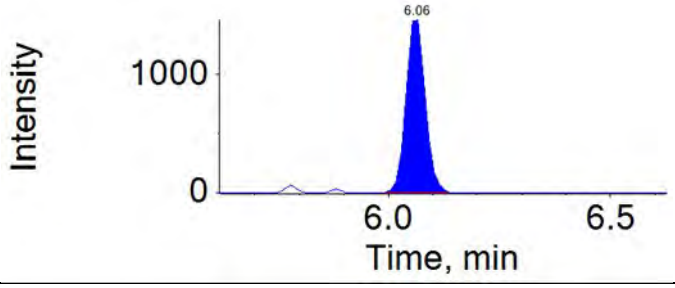


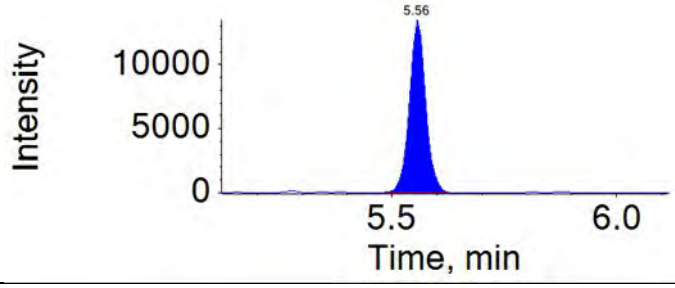
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



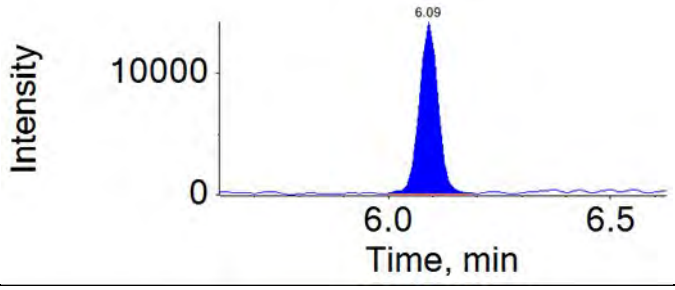


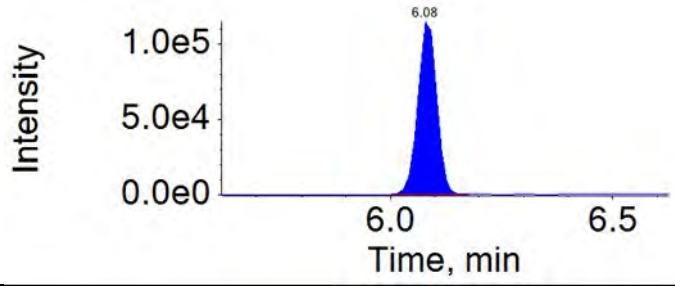
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



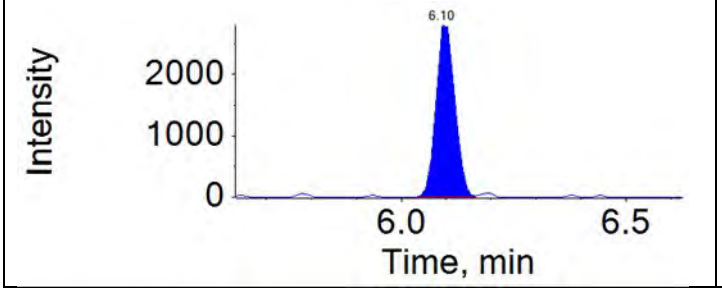


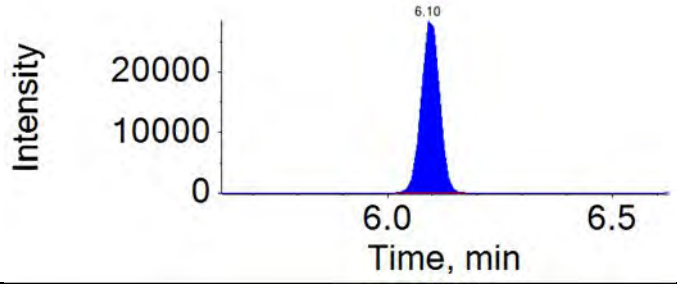
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

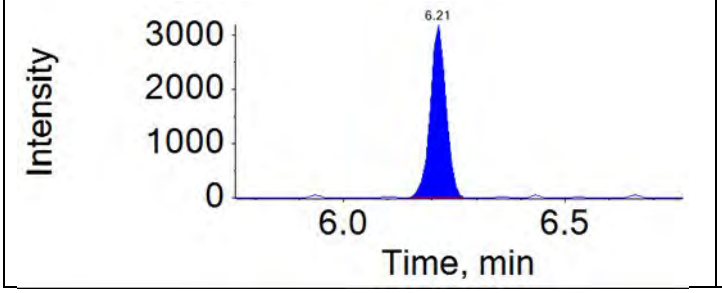
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

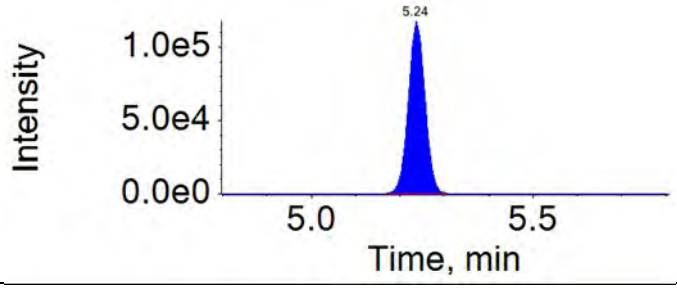
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



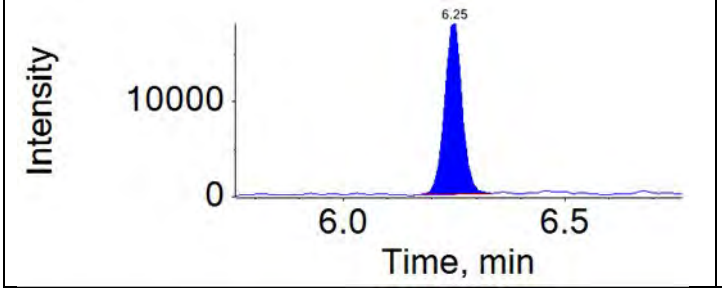


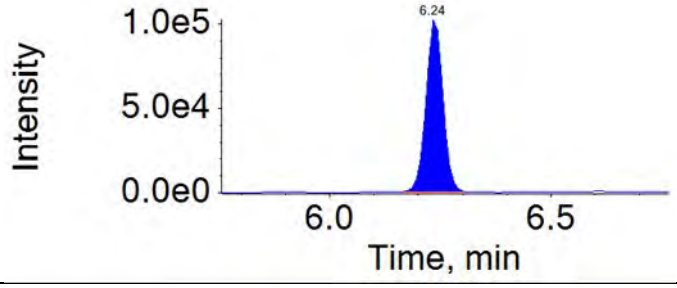
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



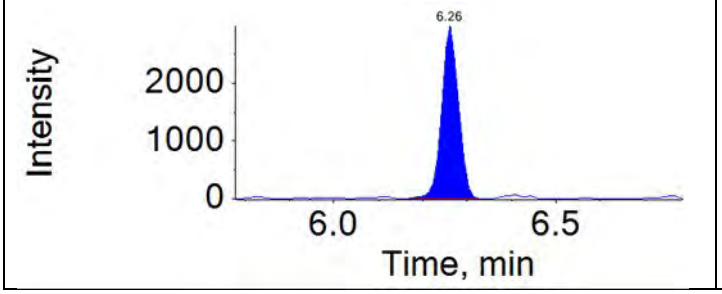


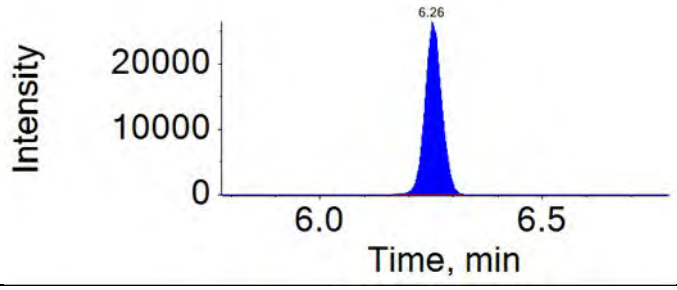
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

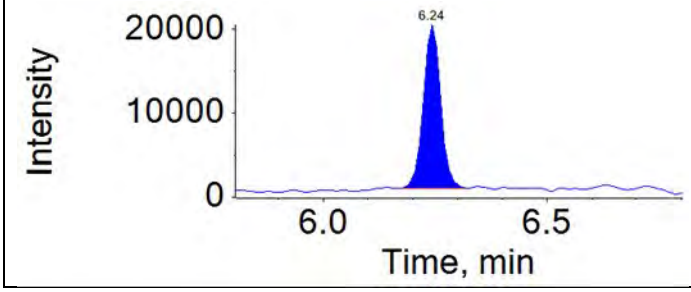
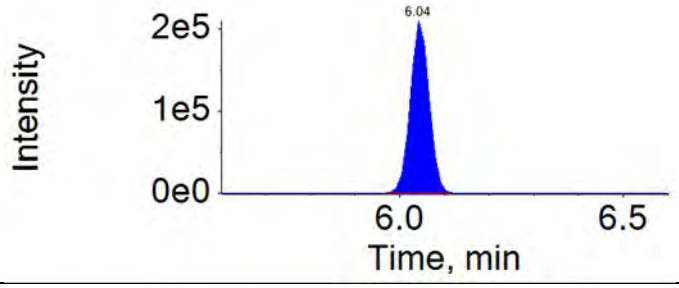


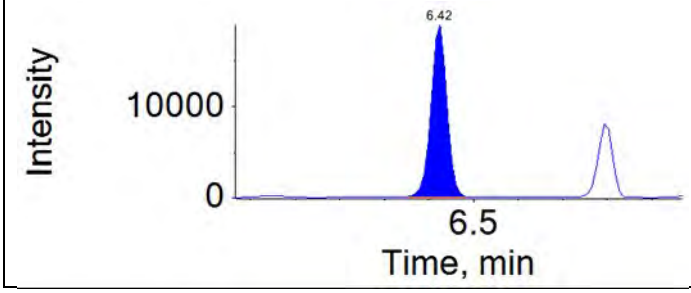
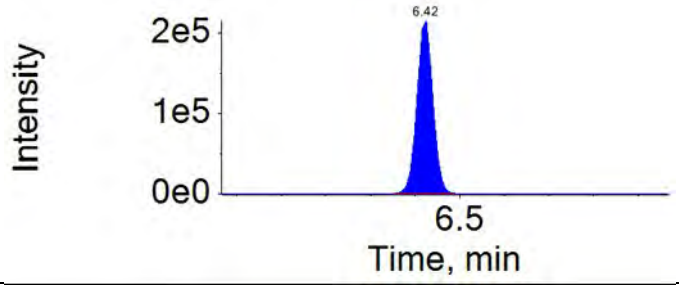


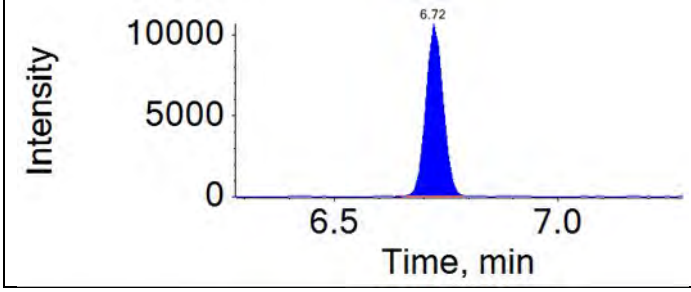
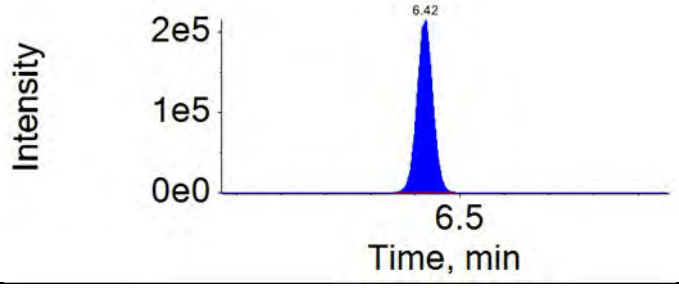
APPROVED
By MCD at 6:31 pm, 11/7/18

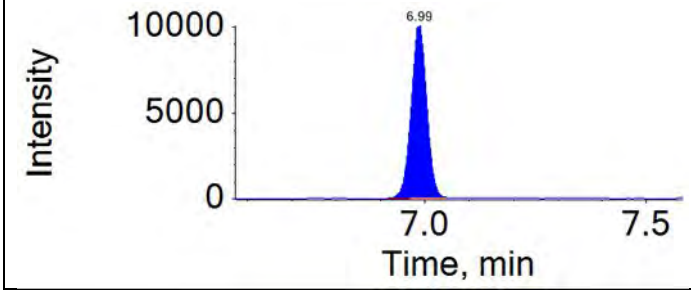
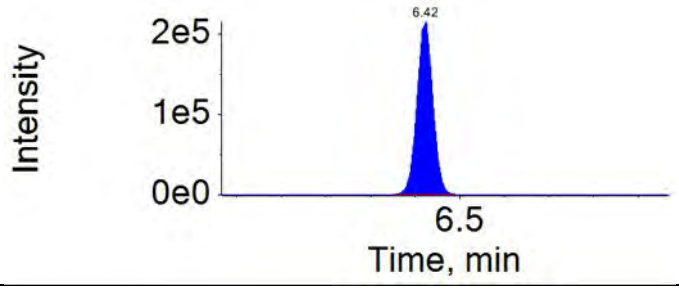
REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

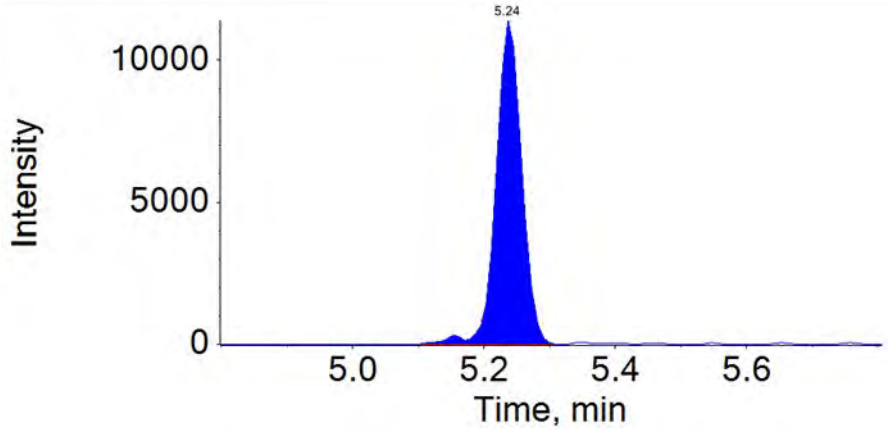
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

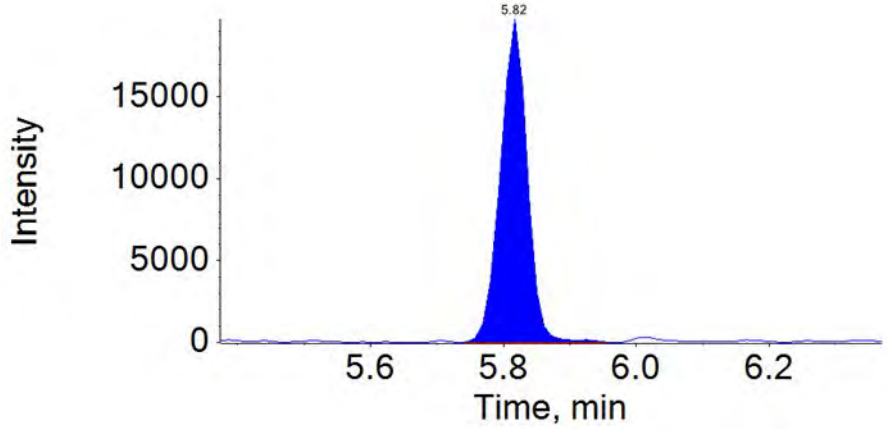
Results Table Name: 18NOV07DCCV1-4_DOD
Results Table Date: 11/7/2018 6:26:02 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
31140.2
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-05.wiff
Sample Name:
CCV1_ISC_CAL2



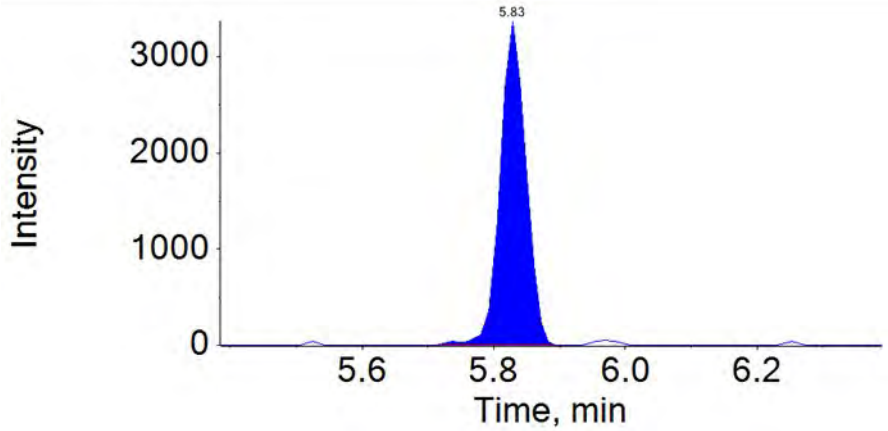
Integration Comment: incorrect integration

Component Name:
PFUnDA
RT (min.):
5.82
Peak Area:
55378.6
Mass Range:
563.0 / 519.0
File Name:
18NOV07D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
9166.7
Mass Range:
584.0 / 419.0
File Name:
18NOV07D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Results Table Name: 18NOV07DCCV1-4_DOD
Results Table Date: 11/7/2018 6:26:02 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Ion Ratio Report

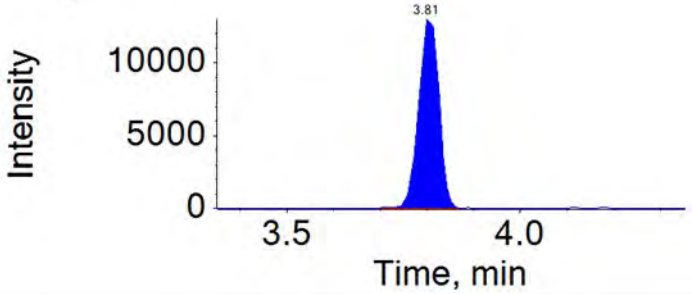
Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV07D-05.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	39168.4	A	N/A	0.3818			
PFBS_2	3.80	1.00	14954.7	A	N/A	0.3818	7	50	
4:2-FTS	4.12	1.00	9925.9	A	N/A	0.7140			
4:2-FTS_2	4.12	1.00	7086.7	A	N/A	0.7140	11	50	
PFHxA	4.15	1.00	88074.7	A	N/A	0.0131			
PFHxA_2	4.15	1.00	1154.7	A	N/A	0.0131	16	50	
PFPeS	4.17	1.10	20913.0	A	N/A	0.5407			
PFPeS_2	4.17	1.10	11308.3	A	N/A	0.5407	0	50	
PFHxS	4.54	1.00	30387.3	A	N/A	0.3536			
PFHxS_2	4.54	1.00	10746.4	A	N/A	0.3536	-1	50	
PFHpA	4.54	1.00	90462.4	A	N/A	0.0662			
PFHpA_2	4.54	1.00	5987.6	A	N/A	0.0662	15	50	
6:2-FTS	4.90	1.00	8938.2	A	N/A	0.6565			
6:2-FTS_2	4.90	1.00	5867.6	A	N/A	0.6565	-4	50	
PFHpS	4.90	1.08	30992.6	A	N/A	0.3879			
PFHpS_2	4.91	1.08	12021.9	A	N/A	0.3879	-2	50	
PFOA	4.91	1.00	99629.5	A	N/A	0.0517			
PFOA_2	4.91	1.00	5145.9	A	N/A	0.0517	-19	50	
PFOS	5.24	1.00	30525.5	M	N/A	0.3260			
PFOS_2	5.24	1.00	9952.4	A	N/A	0.3260	-7	50	
PFNA	5.25	1.00	74628.2	A	N/A	0.0235			
PFNA_2	5.25	1.00	1751.5	A	N/A	0.0235	14	50	
PFNS	5.53	1.06	16672.5	A	N/A	0.4591			
PFNS_2	5.53	1.06	7655.1	A	N/A	0.4591	-6	50	
PFDA	5.55	1.00	58204.1	A	N/A	0.0020			
PFDA_2	5.36	0.97	118.0	A	N/A	0.0020	-63	50	OOS
8:2-FTS	5.56	1.00	6912.4	A	N/A	0.6715			
8:2-FTS_2	5.56	1.00	4641.6	A	N/A	0.6715	8	50	
NMeFOSAA	5.69	1.00	7609.0	A	N/A	0.2968			
NMeFOSAA_2	5.70	1.00	2258.1	A	N/A	0.2968	37	50	
PFDS	5.79	1.11	13804.1	A	N/A	0.5109			
PFDS_2	5.80	1.11	7052.9	A	N/A	0.5109	11	50	
PFUnDA	5.82	1.00	55119.4	M	N/A	0.0076			
PFUnDA_2	5.82	1.00	417.9	A	N/A	0.0076	149	50	OOS
NEtFOSAA	5.83	1.00	9115.6	M	N/A	0.3688			
NEtFOSAA_2	5.84	1.00	3362.1	A	N/A	0.3688	-39	50	
PFDoDA	6.04	1.00	59030.8	A	N/A	0.0085			
PFDoDA_2	6.05	1.00	502.7	A	N/A	0.0085	-19	50	
10:2-FTS	6.06	1.09	4422.0	A	N/A	1.0135			
10:2-FTS_2	6.07	1.09	4481.6	A	N/A	1.0135	42	50	
PFTrDA	6.24	1.03	52443.4	A	N/A	0.0130			
PFTrDA_2	6.26	1.03	681.3	A	N/A	0.0130	36	50	
PFTeDA	6.42	1.00	46434.9	A	N/A	0.0073			
PFTeDA_2	6.42	1.00	340.9	A	N/A	0.0073	36	50	
PFHxDA	6.72	1.05	28219.3	A	N/A	0.0551			
PFHxDA_2	6.72	1.05	1554.7	A	N/A	0.0551	-7	50	
PFODA	6.99	1.09	24584.2	A	N/A	0.0228			
PFODA_2	6.98	1.09	560.9	A	N/A	0.0228	-11	50	

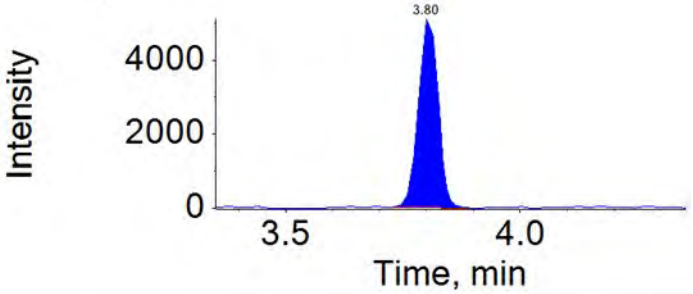
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

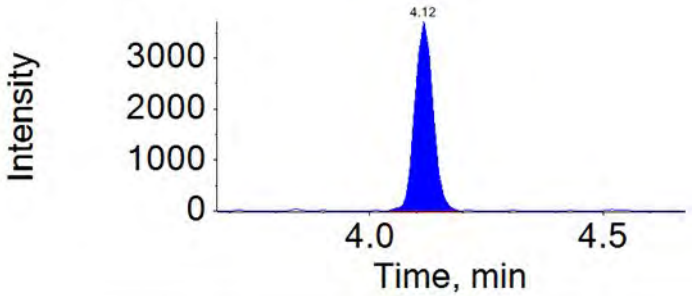
Component: PFBS
Primary Mass: 299.0 / 80.0



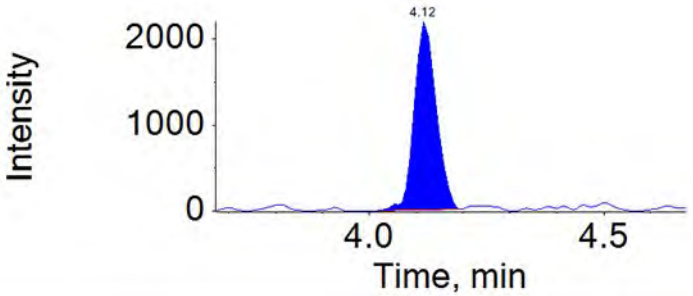
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



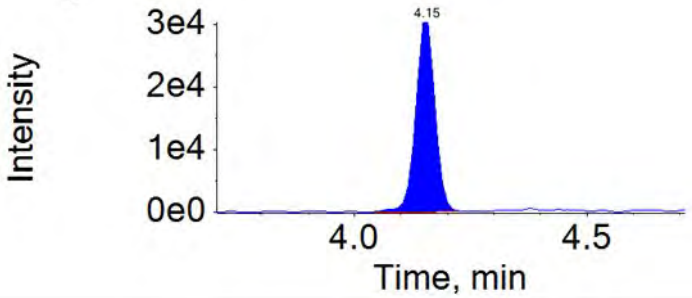
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



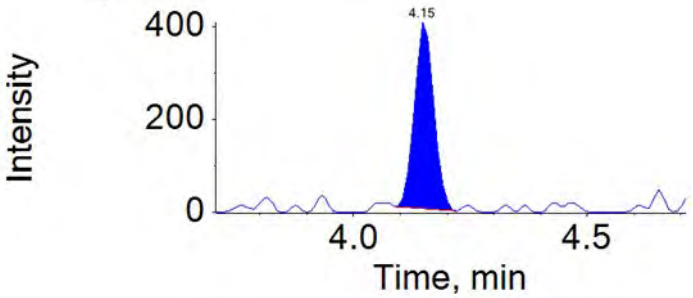
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



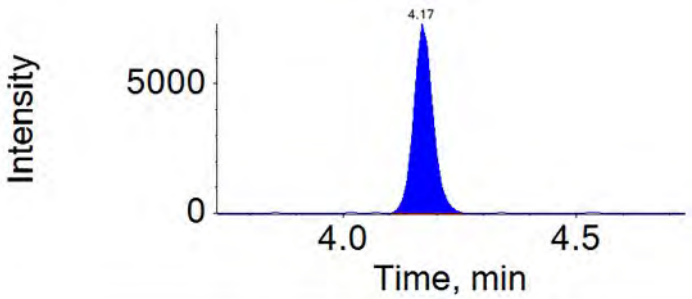
Component: PFHxA
Primary Mass: 313.0 / 269.0



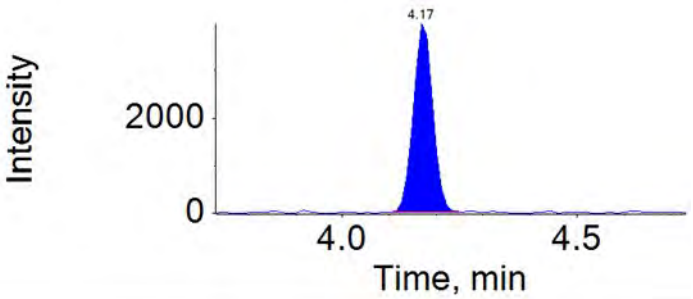
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



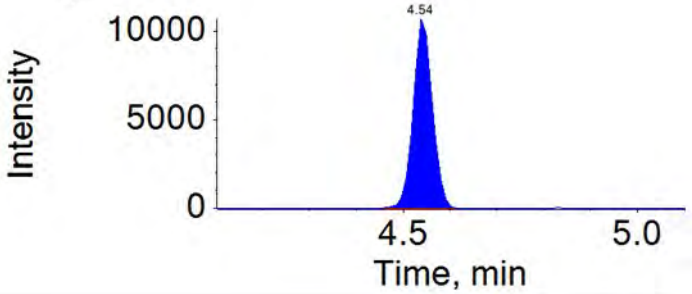
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



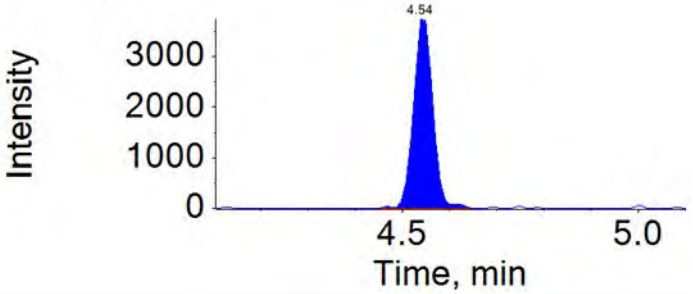
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

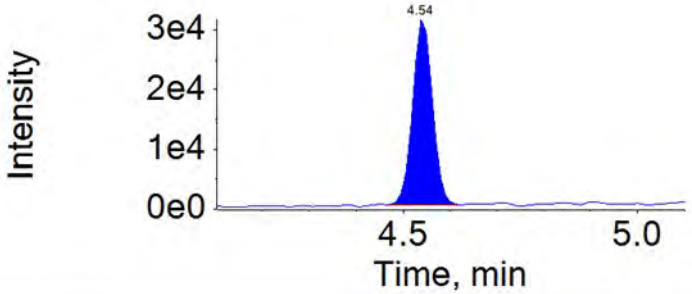
Component: PFHxS
Primary Mass: 399.0 / 80.0



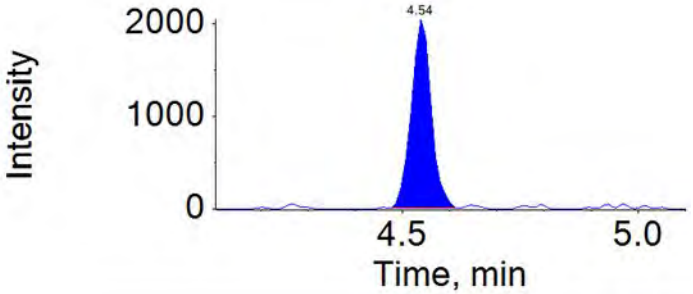
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



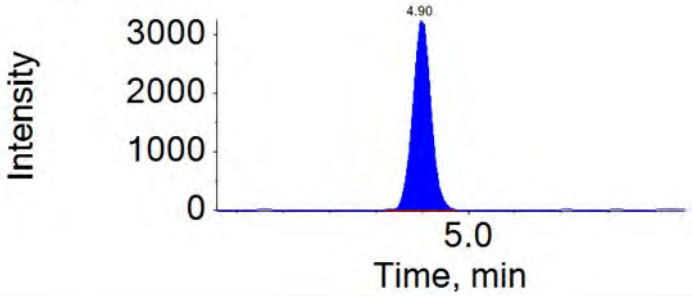
Component: PFHpA
Primary Mass: 363.0 / 319.0



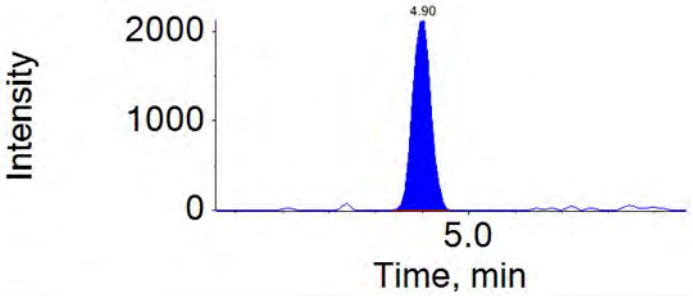
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



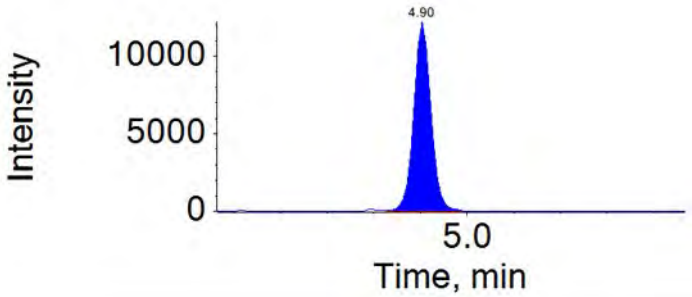
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



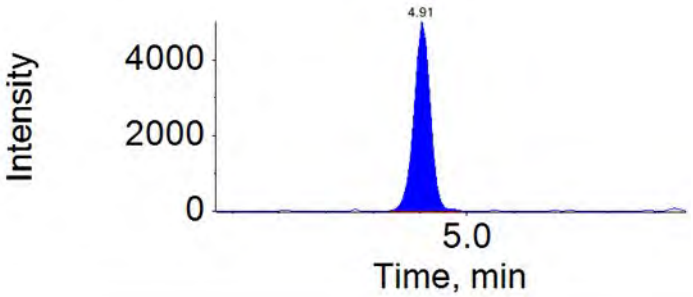
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



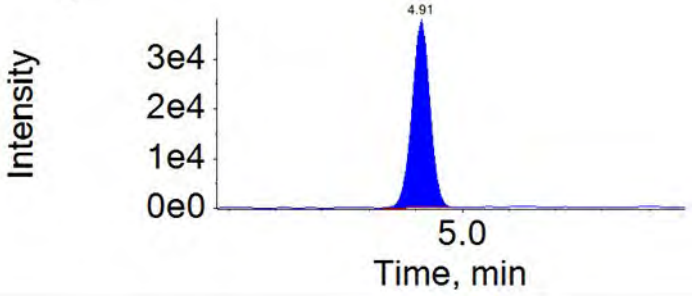
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



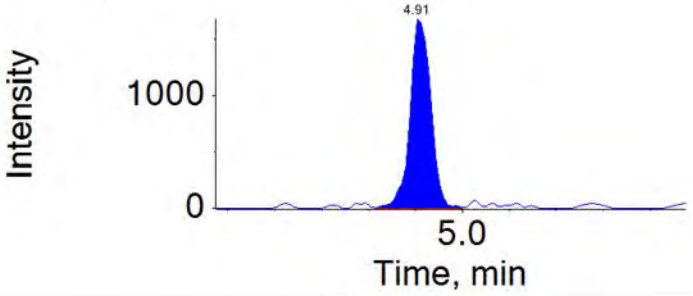
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

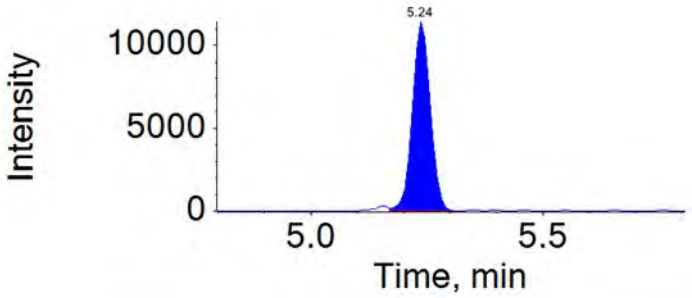
Component: PFOA
Primary Mass: 413.0 / 369.0



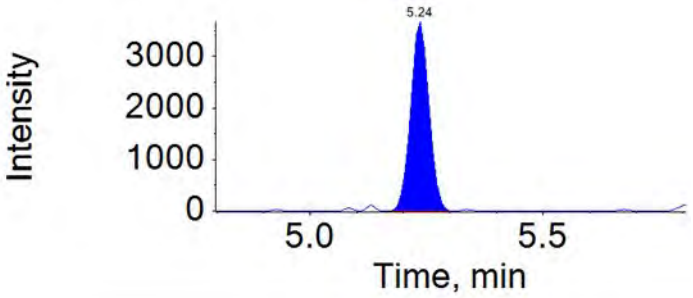
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



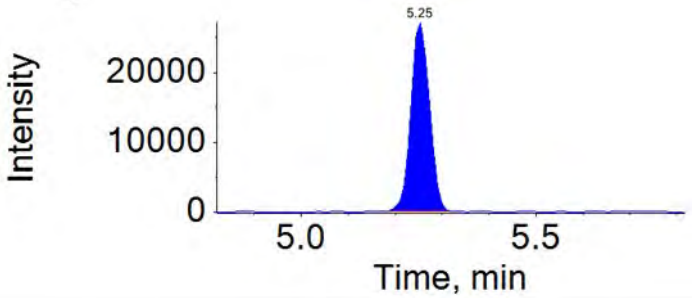
Component: PFOS
Primary Mass: 499.0 / 80.0



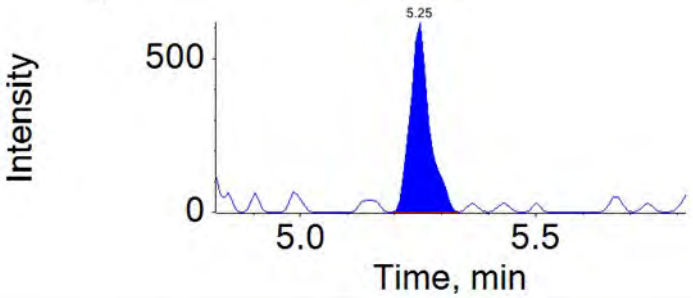
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



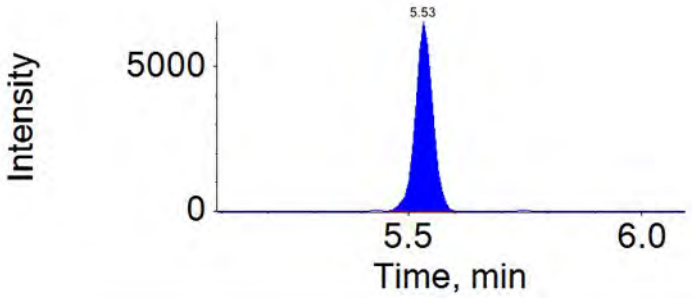
Component: PFNA
Primary Mass: 463.0 / 419.0



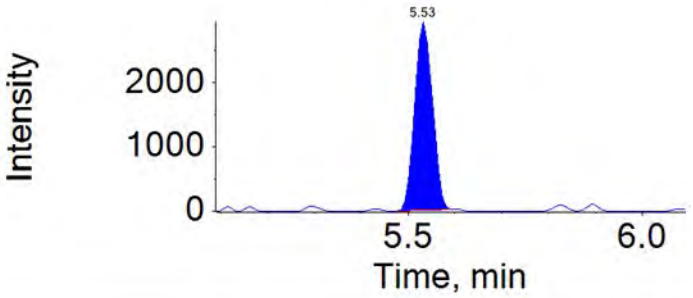
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



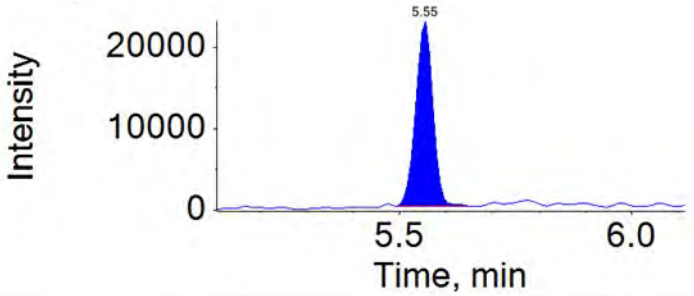
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



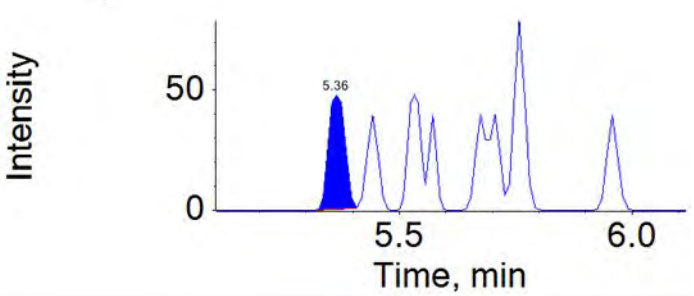
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

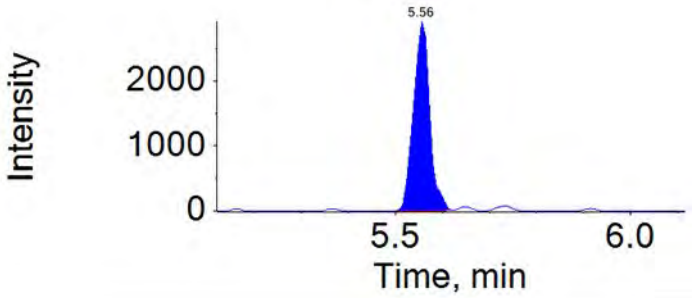
Component: PFDA
Primary Mass: 513.0 / 469.0



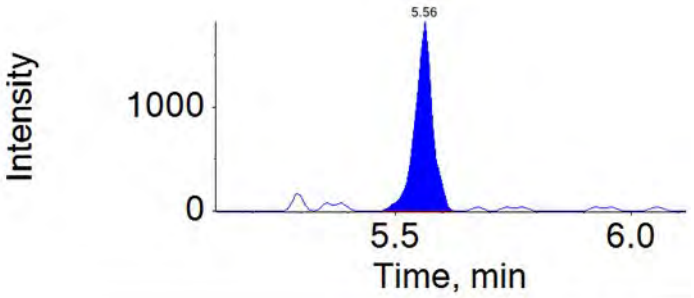
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



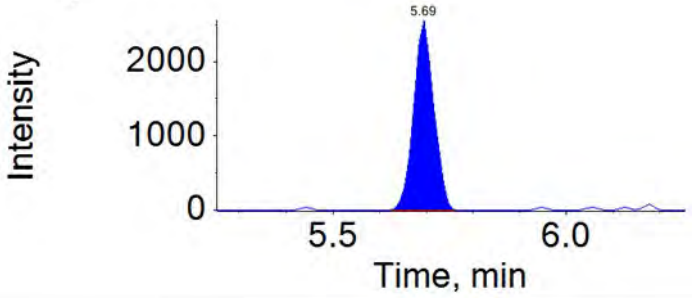
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



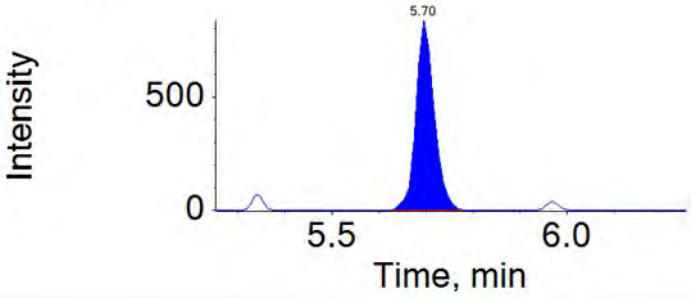
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



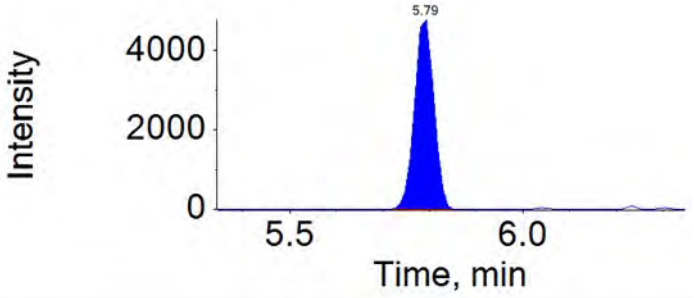
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



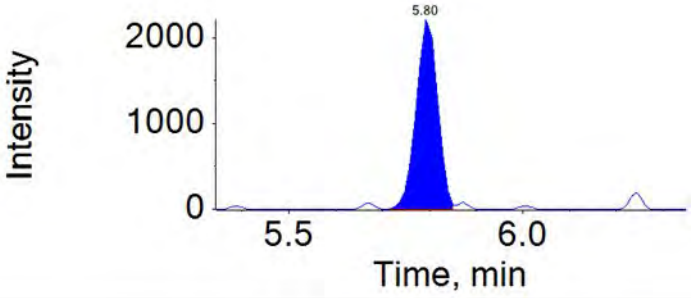
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



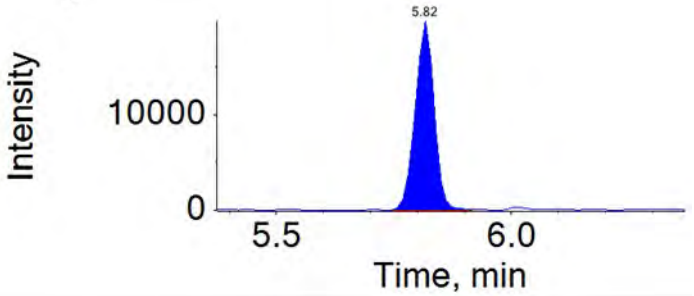
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



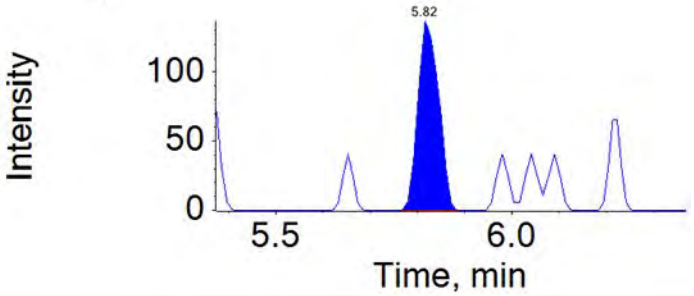
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

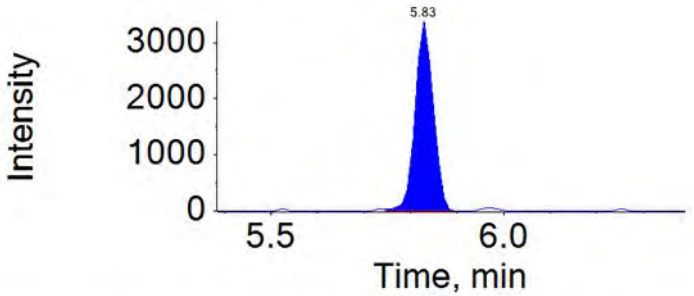
Component: PFUnDA
Primary Mass: 563.0 / 519.0



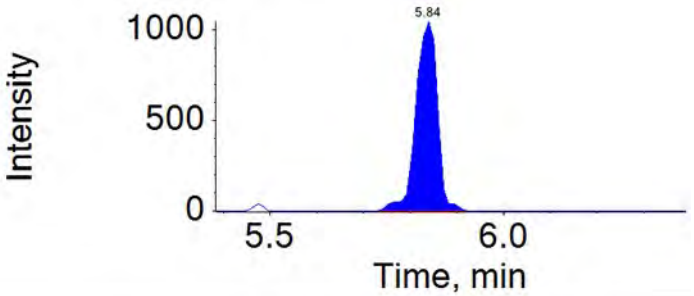
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



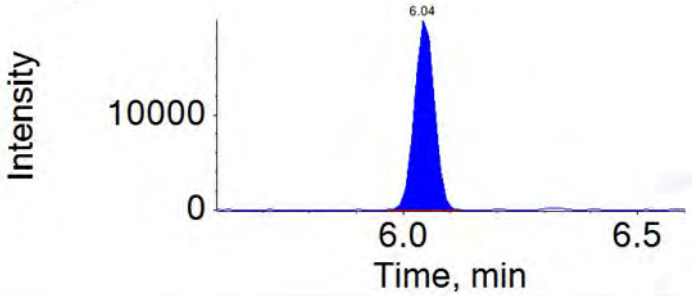
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



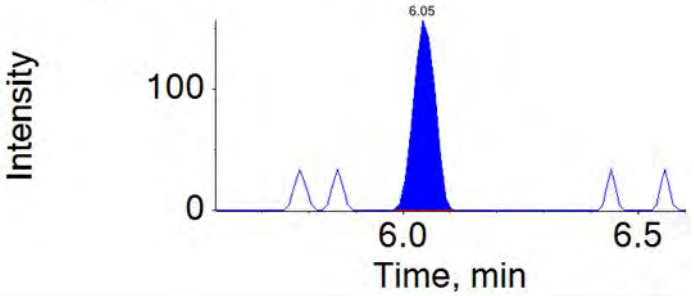
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



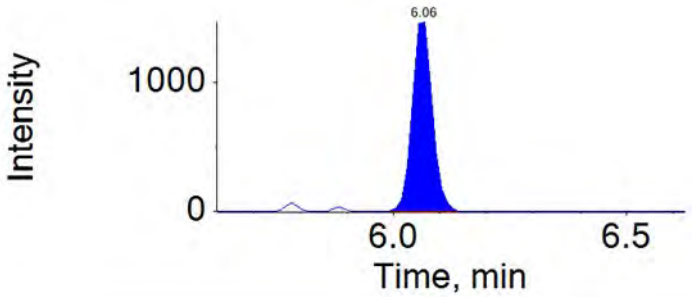
Component: PFDoDA
Primary Mass: 613.0 / 569.0



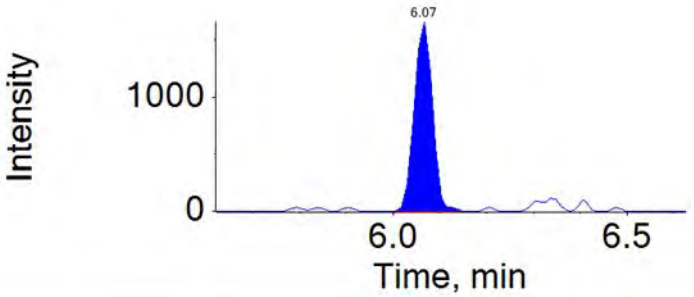
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



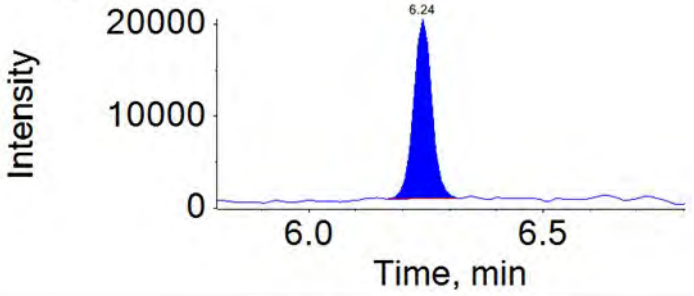
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



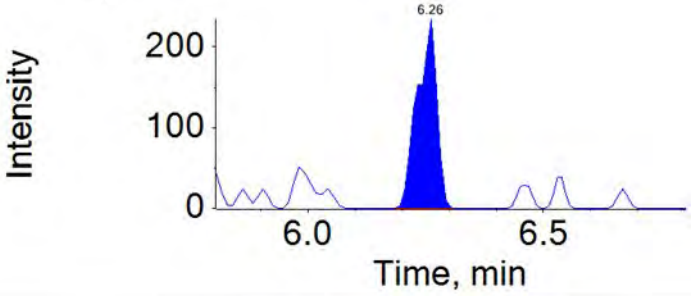
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

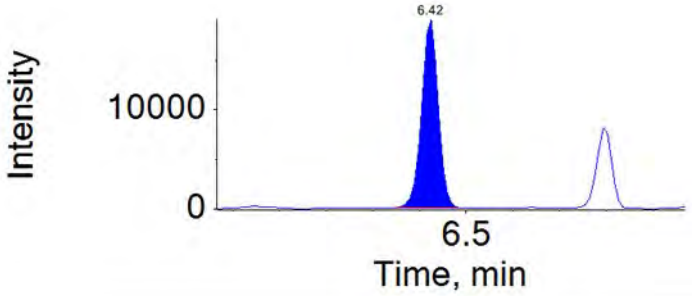
Component: PFTrDA
Primary Mass: 663.0 / 619.0



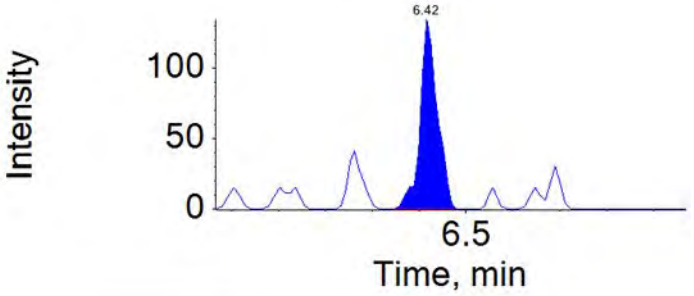
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



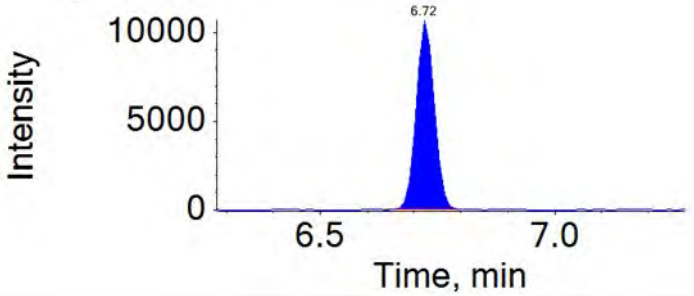
Component: PFTeDA
Primary Mass: 713.0 / 669.0



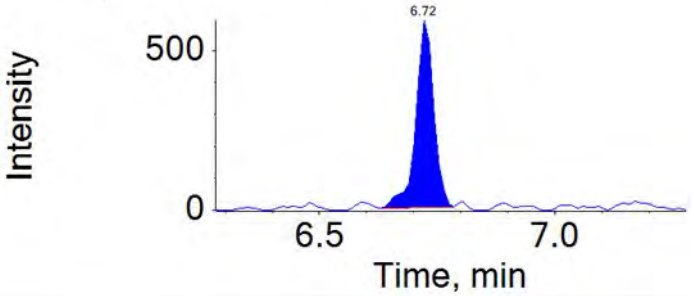
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



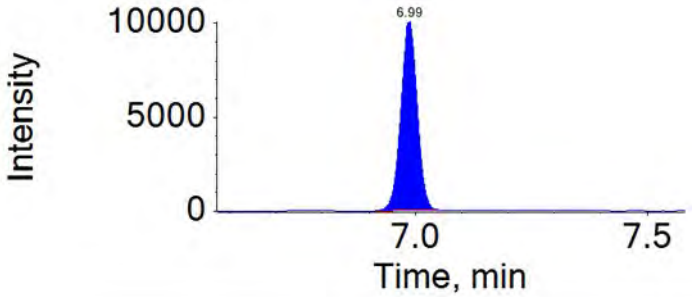
Component: PFHxDA
Primary Mass: 813.0 / 769.0



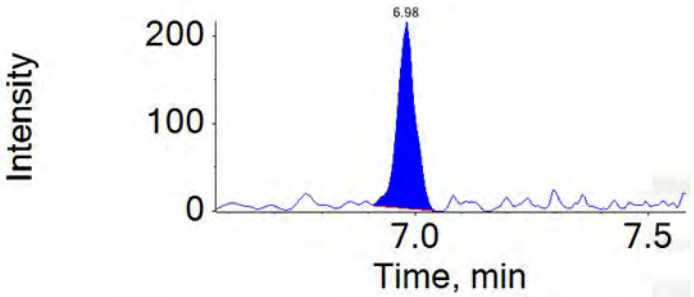
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	INBLK			**Data File:**		18NOV07D-06.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-07T12:05:44
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCCV1-4_DOD
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	746238.1	730410.6	2	50	
13C2-PFOA	5.0	543666.1	524423.6	4	50	
13C4-PFOS	4.8	282394.6	274061.7	3	50	
13C2-PFDA	5.0	338571.3	311442.1	9	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	824364.1	13C3-PFBA	746238.1	1.105	5.000	5.112	102	70-130	
E13C5-PFPeA	839122.9	13C3-PFBA	746238.1	1.124	5.000	4.899	98	70-130	
E13C3-PFBS	464310.5	13C3-PFBA	746238.1	0.622	4.650	4.566	98	70-130	
E13C2-4:2-FTS	63811.1	13C2-PFOA	543666.1	0.117	4.670	5.296	113	70-130	
E13C5-PFHxA	730598.3	13C2-PFOA	543666.1	1.344	5.000	4.943	99	70-130	
E13C3-PFHxS	366105.3	13C2-PFOA	543666.1	0.673	4.730	4.834	102	70-130	
E13C4-PFHpA	597749.6	13C2-PFOA	543666.1	1.099	5.000	5.002	100	70-130	
E13C2-6:2-FTS	48976.3	13C2-PFOA	543666.1	0.090	4.750	6.007	126	70-130	
E13C8-PFOA	1026003.0	13C2-PFOA	543666.1	1.887	5.000	5.263	105	70-130	
E13C8-PFOS	306326.4	13C4-PFOS	282394.6	1.085	4.780	4.797	100	70-130	
E13C9-PFNA	571605.8	13C4-PFOS	282394.6	2.024	5.000	5.529	111	70-130	
E13C6-PFDA	698490.6	13C2-PFDA	338571.3	2.063	5.000	5.188	104	70-130	
E13C2-8:2-FTS	33421.3	13C2-PFDA	338571.3	0.099	4.790	5.223	109	70-130	
E13C8-PFOSA	735116.3	13C2-PFDA	338571.3	2.171	5.000	4.738	95	70-130	
Ed3-NMeFOSAA	88965.9	13C2-PFDA	338571.3	0.263	5.000	4.886	98	70-130	
E13C7-PFUnDA	283954.2	13C2-PFDA	338571.3	0.839	5.000	4.838	97	70-130	
Ed5-NEtFOSAA	75152.6	13C2-PFDA	338571.3	0.222	5.000	5.137	103	70-130	
E13C2-PFDoDA	650229.2	13C2-PFDA	338571.3	1.921	5.000	5.177	104	70-130	
Ed7-NMePFOSAE	365056.2	13C2-PFDA	338571.3	1.078	5.000	5.014	100	70-130	
Ed3-NMePFOSA	86049.6	13C2-PFDA	338571.3	0.254	5.000	4.653	93	70-130	
Ed9-NEtPFOSAE	297852.1	13C2-PFDA	338571.3	0.880	5.000	5.024	100	70-130	
Ed5-NEtPFOSA	65421.9	13C2-PFDA	338571.3	0.193	5.000	4.474	89	70-130	
E13C2-PFTeDA	504217.0	13C2-PFDA	338571.3	1.489	5.000	5.361	107	70-130	

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

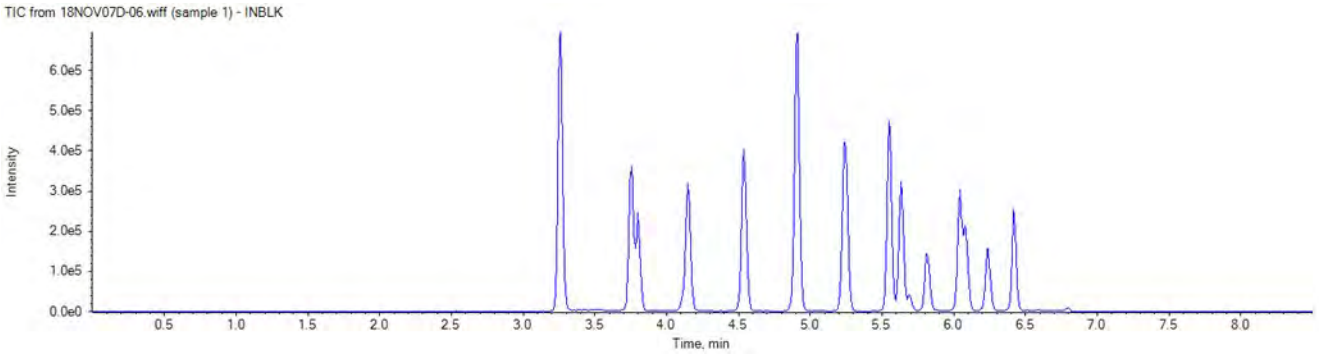
Analyte Quantitation Peak Table

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV07D-06.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	824364.1	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.75	839122.9	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	464310.5	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.11	63811.1	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	730598.3	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.80	464310.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	366105.3	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	597749.7	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	48976.3	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	366105.3	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	1026003.0	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.23	306326.4	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	571605.8	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.23	306326.4	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	698490.6	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	33421.3	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.63	735116.3	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	88965.9	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.23	306326.4	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	283954.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	75152.6	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	650229.2	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	33421.3	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	365056.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.09	86049.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.23	306326.4	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	297852.1	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.25	65421.9	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	650229.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	504217.0	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	504217.0	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	504217.0	N/A	

Total Ion Chromatogram

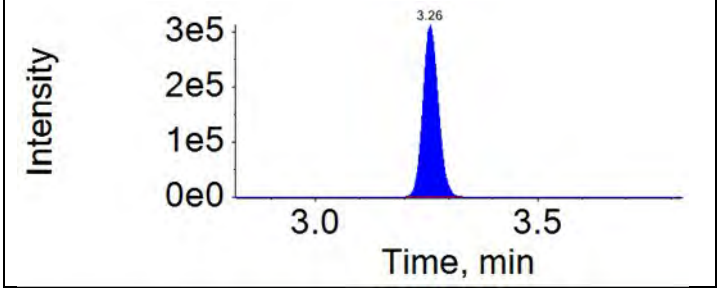


APPROVED
By MCD at 6:32 pm, 11/7/18

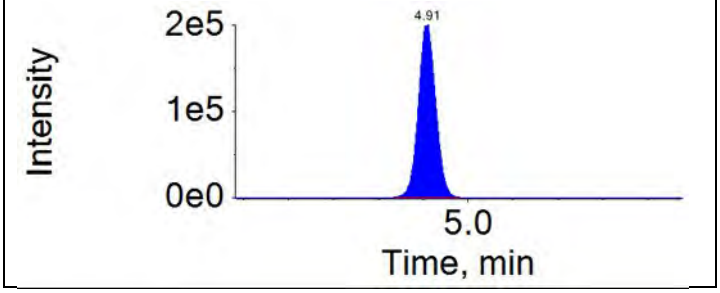
REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

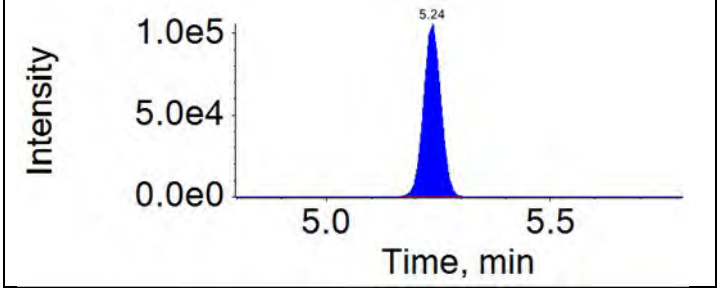
Injection Standard: 13C3-PFBA
216.0 / 172.0



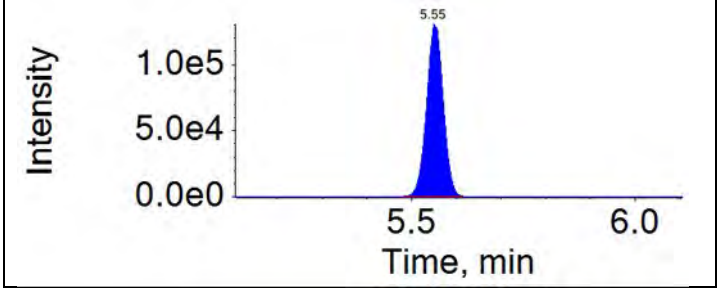
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

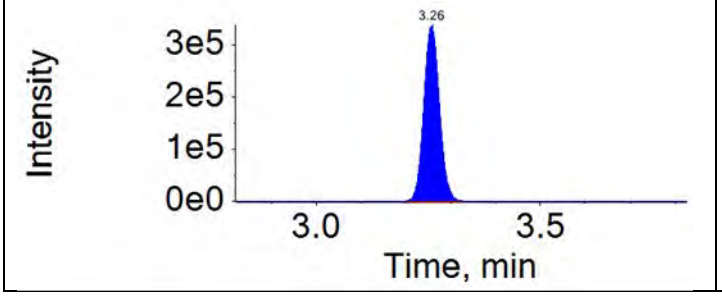


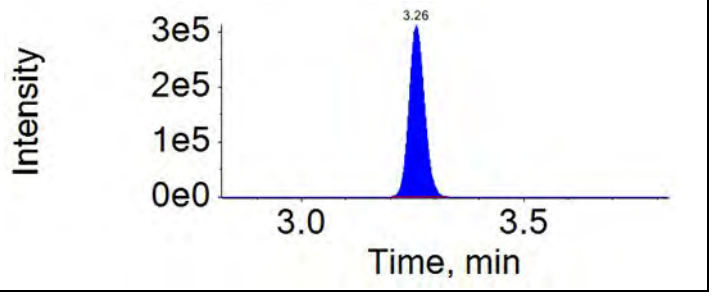
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

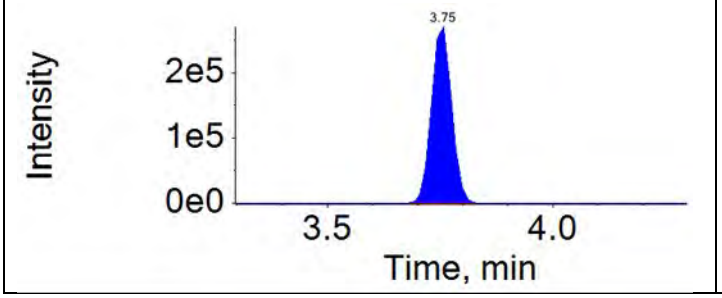
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

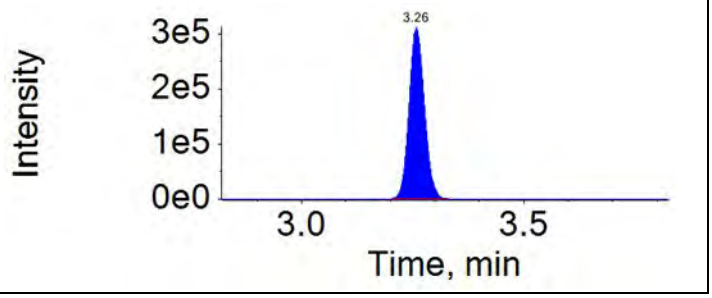
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



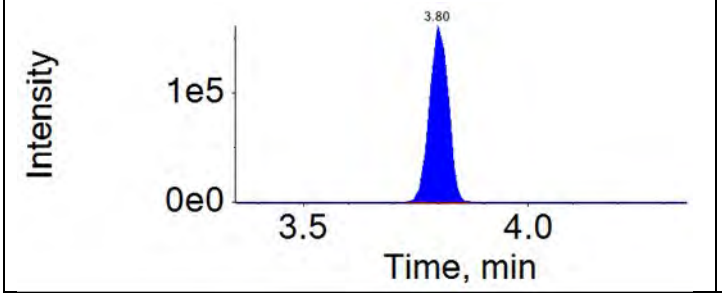


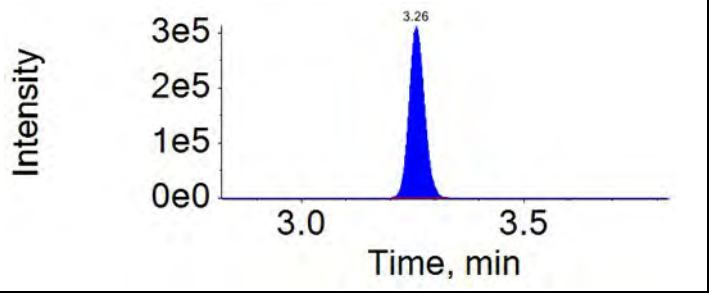
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



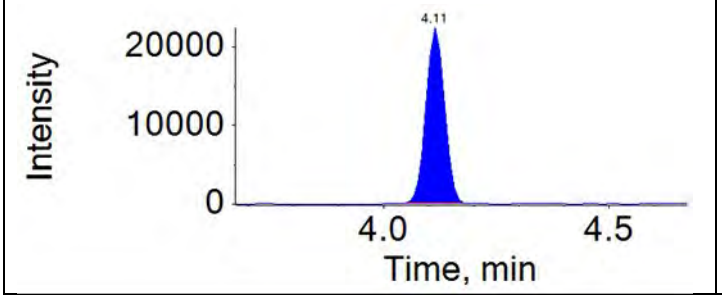


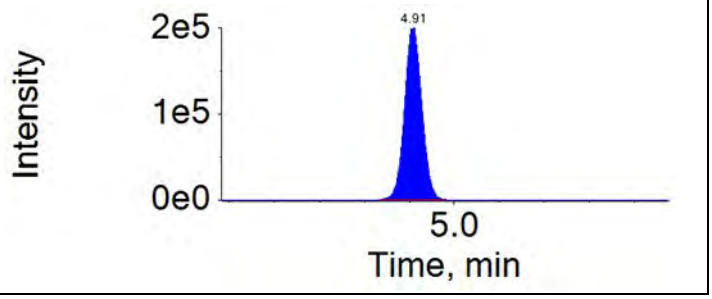
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





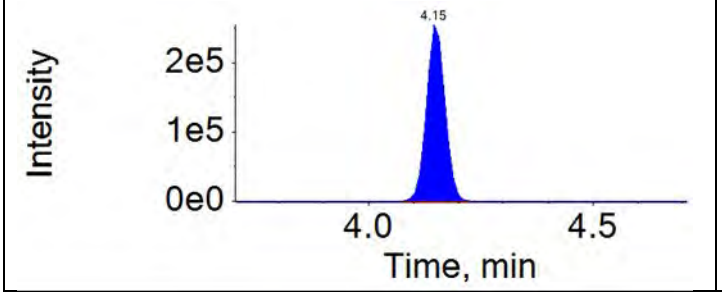
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

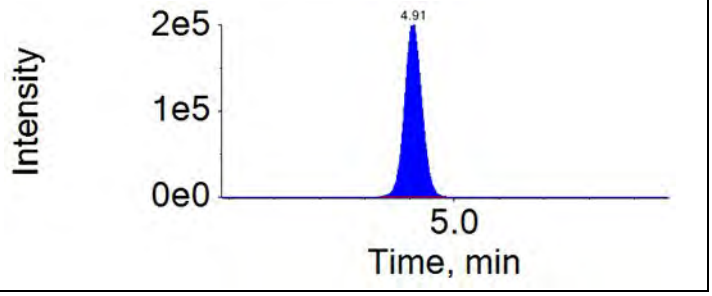




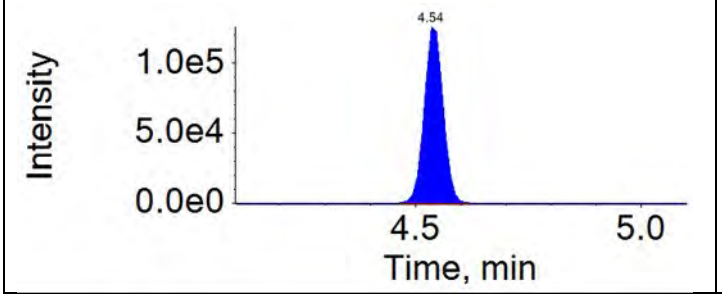
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

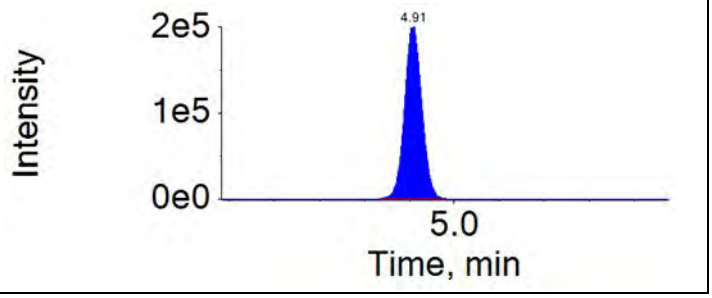
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



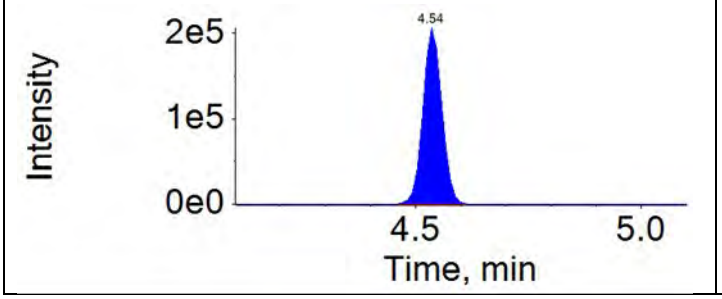


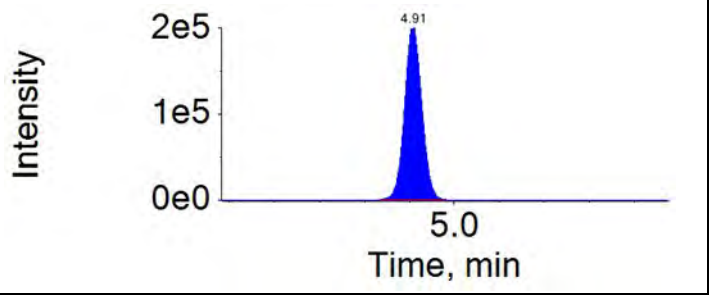
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



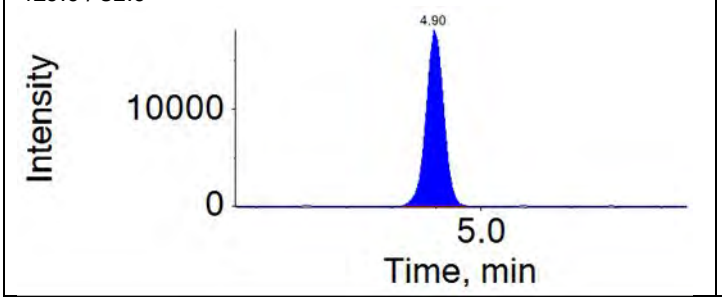


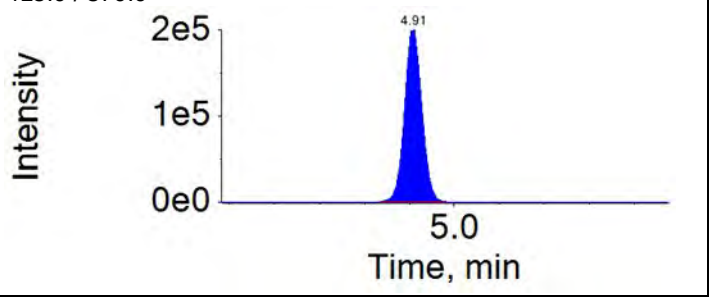
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



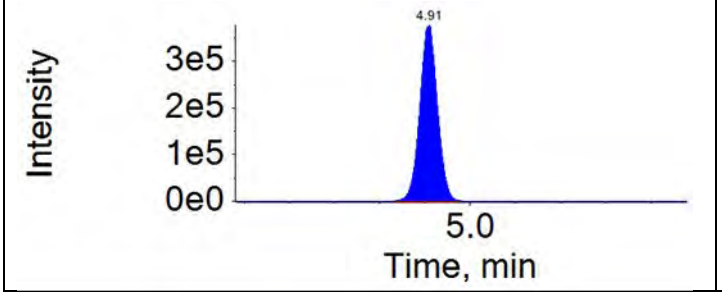


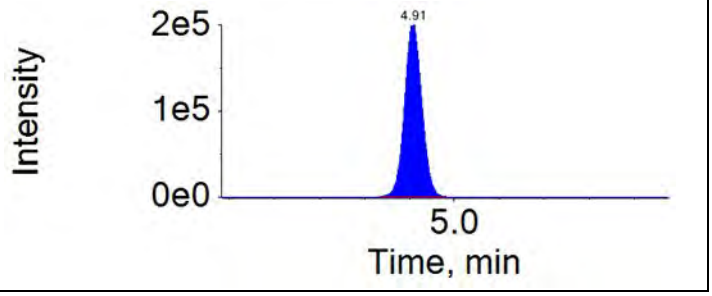
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

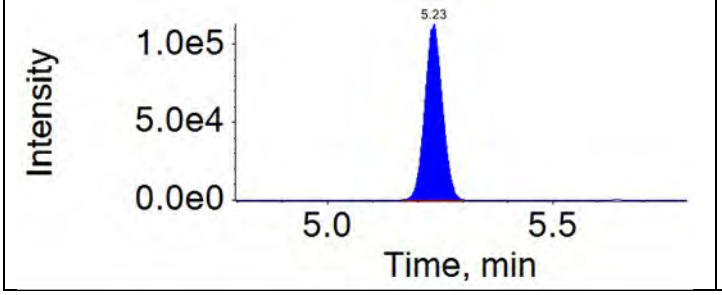
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

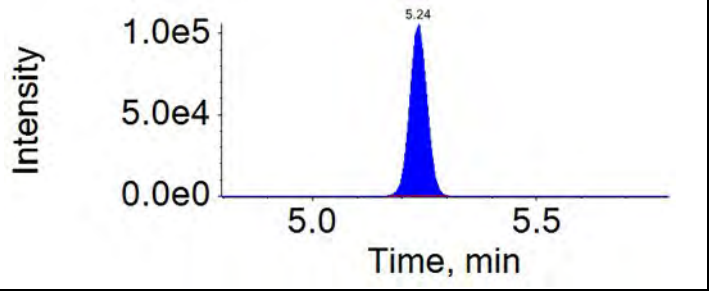
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



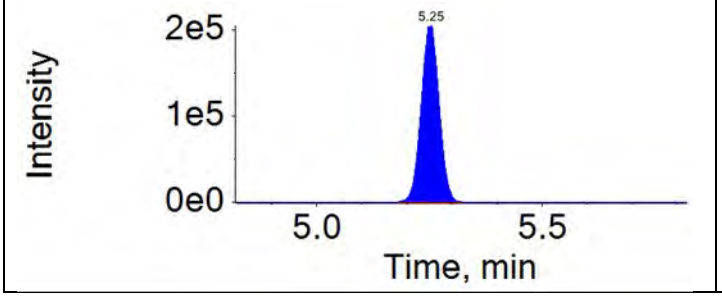


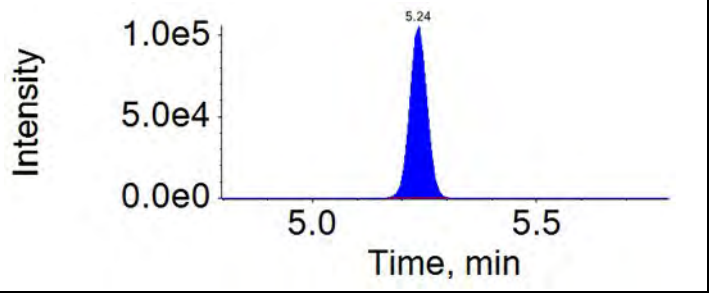
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



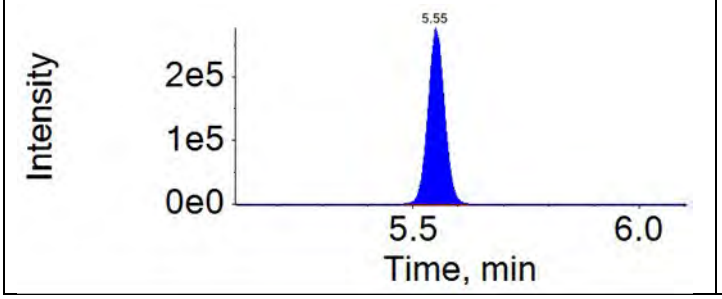


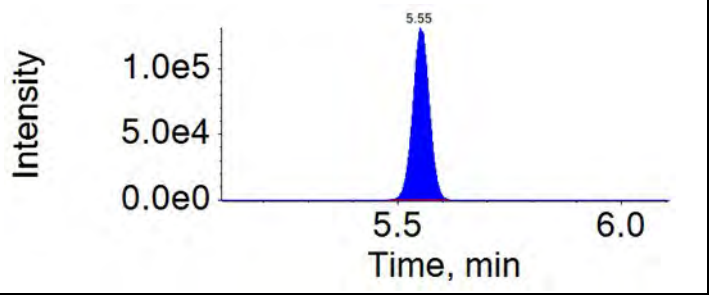
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





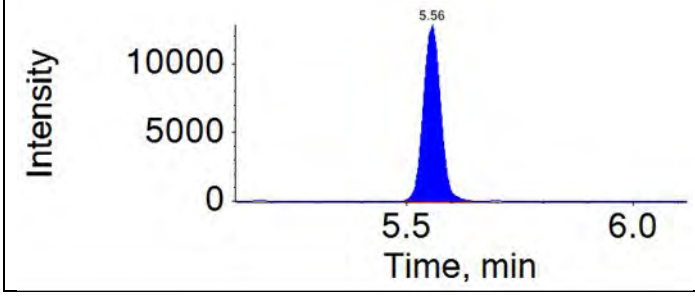
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

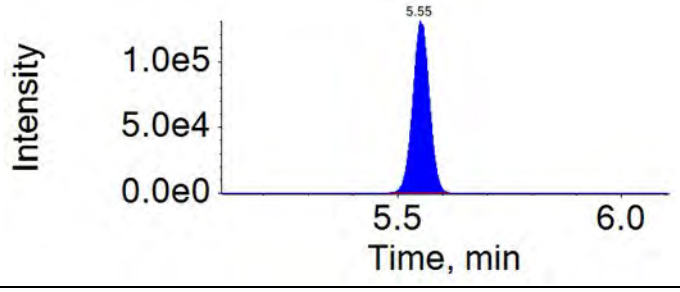




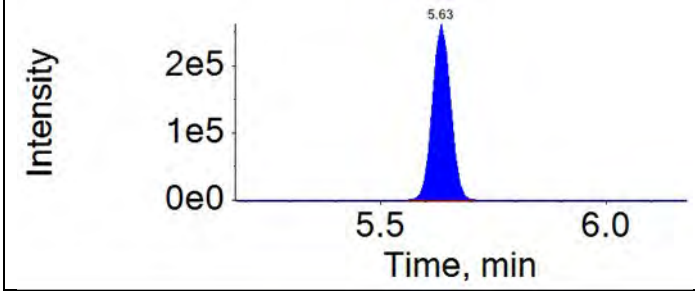
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

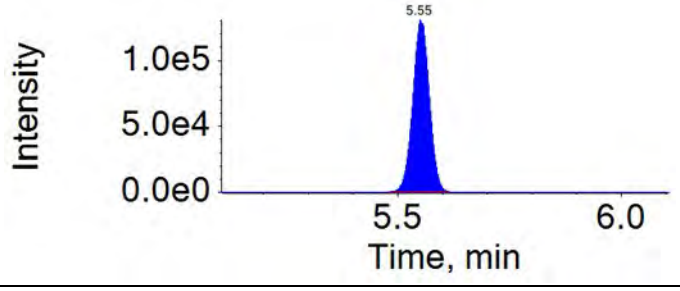
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



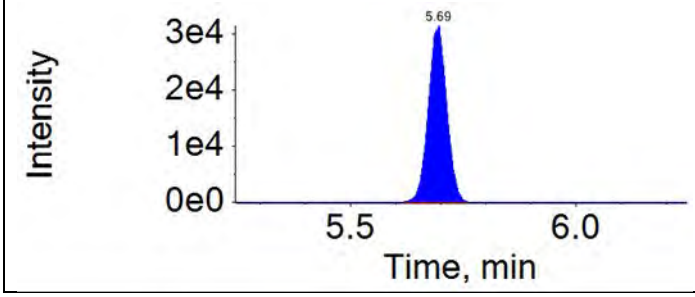


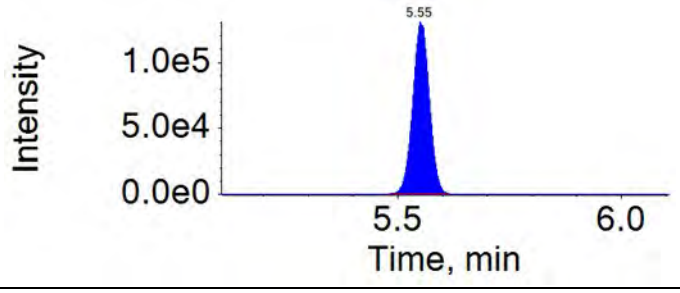
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



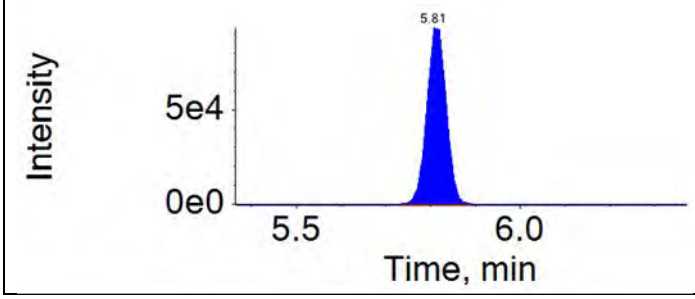


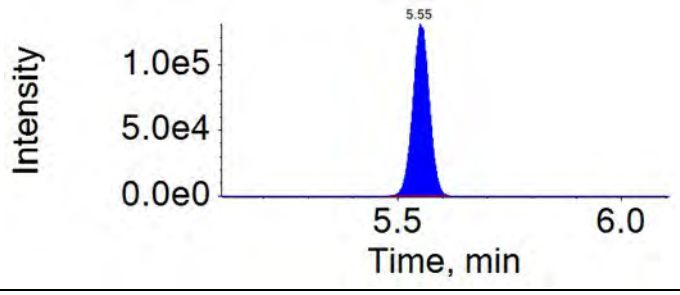
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



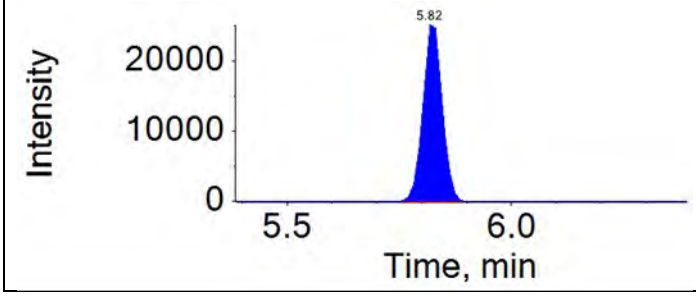


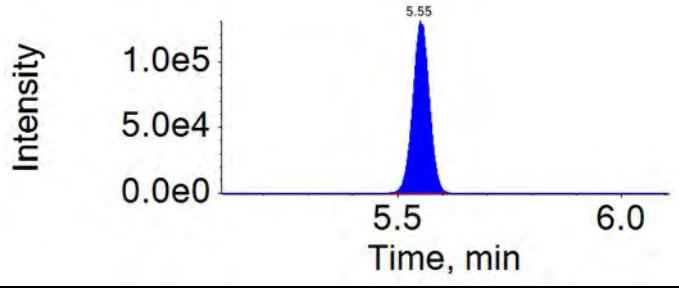
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

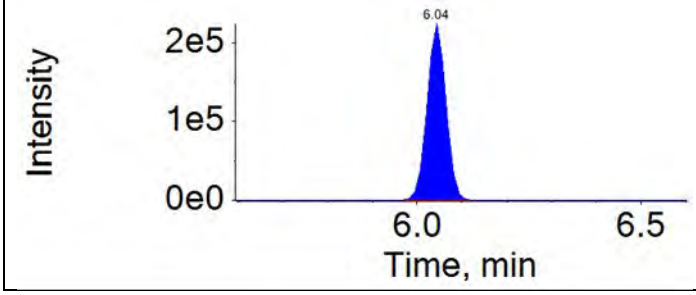
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

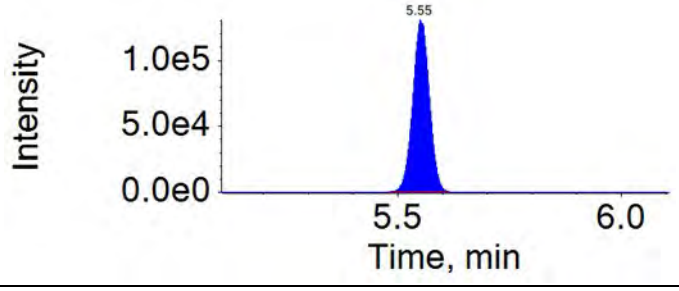
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



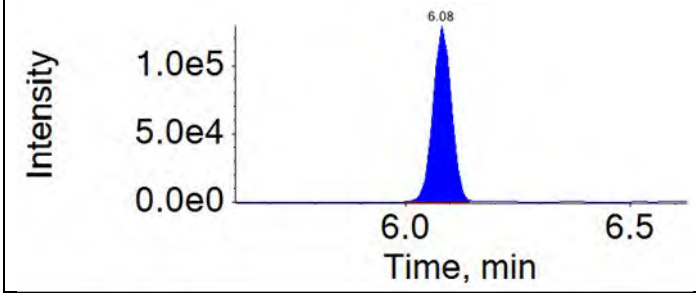


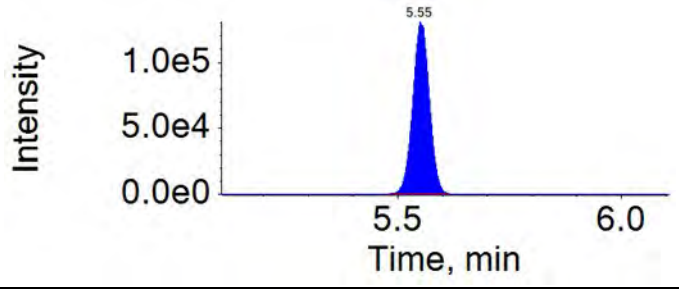
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



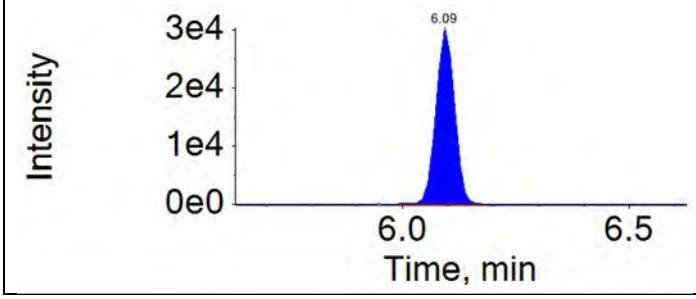


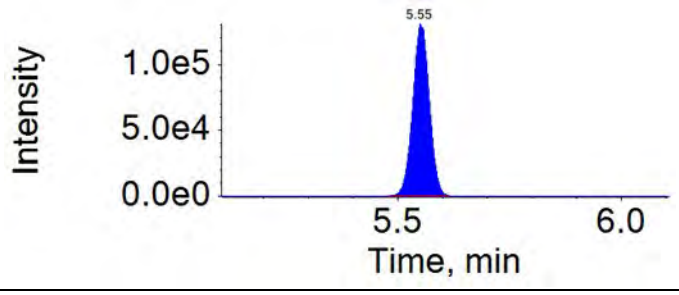
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





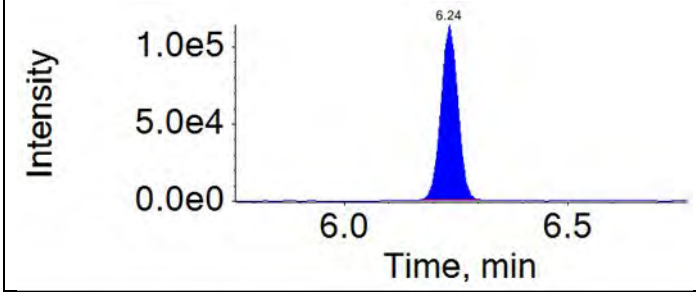
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

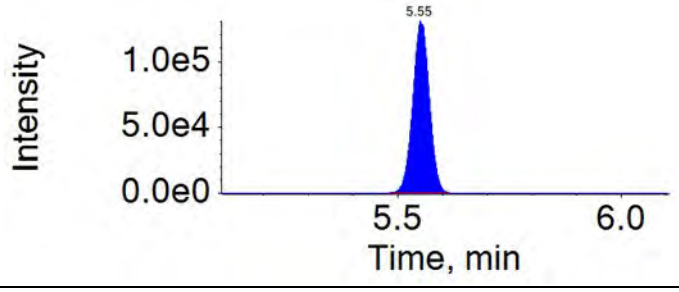




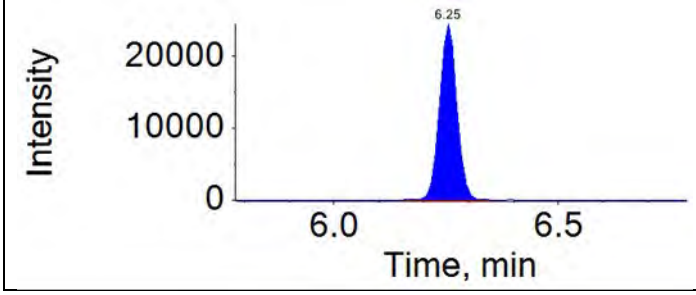
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

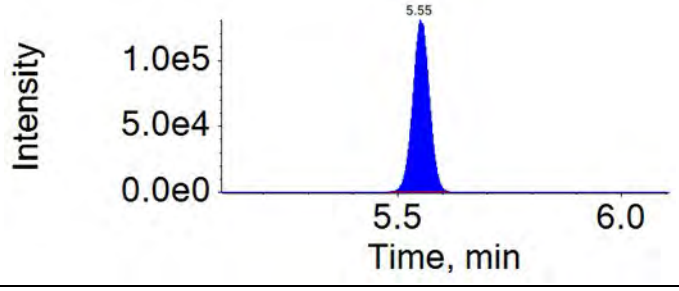
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



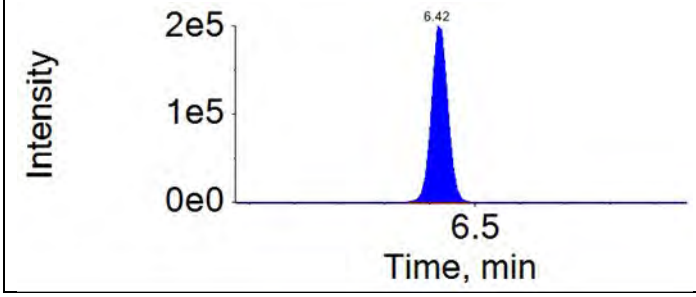


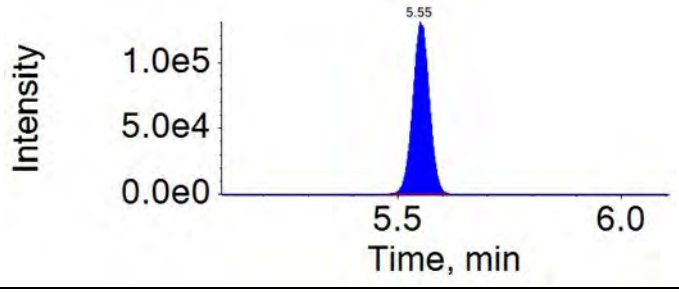
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



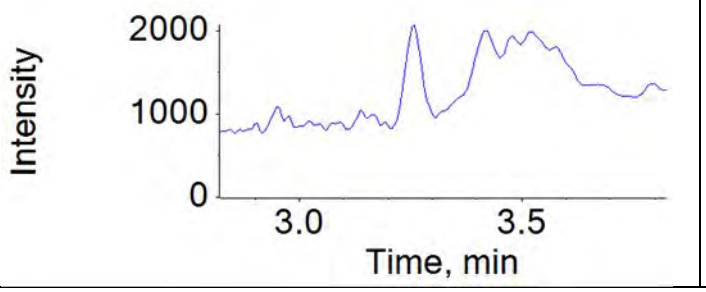


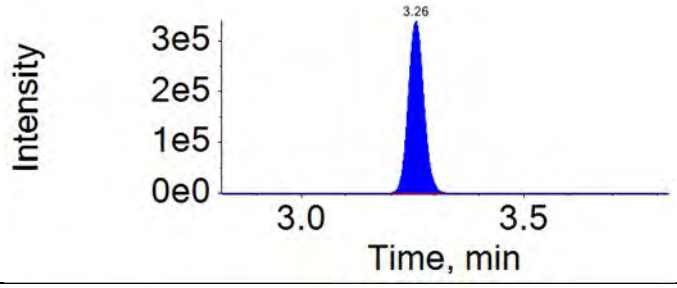
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

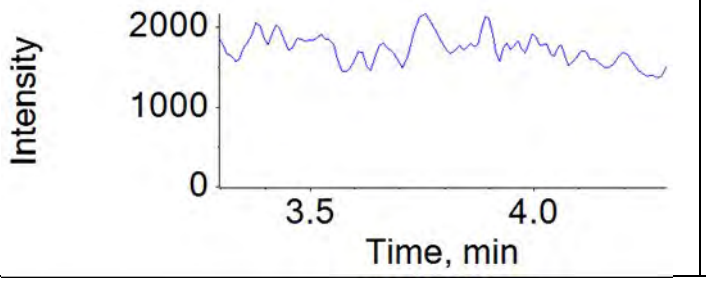
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

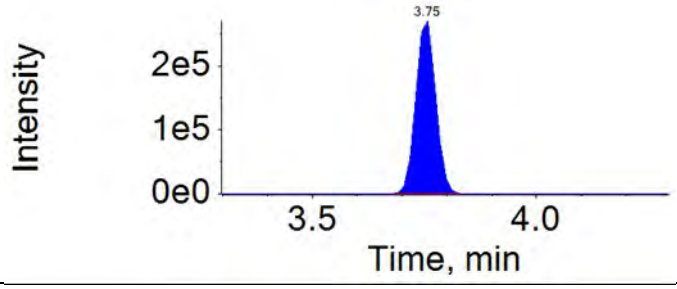
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



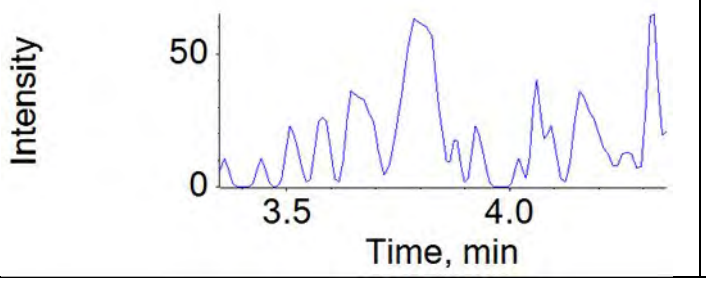


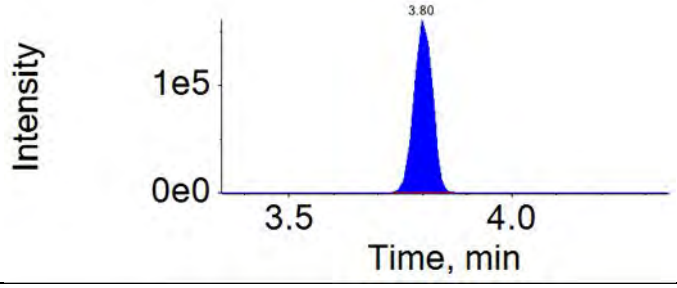
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



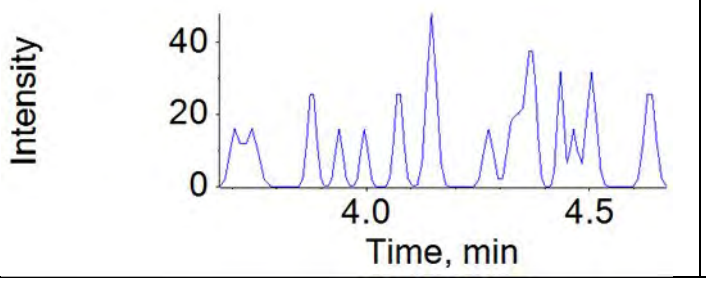


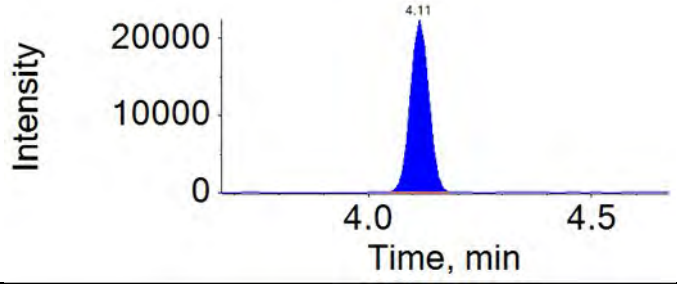
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



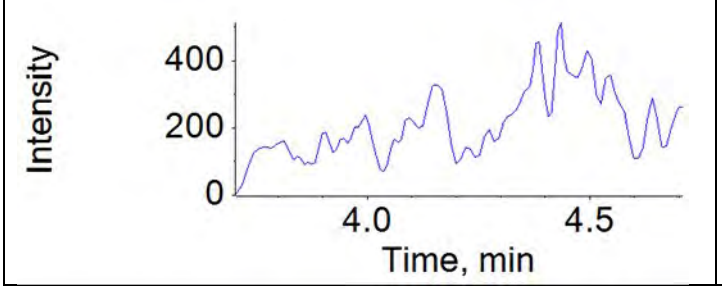


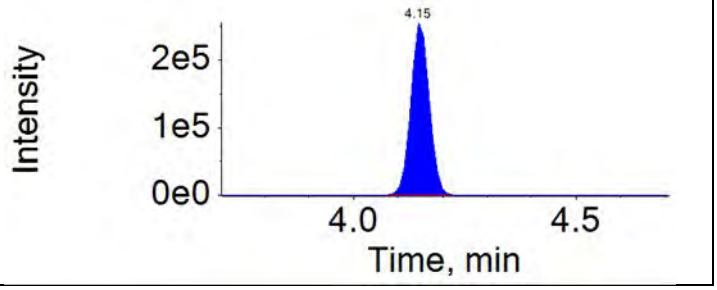
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

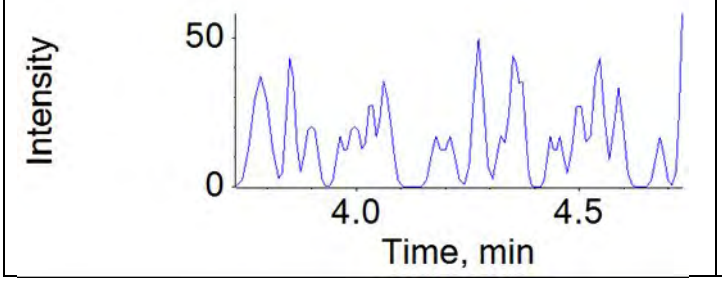
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

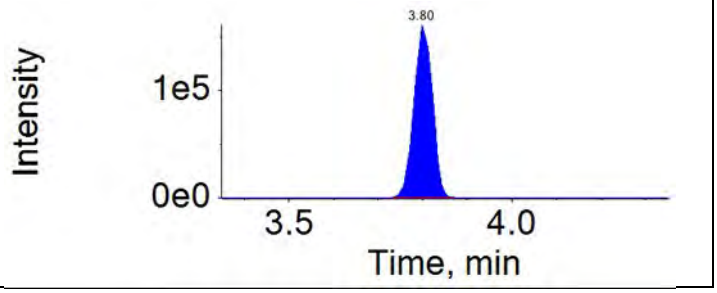
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



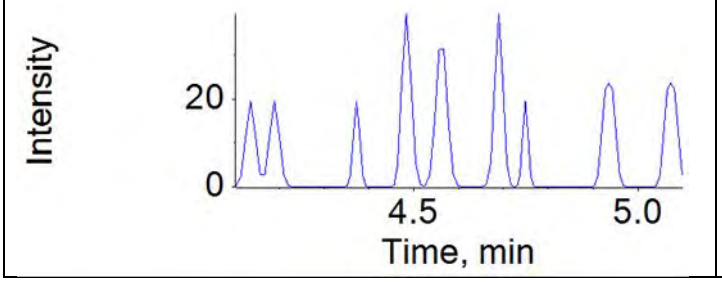


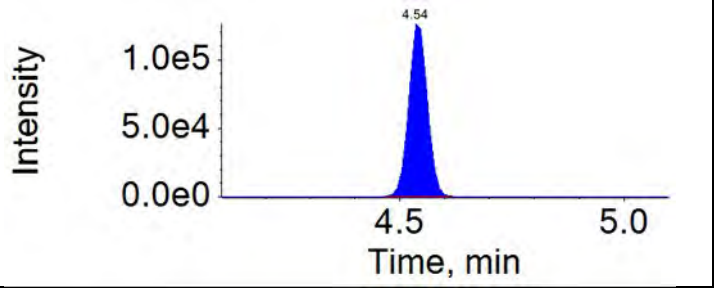
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



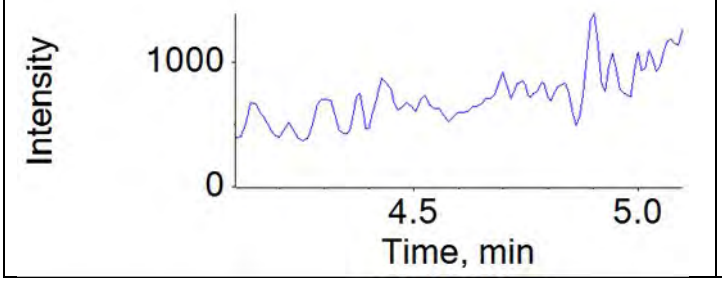


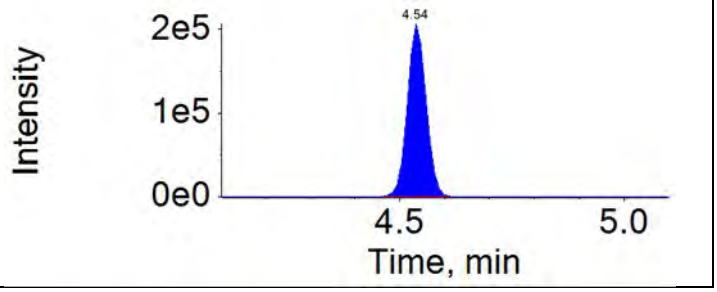
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



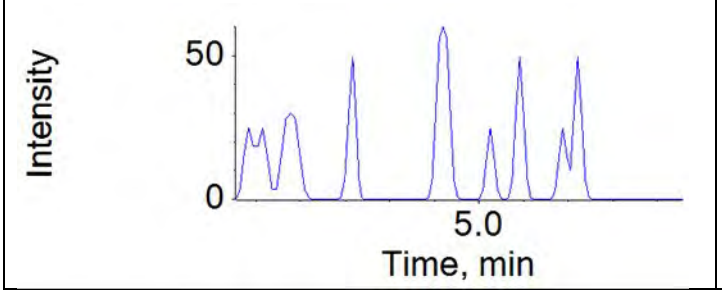


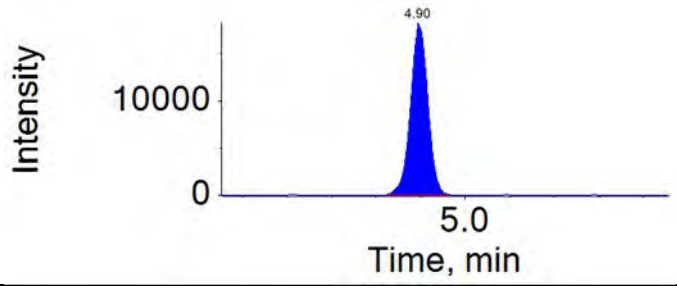
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

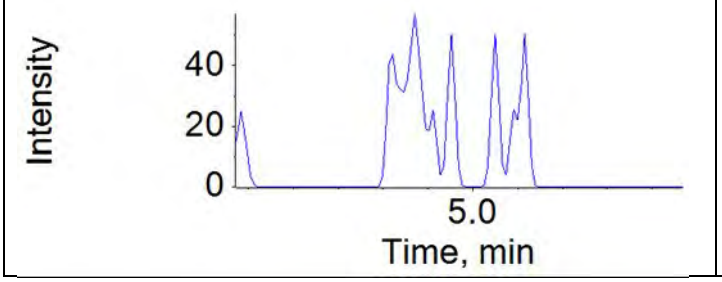
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

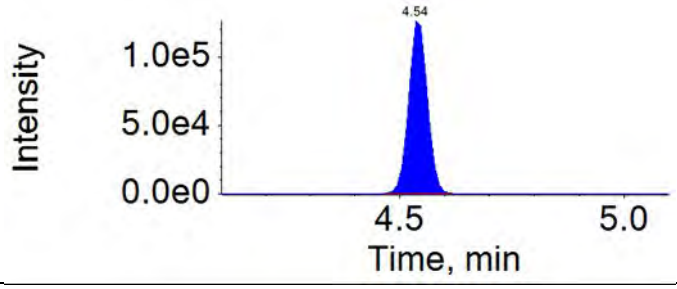
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



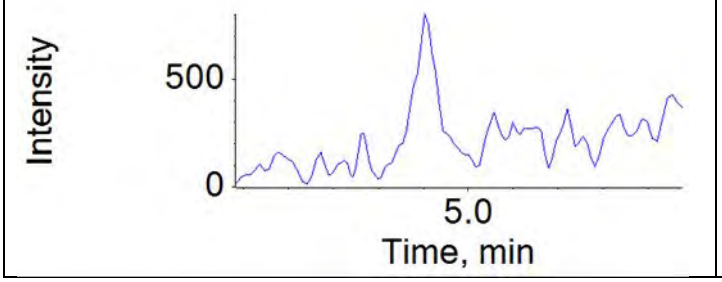


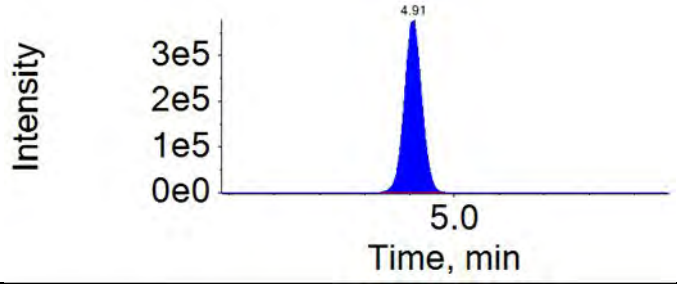
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



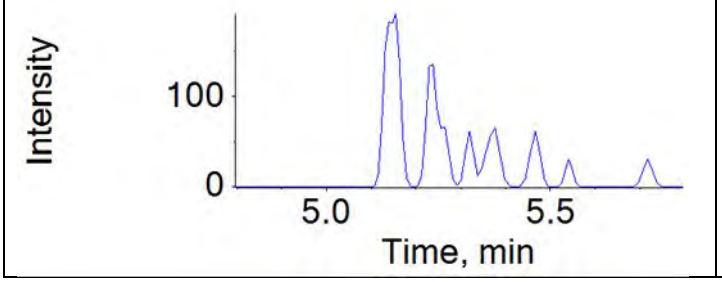


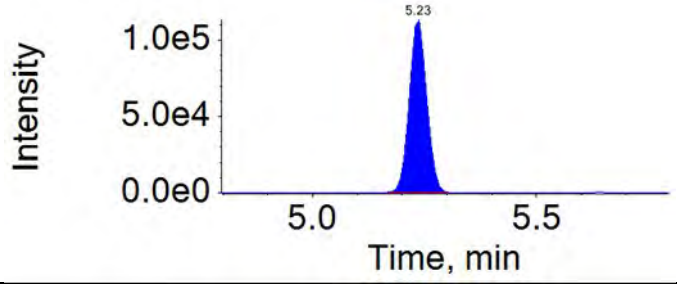
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



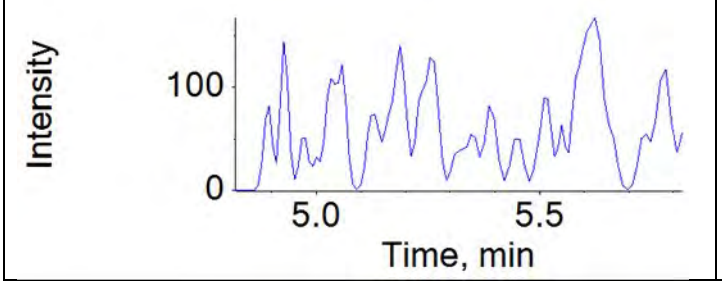


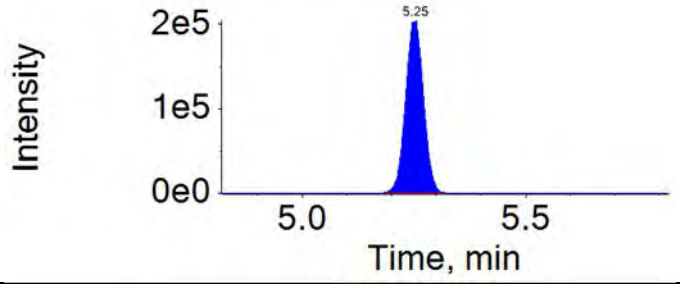
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

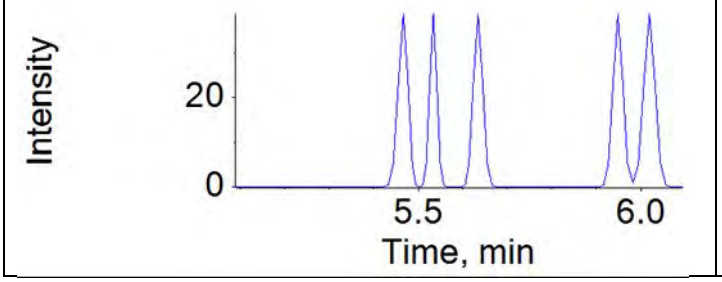
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

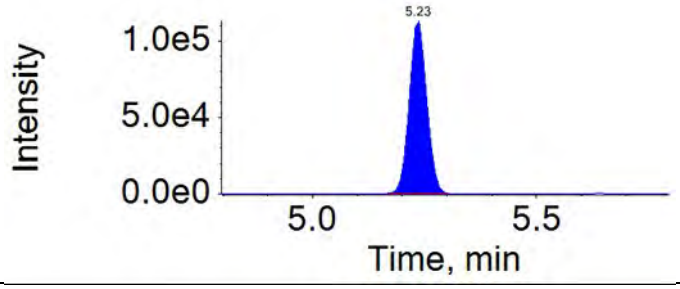
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



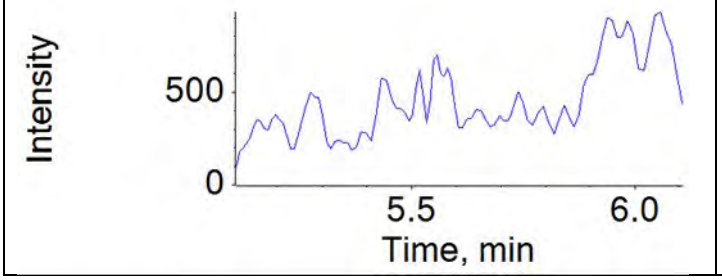


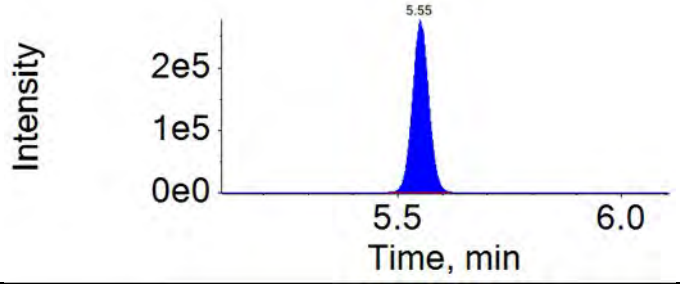
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



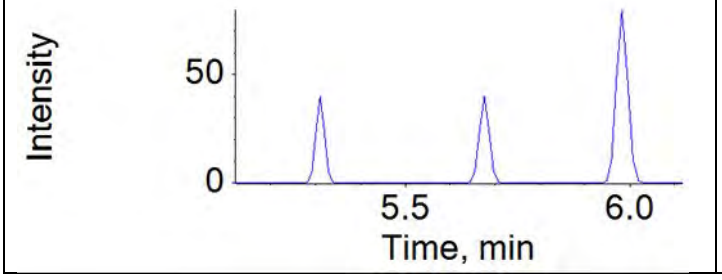


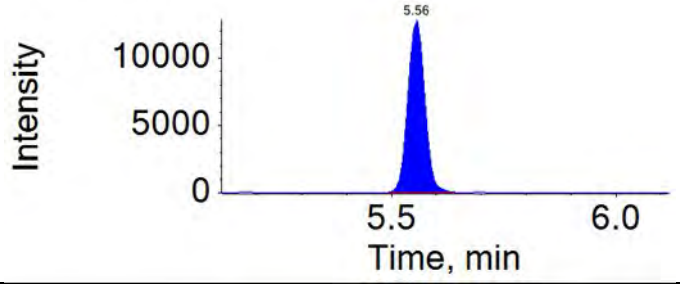
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



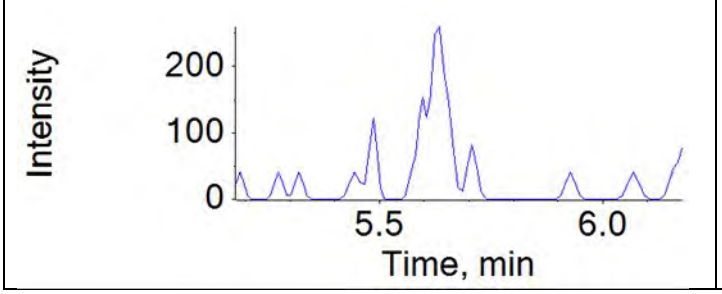


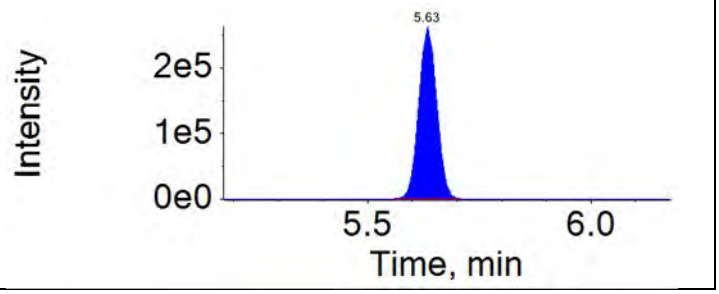
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

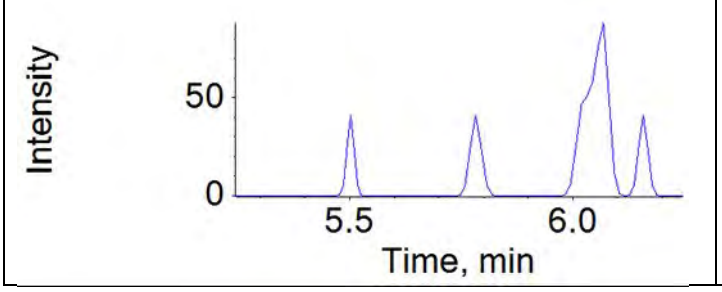
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

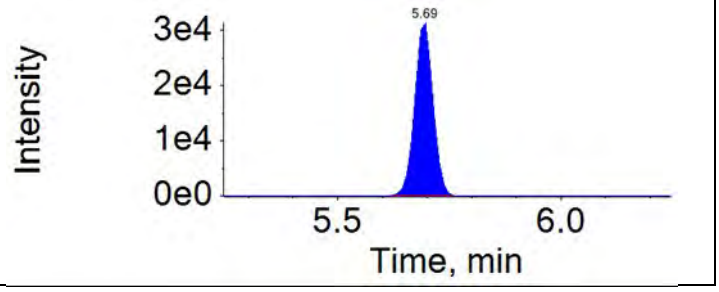
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



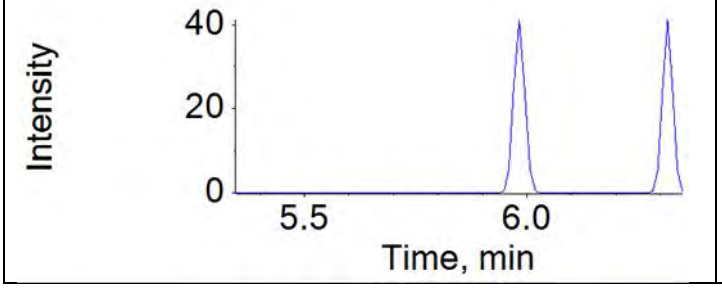


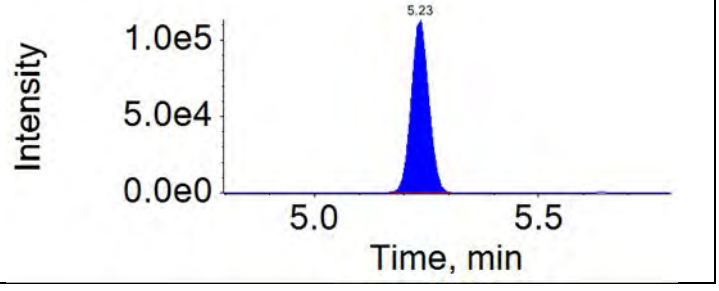
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



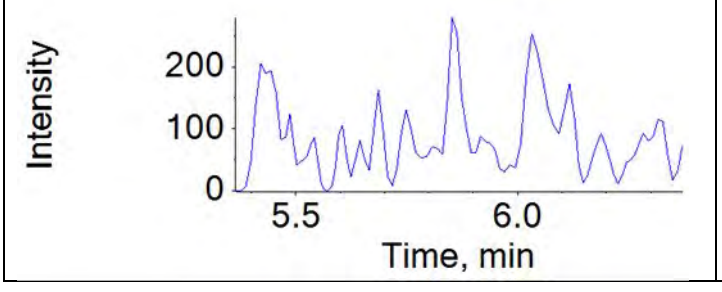


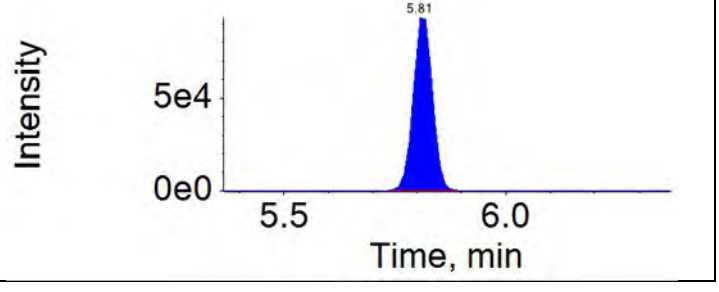
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



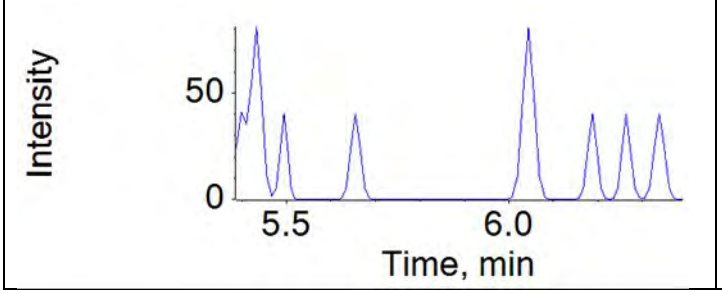


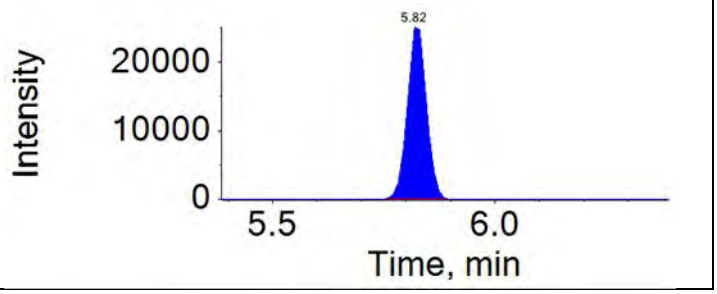
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

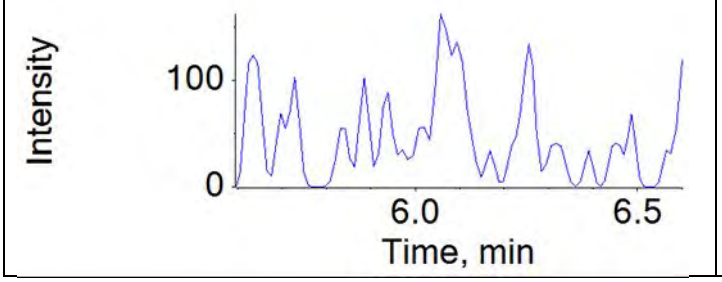
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

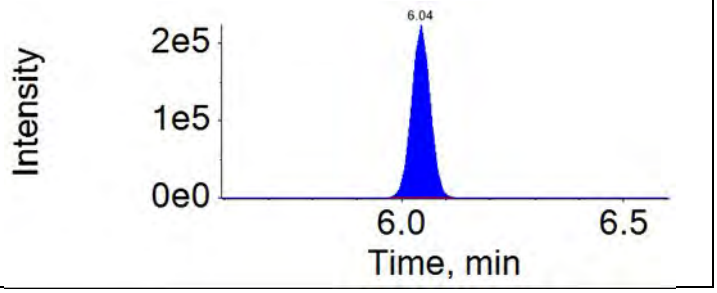
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



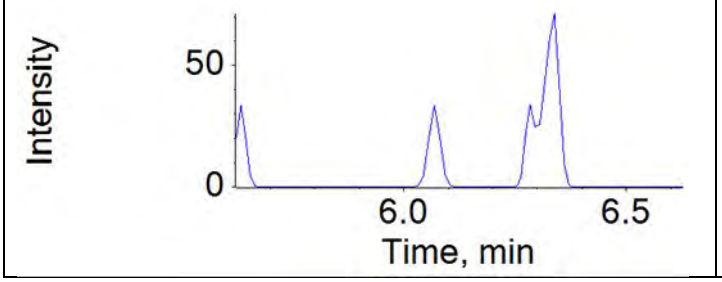


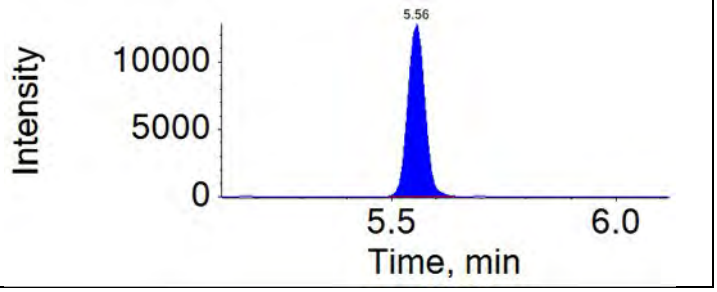
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



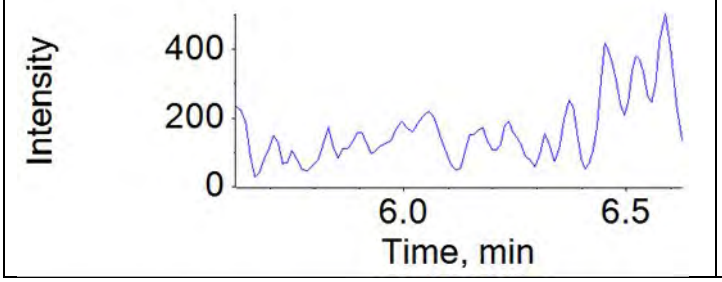


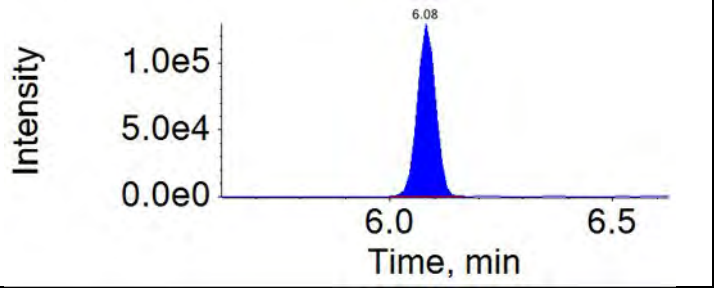
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



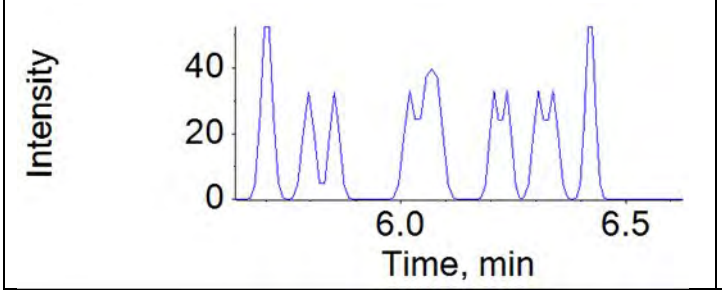


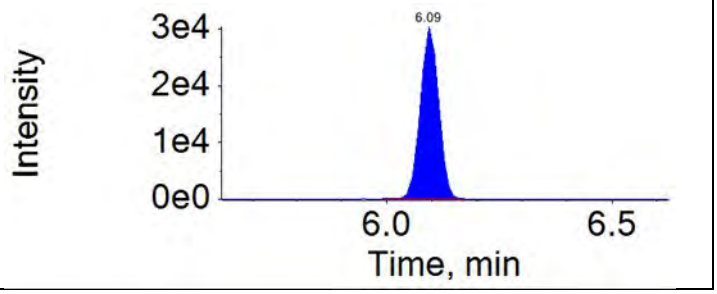
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

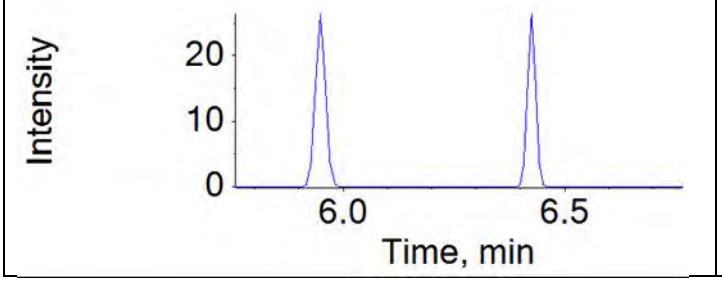
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

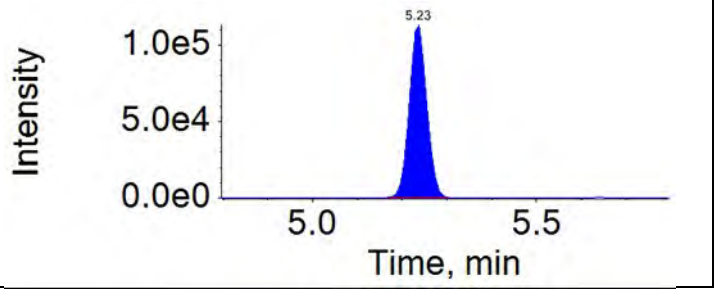
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



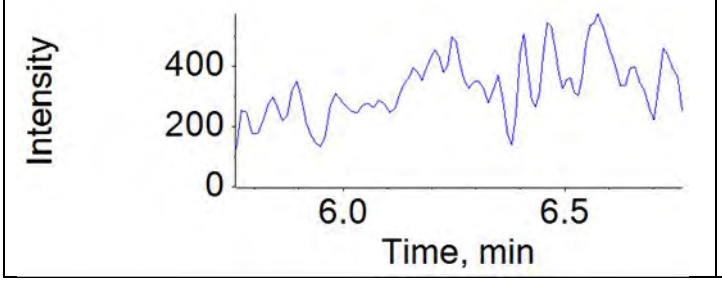


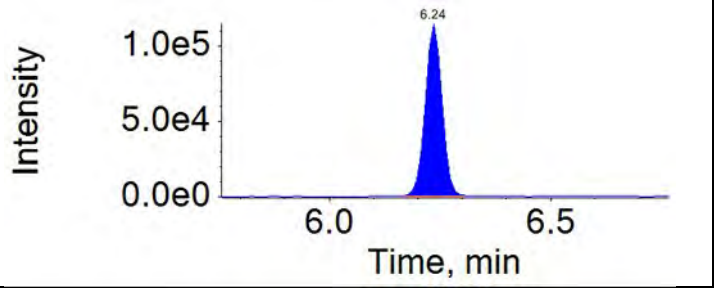
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



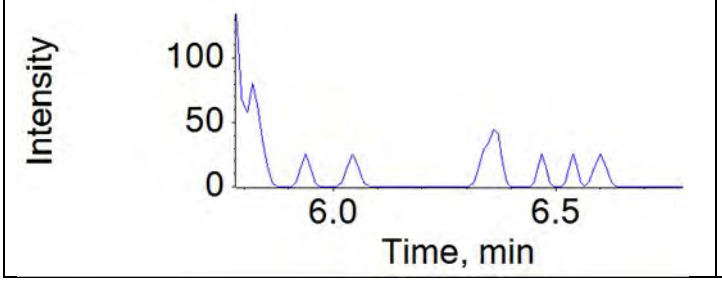


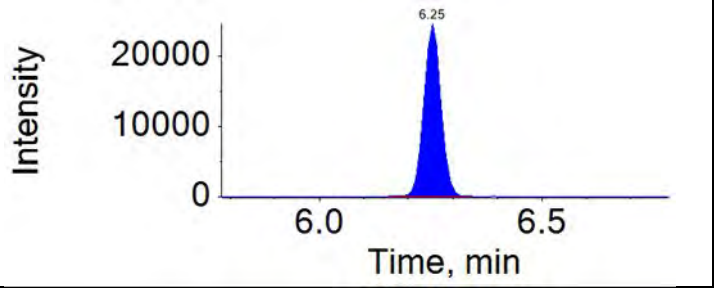
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



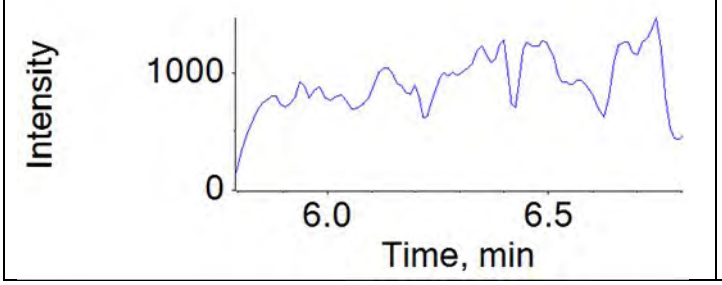


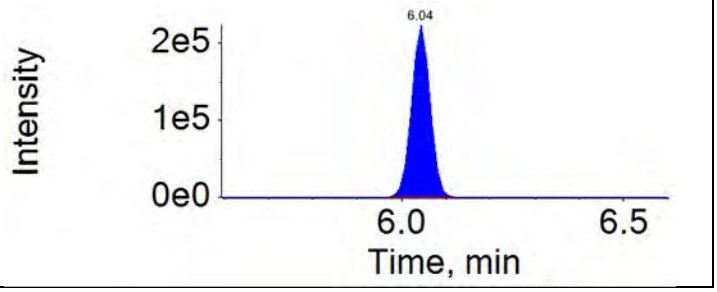
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

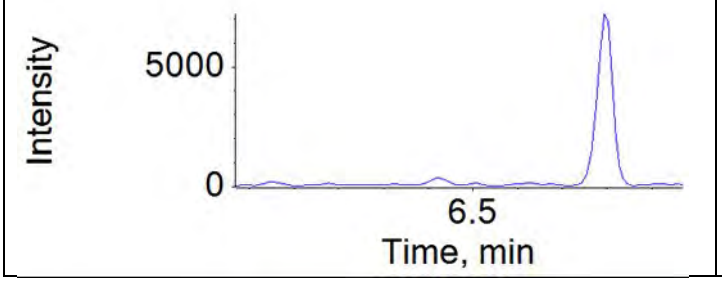
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

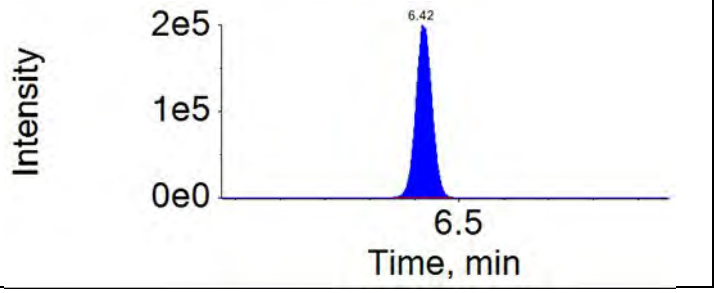
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



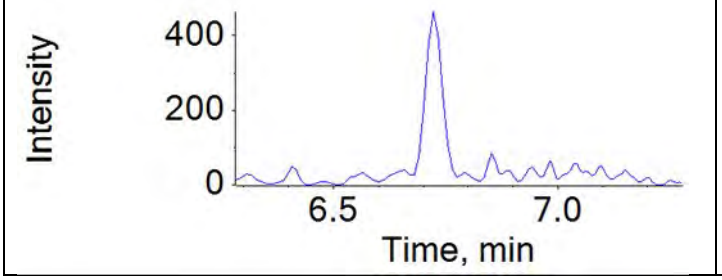


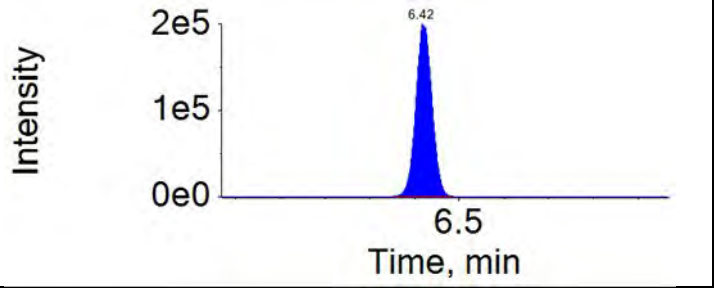
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



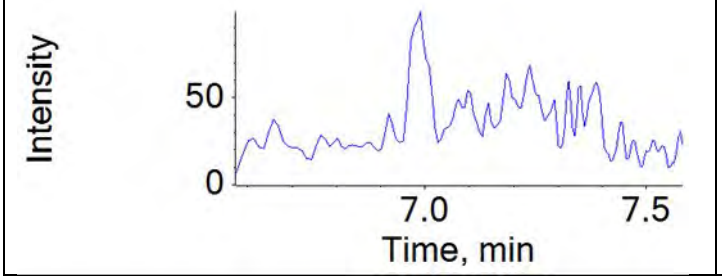


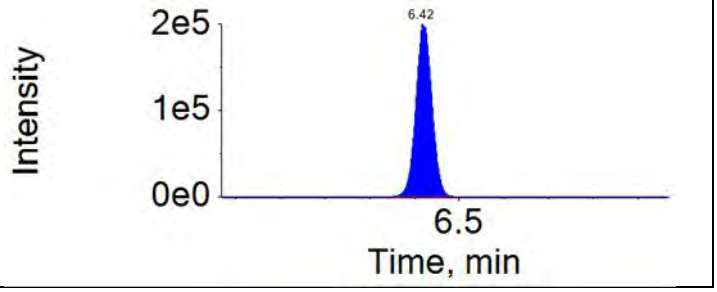
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Ion Ratio Report

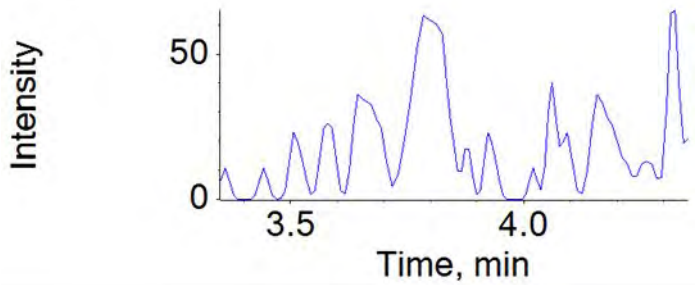
Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV07D-06.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

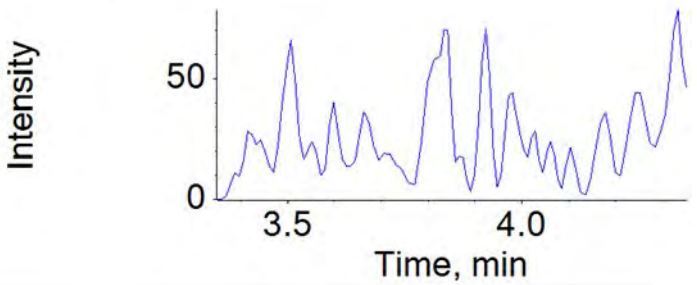
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

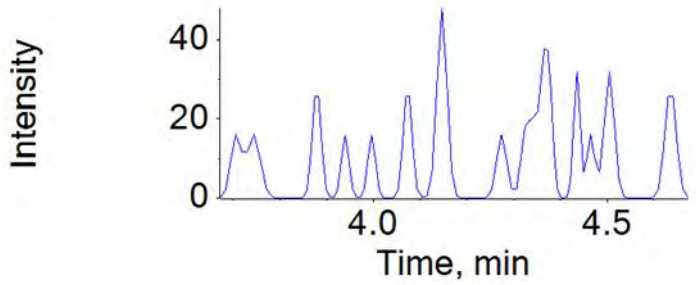
Component: PFBS
Primary Mass: 299.0 / 80.0



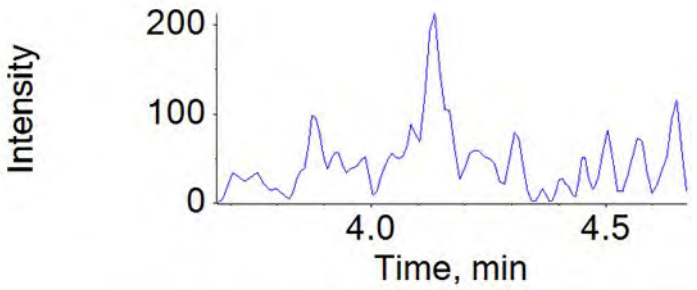
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



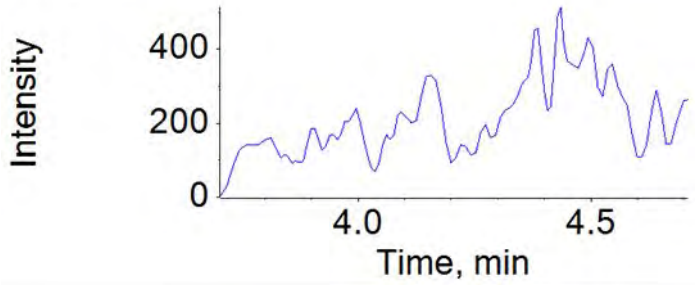
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



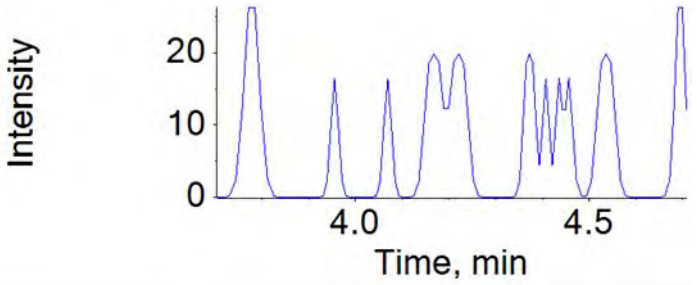
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



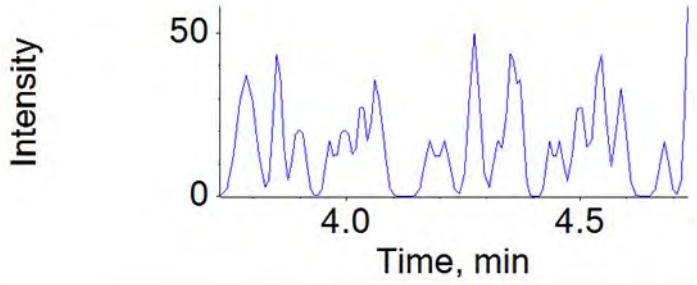
Component: PFHxA
Primary Mass: 313.0 / 269.0



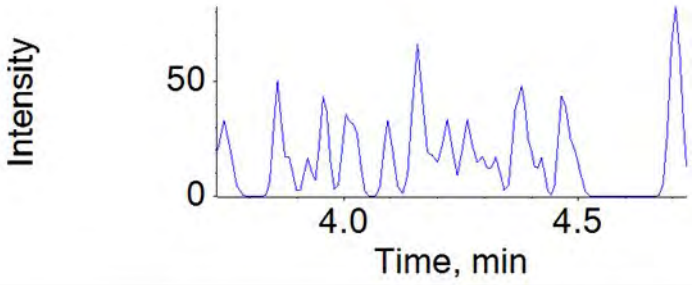
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



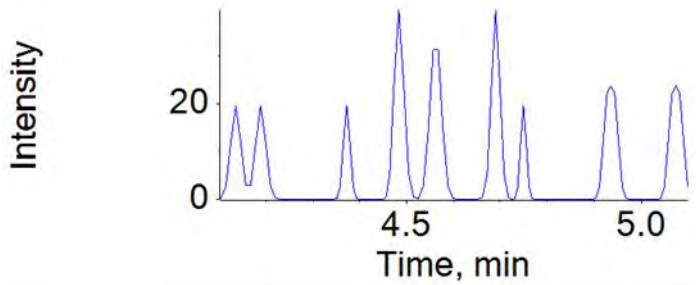
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



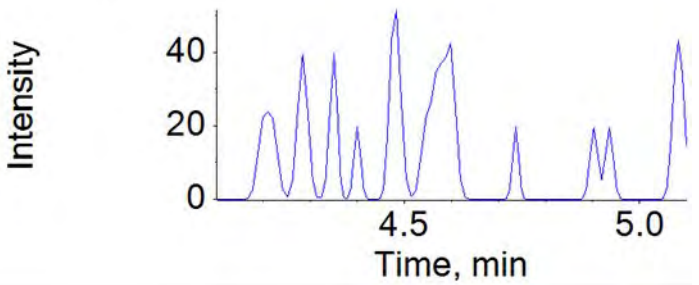
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

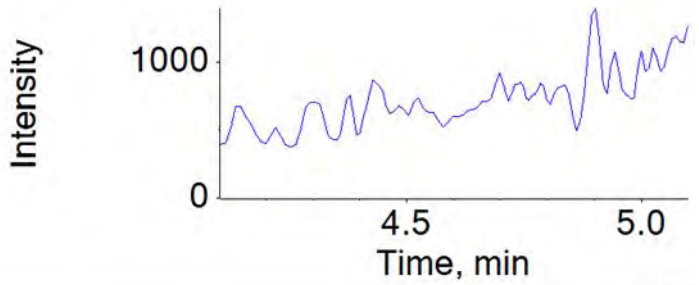
Component: PFHxS
Primary Mass: 399.0 / 80.0



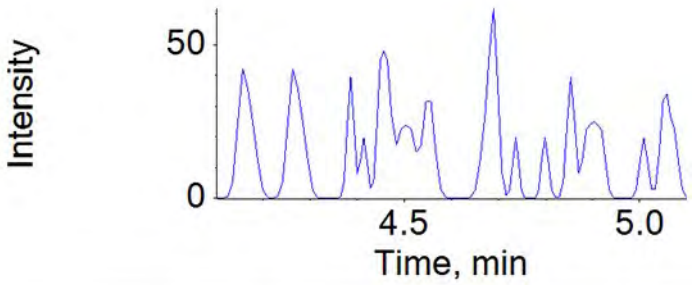
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



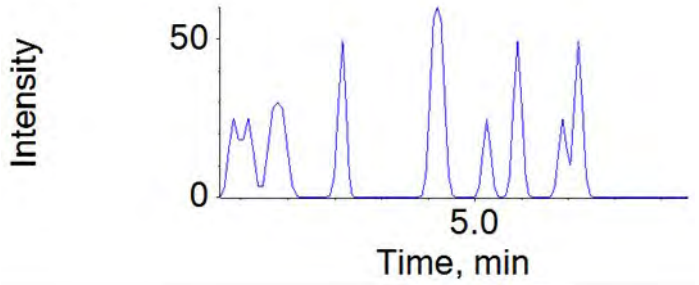
Component: PFHpA
Primary Mass: 363.0 / 319.0



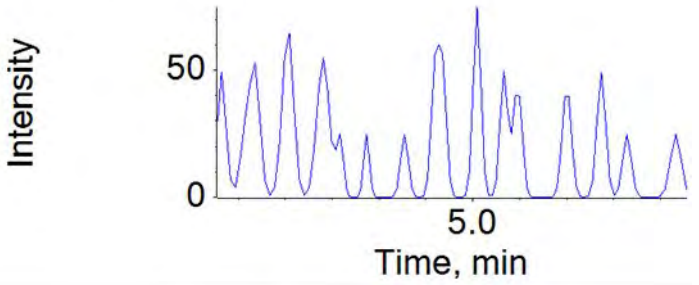
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



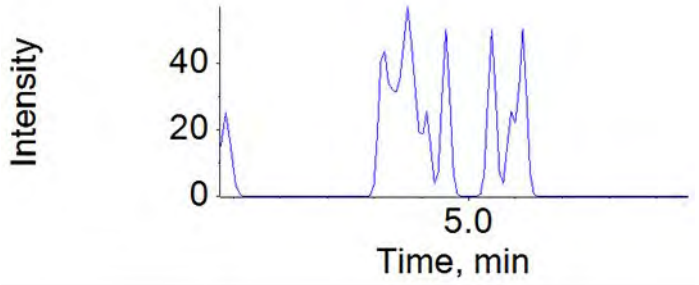
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



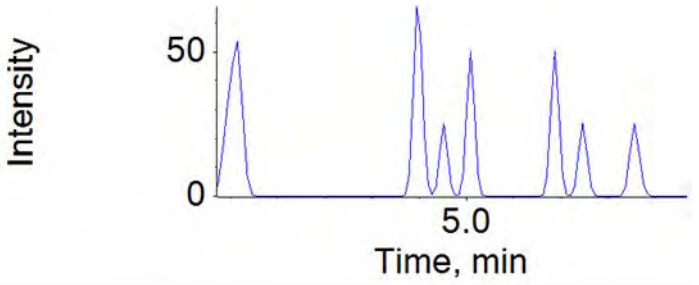
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



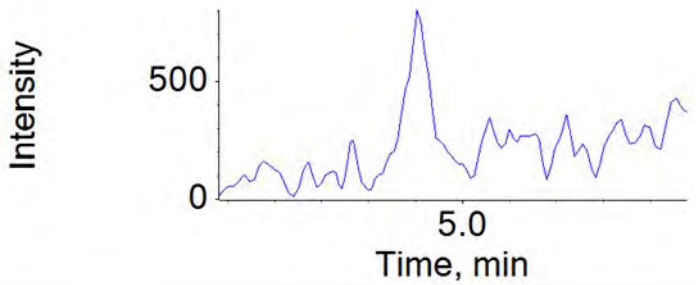
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



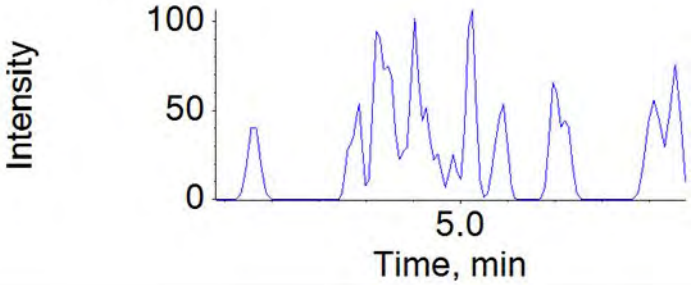
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

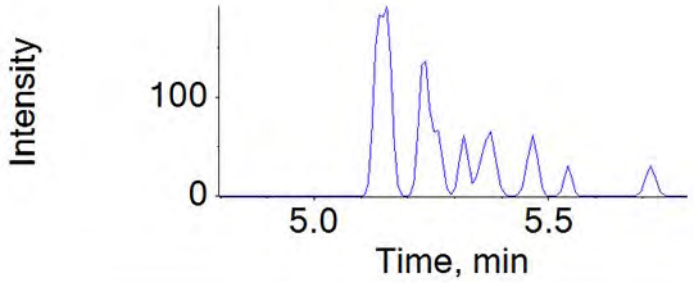
Component: PFOA
Primary Mass: 413.0 / 369.0



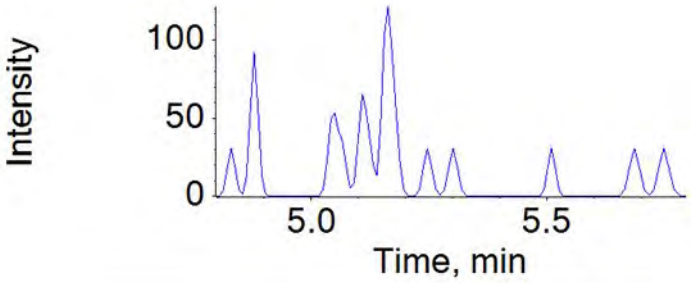
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



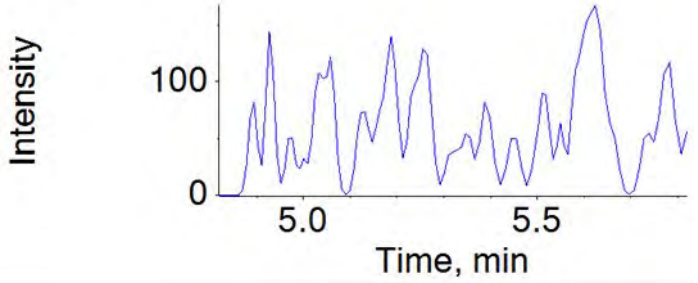
Component: PFOS
Primary Mass: 499.0 / 80.0



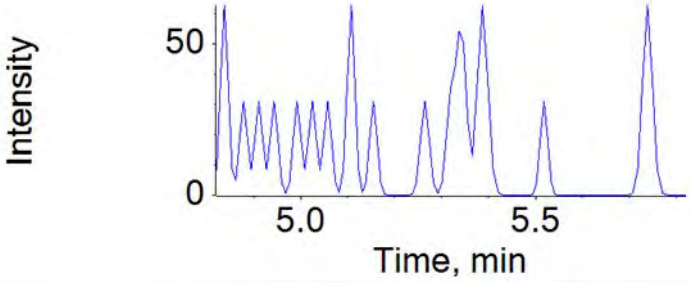
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



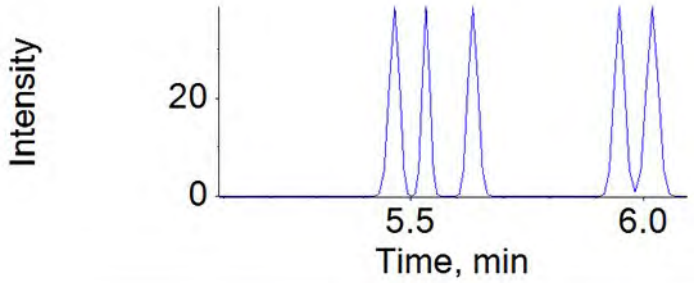
Component: PFNA
Primary Mass: 463.0 / 419.0



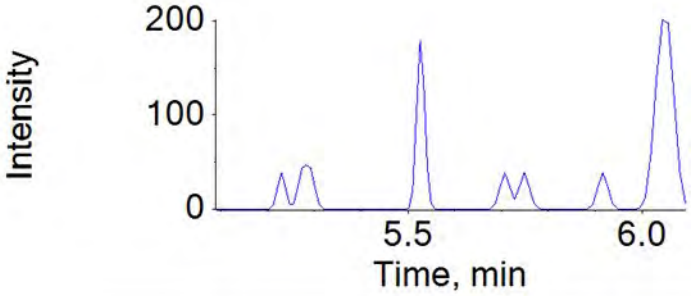
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



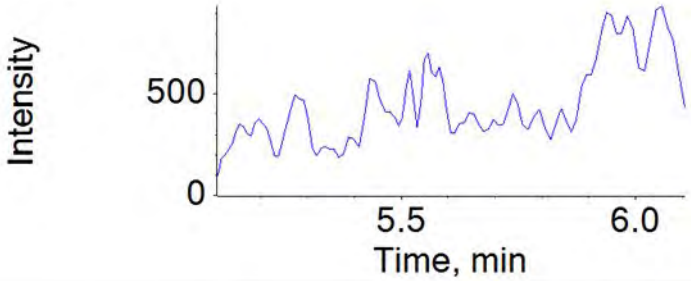
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



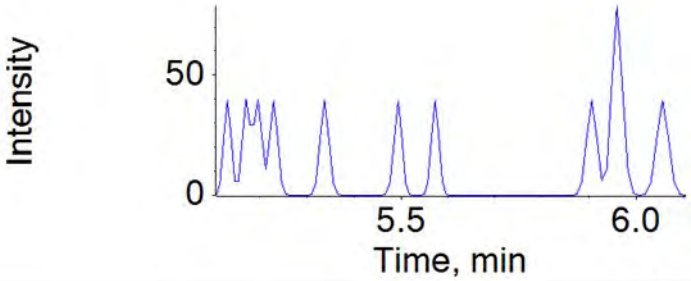
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

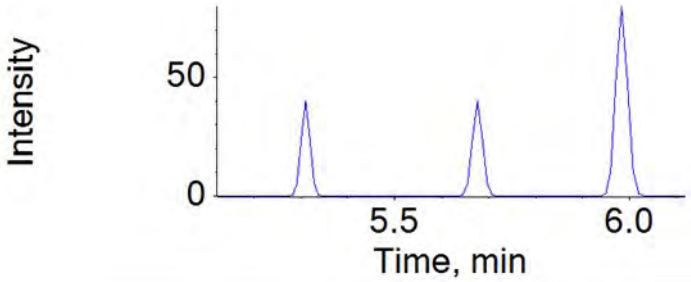
Component: PFDA
Primary Mass: 513.0 / 469.0



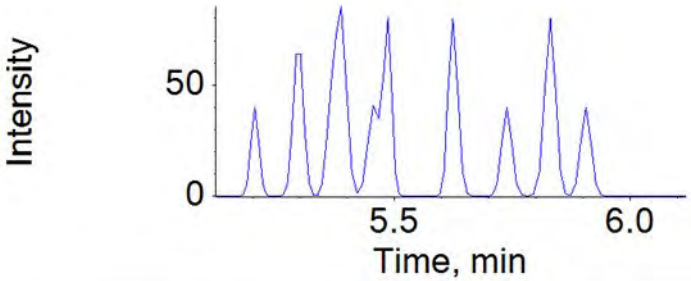
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



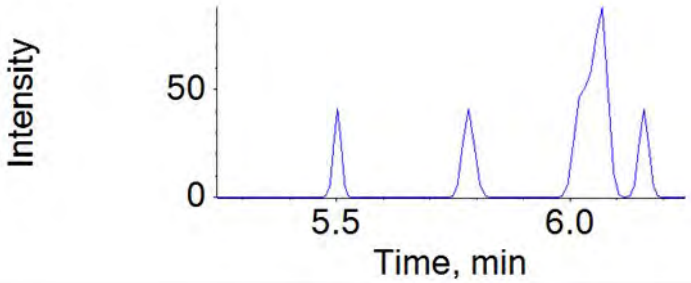
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



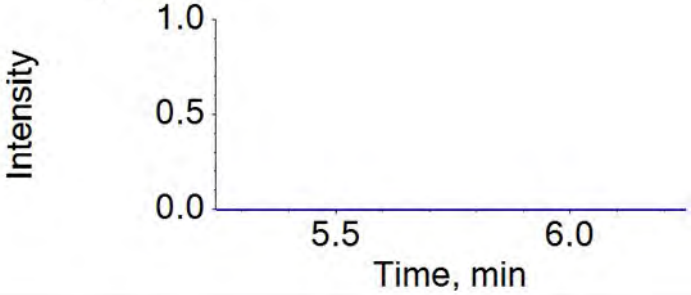
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



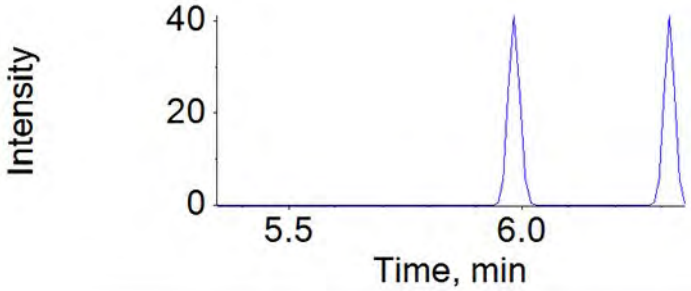
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



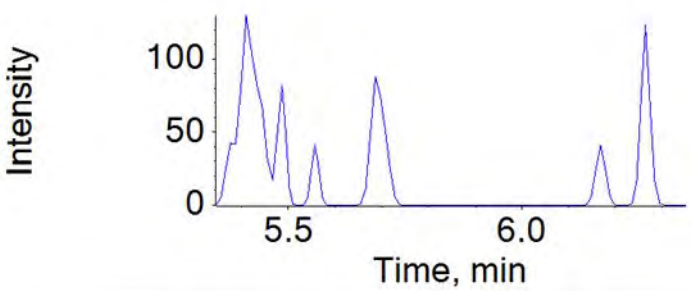
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



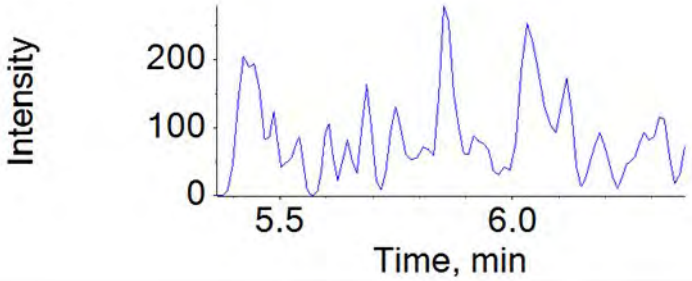
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



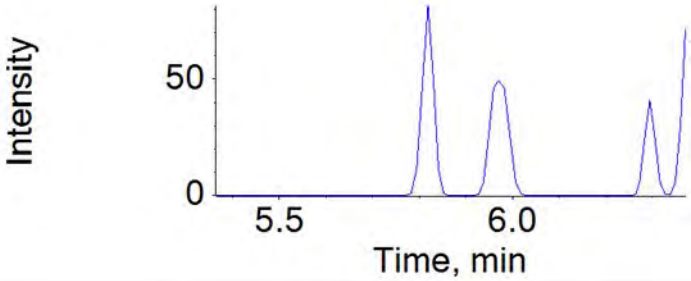
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

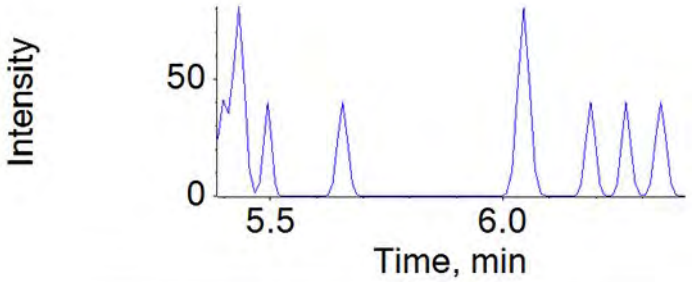
Component: PFUnDA
Primary Mass: 563.0 / 519.0



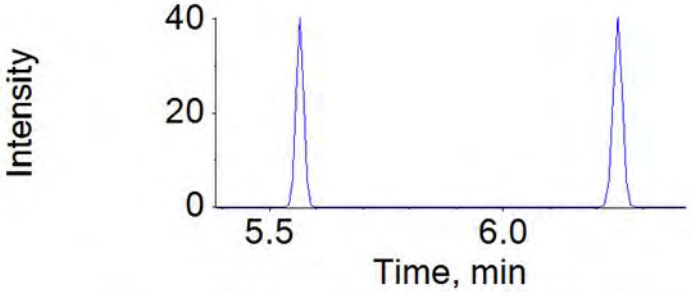
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



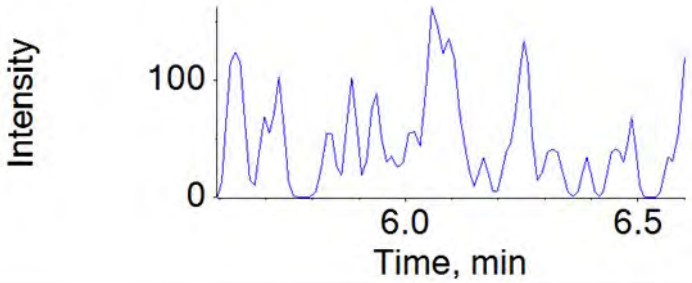
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



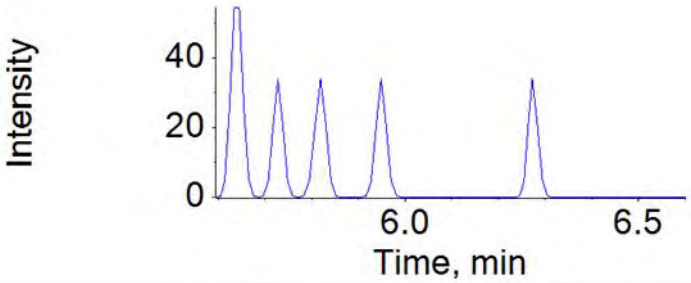
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



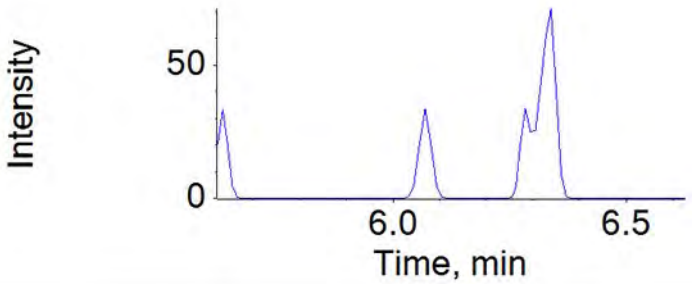
Component: PFDoDA
Primary Mass: 613.0 / 569.0



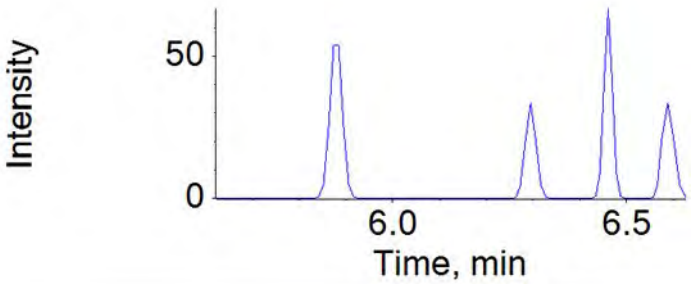
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



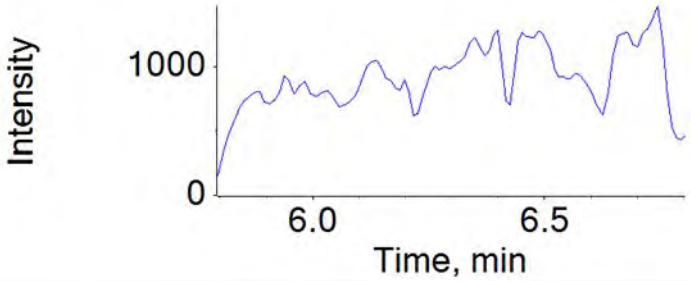
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



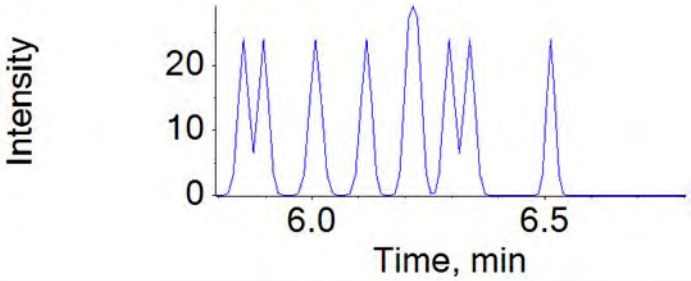
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

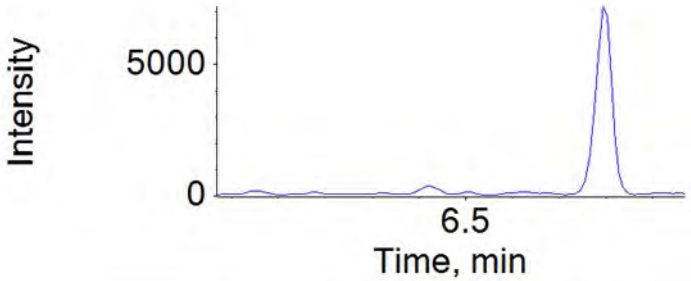
Component: PFTrDA
Primary Mass: 663.0 / 619.0



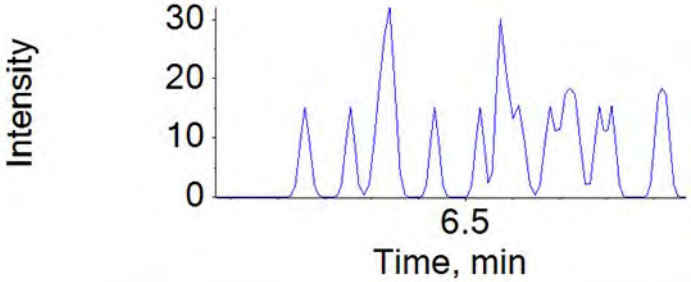
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



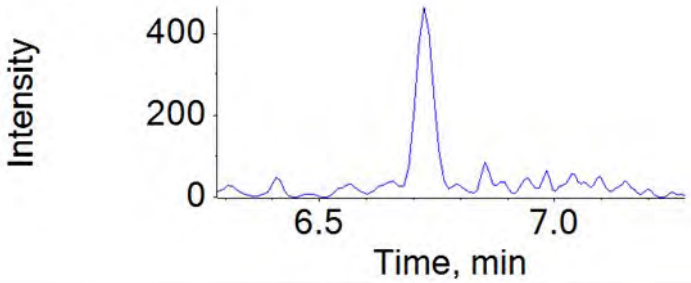
Component: PFTeDA
Primary Mass: 713.0 / 669.0



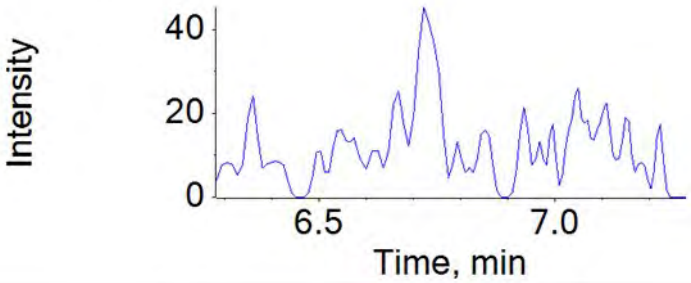
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



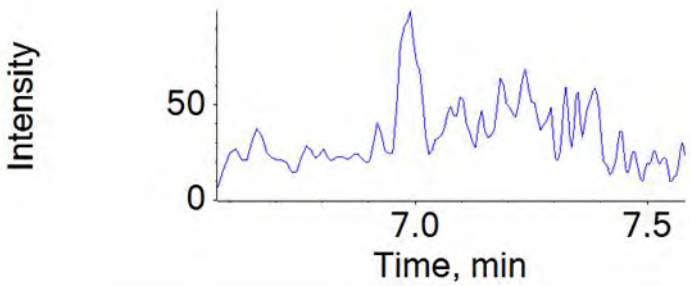
Component: PFHxDA
Primary Mass: 813.0 / 769.0



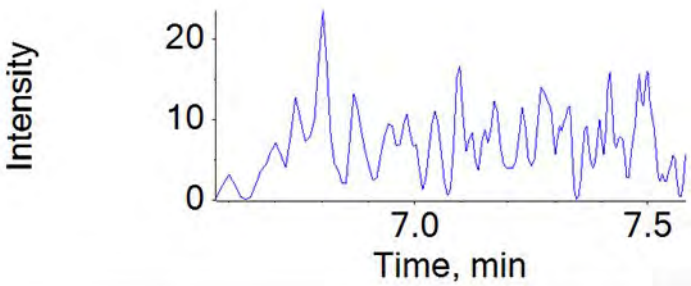
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



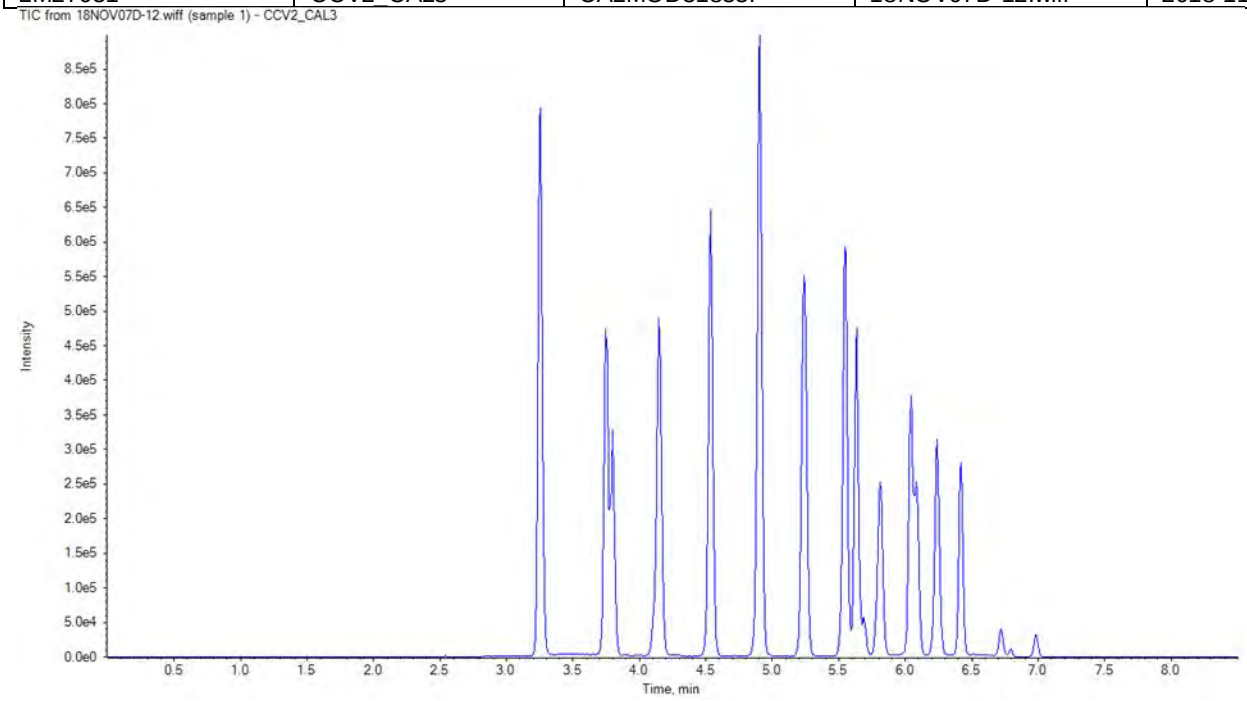
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALMOD31833F	18NOV07D-12.wiff	2018-11-07T12:59:48



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	716017.0	730410.6	-2	50	
13C2-PFOA	5.0	521855.6	524423.6	0	50	
13C4-PFOS	4.8	262694.1	274061.7	-4	50	
13C2-PFDA	5.0	322370.2	311442.1	4	50	

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALMOD31833F	18NOV07D-12.wiff	2018-11-07T12:59:48

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	279577.2	10	13C4-PFBA	756673.6	5.0	0.369	3.25	1.000	2.000	2.162	8	30	
PFPeA	286456.5	12	13C5-PFPeA	817999.9	5.0	0.350	3.75	1.000	2.000	2.081	4	30	
PFBS	157076.1	11	13C3-PFBS	417453.4	4.7	0.376	3.80	1.000	1.770	1.897	7	30	
4:2-FTS	38952.4	12	13C2-4:2-FTS	59581.2	4.7	0.654	4.11	1.000	1.868	1.758	-6	30	
PFHxA	353783.1	12	13C5-PFHxA	714984.5	5.0	0.495	4.15	1.000	2.000	2.122	6	30	
PFPeS	76864.2	11	13C3-PFBS	417453.4	4.7	0.184	4.17	1.100	1.880	1.816	-3	30	
PFHxS	126814.6	12	13C3-PFHxS	338908.4	4.7	0.374	4.54	1.000	1.890	1.897	0	30	
PFHpA	368935.3	12	13C4-PFHpA	583445.6	5.0	0.632	4.54	1.000	2.000	2.127	6	30	
6:2-FTS	34898.0	11	13C2-6:2-FTS	37958.0	4.8	0.919	4.89	1.000	1.896	2.294	21	30	
PFHpS	121935.5	11	13C3-PFHxS	338908.4	4.7	0.360	4.90	1.080	1.900	1.882	-1	30	
PFOA	361377.7	11	13C8-PFOA	942807.5	5.0	0.383	4.90	1.000	2.000	2.158	8	30	
PFOS	112316.2	11	13C8-PFOS	288739.2	4.8	0.389	5.23	1.000	1.910	2.017	6	30	
PFNA	304718.7	11	13C9-PFNA	521726.8	5.0	0.584	5.25	1.000	2.000	2.183	9	30	
PFNS	74275.5	11	13C8-PFOS	288739.2	4.8	0.257	5.53	1.060	1.920	2.040	6	30	
PFDA	235396.8	11	13C6-PFDA	672916.4	5.0	0.350	5.55	1.000	2.000	1.925	-4	30	
8:2-FTS	27244.6	10	13C2-8:2-FTS	29277.2	4.8	0.931	5.55	1.000	1.916	2.098	9	30	
PFOSA	300183.3	11	13C8-PFOSA	713215.9	5.0	0.421	5.63	1.000	2.000	2.275	14	30	
NMeFOSAA	32038.6	11	d3-NMeFOSAA	81985.4	5.0	0.391	5.69	1.000	2.000	2.011	1	30	
PFDS	60808.7	12	13C8-PFOS	288739.2	4.8	0.211	5.78	1.110	1.930	2.012	4	30	
PFUnDA	209375.3	12	13C7-PFUnDA	267281.1	5.0	0.783	5.81	1.000	2.000	2.246	12	30	
NEtFOSAA	30206.4	12	d5-NEtFOSAA	76338.5	5.0	0.396	5.83	1.000	2.000	1.701	-15	30	
PFDoDA	219293.5	12	13C2-PFDoDA	584415.7	5.0	0.375	6.04	1.000	2.000	2.034	2	30	
10:2-FTS	18424.6	12	13C2-8:2-FTS	29277.2	4.8	0.629	6.05	1.090	1.928	1.960	2	30	
NMePFOSAE	158918.4	12	d7-NMePFOSAE	327621.4	5.0	0.485	6.09	1.000	2.000	2.174	9	30	
NMePFOSA	29509.2	12	d3-NMePFOSA	82225.3	5.0	0.359	6.10	1.000	2.000	2.009	0	30	
PFDoS	28520.3	10	13C8-PFOS	288739.2	4.8	0.099	6.21	1.190	1.940	1.906	-2	30	
NEtPFOSAE	184317.4	11	d9-NEtPFOSAE	276569.0	5.0	0.666	6.25	1.000	2.000	2.136	7	30	
NEtPFOSA	28612.8	11	d5-NEtPFOSA	63089.6	5.0	0.454	6.26	1.000	2.000	1.997	0	30	
PFTrDA	182926.3	11	13C2-PFDoDA	584415.7	5.0	0.313	6.24	1.030	2.000	1.974	-1	30	
PFTeDA	153584.9	11	13C2-PFTeDA	446124.2	5.0	0.344	6.42	1.000	2.000	2.022	1	30	
PFHxDA	78639.3	11	13C2-PFTeDA	446124.2	5.0	0.176	6.72	1.050	2.000	2.188	9	30	
PFODA	70028.7	10	13C2-PFTeDA	446124.2	5.0	0.157	6.98	1.090	2.000	2.249	12	30	

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV2_CAL3			**Data File:**		18NOV07D-12.wiff
Sample ID:	CALMOD31833F			**Acquis Date:**		2018-11-07T12:59:48
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCCV1-4_DOD
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	716017.0	730410.6	-2	50	
13C2-PFOA	5.0	521855.6	524423.6	0	50	
13C4-PFOS	4.8	262694.1	274061.7	-4	50	
13C2-PFDA	5.0	322370.2	311442.1	4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	756673.6	13C3-PFBA	716017.0	1.057	5.000	4.890	98	70-130	
E13C5-PFPeA	817999.9	13C3-PFBA	716017.0	1.142	5.000	4.977	100	70-130	
E13C3-PFBS	417453.4	13C3-PFBA	716017.0	0.583	4.650	4.279	92	70-130	
E13C2-4:2-FTS	59581.2	13C2-PFOA	521855.6	0.114	4.670	5.152	110	70-130	
E13C5-PFHxA	714984.5	13C2-PFOA	521855.6	1.370	5.000	5.040	101	70-130	
E13C3-PFHxS	338908.4	13C2-PFOA	521855.6	0.649	4.730	4.662	99	70-130	
E13C4-PFHpA	583445.6	13C2-PFOA	521855.6	1.118	5.000	5.086	102	70-130	
E13C2-6:2-FTS	37958.0	13C2-PFOA	521855.6	0.073	4.750	4.850	102	70-130	
E13C8-PFOA	942807.5	13C2-PFOA	521855.6	1.807	5.000	5.038	101	70-130	
E13C8-PFOS	288739.2	13C4-PFOS	262694.1	1.099	4.780	4.860	102	70-130	
E13C9-PFNA	521726.8	13C4-PFOS	262694.1	1.986	5.000	5.425	109	70-130	
E13C6-PFDA	672916.4	13C2-PFDA	322370.2	2.087	5.000	5.249	105	70-130	
E13C2-8:2-FTS	29277.2	13C2-PFDA	322370.2	0.091	4.790	4.806	100	70-130	
E13C8-PFOSA	713215.9	13C2-PFDA	322370.2	2.212	5.000	4.828	97	70-130	
Ed3-NMeFOSAA	81985.4	13C2-PFDA	322370.2	0.254	5.000	4.729	95	70-130	
E13C7-PFUnDA	267281.1	13C2-PFDA	322370.2	0.829	5.000	4.783	96	70-130	
Ed5-NEtFOSAA	76338.5	13C2-PFDA	322370.2	0.237	5.000	5.480	110	70-130	
E13C2-PFDoDA	584415.7	13C2-PFDA	322370.2	1.813	5.000	4.887	98	70-130	
Ed7-NMePFOSAE	327621.4	13C2-PFDA	322370.2	1.016	5.000	4.726	95	70-130	
Ed3-NMePFOSA	82225.3	13C2-PFDA	322370.2	0.255	5.000	4.670	93	70-130	
Ed9-NEtPFOSAE	276569.0	13C2-PFDA	322370.2	0.858	5.000	4.899	98	70-130	
Ed5-NEtPFOSA	63089.6	13C2-PFDA	322370.2	0.196	5.000	4.531	91	70-130	
E13C2-PFTeDA	446124.2	13C2-PFDA	322370.2	1.384	5.000	4.982	100	70-130	

APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

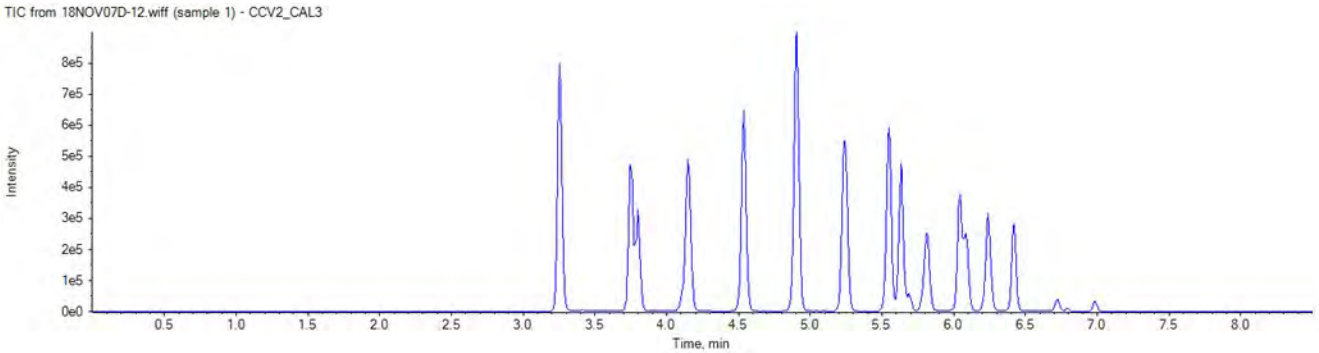
Analyte Quantitation Peak Table

Sample Name: CCV2_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07D-12.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	279577.2		A	13C4-PFBA	3.25	756673.6	0.369	2.162
PFPeA	3.75	1.000	286456.5		A	13C5-PFPeA	3.75	817999.9	0.350	2.081
PFBS	3.80	1.000	157076.1		A	13C3-PFBS	3.80	417453.4	0.376	1.897
4:2-FTS	4.11	1.000	38952.4		A	13C2-4:2-FTS	4.11	59581.2	0.654	1.758
PFHxA	4.15	1.000	353783.1		A	13C5-PFHxA	4.15	714984.5	0.495	2.122
PFPeS	4.17	1.100	76864.2		A	13C3-PFBS	3.80	417453.4	0.184	1.816
PFHxS	4.54	1.000	126814.6		A	13C3-PFHxS	4.54	338908.4	0.374	1.897
PFHpA	4.54	1.000	368935.3		A	13C4-PFHpA	4.54	583445.6	0.632	2.127
6:2-FTS	4.89	1.000	34898.0		A	13C2-6:2-FTS	4.89	37958.0	0.919	2.294
PFHpS	4.90	1.080	121935.5		A	13C3-PFHxS	4.54	338908.4	0.360	1.882
PFOA	4.90	1.000	361377.7		A	13C8-PFOA	4.91	942807.5	0.383	2.158
PFOS	5.23	1.000	112316.2		M	13C8-PFOS	5.23	288739.2	0.389	2.017
PFNA	5.25	1.000	304718.7		A	13C9-PFNA	5.25	521726.8	0.584	2.183
PFNS	5.53	1.060	74275.5		A	13C8-PFOS	5.23	288739.2	0.257	2.040
PFDA	5.55	1.000	235396.8		A	13C6-PFDA	5.55	672916.4	0.350	1.925
8:2-FTS	5.55	1.000	27244.6		A	13C2-8:2-FTS	5.55	29277.2	0.931	2.098
PFOSA	5.63	1.000	300183.3		A	13C8-PFOSA	5.63	713215.9	0.421	2.275
NMeFOSAA	5.69	1.000	32038.6		A	d3-NMeFOSAA	5.69	81985.4	0.391	2.011
PFDS	5.78	1.110	60808.7		A	13C8-PFOS	5.23	288739.2	0.211	2.012
PFUnDA	5.81	1.000	209375.3		A	13C7-PFUnDA	5.81	267281.1	0.783	2.246
NEtFOSAA	5.83	1.000	30206.4		A	d5-NEtFOSAA	5.82	76338.5	0.396	1.701
PFDoDA	6.04	1.000	219293.5		A	13C2-PFDoDA	6.04	584415.7	0.375	2.034
10:2-FTS	6.05	1.090	18424.6		A	13C2-8:2-FTS	5.55	29277.2	0.629	1.960
NMePFOSAE	6.09	1.000	158918.4		A	d7-NMePFOSAE	6.08	327621.4	0.485	2.174
NMePFOSA	6.10	1.000	29509.2		A	d3-NMePFOSA	6.09	82225.3	0.359	2.009
PFDoS	6.21	1.190	28520.3		A	13C8-PFOS	5.23	288739.2	0.099	1.906
NEtPFOSAE	6.25	1.000	184317.4		A	d9-NEtPFOSAE	6.23	276569.0	0.666	2.136
NEtPFOSA	6.26	1.000	28612.8		A	d5-NEtPFOSA	6.25	63089.6	0.454	1.997
PFTrDA	6.24	1.030	182926.3		A	13C2-PFDoDA	6.04	584415.7	0.313	1.974
PFTeDA	6.42	1.000	153584.9		A	13C2-PFTeDA	6.42	446124.2	0.344	2.022
PFHxDA	6.72	1.050	78639.3		A	13C2-PFTeDA	6.42	446124.2	0.176	2.188
PFODA	6.98	1.090	70028.7		A	13C2-PFTeDA	6.42	446124.2	0.157	2.249

Total Ion Chromatogram

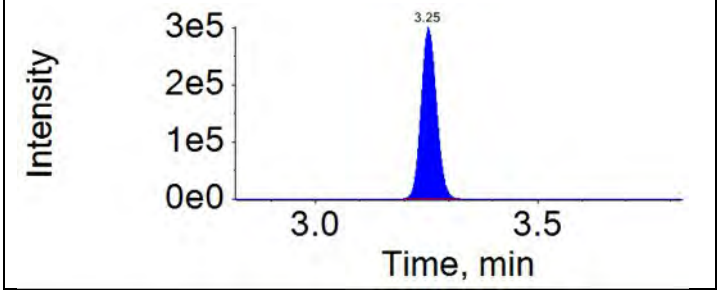


APPROVED
By MCD at 6:31 pm, 11/7/18

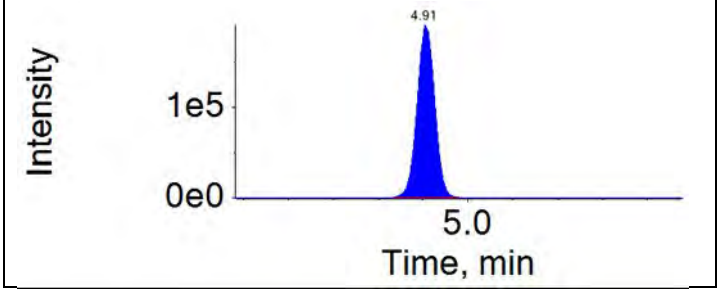
REVIEWED
By HMK at 2:57 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

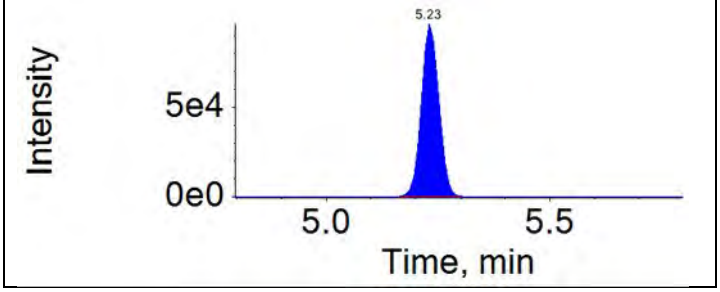
Injection Standard: 13C3-PFBA
216.0 / 172.0



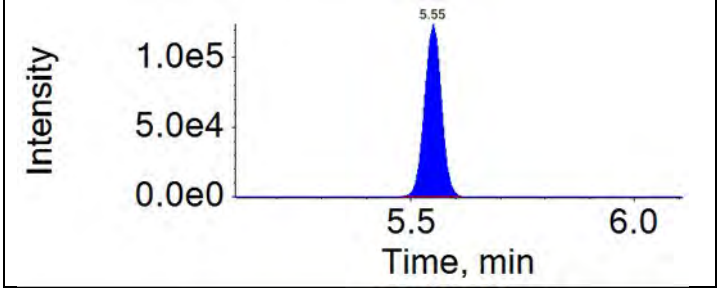
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

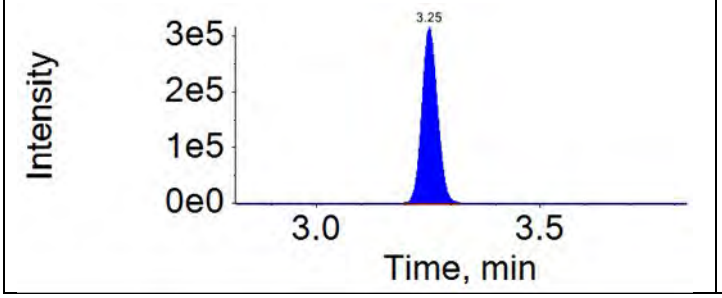


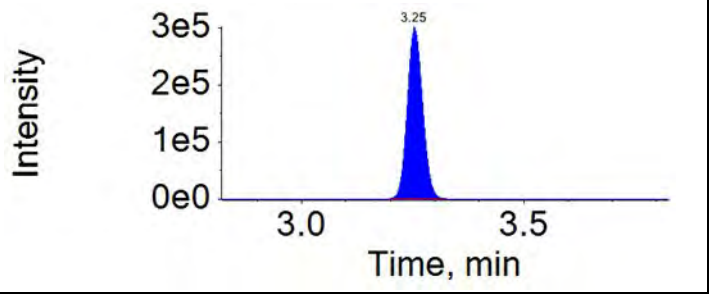
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

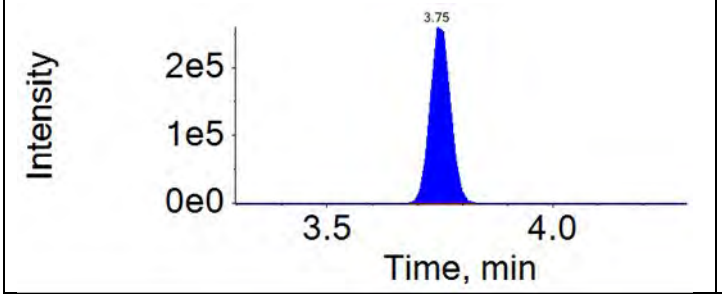
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

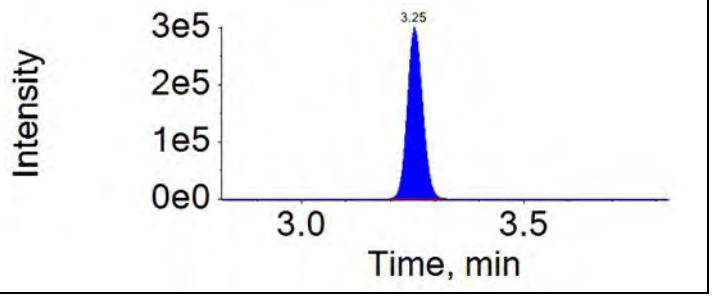
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



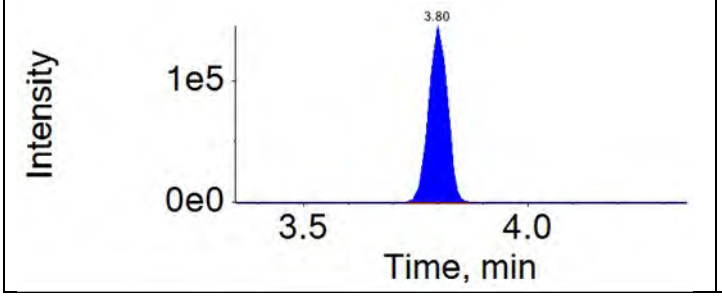


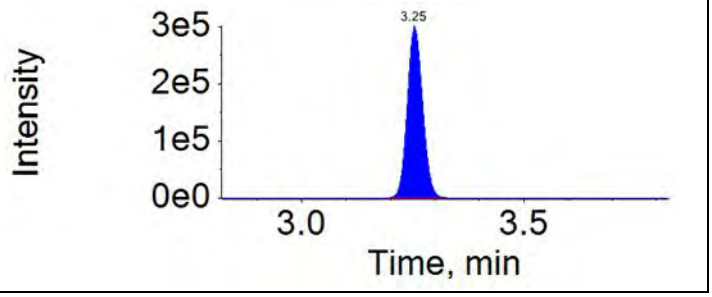
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



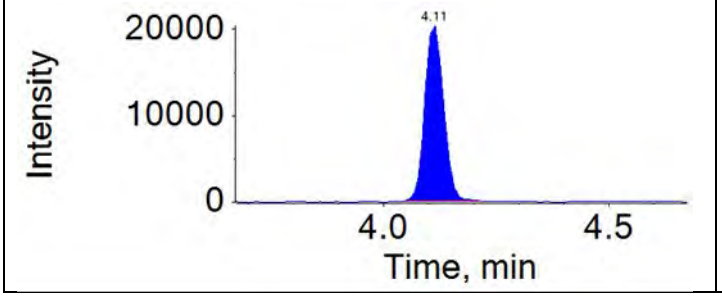


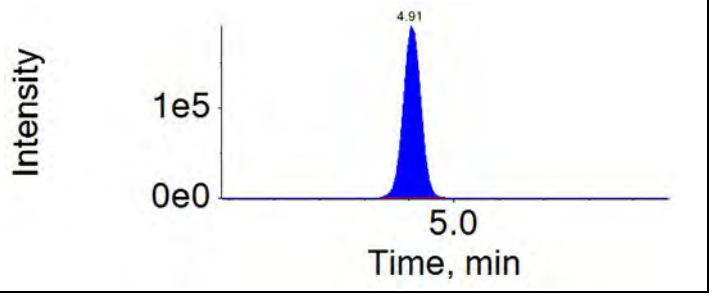
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



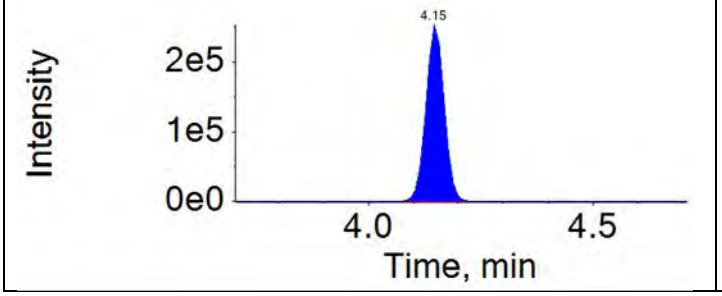


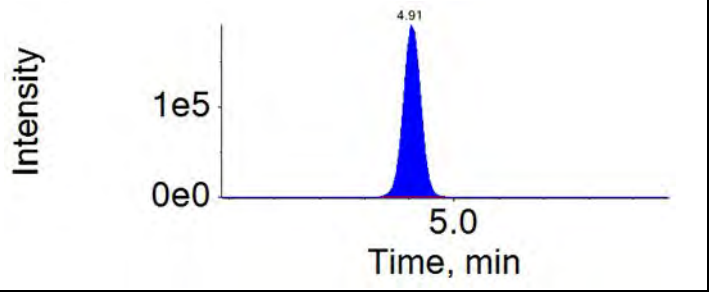
APPROVED
By MCD at 6:31 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

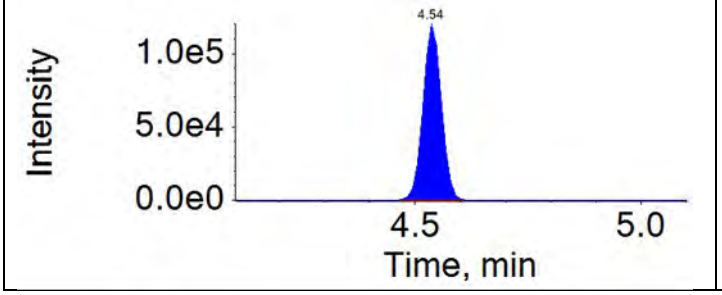
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

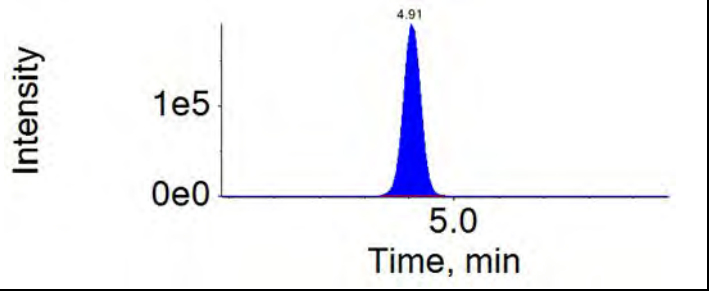
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



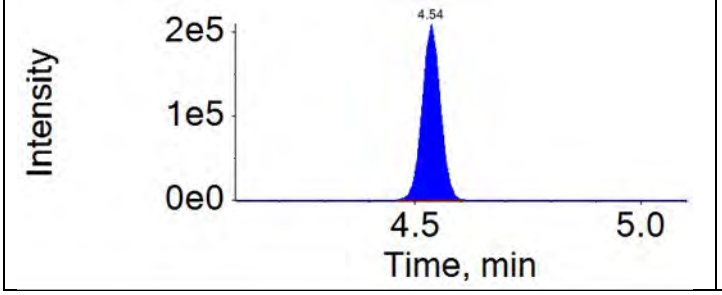


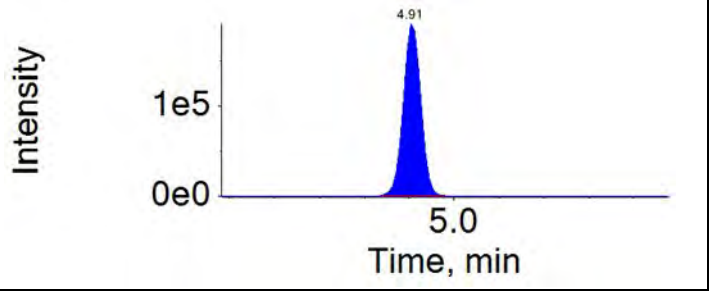
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



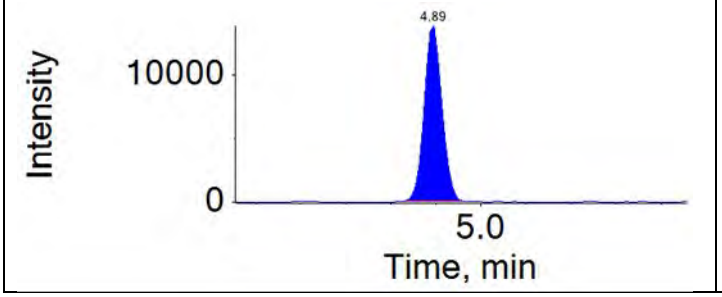


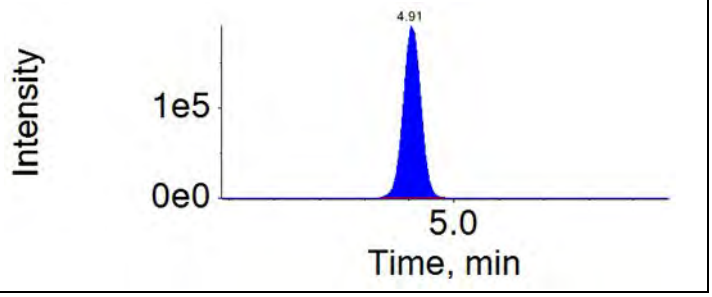
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0



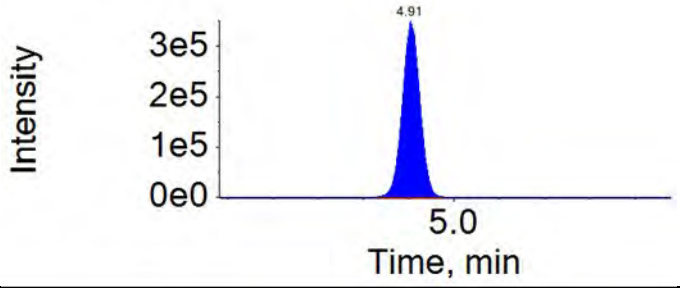
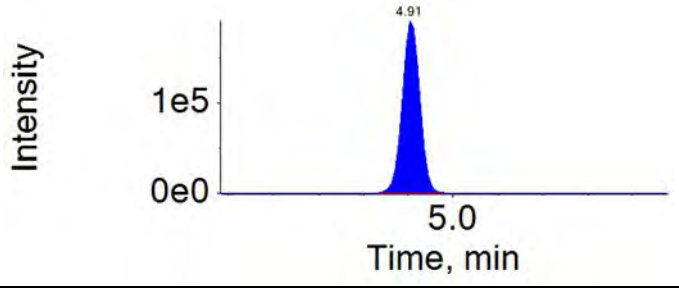


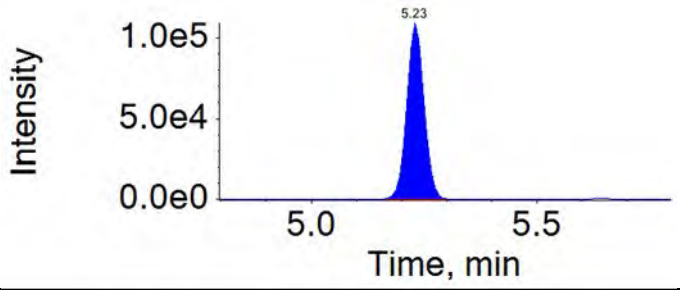
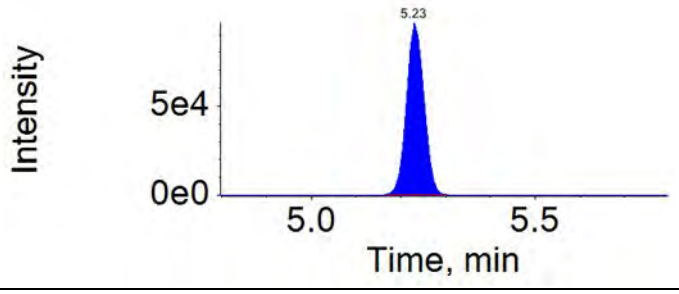
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

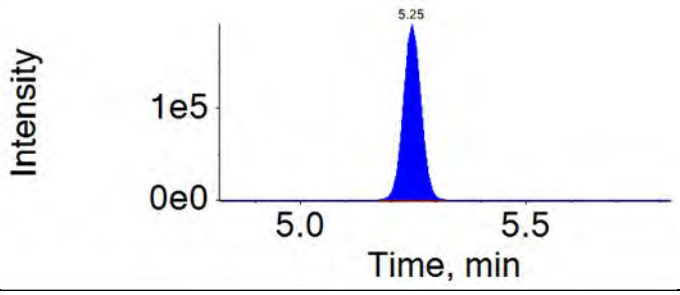
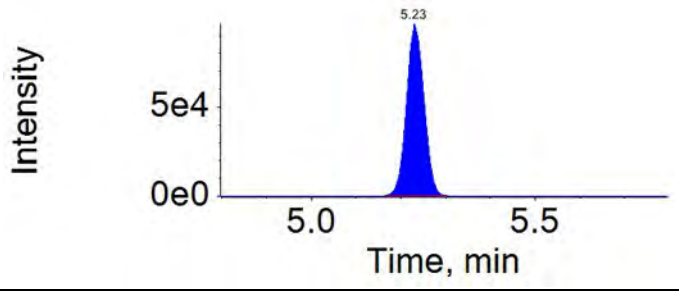


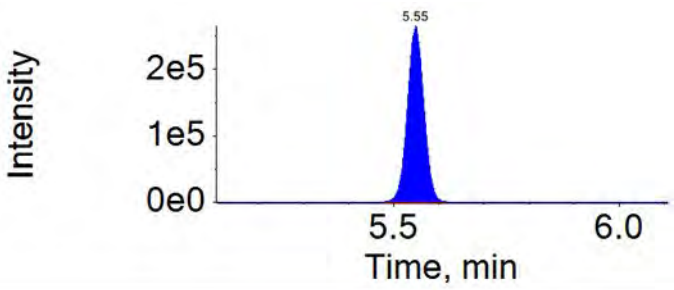
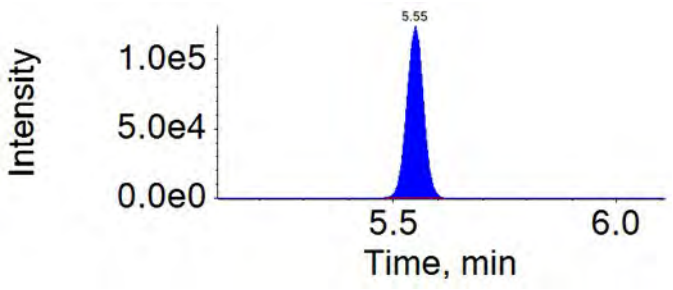


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

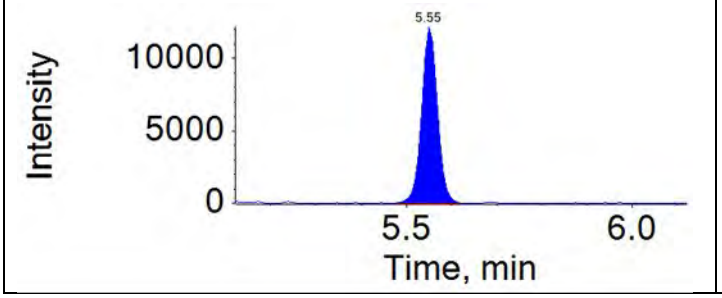
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

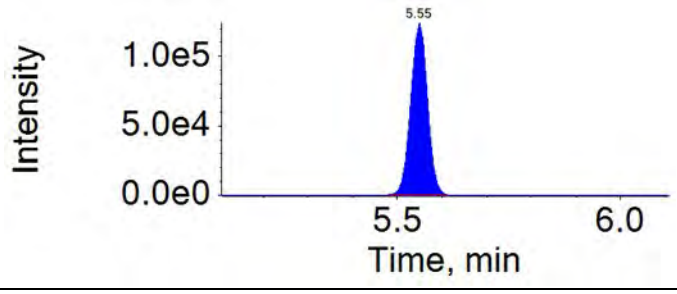
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

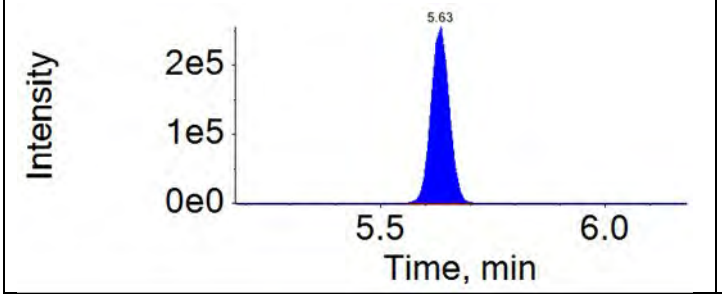
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

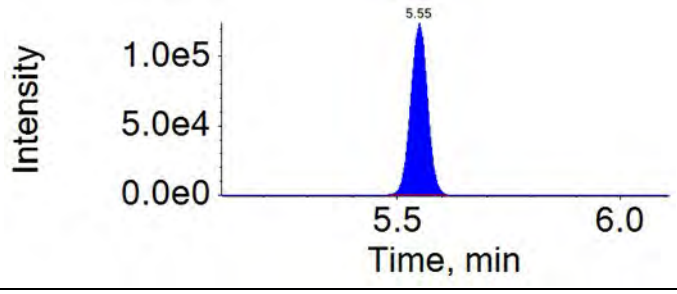
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



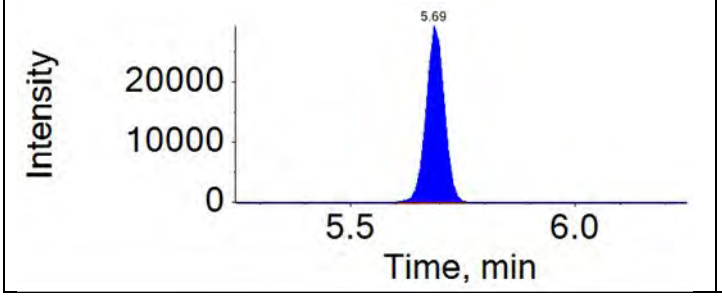


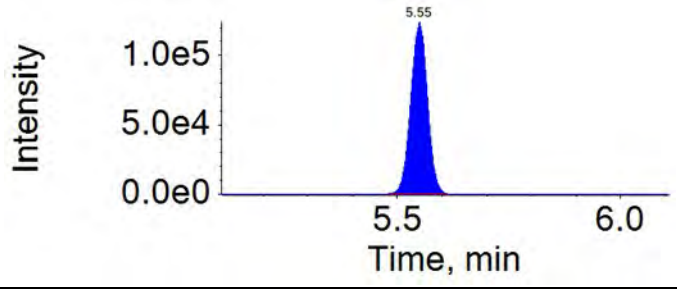
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



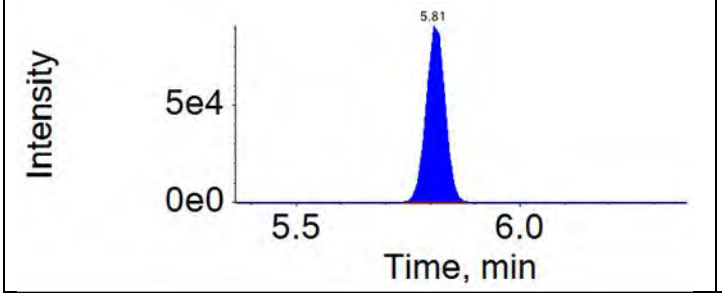


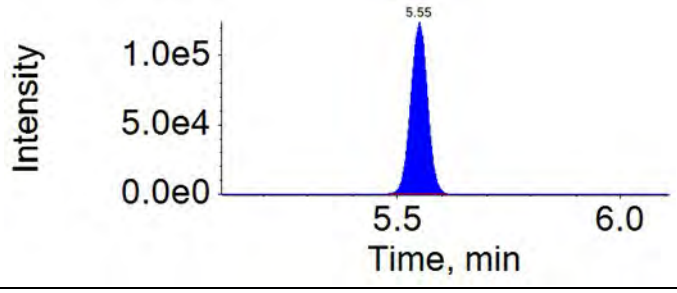
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





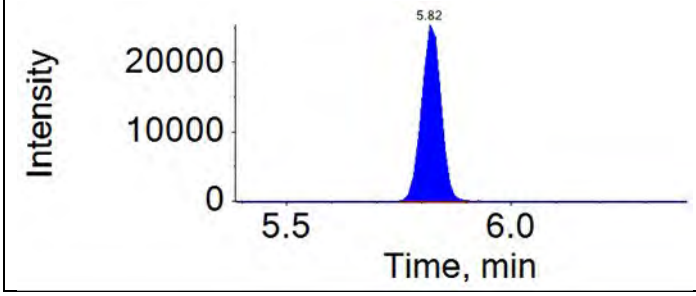
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

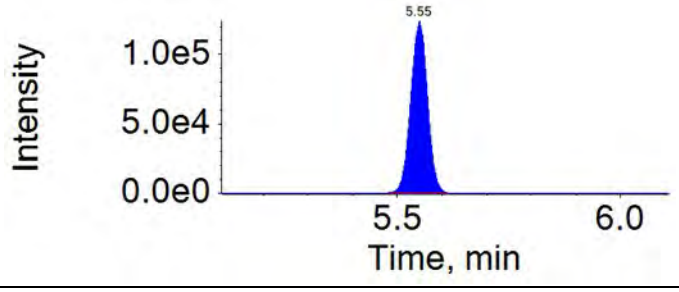




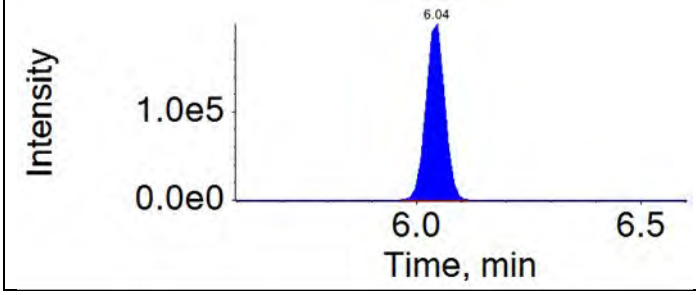
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

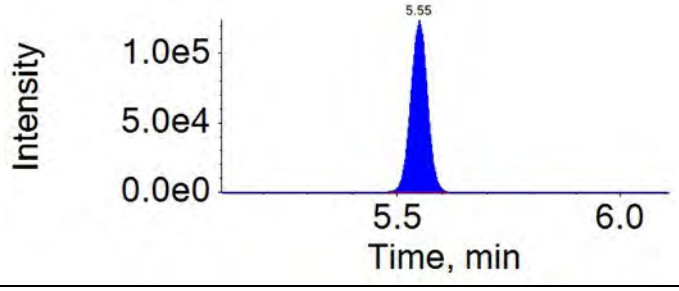
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



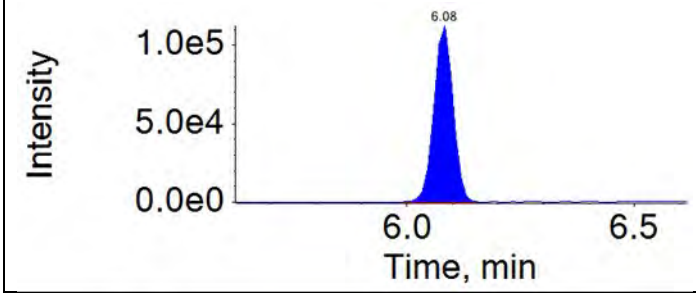


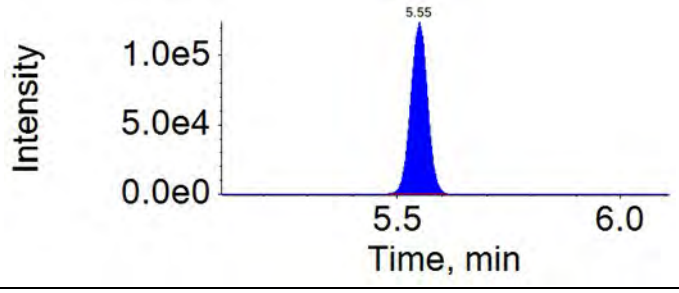
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



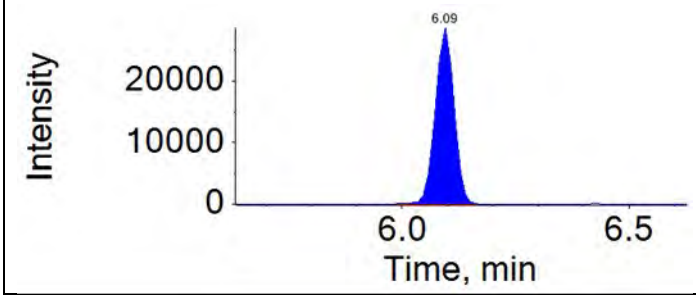


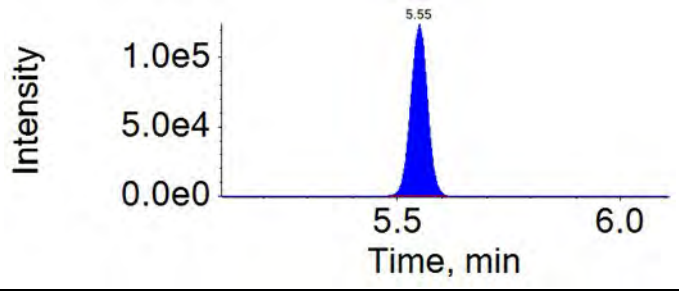
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





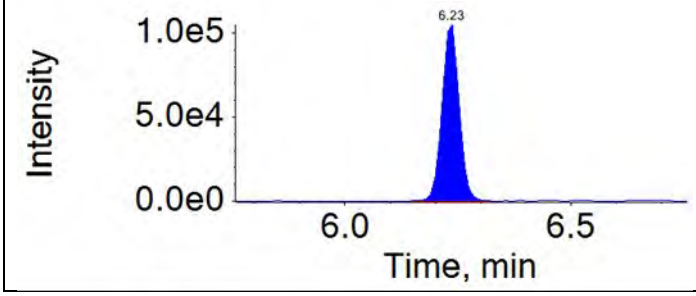
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

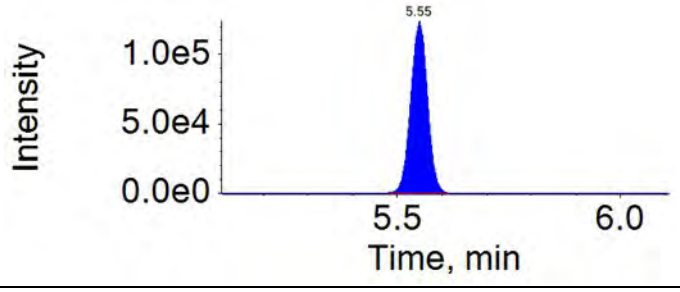




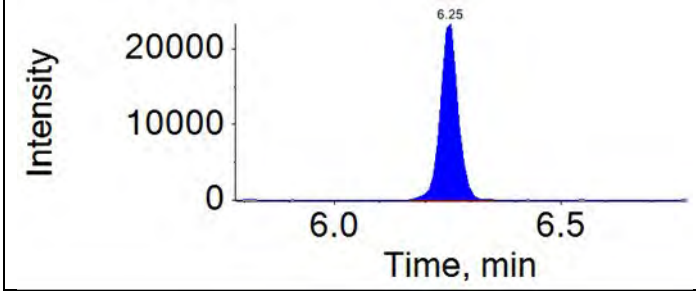
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

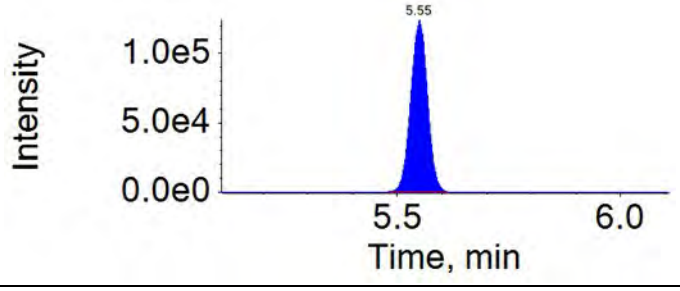
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



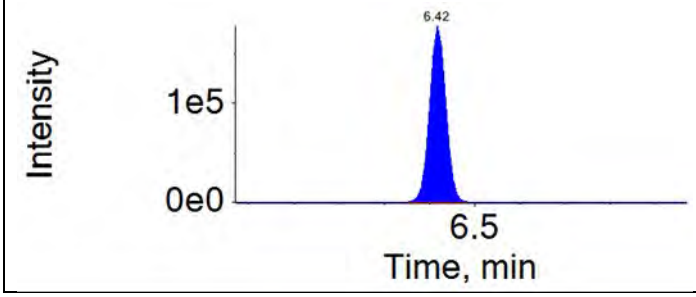


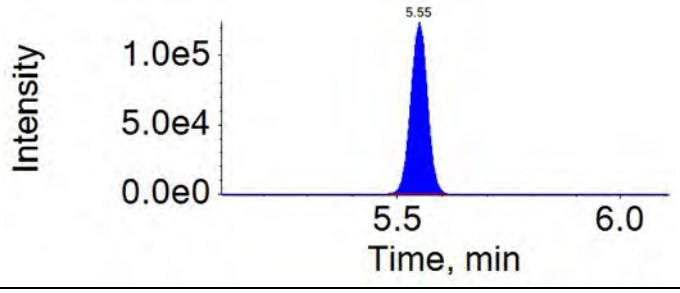
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



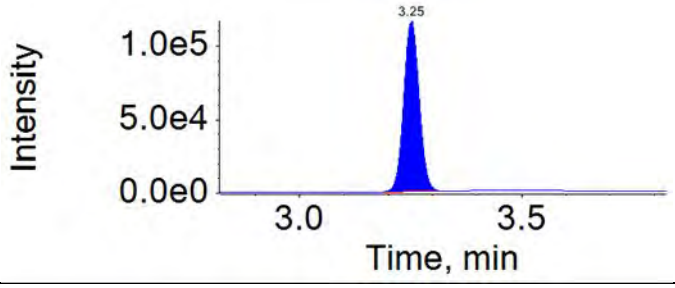


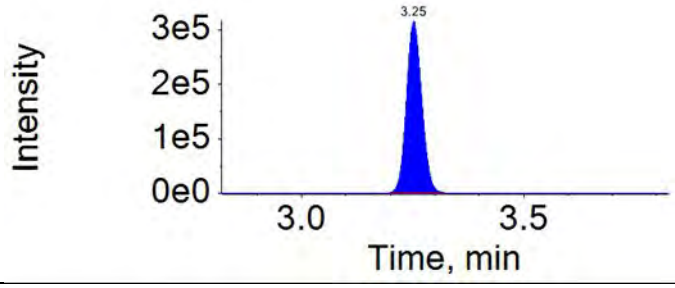
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

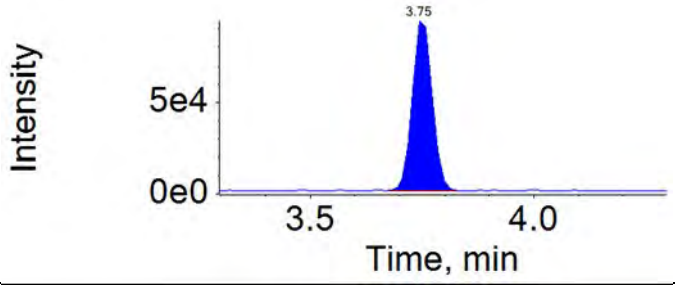
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

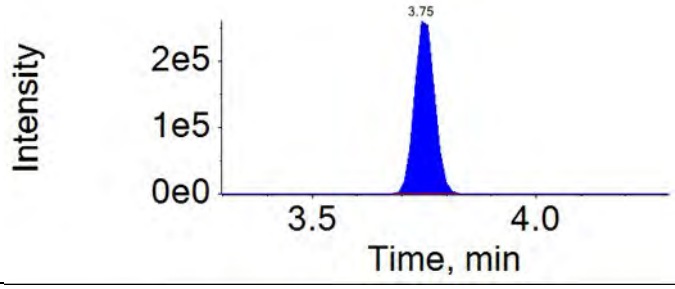
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



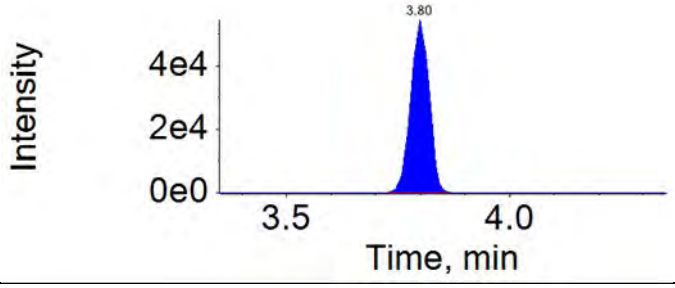


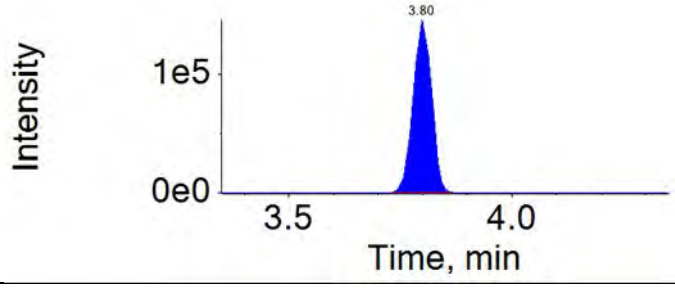
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



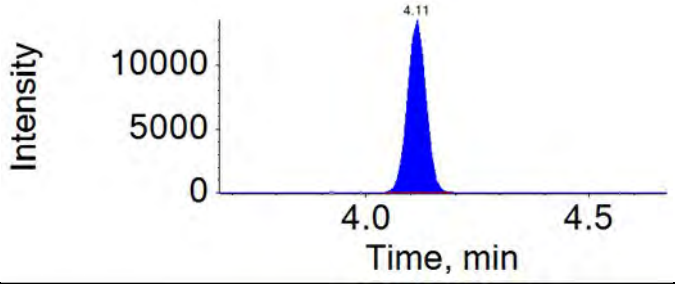


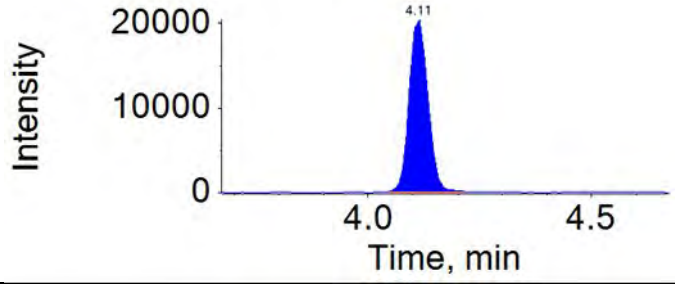
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



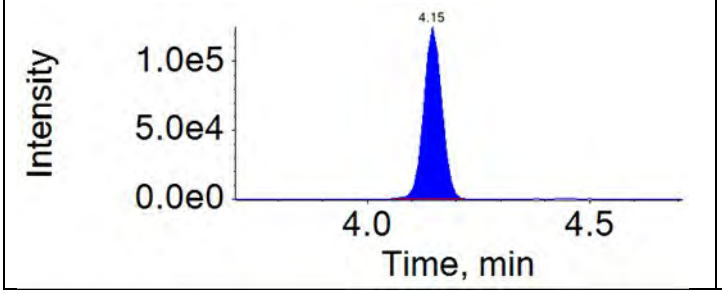


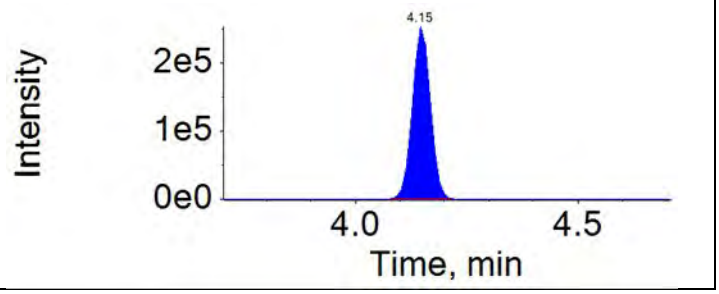
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

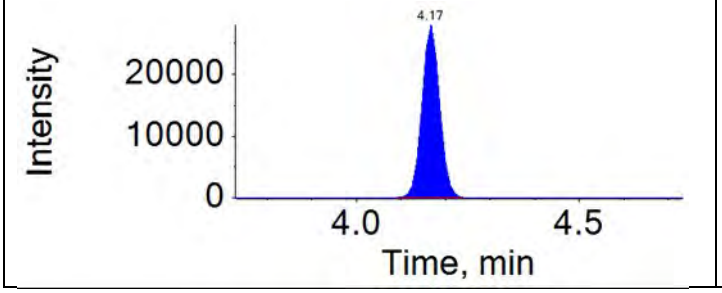
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

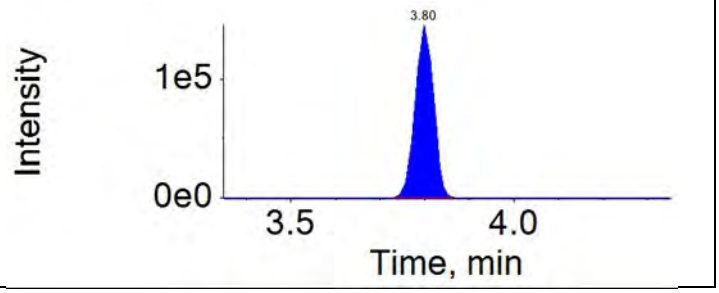
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



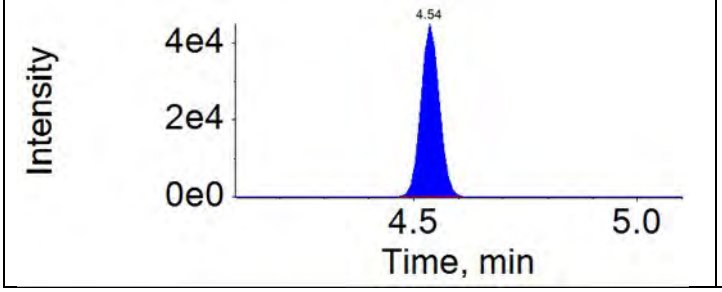


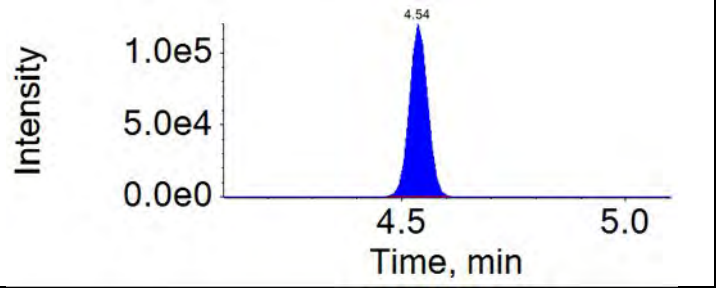
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



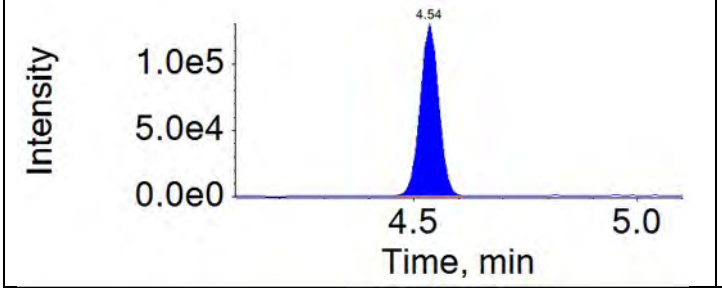


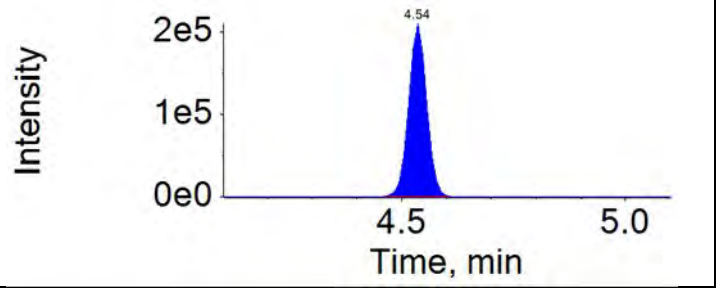
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





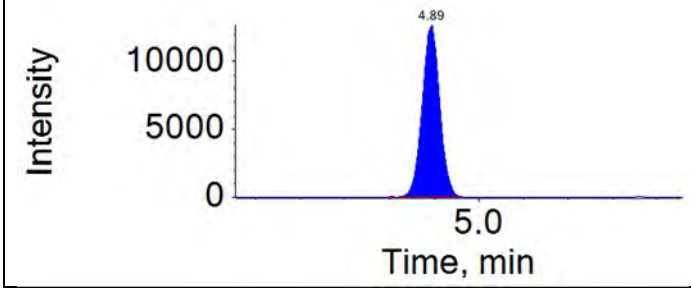
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

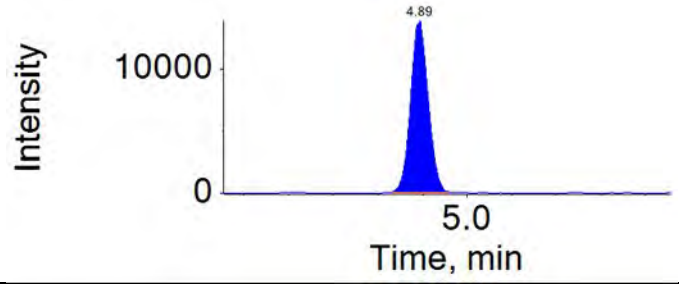




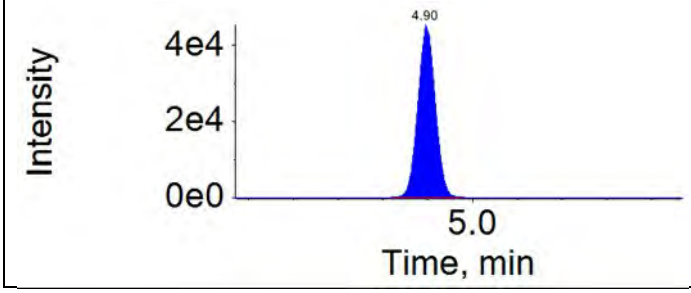
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

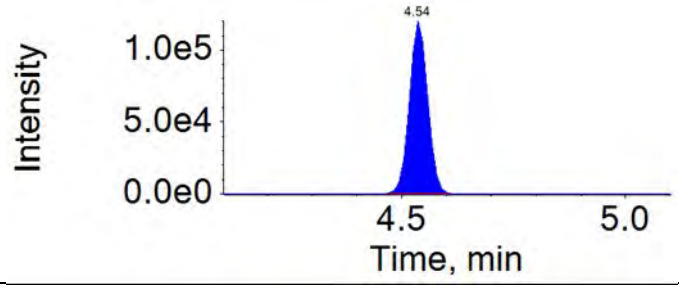
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



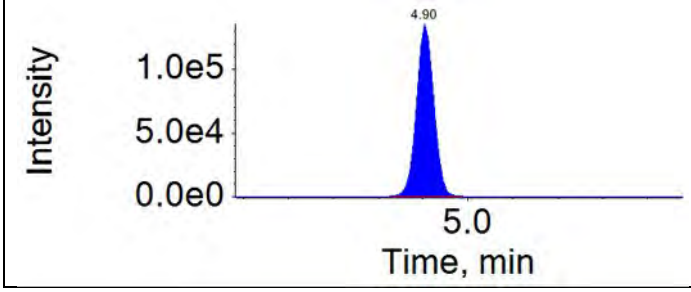


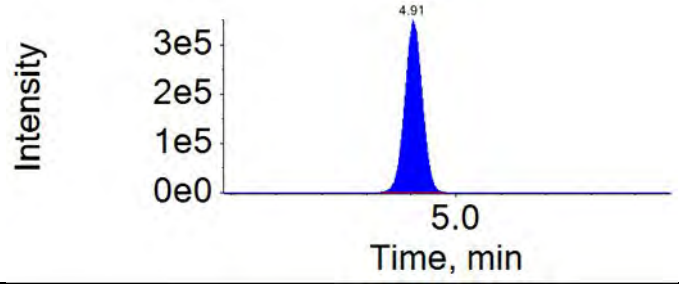
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



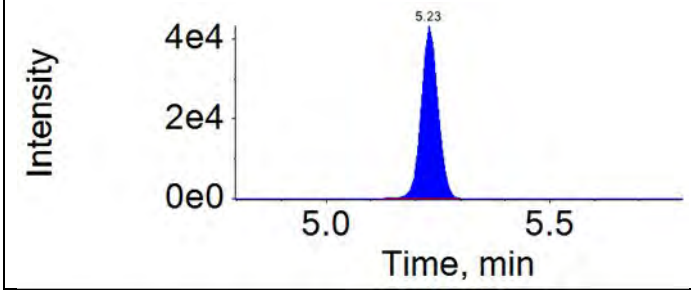


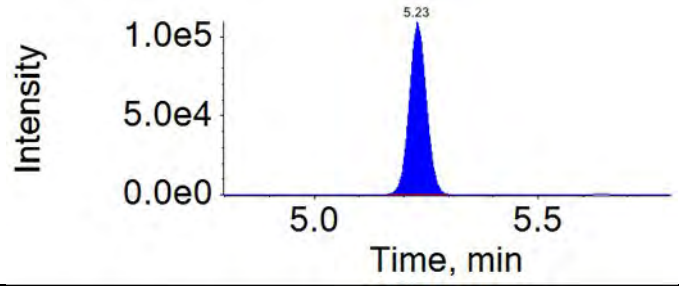
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



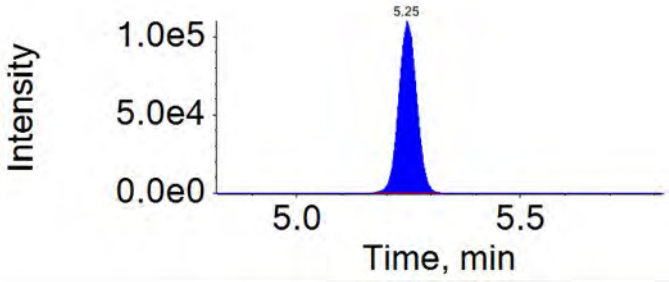


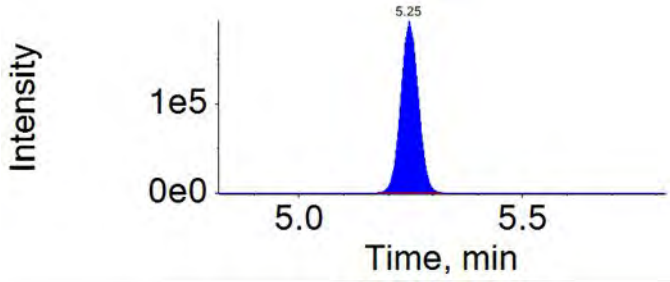
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

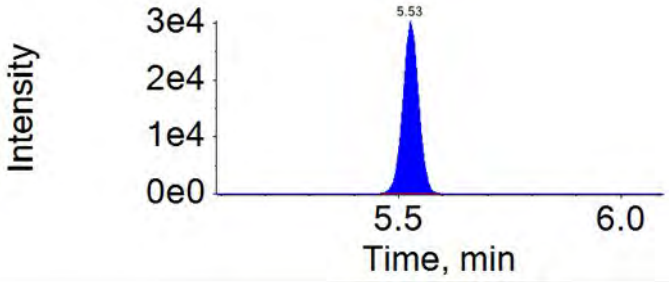
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

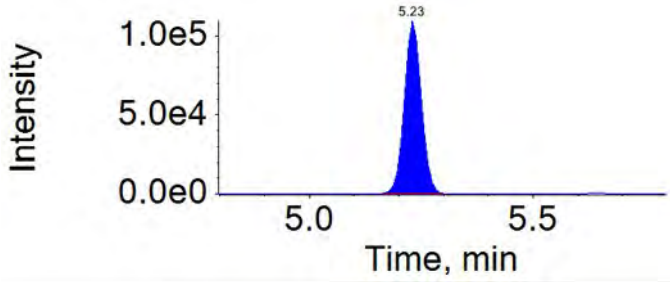
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



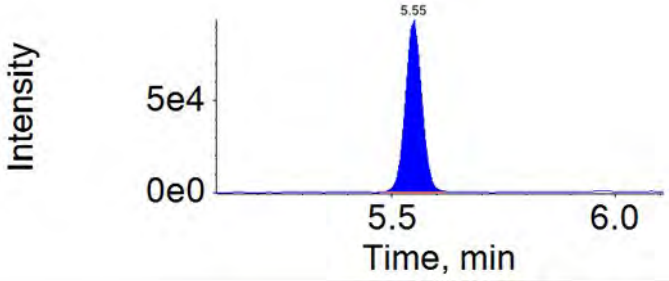


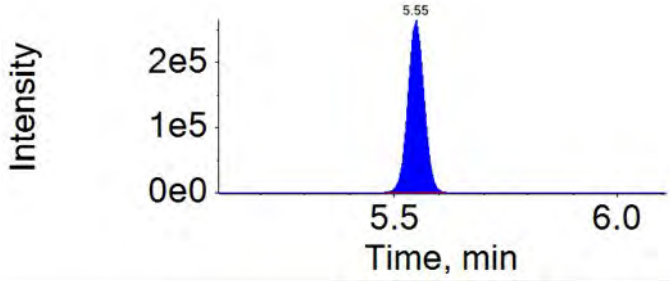
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



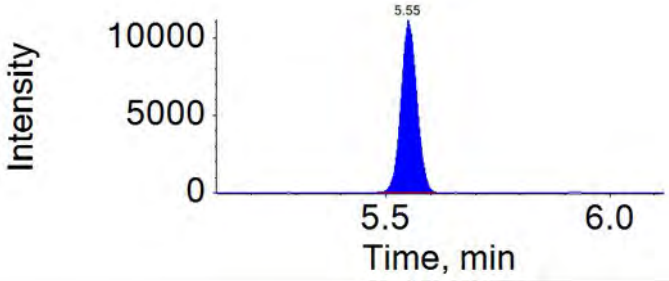


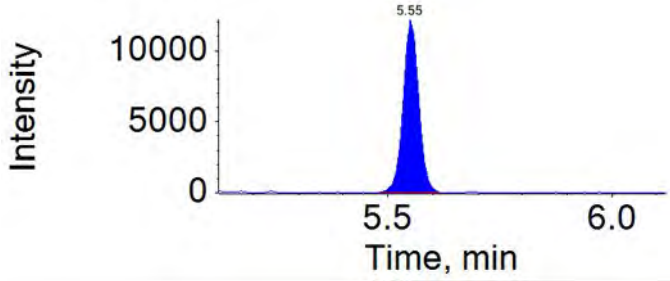
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



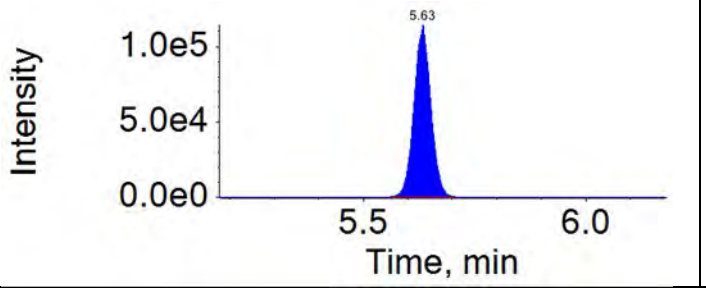


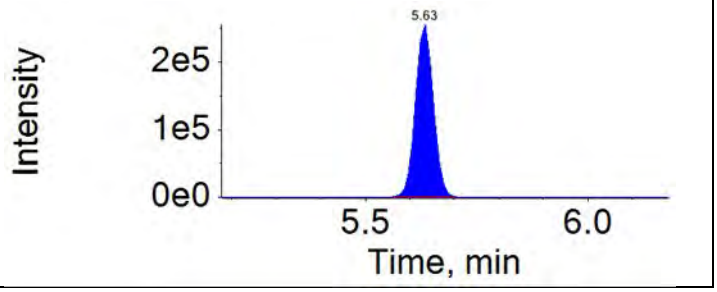
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

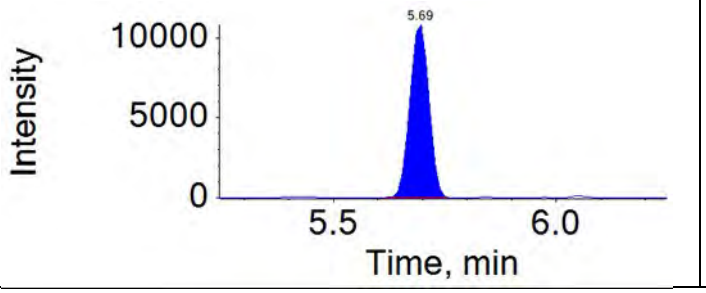
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

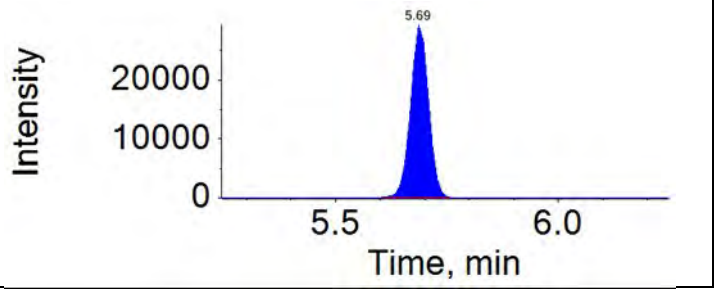
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



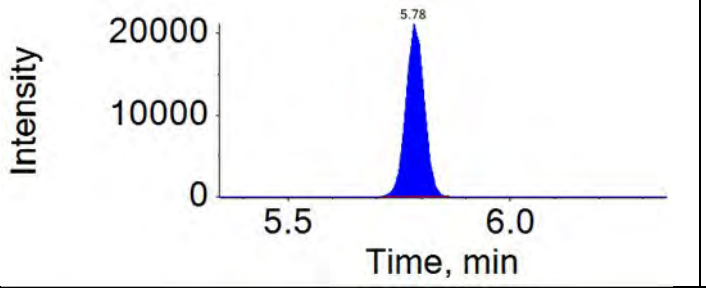


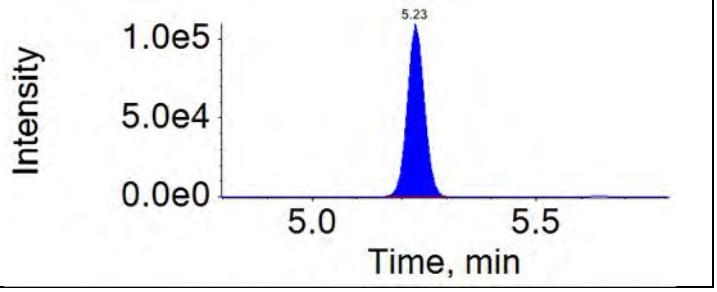
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



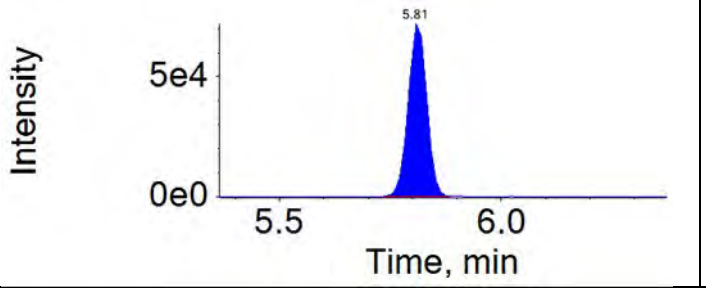


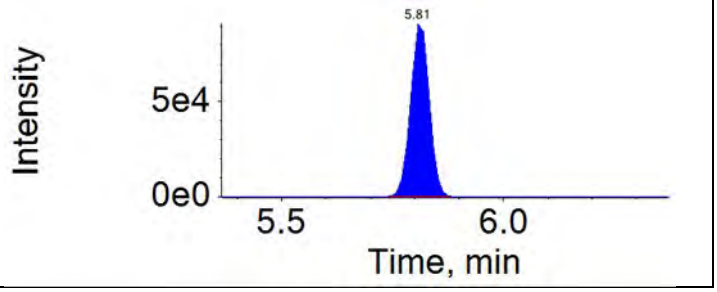
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



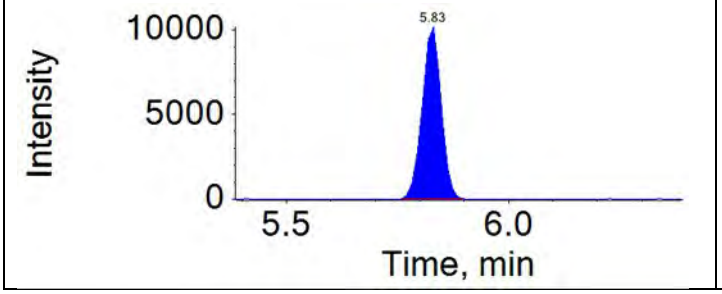


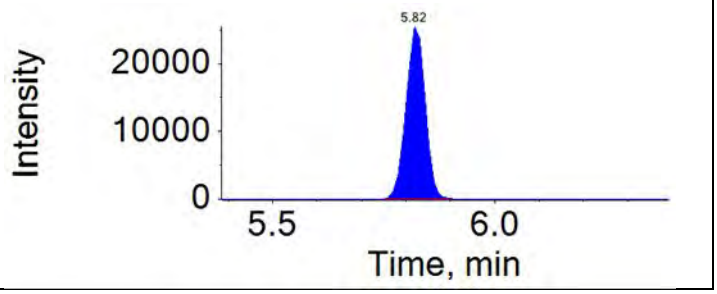
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

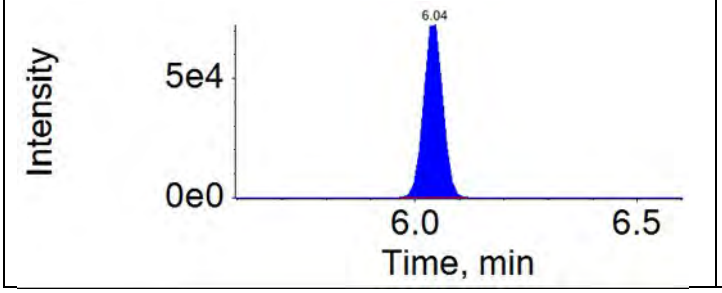
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

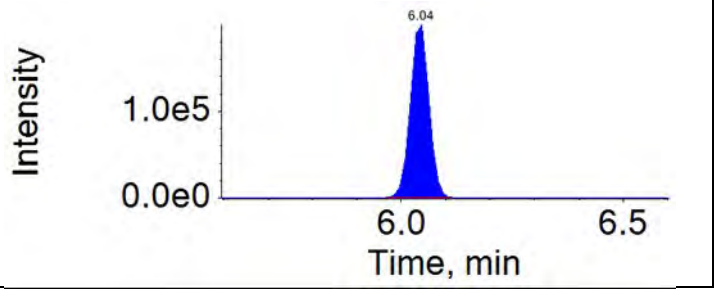
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



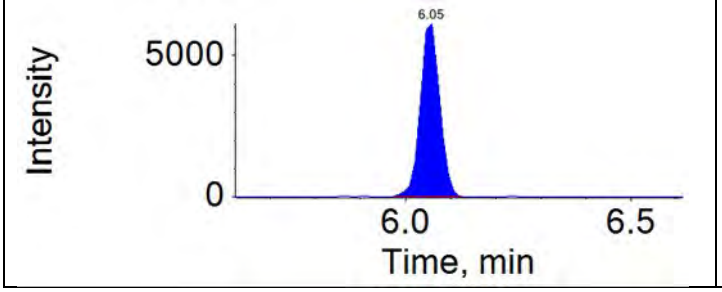


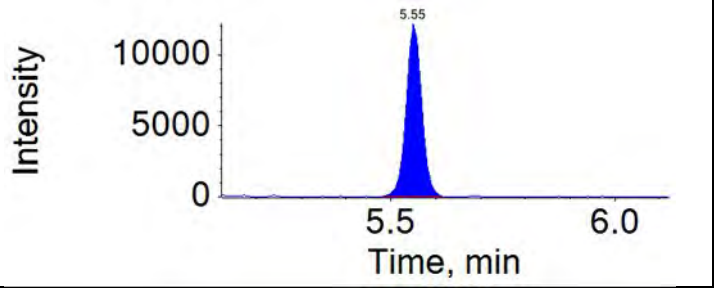
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



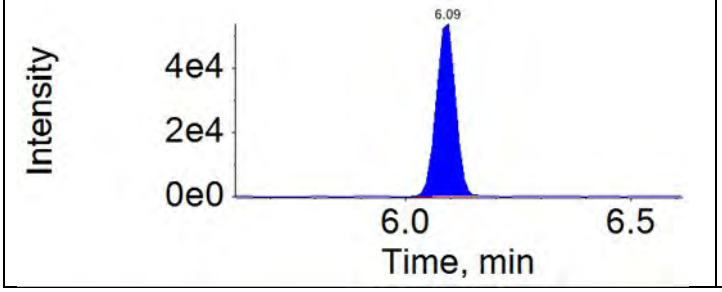


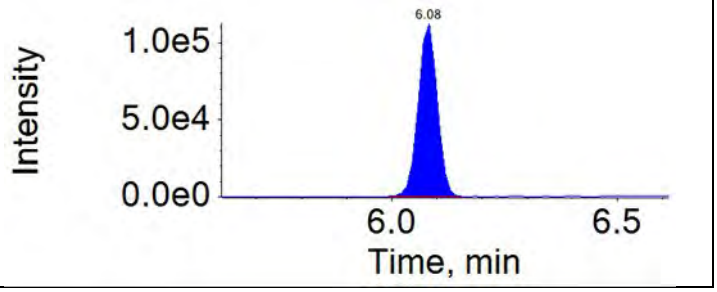
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



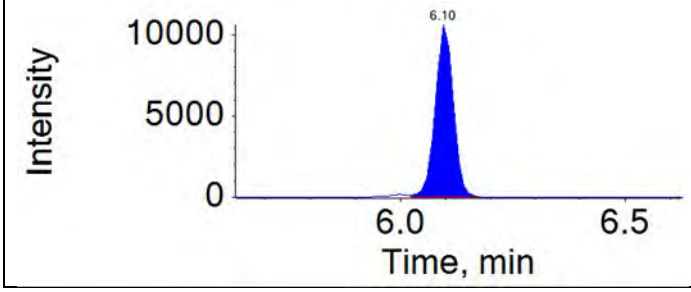


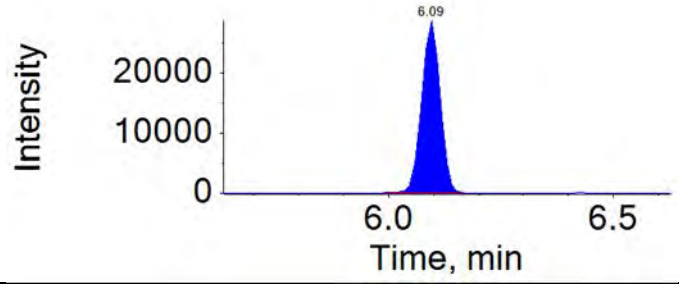
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

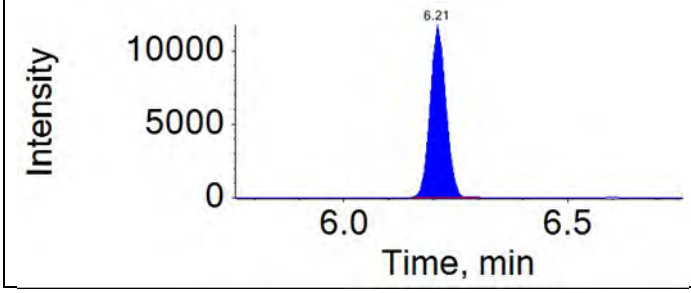
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

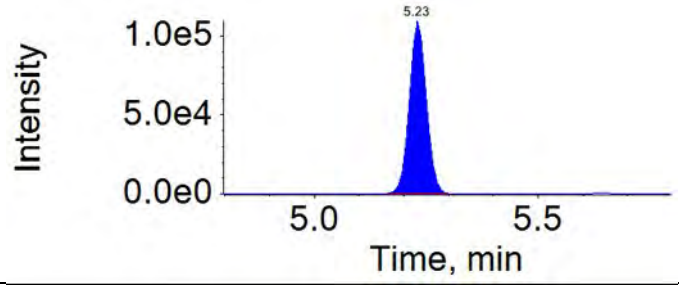
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



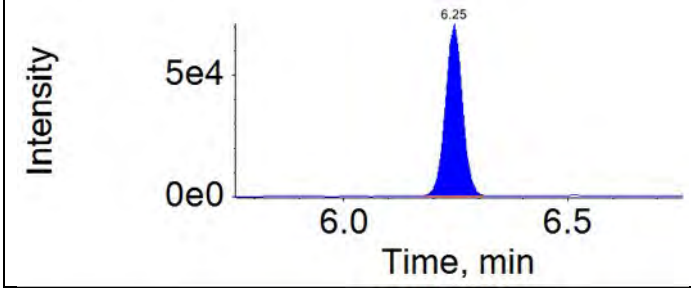


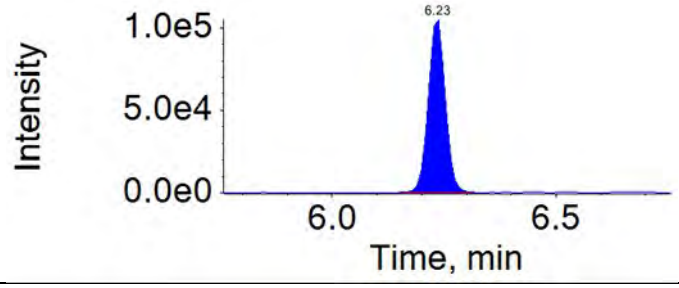
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



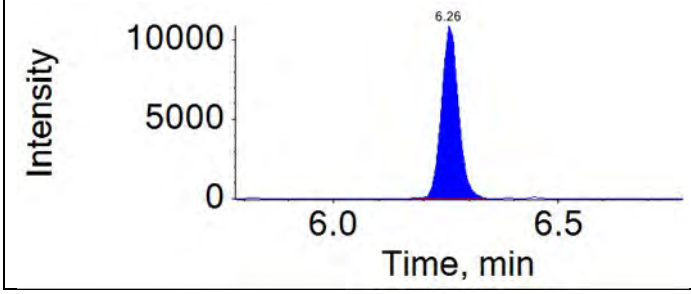


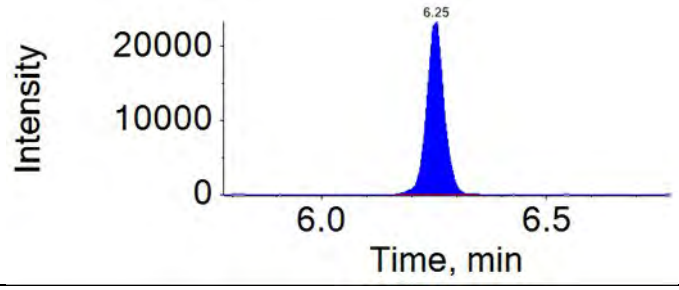
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



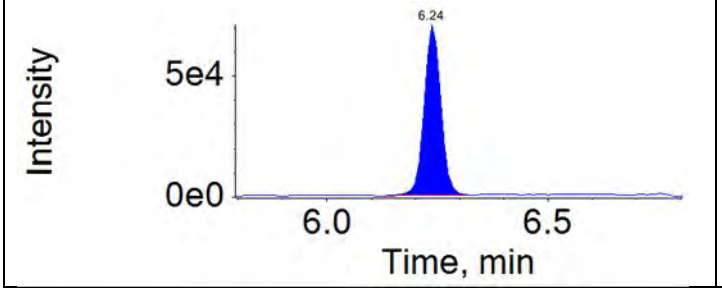


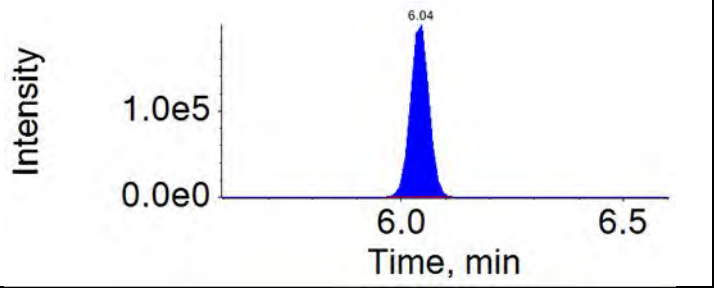
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

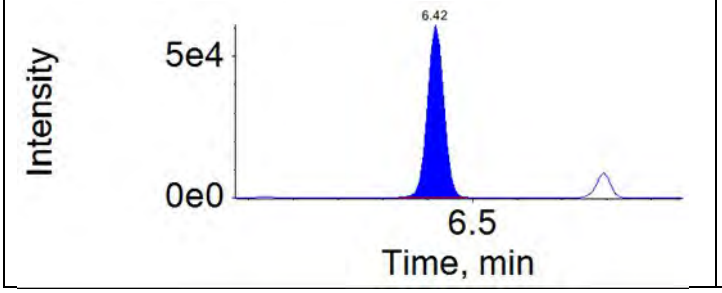
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

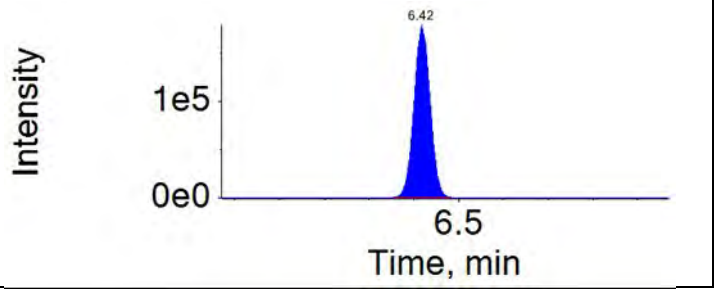
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



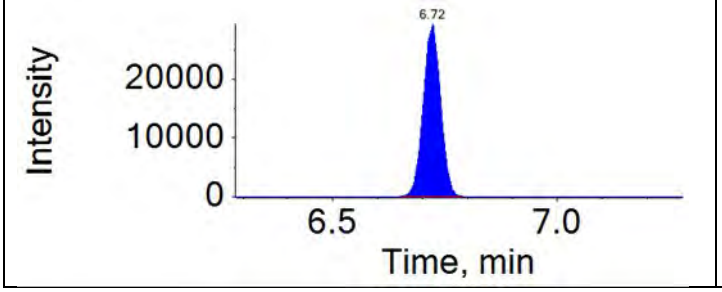


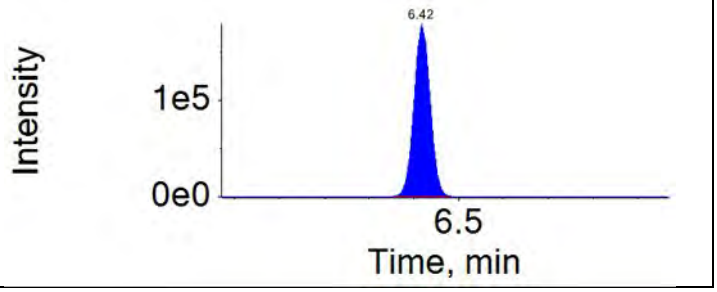
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



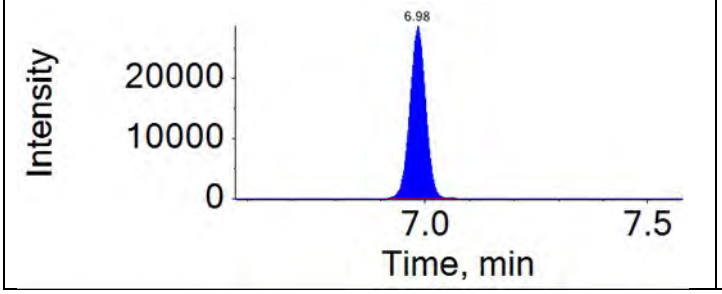


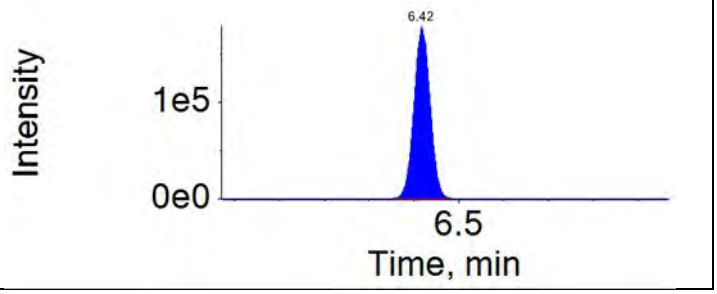
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



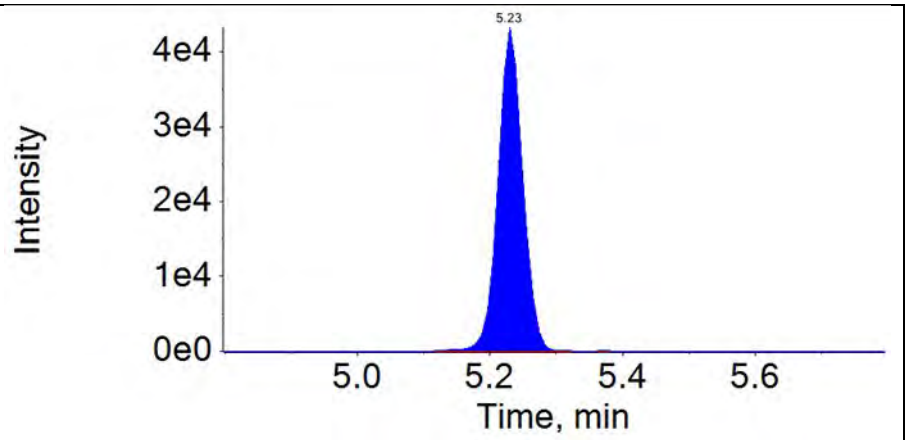


APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Results Table Name: 18NOV07DCCV1-4_DOD
Results Table Date: 11/7/2018 6:26:02 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.23
Peak Area:
112549.2
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-12.wiff
Sample Name:
CCV2_CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Results Table Name:	18NOV07DCCV1-4_DOD	**Acquisition Method:**	18AUG13_3uL.dam
Results Table Date:	11/7/2018 6:26:02 PM	**QMethod File:**	MQ4-18AUG13

Ion Ratio Report

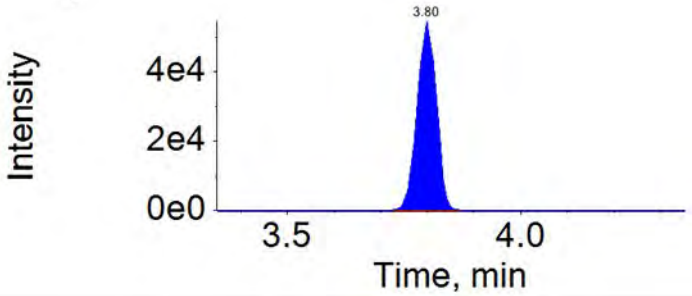
Sample Name: CCV2_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07D-12.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	157076.1	A	N/A	0.3651			
PFBS_2	3.80	1.00	57345.8	A	N/A	0.3651	3	50	
4:2-FTS	4.11	1.00	38952.4	A	N/A	0.6438			
4:2-FTS_2	4.11	1.00	25076.4	A	N/A	0.6438	0	50	
PFHxA	4.15	1.00	353783.1	A	N/A	0.0111			
PFHxA_2	4.15	1.00	3936.2	A	N/A	0.0111	-1	50	
PFPeS	4.17	1.10	76864.2	A	N/A	0.5681			
PFPeS_2	4.17	1.10	43668.5	A	N/A	0.5681	5	50	
PFHxS	4.54	1.00	126814.6	A	N/A	0.3365			
PFHxS_2	4.54	1.00	42676.0	A	N/A	0.3365	-6	50	
PFHpA	4.54	1.00	368935.3	A	N/A	0.0560			
PFHpA_2	4.53	1.00	20648.3	A	N/A	0.0560	-3	50	
6:2-FTS	4.89	1.00	34898.0	A	N/A	0.5524			
6:2-FTS_2	4.89	1.00	19279.4	A	N/A	0.5524	-19	50	
PFHpS	4.90	1.08	121935.5	A	N/A	0.4252			
PFHpS_2	4.90	1.08	51846.1	A	N/A	0.4252	8	50	
PFOA	4.90	1.00	361377.7	A	N/A	0.0514			
PFOA_2	4.90	1.00	18574.4	A	N/A	0.0514	-19	50	
PFOS	5.23	1.00	112316.2	M	N/A	0.3233			
PFOS_2	5.23	1.00	36314.7	A	N/A	0.3233	-8	50	
PFNA	5.25	1.00	304718.7	A	N/A	0.0148			
PFNA_2	5.25	1.00	4523.0	A	N/A	0.0148	-28	50	
PFNS	5.53	1.06	74275.5	A	N/A	0.4666			
PFNS_2	5.53	1.06	34659.2	A	N/A	0.4666	-4	50	
PFDA	5.55	1.00	235396.8	A	N/A	0.0068			
PFDA_2	5.55	1.00	1597.6	A	N/A	0.0068	25	50	
8:2-FTS	5.55	1.00	27244.6	A	N/A	0.5918			
8:2-FTS_2	5.55	1.00	16124.4	A	N/A	0.5918	-5	50	
NMeFOSAA	5.69	1.00	32038.6	A	N/A	0.2254			
NMeFOSAA_2	5.69	1.00	7221.6	A	N/A	0.2254	4	50	
PFDS	5.78	1.11	60808.7	A	N/A	0.5077			
PFDS_2	5.79	1.11	30871.3	A	N/A	0.5077	11	50	
PFUnDA	5.81	1.00	209375.3	A	N/A	0.0033			
PFUnDA_2	5.81	1.00	700.9	A	N/A	0.0033	10	50	
NEtFOSAA	5.83	1.00	30206.4	A	N/A	0.5806			
NEtFOSAA_2	5.83	1.00	17537.1	A	N/A	0.5806	-4	50	
PFDoDA	6.04	1.00	219293.5	A	N/A	0.0118			
PFDoDA_2	6.04	1.00	2580.7	A	N/A	0.0118	12	50	
10:2-FTS	6.05	1.09	18424.6	A	N/A	0.6509			
10:2-FTS_2	6.06	1.09	11992.6	A	N/A	0.6509	-9	50	
PFTrDA	6.24	1.03	182926.3	A	N/A	0.0087			
PFTrDA_2	6.25	1.03	1585.6	A	N/A	0.0087	-9	50	
PFTeDA	6.42	1.00	153584.9	A	N/A	0.0057			
PFTeDA_2	6.42	1.00	880.8	A	N/A	0.0057	6	50	
PFHxDA	6.72	1.05	78639.3	A	N/A	0.0577			
PFHxDA_2	6.72	1.05	4537.1	A	N/A	0.0577	-2	50	
PFODA	6.98	1.09	70028.7	A	N/A	0.0257			
PFODA_2	6.98	1.09	1800.5	A	N/A	0.0257	0	50	

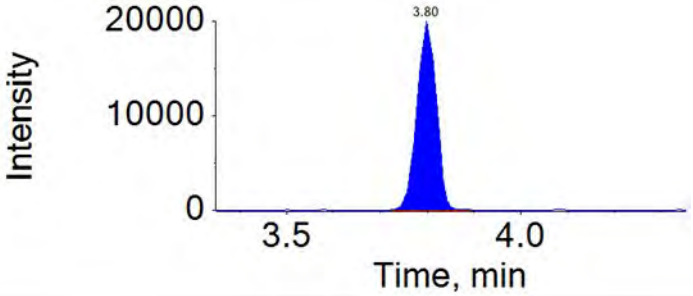
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

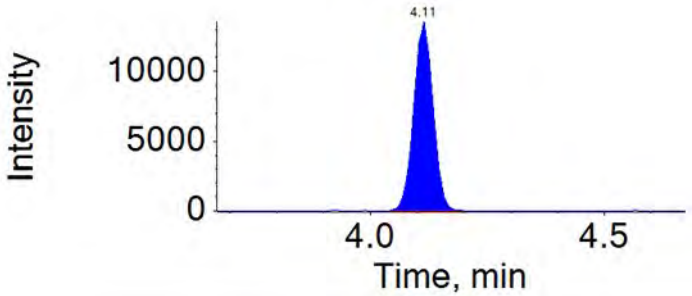
Component: PFBS
Primary Mass: 299.0 / 80.0



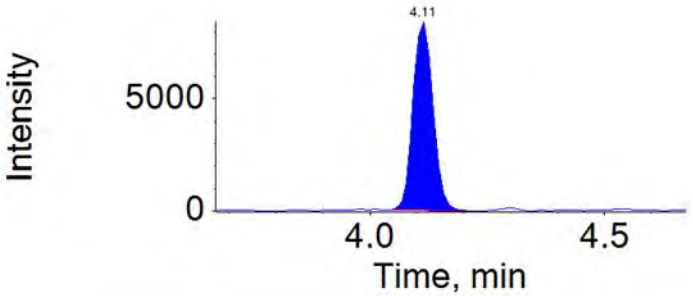
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



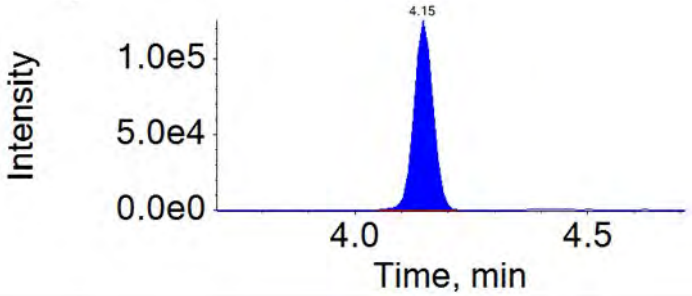
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



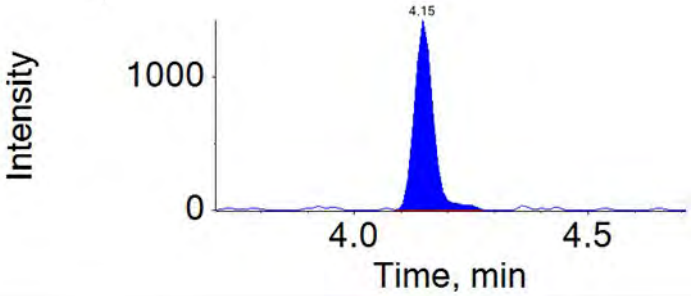
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



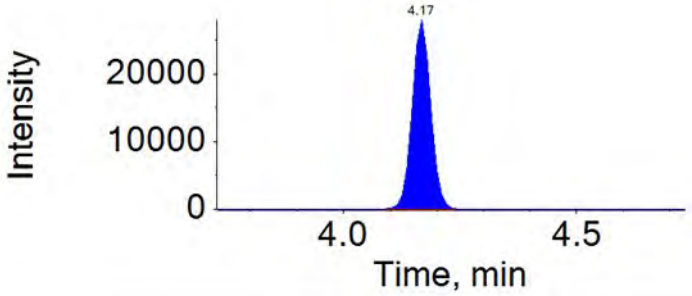
Component: PFHxA
Primary Mass: 313.0 / 269.0



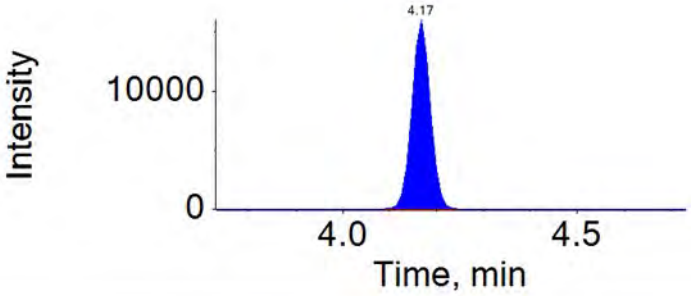
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



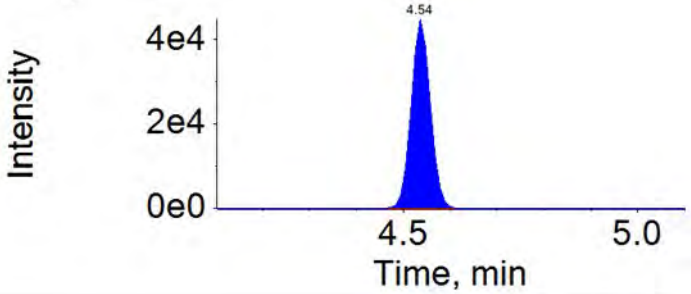
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



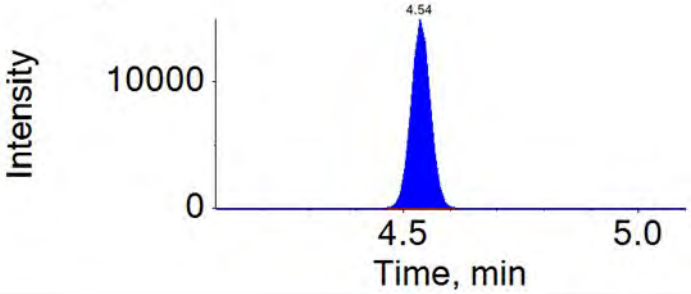
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

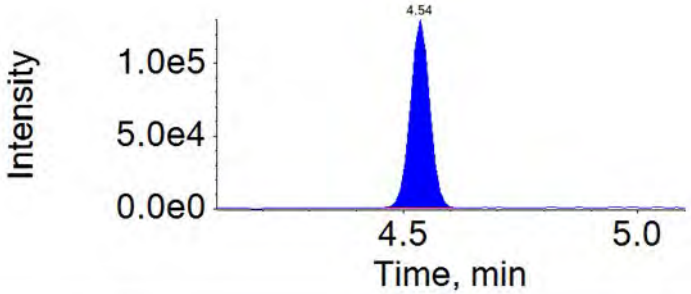
Component: PFHxS
Primary Mass: 399.0 / 80.0



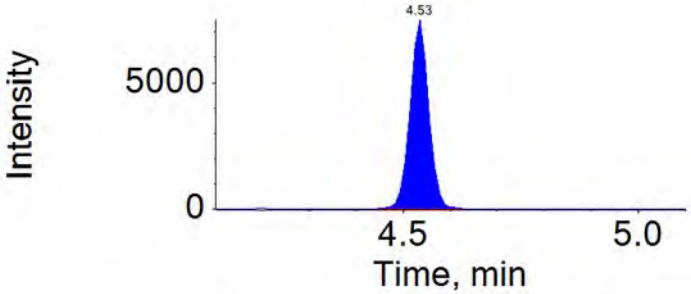
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



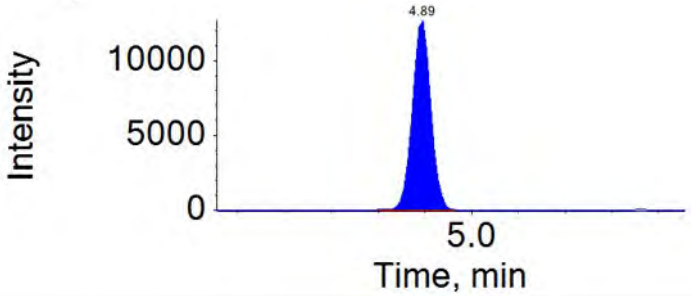
Component: PFHpA
Primary Mass: 363.0 / 319.0



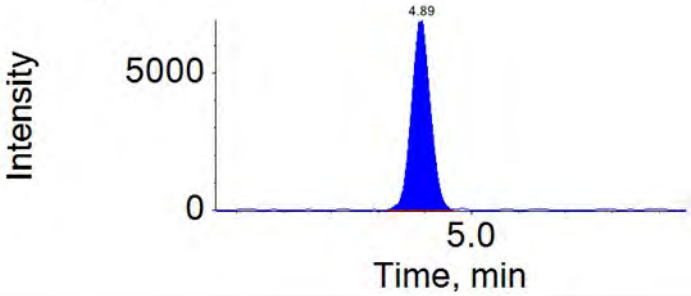
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



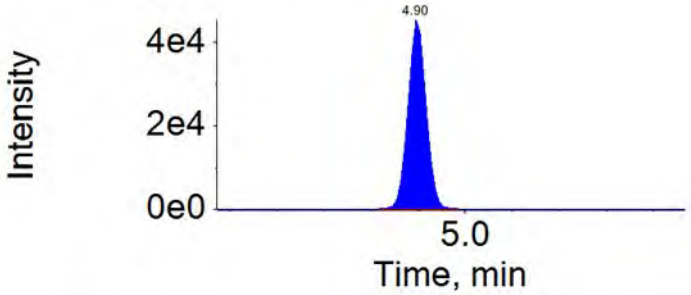
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



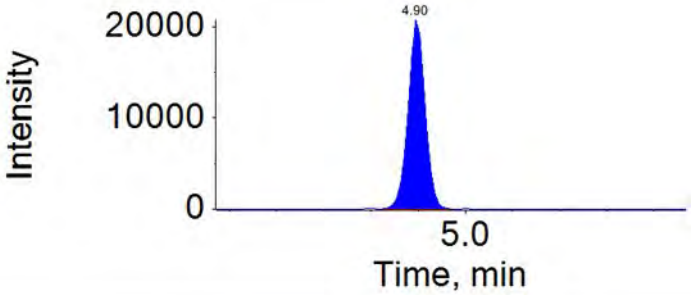
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



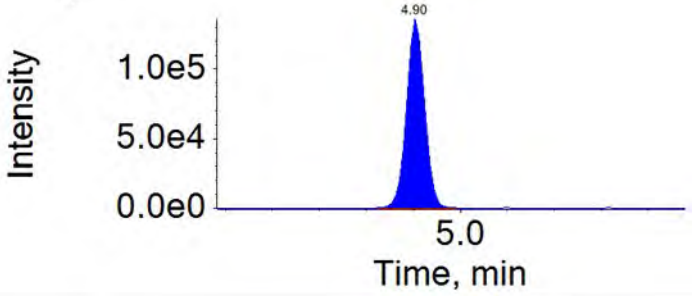
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



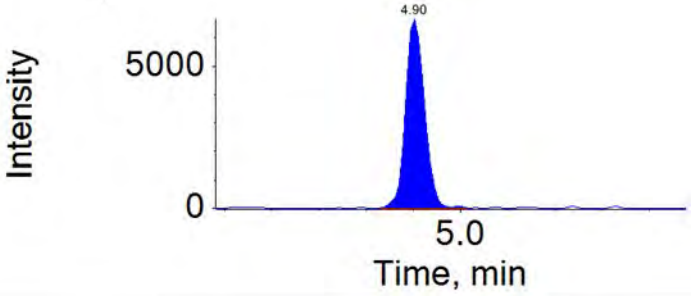
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

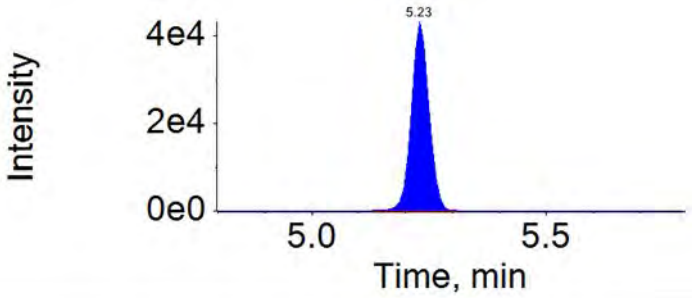
Component: PFOA
Primary Mass: 413.0 / 369.0



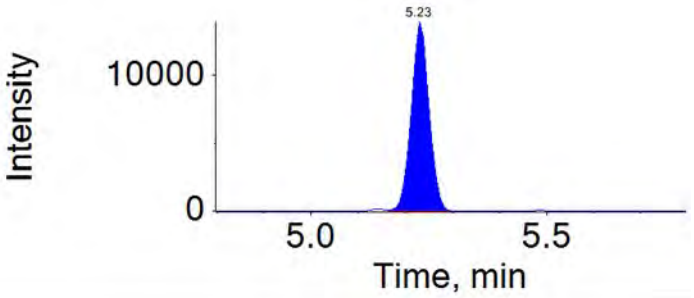
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



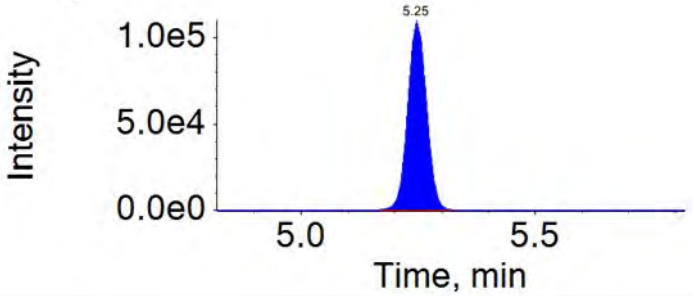
Component: PFOS
Primary Mass: 499.0 / 80.0



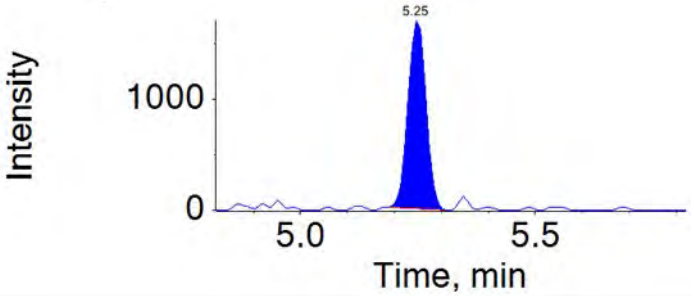
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



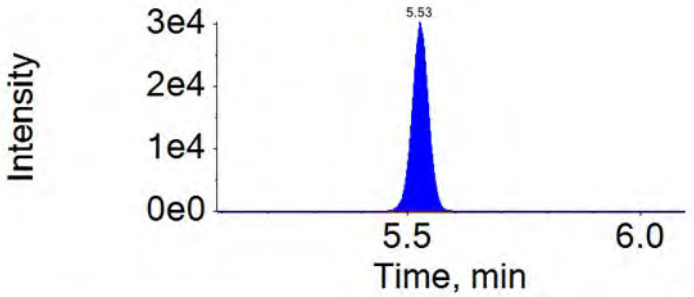
Component: PFNA
Primary Mass: 463.0 / 419.0



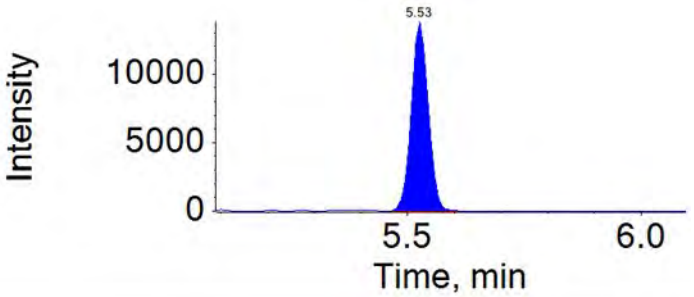
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



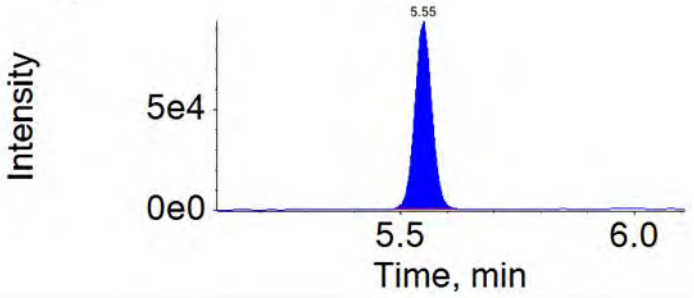
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



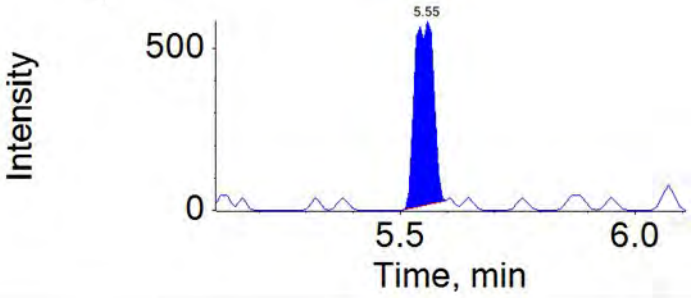
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

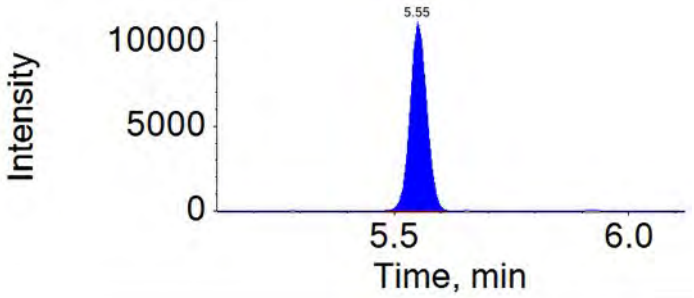
Component: PFDA
Primary Mass: 513.0 / 469.0



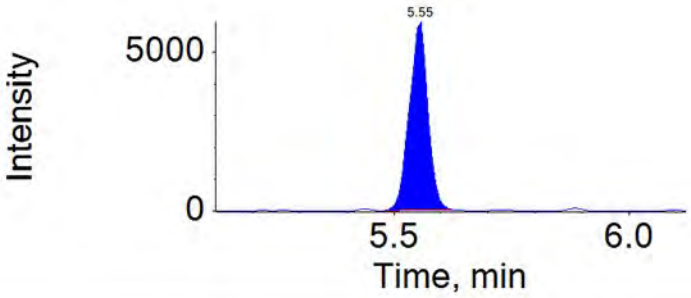
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



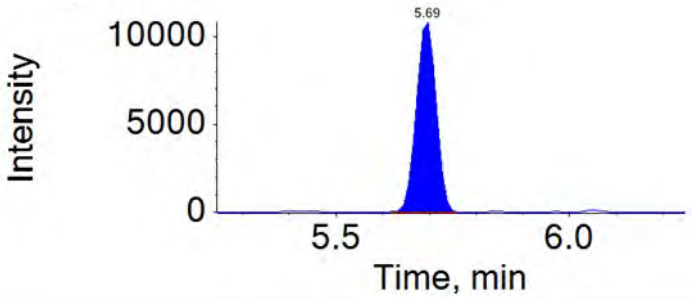
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



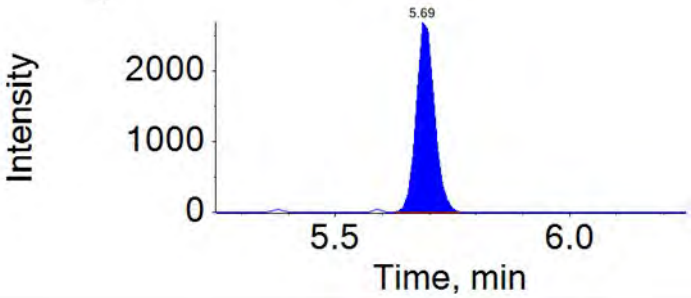
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



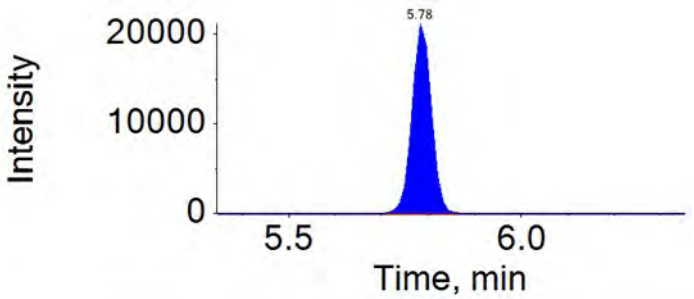
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



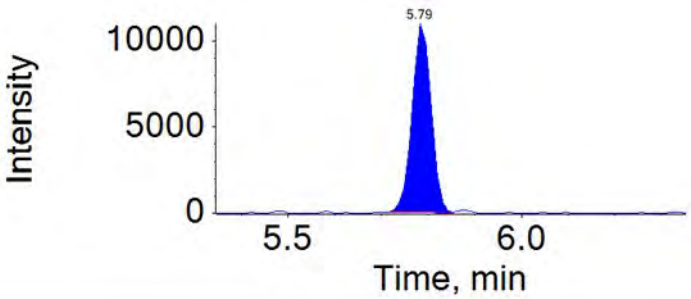
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



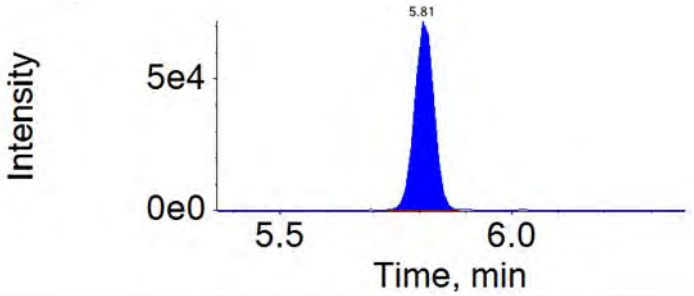
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



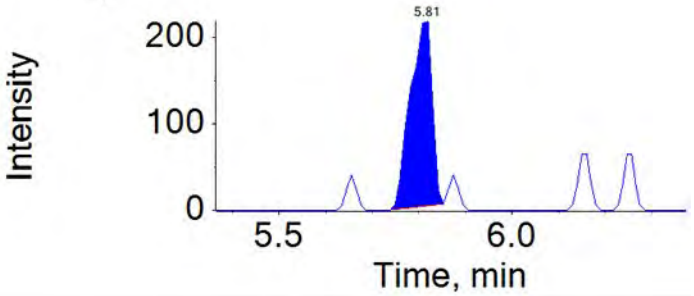
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

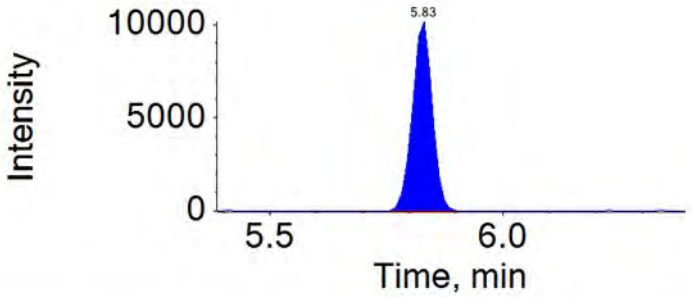
Component: PFUnDA
Primary Mass: 563.0 / 519.0



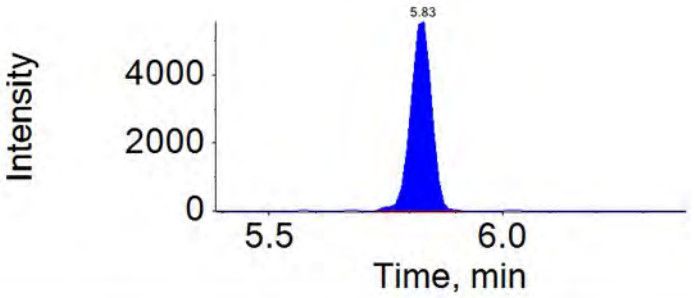
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



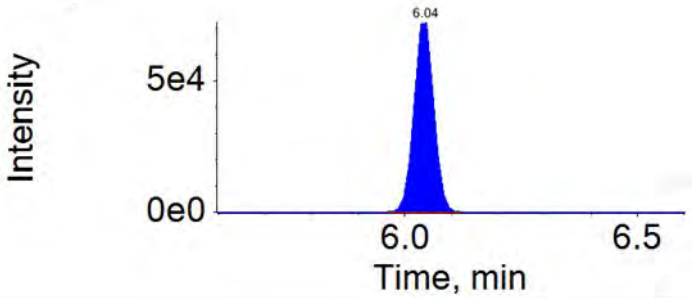
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



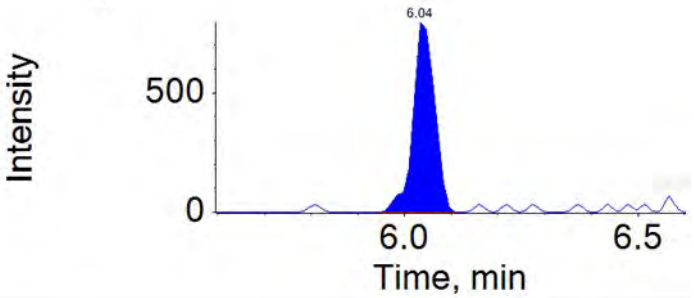
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



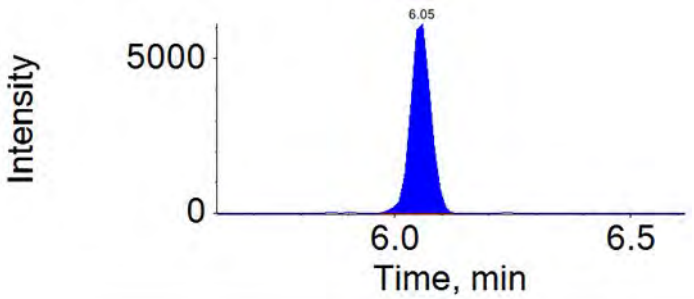
Component: PFDoDA
Primary Mass: 613.0 / 569.0



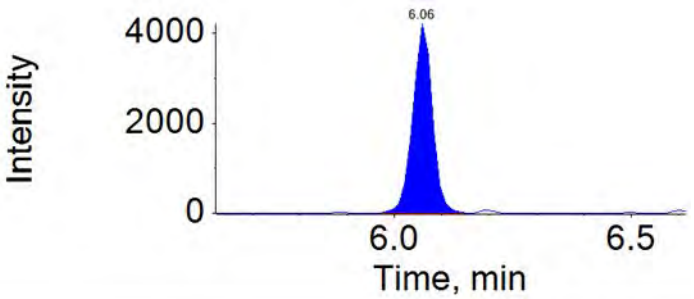
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



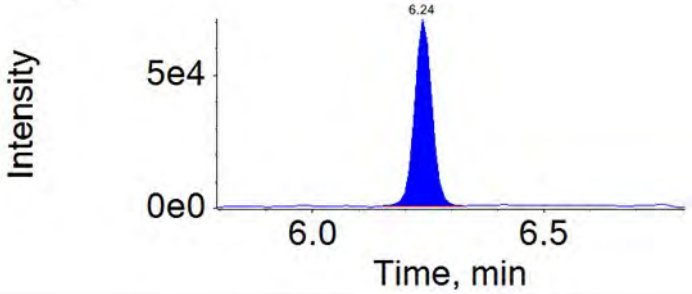
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



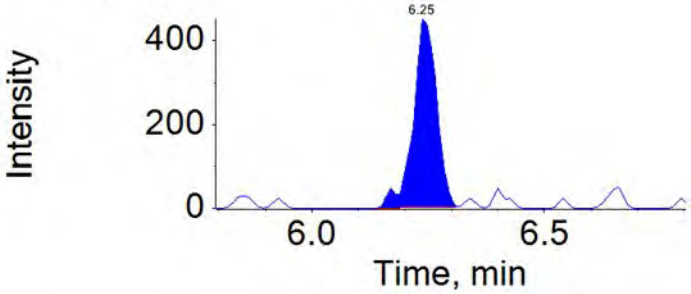
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



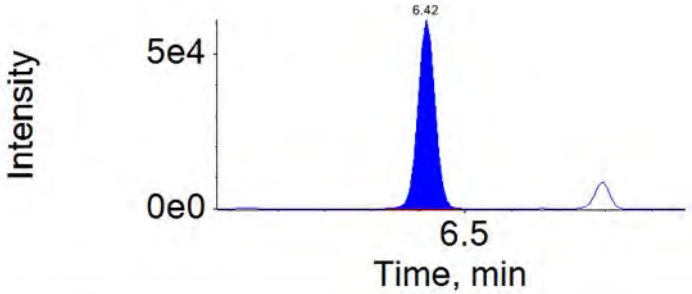
Component: PFTrDA
Primary Mass: 663.0 / 619.0



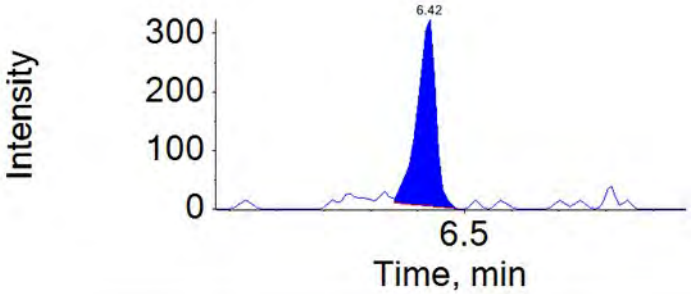
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



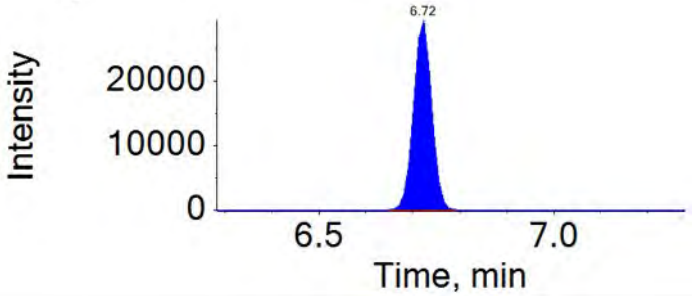
Component: PFTeDA
Primary Mass: 713.0 / 669.0



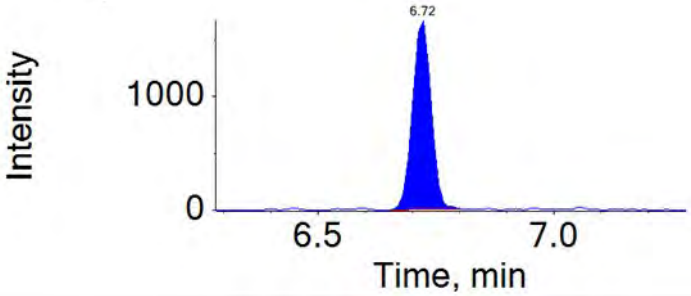
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



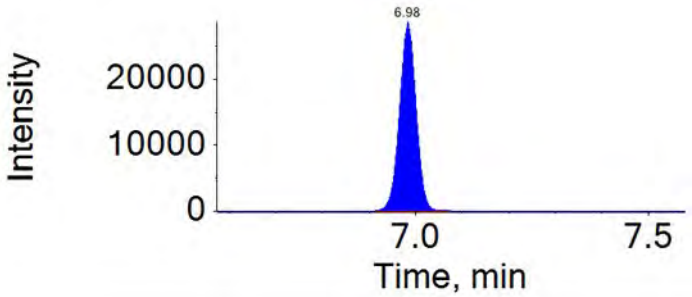
Component: PFHxDA
Primary Mass: 813.0 / 769.0



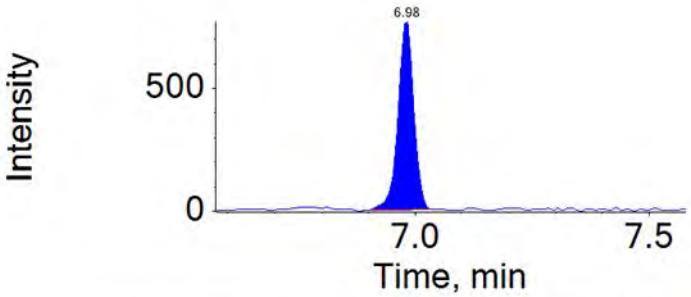
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



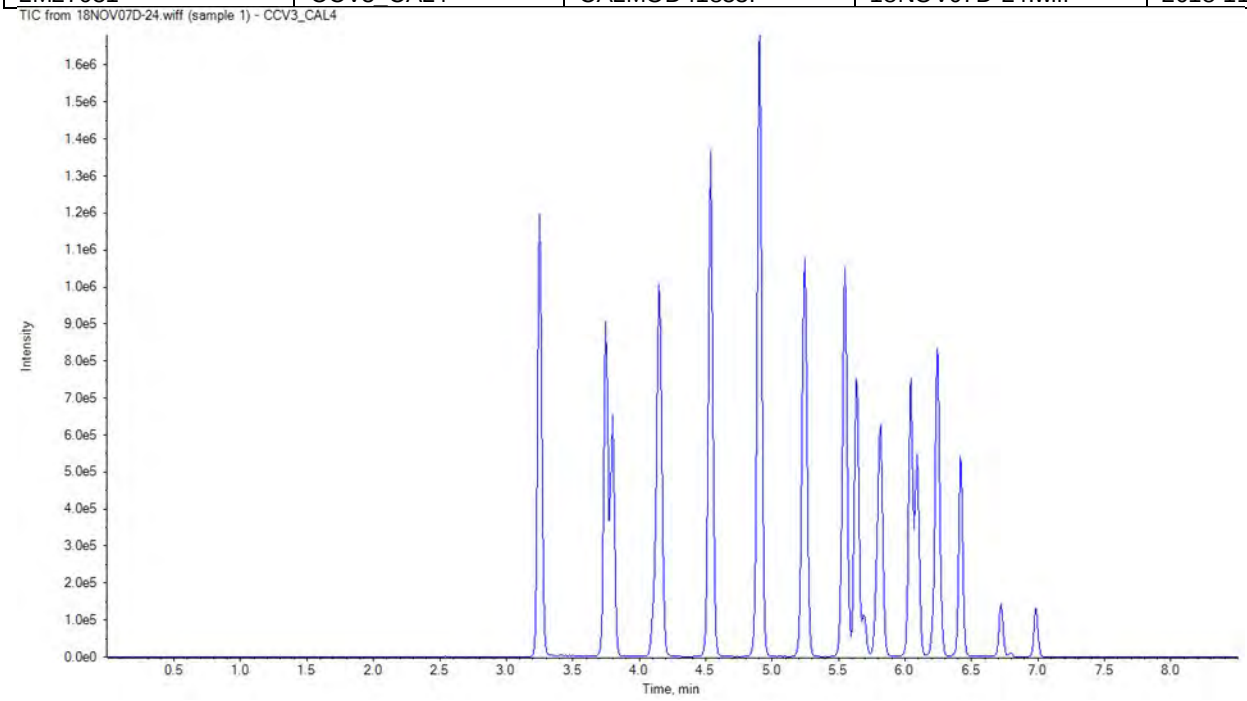
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By HMK at 2:57 pm, 11/11/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV3_CAL4	CALMOD41833F	18NOV07D-24.wiff	2018-11-07T14:48:00



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	718340.8	730410.6	-2	50	
13C2-PFOA	5.0	525023.1	524423.6	0	50	
13C4-PFOS	4.8	271544.5	274061.7	-1	50	
13C2-PFDA	5.0	317516.2	311442.1	2	50	

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV3_CAL4	CALMOD41833F	18NOV07D-24.wiff	2018-11-07T14:48:00

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	1151890.3	10	13C4-PFBA	782874.6	5.0	1.471	3.25	1.000	8.000	8.611	8	30	
PFPeA	1202909.2	12	13C5-PFPeA	819794.7	5.0	1.467	3.75	1.000	8.000	8.720	9	30	
PFBS	653387.1	11	13C3-PFBS	443113.3	4.7	1.475	3.80	1.000	7.080	7.434	5	30	
4:2-FTS	161644.7	11	13C2-4:2-FTS	55248.6	4.7	2.926	4.11	1.000	7.472	7.866	5	30	
PFHxA	1392034.5	12	13C5-PFHxA	708016.1	5.0	1.966	4.15	1.000	8.000	8.432	5	30	
PFPeS	354542.6	11	13C3-PFBS	443113.3	4.7	0.800	4.17	1.100	7.500	7.892	5	30	
PFHxS	502548.7	12	13C3-PFHxS	345453.3	4.7	1.455	4.54	1.000	7.560	7.374	-2	30	
PFHpA	1450230.1	12	13C4-PFHpA	588837.4	5.0	2.463	4.54	1.000	8.000	8.283	4	30	
6:2-FTS	130208.9	11	13C2-6:2-FTS	38439.7	4.8	3.387	4.89	1.000	7.584	8.450	11	30	
PFHpS	505602.4	11	13C3-PFHxS	345453.3	4.7	1.464	4.90	1.080	7.610	7.657	1	30	
PFOA	1477626.7	11	13C8-PFOA	976782.8	5.0	1.513	4.91	1.000	8.000	8.518	6	30	
PFOS	442468.7	11	13C8-PFOS	295520.4	4.8	1.497	5.23	1.000	7.650	7.764	1	30	
PFNA	1184653.0	11	13C9-PFNA	522333.6	5.0	2.268	5.25	1.000	8.000	8.476	6	30	
PFNS	317230.6	10	13C8-PFOS	295520.4	4.8	1.073	5.53	1.060	7.680	8.511	11	30	
PFDA	998430.4	11	13C6-PFDA	677064.5	5.0	1.475	5.55	1.000	8.000	8.113	1	30	
8:2-FTS	108765.3	11	13C2-8:2-FTS	29154.7	4.8	3.731	5.55	1.000	7.664	8.409	10	30	
PFOSA	1133583.1	11	13C8-PFOSA	696392.5	5.0	1.628	5.63	1.000	8.000	8.799	10	30	
NMeFOSAA	140151.7	12	d3-NMeFOSAA	81528.0	5.0	1.719	5.69	1.000	8.000	8.845	11	30	
PFDS	253333.6	12	13C8-PFOS	295520.4	4.8	0.857	5.79	1.110	7.700	8.189	6	30	
PFUnDA	888633.9	12	13C7-PFUnDA	283267.0	5.0	3.137	5.81	1.000	8.000	8.996	12	30	
NEtFOSAA	122902.1	12	d5-NEtFOSAA	70744.9	5.0	1.737	5.83	1.000	8.000	7.466	-7	30	
PFDoDA	897491.0	12	13C2-PFDoDA	590879.3	5.0	1.519	6.04	1.000	8.000	8.232	3	30	
10:2-FTS	74932.7	12	13C2-8:2-FTS	29154.7	4.8	2.570	6.06	1.090	7.712	8.003	4	30	
NMePFOSAE	674097.6	12	d7-NMePFOSAE	336944.7	5.0	2.001	6.09	1.000	8.000	8.965	12	30	
NMePFOSA	130349.1	12	d3-NMePFOSA	88868.5	5.0	1.467	6.10	1.000	8.000	8.210	3	30	
PFDoS	118826.7	11	13C8-PFOS	295520.4	4.8	0.402	6.21	1.190	7.740	7.761	0	30	
NEtPFOSAE	736880.1	11	d9-NEtPFOSAE	284367.9	5.0	2.591	6.25	1.000	8.000	8.307	4	30	
NEtPFOSA	127621.9	11	d5-NEtPFOSA	72006.3	5.0	1.772	6.26	1.000	8.000	7.806	-2	30	
PFTrDA	746362.9	11	13C2-PFDoDA	590879.3	5.0	1.263	6.24	1.030	8.000	7.966	0	30	
PFTeDA	675574.7	11	13C2-PFTeDA	449441.0	5.0	1.503	6.42	1.000	8.000	8.827	10	30	
PFHxDA	288222.5	11	13C2-PFTeDA	449441.0	5.0	0.641	6.72	1.050	8.000	7.961	0	30	
PFODA	278149.1	10	13C2-PFTeDA	449441.0	5.0	0.619	6.98	1.090	8.000	8.866	11	30	

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV07DCCV1-4_DOD 11/7/2018 6:23:57 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV3_CAL4			**Data File:**		18NOV07D-24.wiff
Sample ID:	CALMOD41833F			**Acquis Date:**		2018-11-07T14:48:00
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCCV1-4_DOD
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	718340.8	730410.6	-2	50	
13C2-PFOA	5.0	525023.1	524423.6	0	50	
13C4-PFOS	4.8	271544.5	274061.7	-1	50	
13C2-PFDA	5.0	317516.2	311442.1	2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	782874.6	13C3-PFBA	718340.8	1.090	5.000	5.043	101	70-130	
E13C5-PFPeA	819794.7	13C3-PFBA	718340.8	1.141	5.000	4.972	99	70-130	
E13C3-PFBS	443113.3	13C3-PFBA	718340.8	0.617	4.650	4.527	97	70-130	
E13C2-4:2-FTS	55248.6	13C2-PFOA	525023.1	0.105	4.670	4.748	102	70-130	
E13C5-PFHxA	708016.1	13C2-PFOA	525023.1	1.349	5.000	4.961	99	70-130	
E13C3-PFHxS	345453.3	13C2-PFOA	525023.1	0.658	4.730	4.724	100	70-130	
E13C4-PFHpA	588837.4	13C2-PFOA	525023.1	1.122	5.000	5.102	102	70-130	
E13C2-6:2-FTS	38439.7	13C2-PFOA	525023.1	0.073	4.750	4.882	103	70-130	
E13C8-PFOA	976782.8	13C2-PFOA	525023.1	1.860	5.000	5.188	104	70-130	
E13C8-PFOS	295520.4	13C4-PFOS	271544.5	1.088	4.780	4.812	101	70-130	
E13C9-PFNA	522333.6	13C4-PFOS	271544.5	1.924	5.000	5.254	105	70-130	
E13C6-PFDA	677064.5	13C2-PFDA	317516.2	2.132	5.000	5.363	107	70-130	
E13C2-8:2-FTS	29154.7	13C2-PFDA	317516.2	0.092	4.790	4.859	101	70-130	
E13C8-PFOSA	696392.5	13C2-PFDA	317516.2	2.193	5.000	4.786	96	70-130	
Ed3-NMeFOSAA	81528.0	13C2-PFDA	317516.2	0.257	5.000	4.775	95	70-130	
E13C7-PFUnDA	283267.0	13C2-PFDA	317516.2	0.892	5.000	5.147	103	70-130	
Ed5-NEtFOSAA	70744.9	13C2-PFDA	317516.2	0.223	5.000	5.156	103	70-130	
E13C2-PFDoDA	590879.3	13C2-PFDA	317516.2	1.861	5.000	5.017	100	70-130	
Ed7-NMePFOSAE	336944.7	13C2-PFDA	317516.2	1.061	5.000	4.935	99	70-130	
Ed3-NMePFOSA	88868.5	13C2-PFDA	317516.2	0.280	5.000	5.124	102	70-130	
Ed9-NEtPFOSAE	284367.9	13C2-PFDA	317516.2	0.896	5.000	5.115	102	70-130	
Ed5-NEtPFOSA	72006.3	13C2-PFDA	317516.2	0.227	5.000	5.251	105	70-130	
E13C2-PFTeDA	449441.0	13C2-PFDA	317516.2	1.415	5.000	5.096	102	70-130	

APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

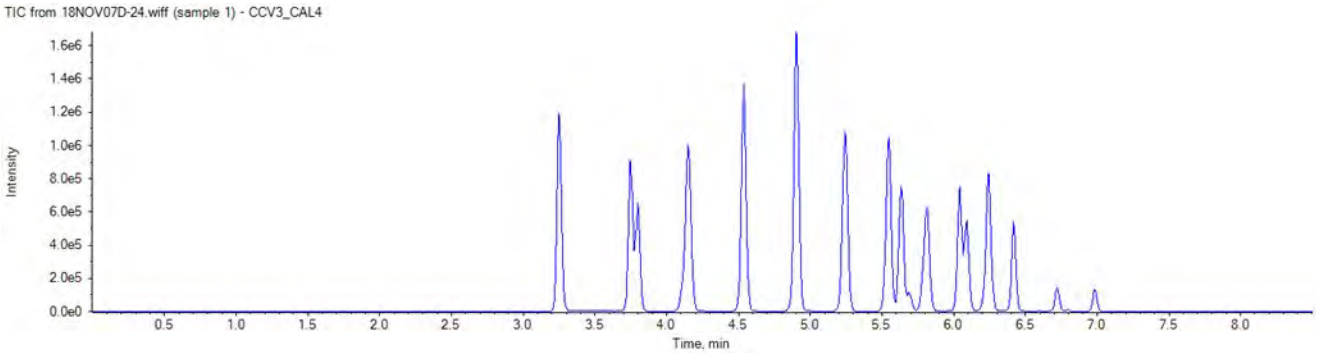
Analyte Quantitation Peak Table

Sample Name: CCV3_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV07D-24.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	1151890.3		A	13C4-PFBA	3.25	782874.6	1.471	8.611
PFPeA	3.75	1.000	1202909.2		A	13C5-PFPeA	3.75	819794.7	1.467	8.720
PFBS	3.80	1.000	653387.1		A	13C3-PFBS	3.80	443113.3	1.475	7.434
4:2-FTS	4.11	1.000	161644.7		A	13C2-4:2-FTS	4.11	55248.6	2.926	7.866
PFHxA	4.15	1.000	1392034.5		A	13C5-PFHxA	4.15	708016.1	1.966	8.432
PFPeS	4.17	1.100	354542.6		A	13C3-PFBS	3.80	443113.3	0.800	7.892
PFHxS	4.54	1.000	502548.7		A	13C3-PFHxS	4.54	345453.3	1.455	7.374
PFHpA	4.54	1.000	1450230.1		A	13C4-PFHpA	4.54	588837.4	2.463	8.283
6:2-FTS	4.89	1.000	130208.9		A	13C2-6:2-FTS	4.89	38439.7	3.387	8.450
PFHpS	4.90	1.080	505602.4		A	13C3-PFHxS	4.54	345453.3	1.464	7.657
PFOA	4.91	1.000	1477626.7		A	13C8-PFOA	4.91	976782.8	1.513	8.518
PFOS	5.23	1.000	442468.7		A	13C8-PFOS	5.23	295520.4	1.497	7.764
PFNA	5.25	1.000	1184653.0		A	13C9-PFNA	5.25	522333.6	2.268	8.476
PFNS	5.53	1.060	317230.6		A	13C8-PFOS	5.23	295520.4	1.073	8.511
PFDA	5.55	1.000	998430.4		A	13C6-PFDA	5.55	677064.5	1.475	8.113
8:2-FTS	5.55	1.000	108765.3		A	13C2-8:2-FTS	5.55	29154.7	3.731	8.409
PFOSA	5.63	1.000	1133583.1		A	13C8-PFOSA	5.64	696392.5	1.628	8.799
NMeFOSAA	5.69	1.000	140151.7		A	d3-NMeFOSAA	5.69	81528.0	1.719	8.845
PFDS	5.79	1.110	253333.6		A	13C8-PFOS	5.23	295520.4	0.857	8.189
PFUnDA	5.81	1.000	888633.9		A	13C7-PFUnDA	5.81	283267.0	3.137	8.996
NEtFOSAA	5.83	1.000	122902.1		A	d5-NEtFOSAA	5.82	70744.9	1.737	7.466
PFDoDA	6.04	1.000	897491.0		A	13C2-PFDoDA	6.04	590879.3	1.519	8.232
10:2-FTS	6.06	1.090	74932.7		A	13C2-8:2-FTS	5.55	29154.7	2.570	8.003
NMePFOSAE	6.09	1.000	674097.6		A	d7-NMePFOSAE	6.08	336944.7	2.001	8.965
NMePFOSA	6.10	1.000	130349.1		A	d3-NMePFOSA	6.10	88868.5	1.467	8.210
PFDoS	6.21	1.190	118826.7		A	13C8-PFOS	5.23	295520.4	0.402	7.761
NEtPFOSAE	6.25	1.000	736880.1		A	d9-NEtPFOSAE	6.24	284367.9	2.591	8.307
NEtPFOSA	6.26	1.000	127621.9		A	d5-NEtPFOSA	6.25	72006.3	1.772	7.806
PFTrDA	6.24	1.030	746362.9		A	13C2-PFDoDA	6.04	590879.3	1.263	7.966
PFTeDA	6.42	1.000	675574.7		A	13C2-PFTeDA	6.42	449441.0	1.503	8.827
PFHxDA	6.72	1.050	288222.5		A	13C2-PFTeDA	6.42	449441.0	0.641	7.961
PFODA	6.98	1.090	278149.1		A	13C2-PFTeDA	6.42	449441.0	0.619	8.866

Total Ion Chromatogram

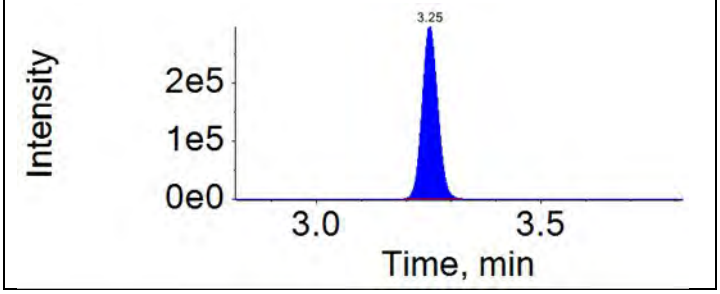


APPROVED
By MCD at 6:32 pm, 11/7/18

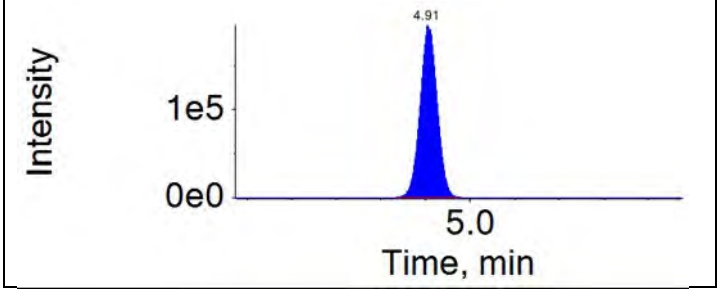
REVIEWED
By umar at 2:05 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

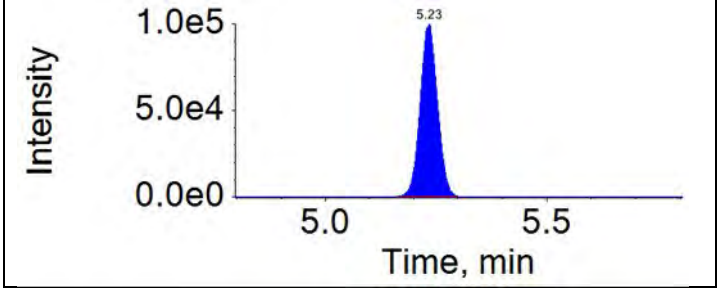
Injection Standard: 13C3-PFBA
216.0 / 172.0



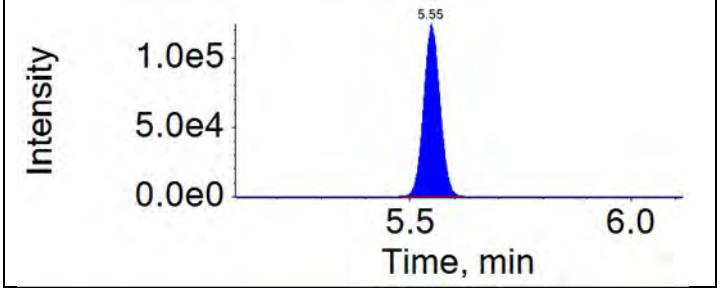
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

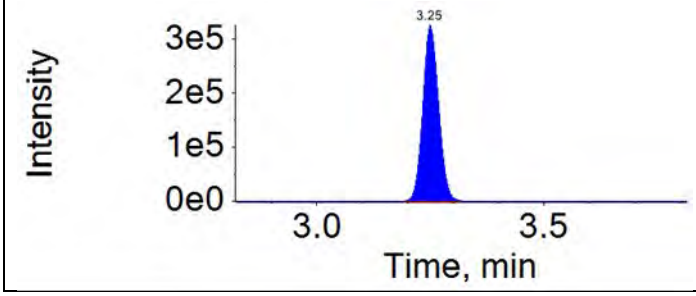


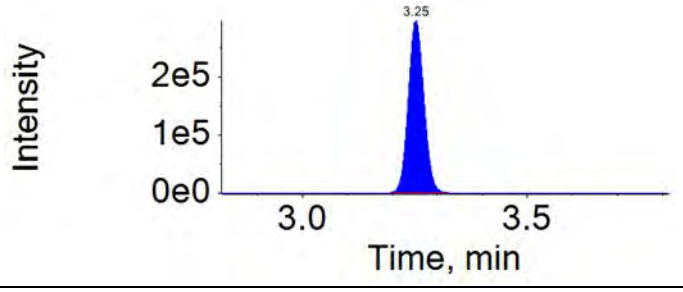
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

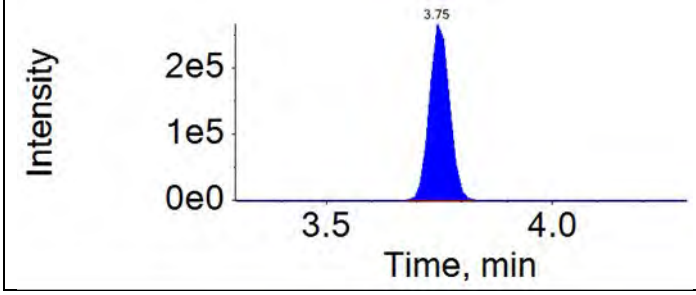
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

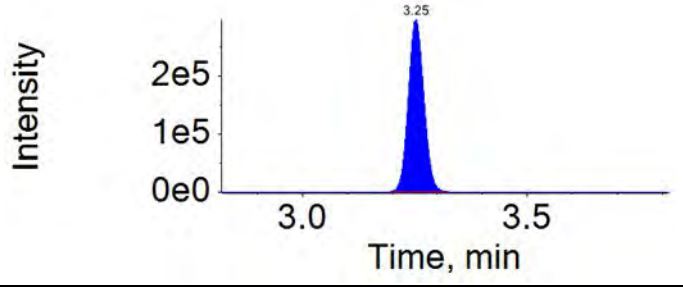
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



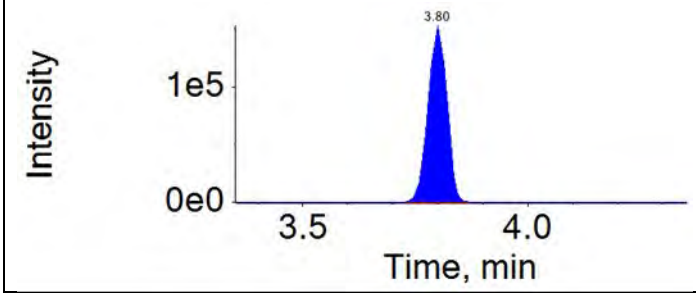


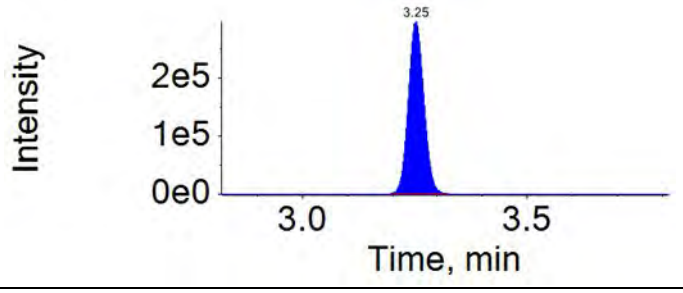
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



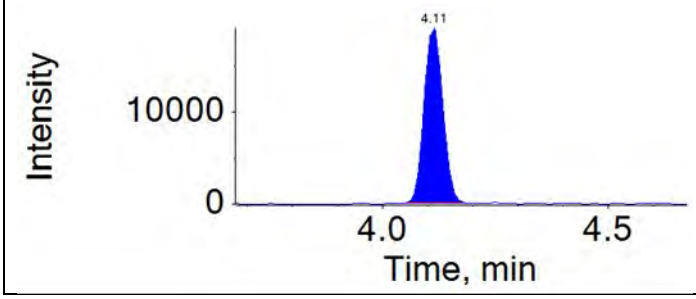


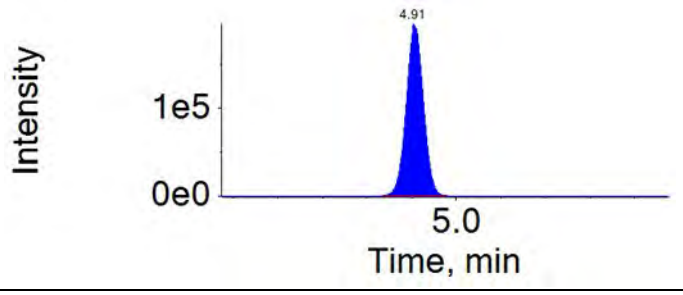
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



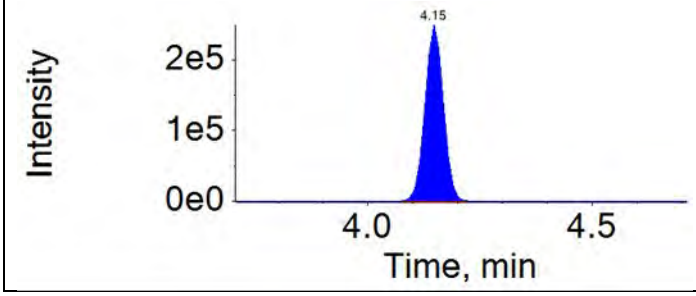


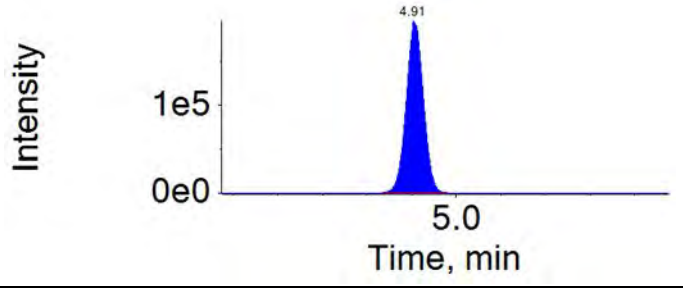
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

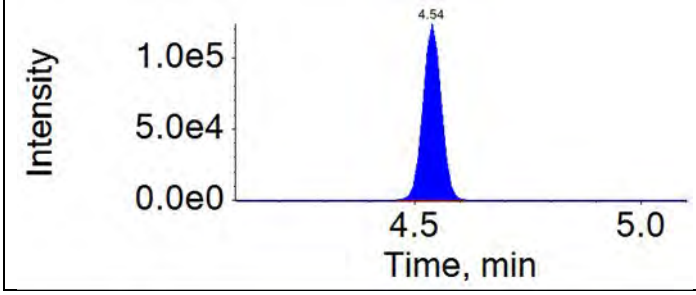
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

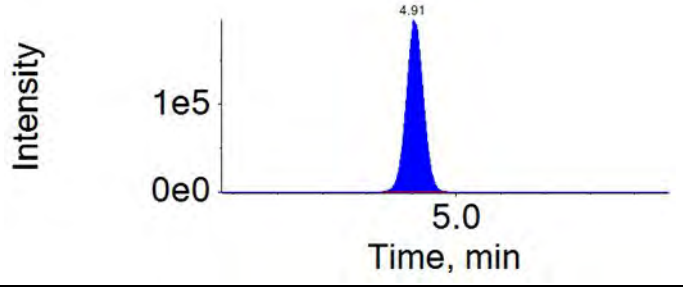
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



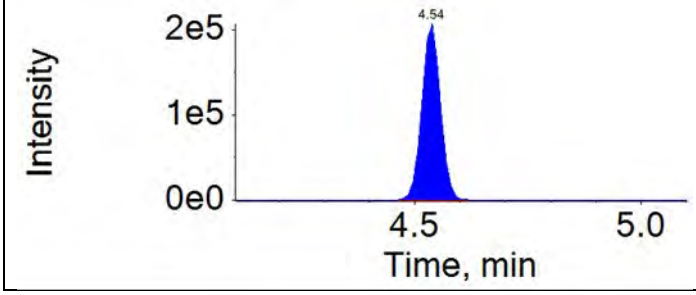


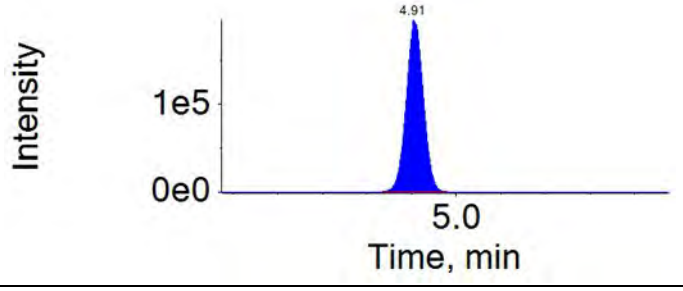
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



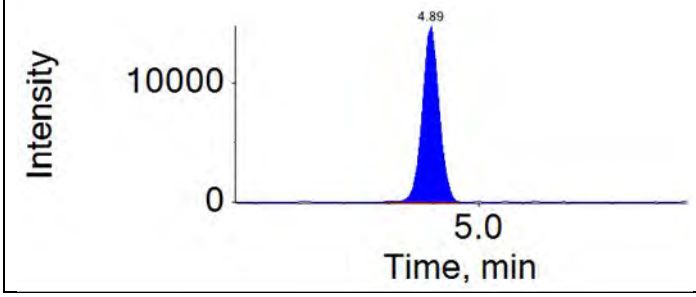


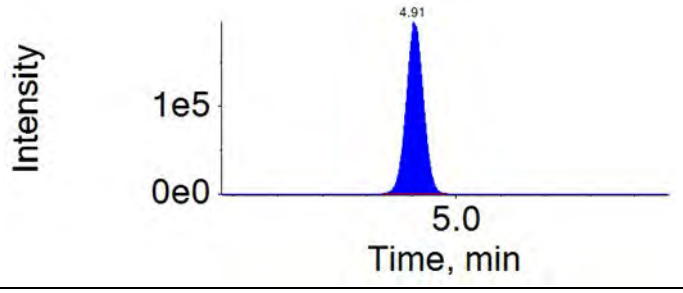
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



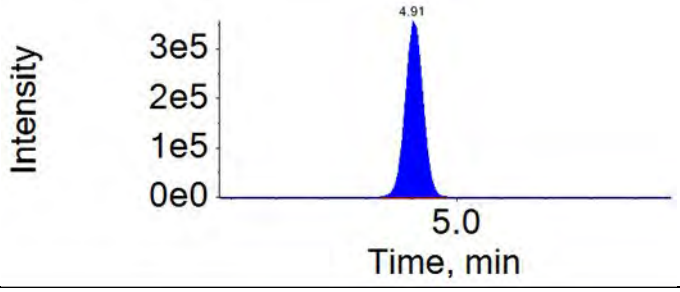


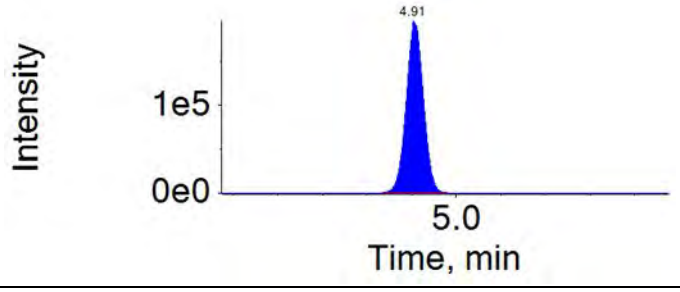
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

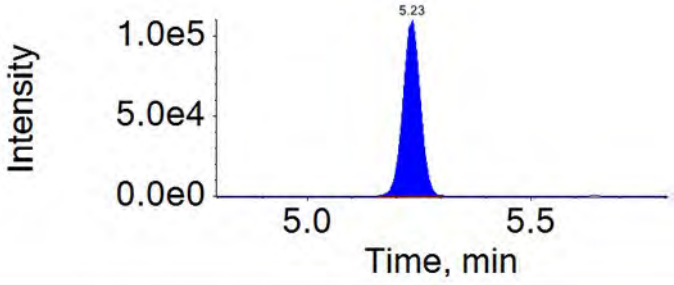
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

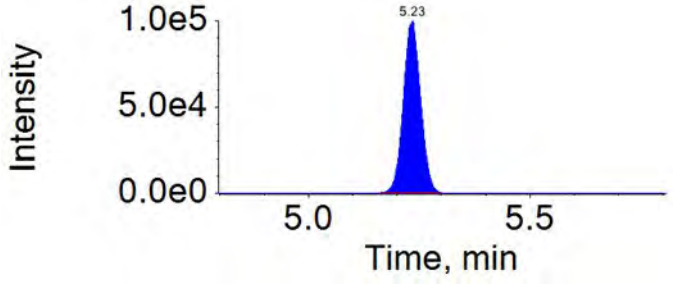
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



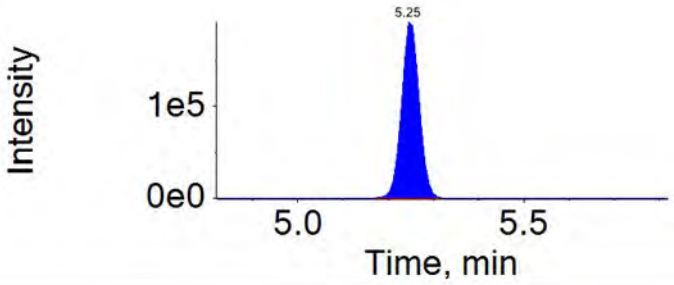


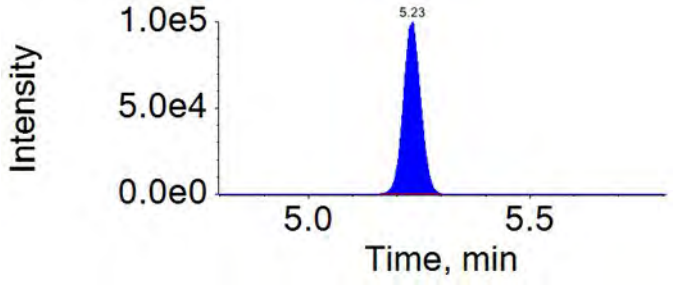
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



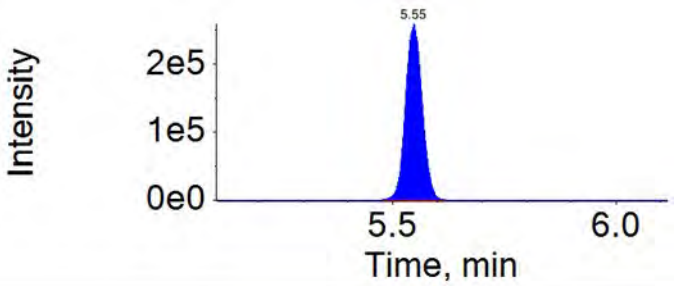


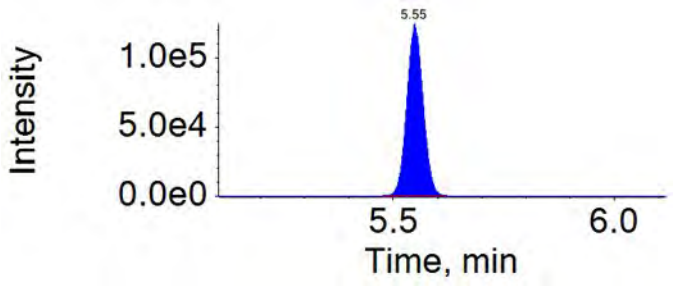
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0



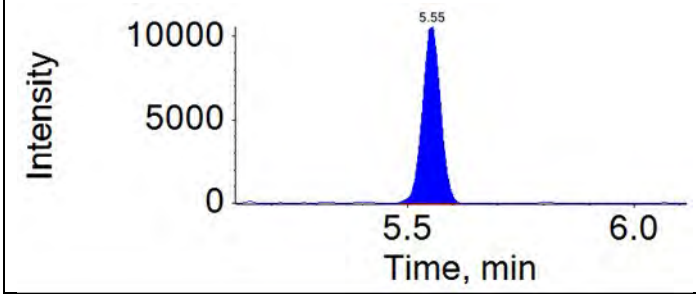


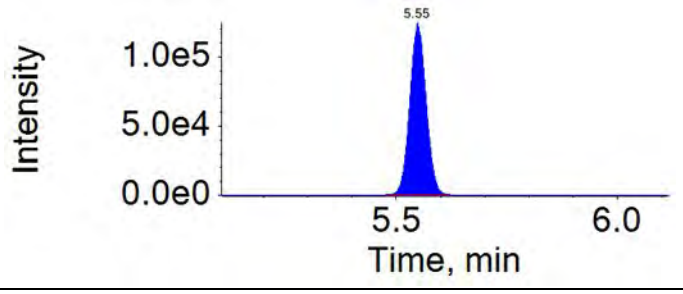
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

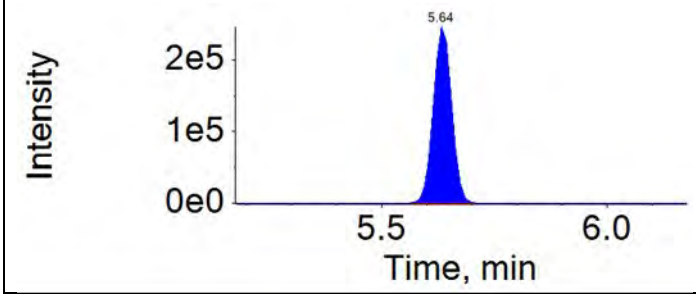
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

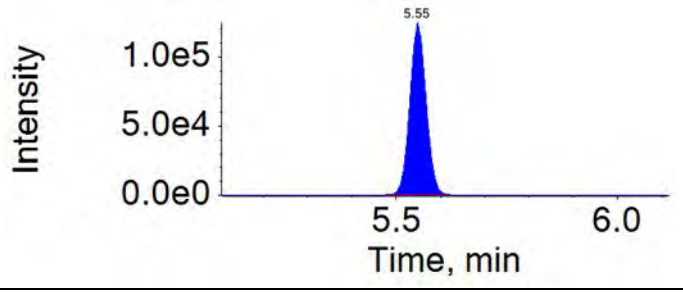
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



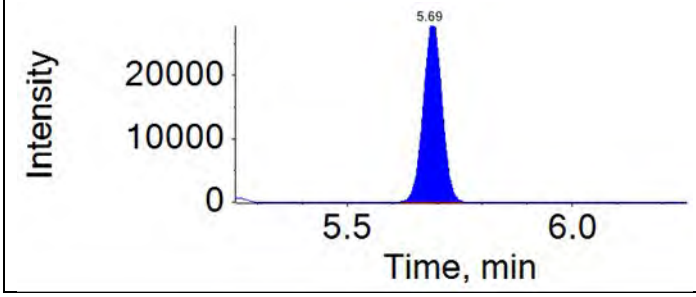


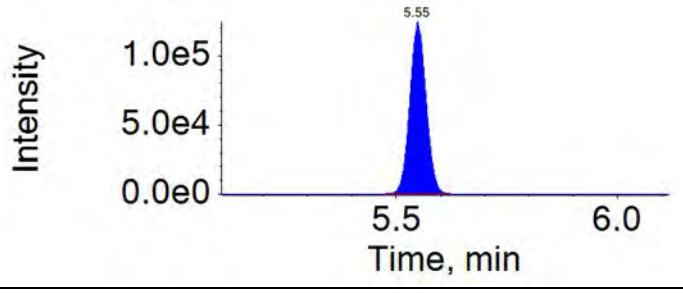
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



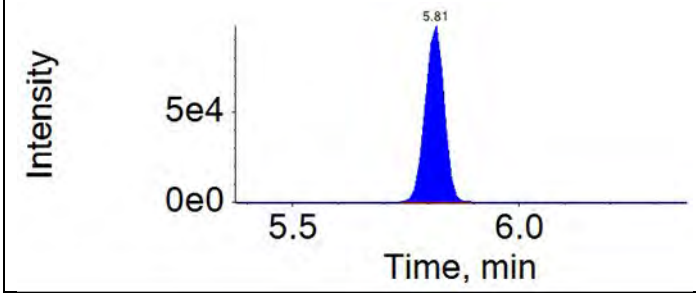


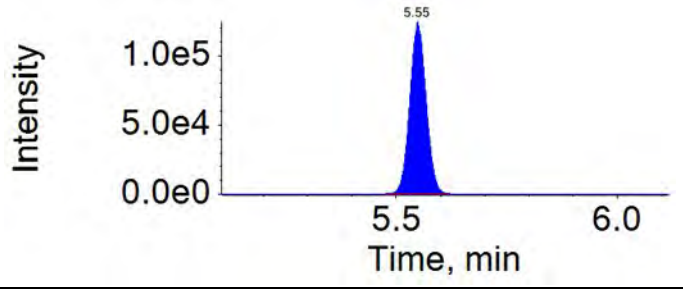
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



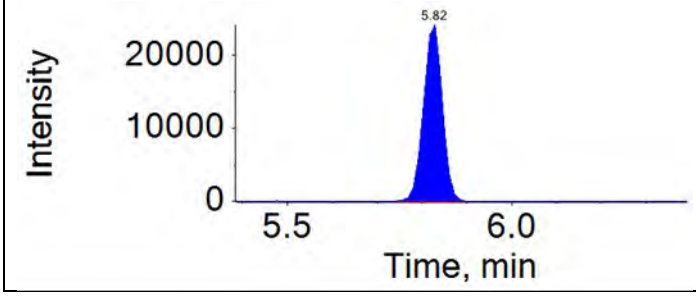
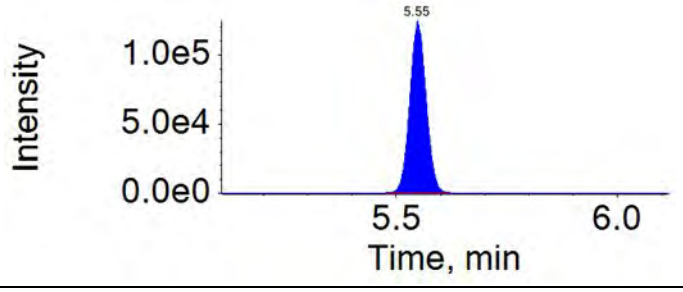


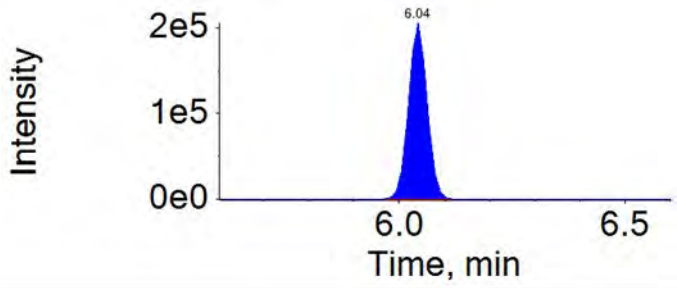
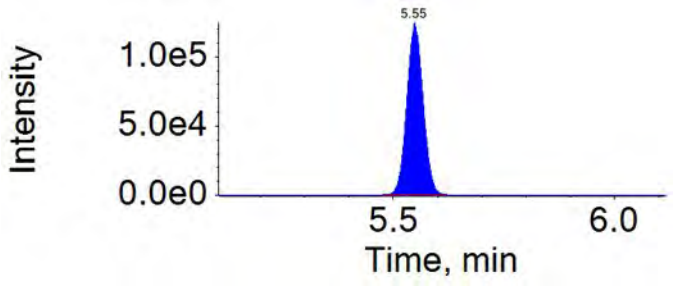
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

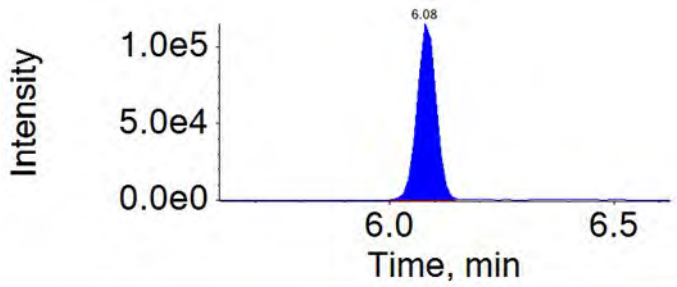
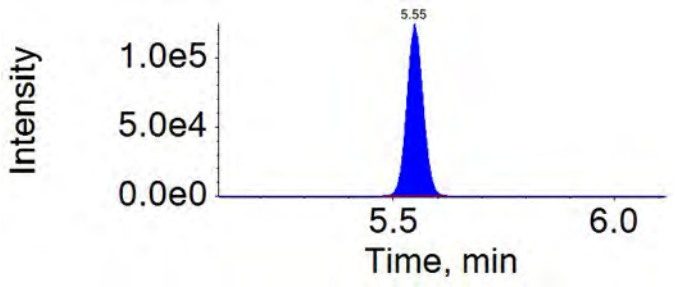


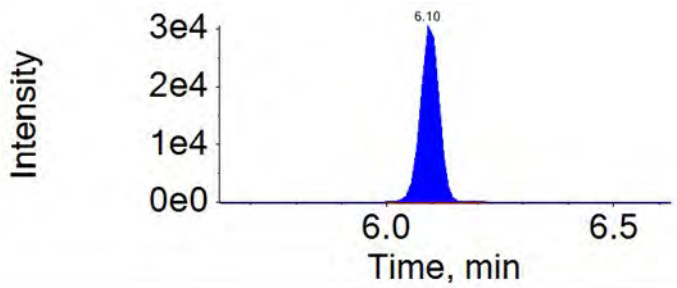
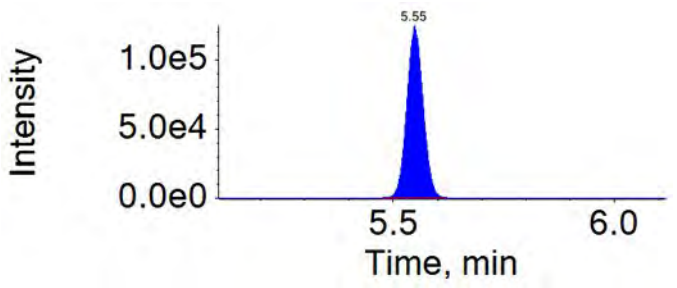


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

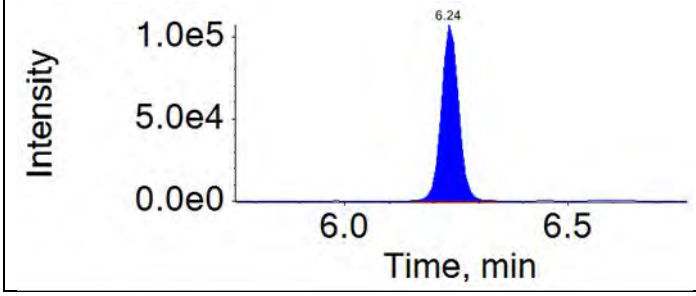
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

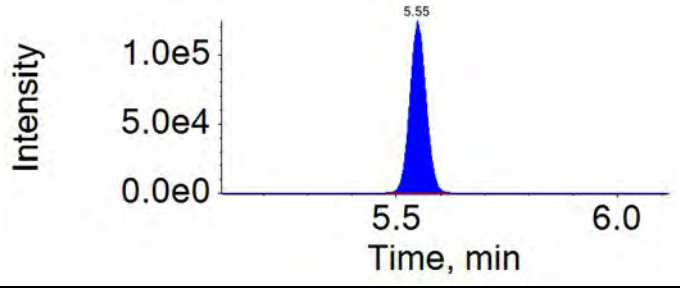
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

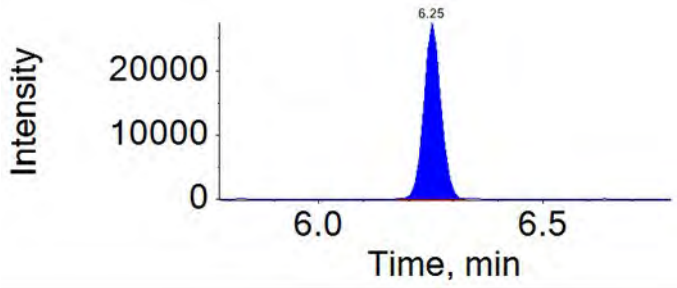
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

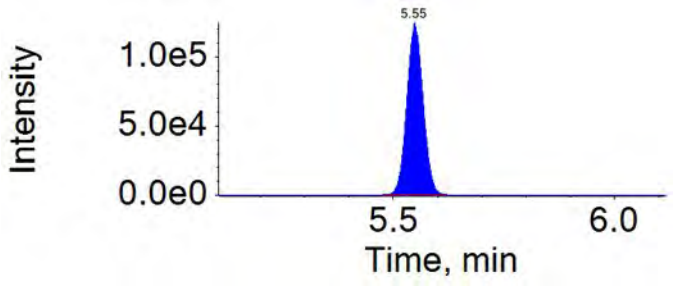
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



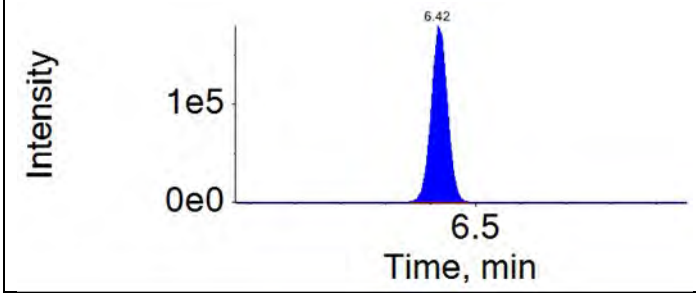


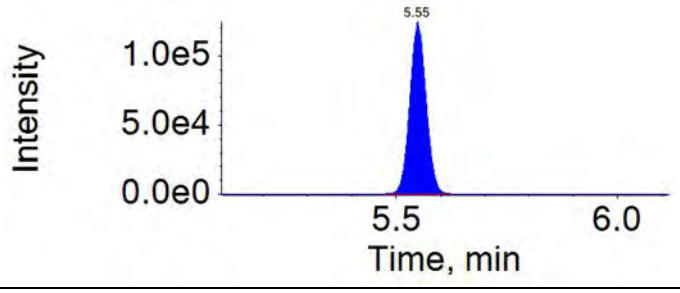
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



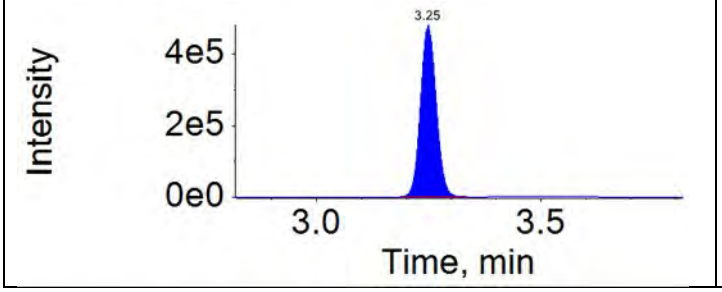


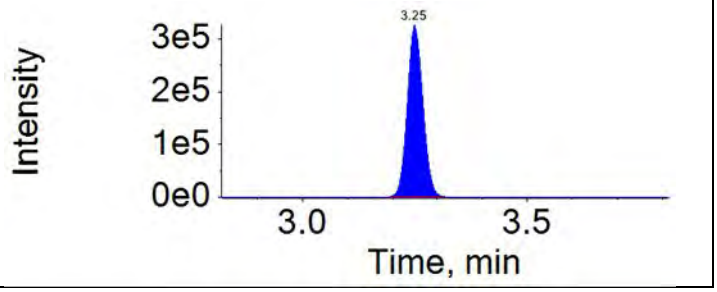
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

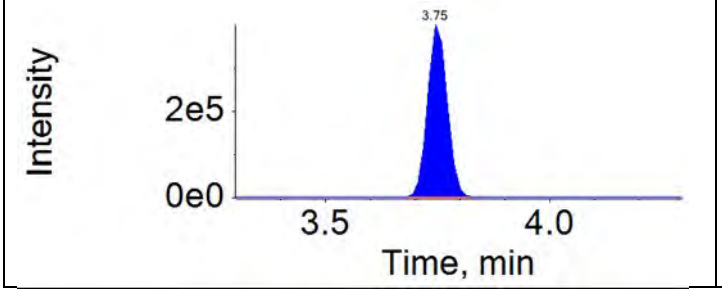
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

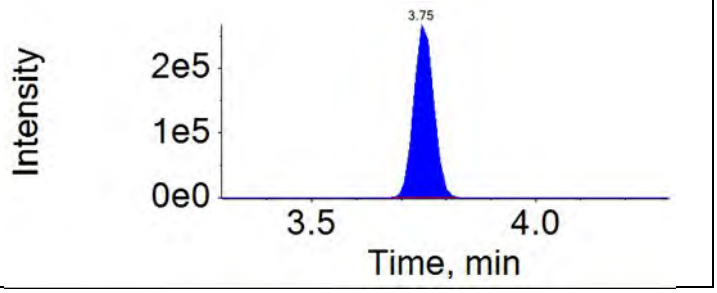
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



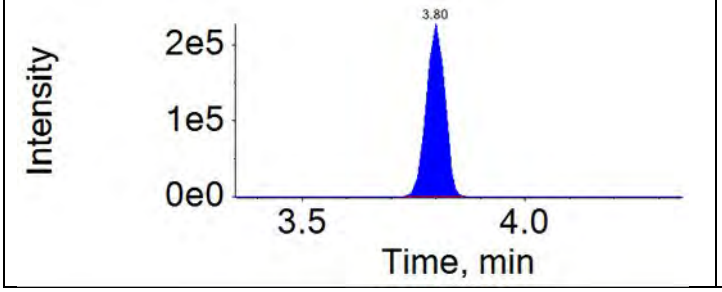


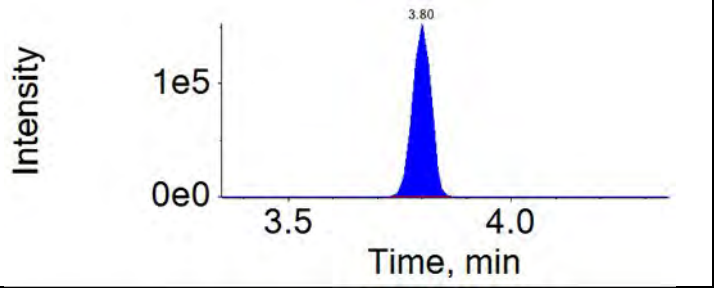
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



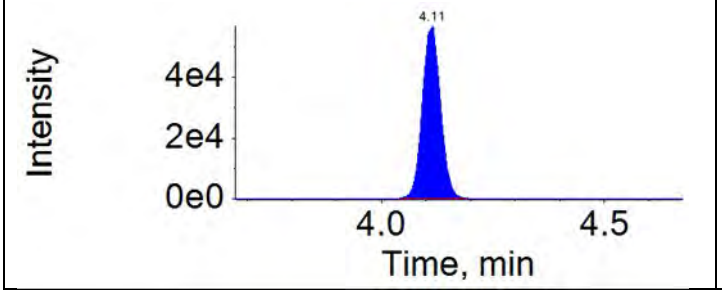


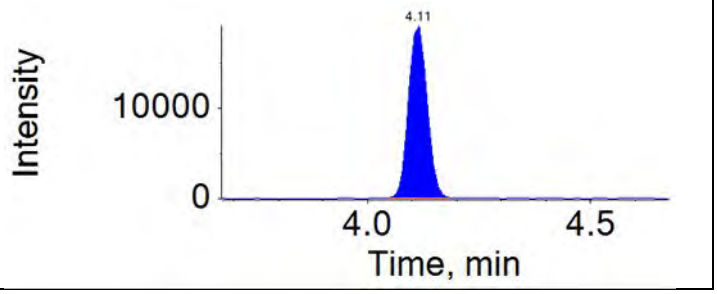
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



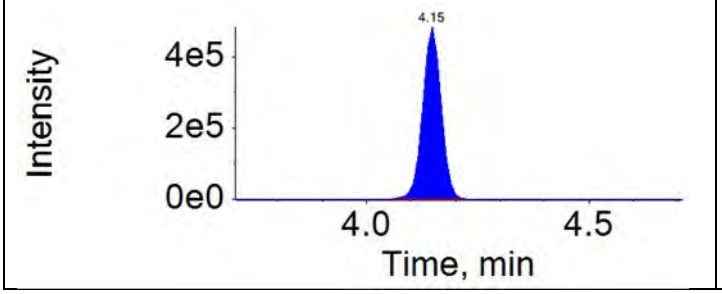


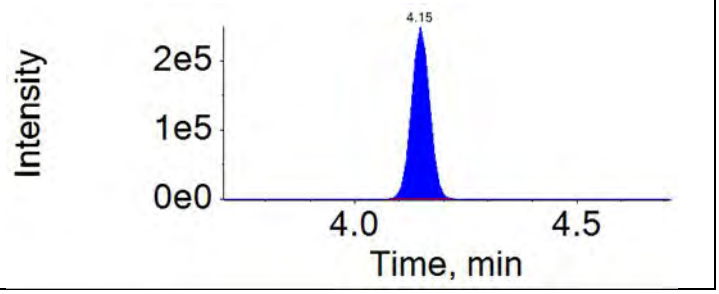
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

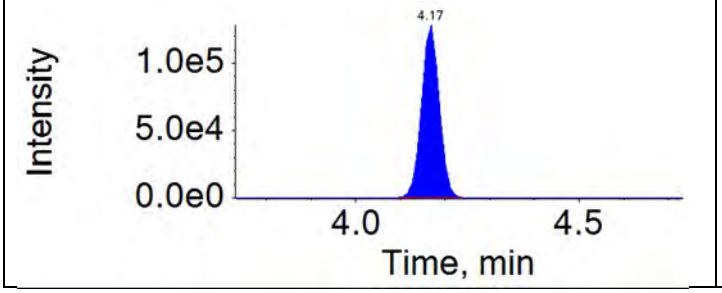
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

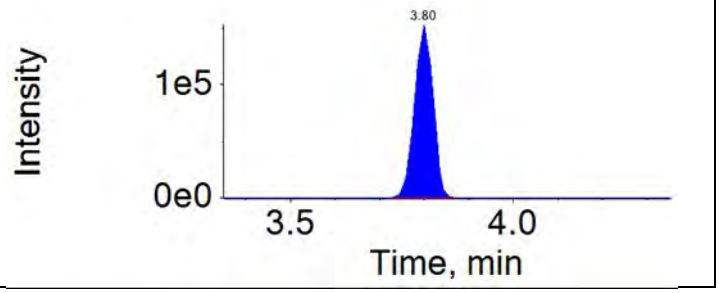
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



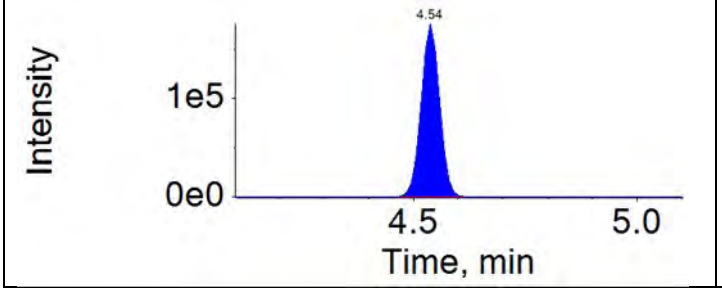


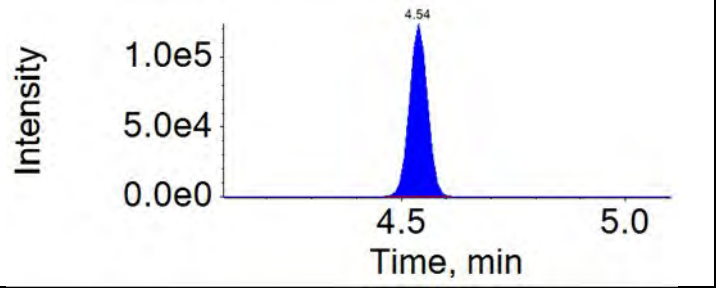
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



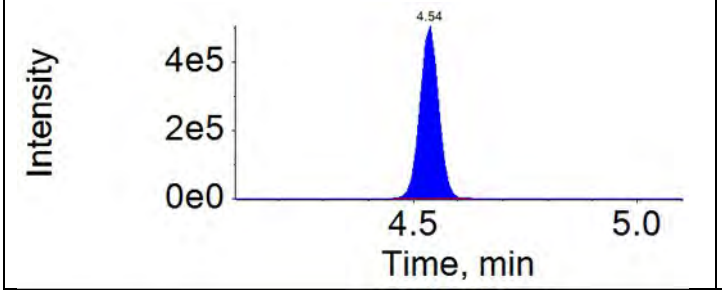


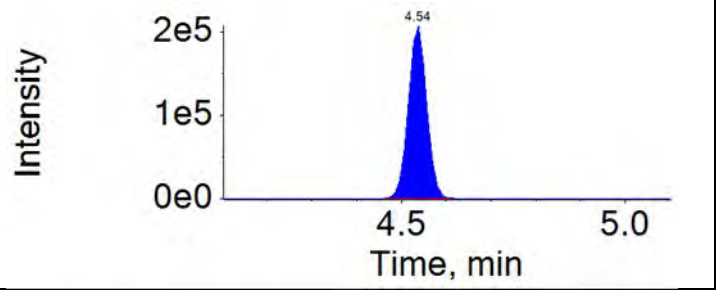
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



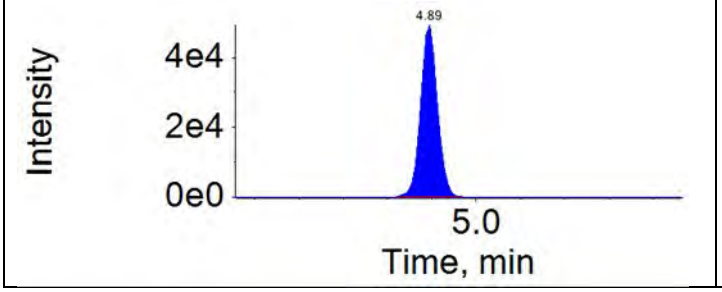


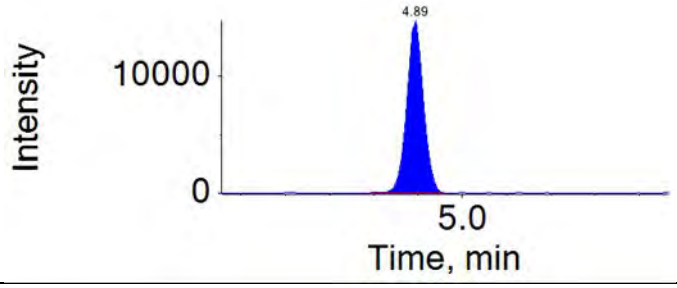
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

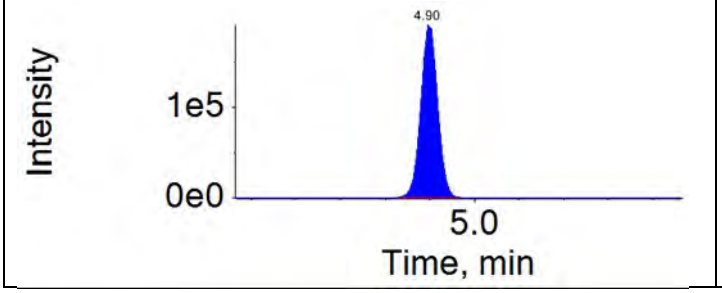
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

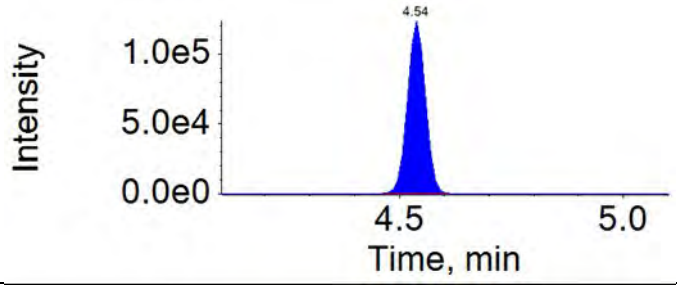
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



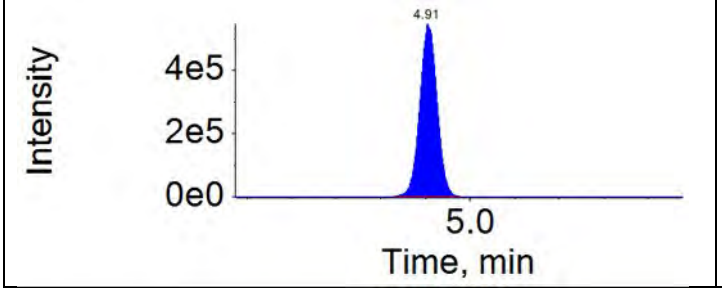


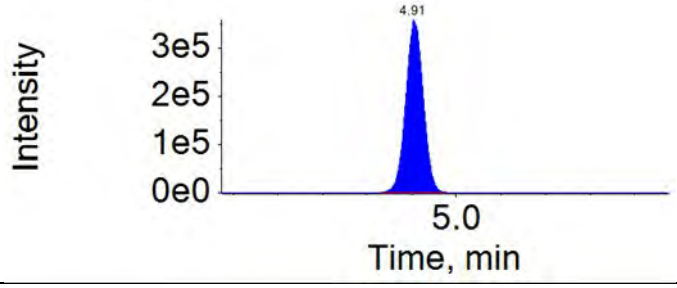
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



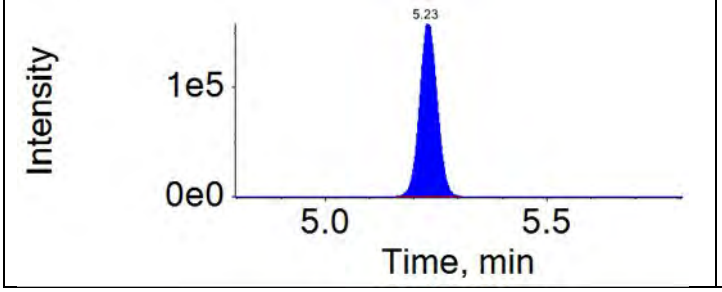


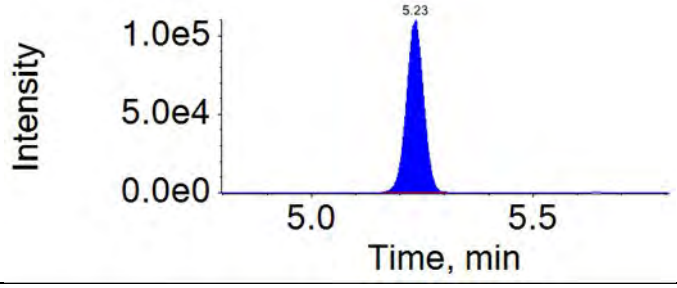
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



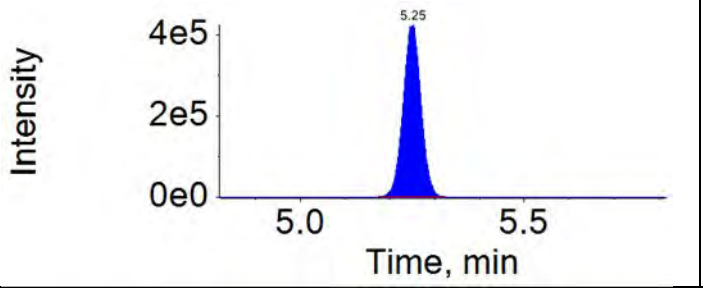


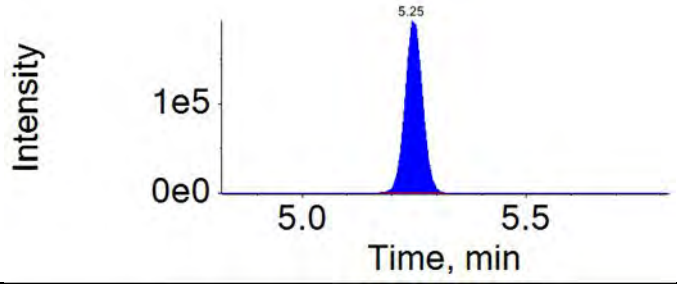
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

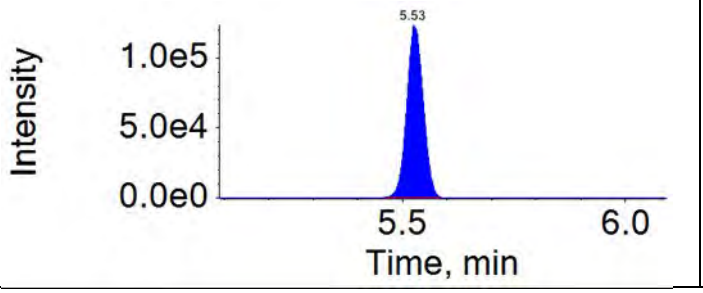
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

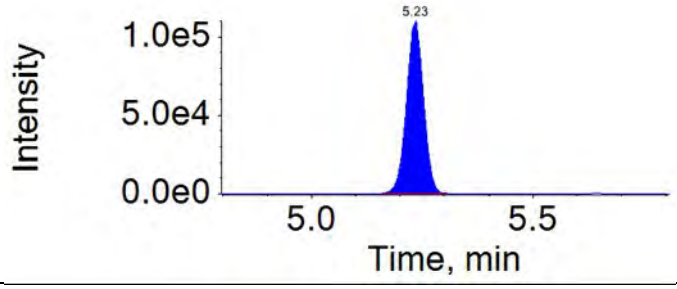
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



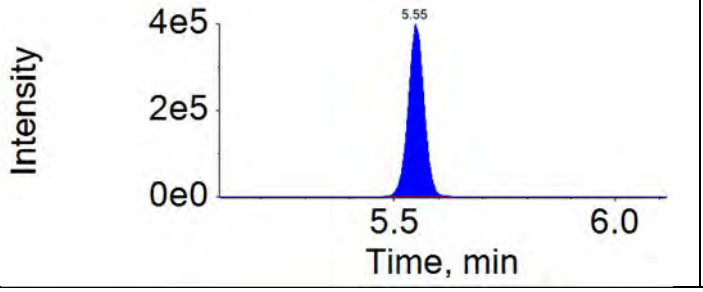


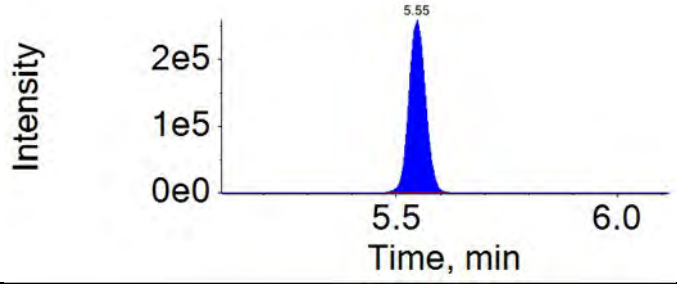
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



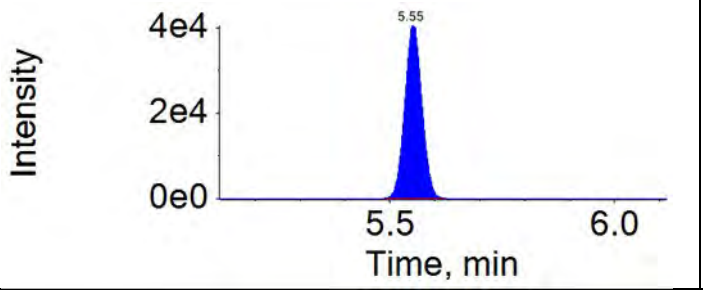


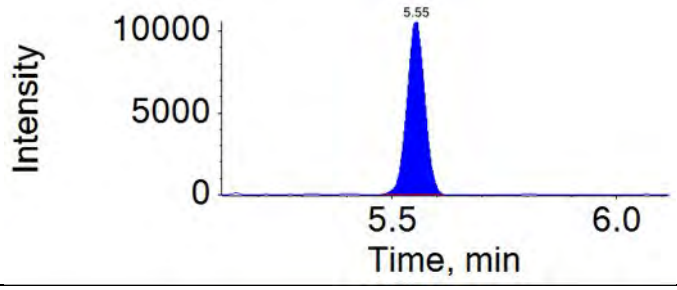
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



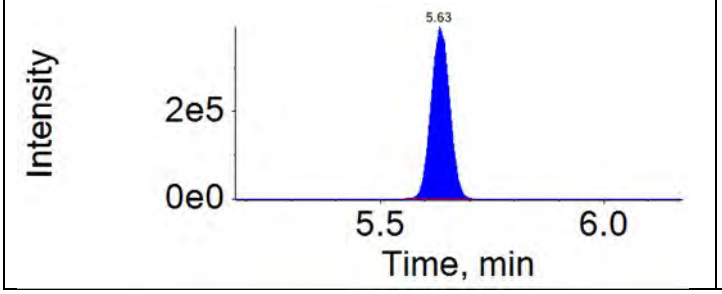


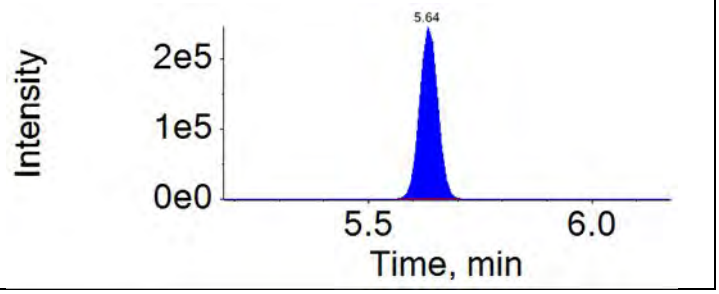
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

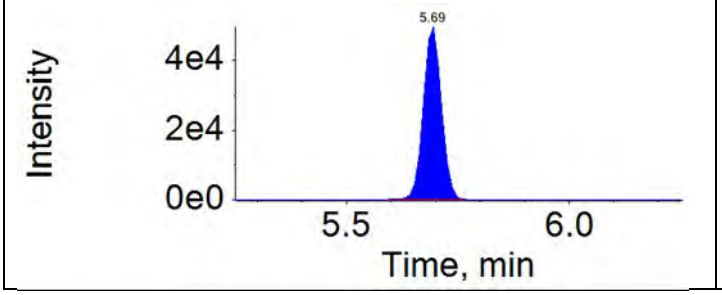
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

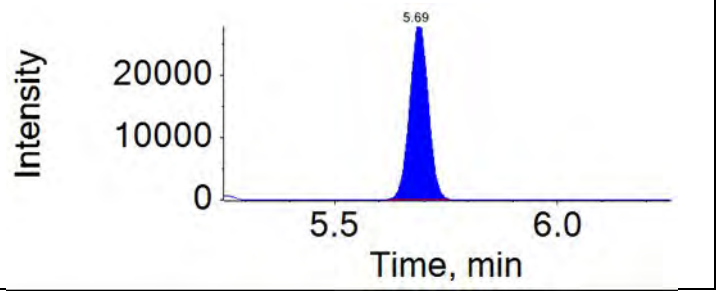
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



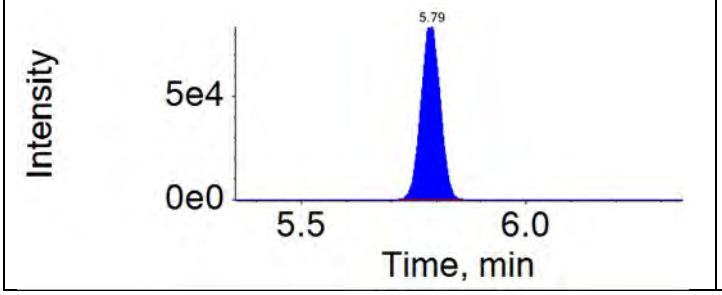


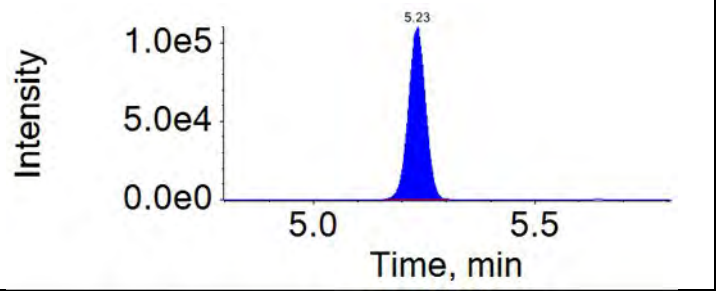
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



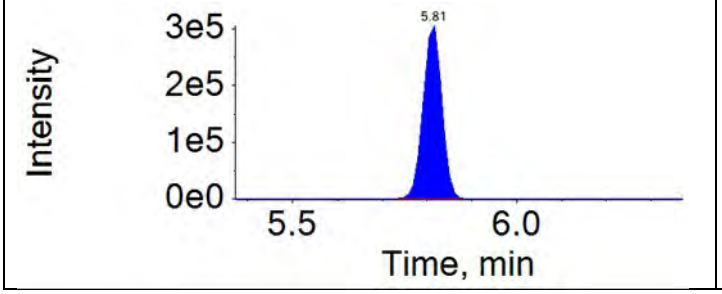


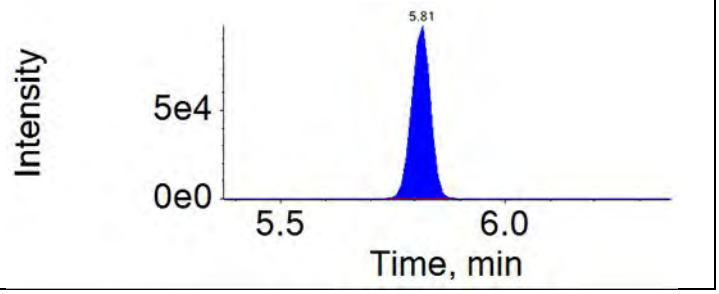
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



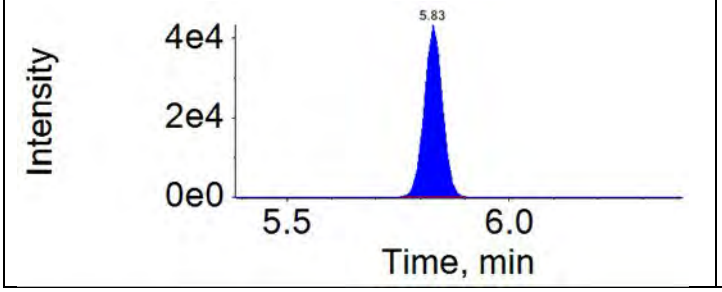


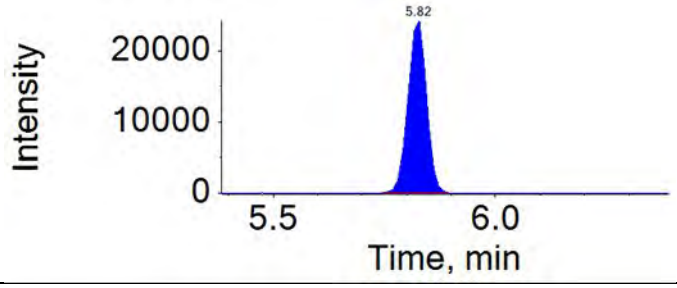
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

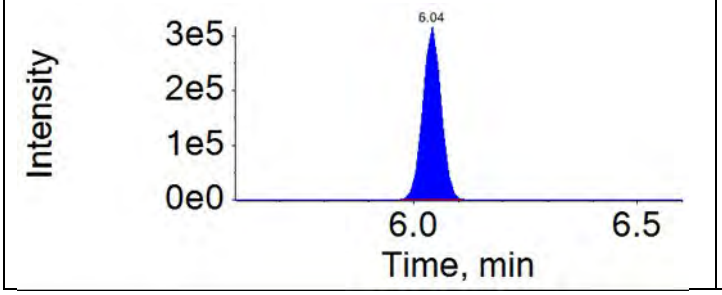
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

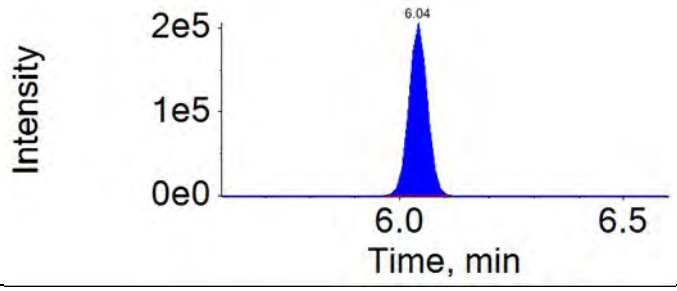
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



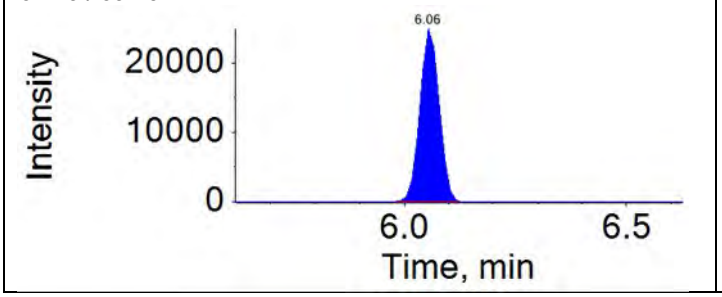


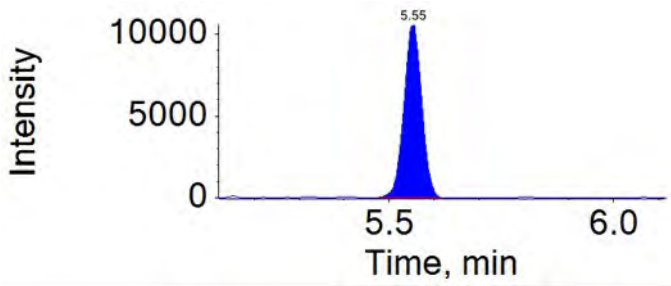
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



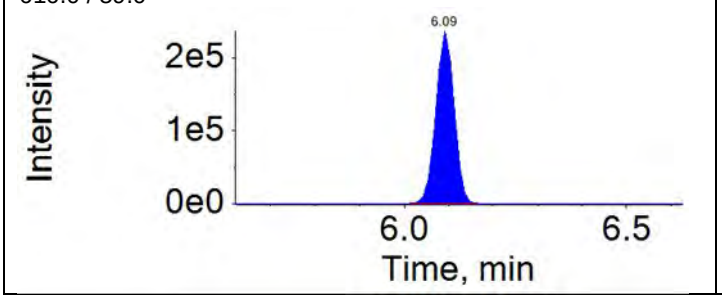


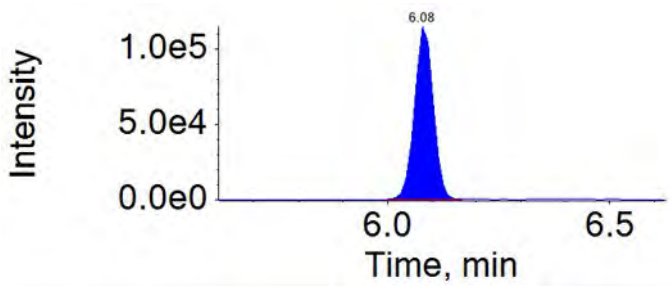
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



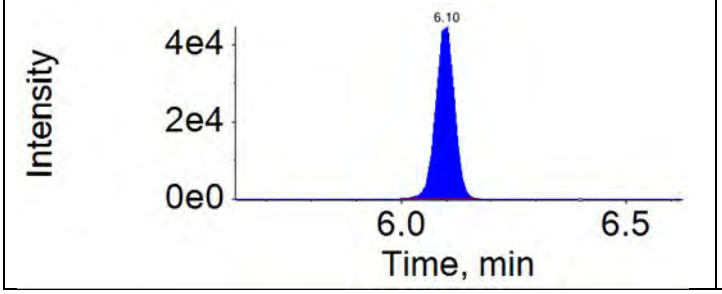


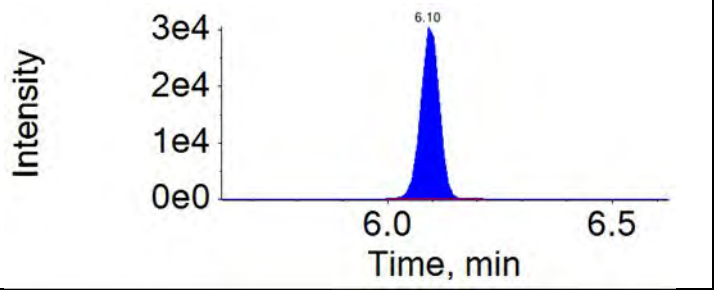
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

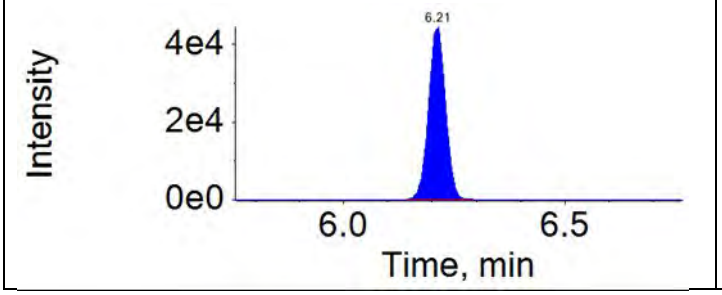
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

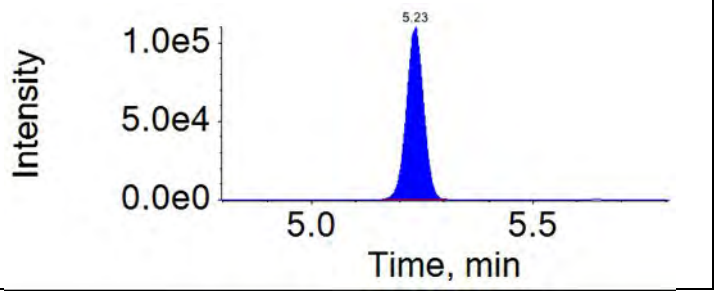
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



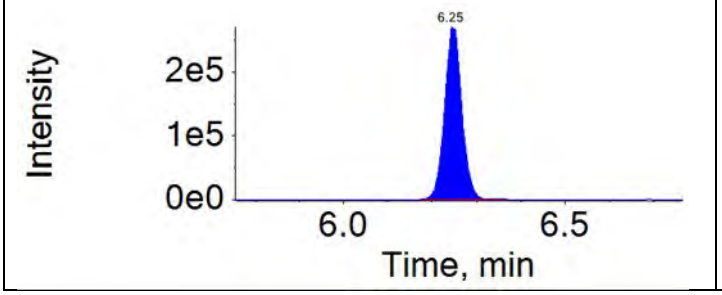


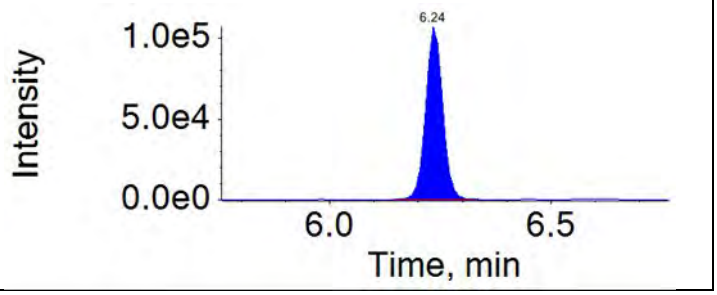
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



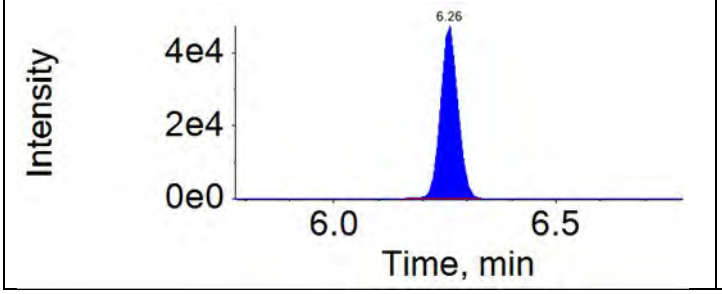


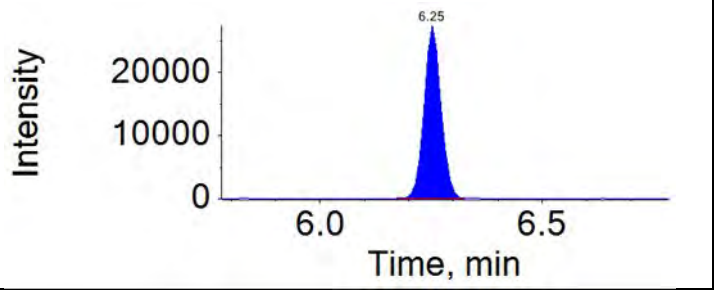
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



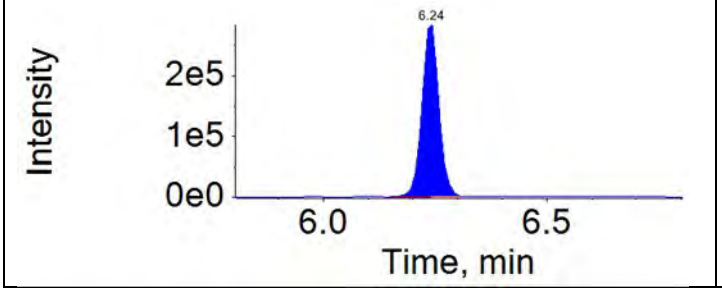


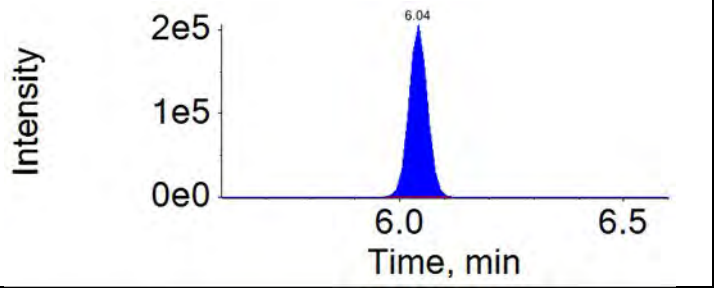
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

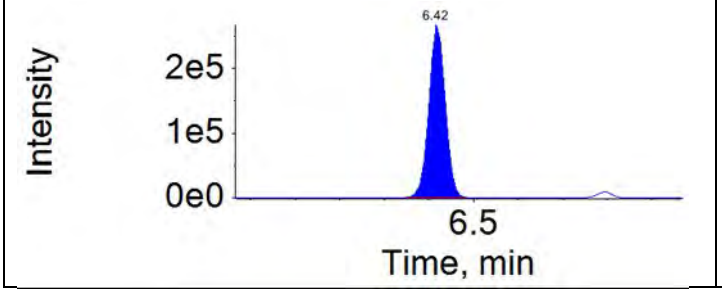
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV1-4_DOD 11/7/2018 6:26:02 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

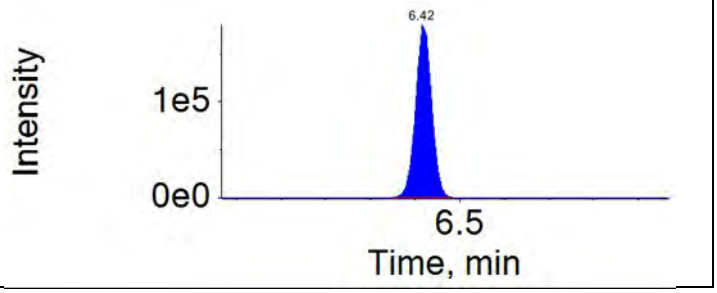
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



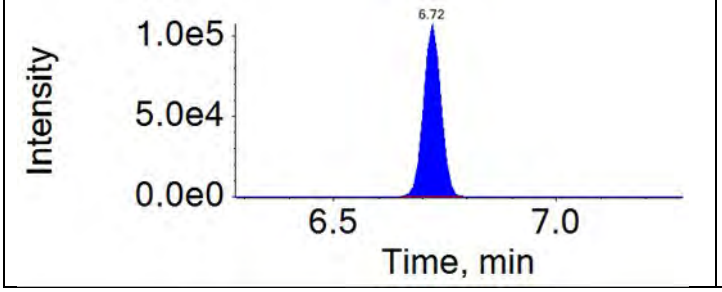


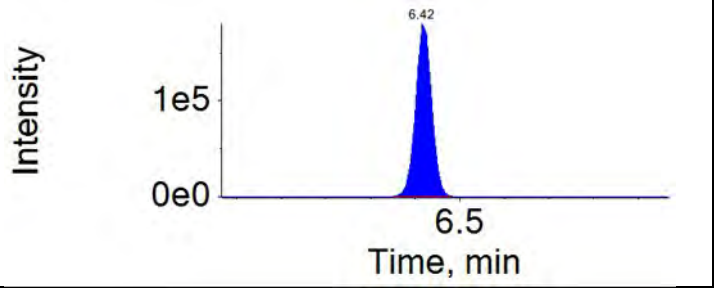
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



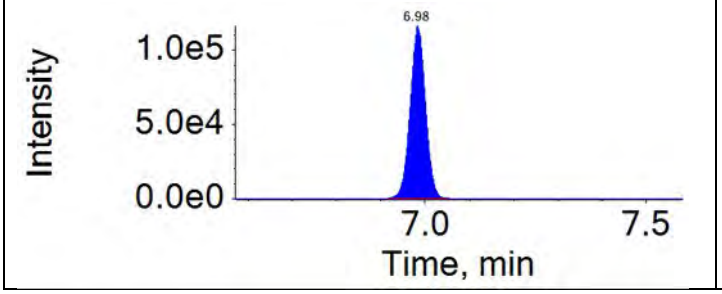


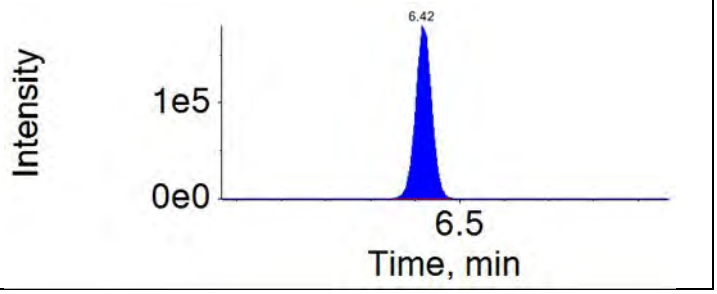
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

Ion Ratio Report

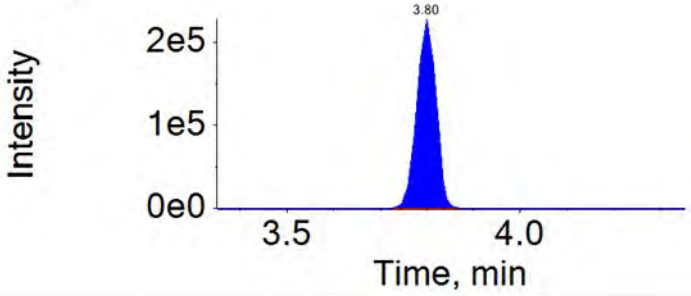
Sample Name: CCV3_CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV07D-24.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	653387.1	A	N/A	0.3650			
PFBS_2	3.80	1.00	238461.3	A	N/A	0.3650	3	50	
4:2-FTS	4.11	1.00	161644.7	A	N/A	0.5861			
4:2-FTS_2	4.11	1.00	94747.9	A	N/A	0.5861	-9	50	
PFHxA	4.15	1.00	1392034.5	A	N/A	0.0114			
PFHxA_2	4.15	1.00	15887.7	A	N/A	0.0114	1	50	
PFPeS	4.17	1.10	354542.6	A	N/A	0.5206			
PFPeS_2	4.17	1.10	184575.1	A	N/A	0.5206	-4	50	
PFHxS	4.54	1.00	502548.7	A	N/A	0.3753			
PFHxS_2	4.54	1.00	188622.2	A	N/A	0.3753	5	50	
PFHpA	4.54	1.00	1450230.1	A	N/A	0.0553			
PFHpA_2	4.53	1.00	80223.6	A	N/A	0.0553	-4	50	
6:2-FTS	4.89	1.00	130208.9	A	N/A	0.6366			
6:2-FTS_2	4.89	1.00	82891.1	A	N/A	0.6366	-7	50	
PFHpS	4.90	1.08	505602.4	A	N/A	0.4067			
PFHpS_2	4.90	1.08	205620.6	A	N/A	0.4067	3	50	
PFOA	4.91	1.00	1477626.7	A	N/A	0.0579			
PFOA_2	4.91	1.00	85623.9	A	N/A	0.0579	-9	50	
PFOS	5.23	1.00	442468.7	A	N/A	0.3479			
PFOS_2	5.23	1.00	153945.2	A	N/A	0.3479	-1	50	
PFNA	5.25	1.00	1184653.0	A	N/A	0.0205			
PFNA_2	5.25	1.00	24325.7	A	N/A	0.0205	0	50	
PFNS	5.53	1.06	317230.6	A	N/A	0.4521			
PFNS_2	5.53	1.06	143423.0	A	N/A	0.4521	-7	50	
PFDA	5.55	1.00	998430.4	A	N/A	0.0065			
PFDA_2	5.55	1.00	6472.3	A	N/A	0.0065	19	50	
8:2-FTS	5.55	1.00	108765.3	A	N/A	0.5977			
8:2-FTS_2	5.55	1.00	65003.9	A	N/A	0.5977	-4	50	
NMeFOSAA	5.69	1.00	140151.7	A	N/A	0.2306			
NMeFOSAA_2	5.69	1.00	32313.9	A	N/A	0.2306	6	50	
PFDS	5.79	1.11	253333.6	A	N/A	0.5184			
PFDS_2	5.79	1.11	131323.6	A	N/A	0.5184	13	50	
PFUnDA	5.81	1.00	888633.9	A	N/A	0.0031			
PFUnDA_2	5.81	1.00	2723.2	A	N/A	0.0031	0	50	
NEtFOSAA	5.83	1.00	122902.1	A	N/A	0.6647			
NEtFOSAA_2	5.83	1.00	81696.4	A	N/A	0.6647	10	50	
PFDoDA	6.04	1.00	897491.0	A	N/A	0.0136			
PFDoDA_2	6.04	1.00	12195.2	A	N/A	0.0136	29	50	
10:2-FTS	6.06	1.09	74932.7	A	N/A	0.7308			
10:2-FTS_2	6.06	1.09	54761.2	A	N/A	0.7308	3	50	
PFTrDA	6.24	1.03	746362.9	A	N/A	0.0104			
PFTrDA_2	6.24	1.03	7756.6	A	N/A	0.0104	9	50	
PFTeDA	6.42	1.00	675574.7	A	N/A	0.0057			
PFTeDA_2	6.42	1.00	3869.2	A	N/A	0.0057	6	50	
PFHxDA	6.72	1.05	288222.5	A	N/A	0.0655			
PFHxDA_2	6.72	1.05	18873.5	A	N/A	0.0655	11	50	
PFODA	6.98	1.09	278149.1	A	N/A	0.0245			
PFODA_2	6.98	1.09	6810.6	A	N/A	0.0245	-4	50	

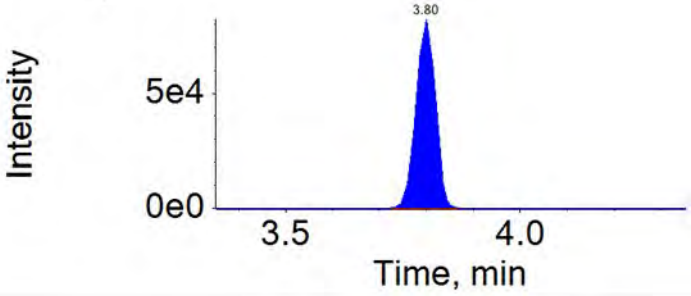
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

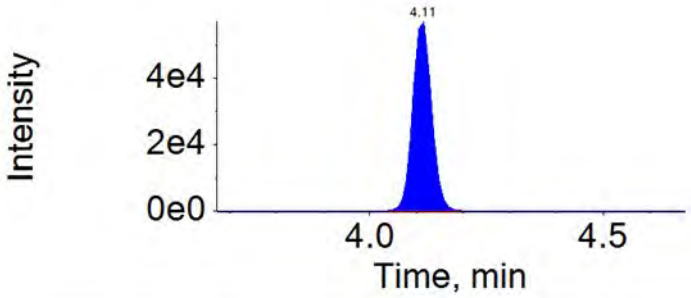
Component: PFBS
Primary Mass: 299.0 / 80.0



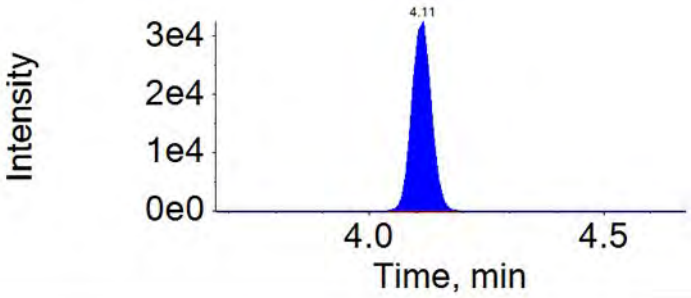
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



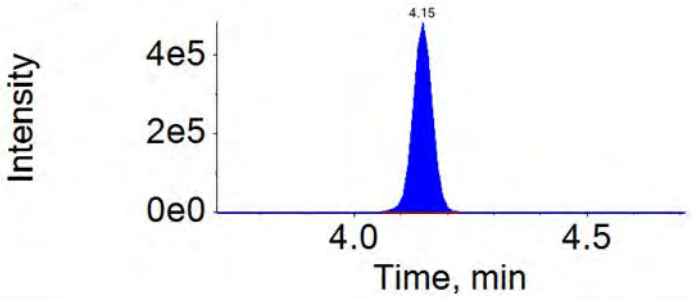
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



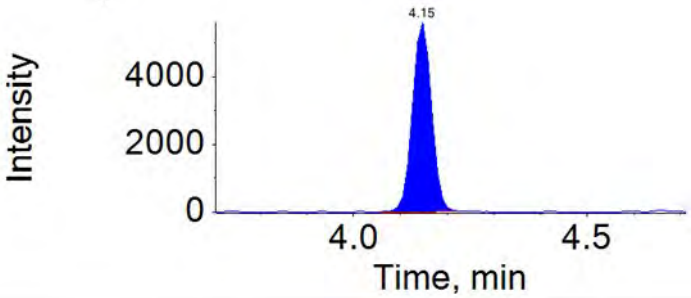
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



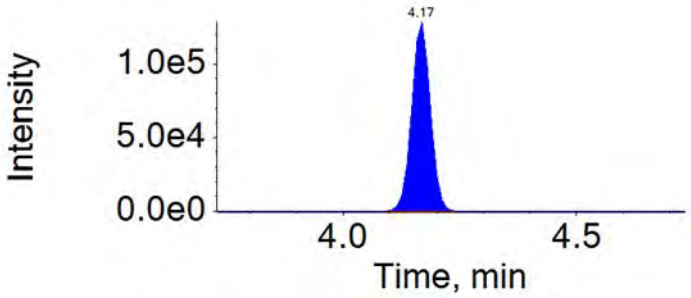
Component: PFHxA
Primary Mass: 313.0 / 269.0



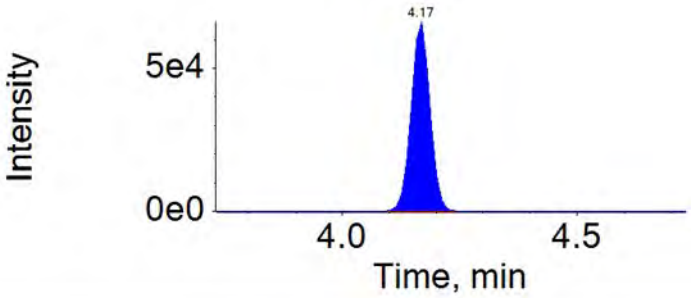
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



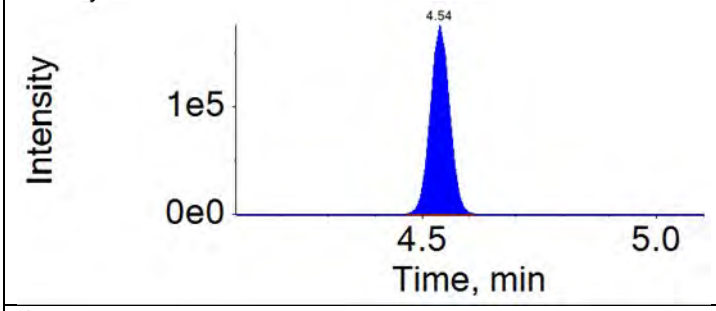
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



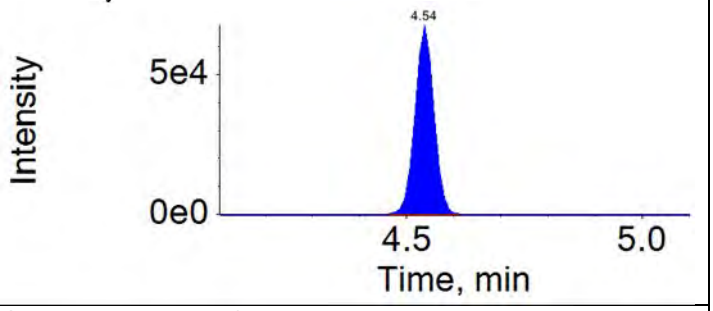
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

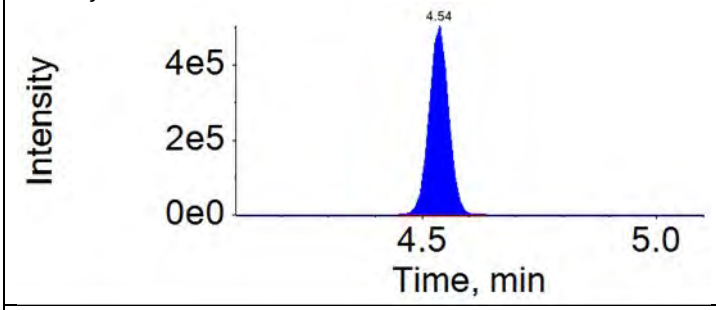
Component: PFHxS
Primary Mass: 399.0 / 80.0



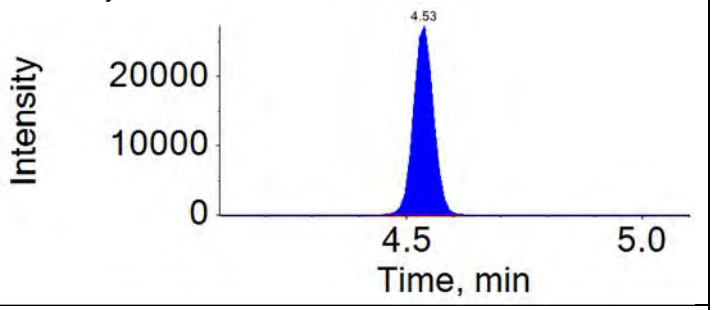
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



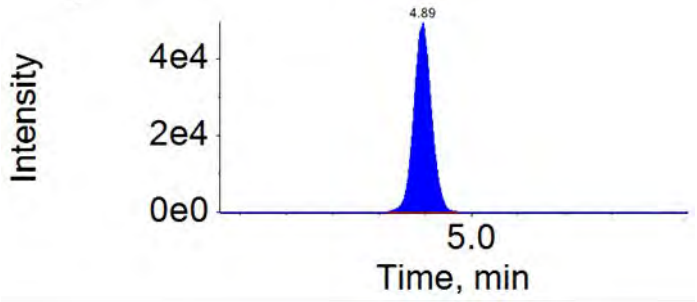
Component: PFHpA
Primary Mass: 363.0 / 319.0



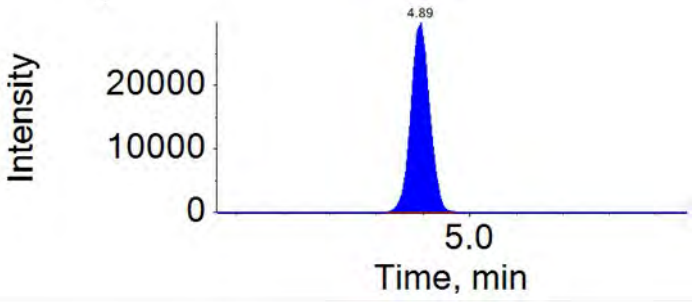
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



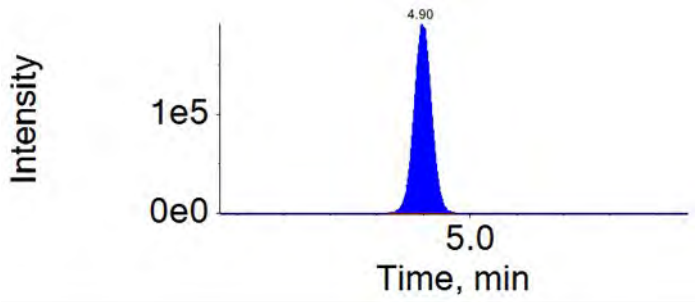
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



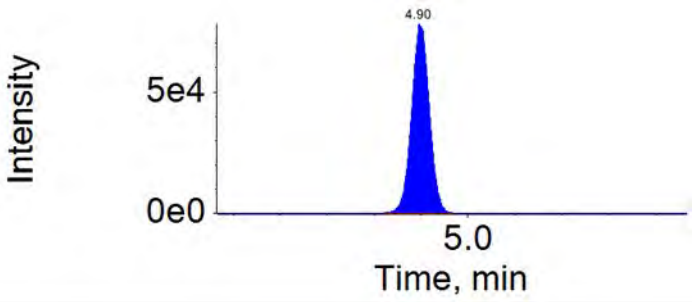
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



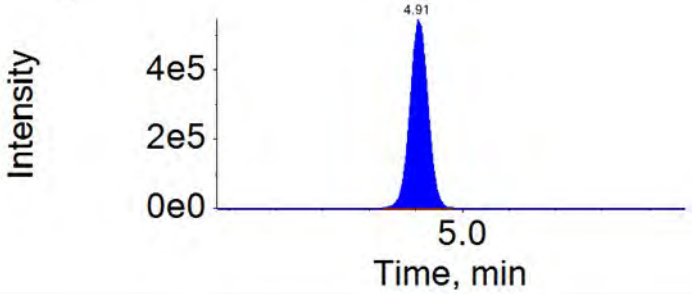
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



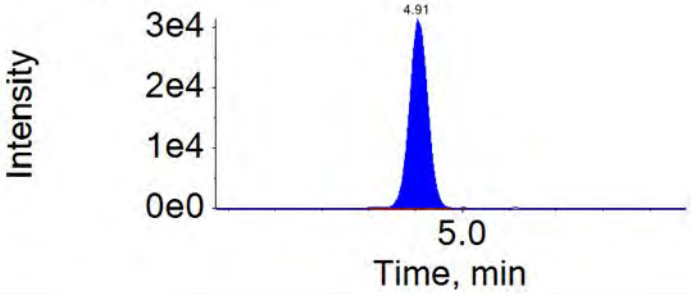
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

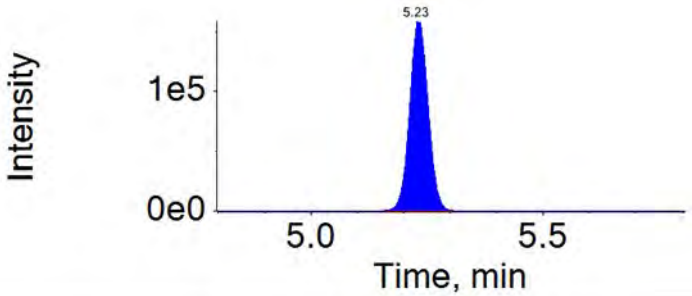
Component: PFOA
Primary Mass: 413.0 / 369.0



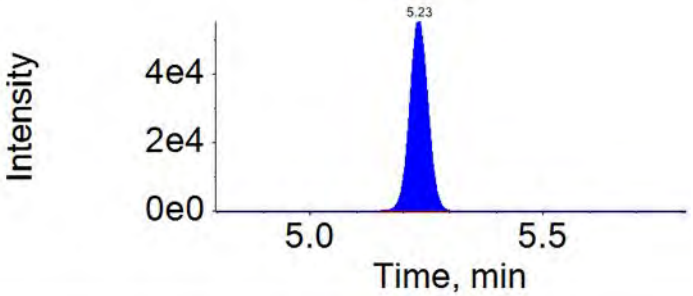
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



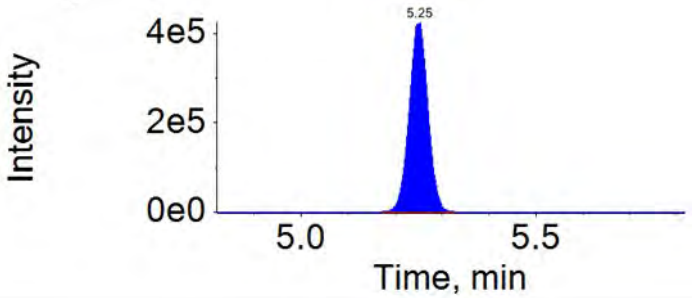
Component: PFOS
Primary Mass: 499.0 / 80.0



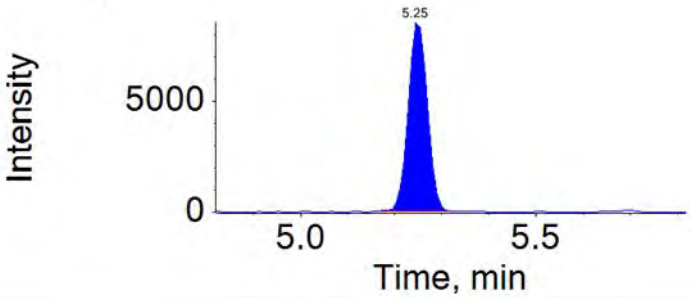
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



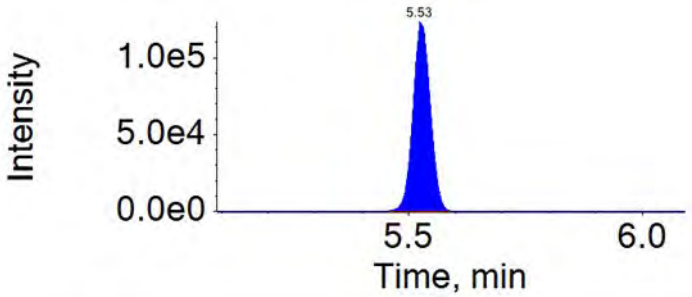
Component: PFNA
Primary Mass: 463.0 / 419.0



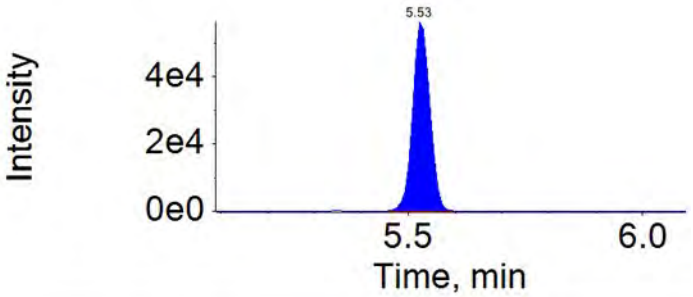
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



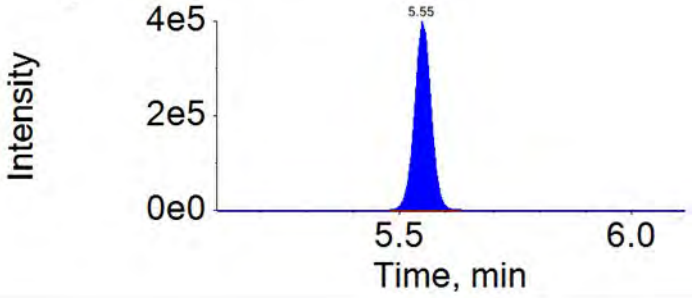
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



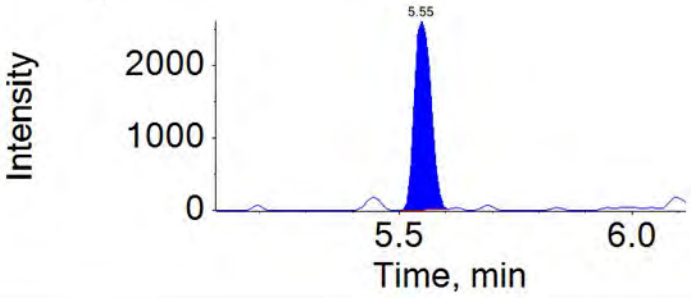
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

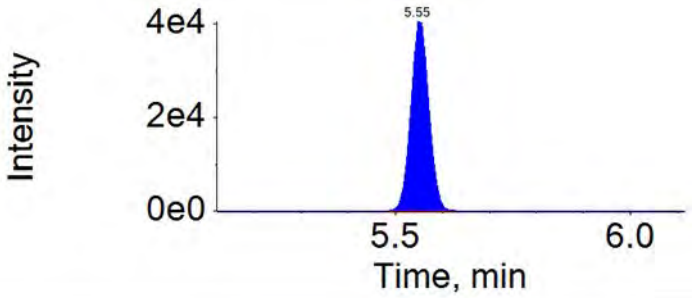
Component: PFDA
Primary Mass: 513.0 / 469.0



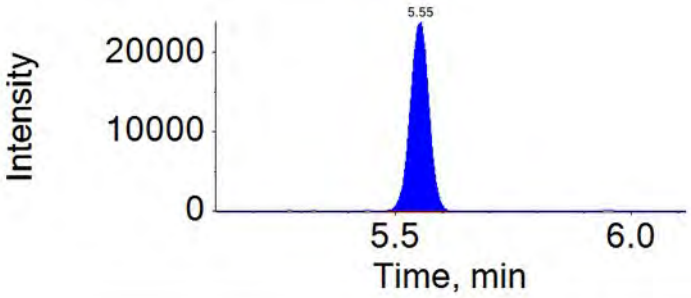
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



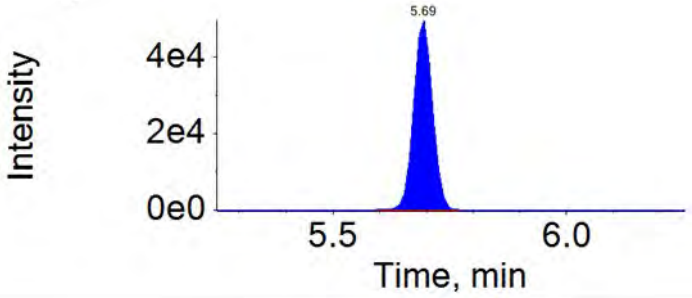
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



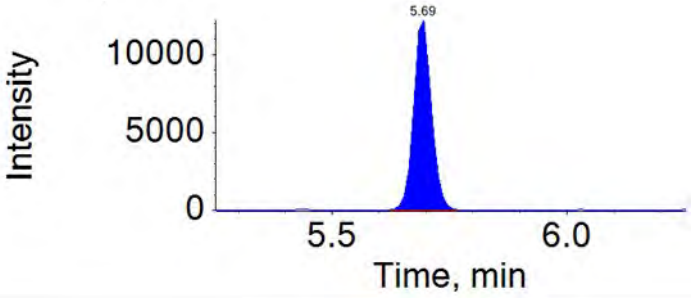
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



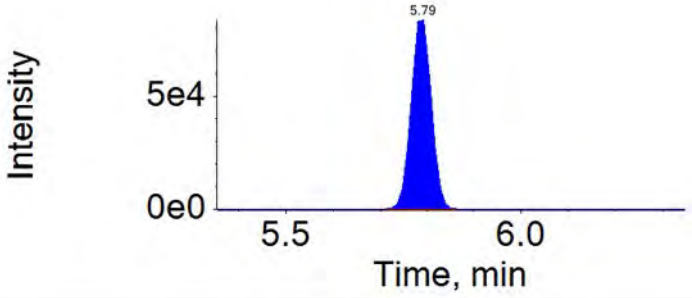
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



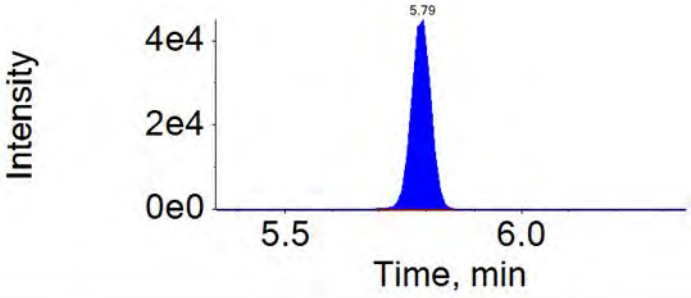
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



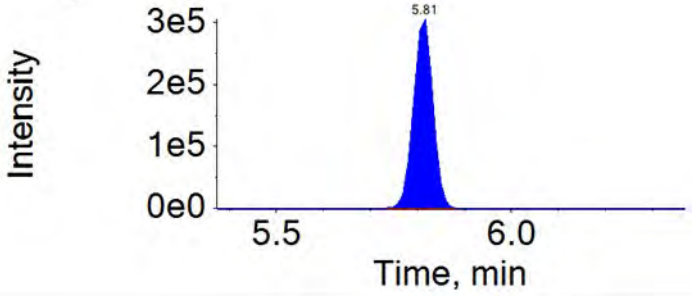
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



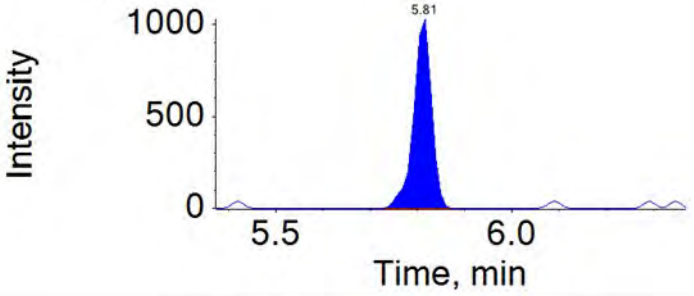
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

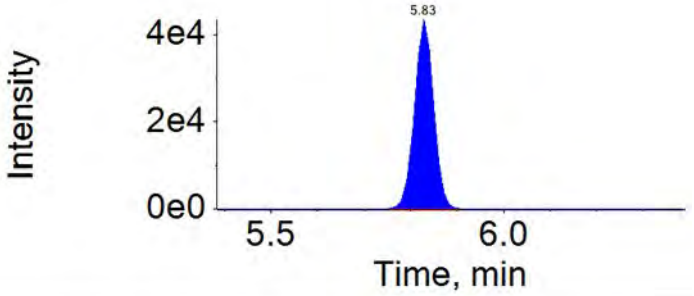
Component: PFUnDA
Primary Mass: 563.0 / 519.0



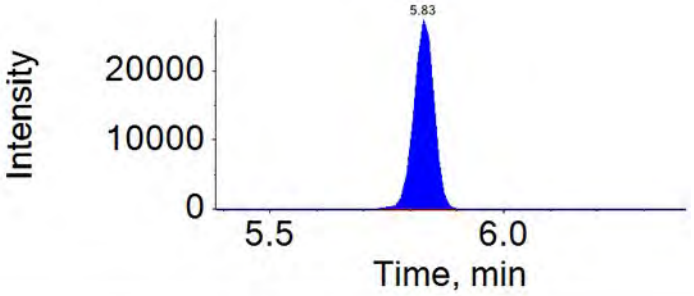
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



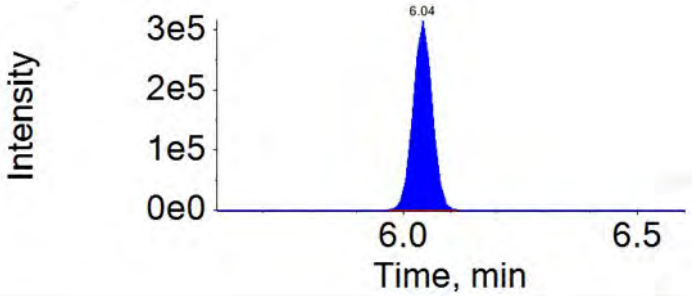
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



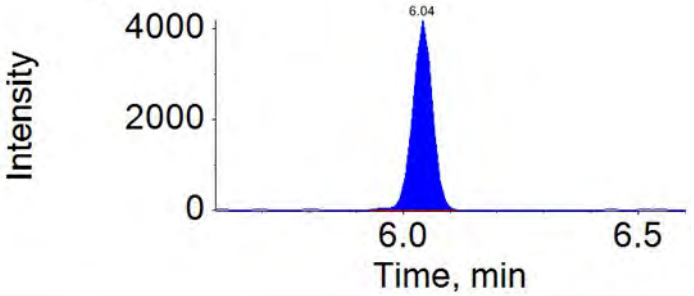
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



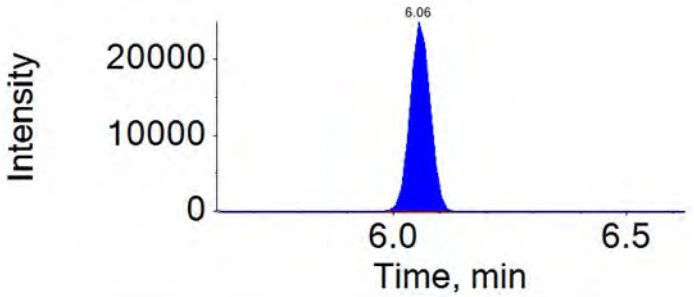
Component: PFDoDA
Primary Mass: 613.0 / 569.0



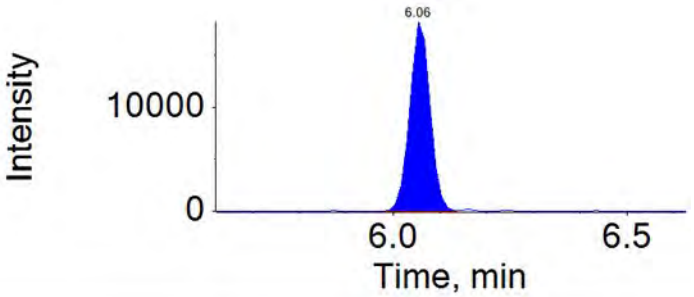
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



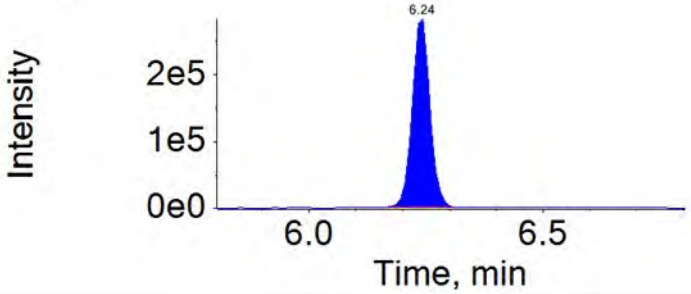
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



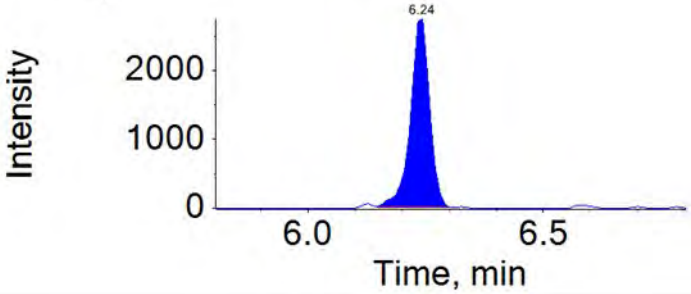
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



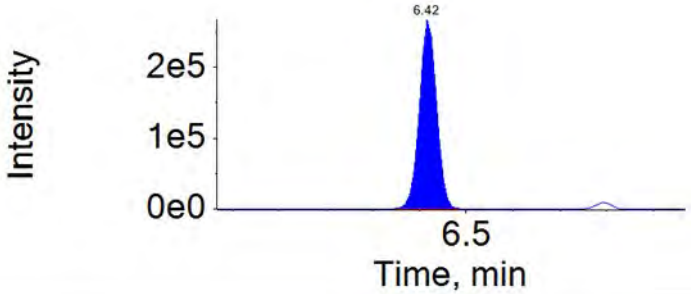
Component: PFTrDA
Primary Mass: 663.0 / 619.0



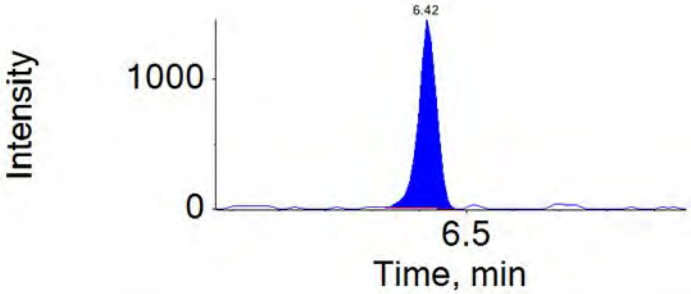
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



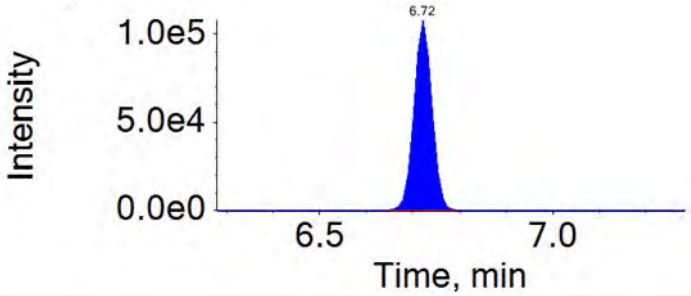
Component: PFTeDA
Primary Mass: 713.0 / 669.0



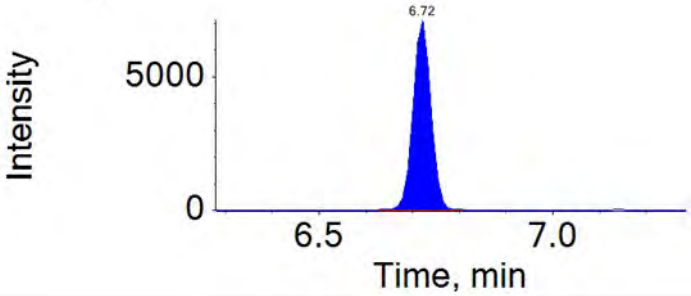
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



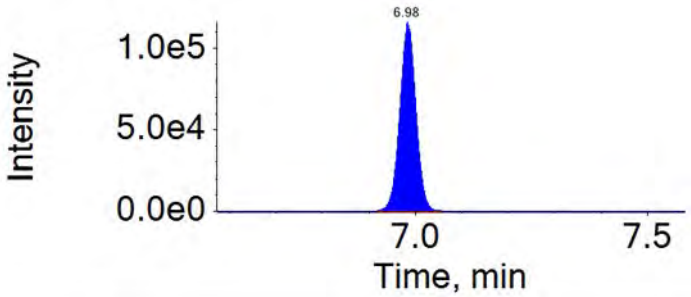
Component: PFHxDA
Primary Mass: 813.0 / 769.0



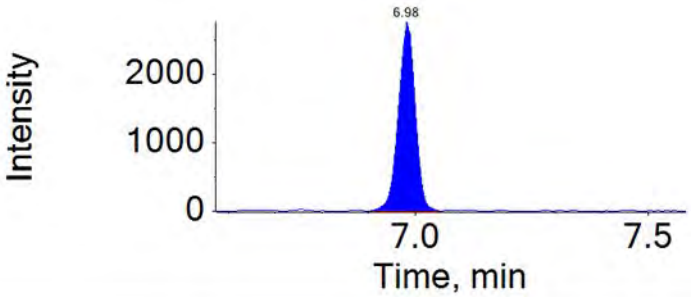
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



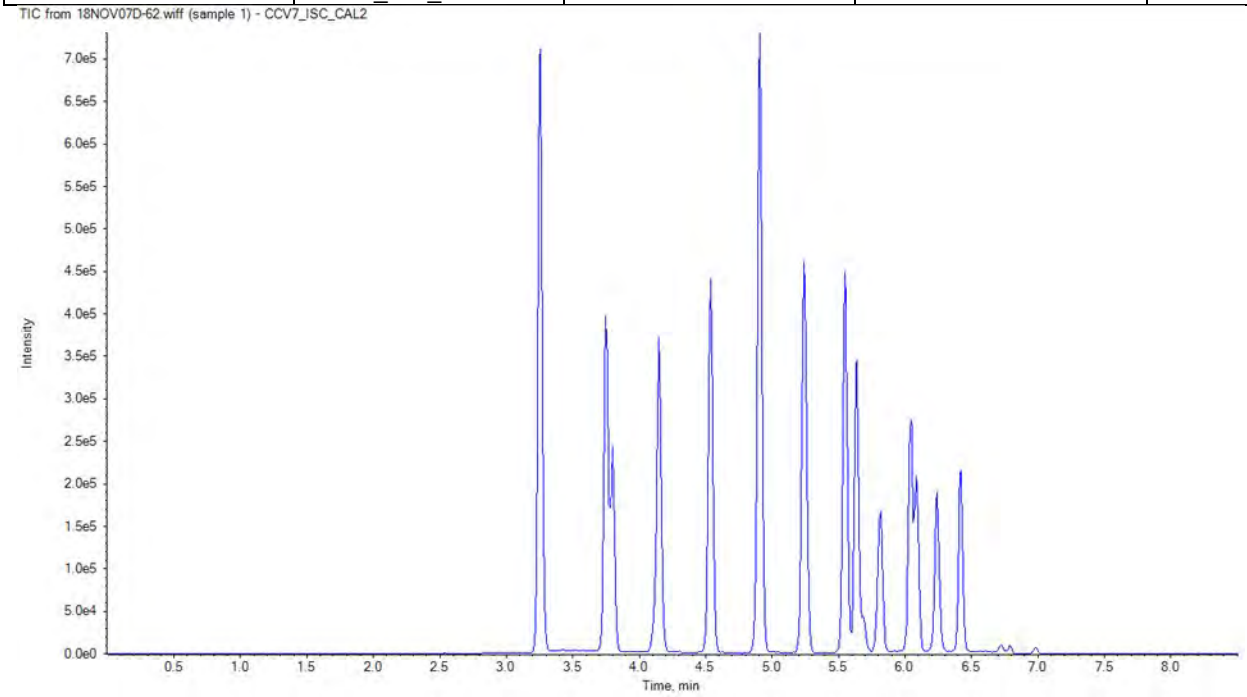
APPROVED
By MCD at 6:32 pm, 11/7/18

REVIEWED
By umar at 2:05 pm, 11/12/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV7_ISC_CAL2	CALMOD21833F	18NOV07D-62.wiff	2018-11-07T20:34:09



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	718630.0	730410.6	-2	50	
13C2-PFOA	5.0	517659.0	524423.6	-1	50	
13C4-PFOS	4.8	270625.6	274061.7	-1	50	
13C2-PFDA	5.0	309076.7	311442.1	-1	50	

APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV7_ISC_CAL2	CALMOD21833F	18NOV07D-62.wiff	2018-11-07T20:34:09

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	73719.4	10	13C4-PFBA	783524.6	5.0	0.094	3.25	1.000	0.500	0.551	10	30	
PFPeA	76136.5	12	13C5-PFPeA	840483.6	5.0	0.091	3.75	1.000	0.500	0.538	8	30	
PFBS	40450.0	12	13C3-PFBS	425367.6	4.7	0.095	3.80	1.000	0.440	0.479	9	30	
4:2-FTS	9609.0	12	13C2-4:2-FTS	53311.7	4.7	0.180	4.11	1.000	0.467	0.485	4	30	
PFHxA	90847.4	12	13C5-PFHxA	709175.5	5.0	0.128	4.15	1.000	0.500	0.549	10	30	
PFPeS	20180.0	11	13C3-PFBS	425367.6	4.7	0.047	4.17	1.100	0.469	0.468	0	30	
PFHxS	29140.2	12	13C3-PFHxS	349010.4	4.7	0.083	4.54	1.000	0.473	0.423	-11	30	
PFHpA	94802.6	12	13C4-PFHpA	565181.9	5.0	0.168	4.54	1.000	0.500	0.564	13	30	
6:2-FTS	8330.3	11	13C2-6:2-FTS	37583.6	4.8	0.222	4.89	1.000	0.474	0.553	17	30	
PFHpS	31454.1	11	13C3-PFHxS	349010.4	4.7	0.090	4.90	1.080	0.476	0.472	-1	30	
PFOA	96030.6	11	13C8-PFOA	947994.4	5.0	0.101	4.91	1.000	0.500	0.570	14	30	
PFOS	26165.2	11	13C8-PFOS	291322.4	4.8	0.090	5.23	1.000	0.478	0.466	-3	30	
PFNA	79343.6	11	13C9-PFNA	519631.3	5.0	0.153	5.25	1.000	0.500	0.571	14	30	
PFNS	17909.9	11	13C8-PFOS	291322.4	4.8	0.061	5.53	1.060	0.480	0.487	2	30	
PFDA	56501.0	11	13C6-PFDA	614246.9	5.0	0.092	5.55	1.000	0.500	0.506	1	30	
8:2-FTS	6684.0	11	13C2-8:2-FTS	27951.7	4.8	0.239	5.55	1.000	0.479	0.539	13	30	
PFOSA	70505.3	11	13C8-PFOSA	709272.1	5.0	0.099	5.64	1.000	0.500	0.537	7	30	
NMeFOSAA	9089.8	12	d3-NMeFOSAA	79804.3	5.0	0.114	5.69	1.000	0.500	0.586	17	30	
PFDS	16309.7	12	13C8-PFOS	291322.4	4.8	0.056	5.78	1.110	0.482	0.535	11	30	
PFUnDA	53286.0	12	13C7-PFUnDA	291261.3	5.0	0.183	5.81	1.000	0.500	0.525	5	30	
NEtFOSAA	7355.8	12	d5-NEtFOSAA	65731.3	5.0	0.112	5.83	1.000	0.500	0.481	-4	30	
PFDoDA	53284.1	12	13C2-PFDoDA	566639.3	5.0	0.094	6.04	1.000	0.500	0.510	2	30	
10:2-FTS	5549.2	12	13C2-8:2-FTS	27951.7	4.8	0.199	6.06	1.090	0.482	0.618	28	30	
NMePFOSAE	41232.6	11	d7-NMePFOSAE	340801.5	5.0	0.121	6.09	1.000	0.500	0.542	8	30	
NMePFOSA	10877.5	12	d3-NMePFOSA	79291.8	5.0	0.137	6.10	1.000	0.500	0.768	54	30	OOS
PFDoS	6354.7	11	13C8-PFOS	291322.4	4.8	0.022	6.21	1.190	0.484	0.421	-13	30	
NEtPFOSAE	47451.6	11	d9-NEtPFOSAE	273743.6	5.0	0.173	6.25	1.000	0.500	0.556	11	30	
NEtPFOSA	7308.1	11	d5-NEtPFOSA	64000.5	5.0	0.114	6.26	1.000	0.500	0.503	1	30	
PFTrDA	49257.3	12	13C2-PFDoDA	566639.3	5.0	0.087	6.24	1.030	0.500	0.548	10	30	
PFTeDA	41493.1	10	13C2-PFTeDA	413127.6	5.0	0.100	6.42	1.000	0.500	0.590	18	30	
PFHxDA	18477.8	11	13C2-PFTeDA	413127.6	5.0	0.045	6.72	1.050	0.500	0.555	11	30	
PFODA	16301.0	11	13C2-PFTeDA	413127.6	5.0	0.039	6.98	1.090	0.500	0.565	13	30	

APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: 18OCT20QM
Result Table: 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV7_ISC_CAL2			**Data File:**		18NOV07D-62.wiff
Sample ID:	CALMOD21833F			**Acquis Date:**		2018-11-07T20:34:09
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCCV7-11_DOD
QMethod File:	18OCT20QM			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		MM26157
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	718630.0	730410.6	-2	50	
13C2-PFOA	5.0	517659.0	524423.6	-1	50	
13C4-PFOS	4.8	270625.6	274061.7	-1	50	
13C2-PFDA	5.0	309076.7	311442.1	-1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	783524.6	13C3-PFBA	718630.0	1.090	5.000	5.046	101	70-130	
E13C5-PFPeA	840483.6	13C3-PFBA	718630.0	1.170	5.000	5.095	102	70-130	
E13C3-PFBS	425367.6	13C3-PFBA	718630.0	0.592	4.650	4.344	93	70-130	
E13C2-4:2-FTS	53311.7	13C2-PFOA	517659.0	0.103	4.670	4.647	100	70-130	
E13C5-PFHxA	709175.5	13C2-PFOA	517659.0	1.370	5.000	5.039	101	70-130	
E13C3-PFHxS	349010.4	13C2-PFOA	517659.0	0.674	4.730	4.840	102	70-130	
E13C4-PFHpA	565181.9	13C2-PFOA	517659.0	1.092	5.000	4.967	99	70-130	
E13C2-6:2-FTS	37583.6	13C2-PFOA	517659.0	0.073	4.750	4.841	102	70-130	
E13C8-PFOA	947994.4	13C2-PFOA	517659.0	1.831	5.000	5.107	102	70-130	
E13C8-PFOS	291322.4	13C4-PFOS	270625.6	1.076	4.780	4.760	100	70-130	
E13C9-PFNA	519631.3	13C4-PFOS	270625.6	1.920	5.000	5.245	105	70-130	
E13C6-PFDA	614246.9	13C2-PFDA	309076.7	1.987	5.000	4.998	100	70-130	
E13C2-8:2-FTS	27951.7	13C2-PFDA	309076.7	0.090	4.790	4.785	100	70-130	
E13C8-PFOSA	709272.1	13C2-PFDA	309076.7	2.295	5.000	5.008	100	70-130	
Ed3-NMeFOSAA	79804.3	13C2-PFDA	309076.7	0.258	5.000	4.802	96	70-130	
E13C7-PFUnDA	291261.3	13C2-PFDA	309076.7	0.942	5.000	5.436	109	70-130	
Ed5-NEtFOSAA	65731.3	13C2-PFDA	309076.7	0.213	5.000	4.922	98	70-130	
E13C2-PFDoDA	566639.3	13C2-PFDA	309076.7	1.833	5.000	4.942	99	70-130	
Ed7-NMePFOSAE	340801.5	13C2-PFDA	309076.7	1.103	5.000	5.128	103	70-130	
Ed3-NMePFOSA	79291.8	13C2-PFDA	309076.7	0.257	5.000	4.697	94	70-130	
Ed9-NEtPFOSAE	273743.6	13C2-PFDA	309076.7	0.886	5.000	5.058	101	70-130	
Ed5-NEtPFOSA	64000.5	13C2-PFDA	309076.7	0.207	5.000	4.795	96	70-130	
E13C2-PFTeDA	413127.6	13C2-PFDA	309076.7	1.337	5.000	4.812	96	70-130	

APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

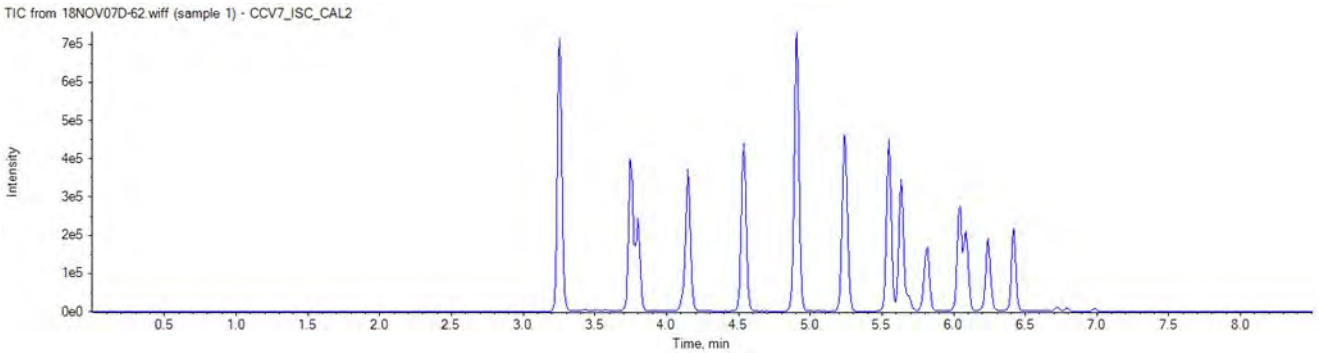
Analyte Quantitation Peak Table

Sample Name: CCV7_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV07D-62.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	73719.4		A	13C4-PFBA	3.25	783524.6	0.094	0.551
PFPeA	3.75	1.000	76136.5		A	13C5-PFPeA	3.75	840483.6	0.091	0.538
PFBS	3.80	1.000	40450.0		A	13C3-PFBS	3.80	425367.6	0.095	0.479
4:2-FTS	4.11	1.000	9609.0		A	13C2-4:2-FTS	4.11	53311.7	0.180	0.485
PFHxA	4.15	1.000	90847.4		A	13C5-PFHxA	4.15	709175.5	0.128	0.549
PFPeS	4.17	1.100	20180.0		A	13C3-PFBS	3.80	425367.6	0.047	0.468
PFHxS	4.54	1.000	29140.2		A	13C3-PFHxS	4.54	349010.4	0.083	0.423
PFHpA	4.54	1.000	94802.6		A	13C4-PFHpA	4.54	565181.9	0.168	0.564
6:2-FTS	4.89	1.000	8330.3		A	13C2-6:2-FTS	4.89	37583.6	0.222	0.553
PFHpS	4.90	1.080	31454.1		A	13C3-PFHxS	4.54	349010.4	0.090	0.472
PFOA	4.91	1.000	96030.6		A	13C8-PFOA	4.91	947994.4	0.101	0.570
PFOS	5.23	1.000	26165.2		A	13C8-PFOS	5.23	291322.4	0.090	0.466
PFNA	5.25	1.000	79343.6		A	13C9-PFNA	5.25	519631.3	0.153	0.571
PFNS	5.53	1.060	17909.9		A	13C8-PFOS	5.23	291322.4	0.061	0.487
PFDA	5.55	1.000	56501.0		A	13C6-PFDA	5.55	614246.9	0.092	0.506
8:2-FTS	5.55	1.000	6684.0		A	13C2-8:2-FTS	5.55	27951.7	0.239	0.539
PFOSA	5.64	1.000	70505.3		A	13C8-PFOSA	5.63	709272.1	0.099	0.537
NMeFOSAA	5.69	1.000	9089.8		A	d3-NMeFOSAA	5.69	79804.3	0.114	0.586
PFDS	5.78	1.110	16309.7		A	13C8-PFOS	5.23	291322.4	0.056	0.535
PFUnDA	5.81	1.000	53286.0		A	13C7-PFUnDA	5.81	291261.3	0.183	0.525
NEtFOSAA	5.83	1.000	7355.8		A	d5-NEtFOSAA	5.82	65731.3	0.112	0.481
PFDoDA	6.04	1.000	53284.1		A	13C2-PFDoDA	6.04	566639.3	0.094	0.510
10:2-FTS	6.06	1.090	5549.2		A	13C2-8:2-FTS	5.55	27951.7	0.199	0.618
NMePFOSAE	6.09	1.000	41232.6		A	d7-NMePFOSAE	6.08	340801.5	0.121	0.542
NMePFOSA	6.10	1.000	10877.5		A	d3-NMePFOSA	6.10	79291.8	0.137	0.768
PFDoS	6.21	1.190	6354.7		A	13C8-PFOS	5.23	291322.4	0.022	0.421
NEtPFOSAE	6.25	1.000	47451.6		A	d9-NEtPFOSAE	6.24	273743.6	0.173	0.556
NEtPFOSA	6.26	1.000	7308.1		A	d5-NEtPFOSA	6.25	64000.5	0.114	0.503
PFTrDA	6.24	1.030	49257.3		A	13C2-PFDoDA	6.04	566639.3	0.087	0.548
PFTeDA	6.42	1.000	41493.1		A	13C2-PFTeDA	6.42	413127.6	0.100	0.590
PFHxDA	6.72	1.050	18477.8		A	13C2-PFTeDA	6.42	413127.6	0.045	0.555
PFODA	6.98	1.090	16301.0		A	13C2-PFTeDA	6.42	413127.6	0.039	0.565

Total Ion Chromatogram

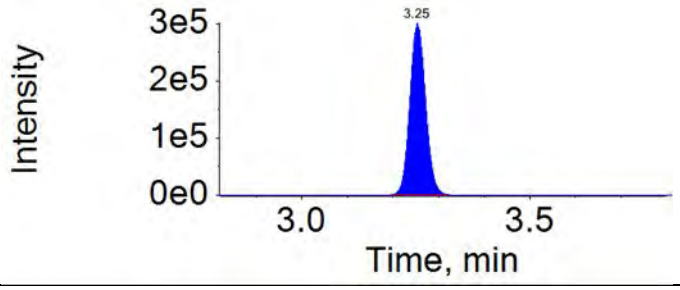


APPROVED
By MSM at 11:40 am, 11/8/18

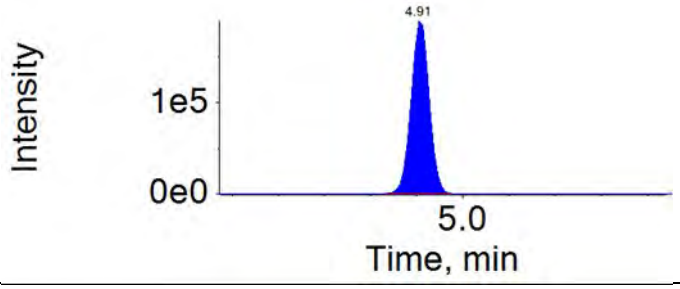
REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

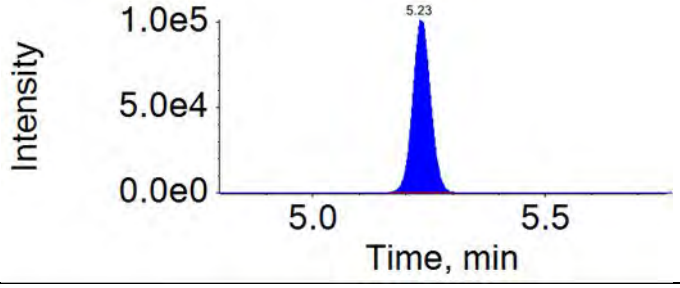
Injection Standard: 13C3-PFBA
216.0 / 172.0



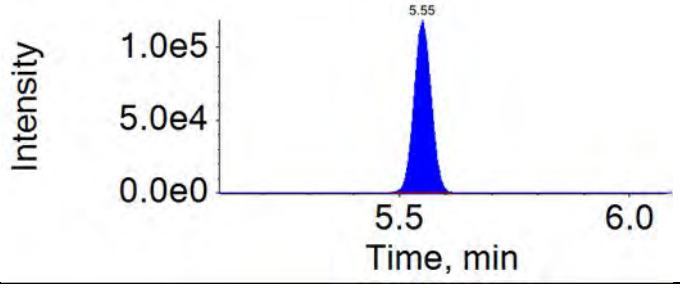
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

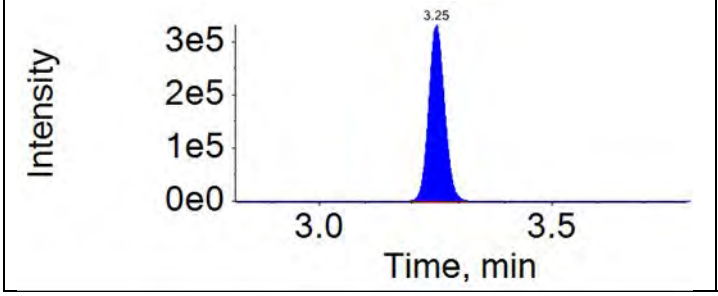


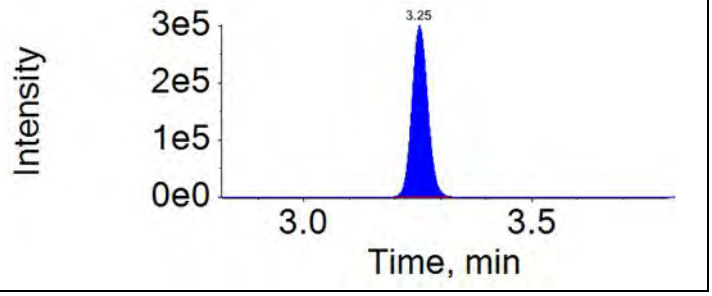
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

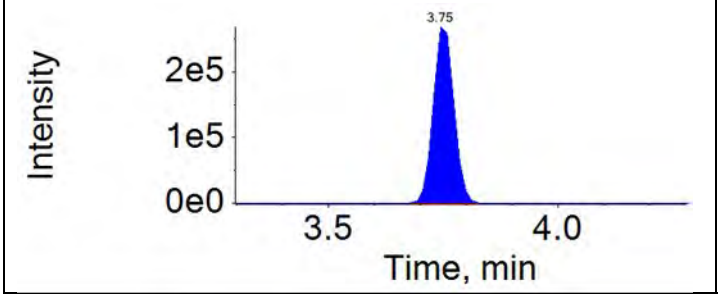
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

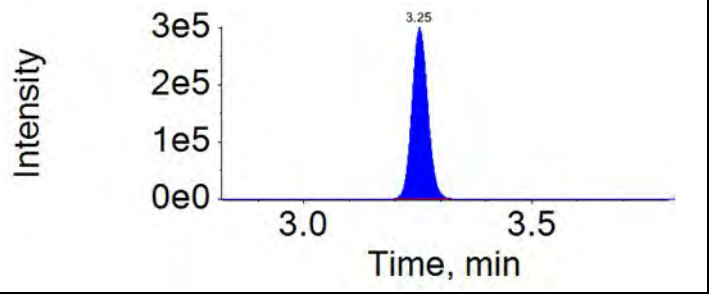
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



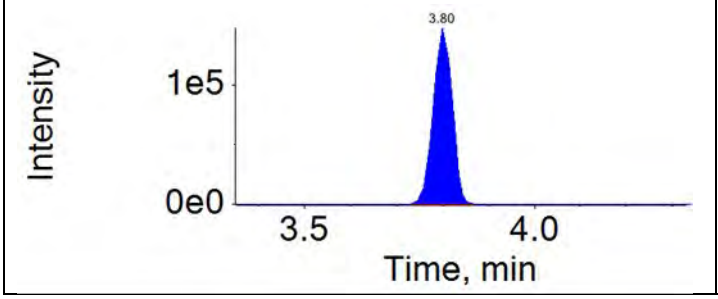


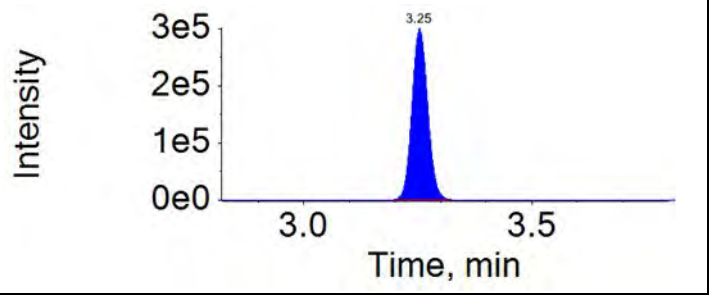
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



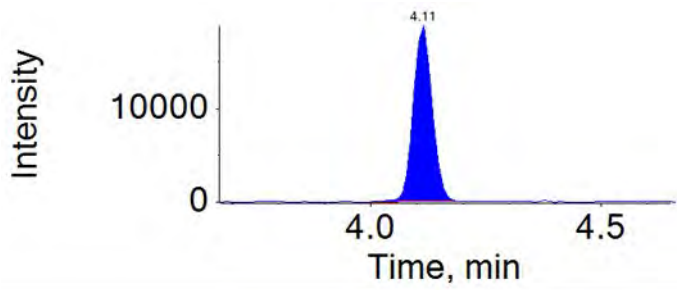


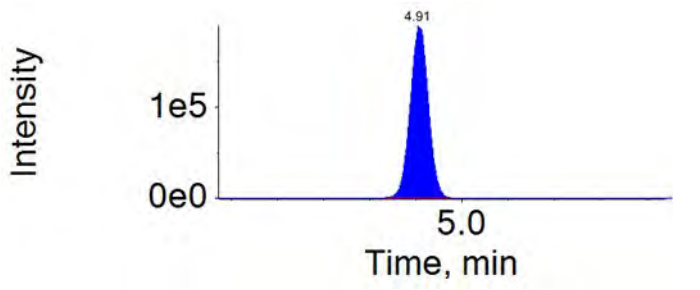
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





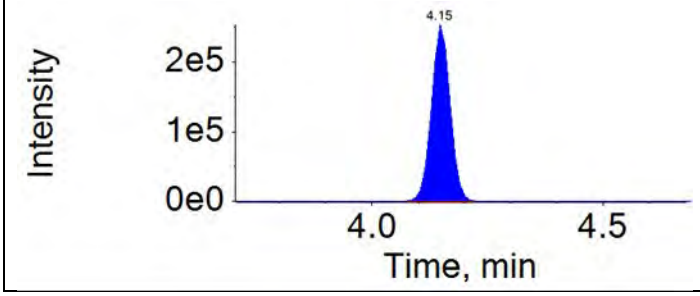
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

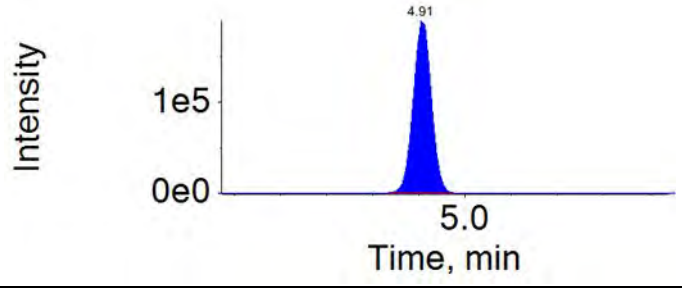




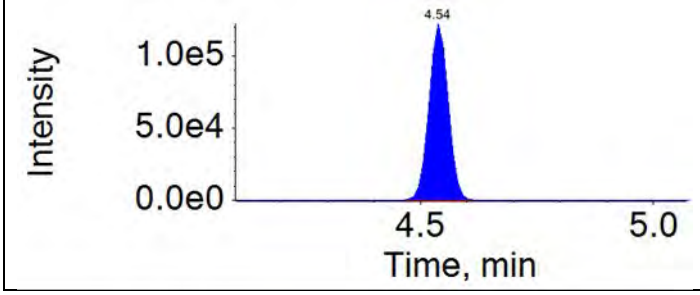
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

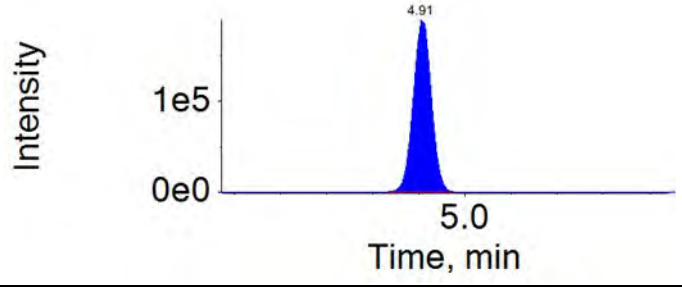
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



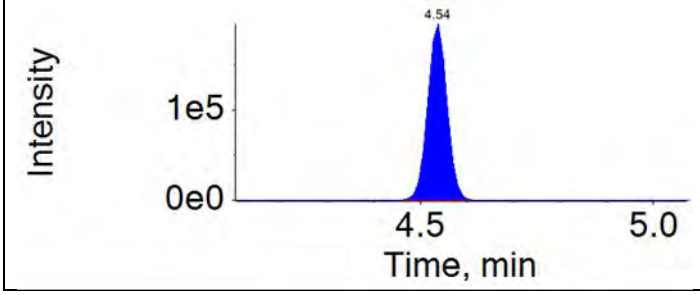


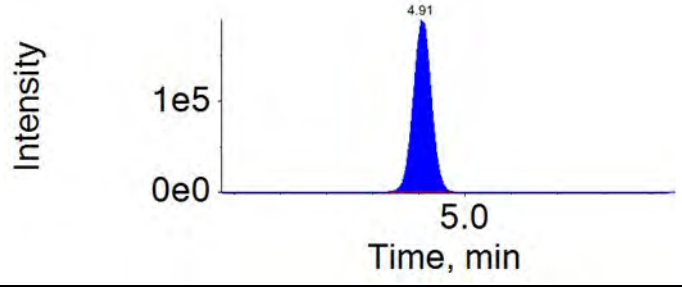
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



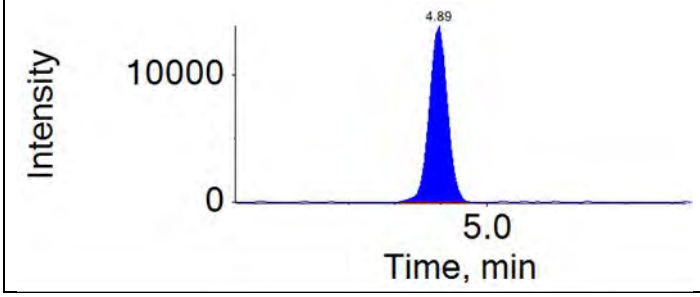


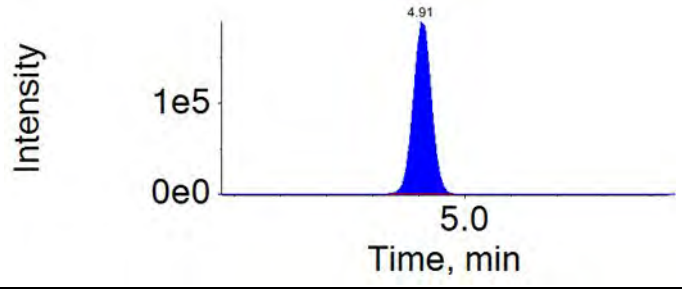
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

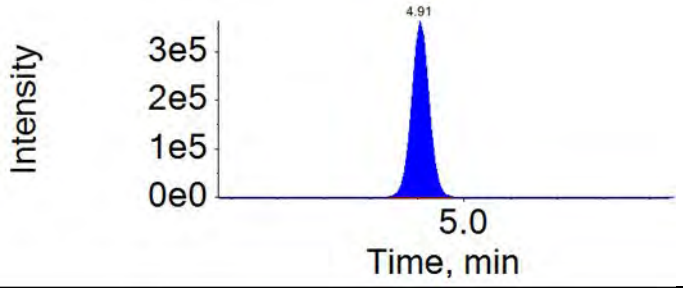
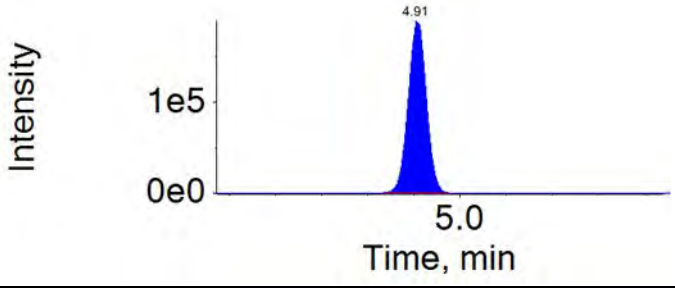


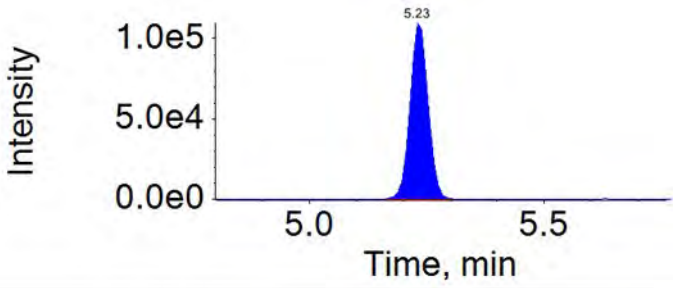
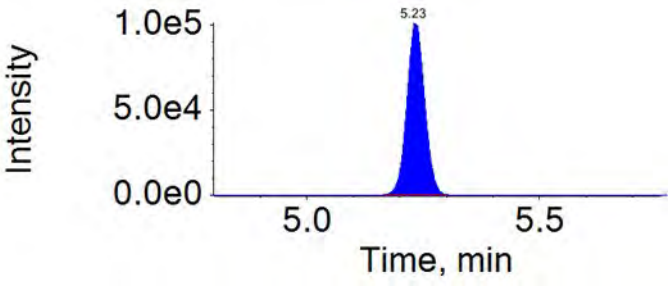


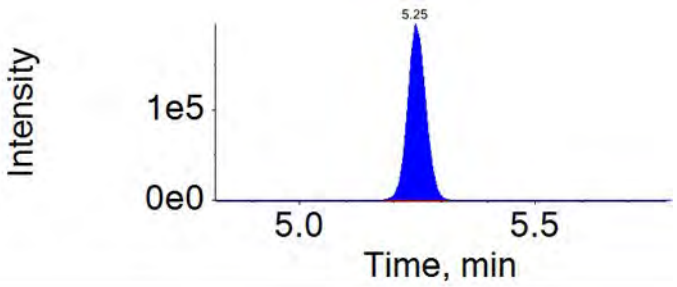
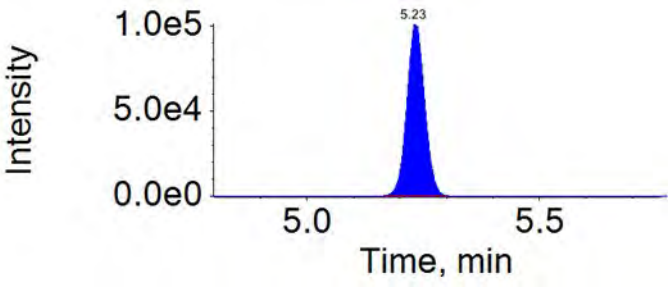
APPROVED
By MSM at 11:40 am, 11/8/18

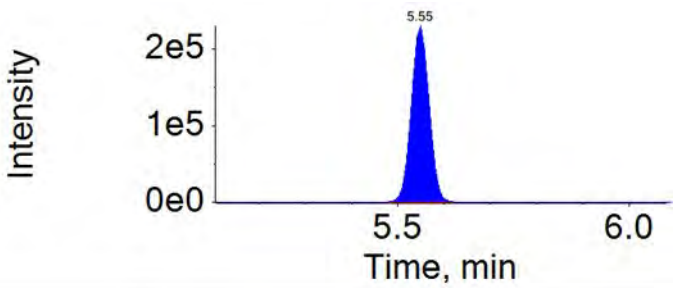
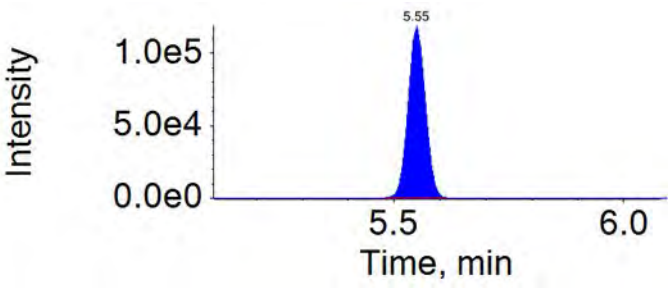
REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

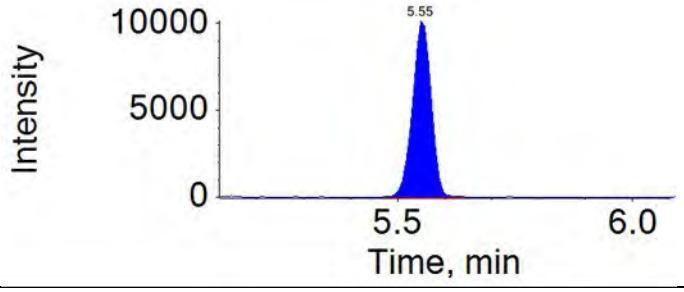
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

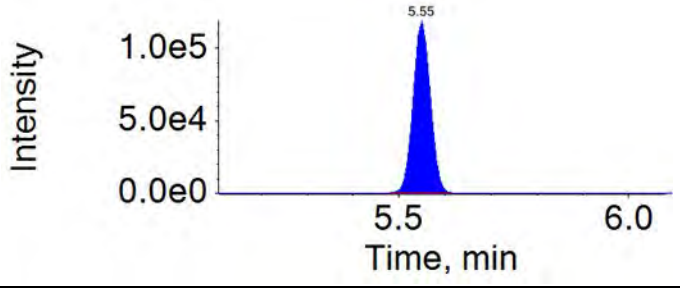
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

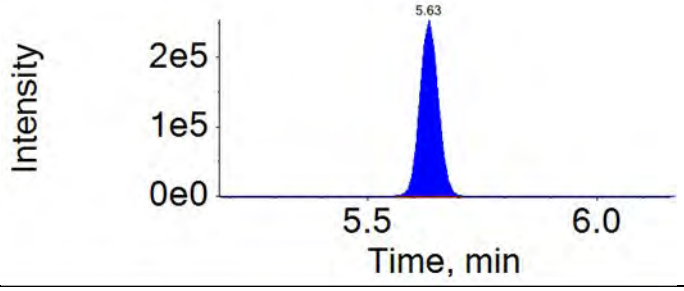
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

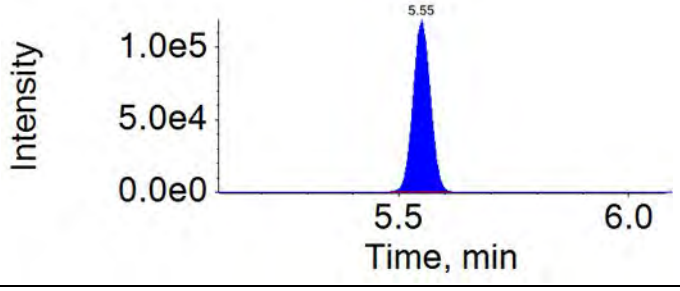
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



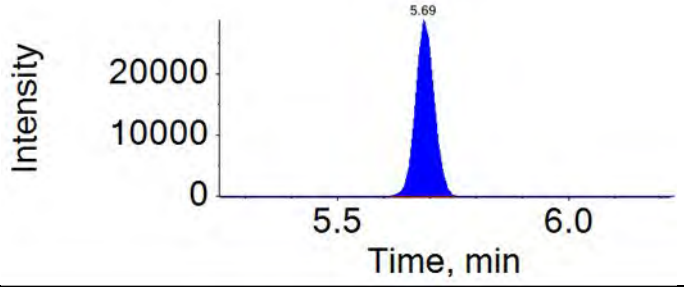


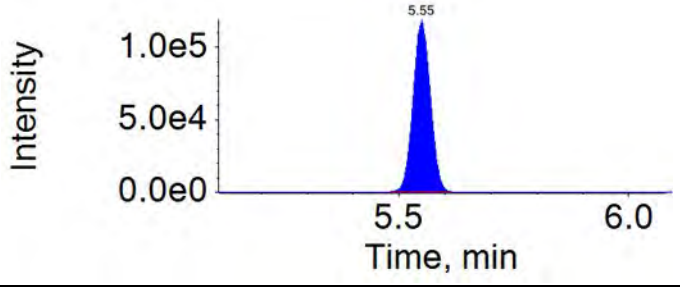
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



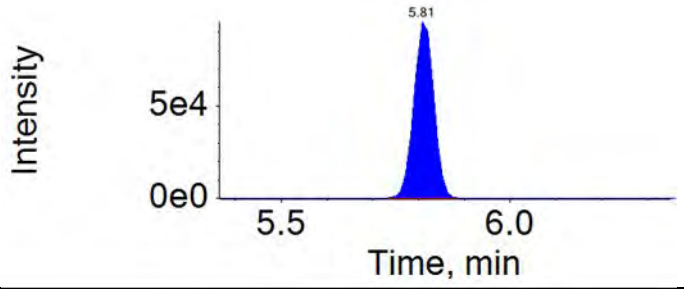


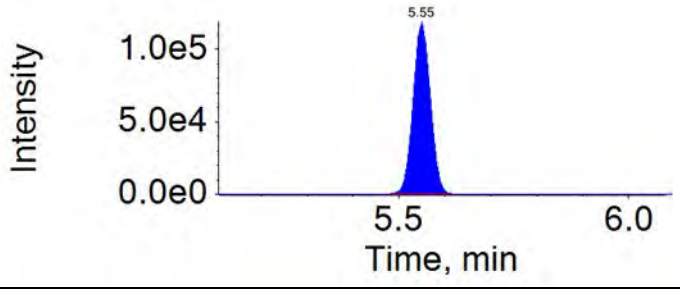
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



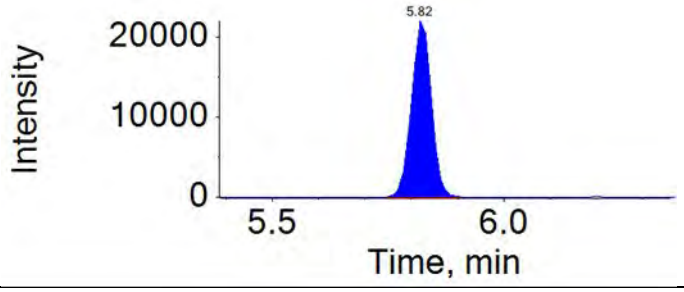


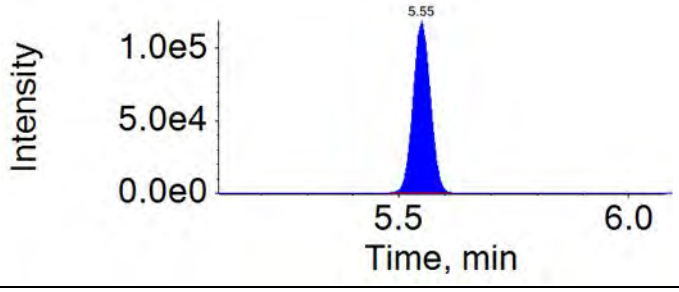
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

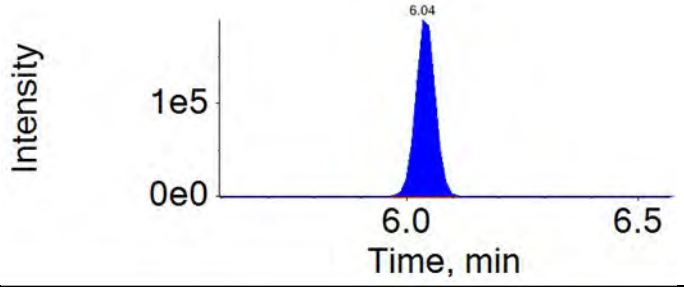
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

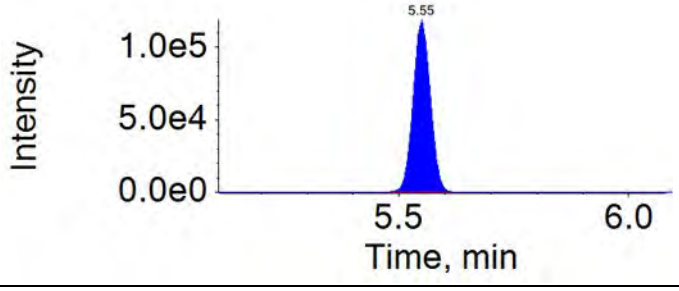
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



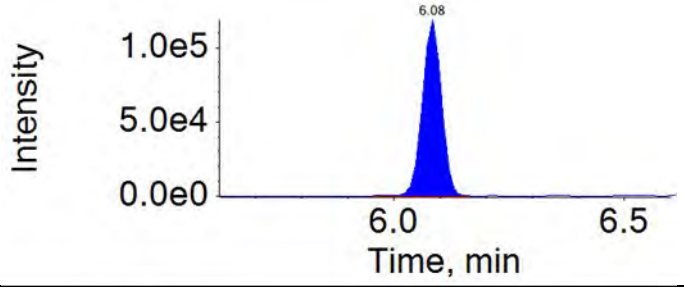


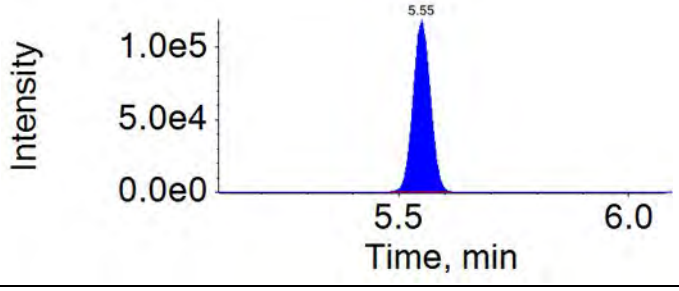
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



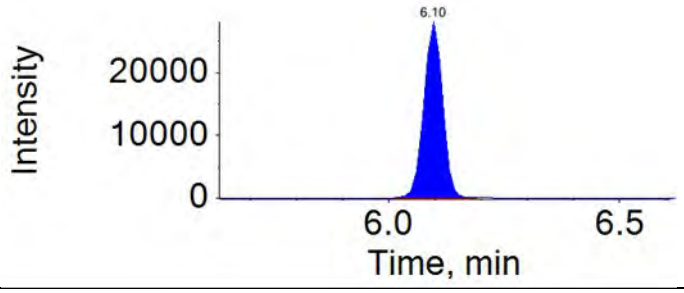


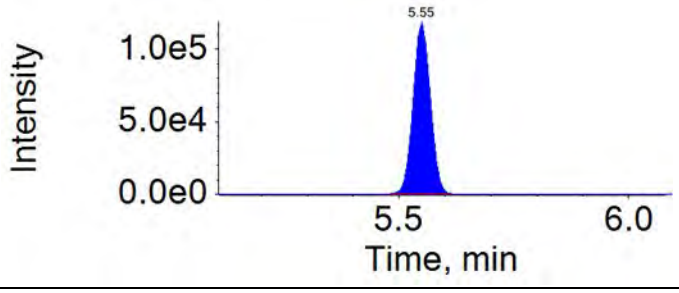
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



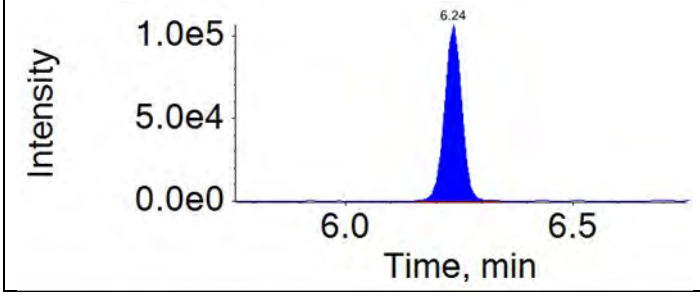


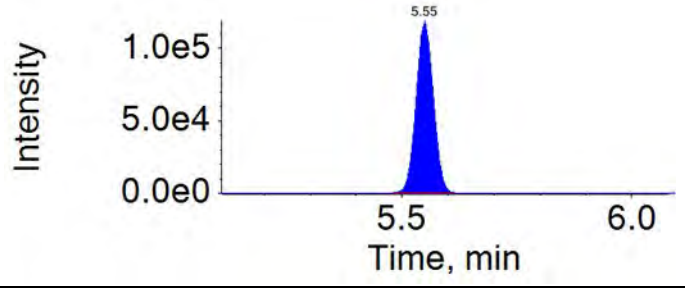
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

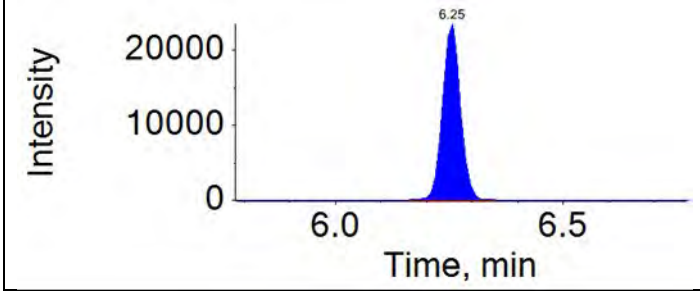
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

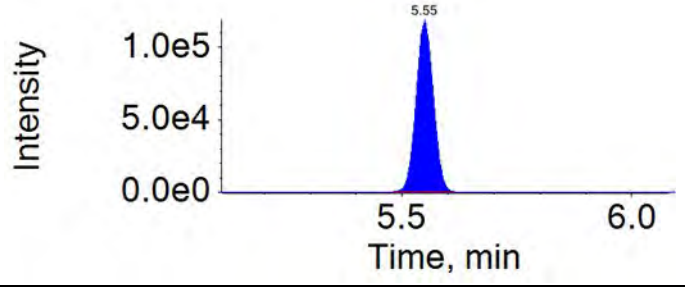
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



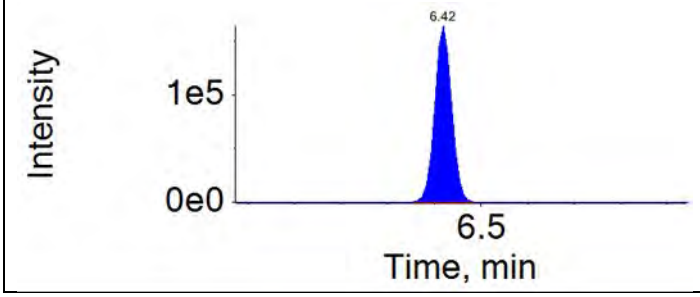


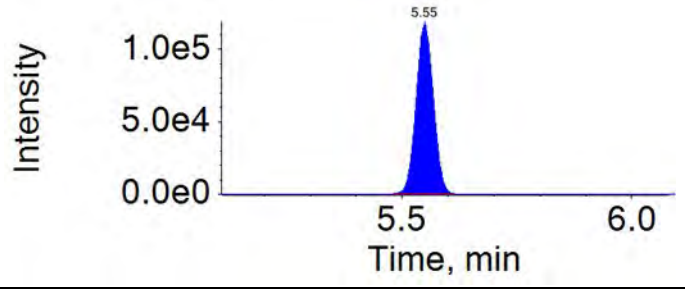
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



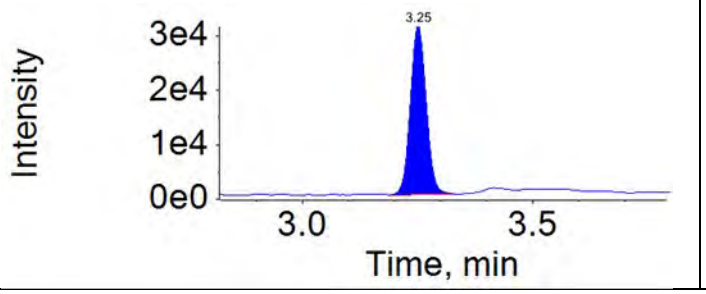


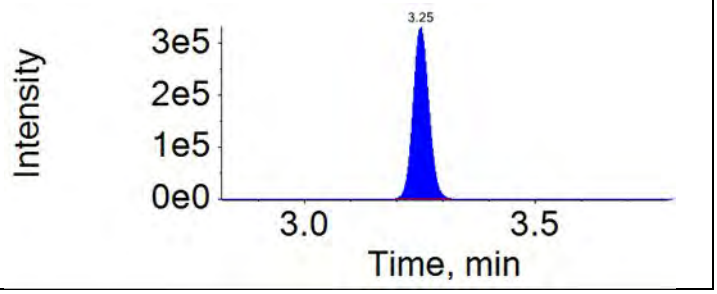
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

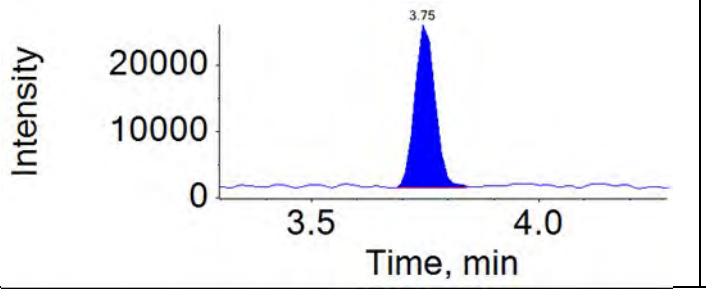
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

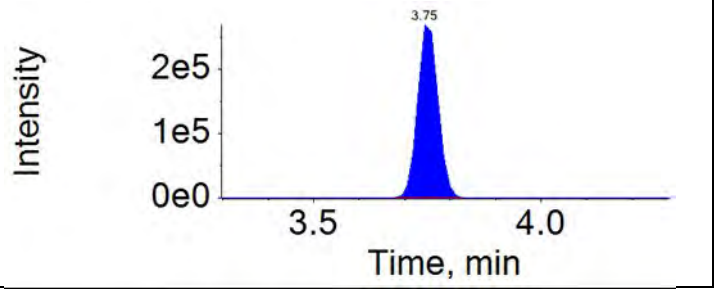
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



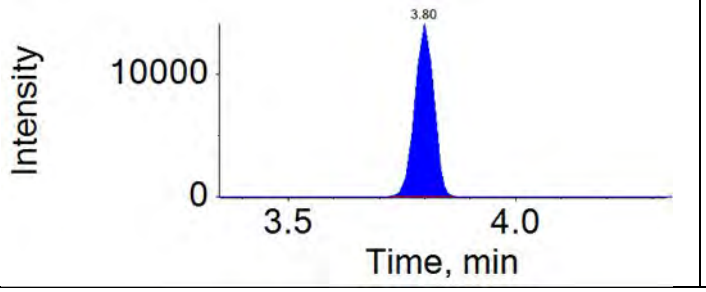


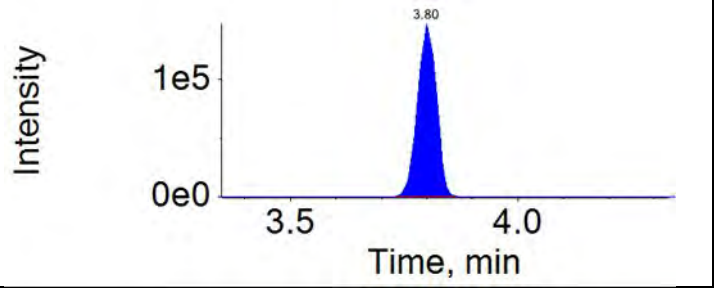
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



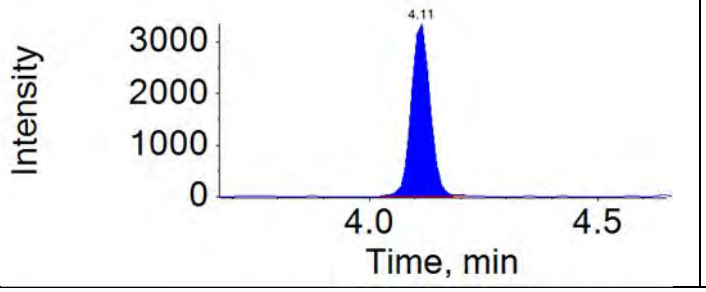


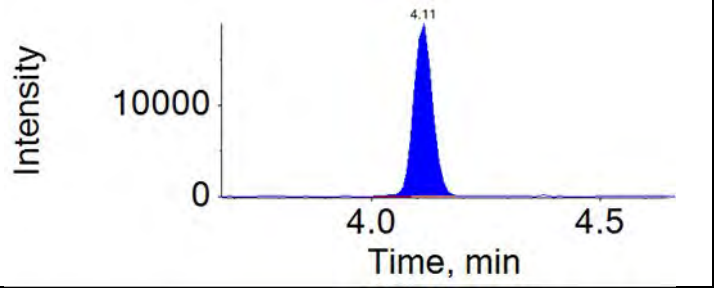
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



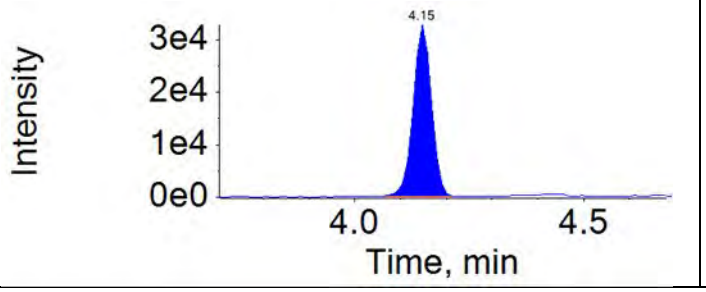


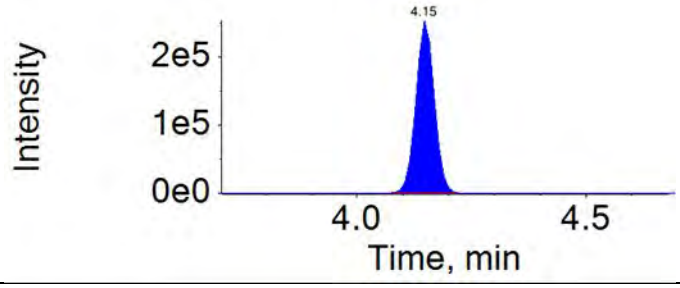
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

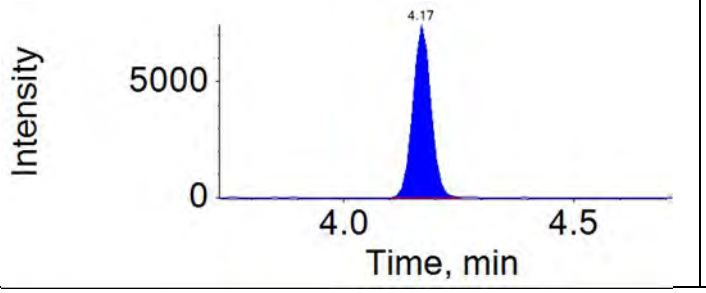
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

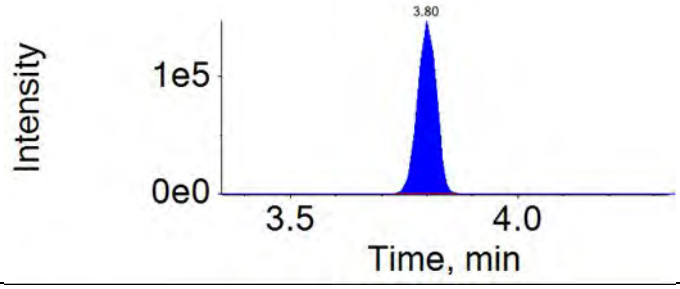
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



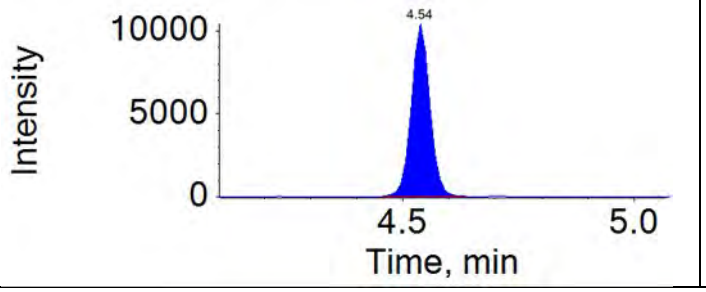


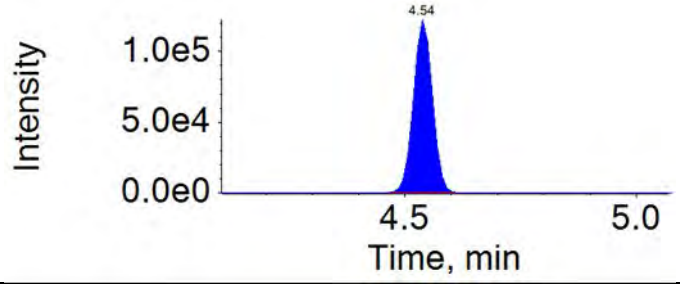
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



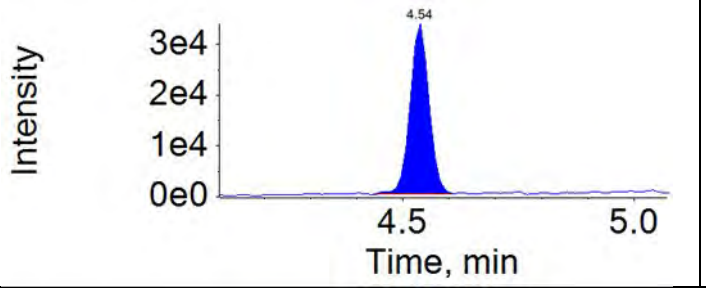


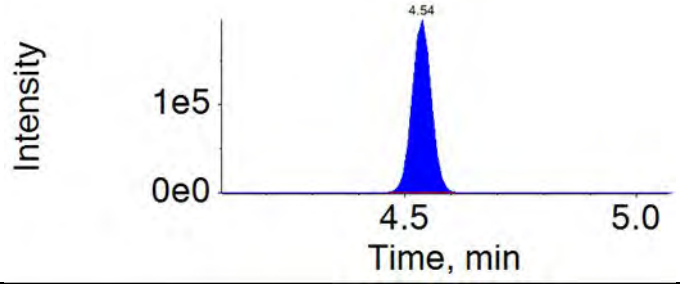
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

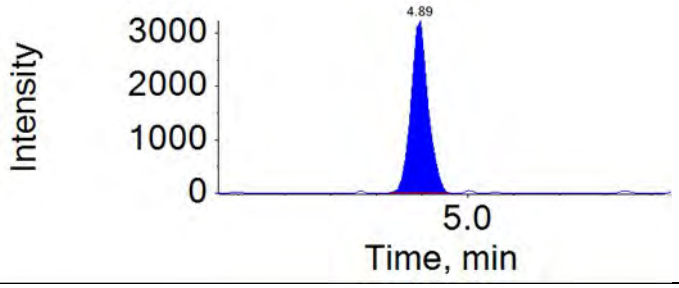
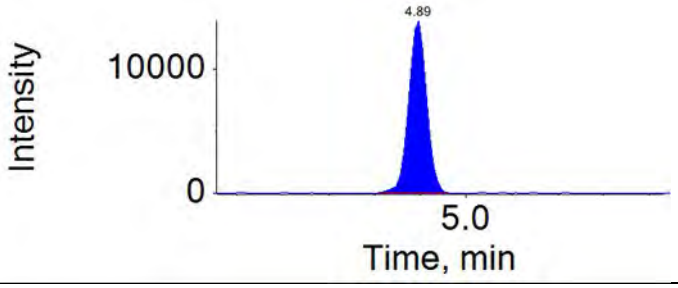


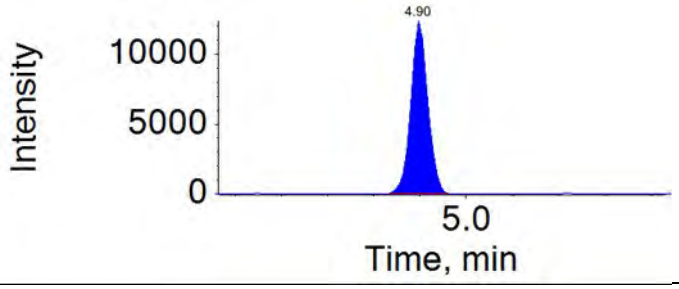
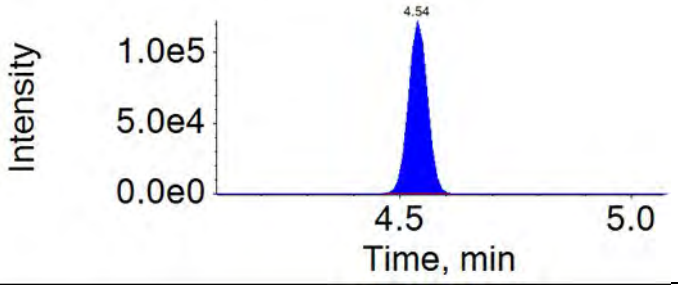


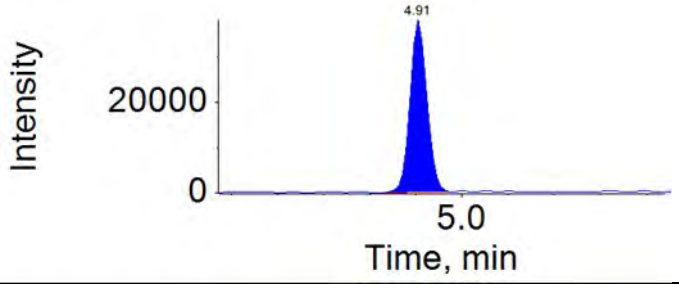
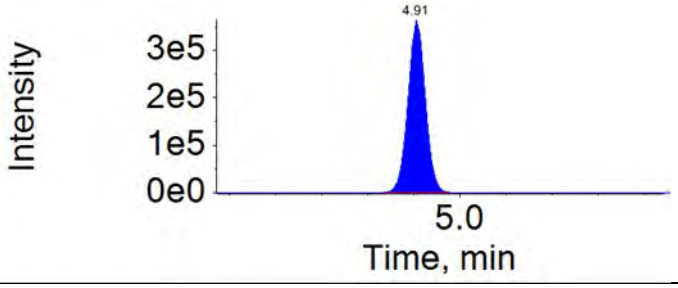
APPROVED
By MSM at 11:40 am, 11/8/18

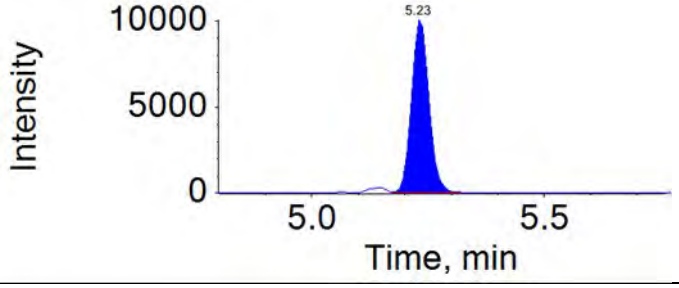
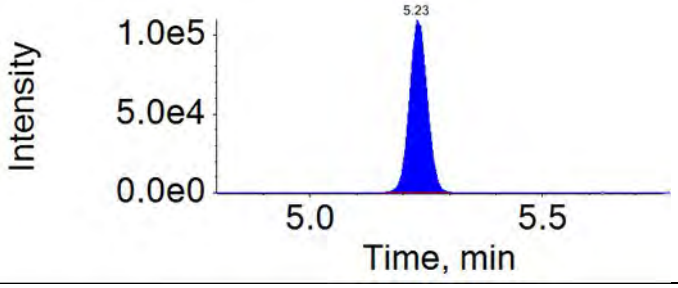
REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

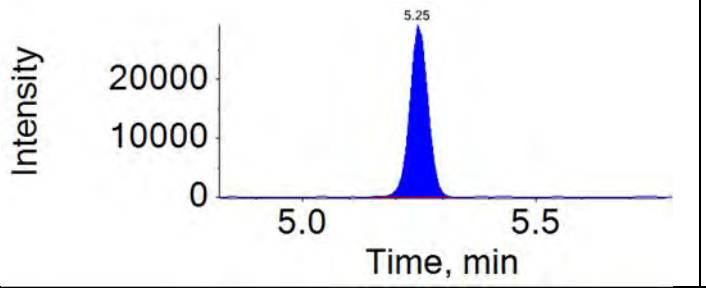
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

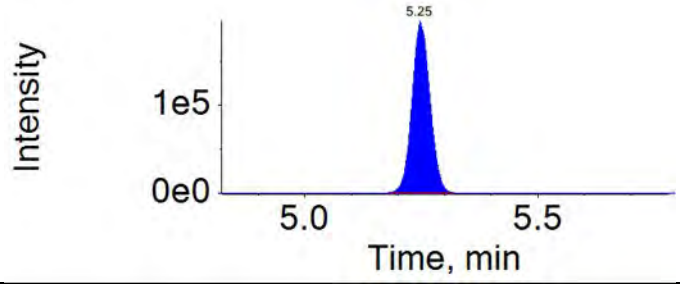
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

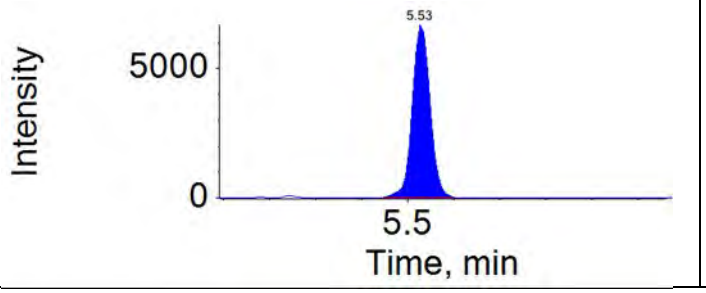
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

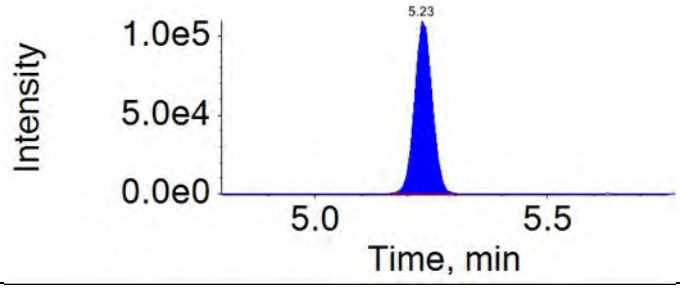
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



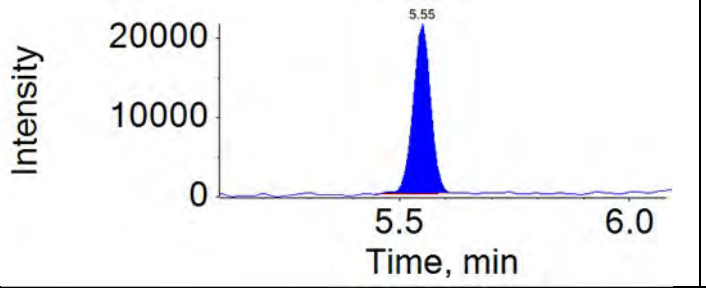


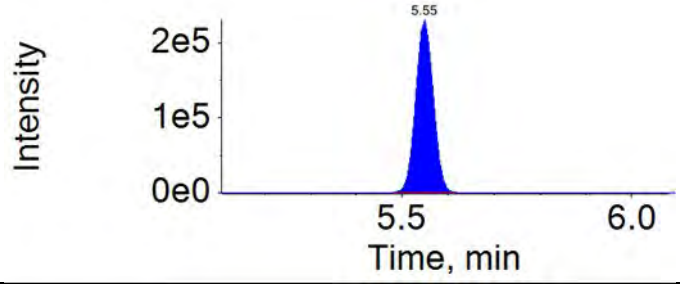
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



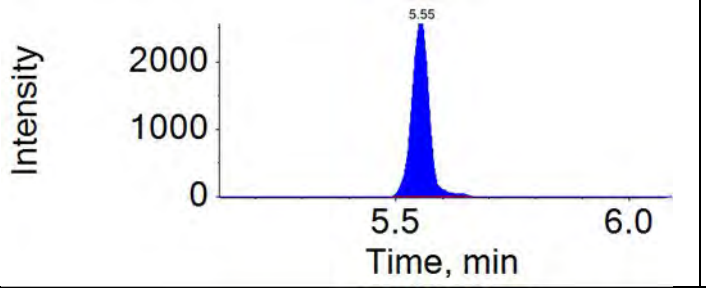


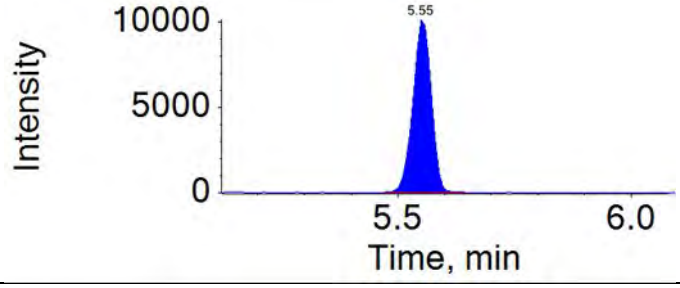
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

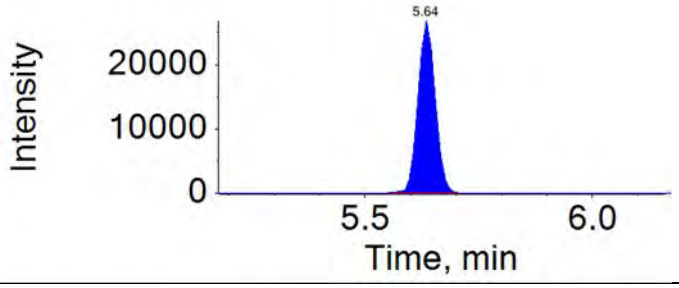
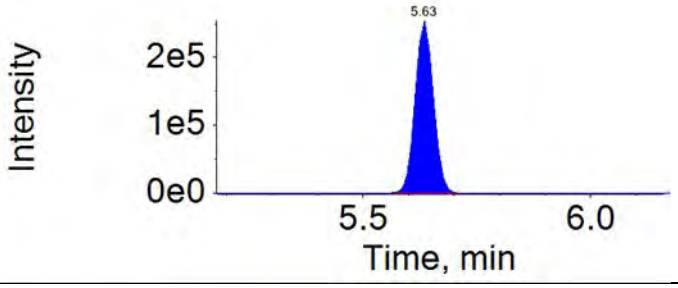


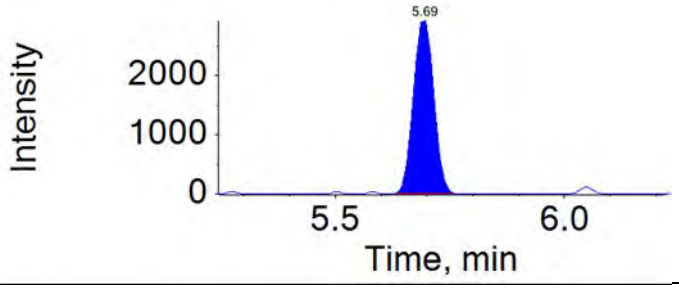
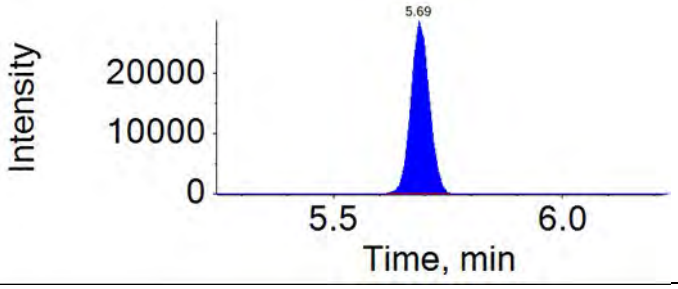


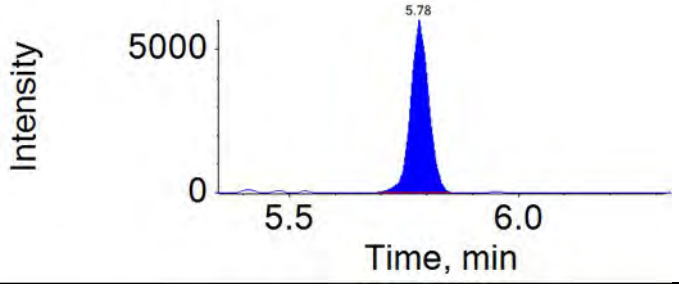
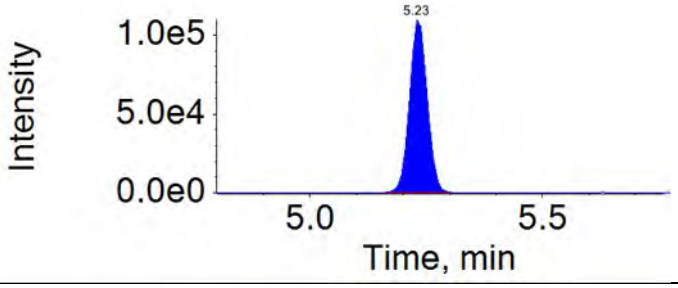
APPROVED
By MSM at 11:40 am, 11/8/18

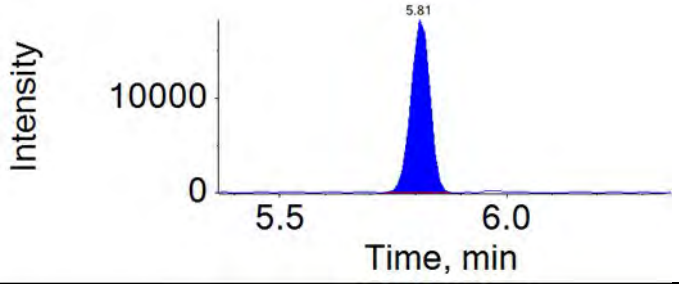
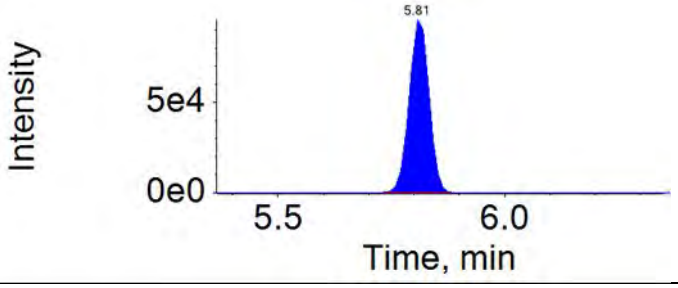
REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

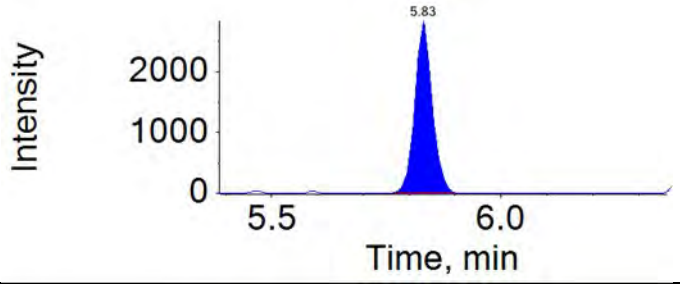
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

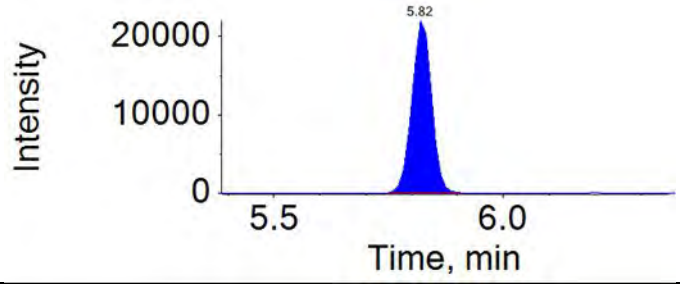
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

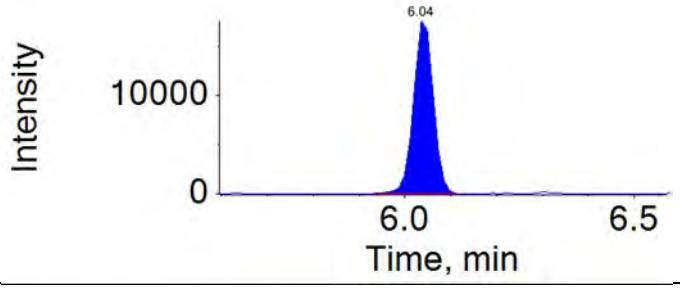
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

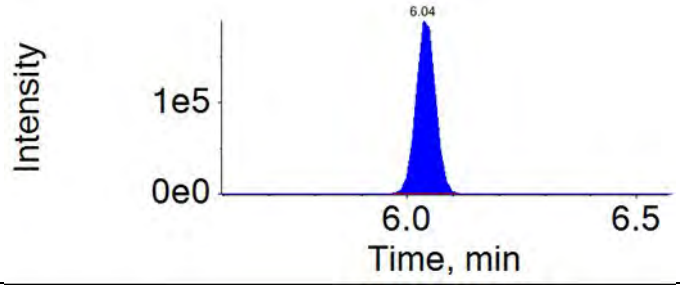
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



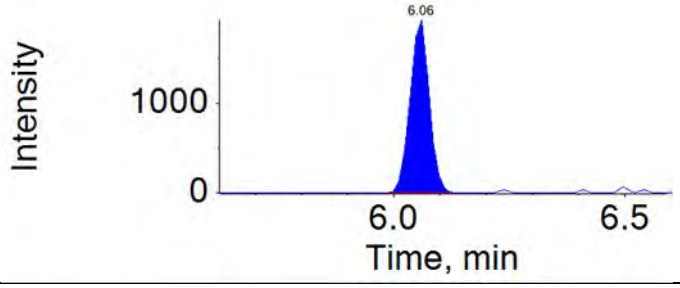


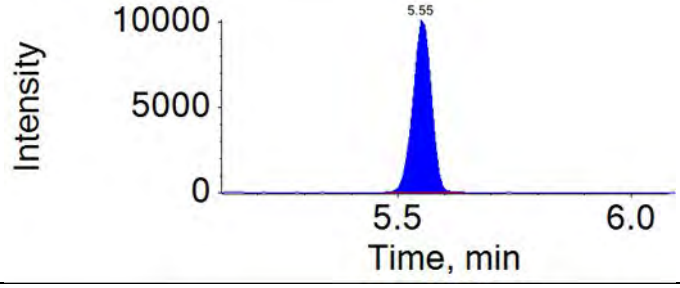
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



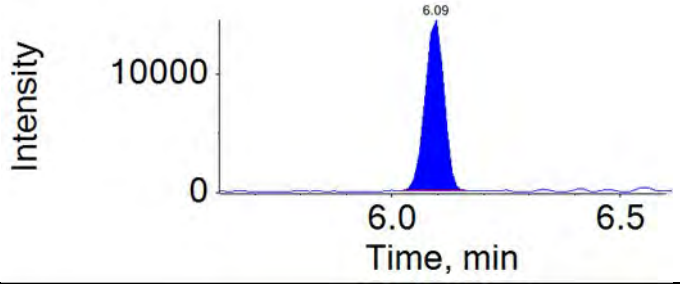


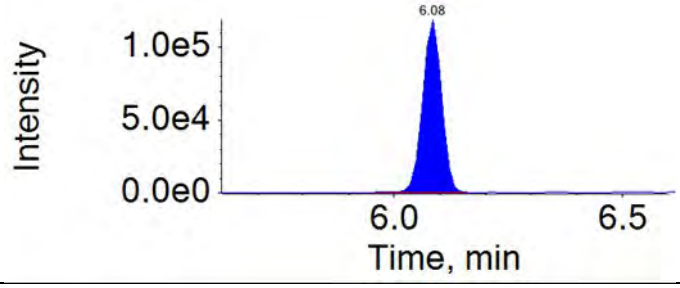
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



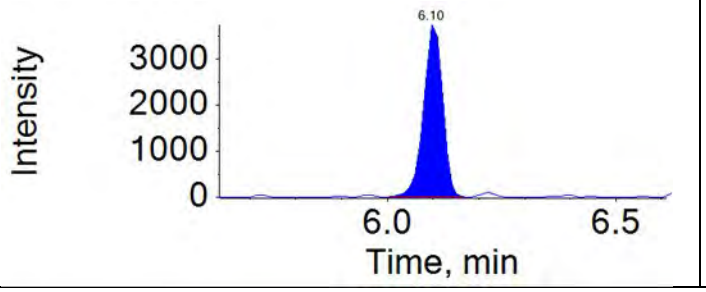


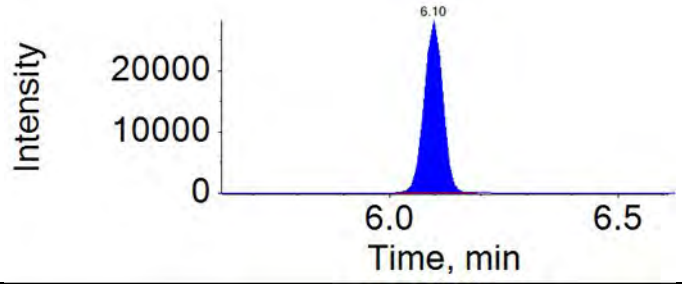
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

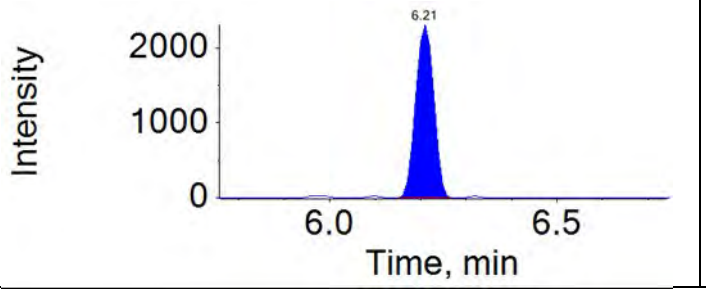
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

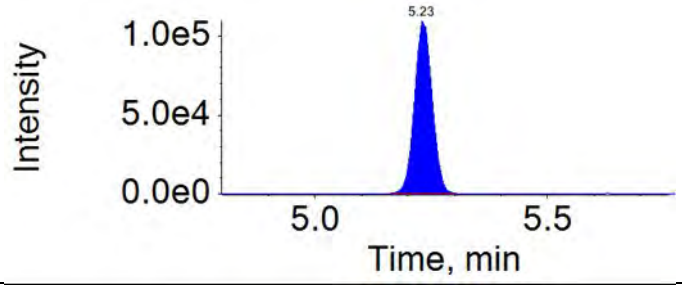
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



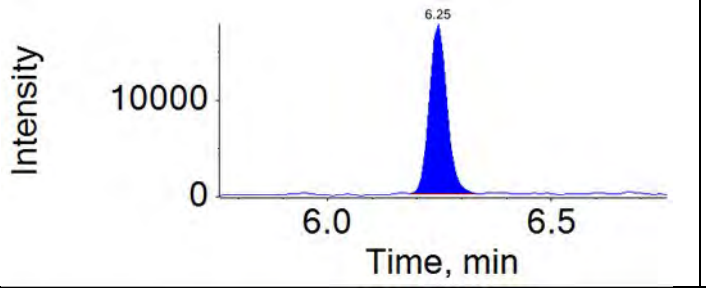


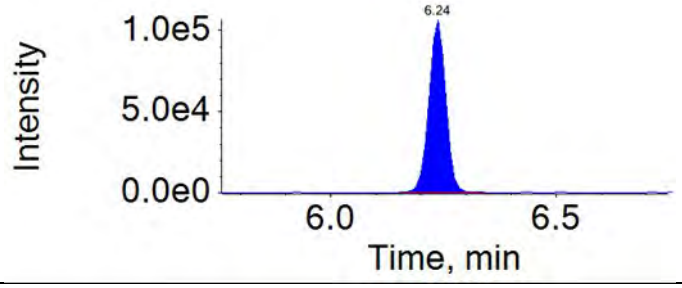
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



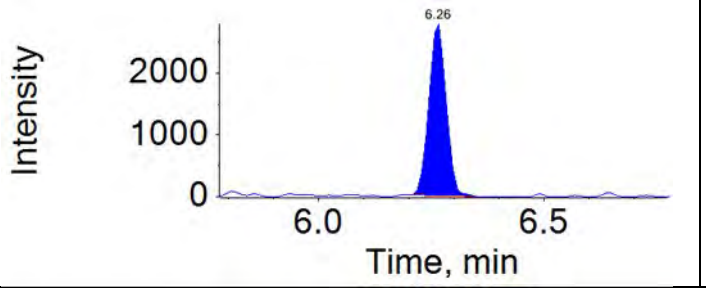


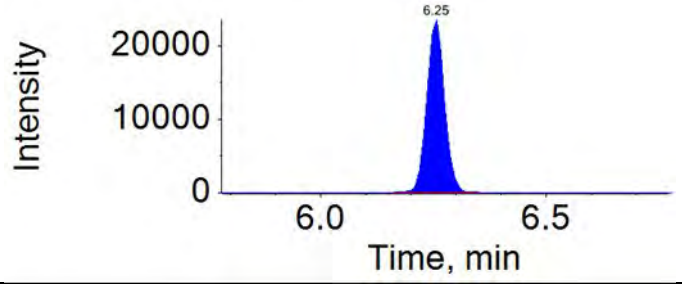
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

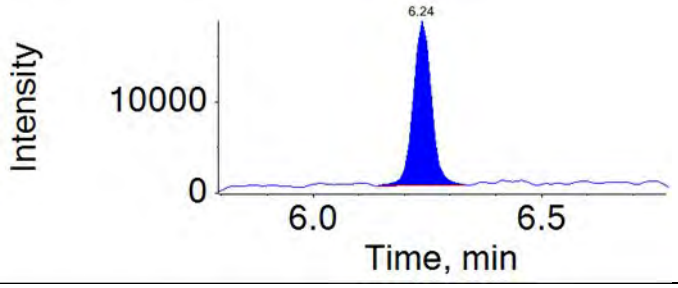
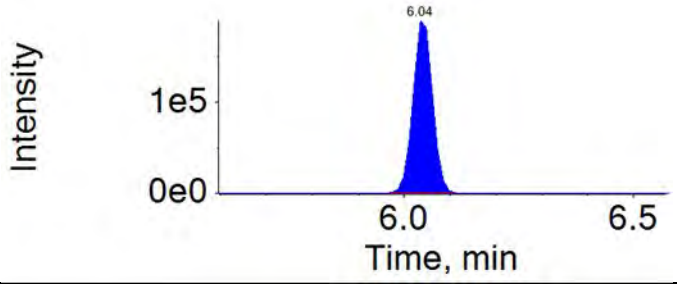


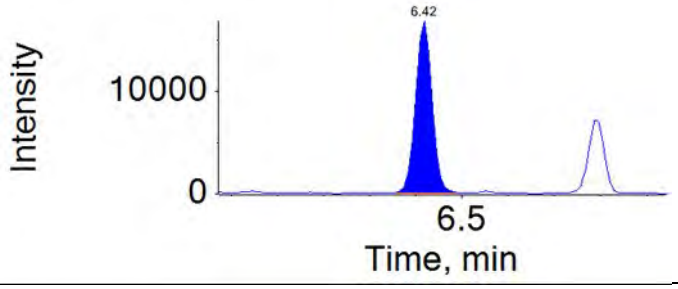
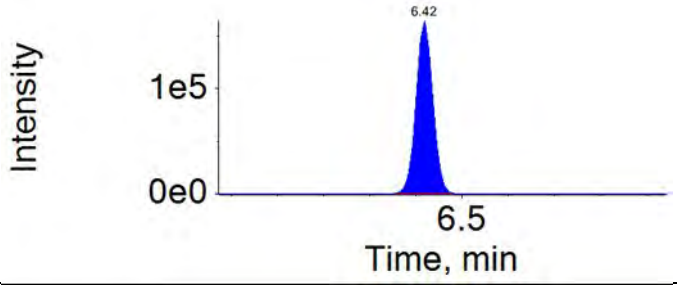


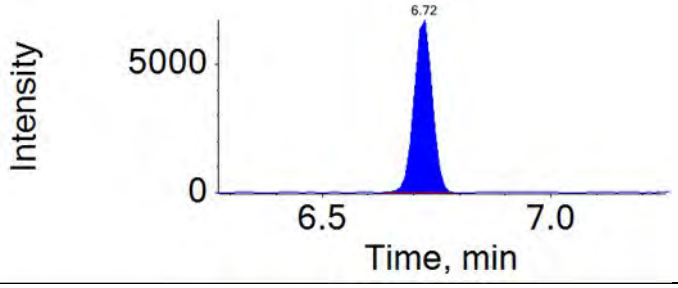
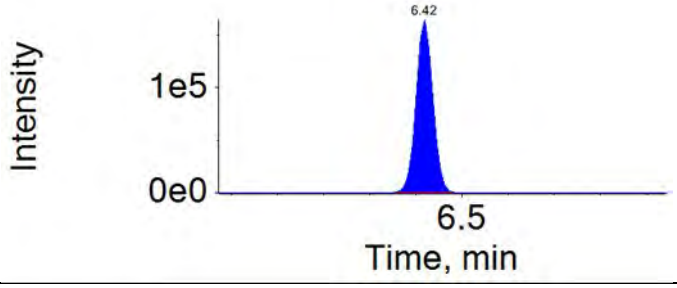
APPROVED
By MSM at 11:40 am, 11/8/18

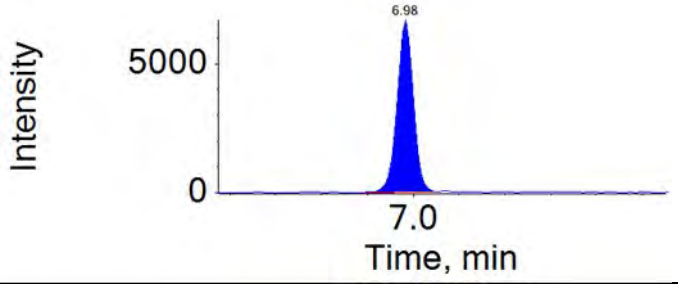
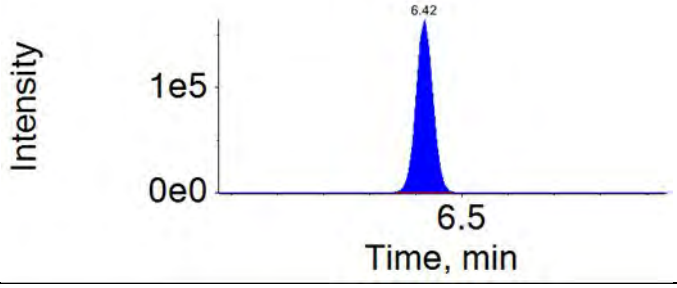
REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

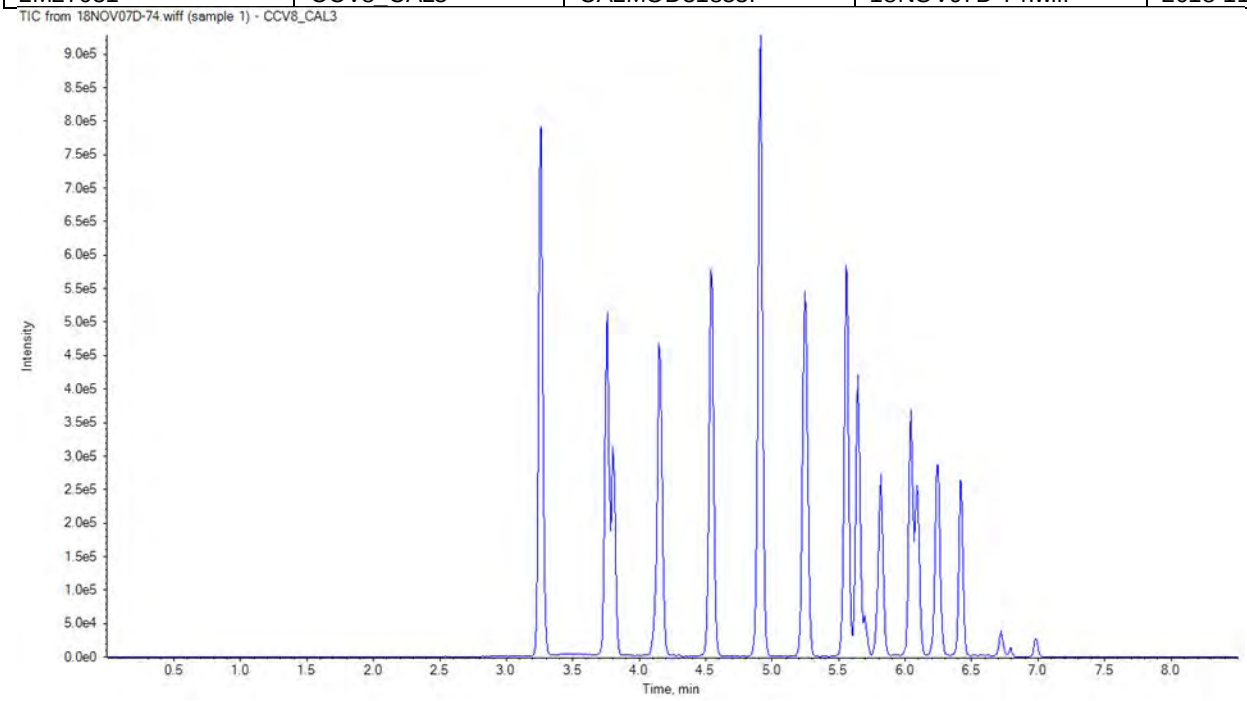
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV8_CAL3	CALMOD31833F	18NOV07D-74.wiff	2018-11-07T22:22:18



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	710427.7	730410.6	-3	50	
13C2-PFOA	5.0	537685.6	524423.6	3	50	
13C4-PFOS	4.8	278296.3	274061.7	2	50	
13C2-PFDA	5.0	323958.7	311442.1	4	50	

APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV8_CAL3	CALMOD31833F	18NOV07D-74.wiff	2018-11-07T22:22:18

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	279254.8	10	13C4-PFBA	755710.0	5.0	0.370	3.26	1.000	2.000	2.163	8	30	
PFPeA	290422.2	12	13C5-PFPeA	818012.2	5.0	0.355	3.76	1.000	2.000	2.110	5	30	
PFBS	156734.9	11	13C3-PFBS	431631.7	4.7	0.363	3.81	1.000	1.770	1.831	3	30	
4:2-FTS	36095.6	11	13C2-4:2-FTS	52608.6	4.7	0.686	4.12	1.000	1.868	1.845	-1	30	
PFHxA	333874.0	12	13C5-PFHxA	682560.4	5.0	0.489	4.15	1.000	2.000	2.098	5	30	
PFPeS	79584.8	11	13C3-PFBS	431631.7	4.7	0.184	4.17	1.100	1.880	1.819	-3	30	
PFHxS	117124.6	12	13C3-PFHxS	327033.3	4.7	0.358	4.54	1.000	1.890	1.815	-4	30	
PFHpA	344281.4	12	13C4-PFHpA	545730.1	5.0	0.631	4.54	1.000	2.000	2.122	6	30	
6:2-FTS	33284.8	11	13C2-6:2-FTS	41228.6	4.8	0.807	4.90	1.000	1.896	2.014	6	30	
PFHpS	120063.8	11	13C3-PFHxS	327033.3	4.7	0.367	4.90	1.080	1.900	1.921	1	30	
PFOA	362395.3	11	13C8-PFOA	943110.0	5.0	0.384	4.91	1.000	2.000	2.164	8	30	
PFOS	110608.0	11	13C8-PFOS	282078.8	4.8	0.392	5.24	1.000	1.910	2.033	6	30	
PFNA	279123.1	12	13C9-PFNA	494473.9	5.0	0.564	5.26	1.000	2.000	2.110	5	30	
PFNS	69287.7	10	13C8-PFOS	282078.8	4.8	0.246	5.54	1.060	1.920	1.948	1	30	
PFDA	241065.8	11	13C6-PFDA	622514.4	5.0	0.387	5.56	1.000	2.000	2.130	7	30	
8:2-FTS	24573.9	11	13C2-8:2-FTS	25626.9	4.8	0.959	5.56	1.000	1.916	2.161	13	30	
PFOSA	264068.3	11	13C8-PFOSA	691219.1	5.0	0.382	5.65	1.000	2.000	2.065	3	30	
NMeFOSAA	29744.3	12	d3-NMeFOSAA	82870.5	5.0	0.359	5.70	1.000	2.000	1.847	-8	30	
PFDS	60506.9	12	13C8-PFOS	282078.8	4.8	0.215	5.79	1.110	1.930	2.049	6	30	
PFUnDA	197164.1	12	13C7-PFUnDA	286713.0	5.0	0.688	5.82	1.000	2.000	1.972	-1	30	
NEtFOSAA	26315.2	12	d5-NEtFOSAA	63540.6	5.0	0.414	5.83	1.000	2.000	1.780	-11	30	
PFDoDA	213517.0	12	13C2-PFDoDA	562441.3	5.0	0.380	6.04	1.000	2.000	2.057	3	30	
10:2-FTS	18699.3	12	13C2-8:2-FTS	25626.9	4.8	0.730	6.06	1.090	1.928	2.272	18	30	
NMePFOSAE	150684.6	12	d7-NMePFOSAE	332511.8	5.0	0.453	6.10	1.000	2.000	2.031	2	30	
NMePFOSA	27662.8	11	d3-NMePFOSA	82735.9	5.0	0.334	6.10	1.000	2.000	1.871	-6	30	
PFDoS	25931.8	11	13C8-PFOS	282078.8	4.8	0.092	6.21	1.190	1.940	1.774	-9	30	
NEtPFOSAE	180891.9	11	d9-NEtPFOSAE	269617.0	5.0	0.671	6.25	1.000	2.000	2.151	8	30	
NEtPFOSA	28549.9	11	d5-NEtPFOSA	66191.8	5.0	0.431	6.26	1.000	2.000	1.900	-5	30	
PFTrDA	185816.0	11	13C2-PFDoDA	562441.3	5.0	0.330	6.24	1.030	2.000	2.083	4	30	
PFTeDA	149555.9	10	13C2-PFTeDA	406521.5	5.0	0.368	6.42	1.000	2.000	2.160	8	30	
PFHxDA	72052.1	11	13C2-PFTeDA	406521.5	5.0	0.177	6.72	1.050	2.000	2.200	10	30	
PFODA	59080.1	10	13C2-PFTeDA	406521.5	5.0	0.145	6.98	1.090	2.000	2.082	4	30	

APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: 18OCT20QM
Result Table: 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV8_CAL3			**Data File:**		18NOV07D-74.wiff
Sample ID:	CALMOD31833F			**Acquis Date:**		2018-11-07T22:22:18
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV07DCCV7-11_DOD
QMethod File:	18OCT20QM			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		MM26157
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	710427.7	730410.6	-3	50	
13C2-PFOA	5.0	537685.6	524423.6	3	50	
13C4-PFOS	4.8	278296.3	274061.7	2	50	
13C2-PFDA	5.0	323958.7	311442.1	4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	755710.0	13C3-PFBA	710427.7	1.064	5.000	4.923	98	70-130	
E13C5-PFPeA	818012.2	13C3-PFBA	710427.7	1.151	5.000	5.016	100	70-130	
E13C3-PFBS	431631.7	13C3-PFBA	710427.7	0.608	4.650	4.459	96	70-130	
E13C2-4:2-FTS	52608.6	13C2-PFOA	537685.6	0.098	4.670	4.415	95	70-130	
E13C5-PFHxA	682560.4	13C2-PFOA	537685.6	1.269	5.000	4.670	93	70-130	
E13C3-PFHxS	327033.3	13C2-PFOA	537685.6	0.608	4.730	4.366	92	70-130	
E13C4-PFHpA	545730.1	13C2-PFOA	537685.6	1.015	5.000	4.617	92	70-130	
E13C2-6:2-FTS	41228.6	13C2-PFOA	537685.6	0.077	4.750	5.113	108	70-130	
E13C8-PFOA	943110.0	13C2-PFOA	537685.6	1.754	5.000	4.891	98	70-130	
E13C8-PFOS	282078.8	13C4-PFOS	278296.3	1.014	4.780	4.482	94	70-130	
E13C9-PFNA	494473.9	13C4-PFOS	278296.3	1.777	5.000	4.853	97	70-130	
E13C6-PFDA	622514.4	13C2-PFDA	323958.7	1.922	5.000	4.832	97	70-130	
E13C2-8:2-FTS	25626.9	13C2-PFDA	323958.7	0.079	4.790	4.186	87	70-130	
E13C8-PFOSA	691219.1	13C2-PFDA	323958.7	2.134	5.000	4.656	93	70-130	
Ed3-NMeFOSAA	82870.5	13C2-PFDA	323958.7	0.256	5.000	4.757	95	70-130	
E13C7-PFUnDA	286713.0	13C2-PFDA	323958.7	0.885	5.000	5.106	102	70-130	
Ed5-NEtFOSAA	63540.6	13C2-PFDA	323958.7	0.196	5.000	4.539	91	70-130	
E13C2-PFDoDA	562441.3	13C2-PFDA	323958.7	1.736	5.000	4.680	94	70-130	
Ed7-NMePFOSAE	332511.8	13C2-PFDA	323958.7	1.026	5.000	4.773	95	70-130	
Ed3-NMePFOSA	82735.9	13C2-PFDA	323958.7	0.255	5.000	4.676	94	70-130	
Ed9-NEtPFOSAE	269617.0	13C2-PFDA	323958.7	0.832	5.000	4.753	95	70-130	
Ed5-NEtPFOSA	66191.8	13C2-PFDA	323958.7	0.204	5.000	4.731	95	70-130	
E13C2-PFTeDA	406521.5	13C2-PFDA	323958.7	1.255	5.000	4.517	90	70-130	

APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

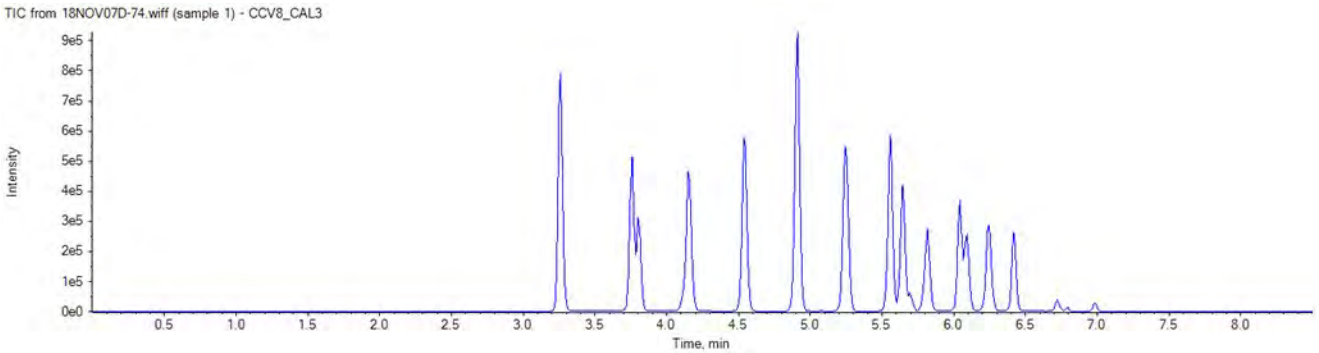
Analyte Quantitation Peak Table

Sample Name: CCV8_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV07D-74.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	279254.8		A	13C4-PFBA	3.26	755710.0	0.370	2.163
PFPeA	3.76	1.000	290422.2		A	13C5-PFPeA	3.76	818012.2	0.355	2.110
PFBS	3.81	1.000	156734.9		A	13C3-PFBS	3.81	431631.7	0.363	1.831
4:2-FTS	4.12	1.000	36095.6		A	13C2-4:2-FTS	4.12	52608.6	0.686	1.845
PFHxA	4.15	1.000	333874.0		A	13C5-PFHxA	4.15	682560.4	0.489	2.098
PFPeS	4.17	1.100	79584.8		A	13C3-PFBS	3.81	431631.7	0.184	1.819
PFHxS	4.54	1.000	117124.6		A	13C3-PFHxS	4.54	327033.3	0.358	1.815
PFHpA	4.54	1.000	344281.4		A	13C4-PFHpA	4.54	545730.1	0.631	2.122
6:2-FTS	4.90	1.000	33284.8		A	13C2-6:2-FTS	4.90	41228.6	0.807	2.014
PFHpS	4.90	1.080	120063.8		A	13C3-PFHxS	4.54	327033.3	0.367	1.921
PFOA	4.91	1.000	362395.3		A	13C8-PFOA	4.91	943110.0	0.384	2.164
PFOS	5.24	1.000	110608.0		A	13C8-PFOS	5.24	282078.8	0.392	2.033
PFNA	5.26	1.000	279123.1		A	13C9-PFNA	5.25	494473.9	0.564	2.110
PFNS	5.54	1.060	69287.7		A	13C8-PFOS	5.24	282078.8	0.246	1.948
PFDA	5.56	1.000	241065.8		A	13C6-PFDA	5.56	622514.4	0.387	2.130
8:2-FTS	5.56	1.000	24573.9		A	13C2-8:2-FTS	5.56	25626.9	0.959	2.161
PFOSA	5.65	1.000	264068.3		A	13C8-PFOSA	5.65	691219.1	0.382	2.065
NMeFOSAA	5.70	1.000	29744.3		A	d3-NMeFOSAA	5.70	82870.5	0.359	1.847
PFDS	5.79	1.110	60506.9		A	13C8-PFOS	5.24	282078.8	0.215	2.049
PFUnDA	5.82	1.000	197164.1		A	13C7-PFUnDA	5.82	286713.0	0.688	1.972
NEtFOSAA	5.83	1.000	26315.2		A	d5-NEtFOSAA	5.83	63540.6	0.414	1.780
PFDoDA	6.04	1.000	213517.0		A	13C2-PFDoDA	6.04	562441.3	0.380	2.057
10:2-FTS	6.06	1.090	18699.3		A	13C2-8:2-FTS	5.56	25626.9	0.730	2.272
NMePFOSAE	6.10	1.000	150684.6		A	d7-NMePFOSAE	6.09	332511.8	0.453	2.031
NMePFOSA	6.10	1.000	27662.8		A	d3-NMePFOSA	6.10	82735.9	0.334	1.871
PFDoS	6.21	1.190	25931.8		A	13C8-PFOS	5.24	282078.8	0.092	1.774
NEtPFOSAE	6.25	1.000	180891.9		A	d9-NEtPFOSAE	6.24	269617.0	0.671	2.151
NEtPFOSA	6.26	1.000	28549.9		A	d5-NEtPFOSA	6.26	66191.8	0.431	1.900
PFTrDA	6.24	1.030	185816.0		A	13C2-PFDoDA	6.04	562441.3	0.330	2.083
PFTeDA	6.42	1.000	149555.9		A	13C2-PFTeDA	6.42	406521.5	0.368	2.160
PFHxDA	6.72	1.050	72052.1		A	13C2-PFTeDA	6.42	406521.5	0.177	2.200
PFODA	6.98	1.090	59080.1		A	13C2-PFTeDA	6.42	406521.5	0.145	2.082

Total Ion Chromatogram

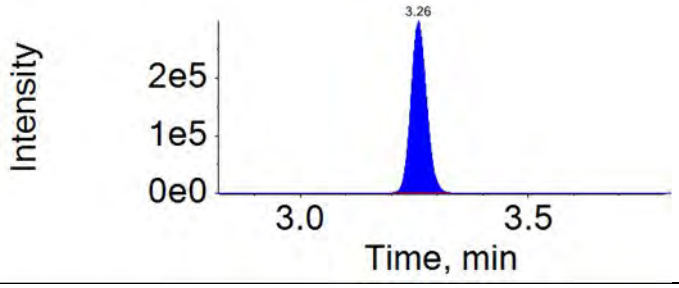


APPROVED
By MSM at 11:40 am, 11/8/18

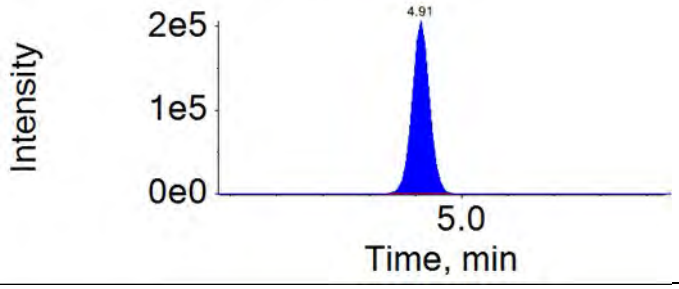
REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

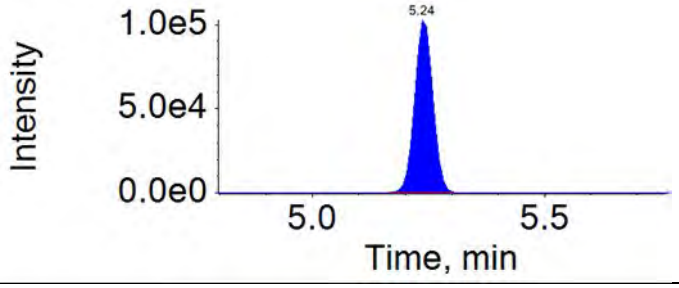
Injection Standard: 13C3-PFBA
216.0 / 172.0



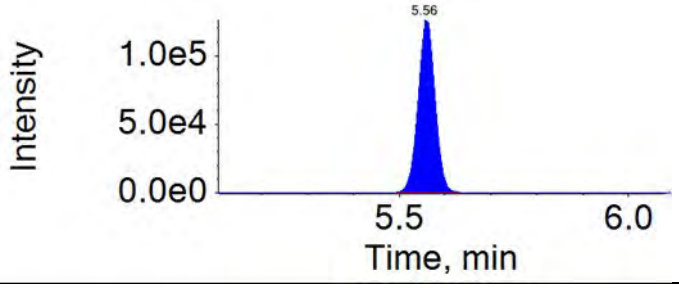
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

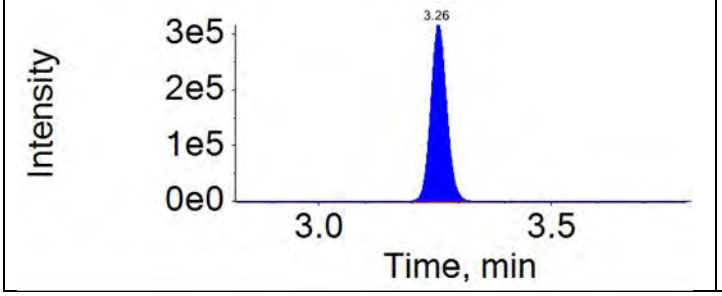


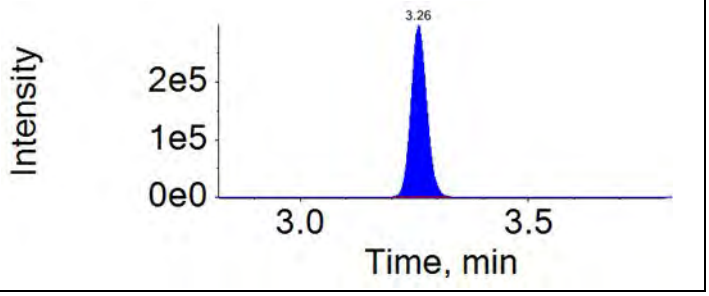
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

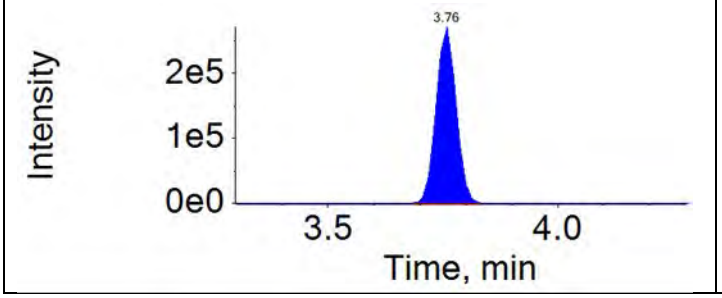
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

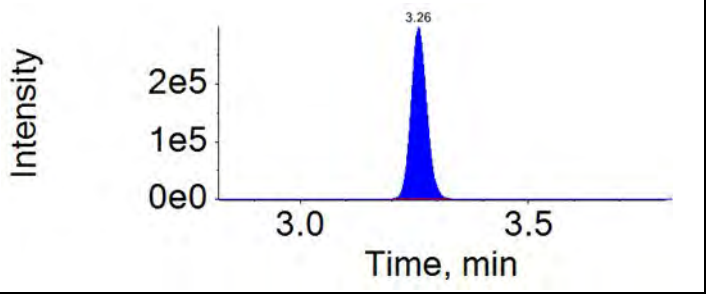
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



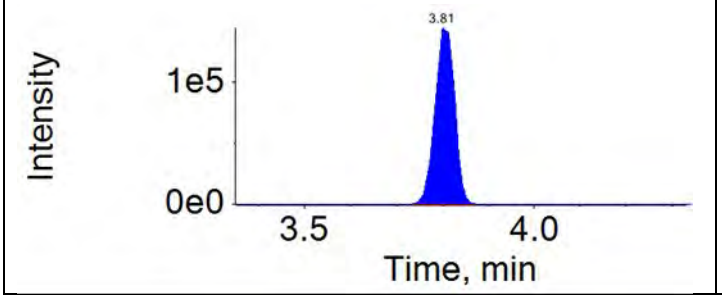


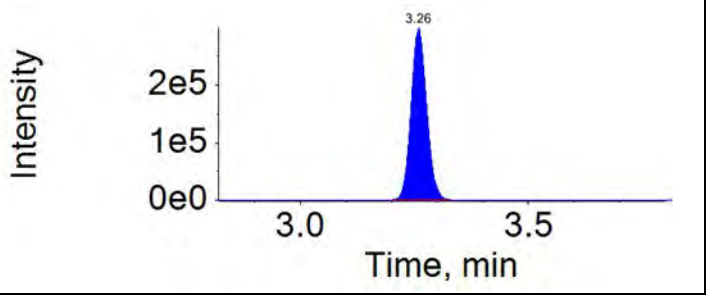
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



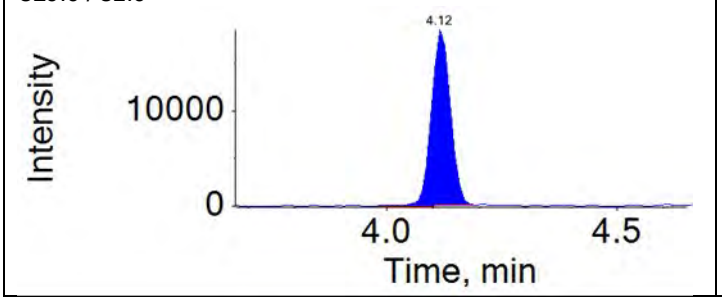


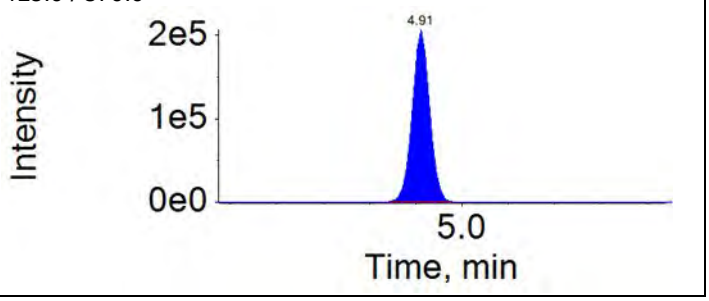
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





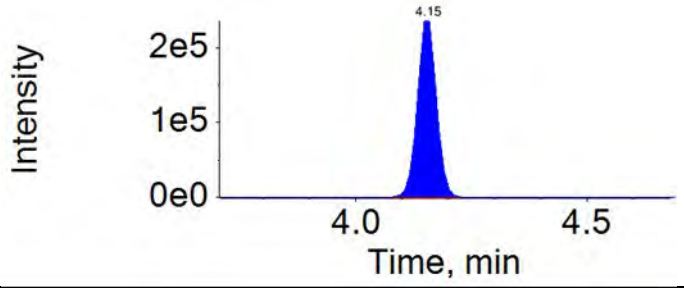
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

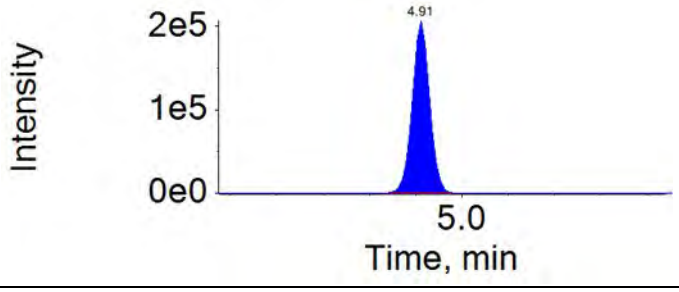




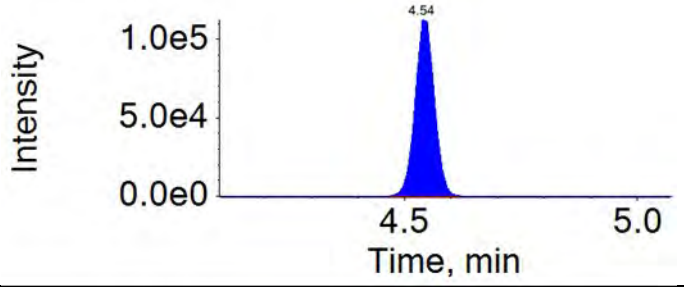
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

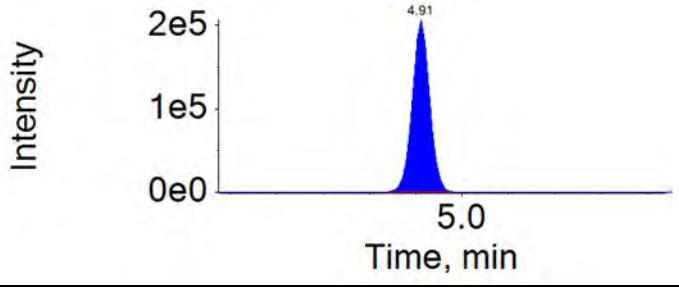
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



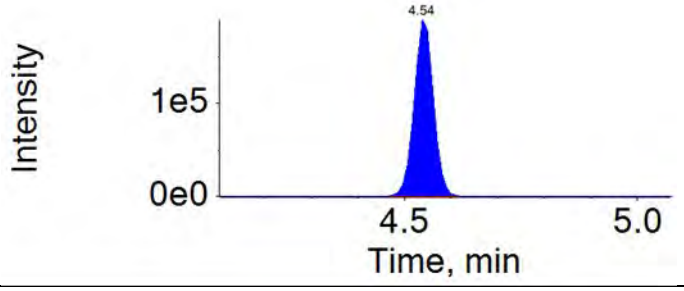


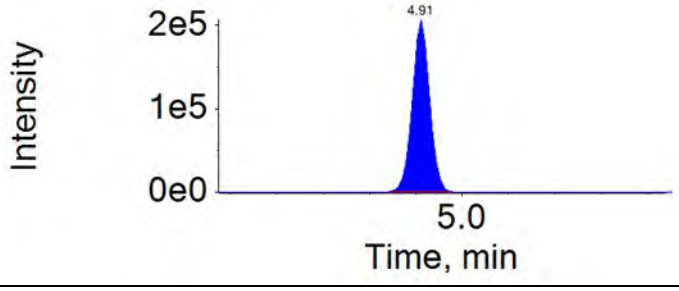
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



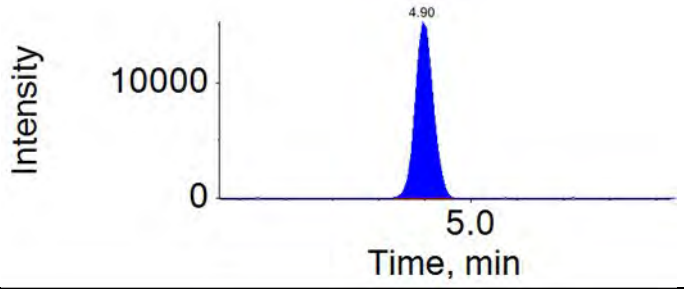


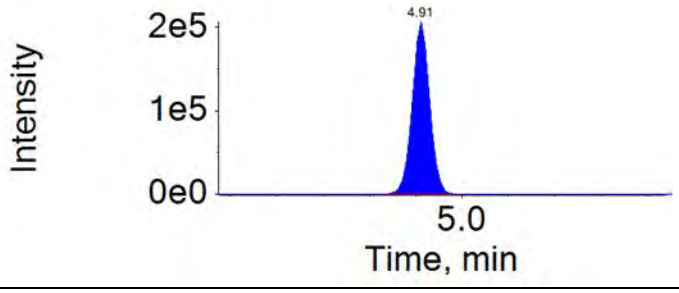
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

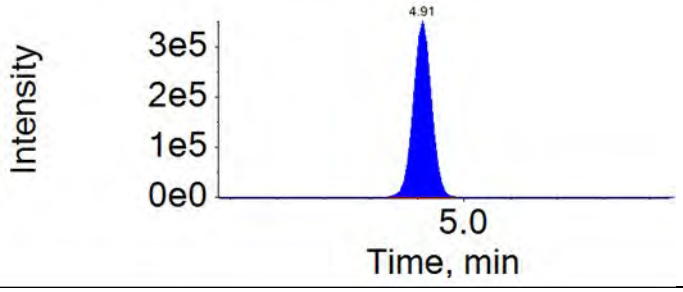
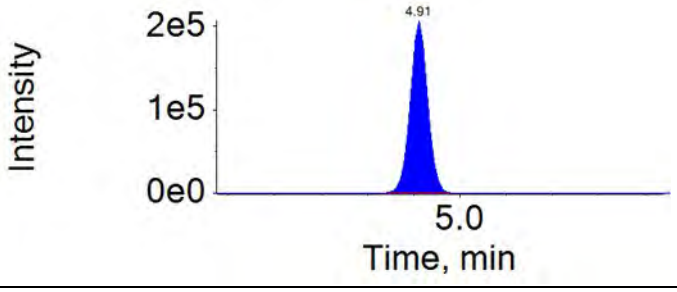


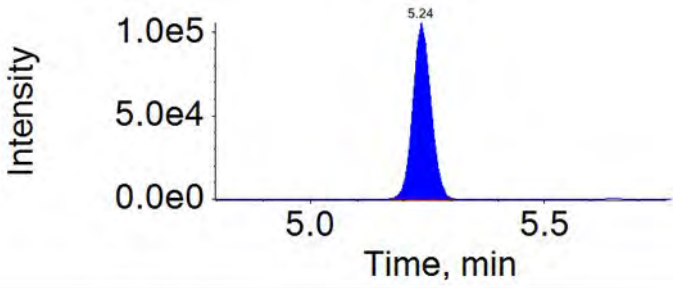
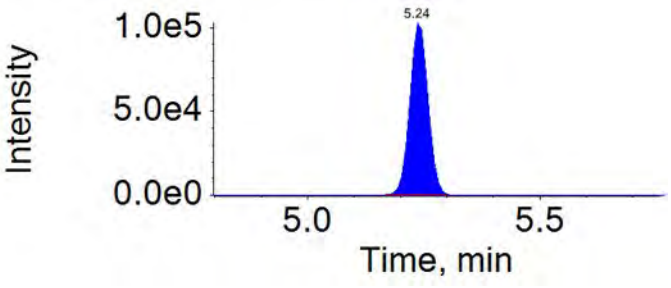


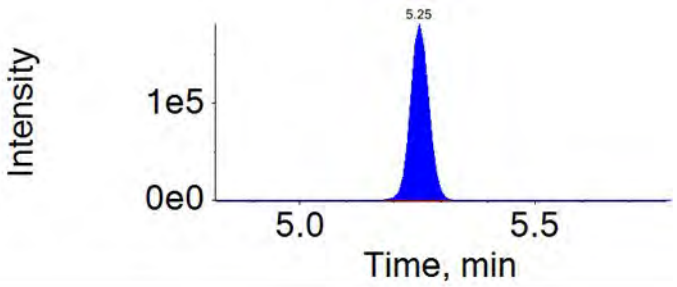
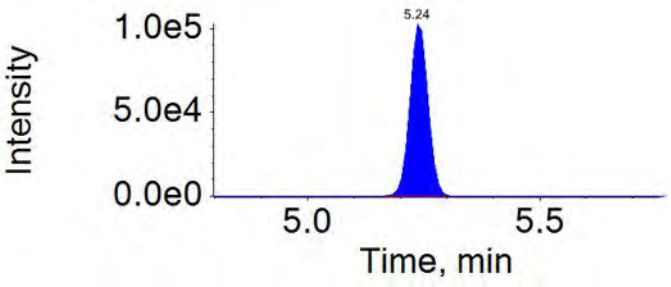
APPROVED
By MSM at 11:40 am, 11/8/18

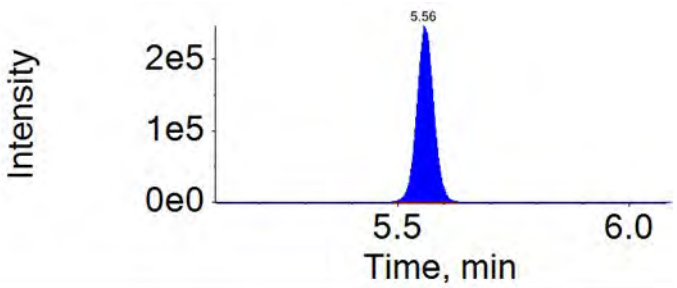
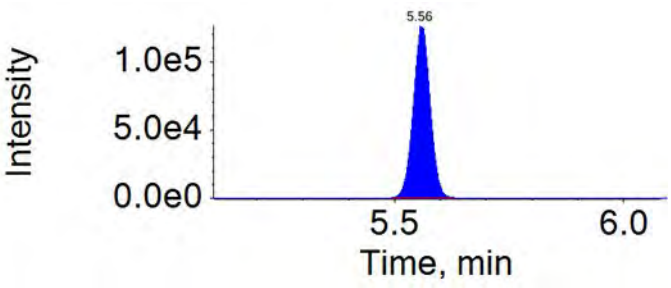
REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

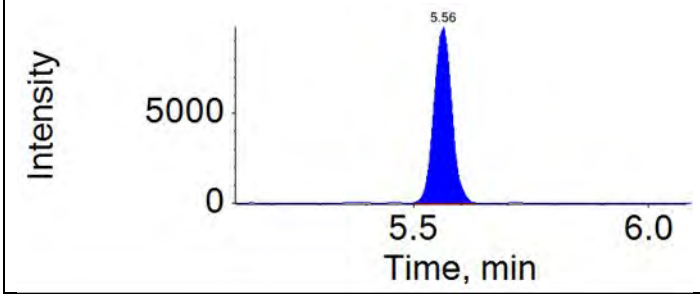
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

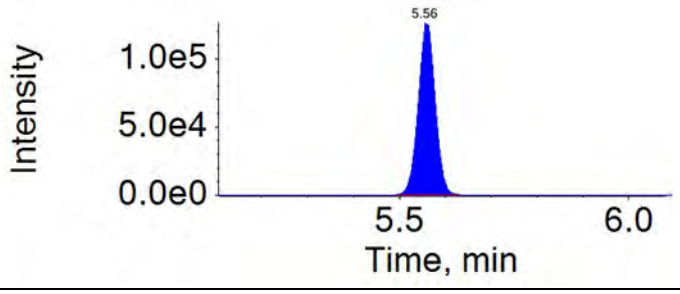
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

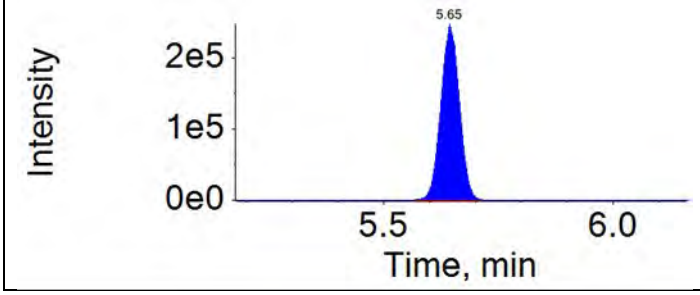
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

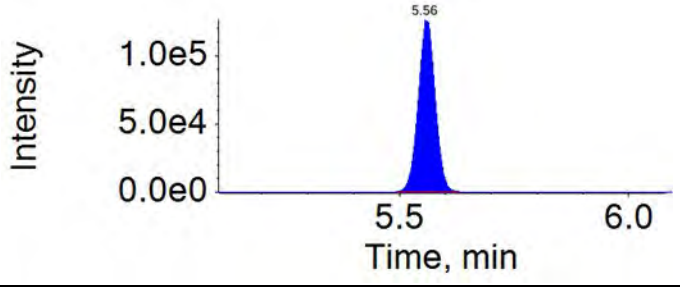
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



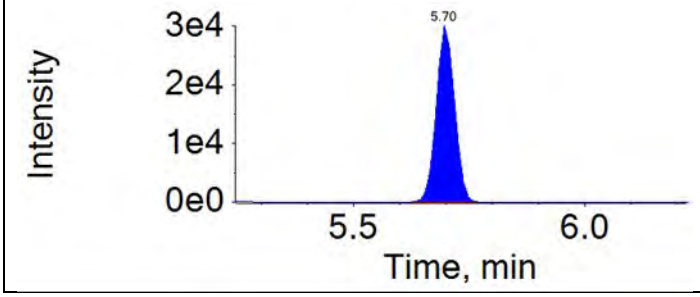


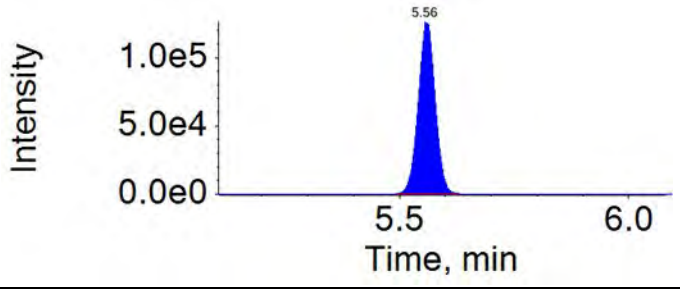
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



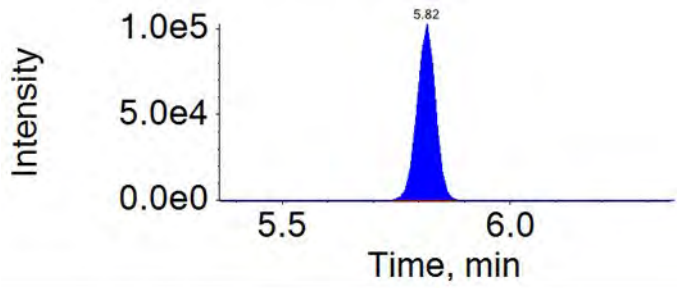


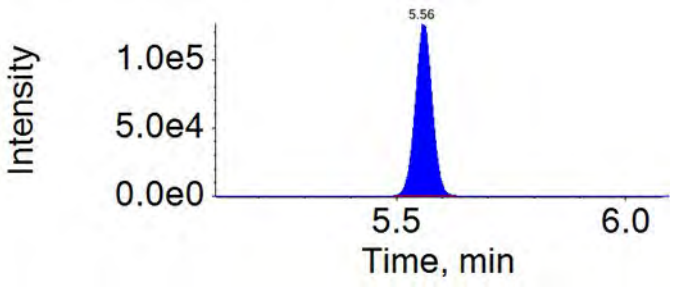
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

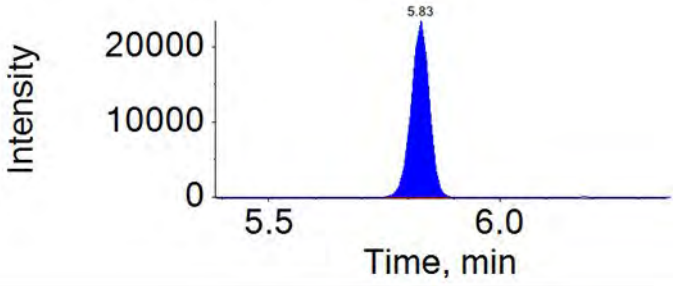
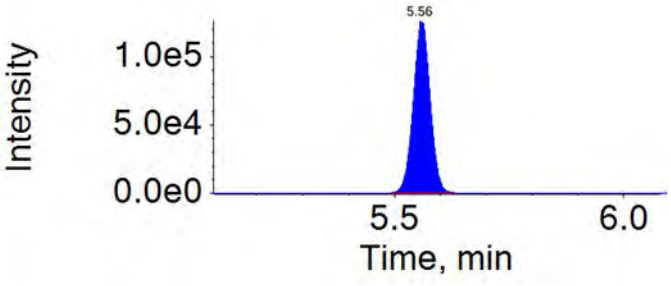


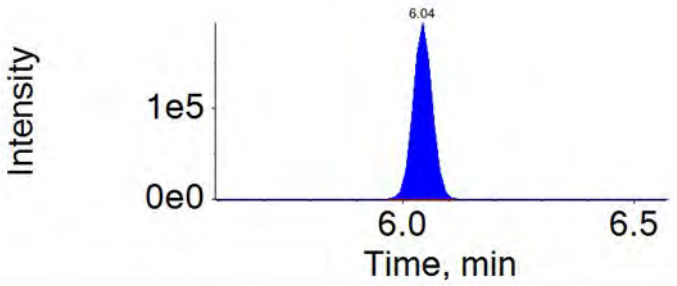
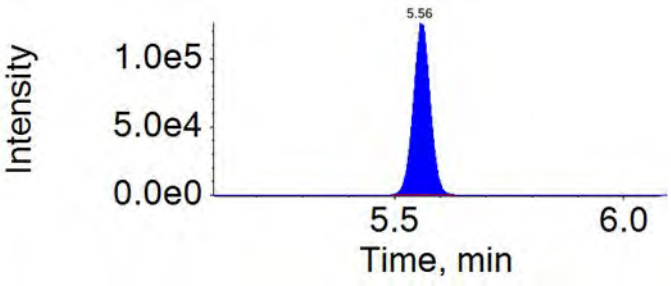


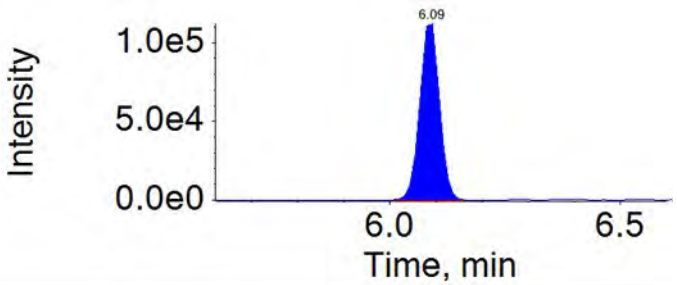
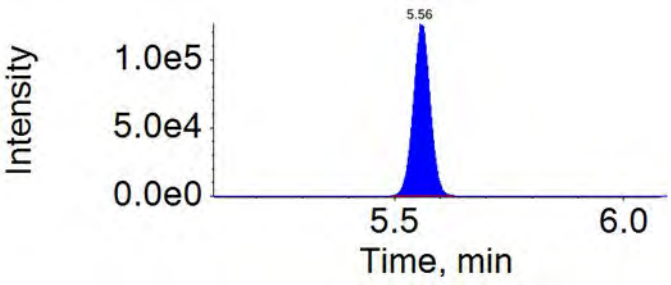
APPROVED
By MSM at 11:40 am, 11/8/18

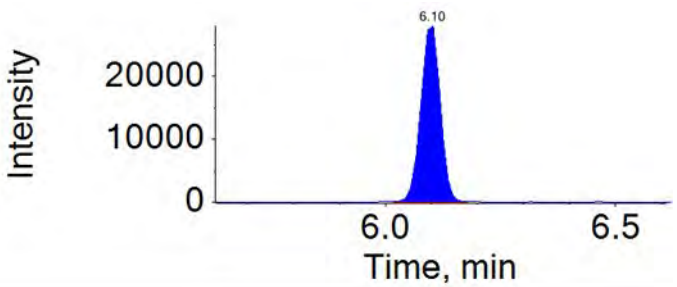
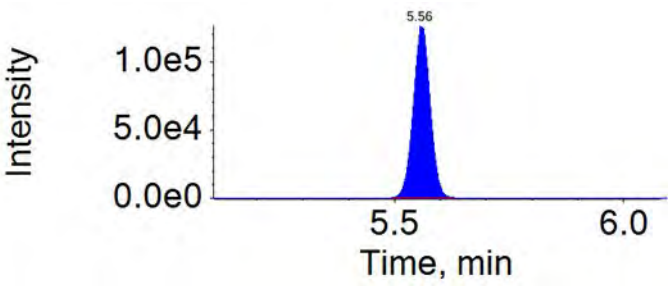
REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

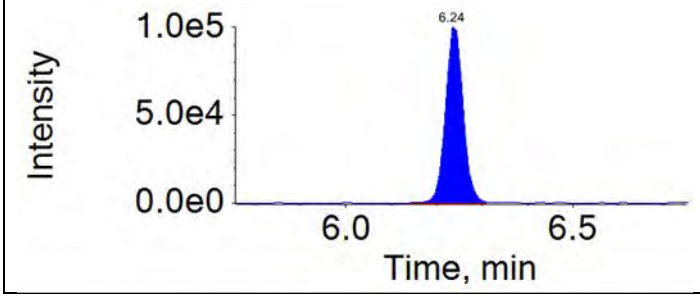
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

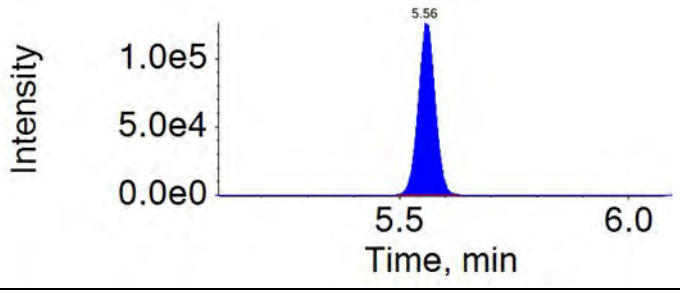
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

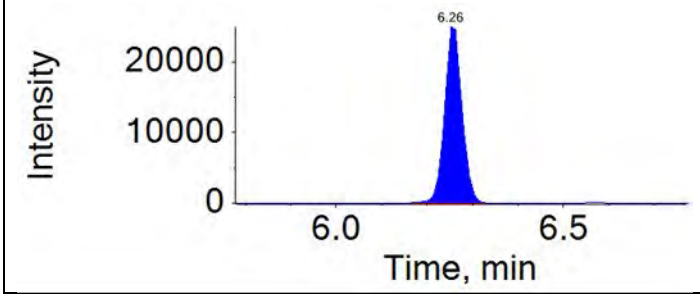
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

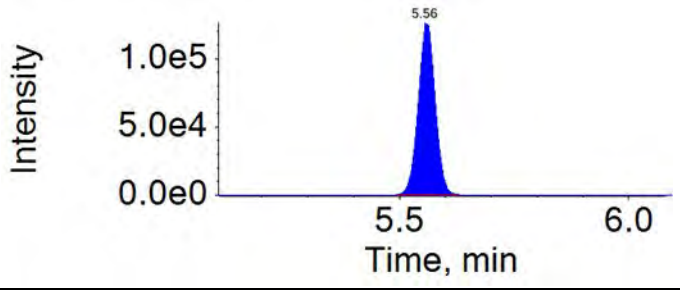
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



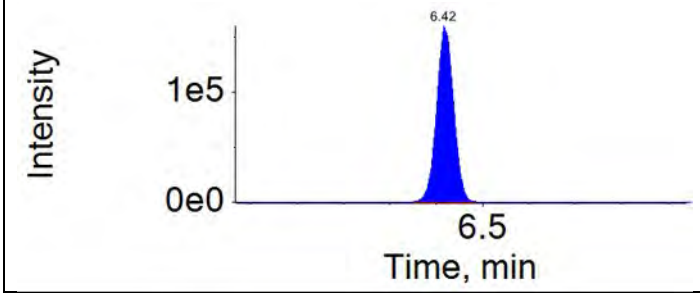


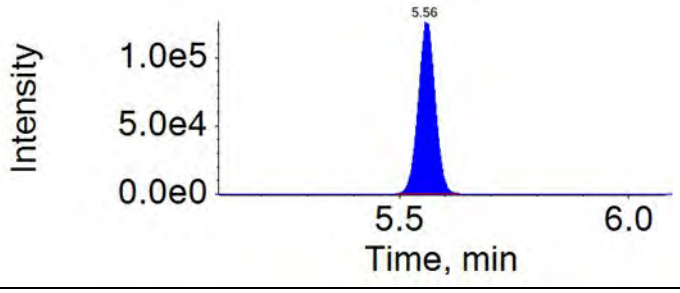
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



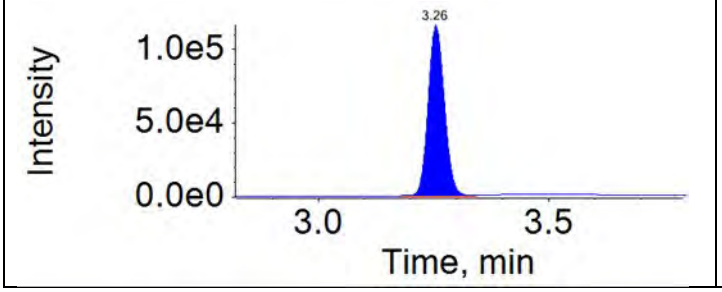


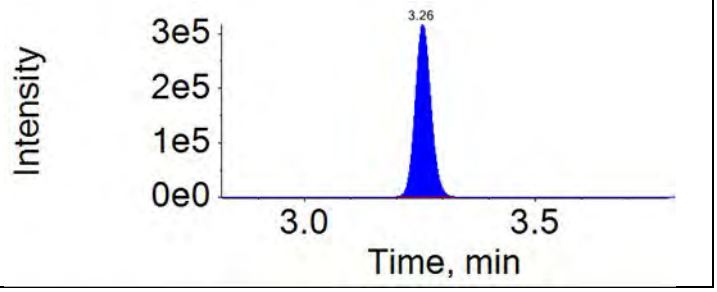
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

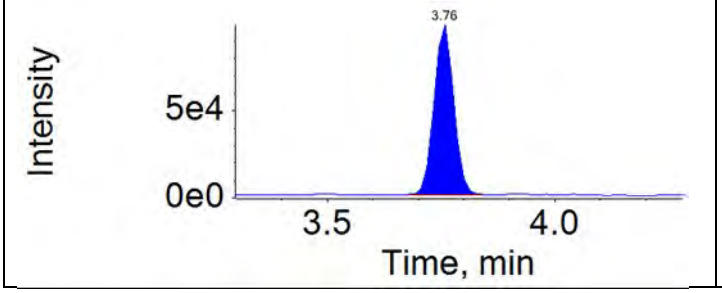
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

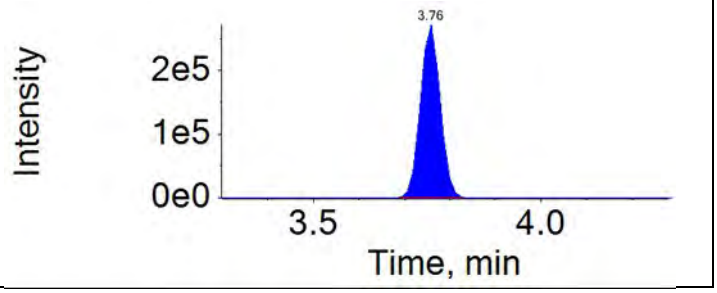
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



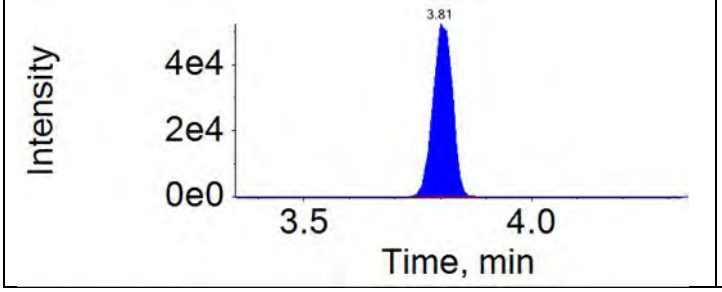


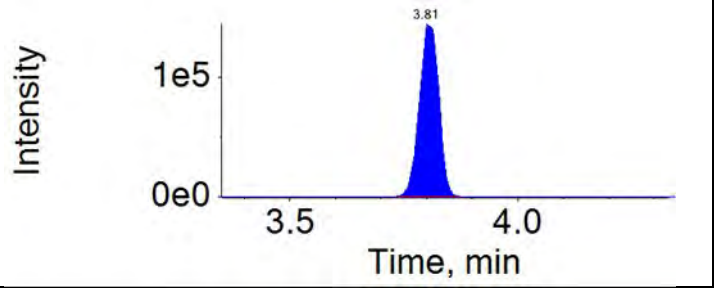
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



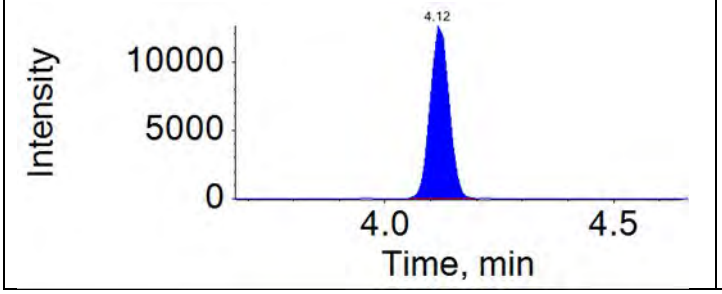


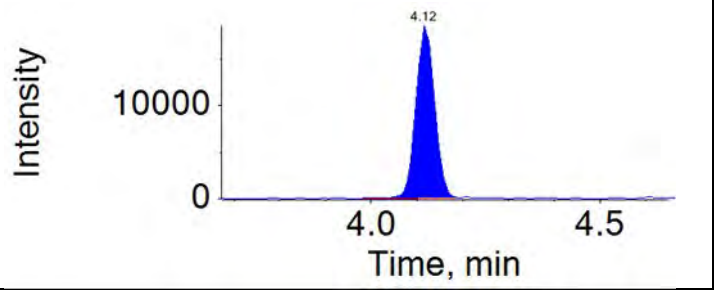
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



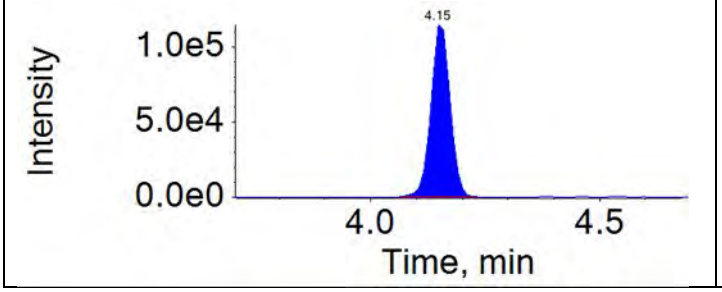


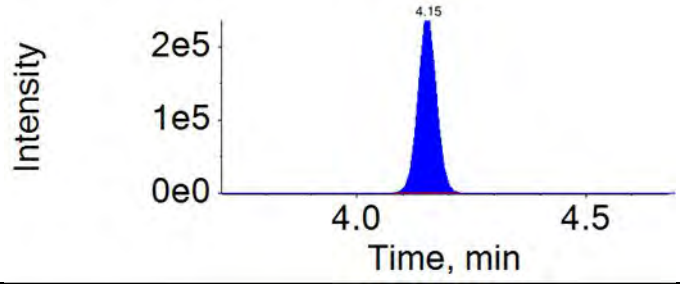
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

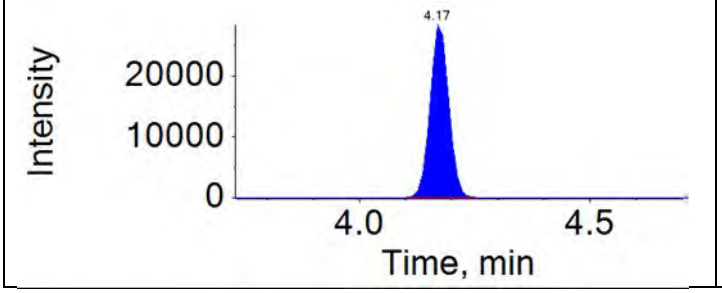
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

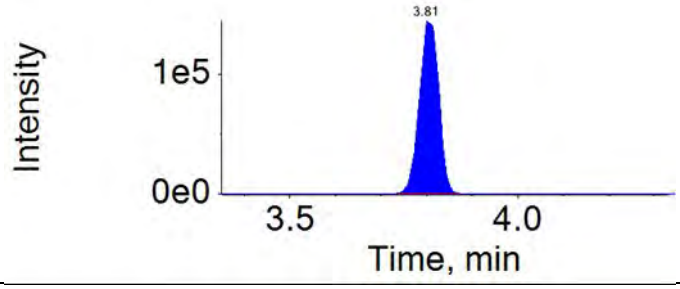
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



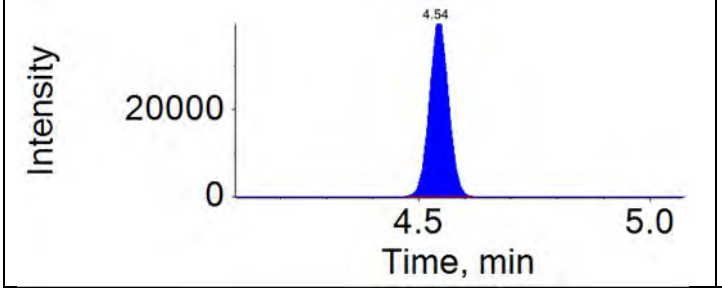


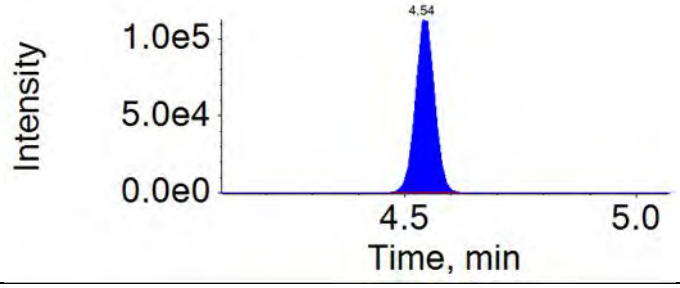
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



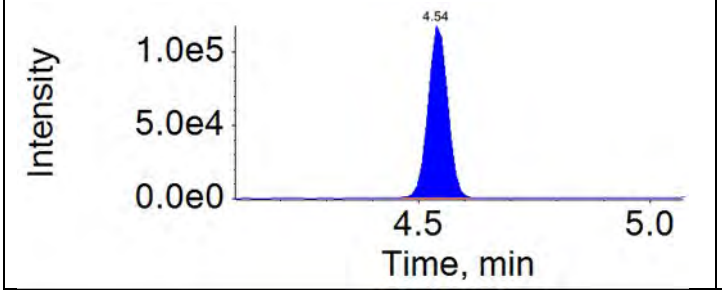


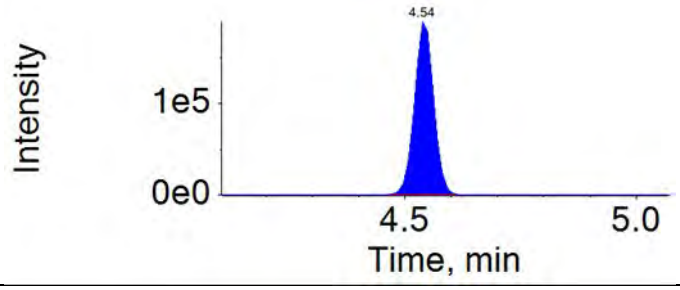
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

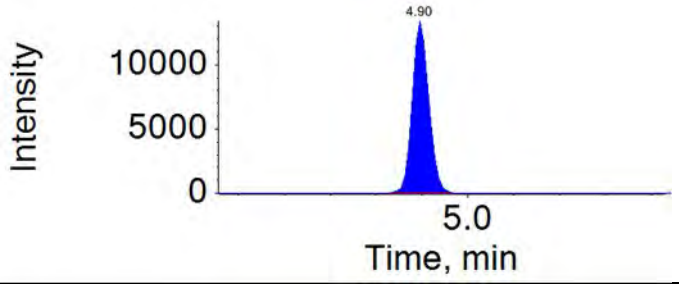
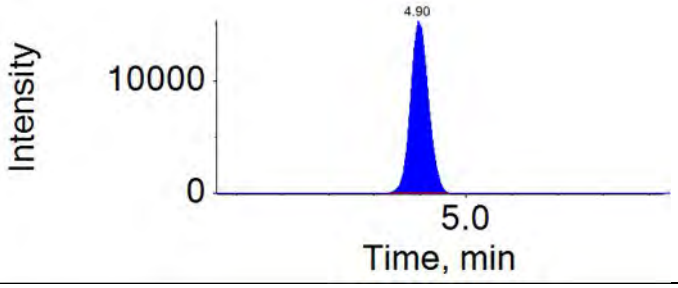


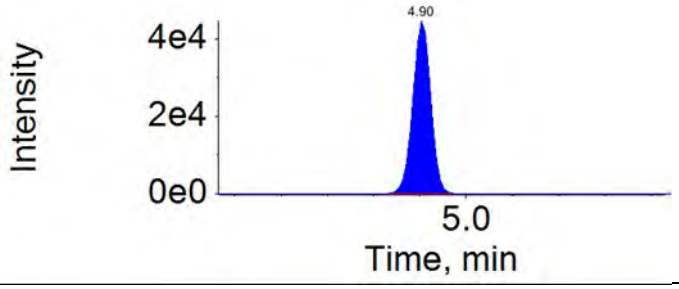
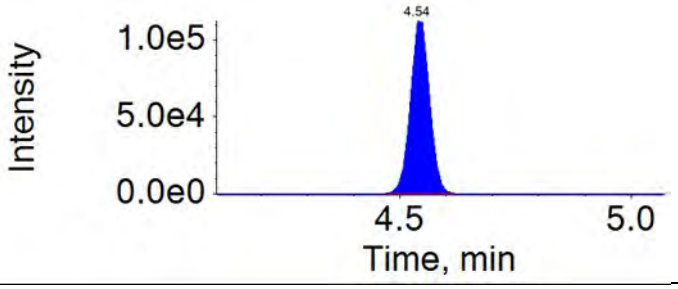


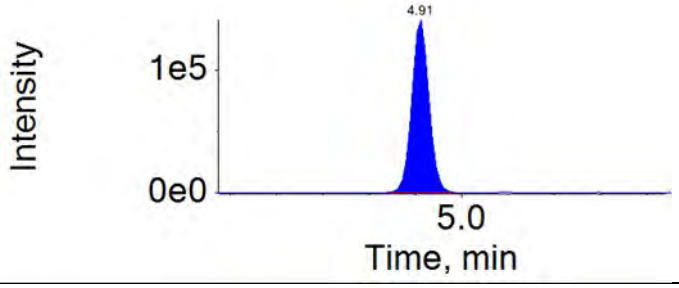
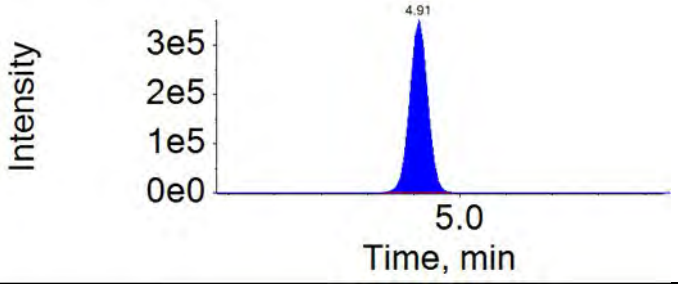
APPROVED
By MSM at 11:40 am, 11/8/18

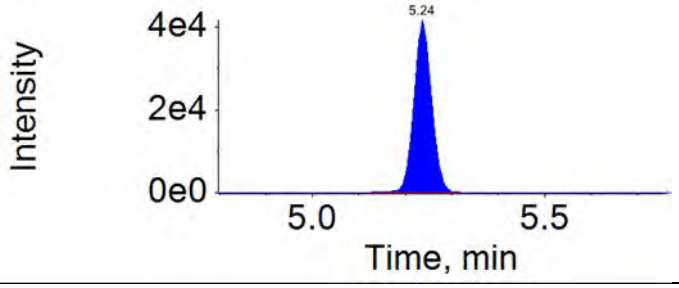
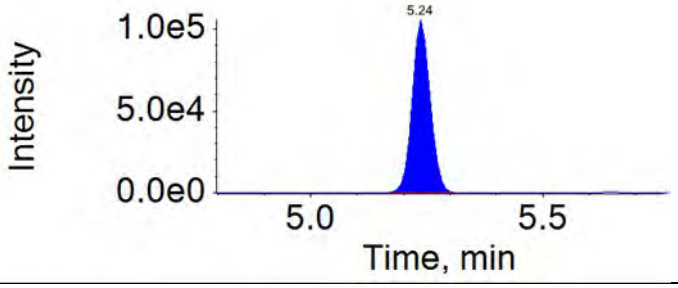
REVIEWED
By umar at 11:27 am, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

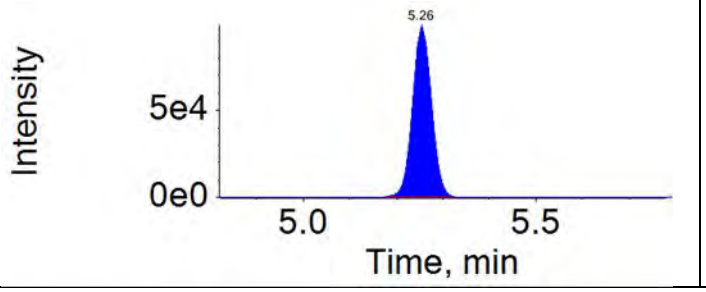
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

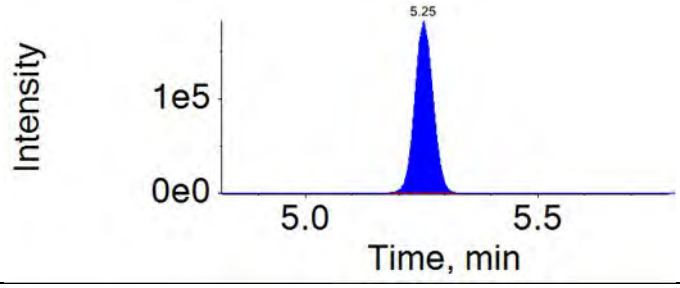
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

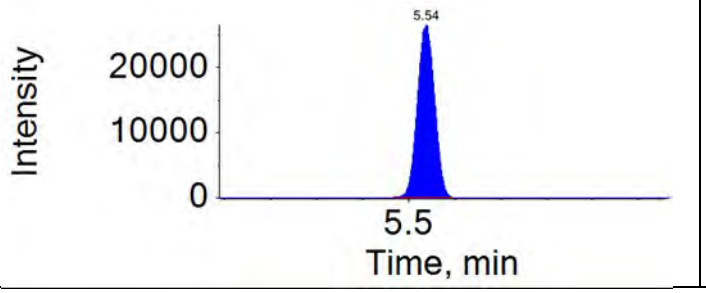
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

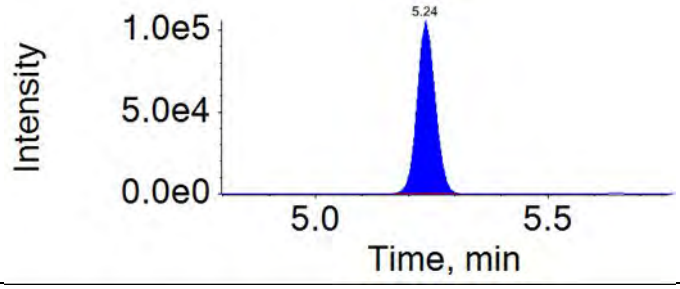
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



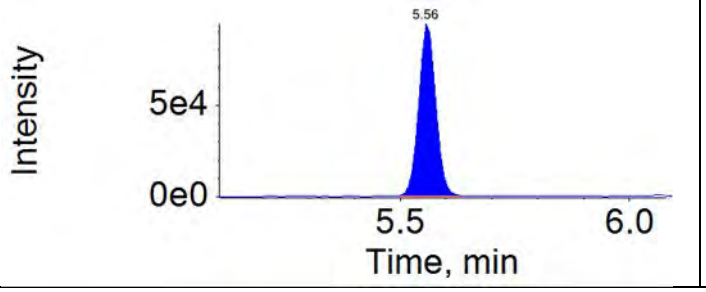


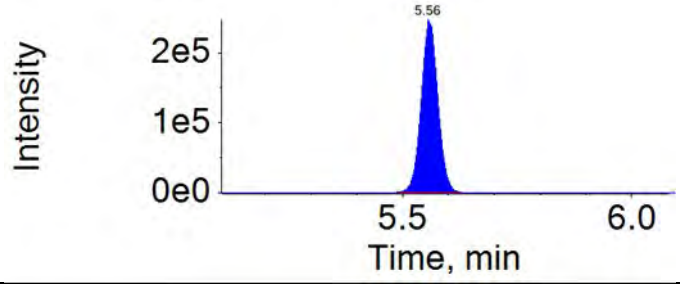
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



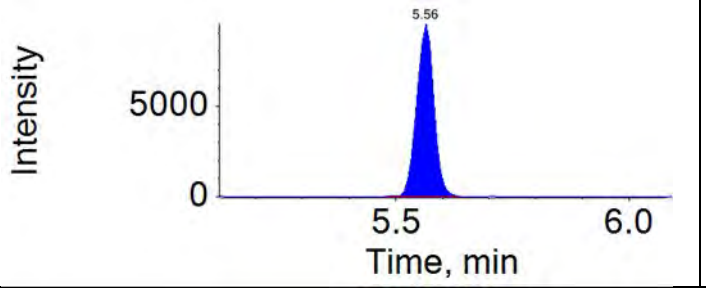


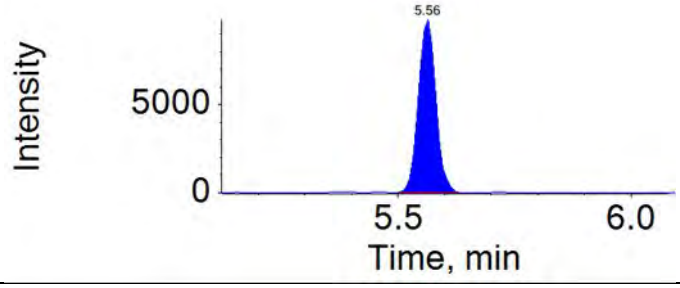
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



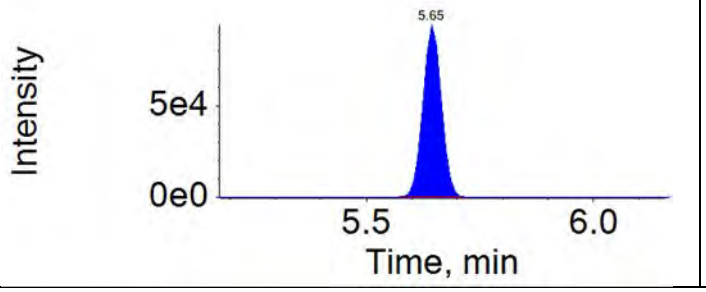


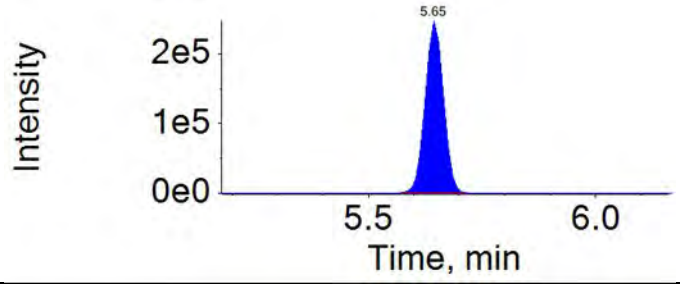
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

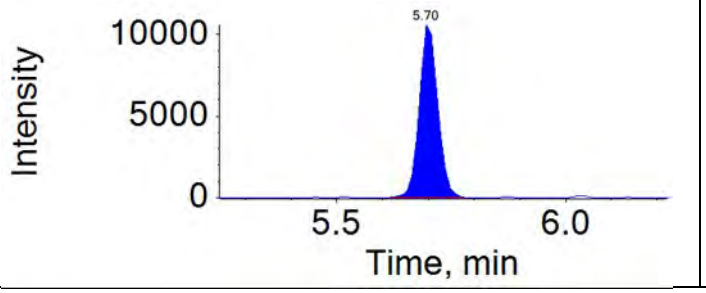
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

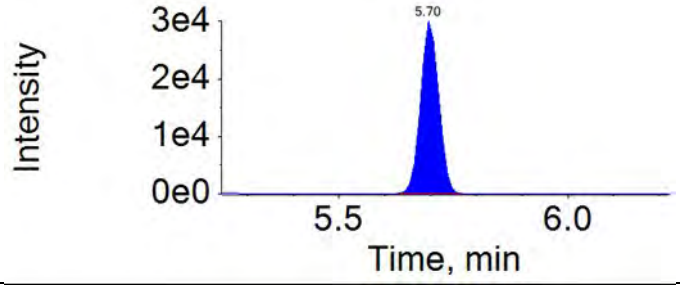
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



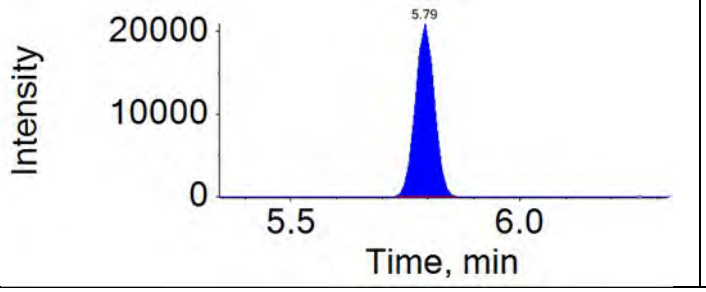


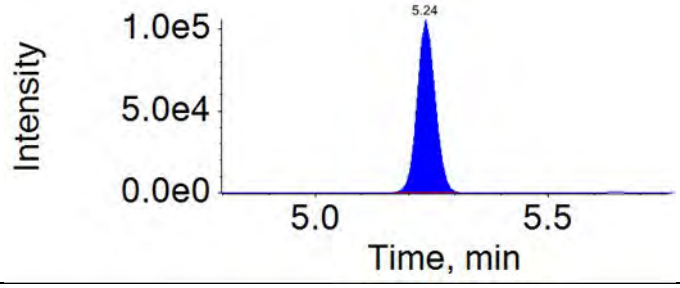
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



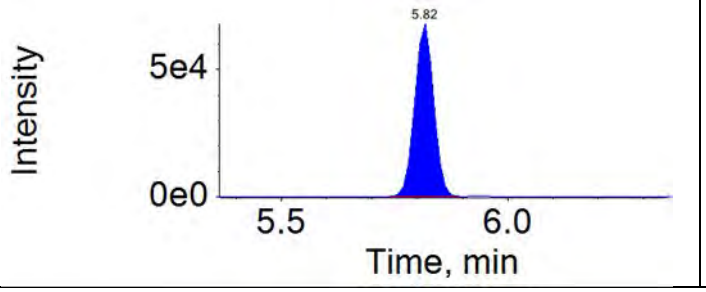


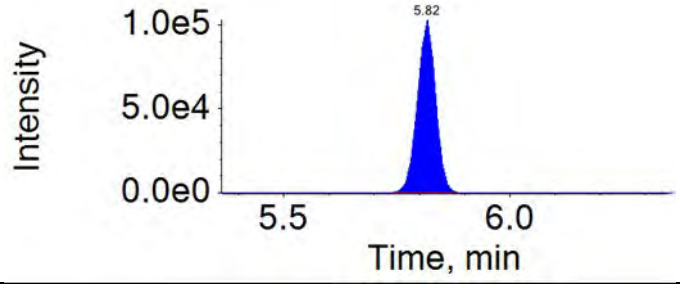
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



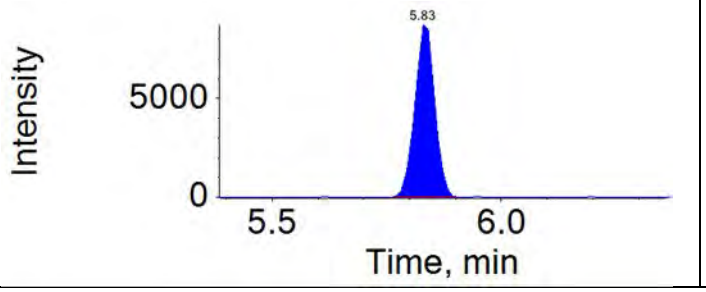


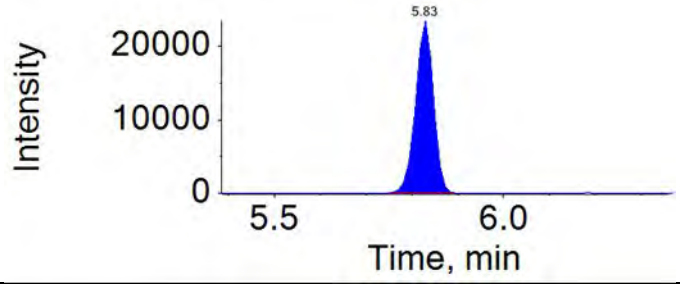
APPROVED
By MSM at 11:40 am, 11/8/18

REVIEWED
By umar at 11:27 am, 11/12/18

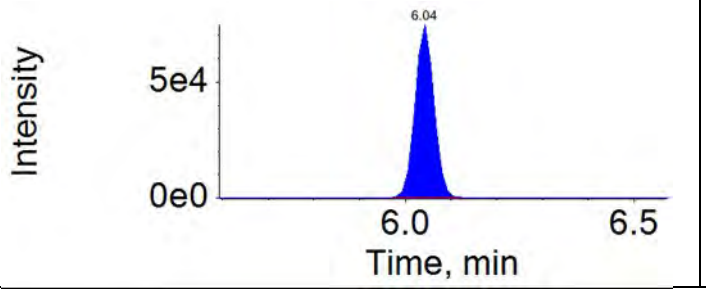
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

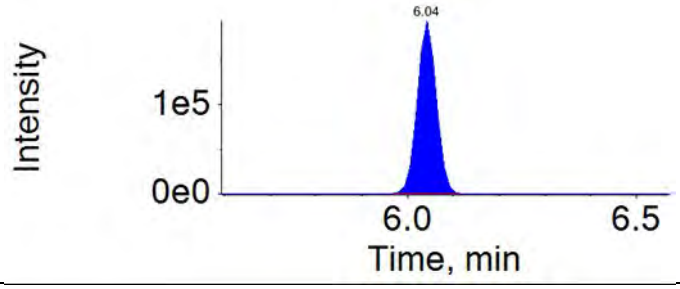
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



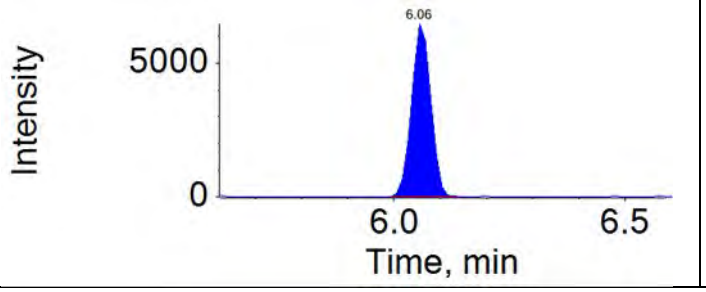


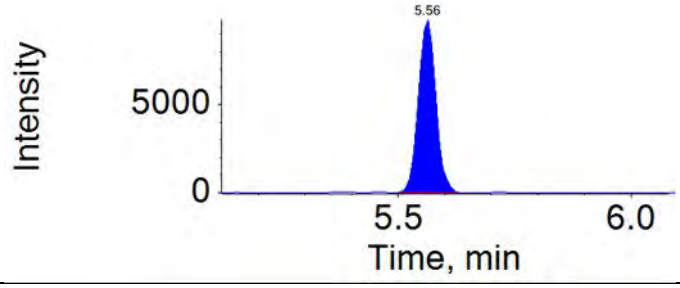
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



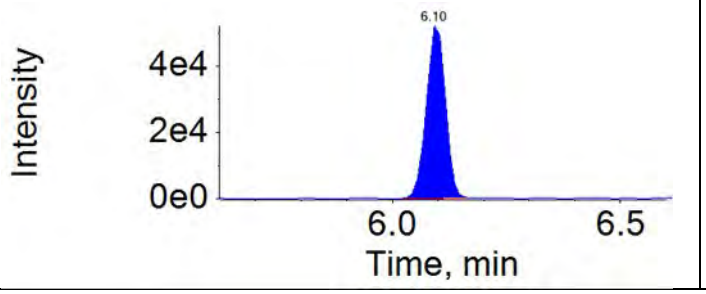


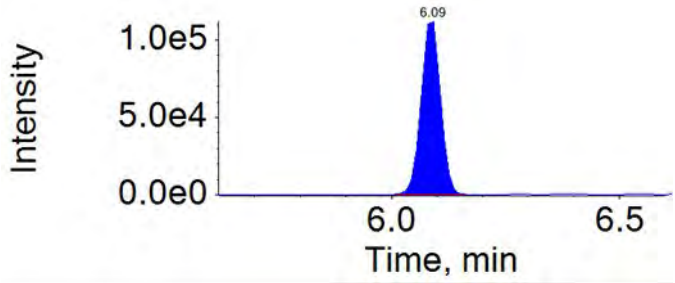
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0





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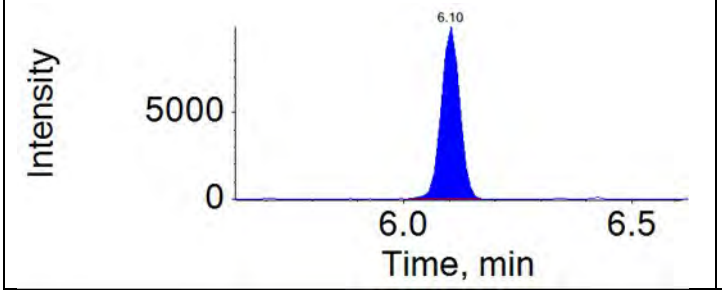
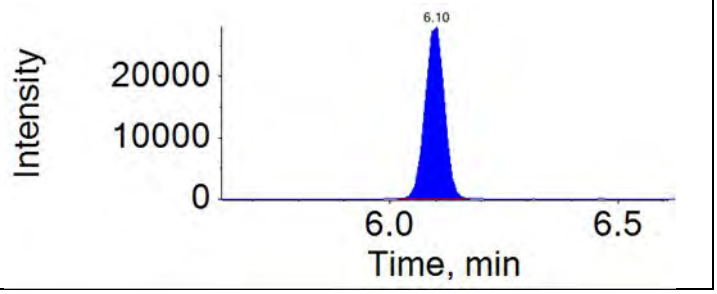
By umar at 11:27 am, 11/12/18

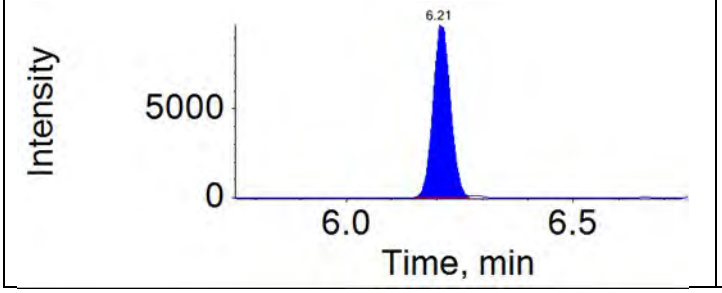
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

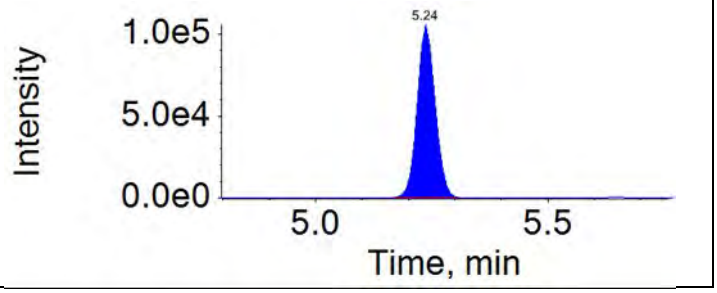
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



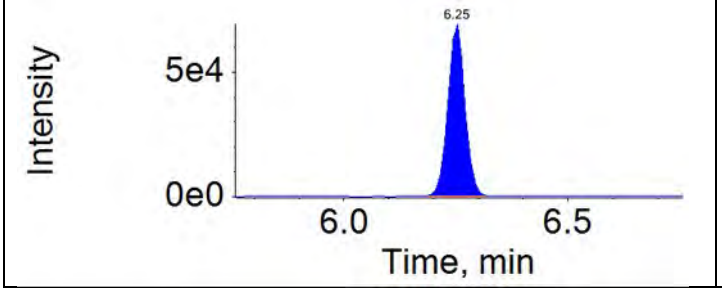


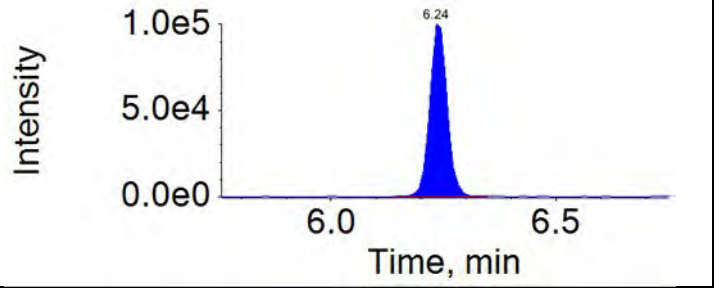
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



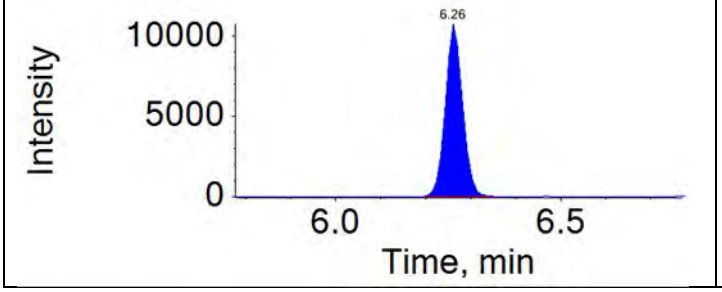


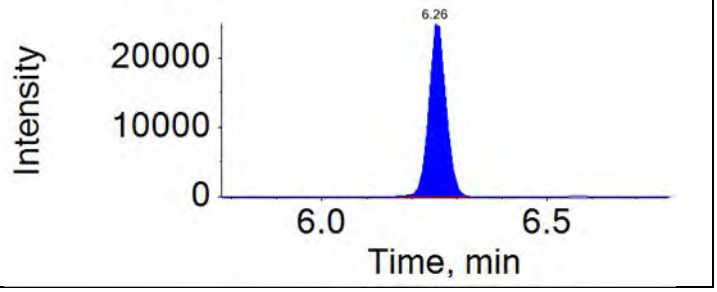
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0





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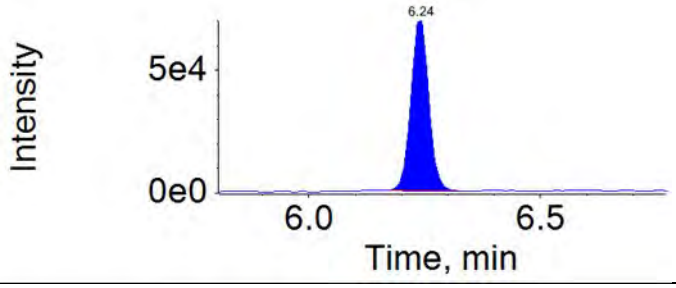
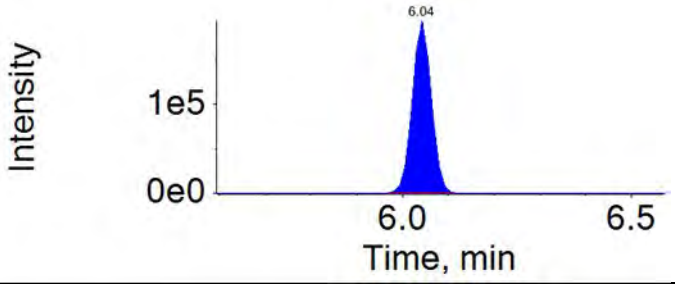
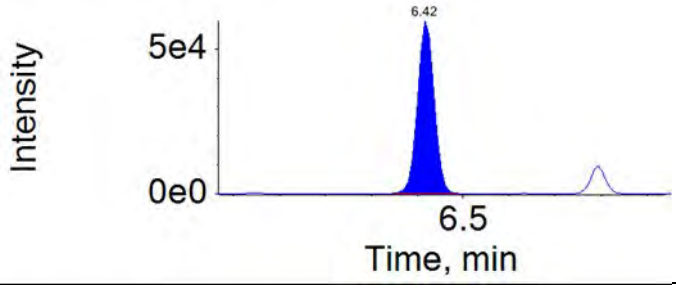
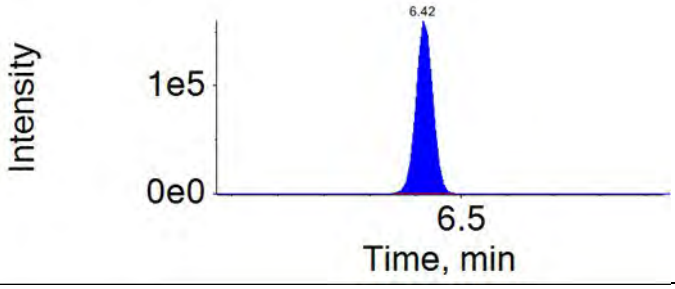
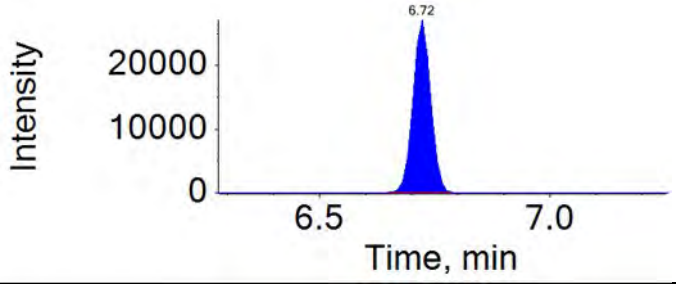
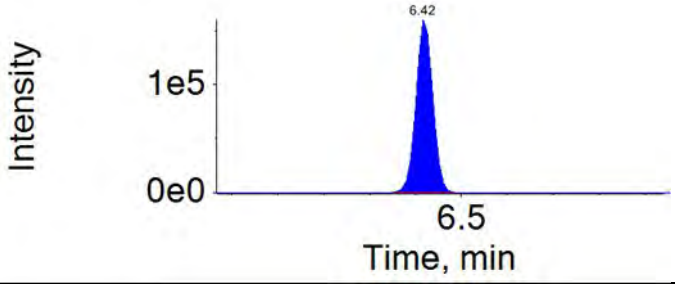
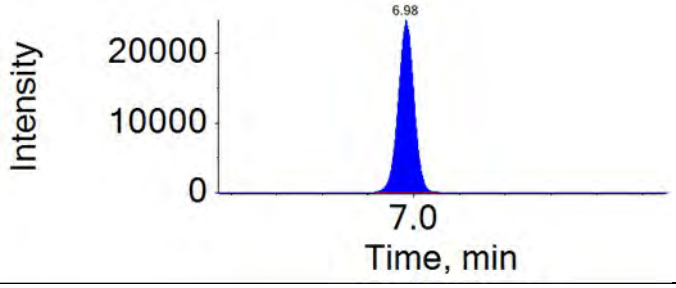
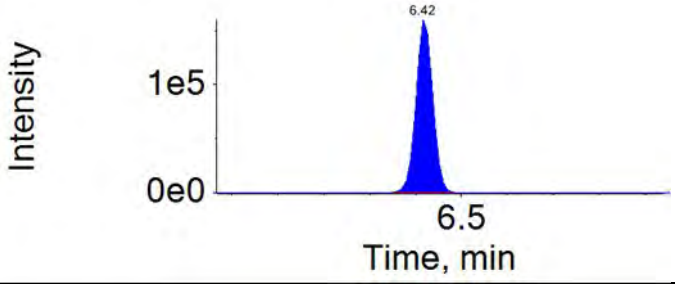
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV07DCCV7-11_DOD 11/8/2018 11:28:48 AM
QMethod Name: 18OCT20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

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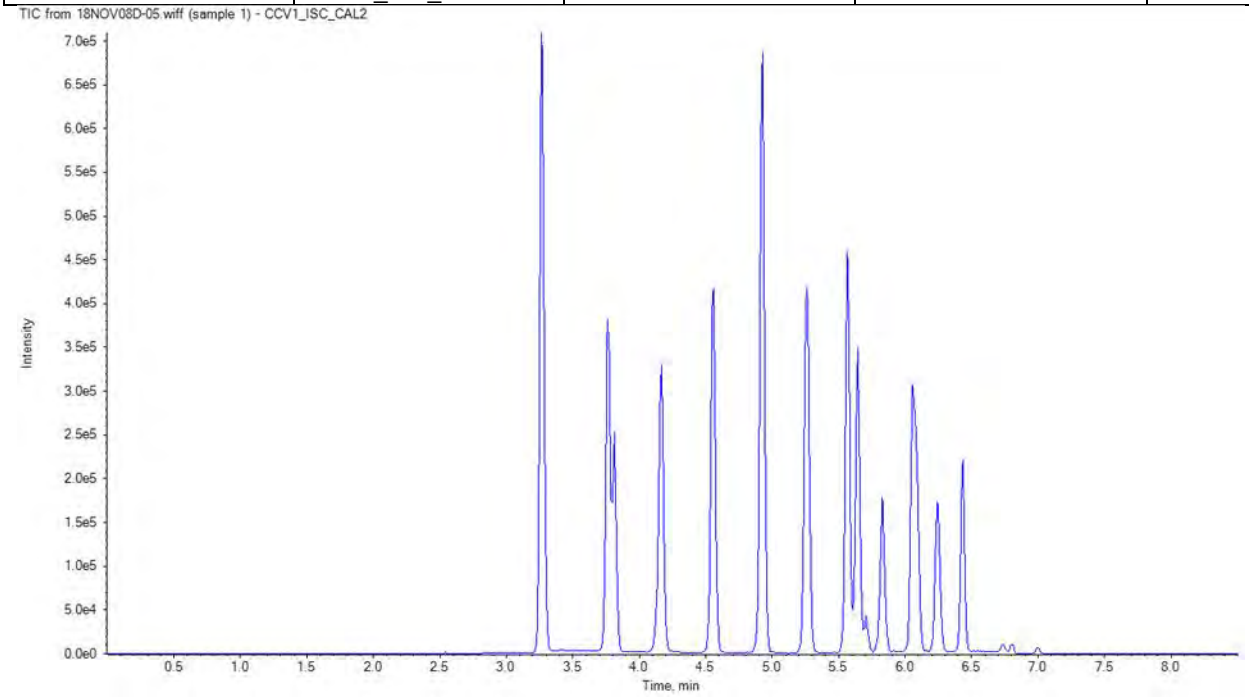
REVIEWED
By umar at 11:27 am, 11/12/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALMOD21833F	18NOV08D-05.wiff	11/8/2018 12:24:40 PM



Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	728839.7	730410.6	0	50	
13C2-PFOA	5.0	491983.1	524423.6	-6	50	
13C4-PFOS	4.8	255568.1	274061.7	-7	50	
13C2-PFDA	5.0	315407.5	311442.1	1	50	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALMOD21833F	18NOV08D-05.wiff	11/8/2018 12:24:40 PM

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	72084.0	10	13C4-PFBA	766928.2	5.0	0.094	3.26	1.000	0.500	0.550	10	30	
PFPeA	76376.3	13	13C5-PFPeA	809192.4	5.0	0.094	3.76	1.000	0.500	0.561	12	30	
PFBS	37650.0	11	13C3-PFBS	430491.1	4.7	0.087	3.81	1.000	0.440	0.441	0	30	
4:2-FTS	9377.7	11	13C2-4:2-FTS	51791.3	4.7	0.181	4.13	1.000	0.467	0.487	4	30	
PFHxA	85965.4	12	13C5-PFHxA	662030.6	5.0	0.130	4.16	1.000	0.500	0.557	11	30	
PFPeS	21837.5	11	13C3-PFBS	430491.1	4.7	0.051	4.18	1.100	0.469	0.500	7	30	
PFHxS	30165.5	12	13C3-PFHxS	325716.7	4.7	0.093	4.55	1.000	0.473	0.469	-1	30	
PFHpA	87232.0	12	13C4-PFHpA	548044.5	5.0	0.159	4.55	1.000	0.500	0.535	7	30	
6:2-FTS	7814.5	11	13C2-6:2-FTS	35283.6	4.8	0.221	4.91	1.000	0.474	0.553	17	30	
PFHpS	30009.2	11	13C3-PFHxS	325716.7	4.7	0.092	4.92	1.080	0.476	0.482	1	30	
PFOA	86207.9	11	13C8-PFOA	939368.6	5.0	0.092	4.93	1.000	0.500	0.517	3	30	
PFOS	28047.3	12	13C8-PFOS	285244.0	4.8	0.098	5.25	1.000	0.478	0.510	7	30	
PFNA	73414.7	11	13C9-PFNA	481998.0	5.0	0.152	5.27	1.000	0.500	0.569	14	30	
PFNS	17602.7	11	13C8-PFOS	285244.0	4.8	0.062	5.55	1.060	0.480	0.489	2	30	
PFDA	60165.4	11	13C6-PFDA	607904.1	5.0	0.099	5.57	1.000	0.500	0.545	9	30	
8:2-FTS	5527.1	12	13C2-8:2-FTS	25655.0	4.8	0.215	5.57	1.000	0.479	0.486	1	30	
PFOSA	68994.6	11	13C8-PFOSA	699314.0	5.0	0.099	5.64	1.000	0.500	0.533	7	30	
NMeFOSAA	8576.2	11	d3-NMeFOSAA	79412.4	5.0	0.108	5.71	1.000	0.500	0.556	11	30	
PFDS	13175.4	11	13C8-PFOS	285244.0	4.8	0.046	5.80	1.100	0.482	0.441	-8	30	
PFUnDA	48289.0	12	13C7-PFUnDA	263647.7	5.0	0.183	5.83	1.000	0.500	0.525	5	30	
NEtFOSAA	7263.0	11	d5-NEtFOSAA	64246.4	5.0	0.113	5.84	1.000	0.500	0.486	-3	30	
PFDoDA	58287.0	12	13C2-PFDoDA	556797.1	5.0	0.105	6.06	1.000	0.500	0.567	13	30	
10:2-FTS	5075.6	12	13C2-8:2-FTS	25655.0	4.8	0.198	6.07	1.090	0.482	0.616	28	30	
NMePFOSAE	41425.0	12	d7-NMePFOSAE	330937.5	5.0	0.125	6.09	1.000	0.500	0.561	12	30	
NMePFOSA	8417.2	11	d3-NMePFOSA	78208.3	5.0	0.108	6.10	1.000	0.500	0.602	20	30	
PFDoS	6665.7	10	13C8-PFOS	285244.0	4.8	0.023	6.22	1.190	0.484	0.451	-7	30	
NEtPFOSAE	43773.7	11	d9-NEtPFOSAE	266759.4	5.0	0.164	6.25	1.000	0.500	0.526	5	30	
NEtPFOSA	7022.0	11	d5-NEtPFOSA	69615.2	5.0	0.101	6.26	1.000	0.500	0.444	-11	30	
PFTrDA	46666.6	11	13C2-PFDoDA	556797.1	5.0	0.084	6.25	1.030	0.500	0.529	6	30	
PFTeDA	38675.5	11	13C2-PFTeDA	403281.7	5.0	0.096	6.43	1.000	0.500	0.563	13	30	
PFHxDA	17615.3	11	13C2-PFTeDA	403281.7	5.0	0.044	6.73	1.050	0.500	0.542	8	30	
PFODA	14725.2	10	13C2-PFTeDA	403281.7	5.0	0.037	7.00	1.090	0.500	0.523	5	30	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV08D-05.wiff
Sample ID:	CALMOD21833F			**Acquis Date:**		2018-11-08T12:24:40
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV08DCCV1-3
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	728839.7	730410.6	0	50	
13C2-PFOA	5.0	491983.1	524423.6	-6	50	
13C4-PFOS	4.8	255568.1	274061.7	-7	50	
13C2-PFDA	5.0	315407.5	311442.1	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	766928.2	13C3-PFBA	728839.7	1.052	5.000	4.870	97	70-130	
E13C5-PFPeA	809192.4	13C3-PFBA	728839.7	1.110	5.000	4.837	97	70-130	
E13C3-PFBS	430491.1	13C3-PFBA	728839.7	0.591	4.650	4.335	93	70-130	
E13C2-4:2-FTS	51791.3	13C2-PFOA	491983.1	0.105	4.670	4.750	102	70-130	
E13C5-PFHxA	662030.6	13C2-PFOA	491983.1	1.346	5.000	4.950	99	70-130	
E13C3-PFHxS	325716.7	13C2-PFOA	491983.1	0.662	4.730	4.753	100	70-130	
E13C4-PFHpA	548044.5	13C2-PFOA	491983.1	1.114	5.000	5.068	101	70-130	
E13C2-6:2-FTS	35283.6	13C2-PFOA	491983.1	0.072	4.750	4.782	101	70-130	
E13C8-PFOA	939368.6	13C2-PFOA	491983.1	1.909	5.000	5.325	106	70-130	
E13C8-PFOS	285244.0	13C4-PFOS	255568.1	1.116	4.780	4.935	103	70-130	
E13C9-PFNA	481998.0	13C4-PFOS	255568.1	1.886	5.000	5.152	103	70-130	
E13C6-PFDA	607904.1	13C2-PFDA	315407.5	1.927	5.000	4.847	97	70-130	
E13C2-8:2-FTS	25655.0	13C2-PFDA	315407.5	0.081	4.790	4.304	90	70-130	
E13C8-PFOSA	699314.0	13C2-PFDA	315407.5	2.217	5.000	4.838	97	70-130	
Ed3-NMeFOSAA	79412.4	13C2-PFDA	315407.5	0.252	5.000	4.682	94	70-130	
E13C7-PFUnDA	263647.7	13C2-PFDA	315407.5	0.836	5.000	4.822	96	70-130	
Ed5-NEtFOSAA	64246.4	13C2-PFDA	315407.5	0.204	5.000	4.714	94	70-130	
E13C2-PFDoDA	556797.1	13C2-PFDA	315407.5	1.765	5.000	4.759	95	70-130	
Ed7-NMePFOSAE	330937.5	13C2-PFDA	315407.5	1.049	5.000	4.879	98	70-130	
Ed3-NMePFOSA	78208.3	13C2-PFDA	315407.5	0.248	5.000	4.540	91	70-130	
Ed9-NEtPFOSAE	266759.3	13C2-PFDA	315407.5	0.846	5.000	4.830	97	70-130	
Ed5-NEtPFOSA	69615.2	13C2-PFDA	315407.5	0.221	5.000	5.111	102	70-130	
E13C2-PFTeDA	403281.7	13C2-PFDA	315407.5	1.279	5.000	4.603	92	70-130	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

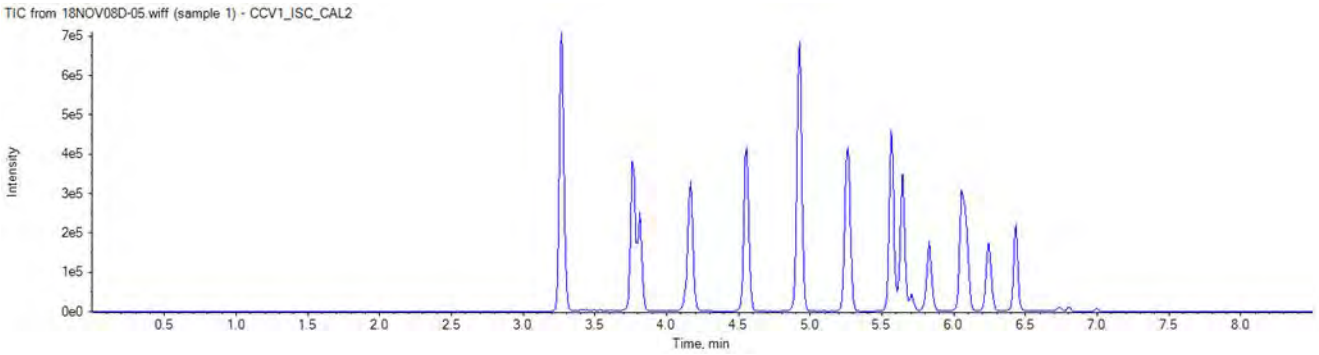
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV08D-05.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	72084.0		A	13C4-PFBA	3.27	766928.2	0.094	0.550
PFPeA	3.76	1.000	76376.3		A	13C5-PFPeA	3.76	809192.4	0.094	0.561
PFBS	3.81	1.000	37650.0		A	13C3-PFBS	3.81	430491.1	0.087	0.441
4:2-FTS	4.13	1.000	9377.7		A	13C2-4:2-FTS	4.13	51791.3	0.181	0.487
PFHxA	4.16	1.000	85965.4		A	13C5-PFHxA	4.16	662030.6	0.130	0.557
PFPeS	4.18	1.100	21837.5		A	13C3-PFBS	3.81	430491.1	0.051	0.500
PFHxS	4.55	1.000	30165.5		A	13C3-PFHxS	4.56	325716.7	0.093	0.469
PFHpA	4.55	1.000	87232.0		A	13C4-PFHpA	4.55	548044.5	0.159	0.535
6:2-FTS	4.91	1.000	7814.5		A	13C2-6:2-FTS	4.91	35283.6	0.221	0.553
PFHpS	4.92	1.080	30009.2		A	13C3-PFHxS	4.56	325716.7	0.092	0.482
PFOA	4.93	1.000	86207.9		M	13C8-PFOA	4.92	939368.6	0.092	0.517
PFOS	5.25	1.000	28047.3		A	13C8-PFOS	5.25	285244.0	0.098	0.510
PFNA	5.27	1.000	73414.7		A	13C9-PFNA	5.27	481998.0	0.152	0.569
PFNS	5.55	1.060	17602.7		A	13C8-PFOS	5.25	285244.0	0.062	0.489
PFDA	5.57	1.000	60165.4		A	13C6-PFDA	5.57	607904.1	0.099	0.545
8:2-FTS	5.57	1.000	5527.1		A	13C2-8:2-FTS	5.57	25655.0	0.215	0.486
PFOSA	5.64	1.000	68994.6		A	13C8-PFOSA	5.64	699314.0	0.099	0.533
NMeFOSAA	5.71	1.000	8576.2		A	d3-NMeFOSAA	5.71	79412.4	0.108	0.556
PFDS	5.80	1.100	13175.4		A	13C8-PFOS	5.25	285244.0	0.046	0.441
PFUnDA	5.83	1.000	48289.0		A	13C7-PFUnDA	5.83	263647.7	0.183	0.525
NEtFOSAA	5.84	1.000	7263.0		A	d5-NEtFOSAA	5.84	64246.4	0.113	0.486
PFDoDA	6.06	1.000	58287.0		A	13C2-PFDoDA	6.06	556797.1	0.105	0.567
10:2-FTS	6.07	1.090	5075.6		A	13C2-8:2-FTS	5.57	25655.0	0.198	0.616
NMePFOSAE	6.09	1.000	41425.0		A	d7-NMePFOSAE	6.08	330937.5	0.125	0.561
NMePFOSA	6.10	1.000	8417.2		A	d3-NMePFOSA	6.10	78208.3	0.108	0.602
PFDoS	6.22	1.190	6665.7		A	13C8-PFOS	5.25	285244.0	0.023	0.451
NEtPFOSAE	6.25	1.000	43773.7		A	d9-NEtPFOSAE	6.24	266759.4	0.164	0.526
NEtPFOSA	6.26	1.000	7022.0		A	d5-NEtPFOSA	6.26	69615.2	0.101	0.444
PFTrDA	6.25	1.030	46666.6		A	13C2-PFDoDA	6.06	556797.1	0.084	0.529
PFTeDA	6.43	1.000	38675.5		A	13C2-PFTeDA	6.43	403281.7	0.096	0.563
PFHxDA	6.73	1.050	17615.3		A	13C2-PFTeDA	6.43	403281.7	0.044	0.542
PFODA	7.00	1.090	14725.2		A	13C2-PFTeDA	6.43	403281.7	0.037	0.523

Total Ion Chromatogram

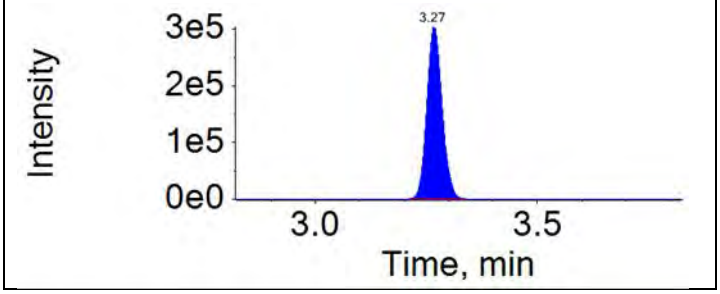


APPROVED
By JPT at 5:07 pm, 11/8/18

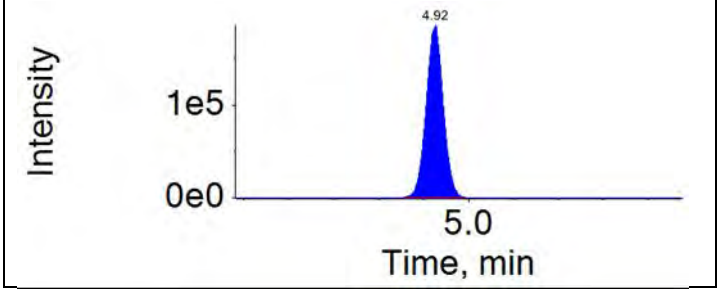
REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

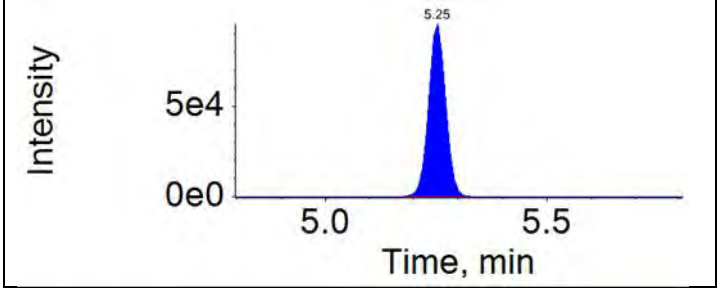
Injection Standard: 13C3-PFBA
216.0 / 172.0



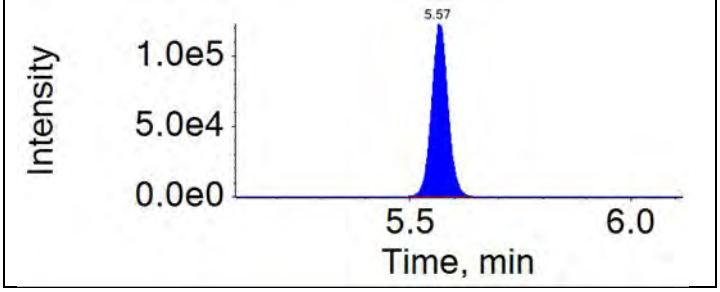
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



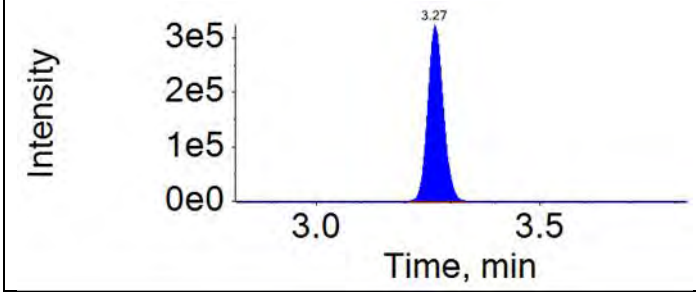
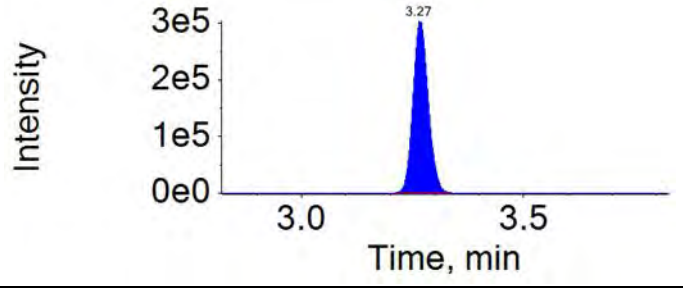
Injection Standard: 13C2-PFDA
515.0 / 470.0

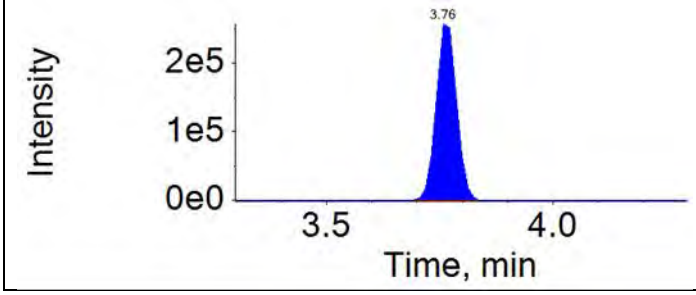
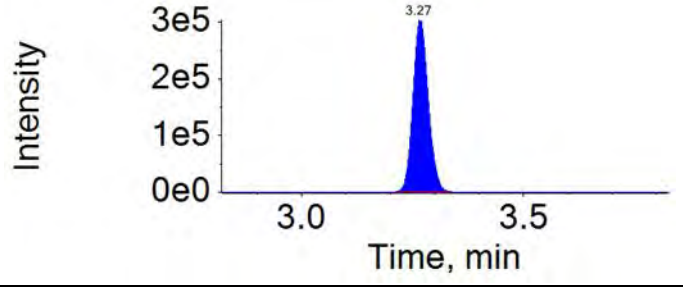


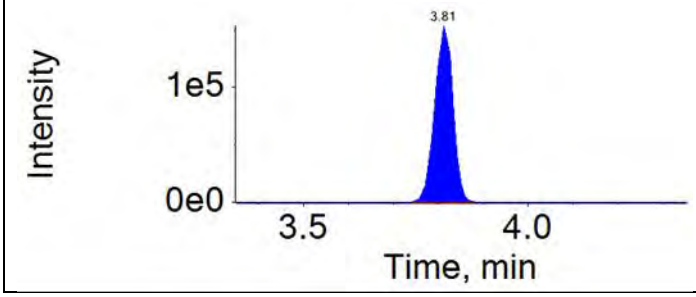
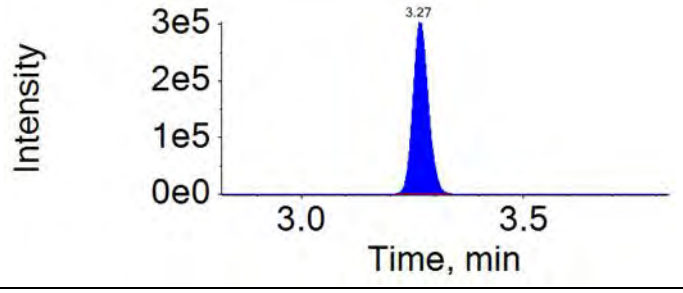
APPROVED
By JPT at 5:07 pm, 11/8/18

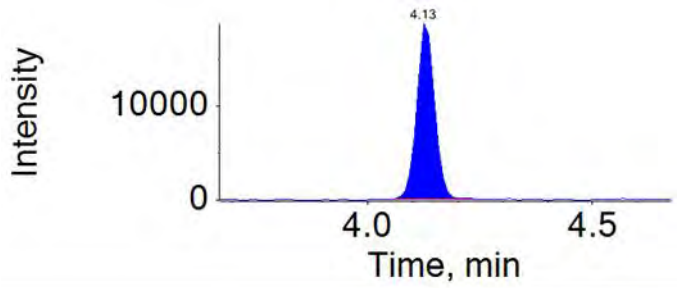
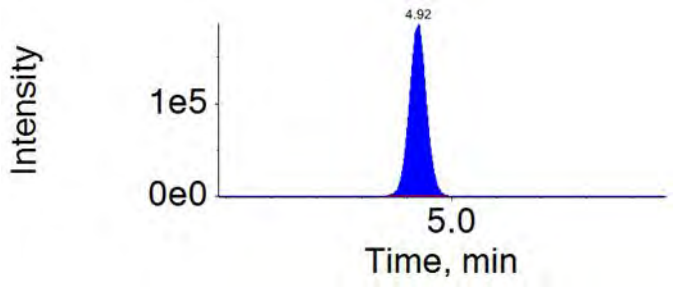
REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

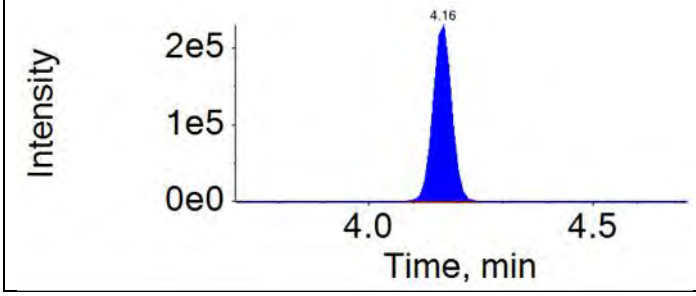
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

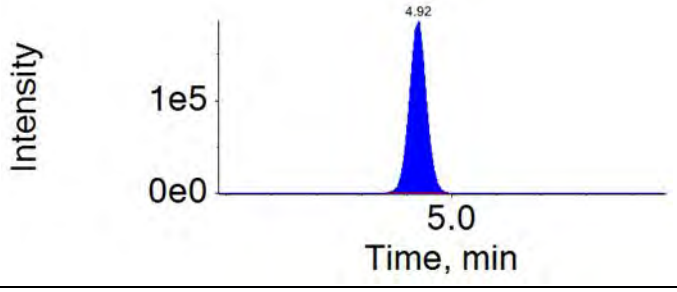
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

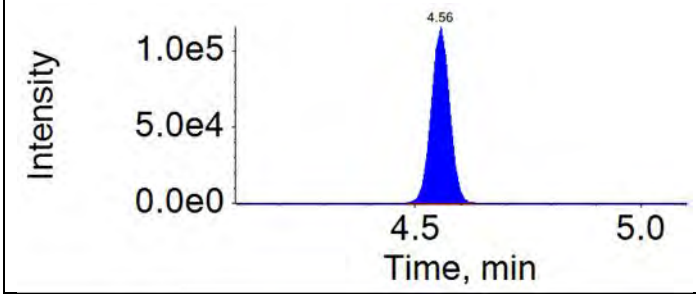
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

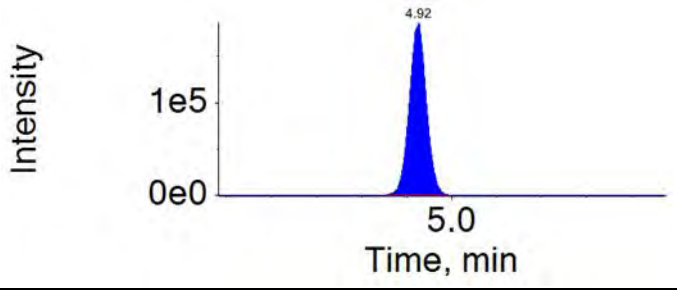
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



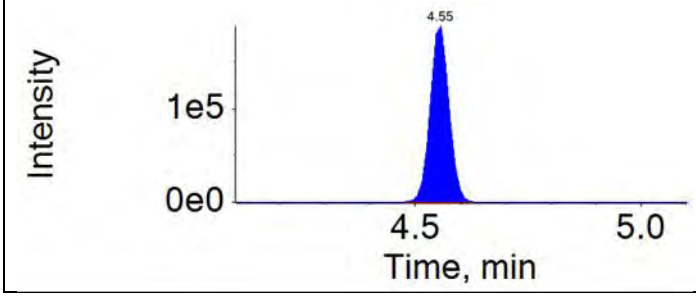


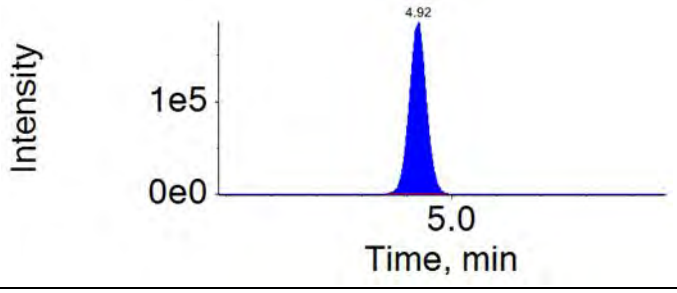
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



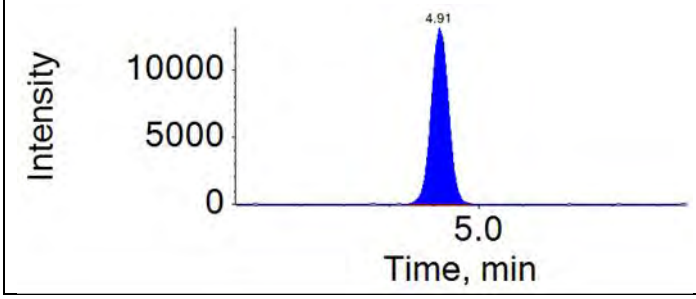


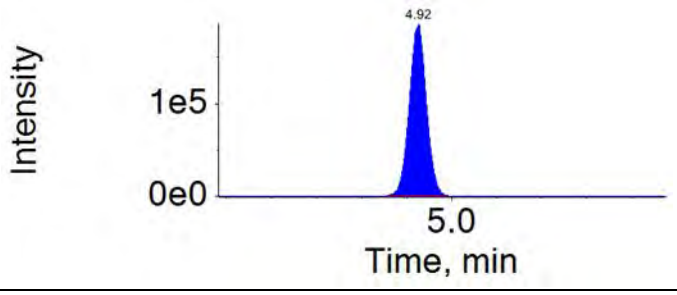
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





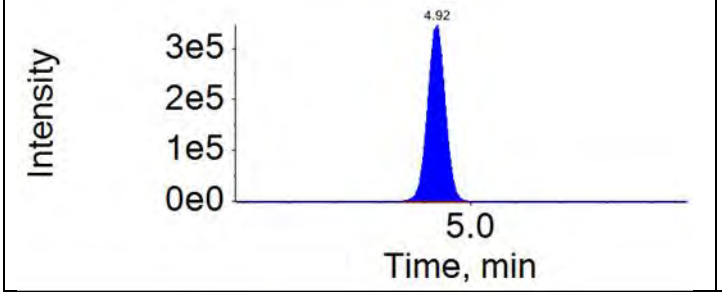
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

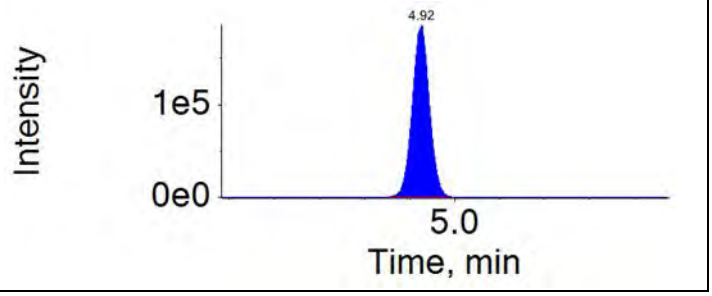




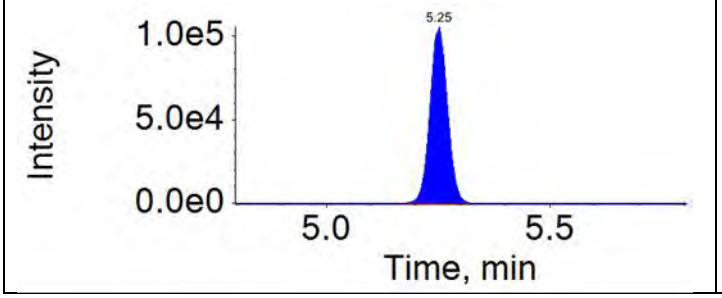
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

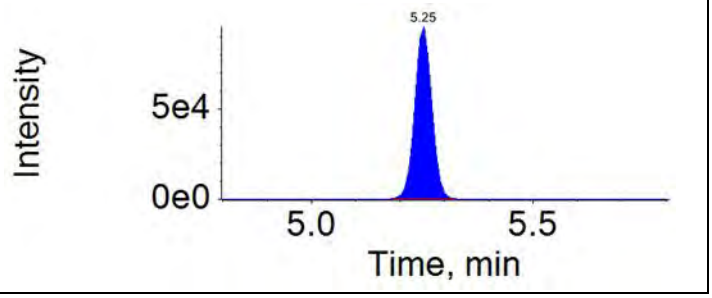
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



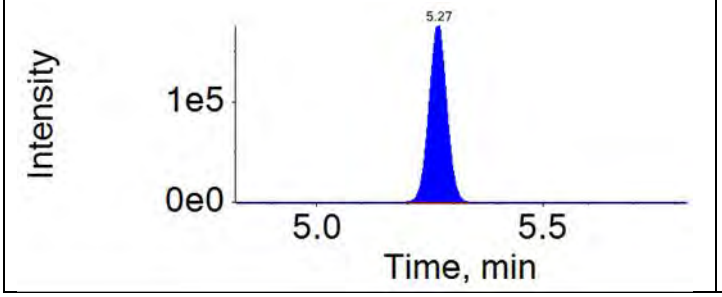


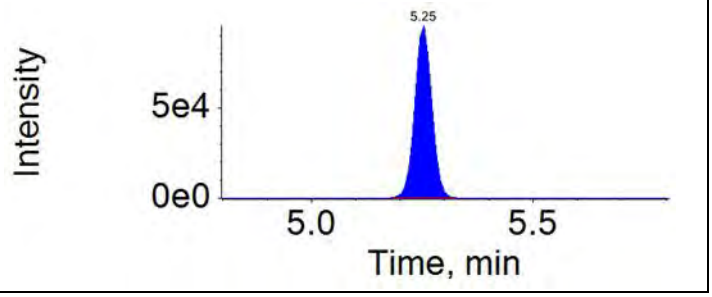
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



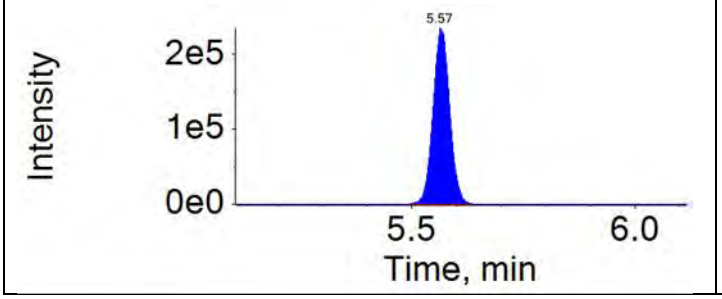


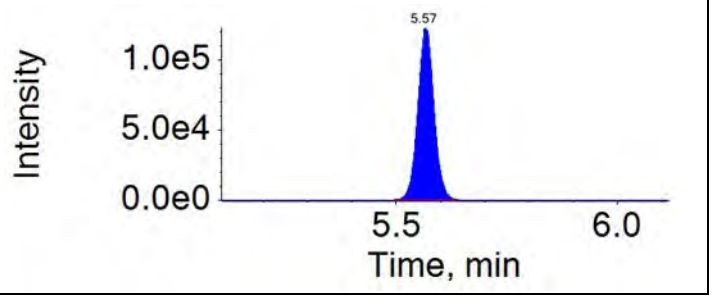
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0



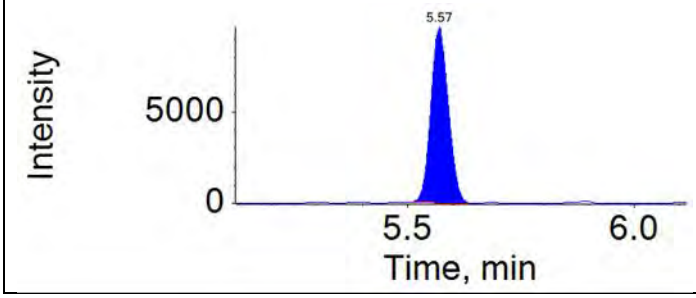


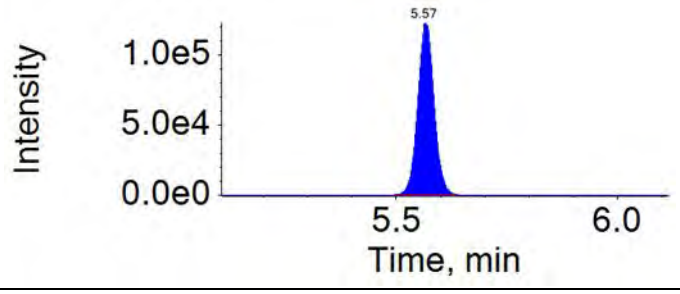
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

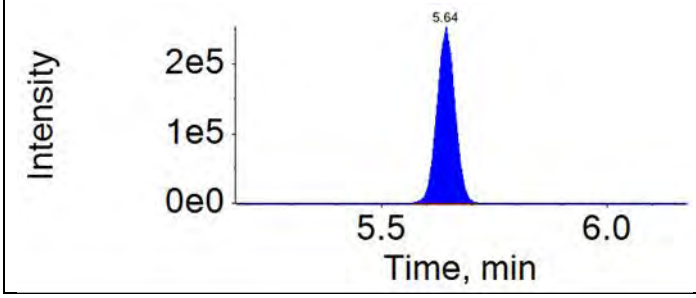
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

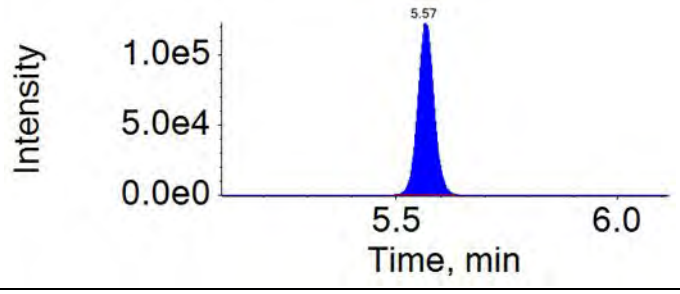
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



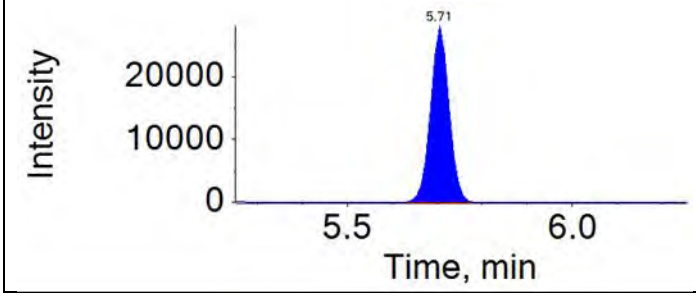


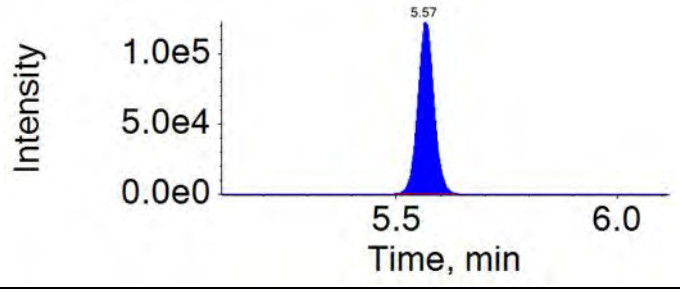
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



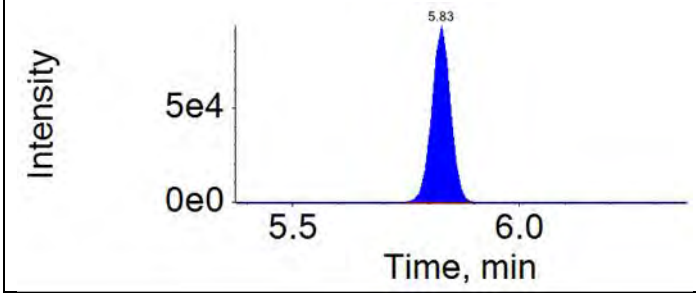


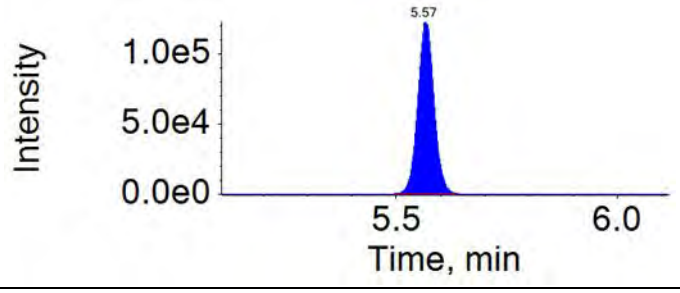
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



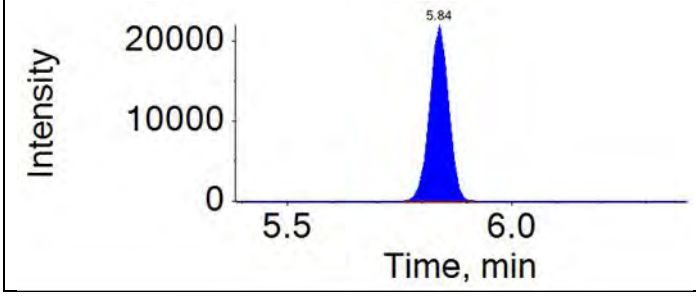


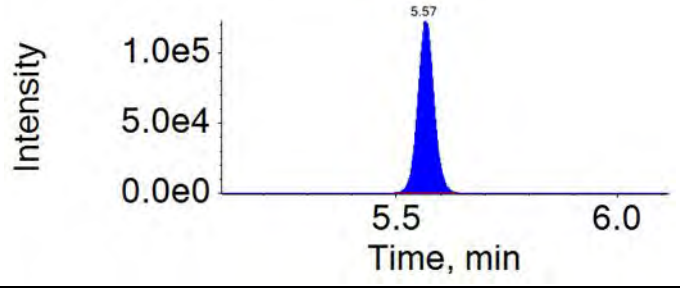
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

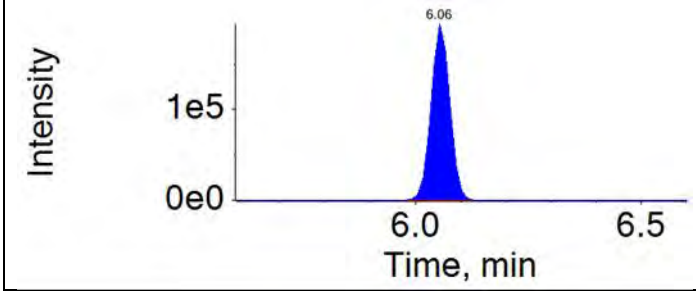
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

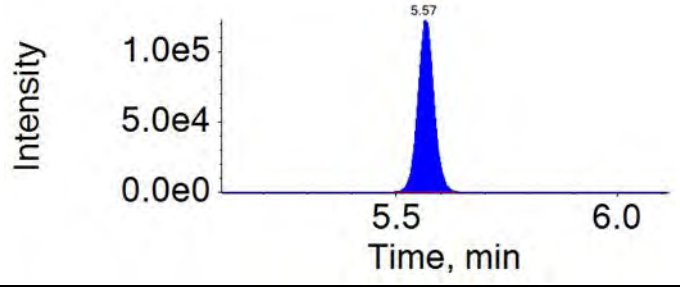
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



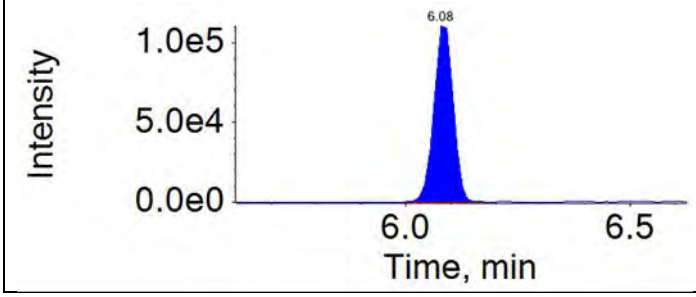


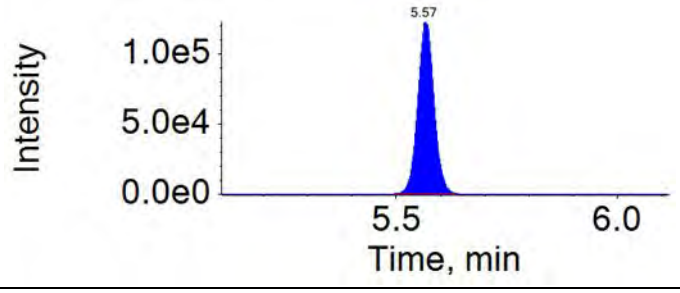
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



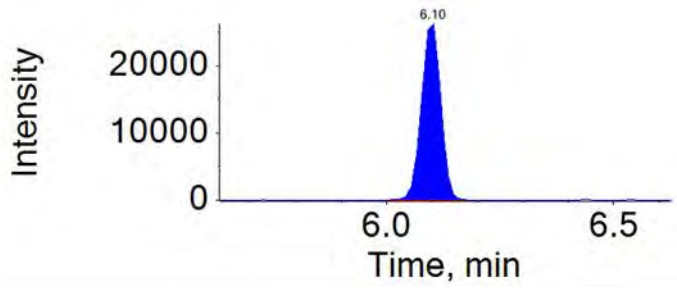


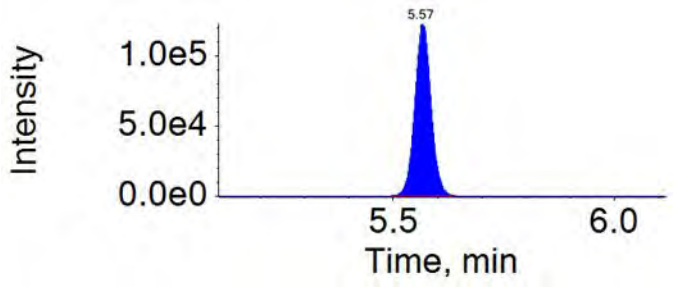
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



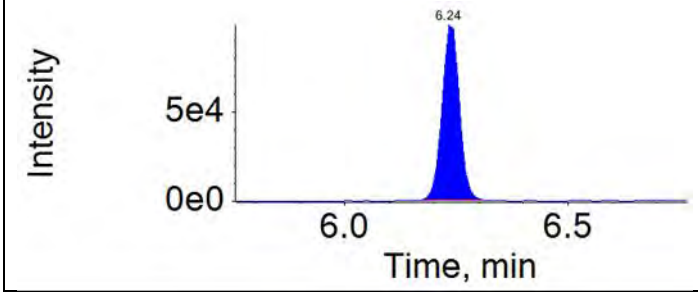


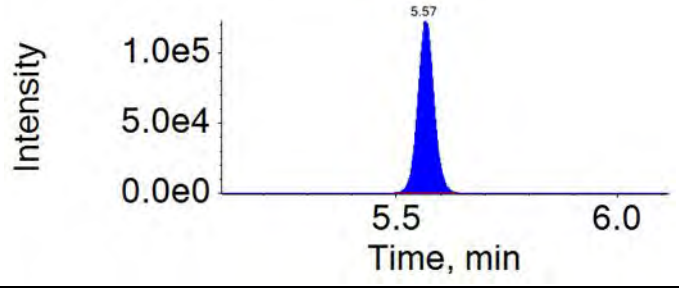
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

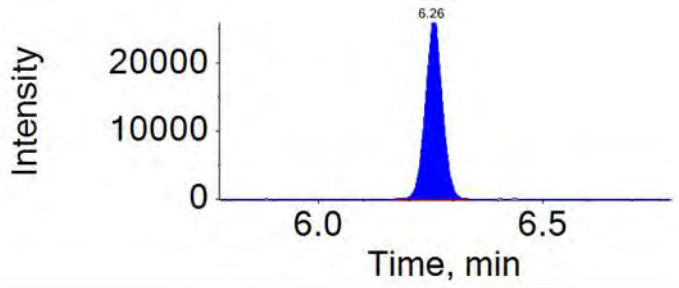
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

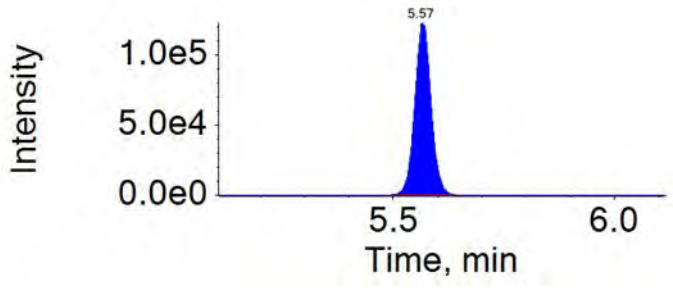
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



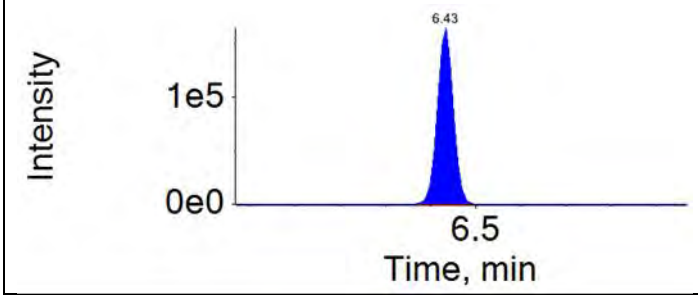


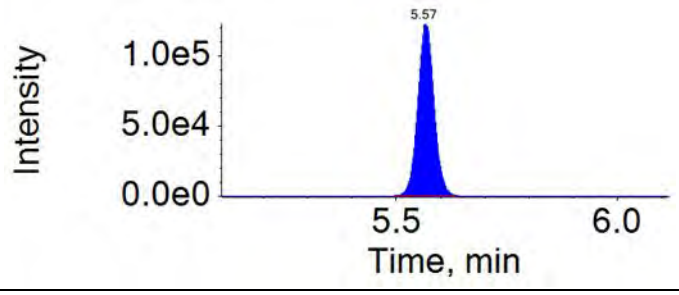
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



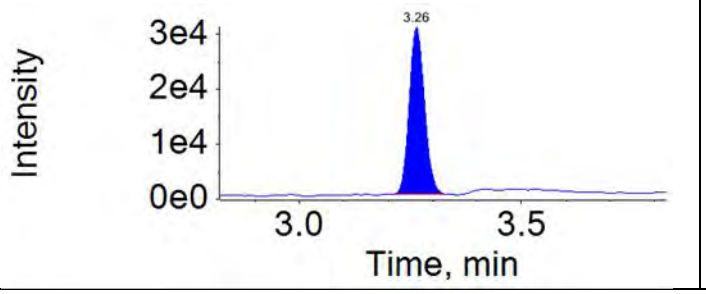


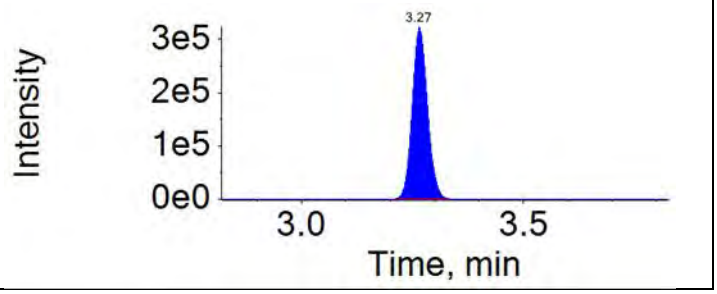
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

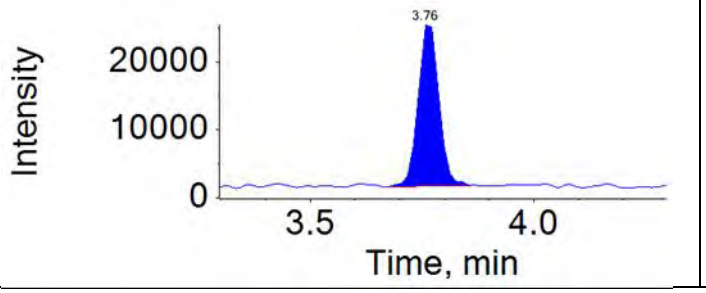
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

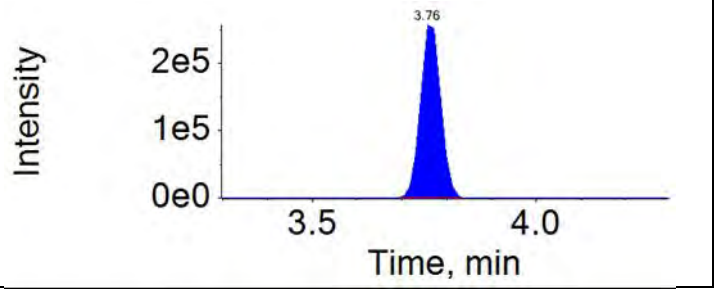
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



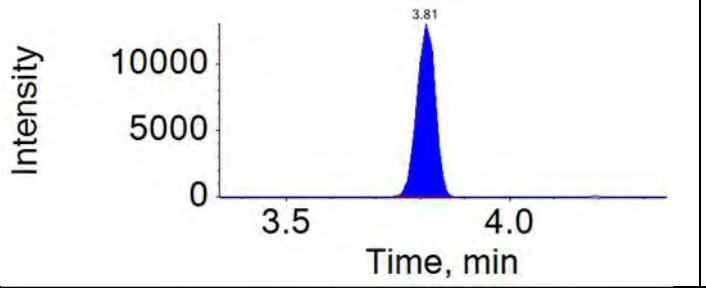


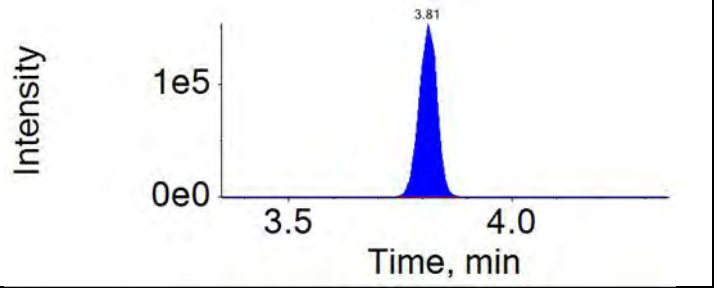
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



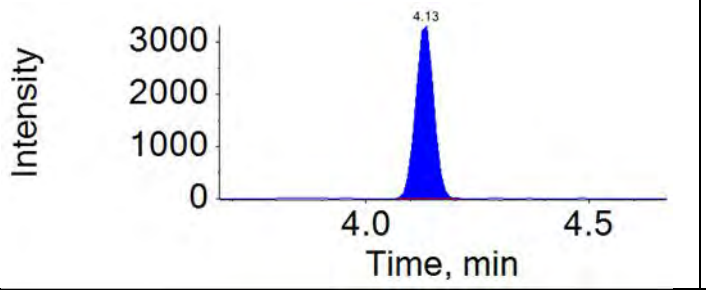


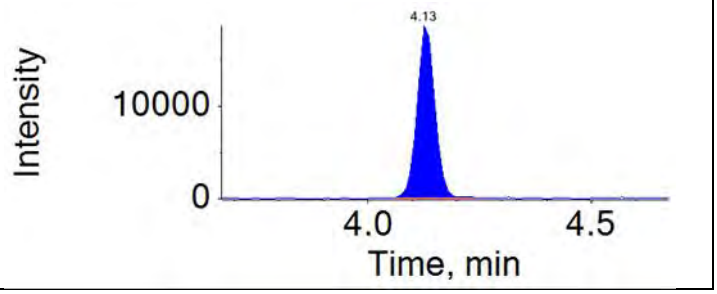
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



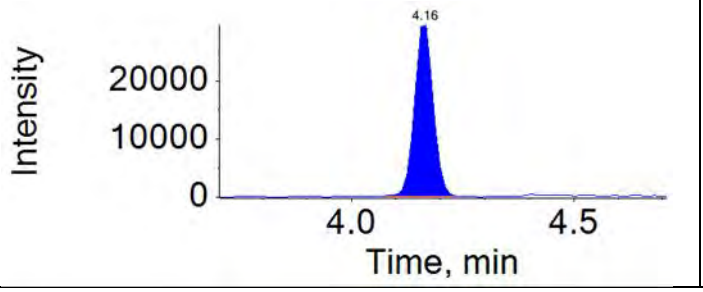


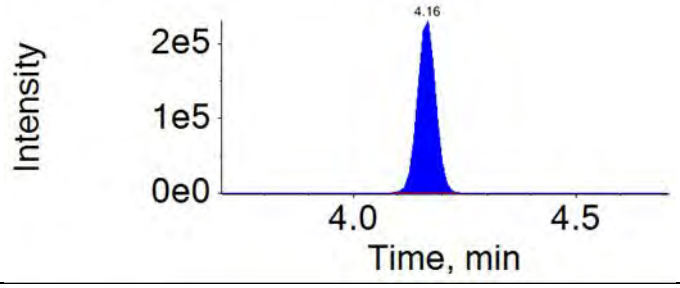
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

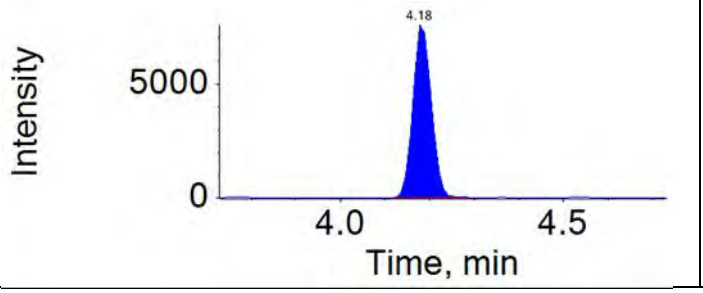
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

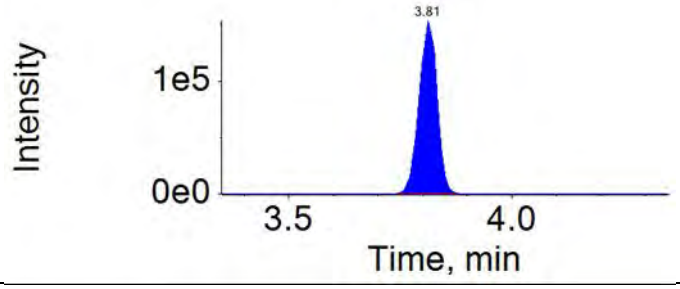
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



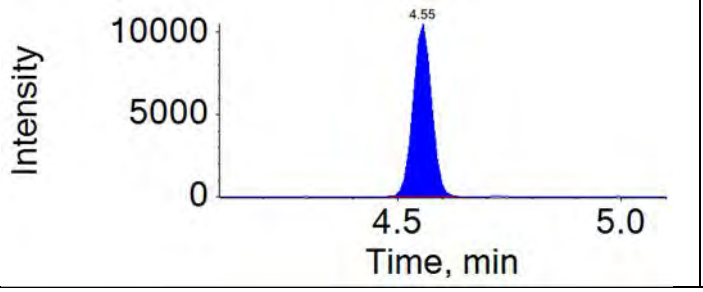


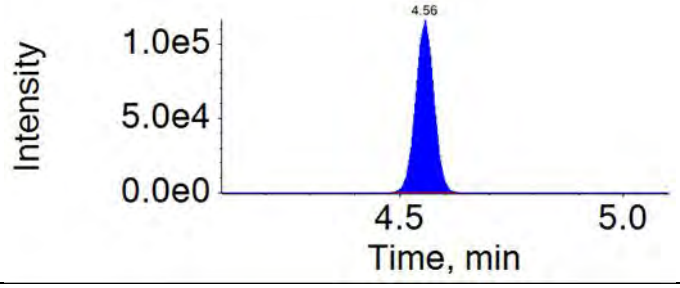
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



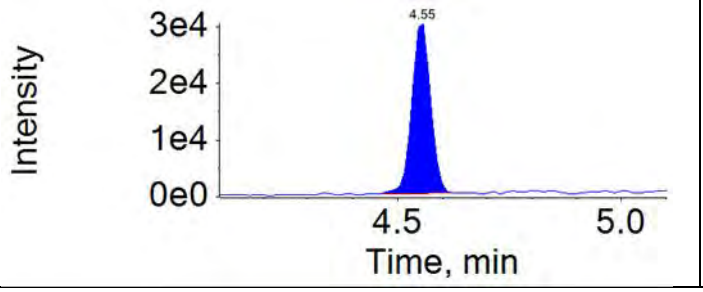


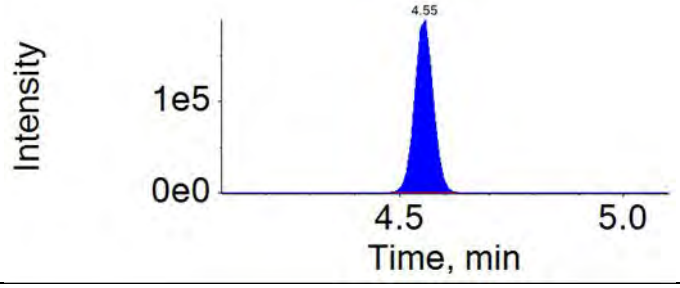
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

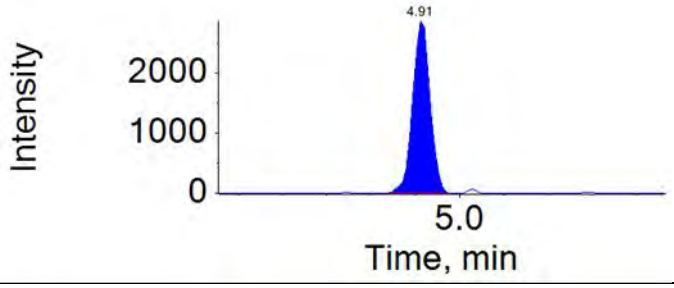
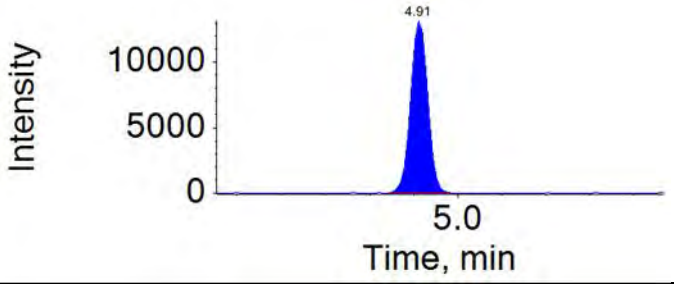


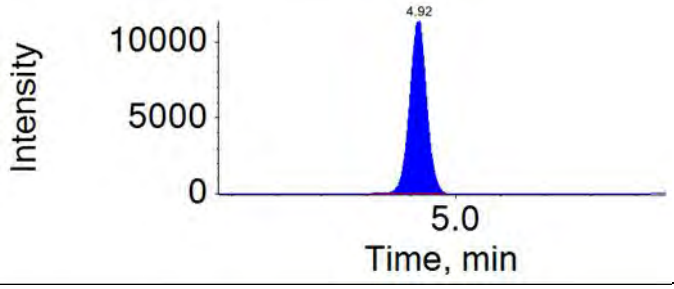
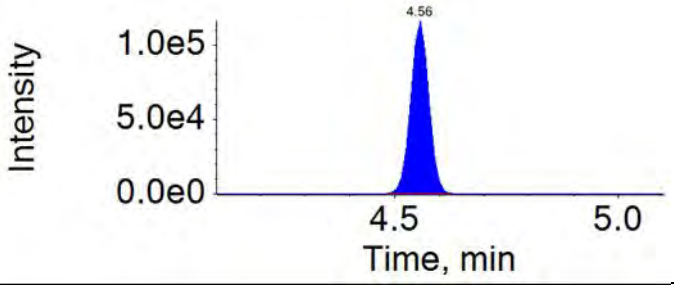


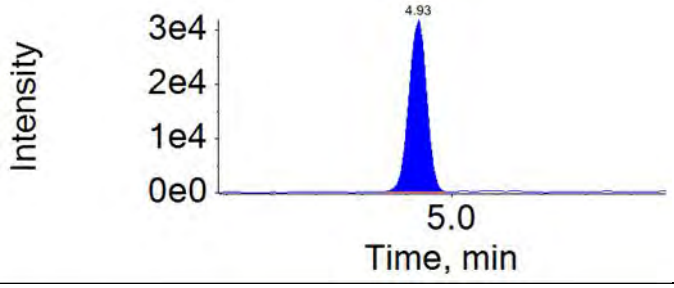
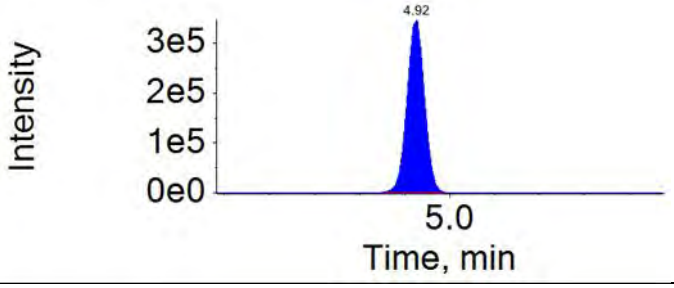
APPROVED
By JPT at 5:07 pm, 11/8/18

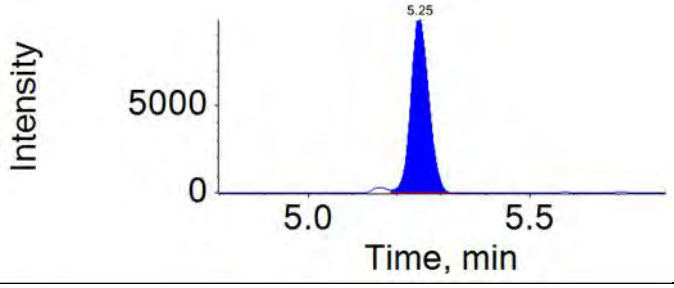
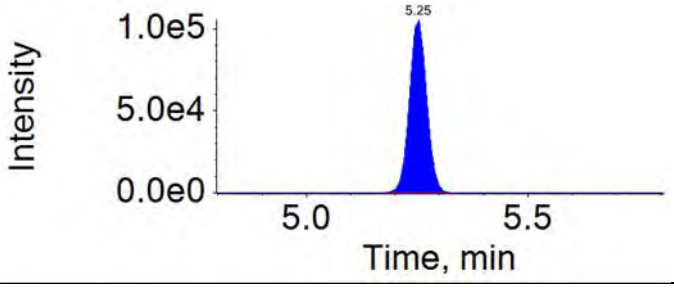
REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

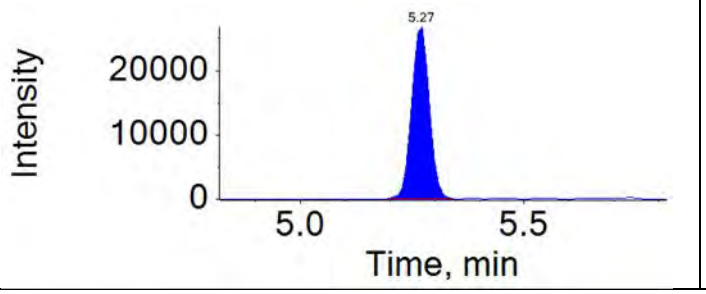
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

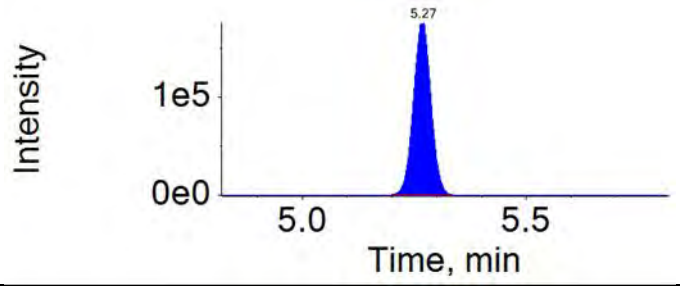
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

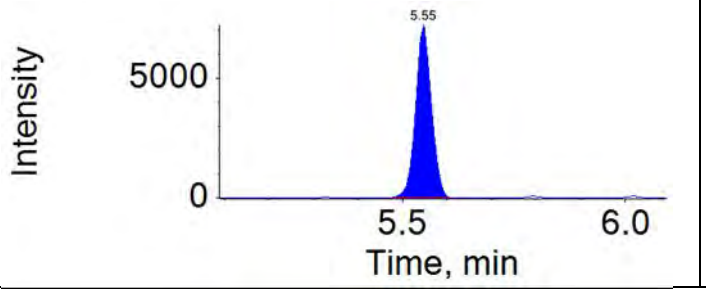
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

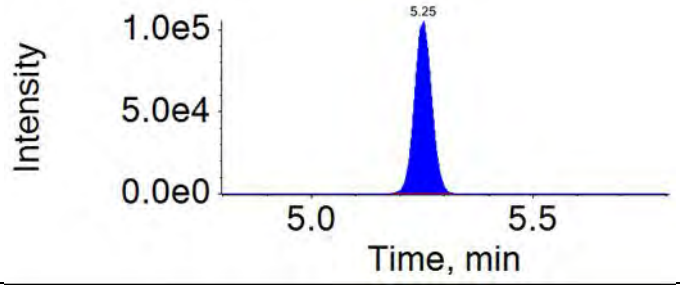
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



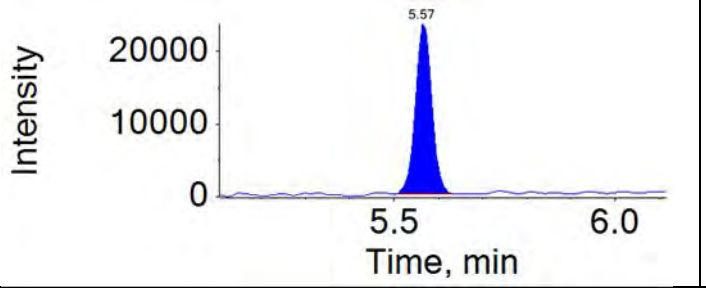


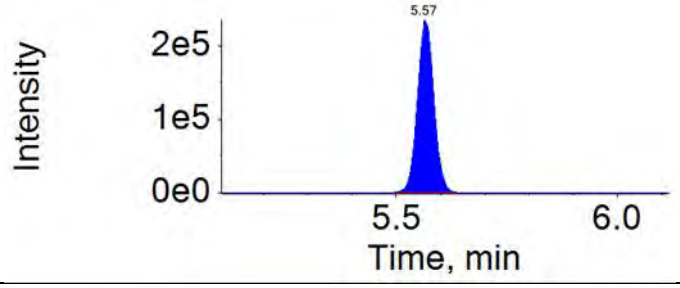
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



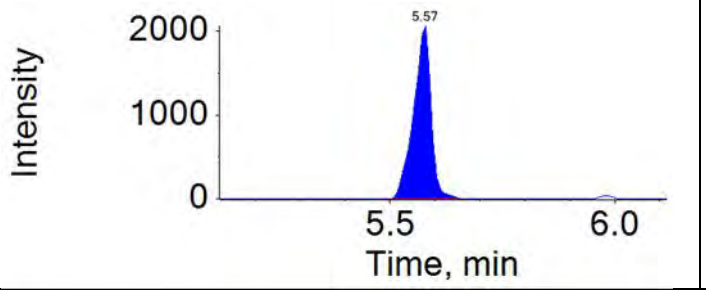


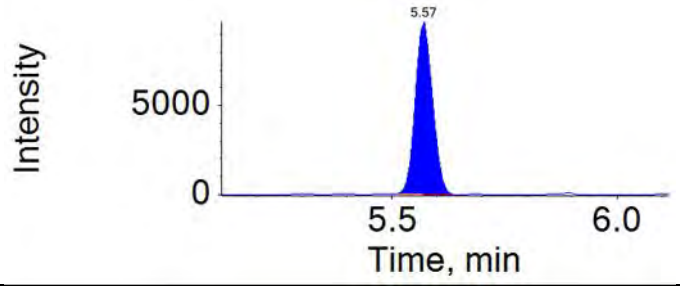
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



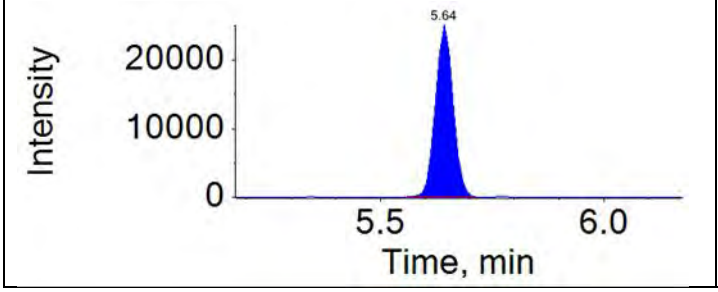


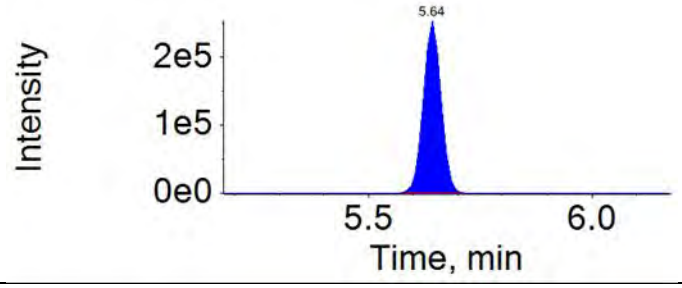
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

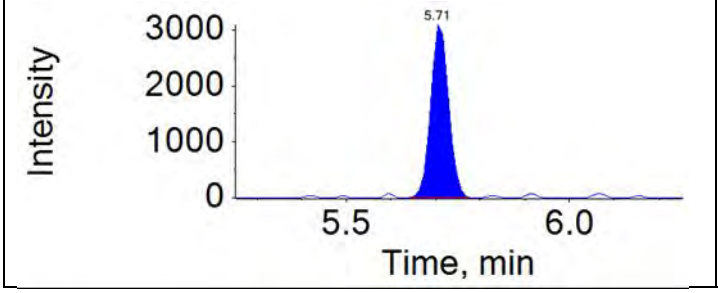
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

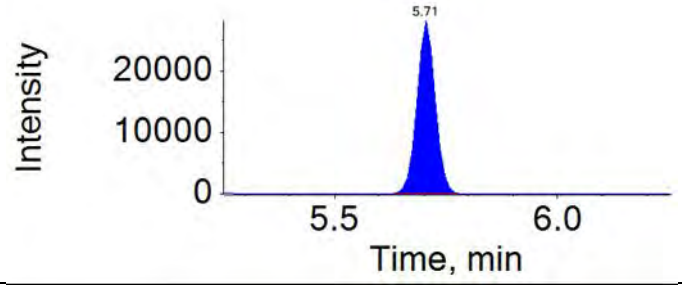
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



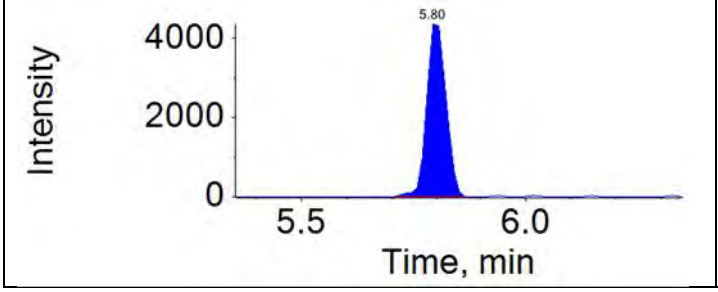


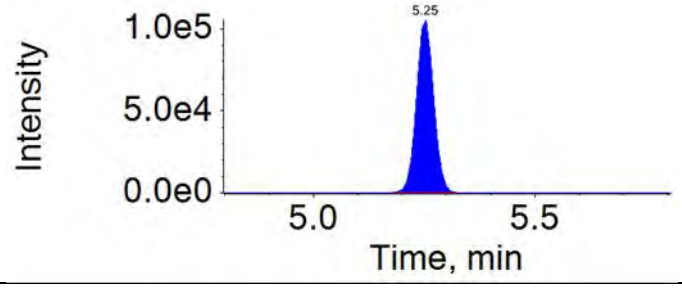
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



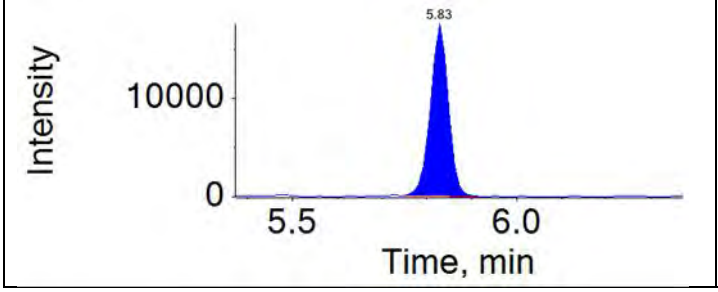


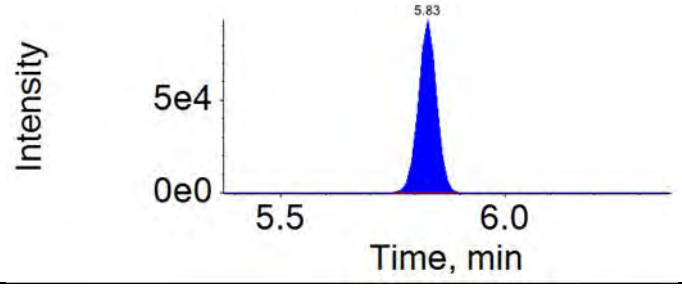
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



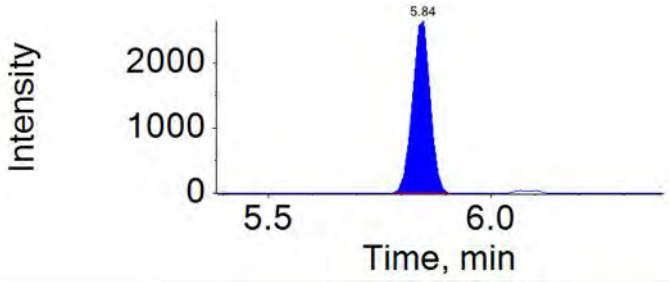


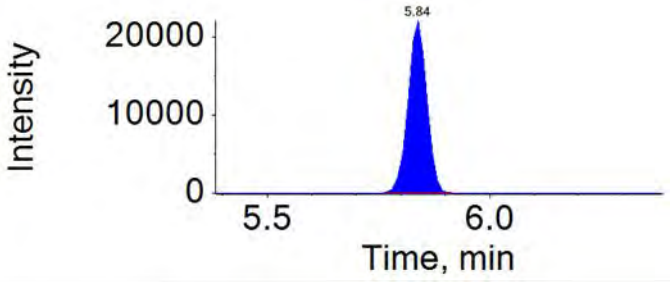
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

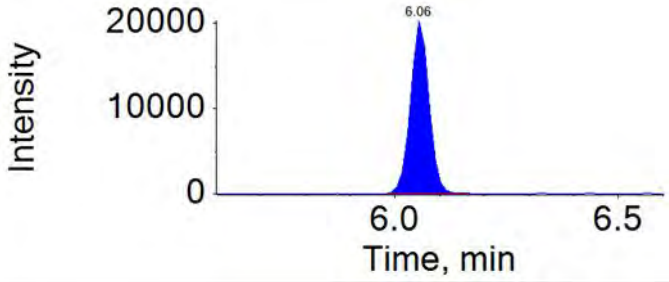
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

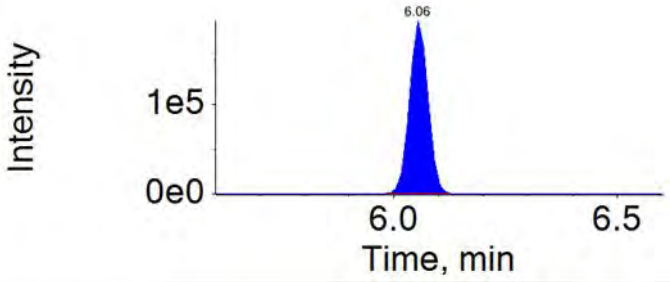
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



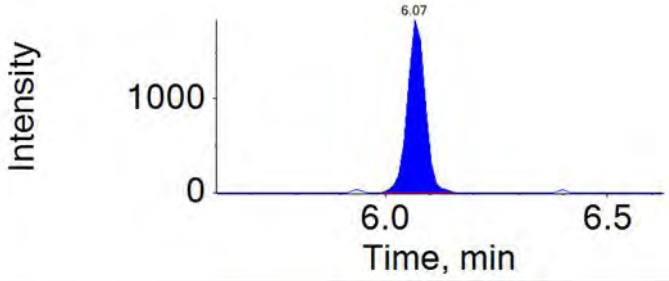


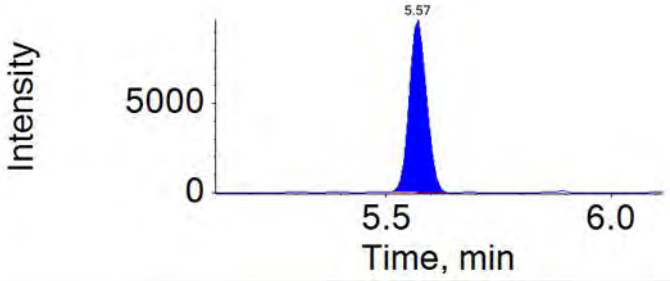
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



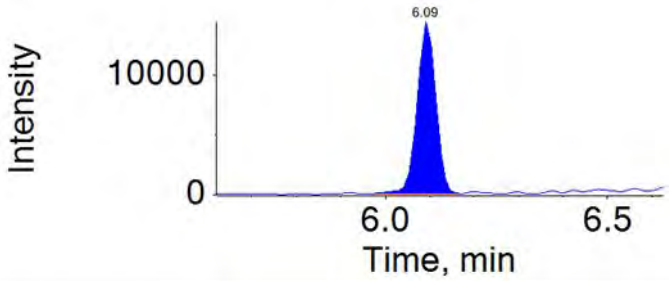


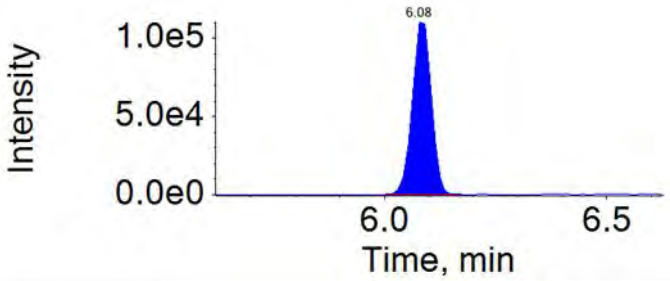
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



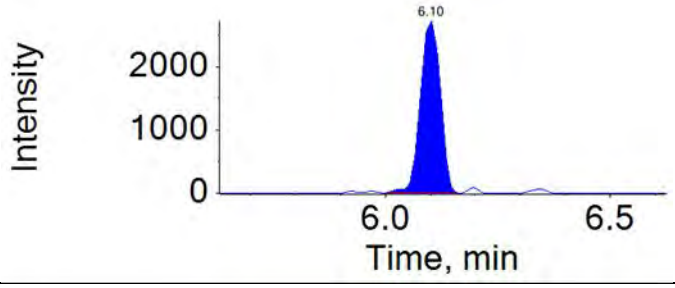


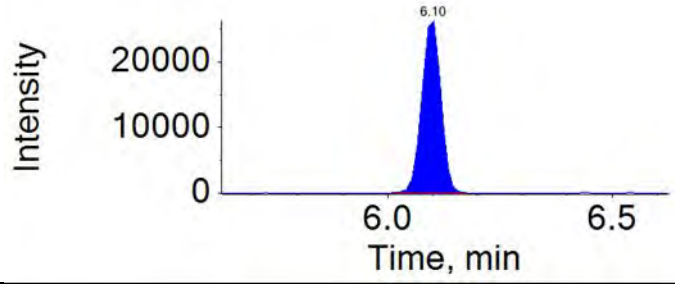
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

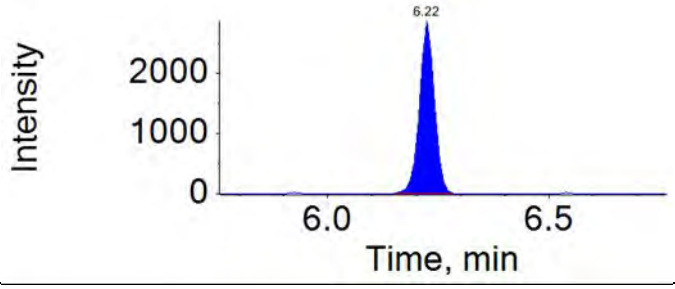
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

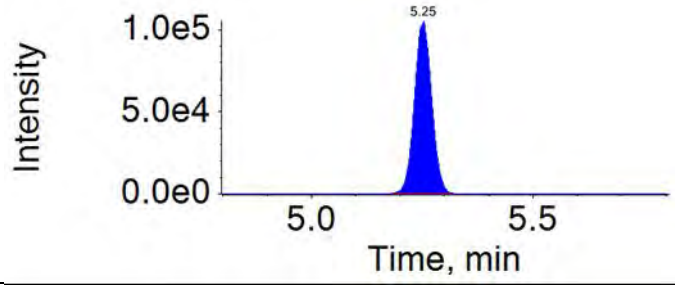
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



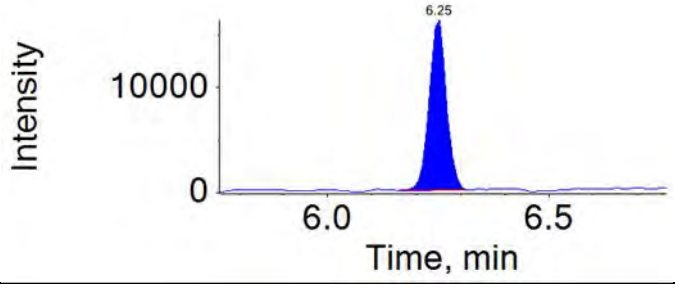


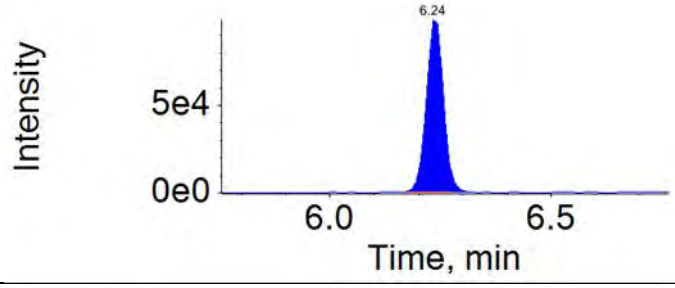
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



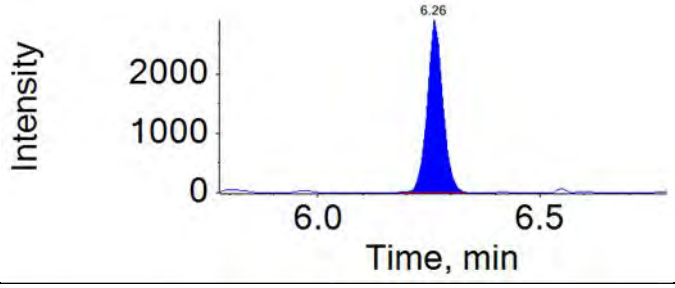


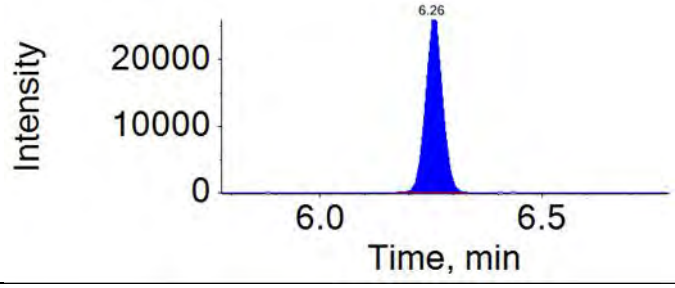
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



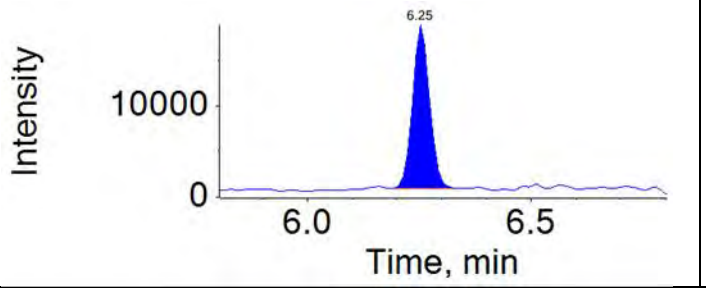


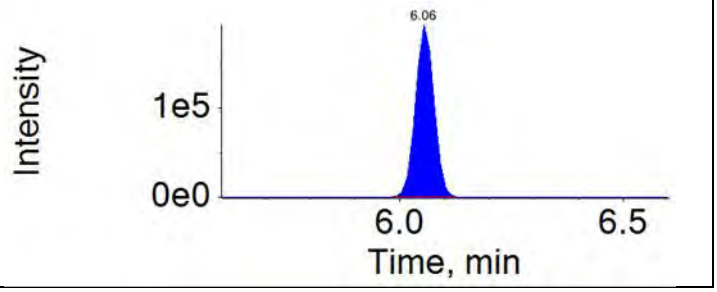
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

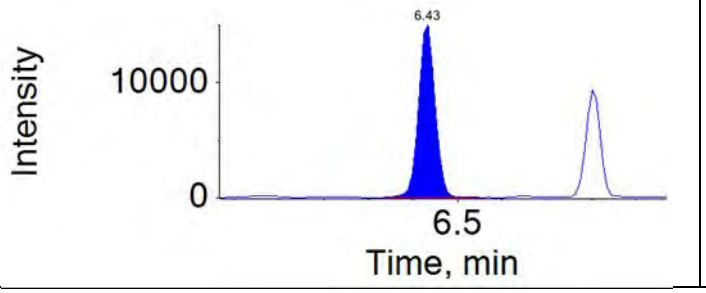
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

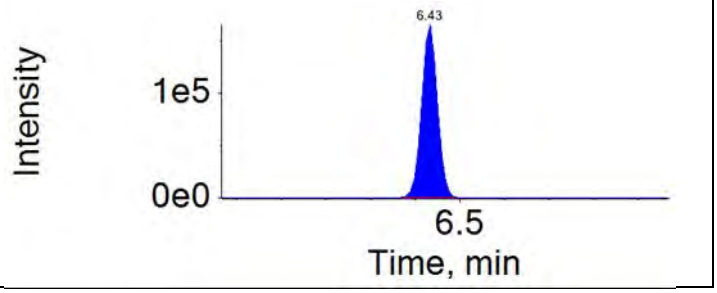
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



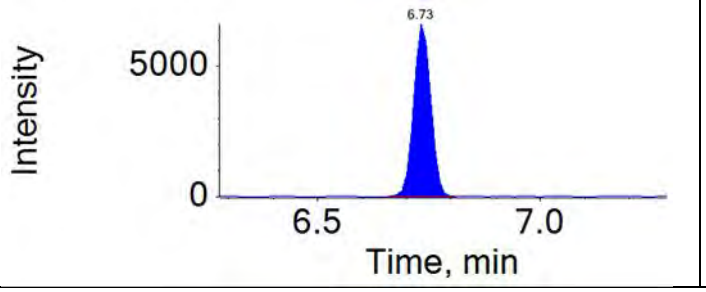


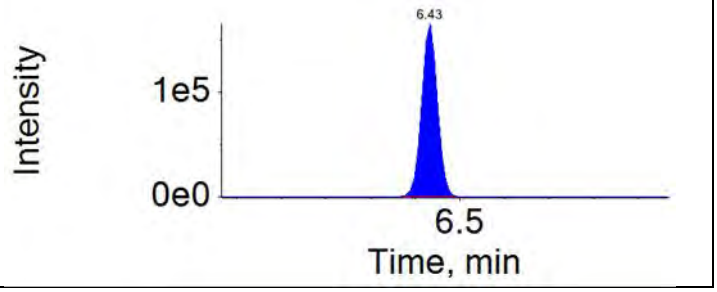
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



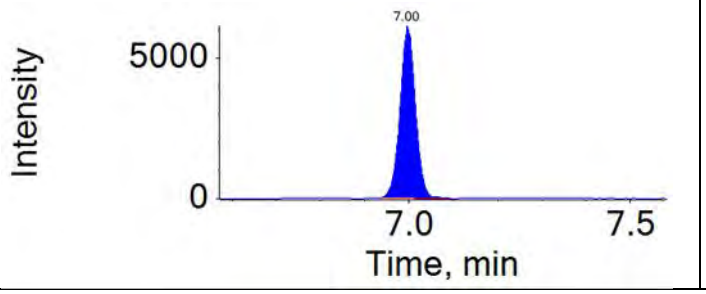


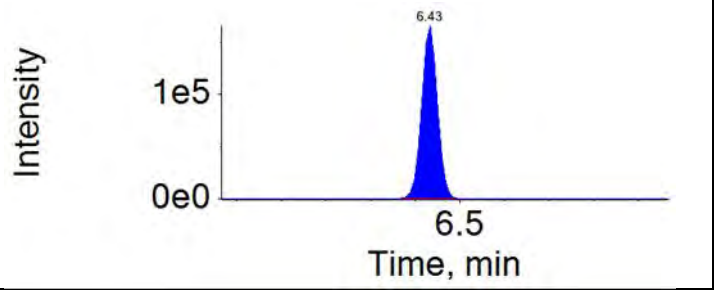
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





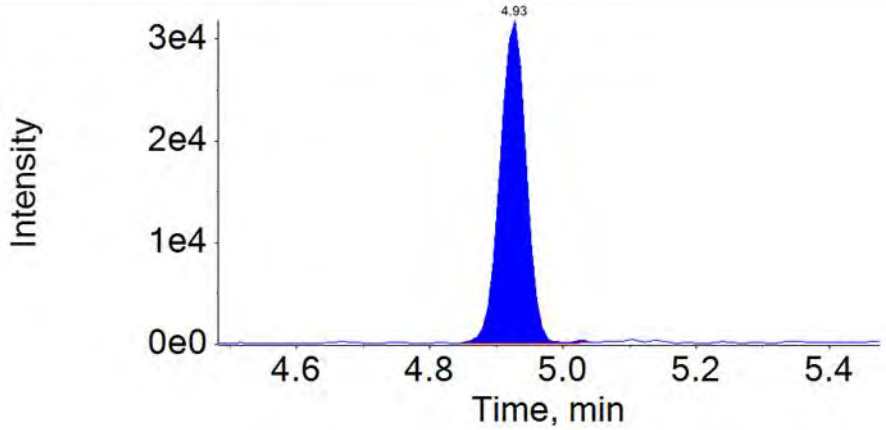
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Results Table Name: 18NOV08DCCV1-3
Results Table Date: 11/8/2018 5:00:30 PM

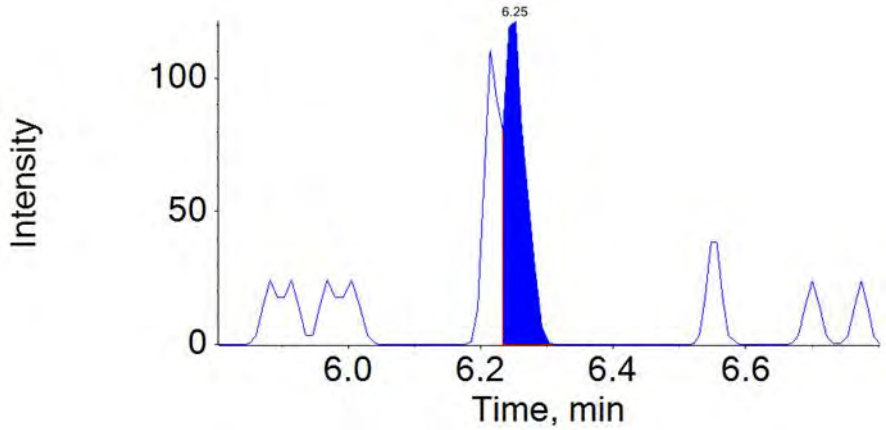
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOA
RT (min.):
4.93
Peak Area:
86492.1
Mass Range:
413.0 / 369.0
File Name:
18NOV08D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.25
Peak Area:
260.9
Mass Range:
663.0 / 169.0
File Name:
18NOV08D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Results Table Name:	18NOV08DCCV1-3	**Acquisition Method:**	18AUG13_3uL.dam
Results Table Date:	11/8/2018 5:00:30 PM	**QMethod File:**	MQ4-18AUG13

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

Ion Ratio Report

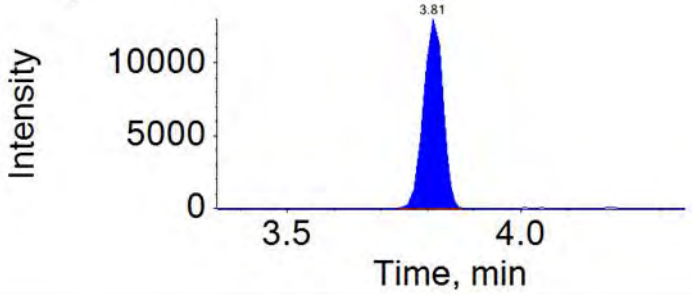
Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV08D-05.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	37650.0	A	N/A	1.0000			
PFBS_2	3.81	1.00	13251.9	A	N/A	0.3520	-2	50	
4:2-FTS	4.13	1.00	9377.7	A	N/A	1.0000			
4:2-FTS_2	4.13	1.00	5342.6	A	N/A	0.5697	-10	50	
PFHxA	4.16	1.00	85965.4	A	N/A	1.0000			
PFHxA_2	4.17	1.00	972.8	A	N/A	0.0113	-1	50	
PFPeS	4.18	1.10	21837.5	A	N/A	1.0000			
PFPeS_2	4.18	1.10	10586.9	A	N/A	0.4848	-10	50	
PFHxS	4.55	1.00	30165.5	A	N/A	1.0000			
PFHxS_2	4.56	1.00	10382.1	A	N/A	0.3442	-4	50	
PFHpA	4.55	1.00	87232.0	A	N/A	1.0000			
PFHpA_2	4.56	1.00	4952.8	A	N/A	0.0568	-2	50	
6:2-FTS	4.91	1.00	7814.5	A	N/A	1.0000			
6:2-FTS_2	4.91	1.00	4814.5	A	N/A	0.6161	-9	50	
PFHpS	4.92	1.08	30009.2	A	N/A	1.0000			
PFHpS_2	4.92	1.08	13233.1	A	N/A	0.4410	12	50	
PFOA	4.93	1.00	86207.9	M	N/A	1.0000			
PFOA_2	4.92	1.00	4733.1	A	N/A	0.0549	-14	50	
PFOS	5.25	1.00	28047.3	A	N/A	1.0000			
PFOS_2	5.25	1.00	9799.5	A	N/A	0.3494	0	50	
PFNA	5.27	1.00	73414.7	A	N/A	1.0000			
PFNA_2	5.26	1.00	1253.8	A	N/A	0.0171	-17	50	
PFNS	5.55	1.06	17602.7	A	N/A	1.0000			
PFNS_2	5.55	1.06	8114.4	A	N/A	0.4610	-6	50	
PFDA	5.57	1.00	60165.4	A	N/A	1.0000			
PFDA_2	5.56	1.00	427.9	A	N/A	0.0071	26	50	
8:2-FTS	5.57	1.00	5527.1	A	N/A	1.0000			
8:2-FTS_2	5.57	1.00	4227.8	A	N/A	0.7649	24	50	
NMeFOSAA	5.71	1.00	8576.2	A	N/A	1.0000			
NMeFOSAA_2	5.70	1.00	1355.2	A	N/A	0.1580	-28	50	
PFDS	5.80	1.10	13175.4	A	N/A	1.0000			
PFDS_2	5.80	1.11	8331.4	A	N/A	0.6323	36	50	
PFUnDA	5.83	1.00	48289.0	A	N/A	1.0000			
PFUnDA_2	5.83	1.00	182.7	A	N/A	0.0038	20	50	
NEtFOSAA	5.84	1.00	7263.0	A	N/A	1.0000			
NEtFOSAA_2	5.84	1.00	4239.9	A	N/A	0.5838	-4	50	
PFDoDA	6.06	1.00	58287.0	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	1258.3	A	N/A	0.0216	97	50	OOS
10:2-FTS	6.07	1.09	5075.6	A	N/A	1.0000			
10:2-FTS_2	6.07	1.09	2705.8	A	N/A	0.5331	-25	50	
PFTrDA	6.25	1.03	46666.6	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	443.3	M	N/A	0.0095	-1	50	
PFTeDA	6.43	1.00	38675.5	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	32.8	A	N/A	0.0008	-85	50	OOS
PFHxDA	6.73	1.05	17615.3	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	985.7	A	N/A	0.0560	-6	50	
PFODA	7.00	1.09	14725.2	A	N/A	1.0000			
PFODA_2	7.00	1.09	380.8	A	N/A	0.0259	1	50	

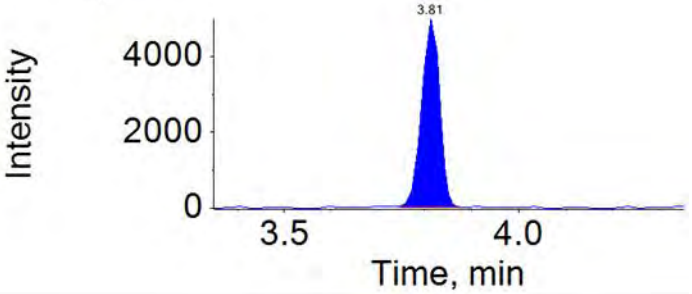
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

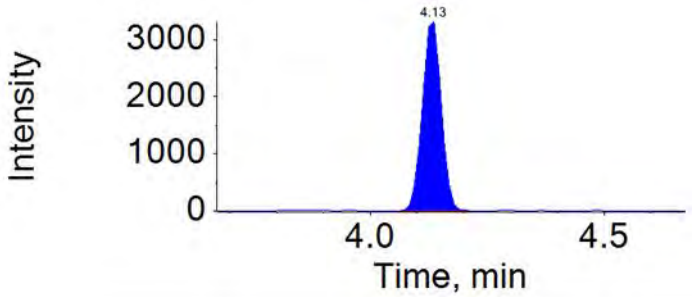
Component: PFBS
Primary Mass: 299.0 / 80.0



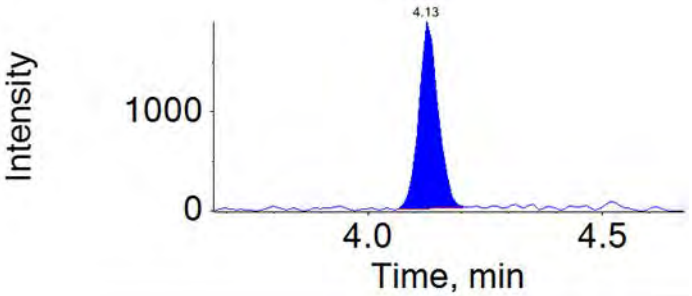
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



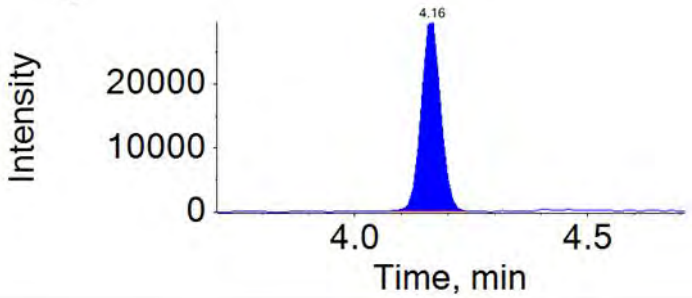
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



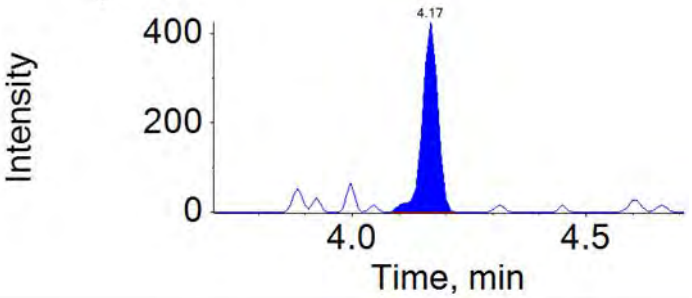
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



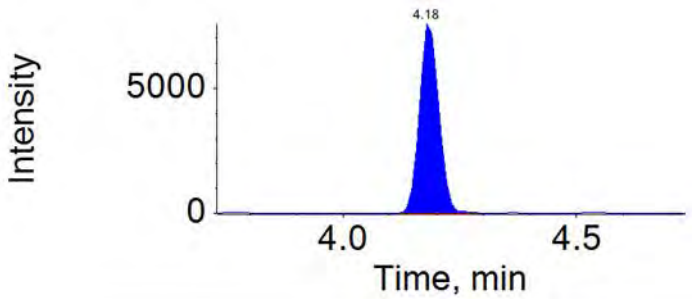
Component: PFHxA
Primary Mass: 313.0 / 269.0



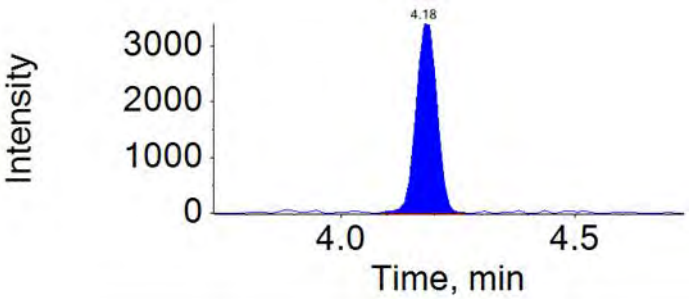
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



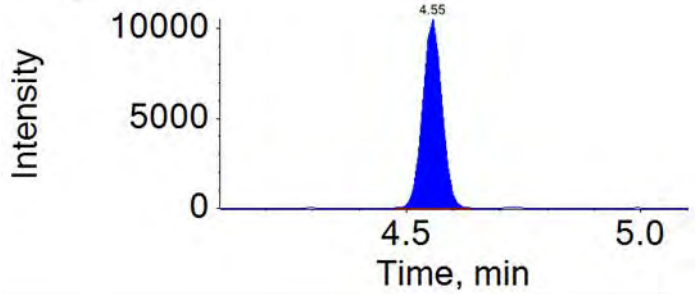
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



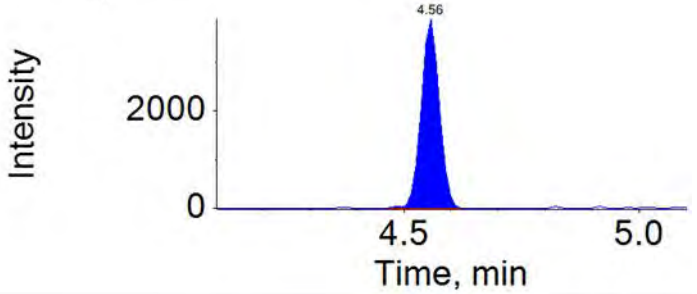
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

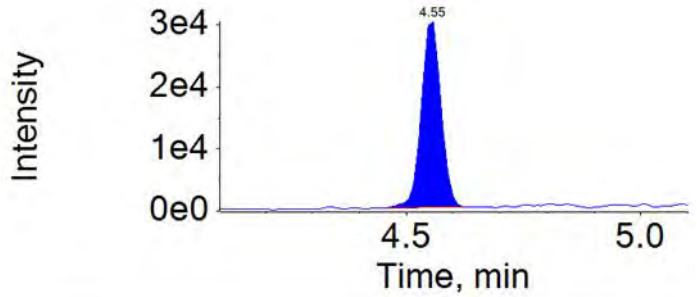
Component: PFHxS
Primary Mass: 399.0 / 80.0



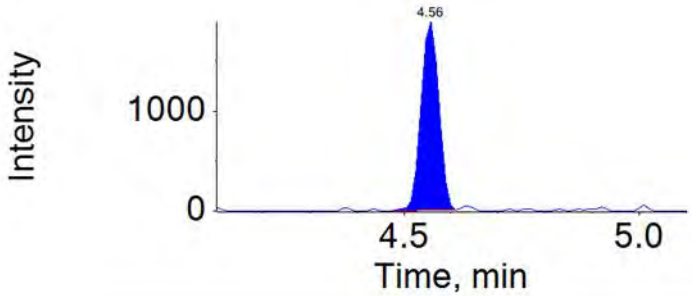
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



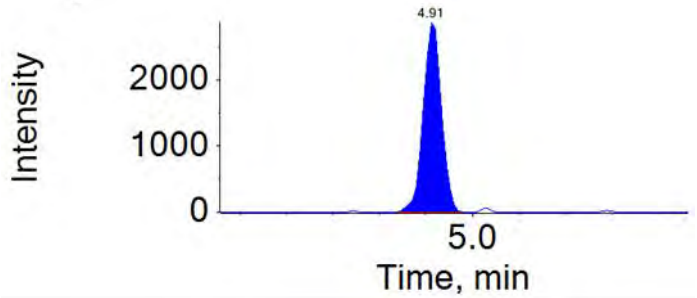
Component: PFHpA
Primary Mass: 363.0 / 319.0



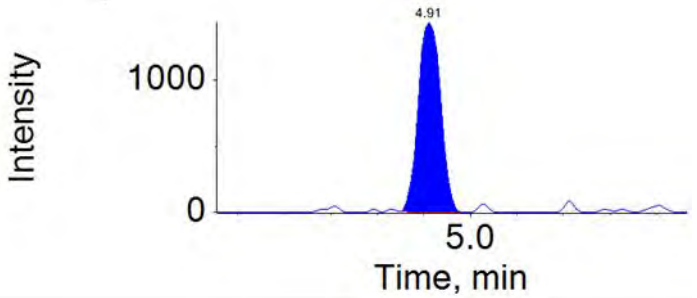
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



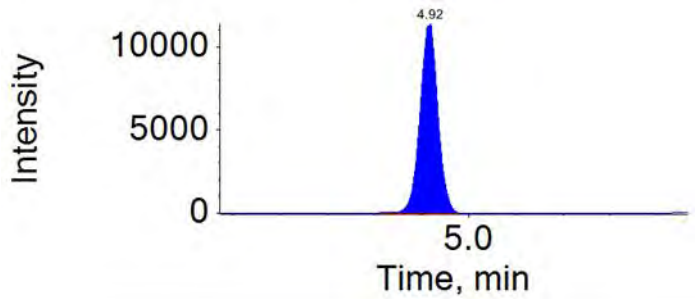
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



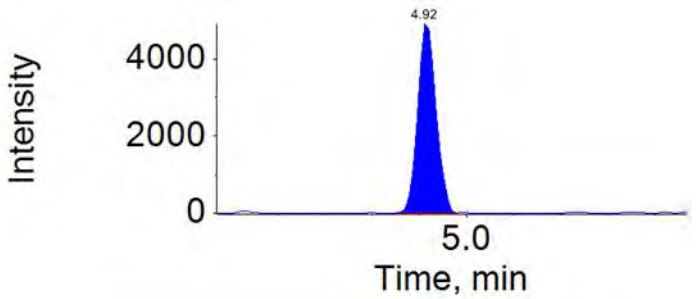
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



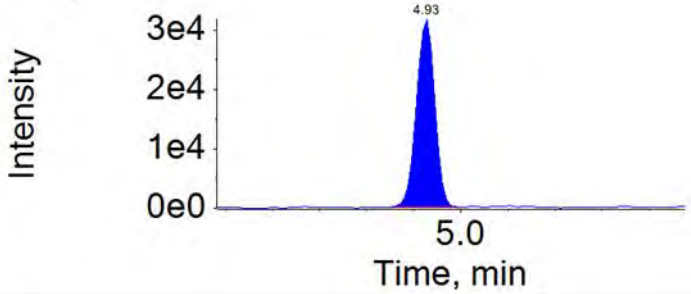
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



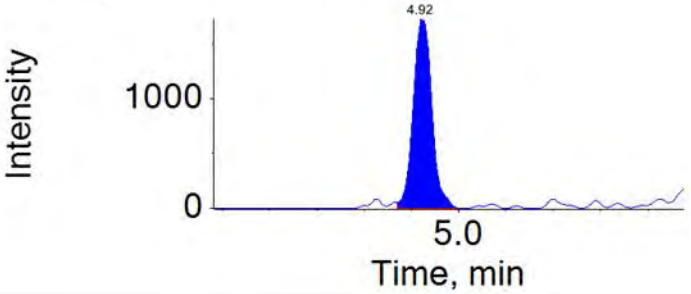
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

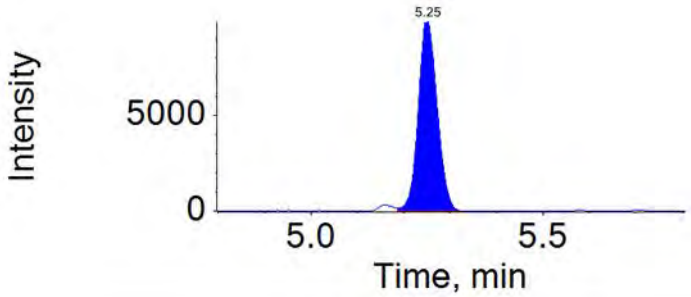
Component: PFOA
Primary Mass: 413.0 / 369.0



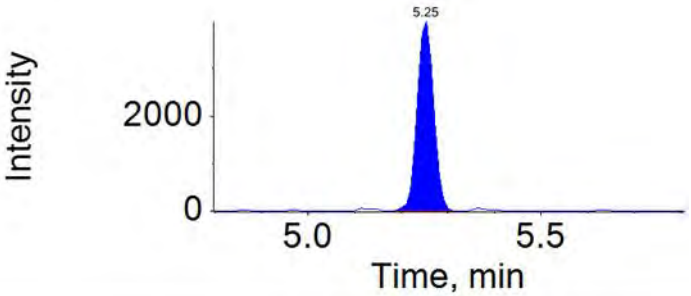
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



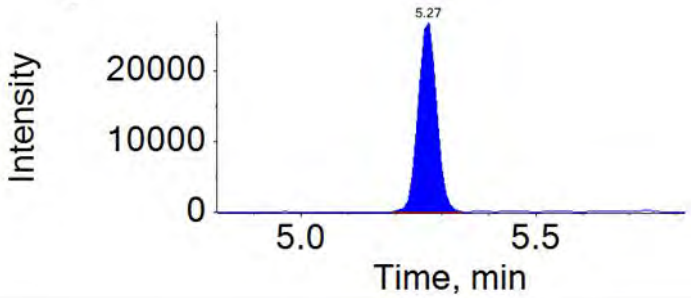
Component: PFOS
Primary Mass: 499.0 / 80.0



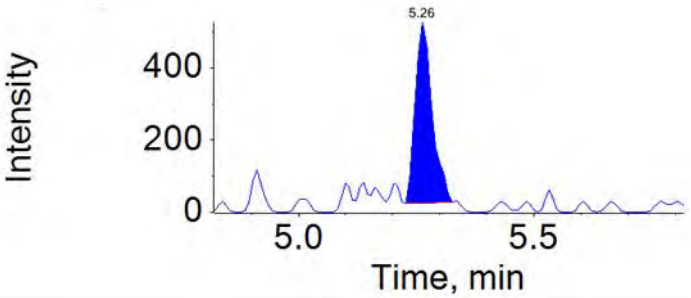
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



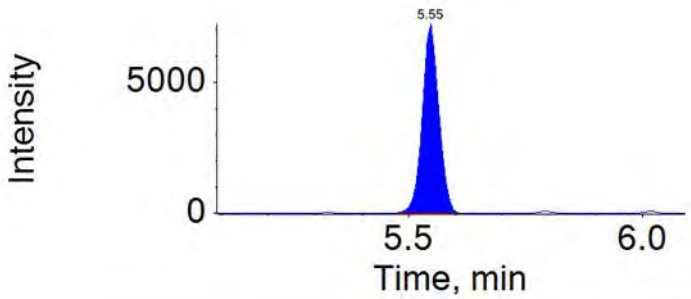
Component: PFNA
Primary Mass: 463.0 / 419.0



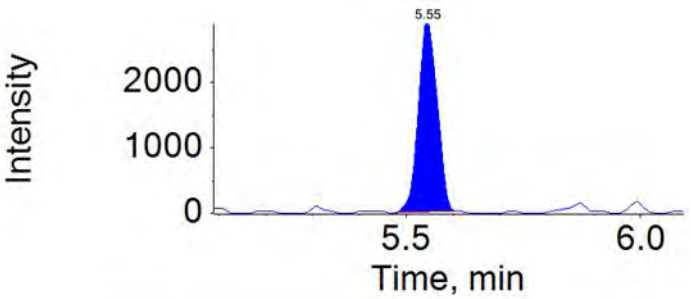
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



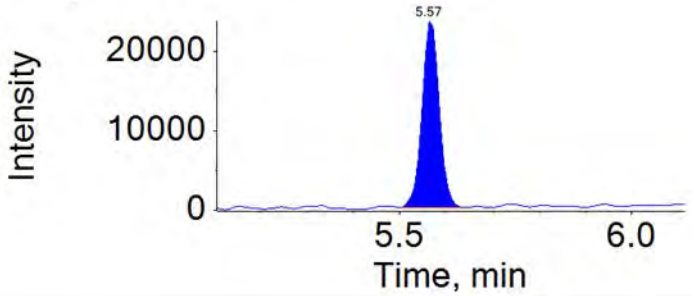
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



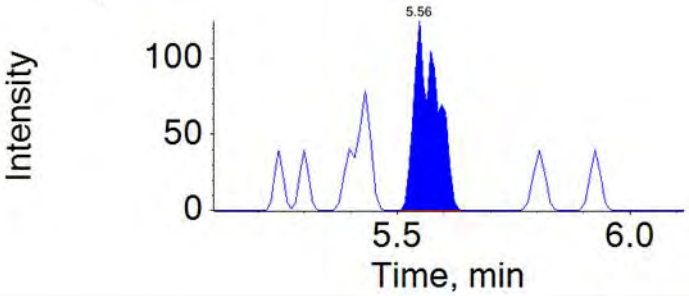
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

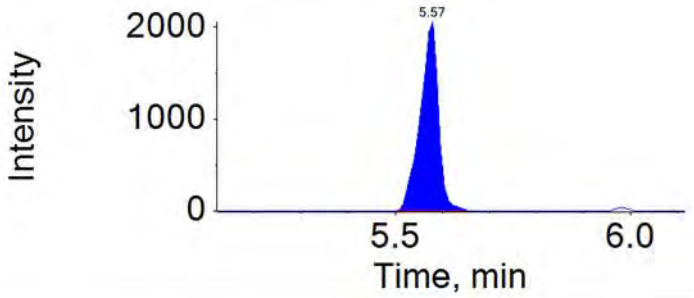
Component: PFDA
Primary Mass: 513.0 / 469.0



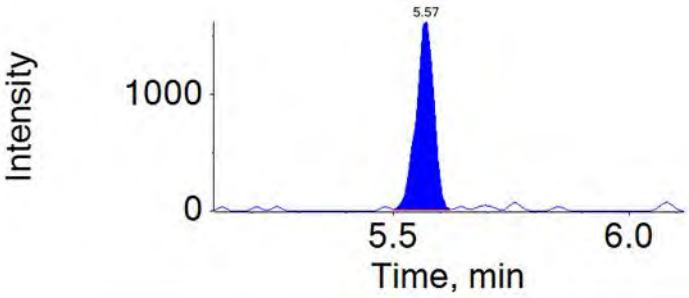
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



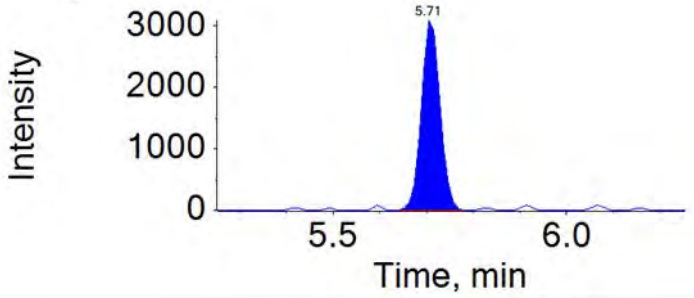
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



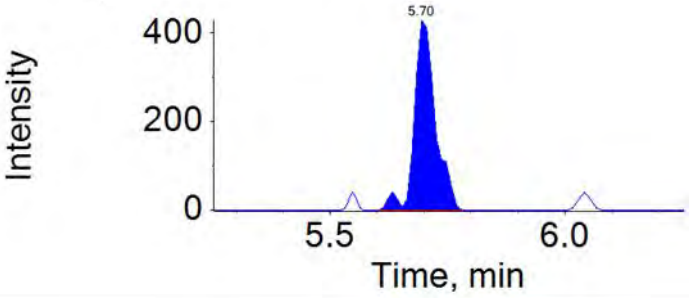
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



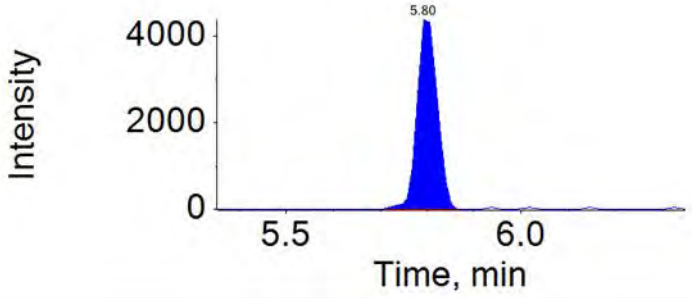
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



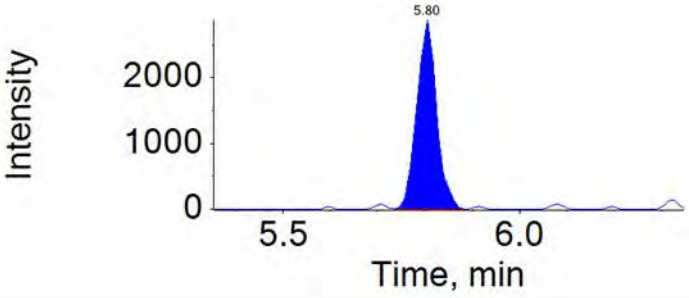
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



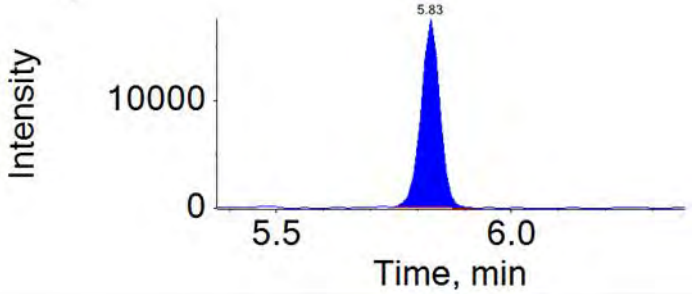
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



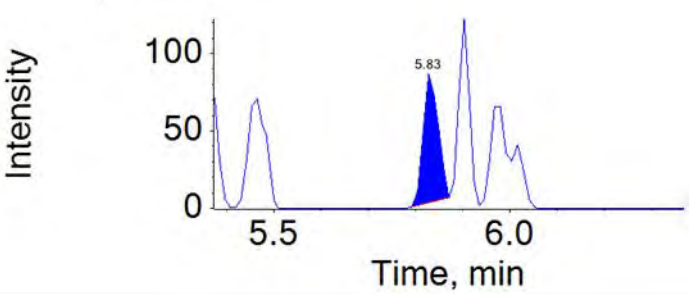
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

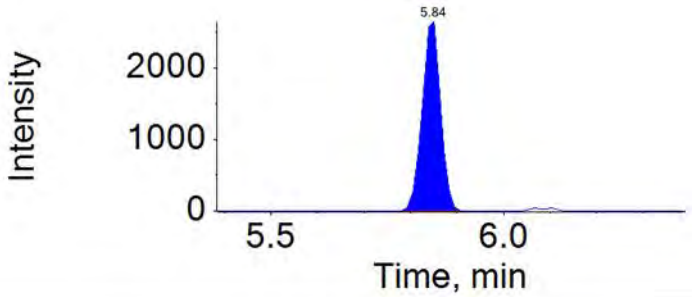
Component: PFUnDA
Primary Mass: 563.0 / 519.0



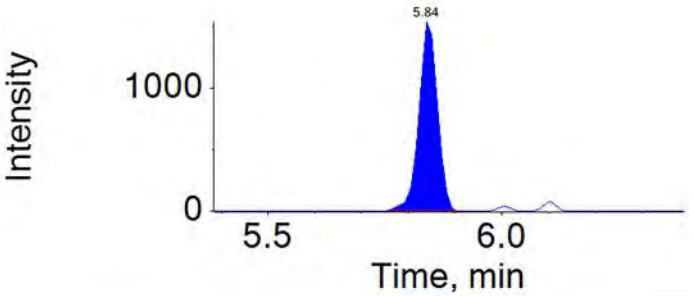
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



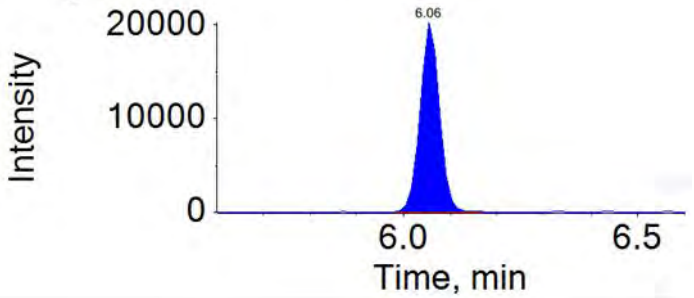
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



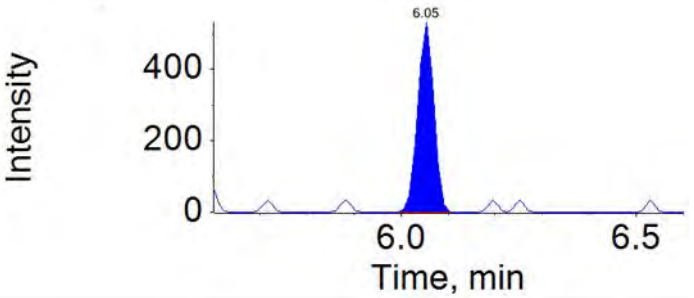
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



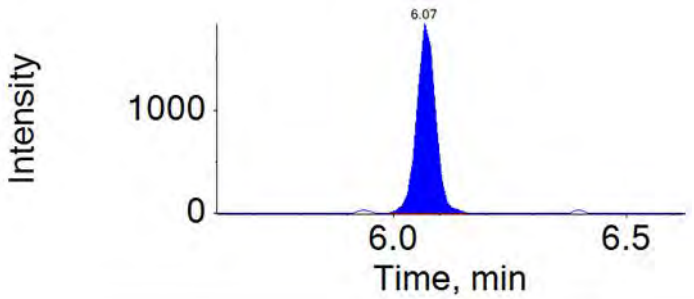
Component: PFDoDA
Primary Mass: 613.0 / 569.0



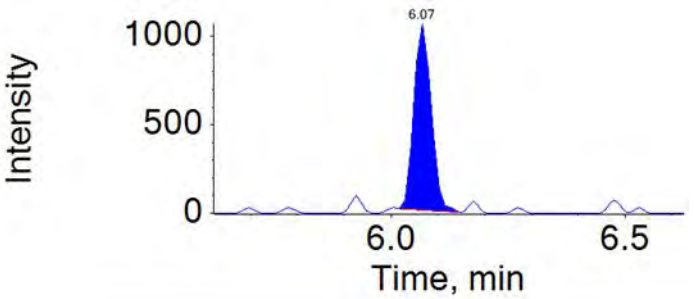
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



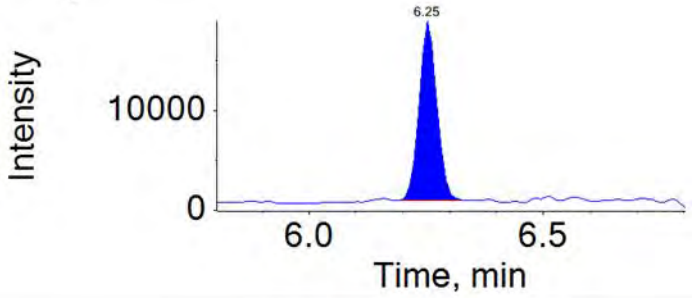
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



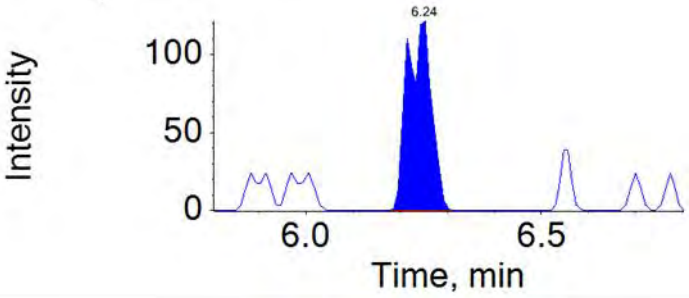
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



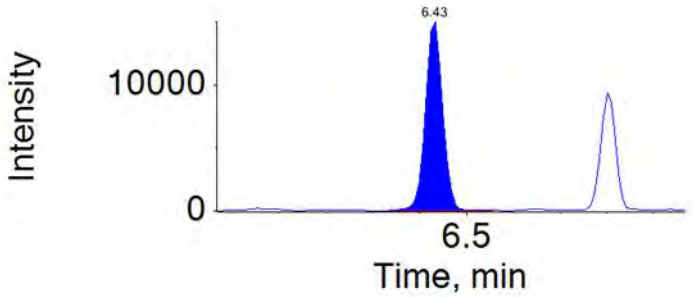
Component: PFTrDA
Primary Mass: 663.0 / 619.0



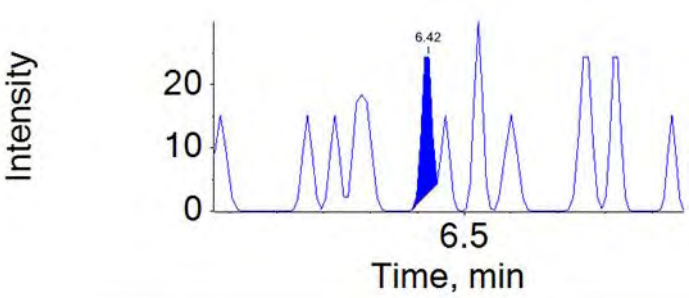
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



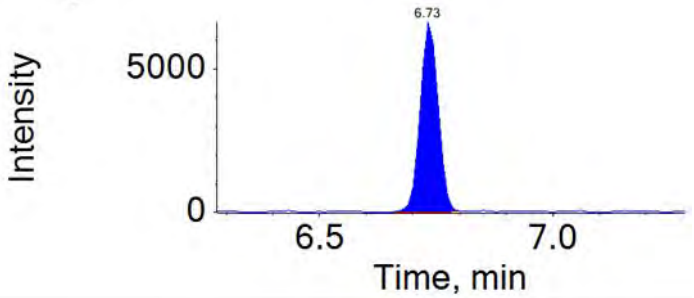
Component: PFTeDA
Primary Mass: 713.0 / 669.0



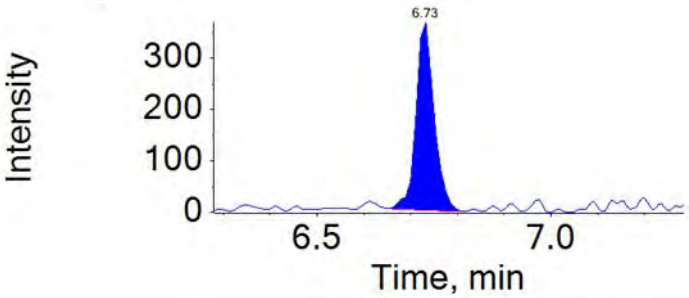
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



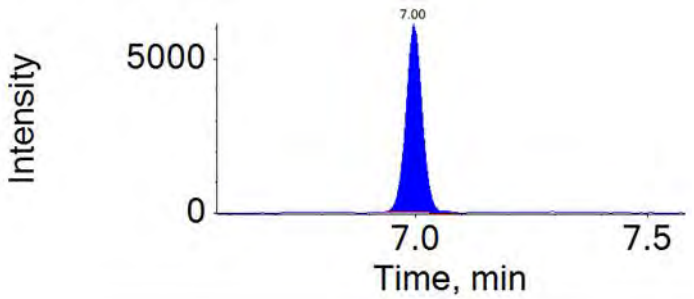
Component: PFHxDA
Primary Mass: 813.0 / 769.0



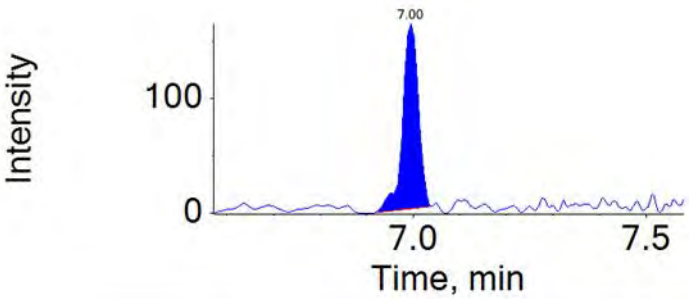
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By HMK at 2:58 pm, 11/11/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	INBLK			**Data File:**		18NOV08D-06.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-08T12:33:40
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV08DCCV1-3
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	762381.1	728839.7	5	50	
13C2-PFOA	5.0	518497.3	491983.1	5	50	
13C4-PFOS	4.8	299698.4	255568.1	17	50	
13C2-PFDA	5.0	319995.1	315407.5	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	833101.6	13C3-PFBA	762381.1	1.093	5.000	5.057	101	70-130	
E13C5-PFPeA	855177.9	13C3-PFBA	762381.1	1.122	5.000	4.887	98	70-130	
E13C3-PFBS	470351.2	13C3-PFBA	762381.1	0.617	4.650	4.528	97	70-130	
E13C2-4:2-FTS	60069.6	13C2-PFOA	518497.3	0.116	4.670	5.228	112	70-130	
E13C5-PFHxA	733289.5	13C2-PFOA	518497.3	1.414	5.000	5.202	104	70-130	
E13C3-PFHxS	361564.7	13C2-PFOA	518497.3	0.697	4.730	5.006	106	70-130	
E13C4-PFHpA	576861.3	13C2-PFOA	518497.3	1.113	5.000	5.061	101	70-130	
E13C2-6:2-FTS	42684.4	13C2-PFOA	518497.3	0.082	4.750	5.490	116	70-130	
E13C8-PFOA	1008040.9	13C2-PFOA	518497.3	1.944	5.000	5.422	108	70-130	
E13C8-PFOS	315952.3	13C4-PFOS	299698.4	1.054	4.780	4.662	98	70-130	
E13C9-PFNA	515145.7	13C4-PFOS	299698.4	1.719	5.000	4.695	94	70-130	
E13C6-PFDA	695304.3	13C2-PFDA	319995.1	2.173	5.000	5.464	109	70-130	
E13C2-8:2-FTS	28113.9	13C2-PFDA	319995.1	0.088	4.790	4.649	97	70-130	
E13C8-PFOSA	721168.7	13C2-PFDA	319995.1	2.254	5.000	4.918	98	70-130	
Ed3-NMeFOSAA	88068.2	13C2-PFDA	319995.1	0.275	5.000	5.118	102	70-130	
E13C7-PFUnDA	312553.5	13C2-PFDA	319995.1	0.977	5.000	5.635	113	70-130	
Ed5-NEtFOSAA	70219.9	13C2-PFDA	319995.1	0.219	5.000	5.078	102	70-130	
E13C2-PFDoDA	613302.5	13C2-PFDA	319995.1	1.917	5.000	5.167	103	70-130	
Ed7-NMePFOSAE	356044.2	13C2-PFDA	319995.1	1.113	5.000	5.174	103	70-130	
Ed3-NMePFOSA	81885.6	13C2-PFDA	319995.1	0.256	5.000	4.685	94	70-130	
Ed9-NEtPFOSAE	290570.6	13C2-PFDA	319995.1	0.908	5.000	5.186	104	70-130	
Ed5-NEtPFOSA	68097.6	13C2-PFDA	319995.1	0.213	5.000	4.927	99	70-130	
E13C2-PFTeDA	436421.1	13C2-PFDA	319995.1	1.364	5.000	4.910	98	70-130	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

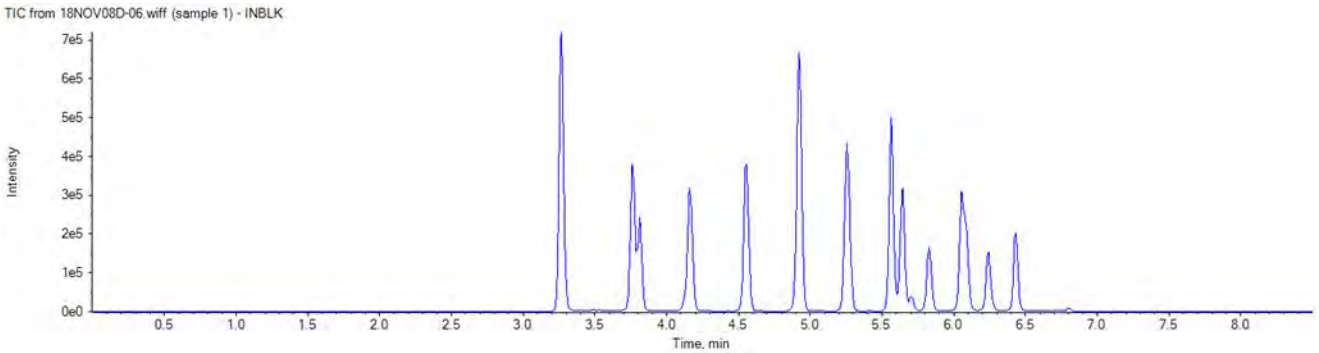
Analyte Quantitation Peak Table

Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV08D-06.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.26	833101.6	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	855177.9	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	470351.2	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	60069.6	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	733289.5	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	470351.2	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	361564.7	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	576861.3	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	42684.4	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	361564.7	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	1008040.9	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	315952.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	515145.7	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	315952.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	695304.3	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	28113.9	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.64	721168.7	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	88068.2	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	315952.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	312553.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	70219.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	613302.5	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	28113.9	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	356044.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	81885.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	315952.3	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	290570.6	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	68097.6	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	613302.5	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	436421.1	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	436421.1	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	436421.1	N/A	

Total Ion Chromatogram

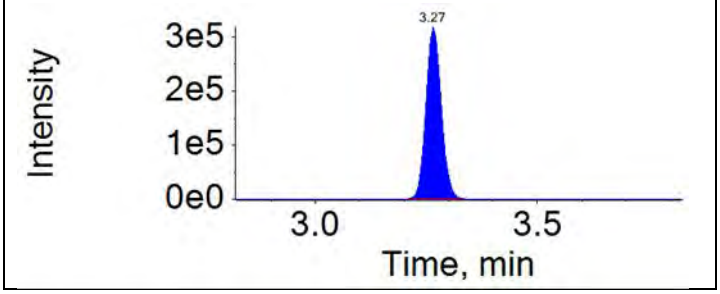


APPROVED
By JPT at 5:07 pm, 11/8/18

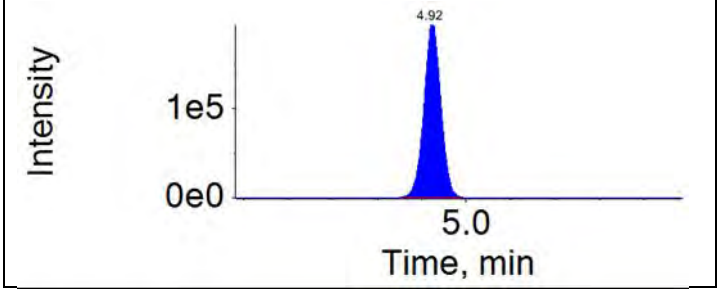
REVIEWED
By umar at 12:13 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

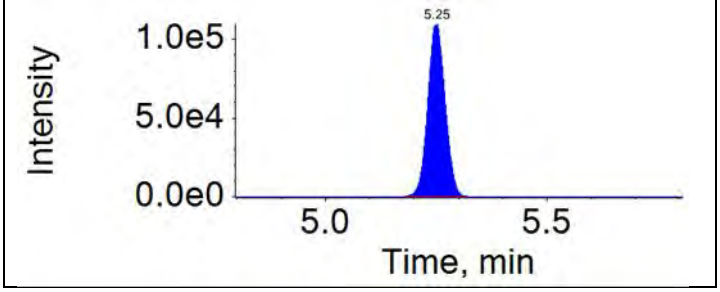
Injection Standard: 13C3-PFBA
216.0 / 172.0



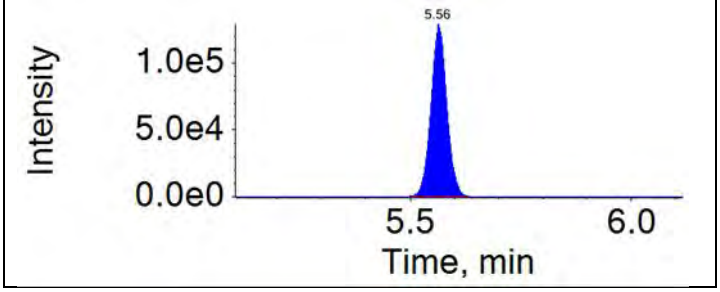
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

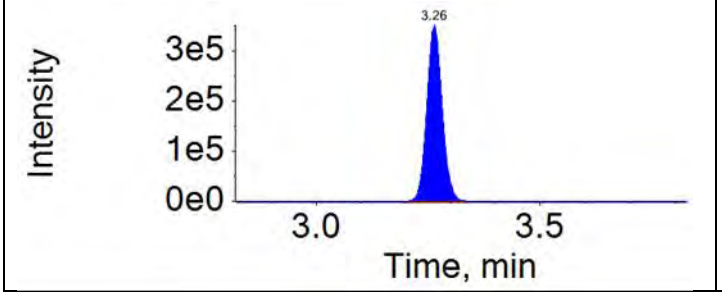


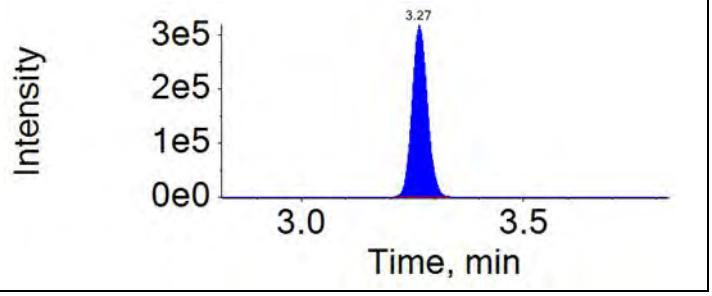
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

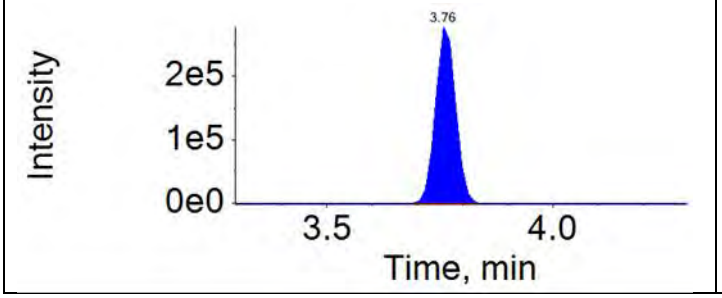
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

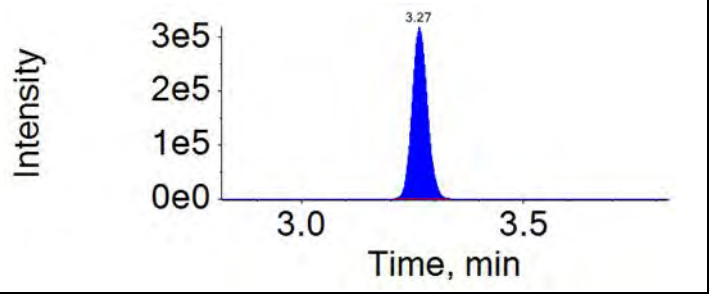
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



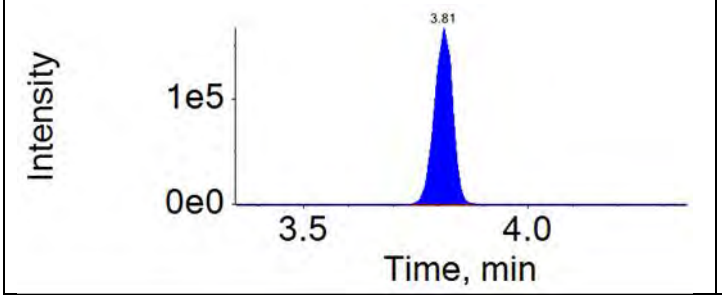


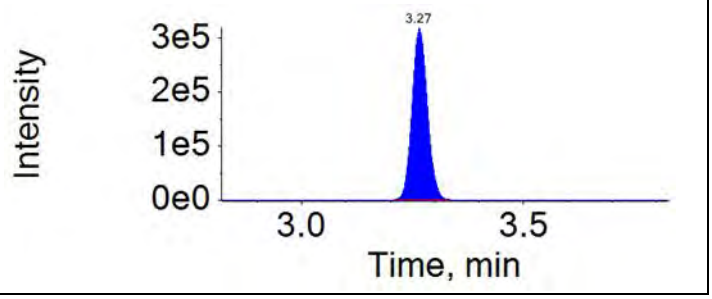
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



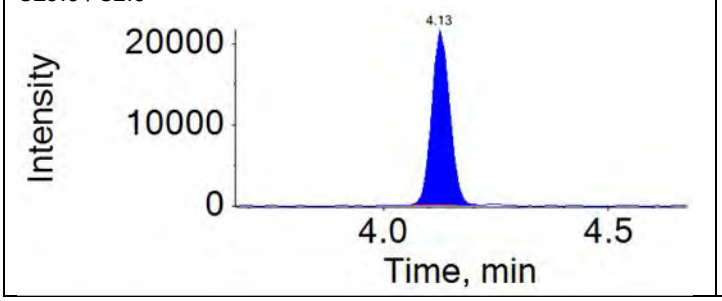


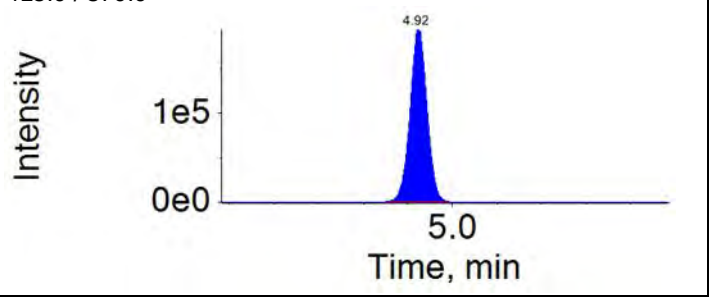
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





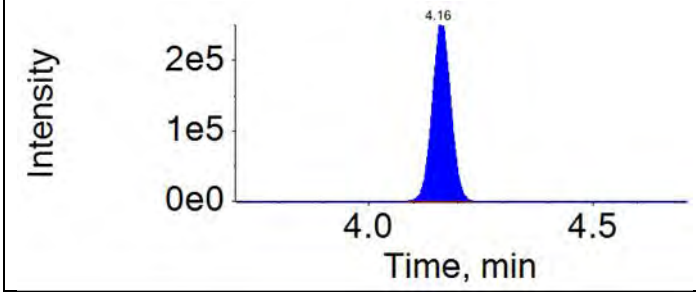
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

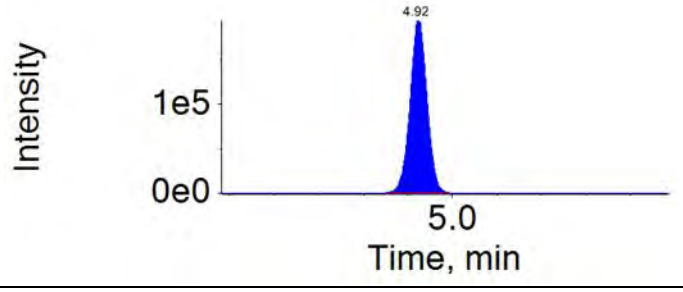




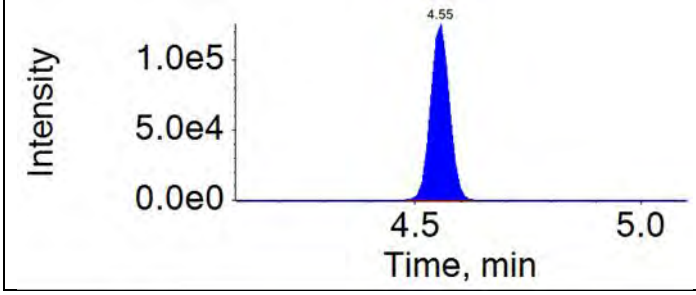
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

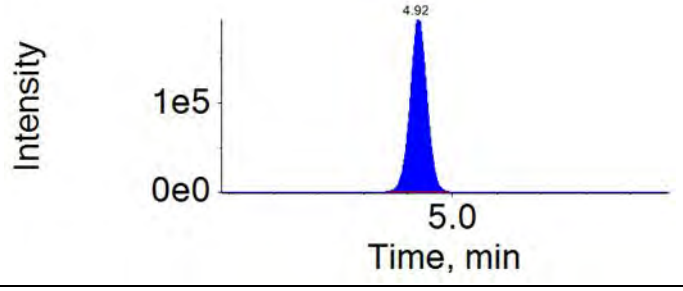
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



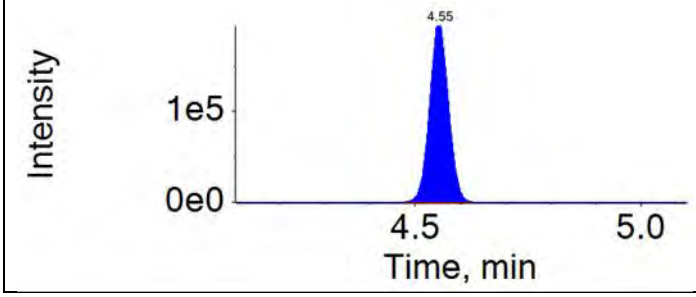


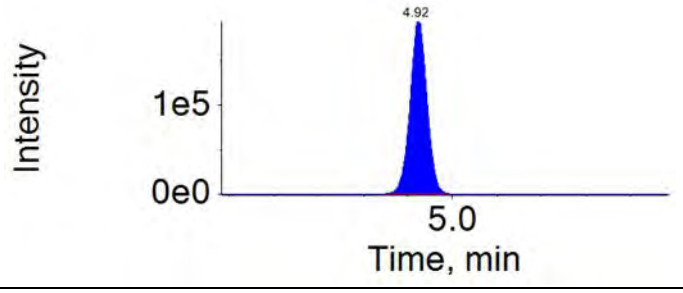
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



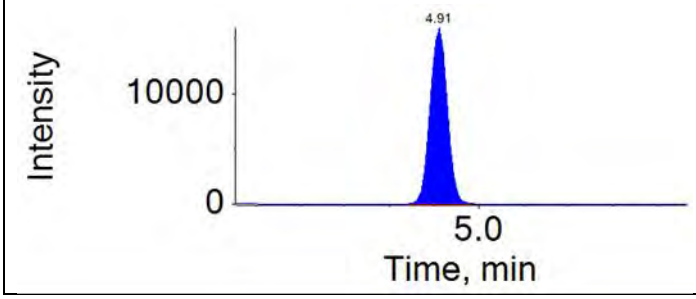


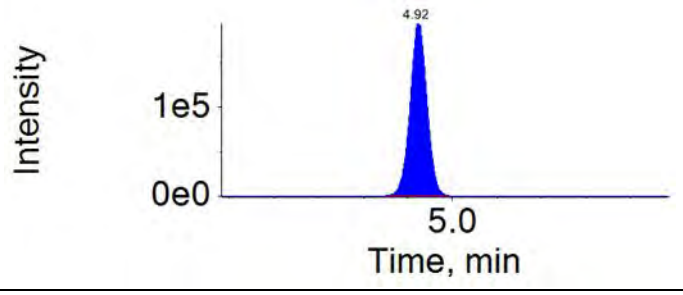
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

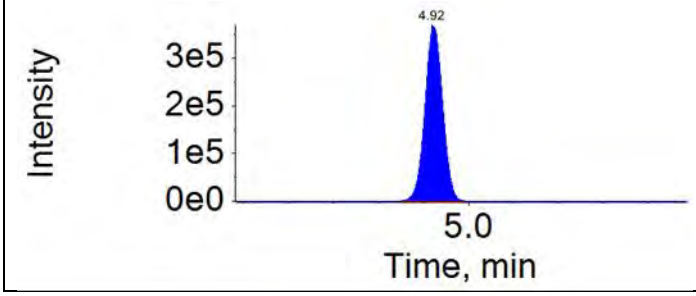
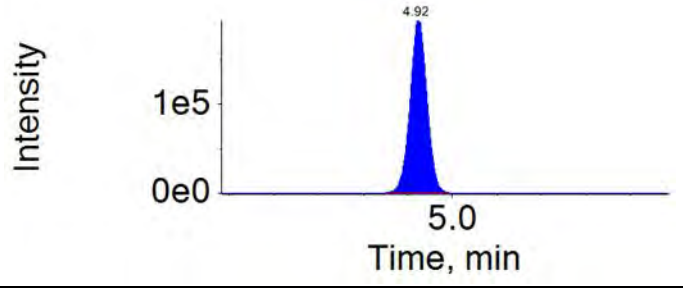


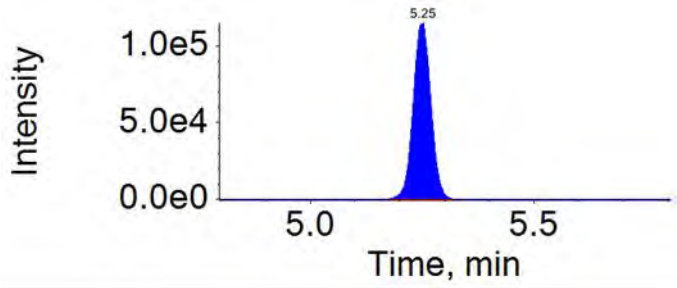
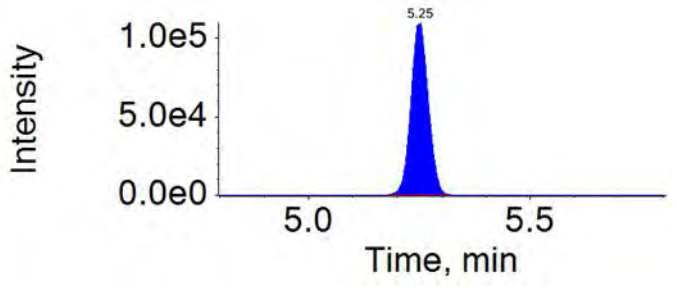


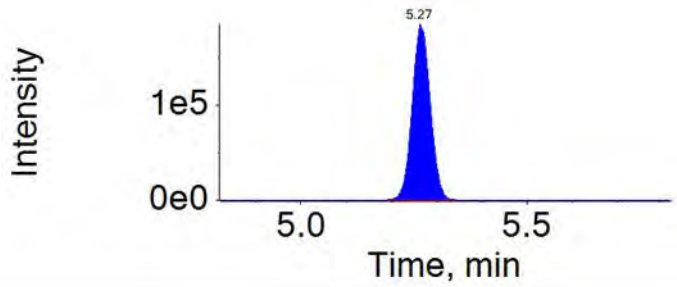
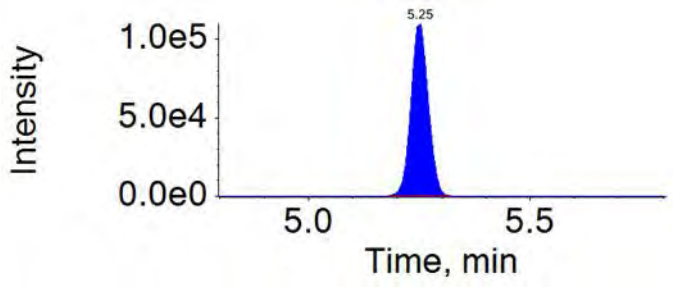
APPROVED
By JPT at 5:07 pm, 11/8/18

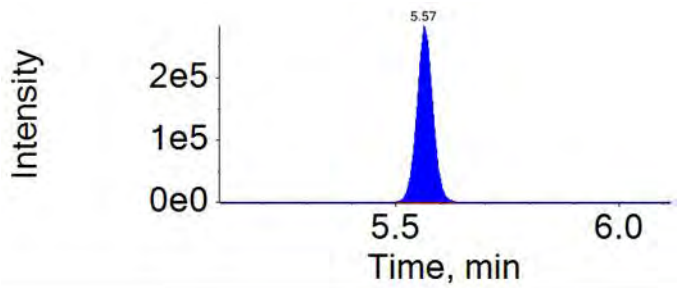
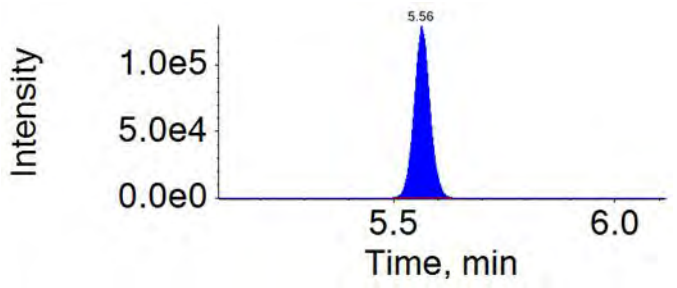
REVIEWED
By umar at 12:13 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

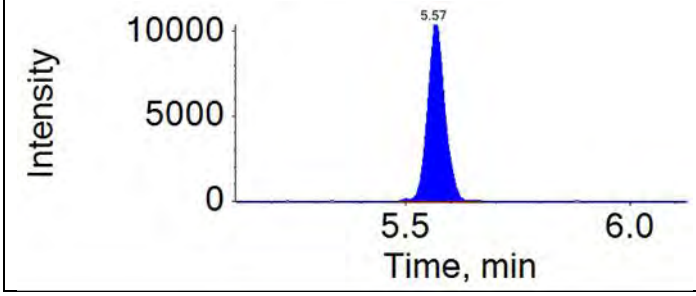
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

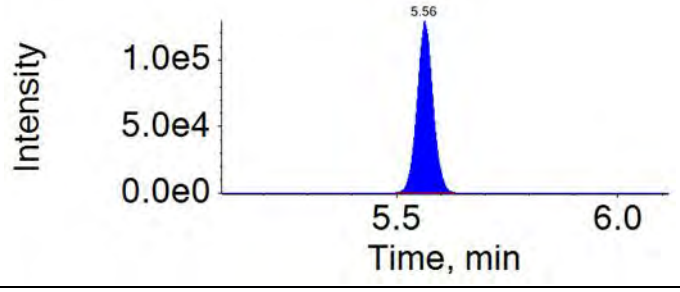
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

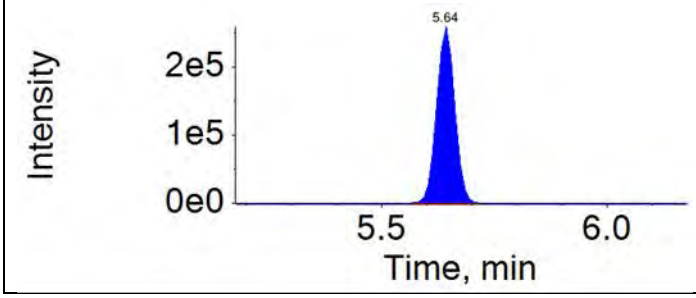
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

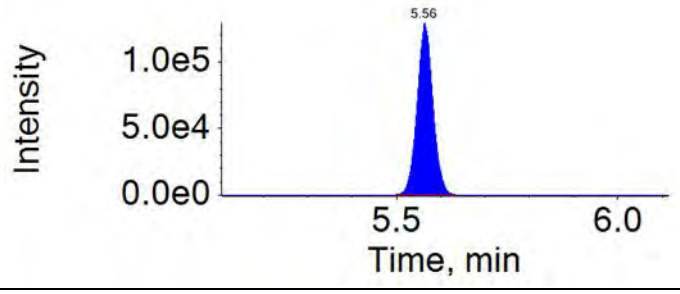
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



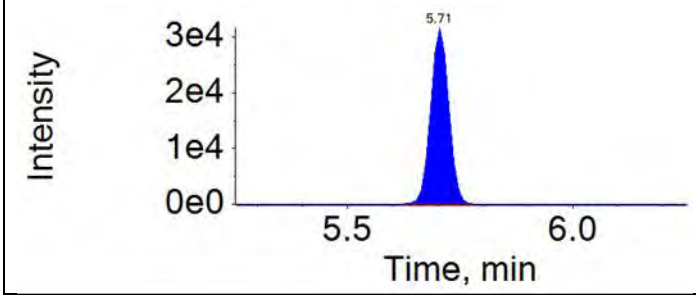


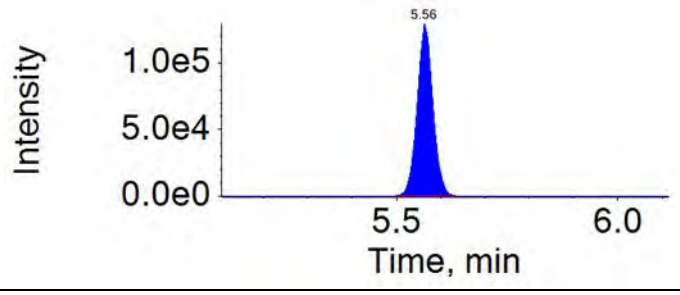
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



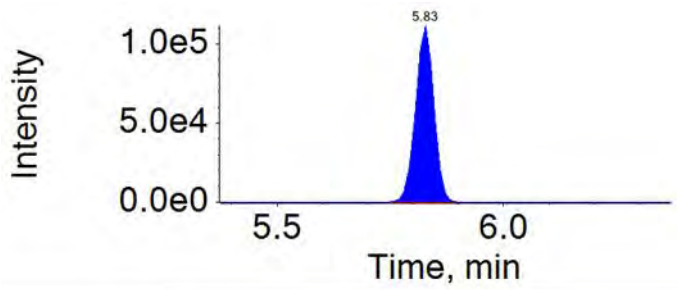


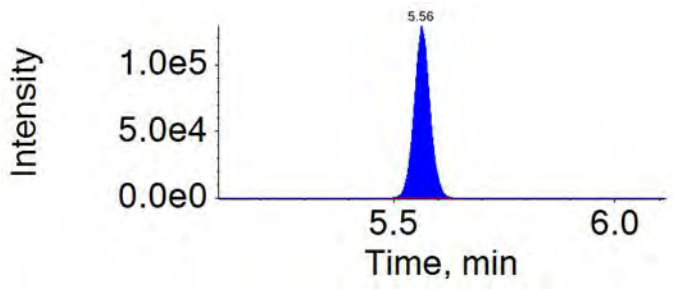
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



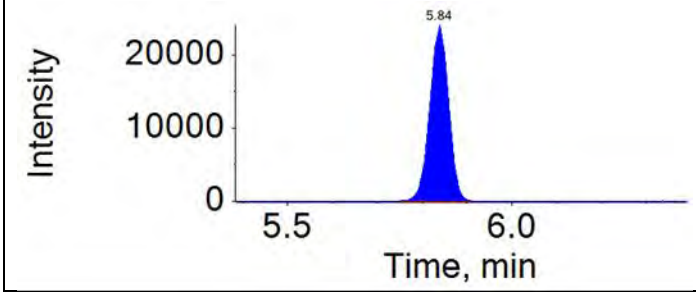


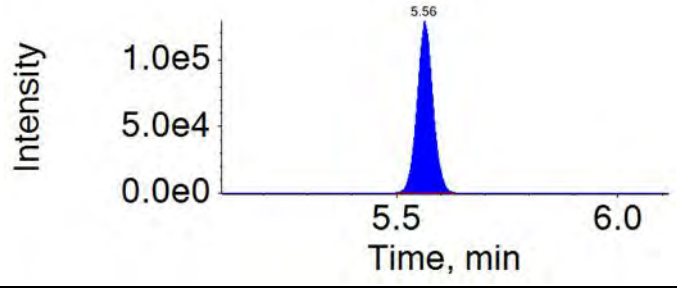
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

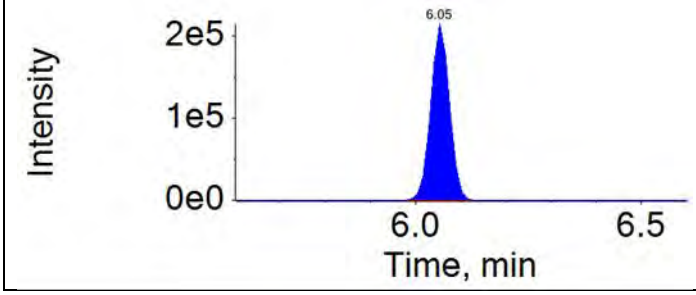
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

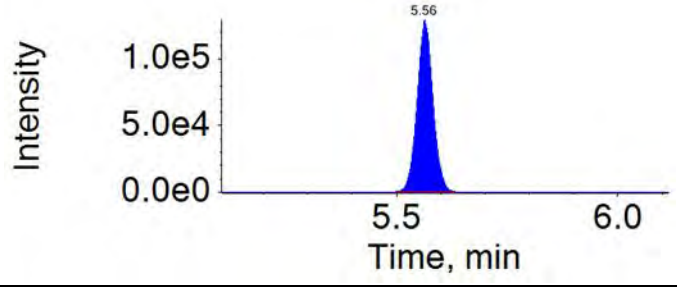
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



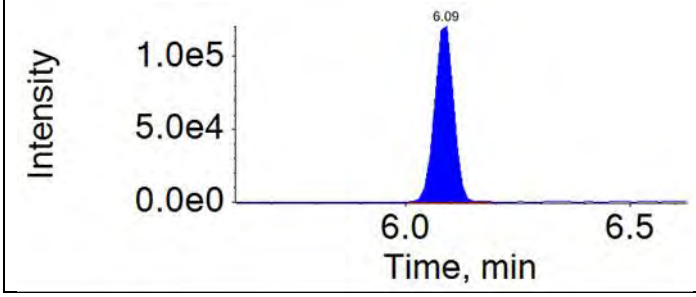


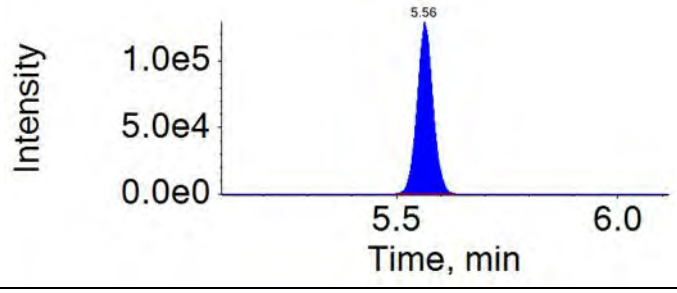
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



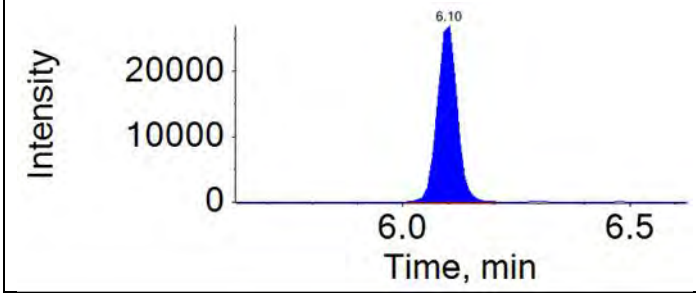


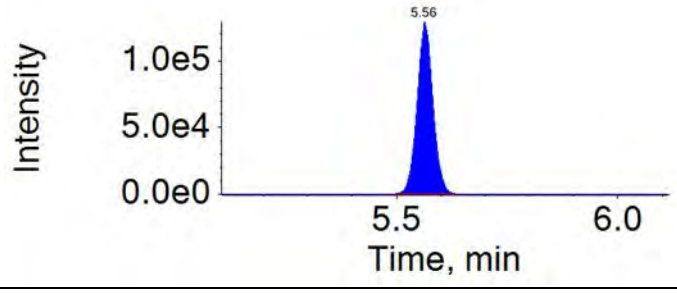
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



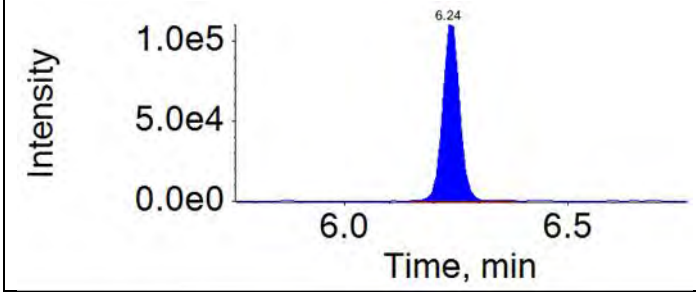


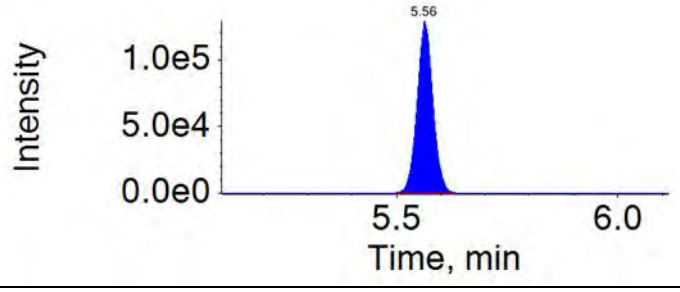
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

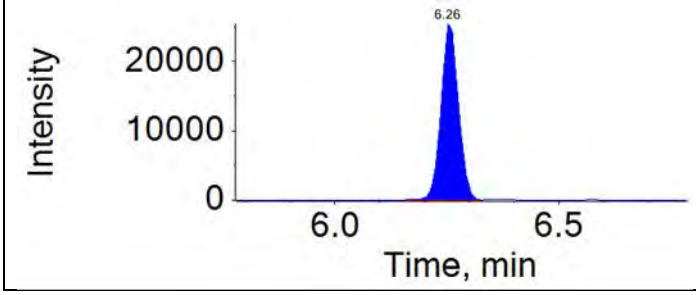
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

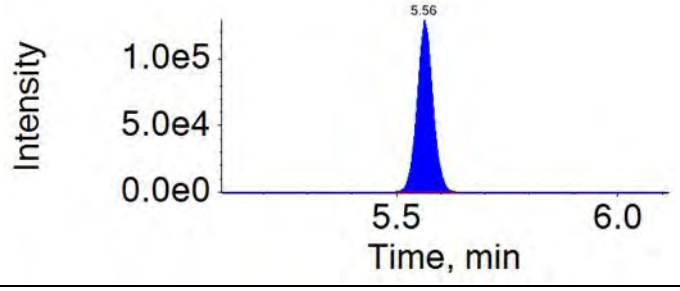
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



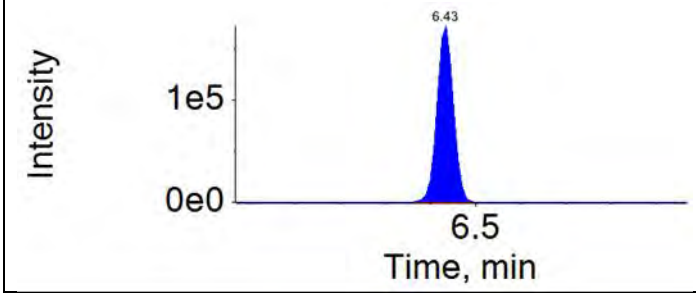


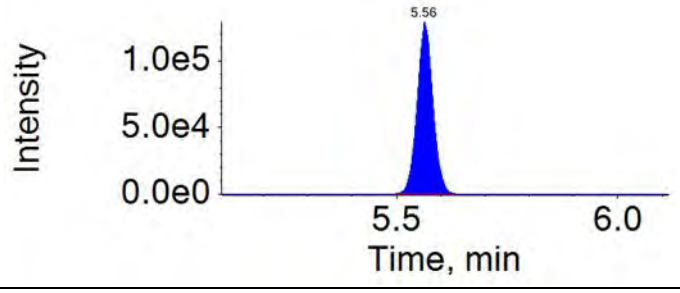
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





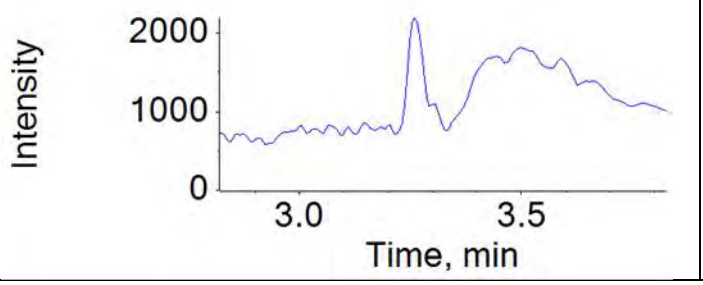
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

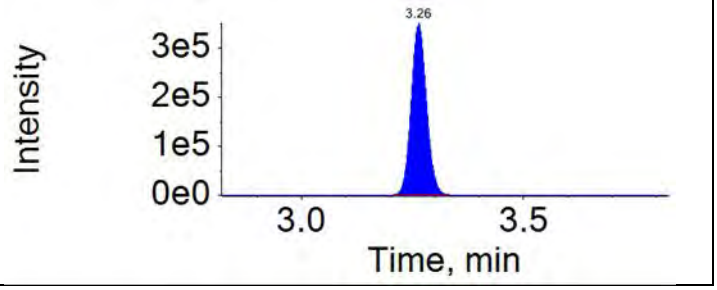




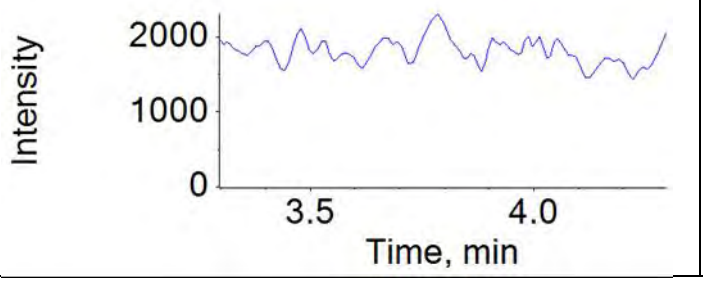
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

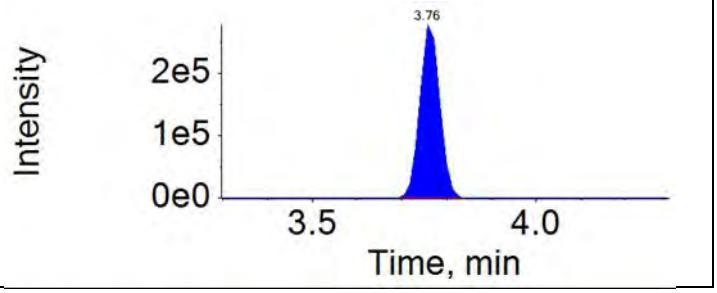
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



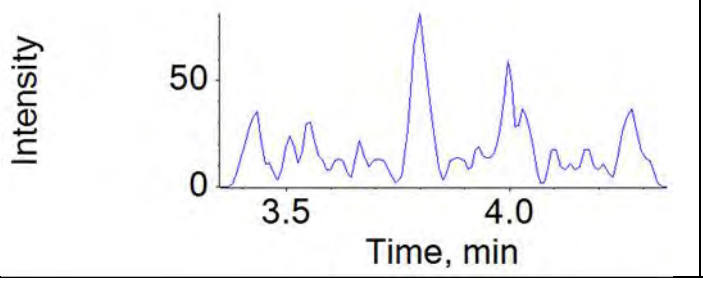


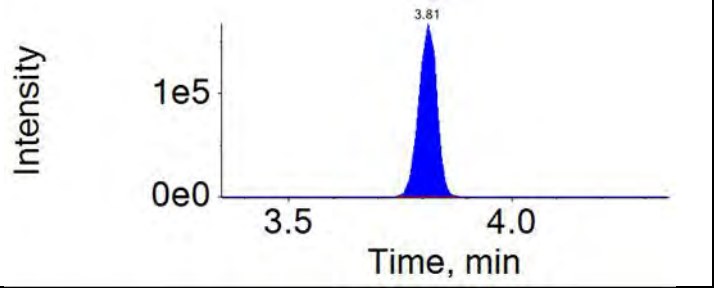
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



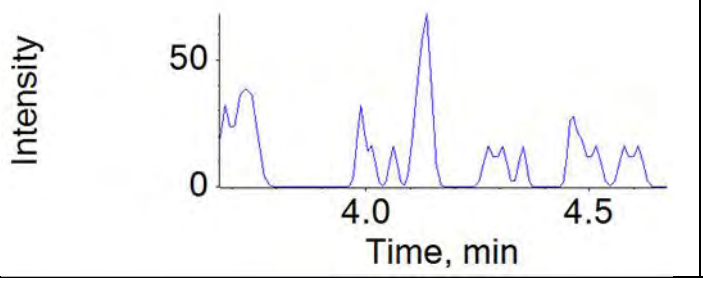


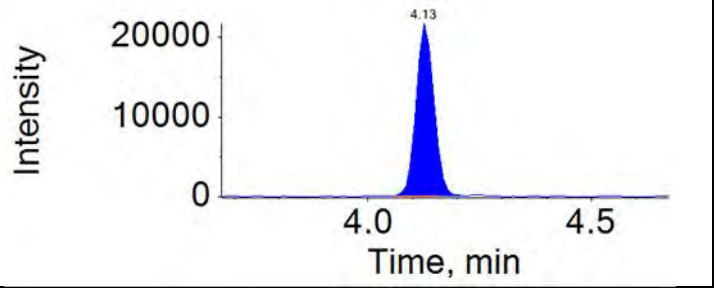
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



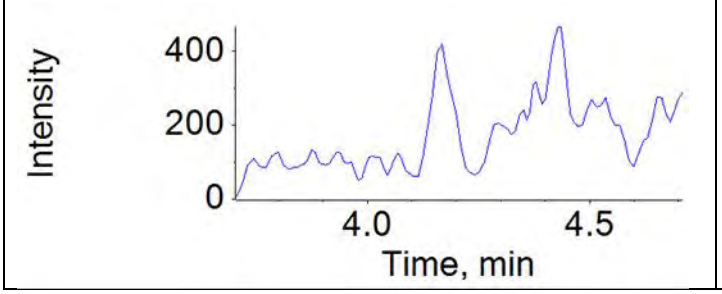


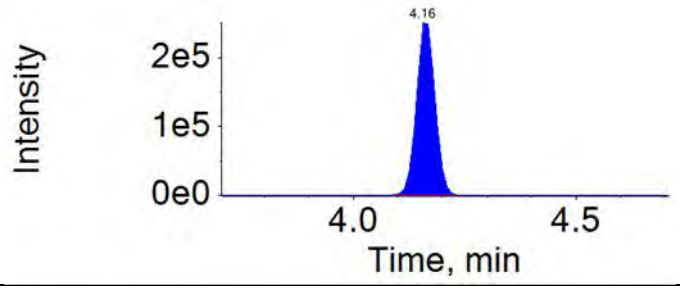
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

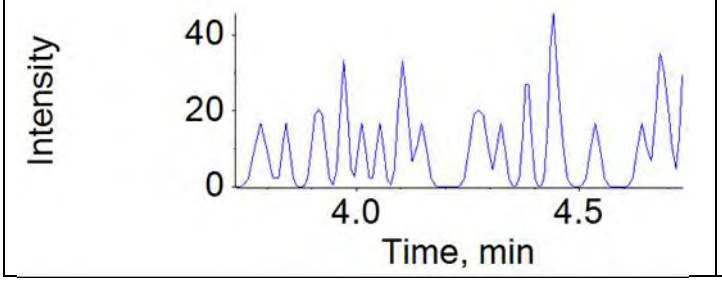
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

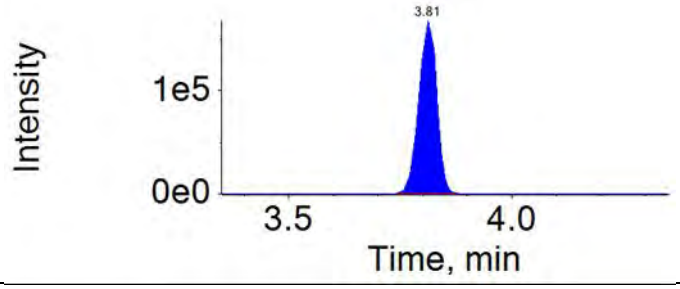
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



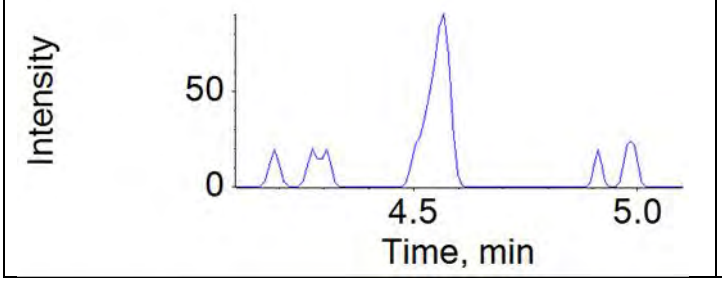


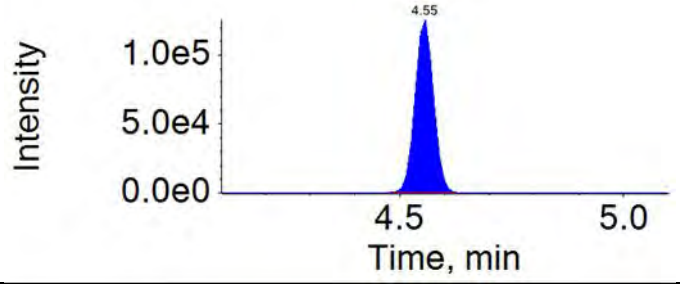
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



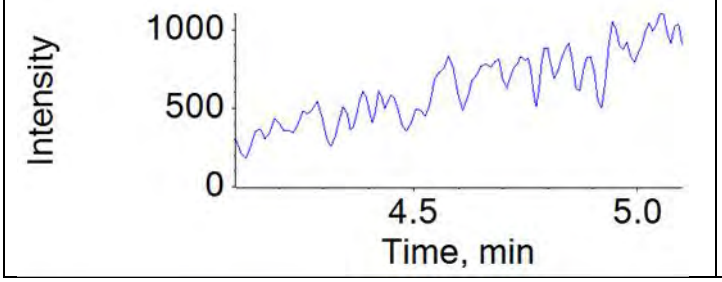


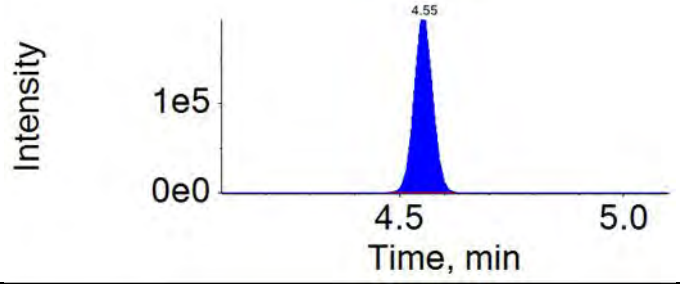
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



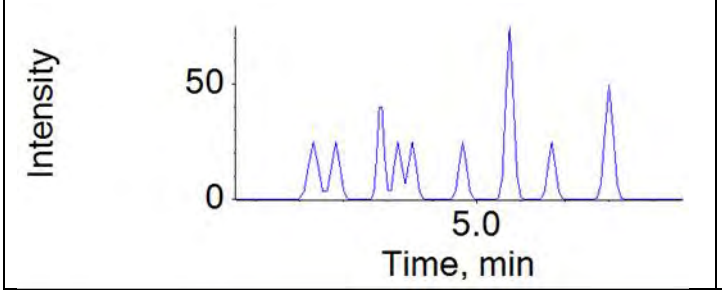


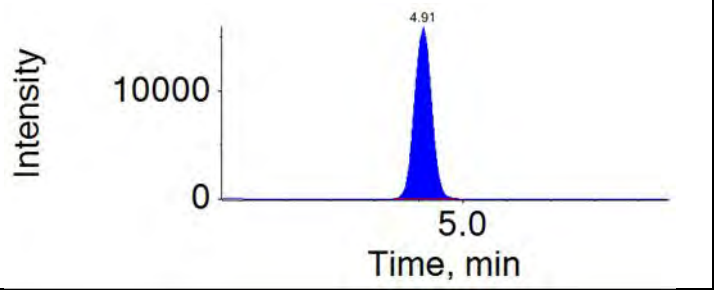
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

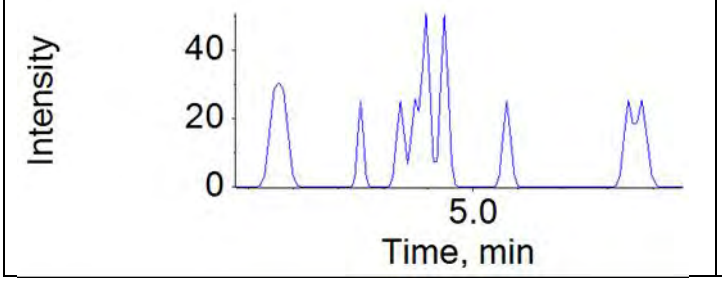
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

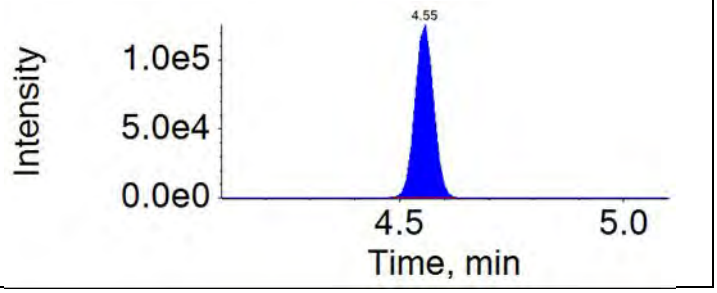
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



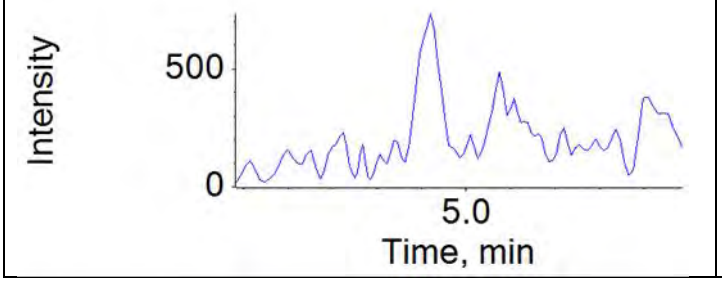


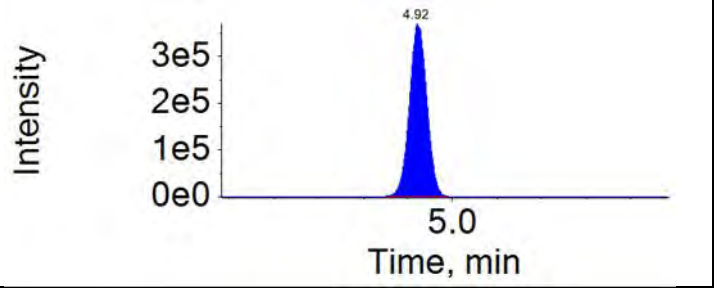
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



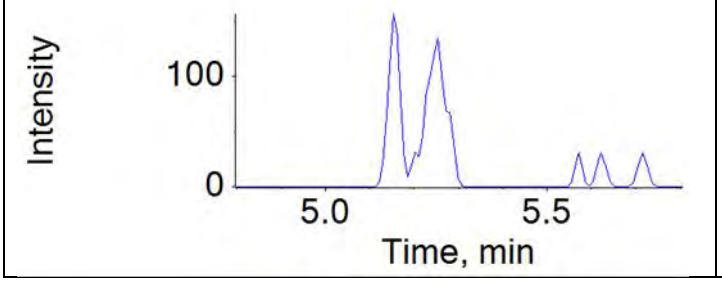


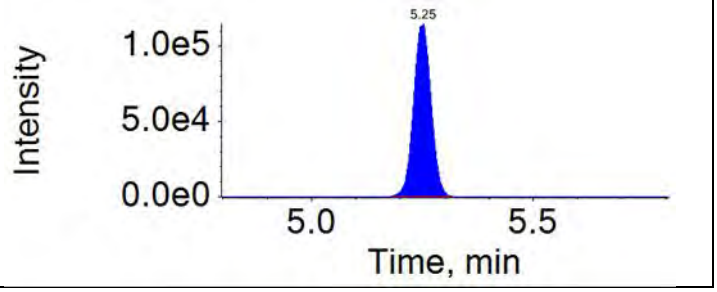
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





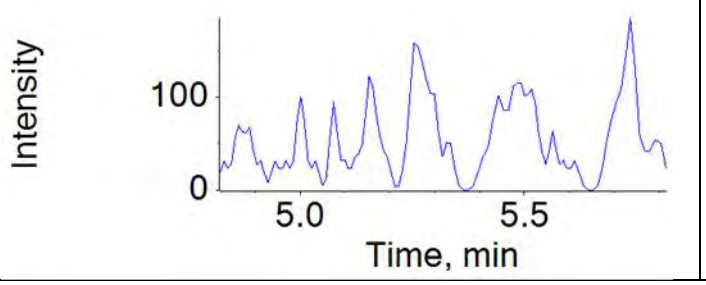
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

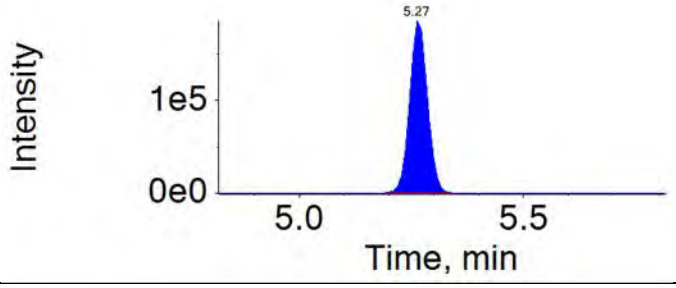




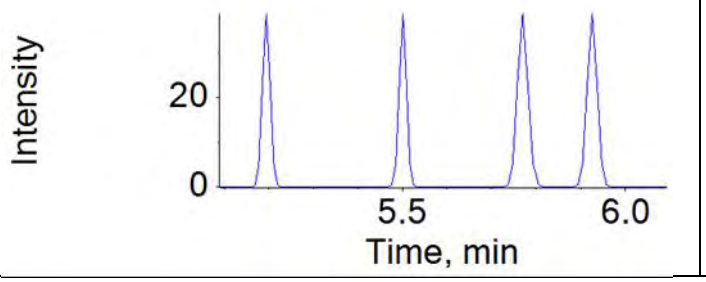
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

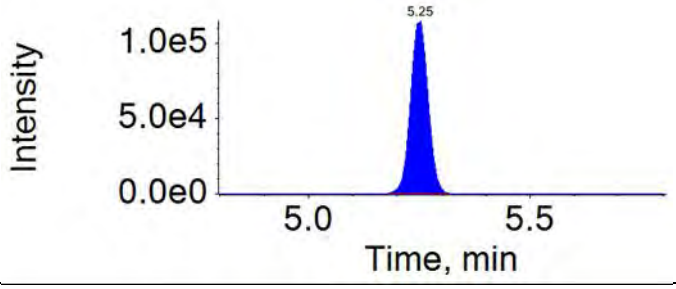
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



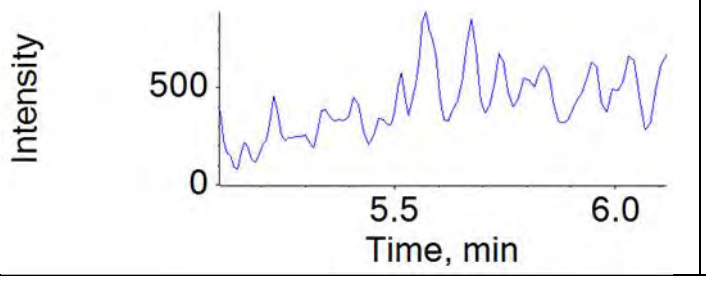


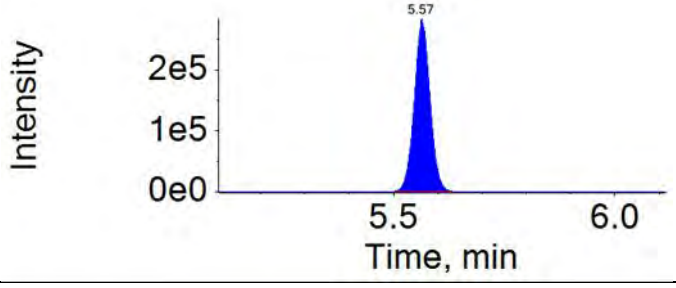
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



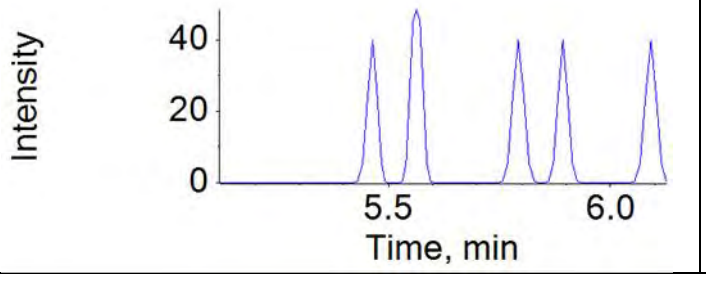


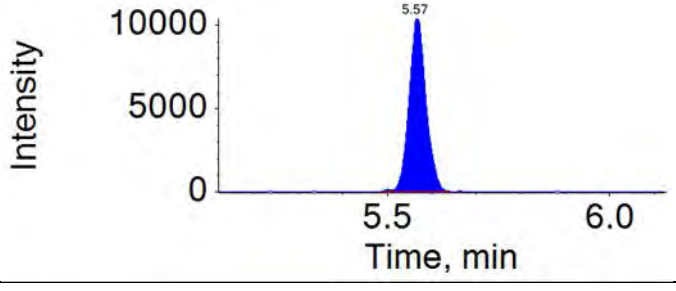
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



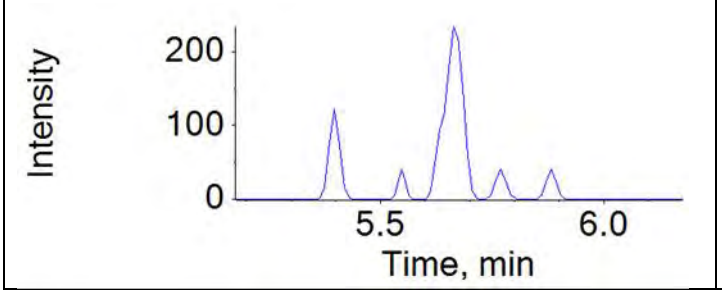


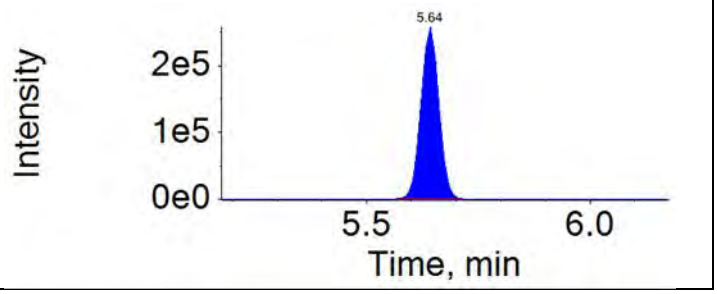
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

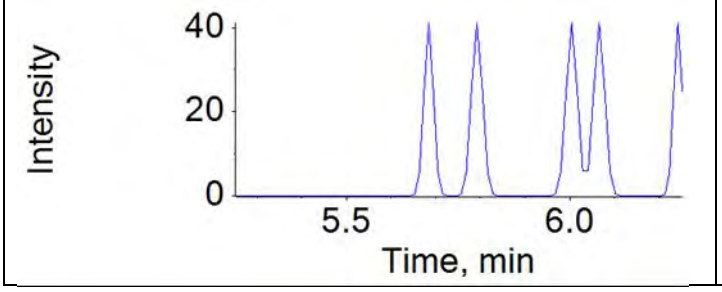
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

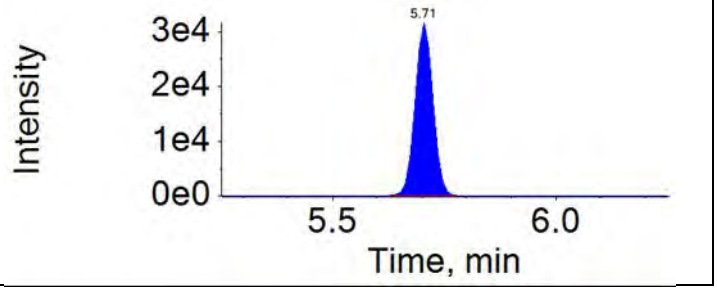
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



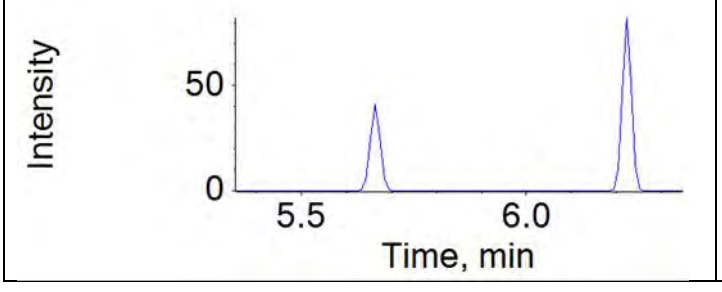


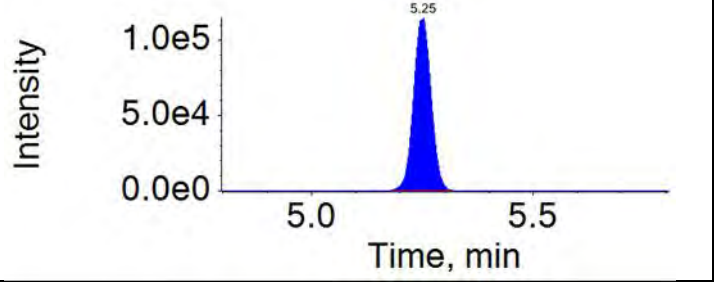
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



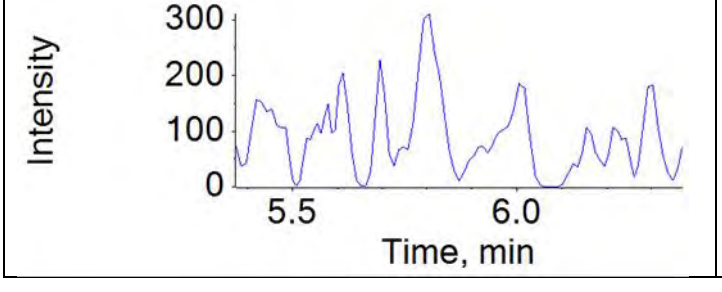


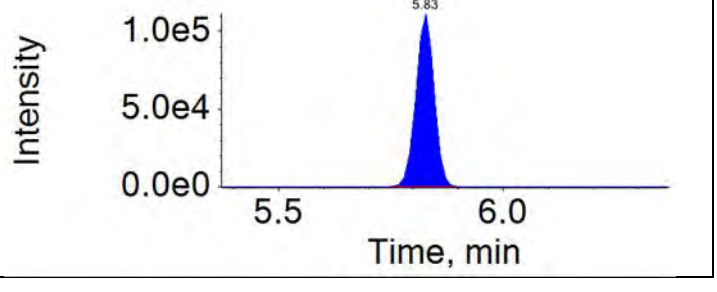
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



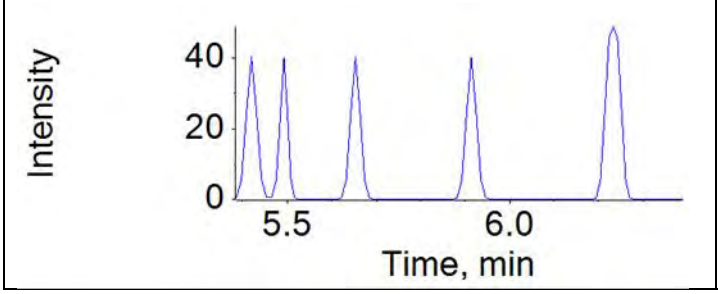


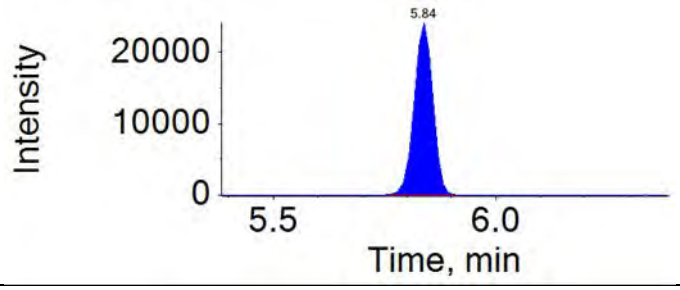
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

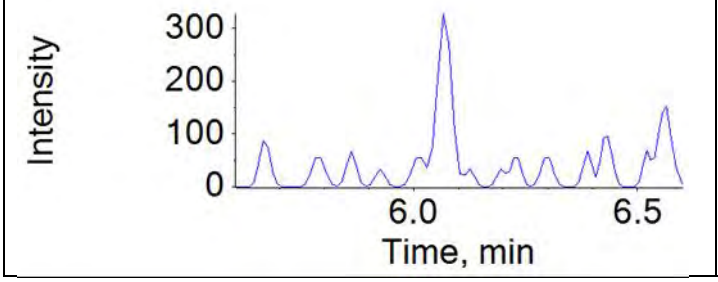
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

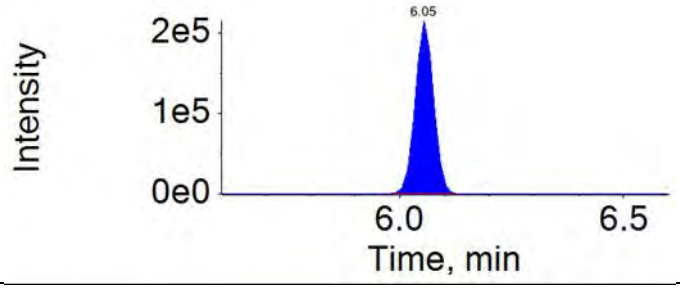
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



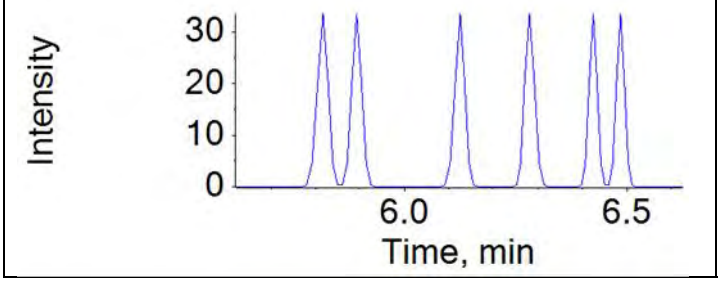


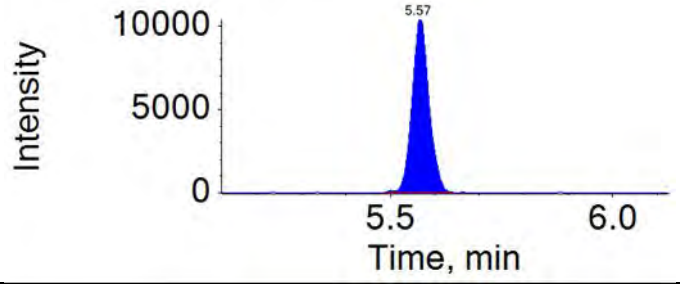
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



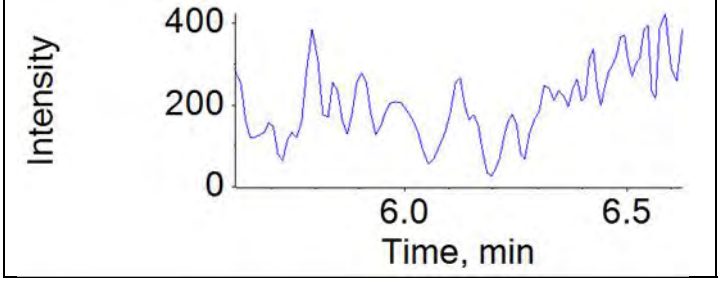


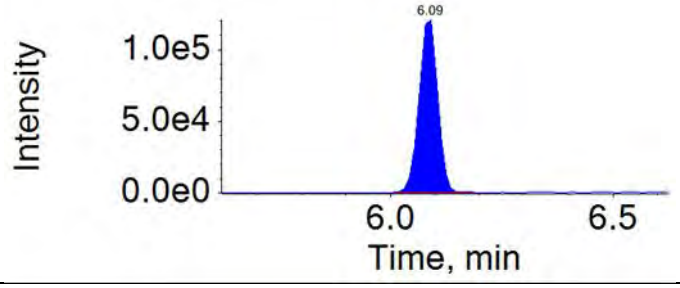
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





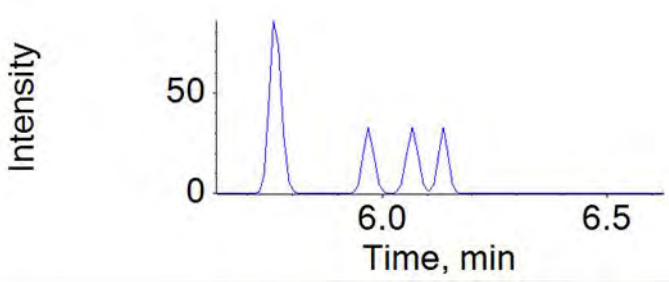
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0

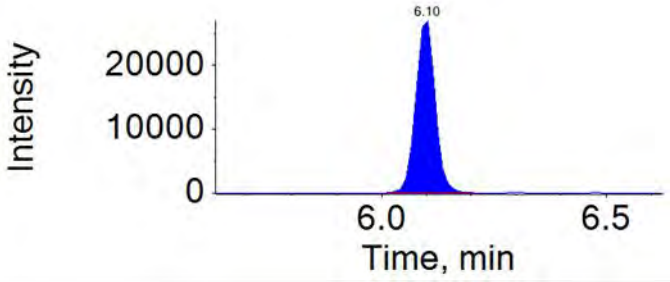




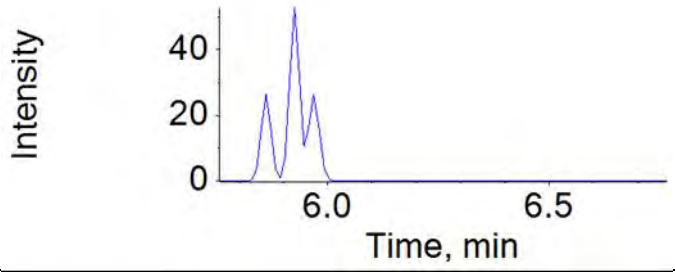
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

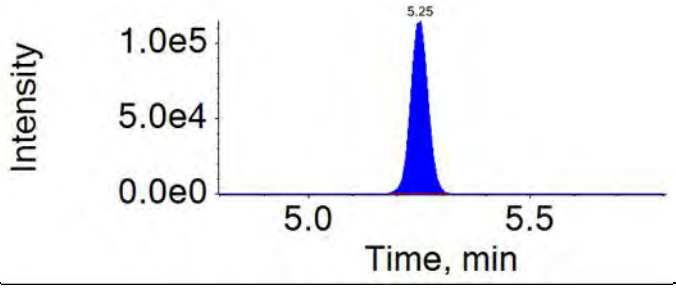
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



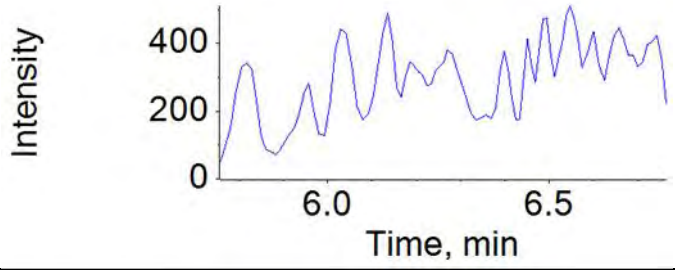


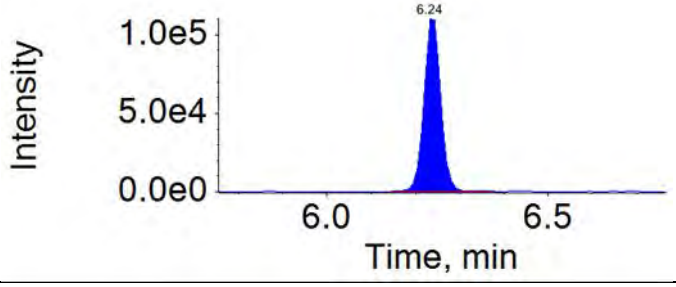
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



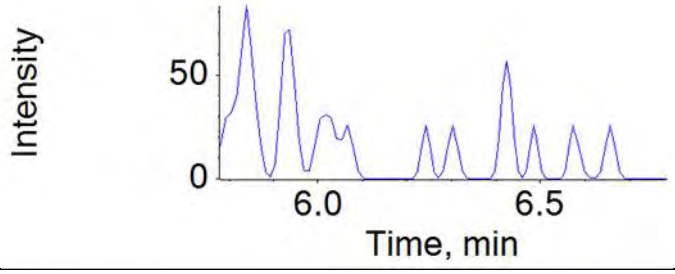


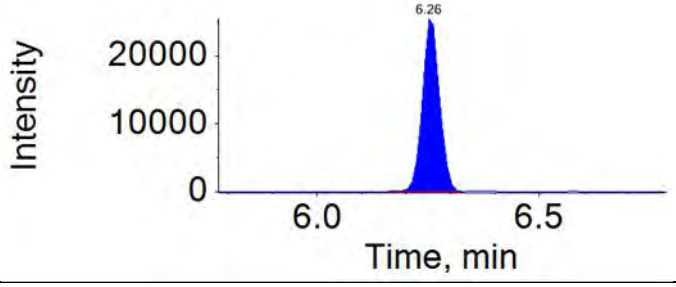
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





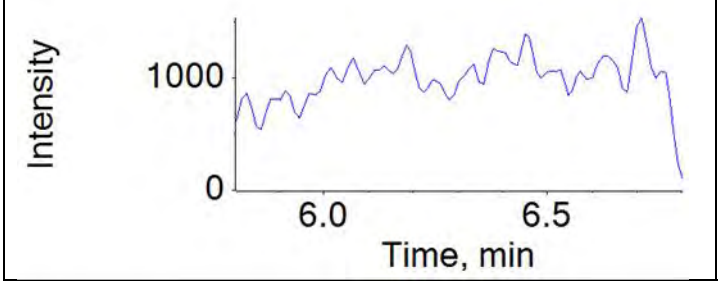
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

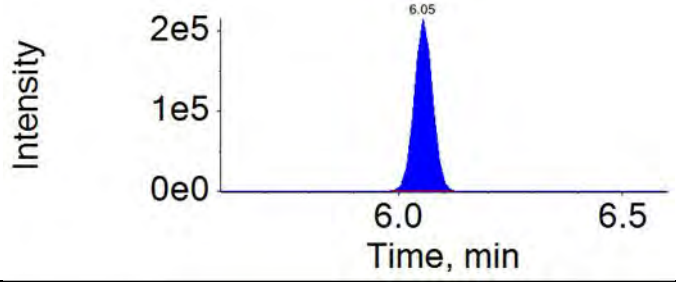




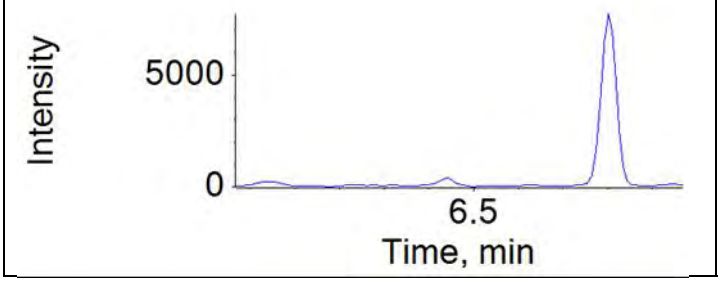
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

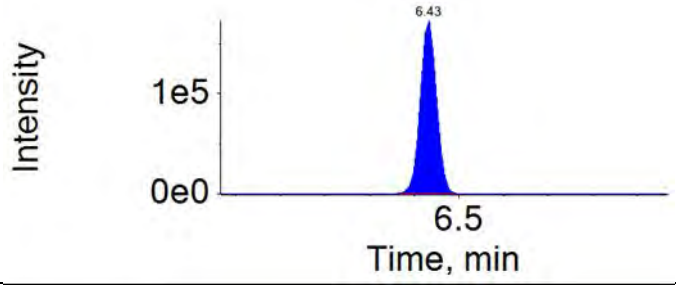
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



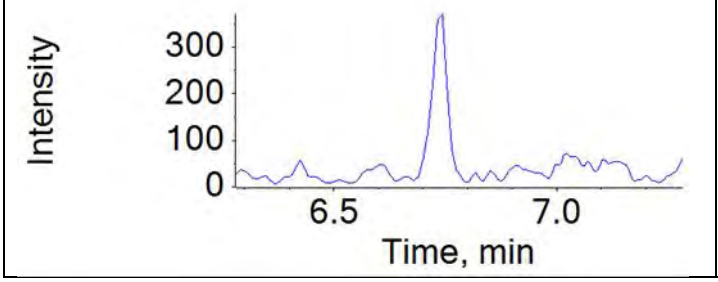


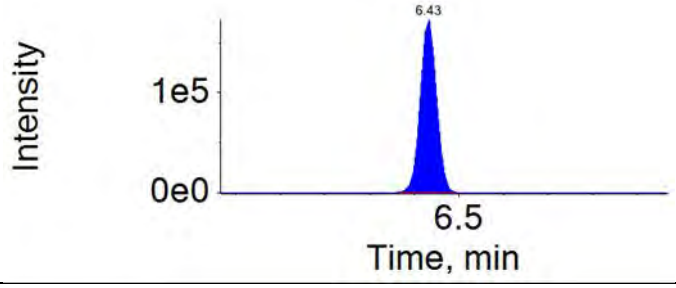
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



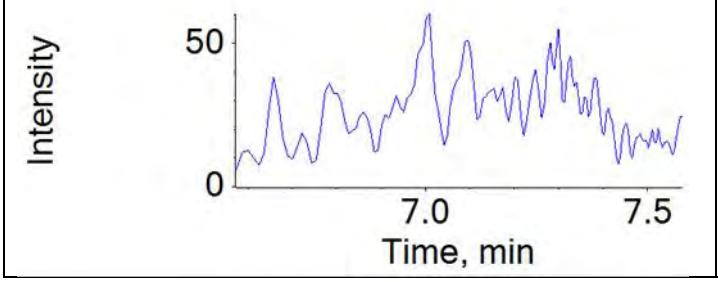


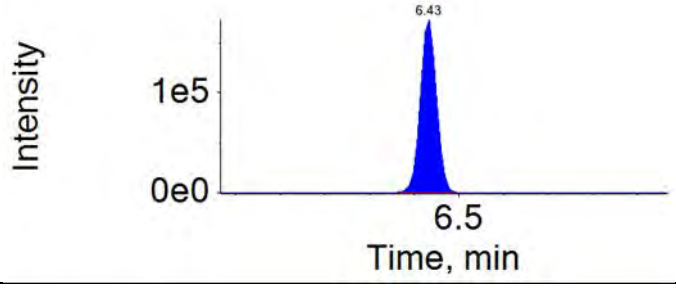
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

Ion Ratio Report

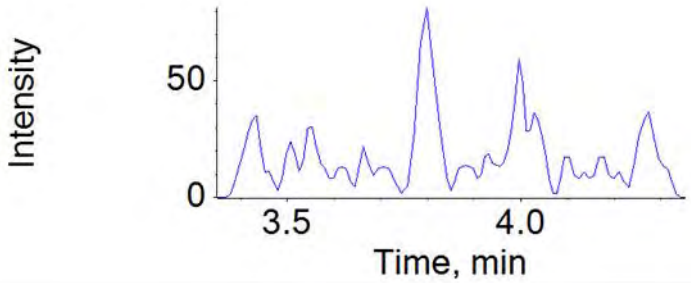
Sample Name: INBLK **Instrument Name:** LM27631 **File Name:** 18NOV08D-06.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

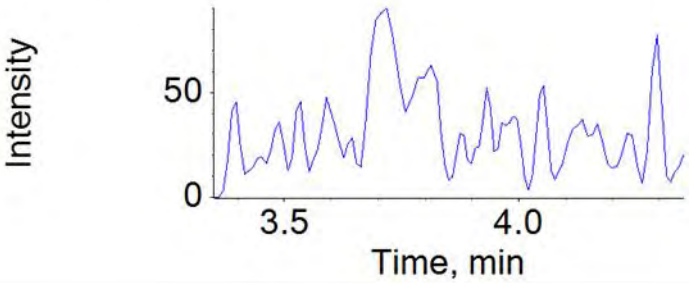
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

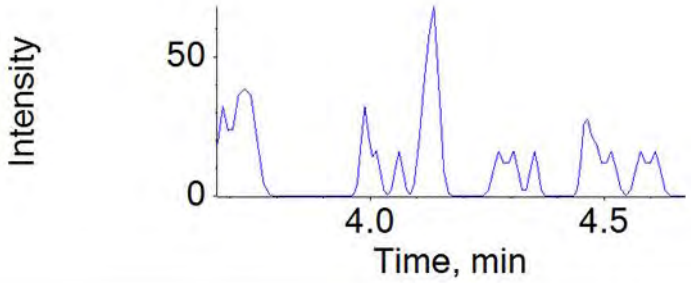
Component: PFBS
Primary Mass: 299.0 / 80.0



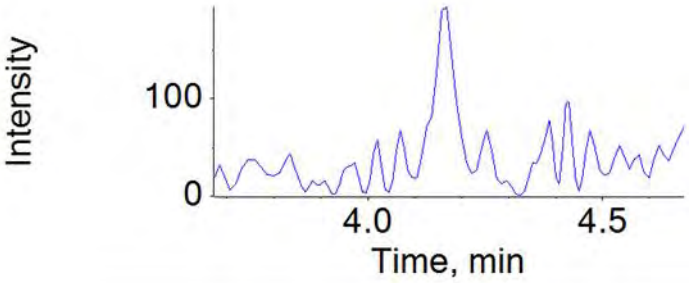
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



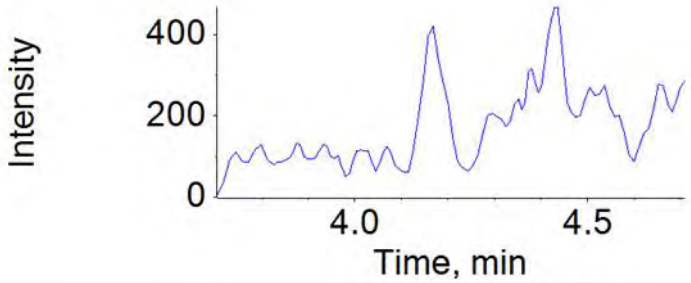
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



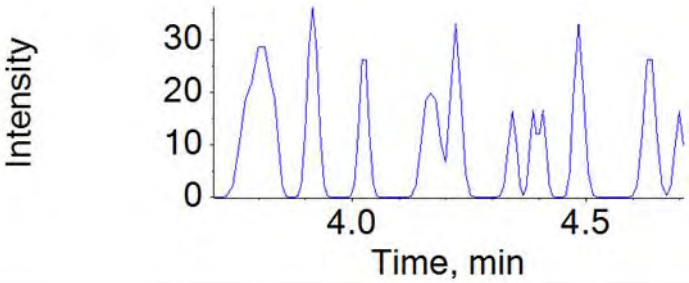
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



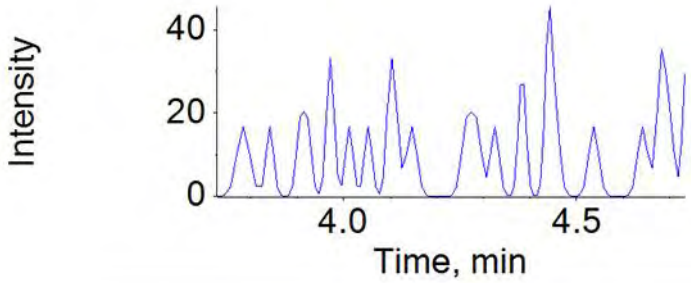
Component: PFHxA
Primary Mass: 313.0 / 269.0



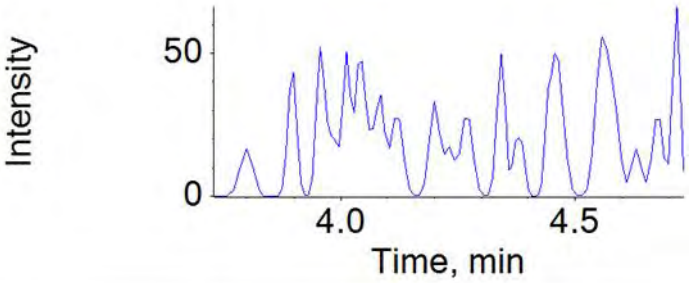
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



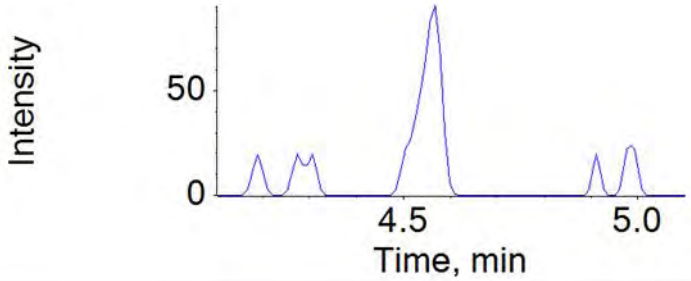
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



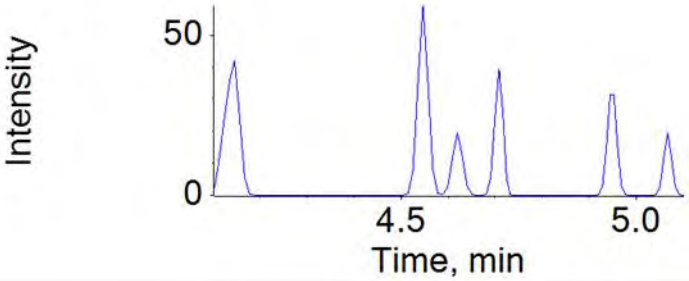
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

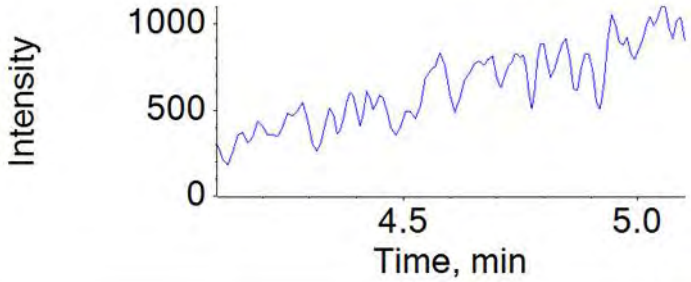
Component: PFHxS
Primary Mass: 399.0 / 80.0



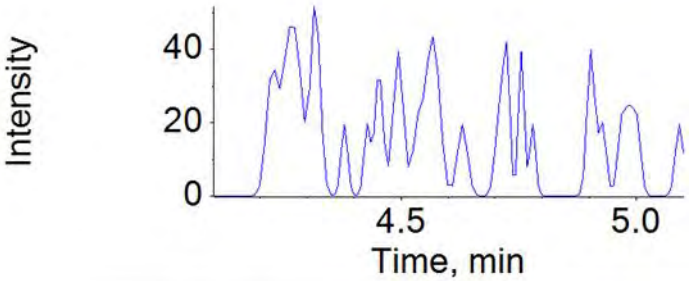
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



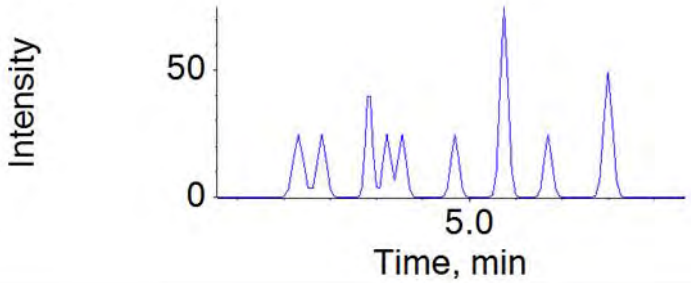
Component: PFHpA
Primary Mass: 363.0 / 319.0



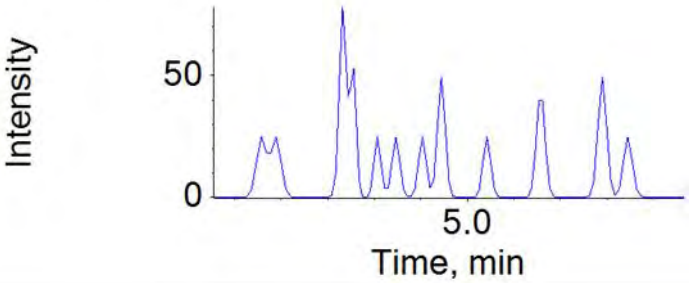
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



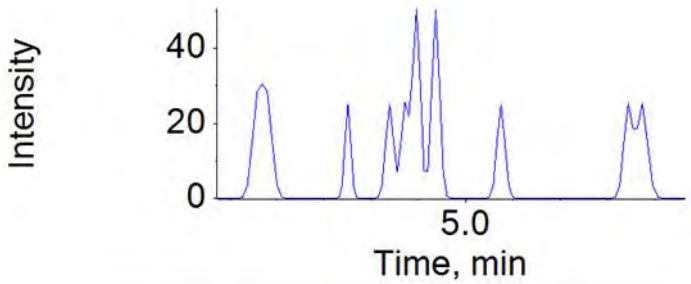
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



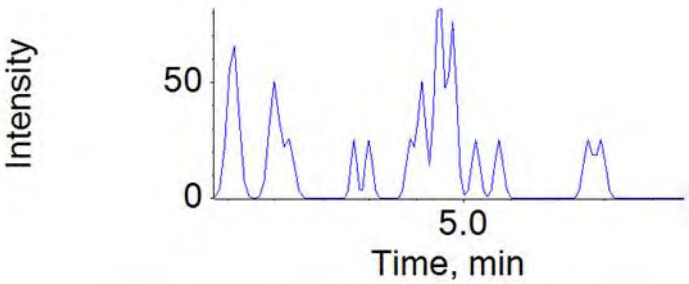
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



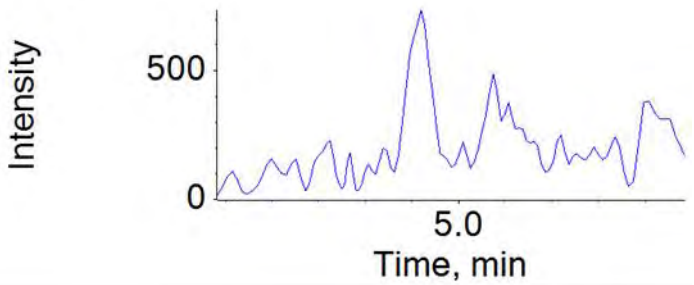
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



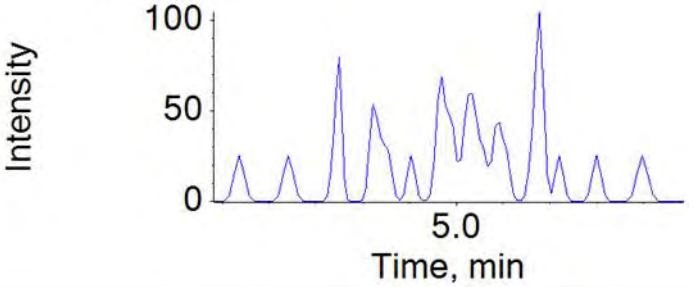
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

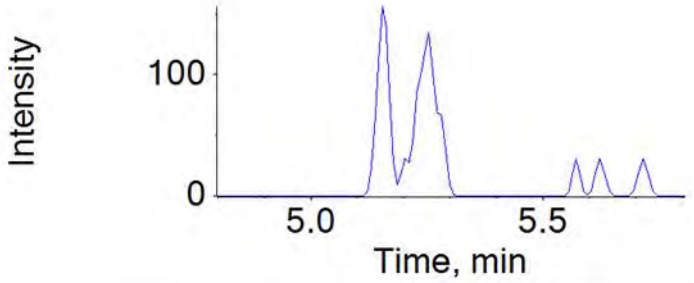
Component: PFOA
Primary Mass: 413.0 / 369.0



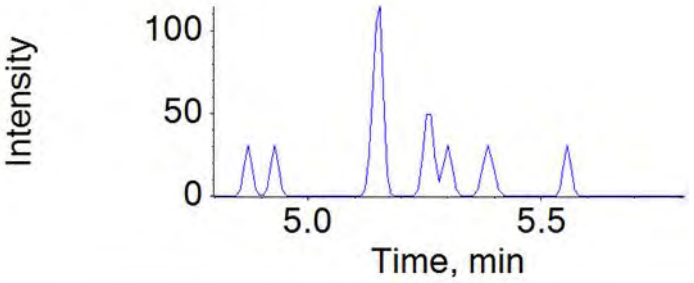
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



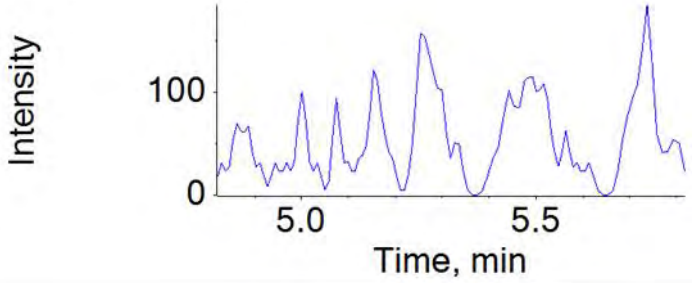
Component: PFOS
Primary Mass: 499.0 / 80.0



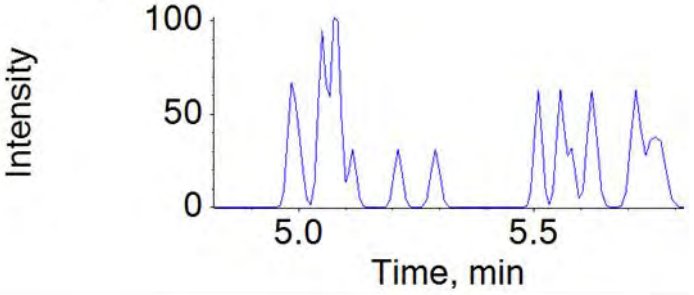
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



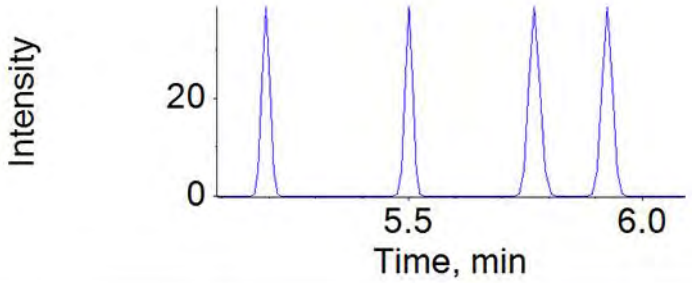
Component: PFNA
Primary Mass: 463.0 / 419.0



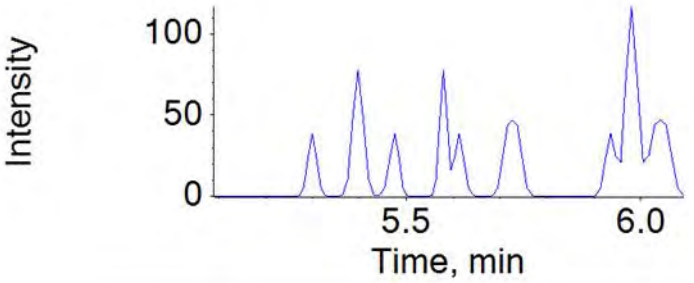
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



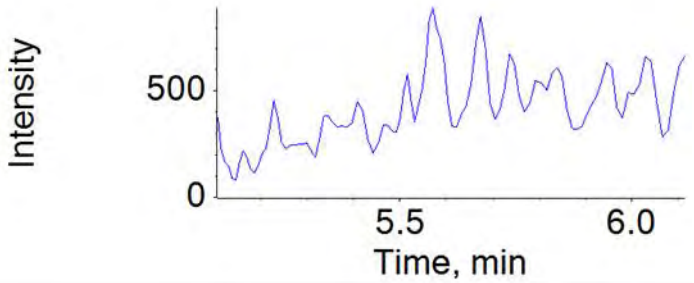
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



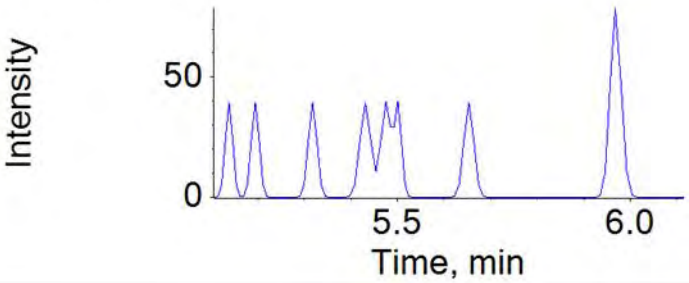
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

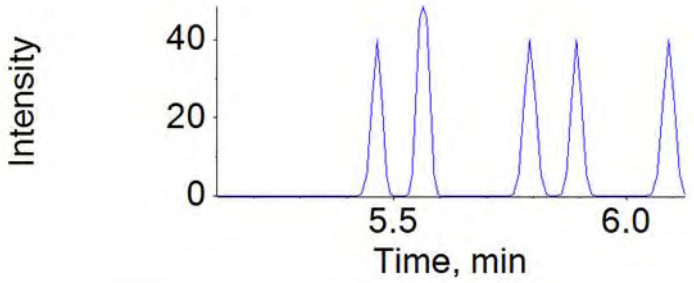
Component: PFDA
Primary Mass: 513.0 / 469.0



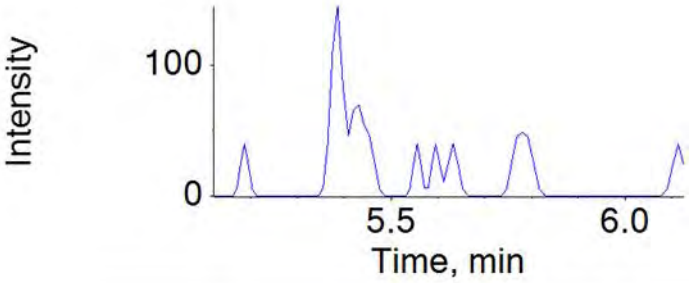
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



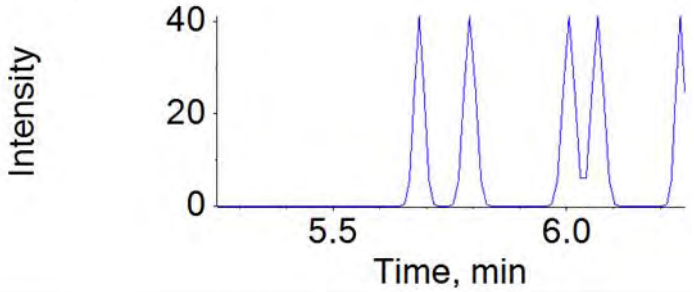
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



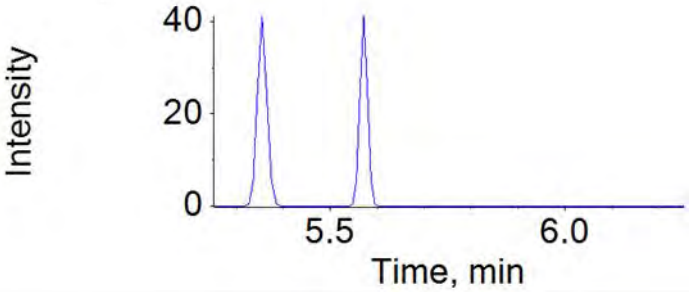
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



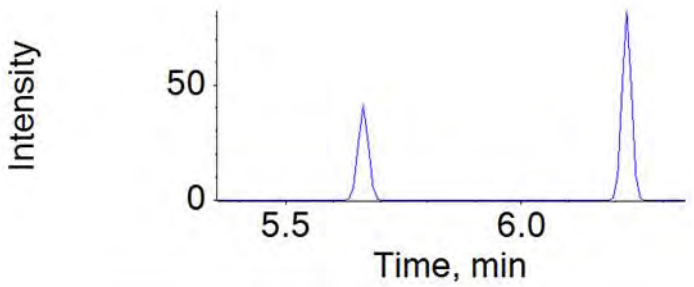
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



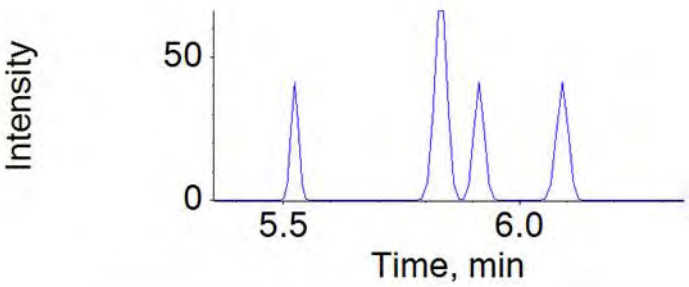
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



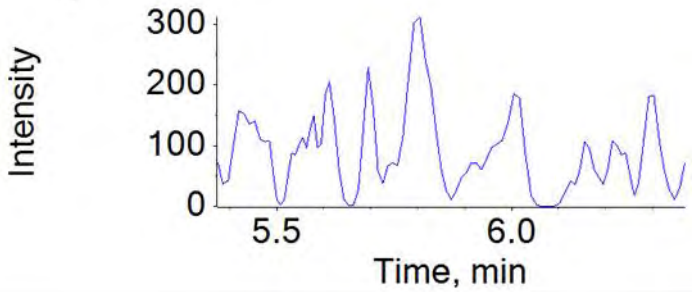
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



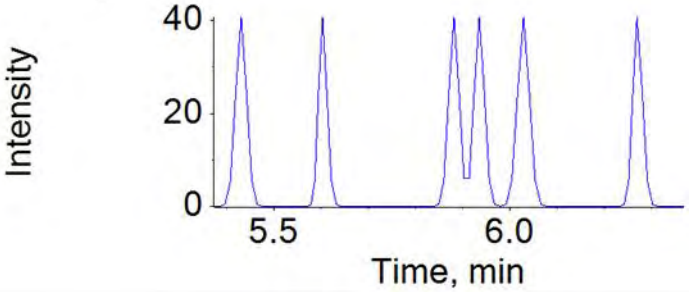
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

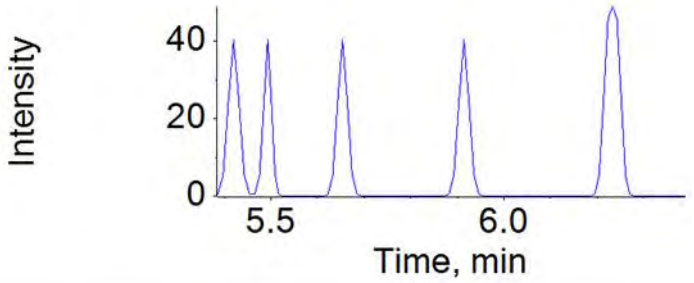
Component: PFUnDA
Primary Mass: 563.0 / 519.0



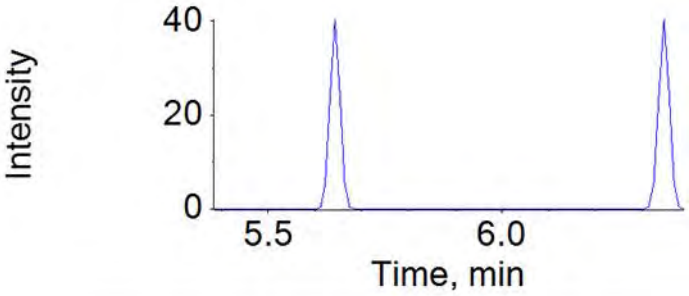
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



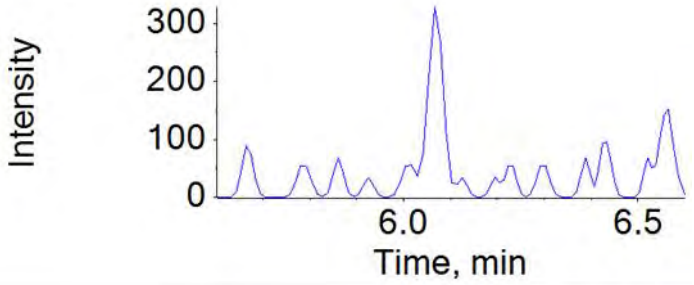
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



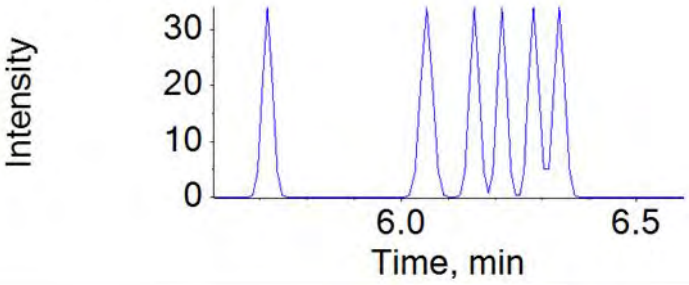
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



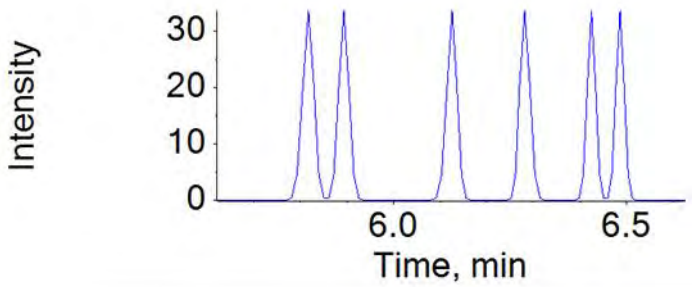
Component: PFDoDA
Primary Mass: 613.0 / 569.0



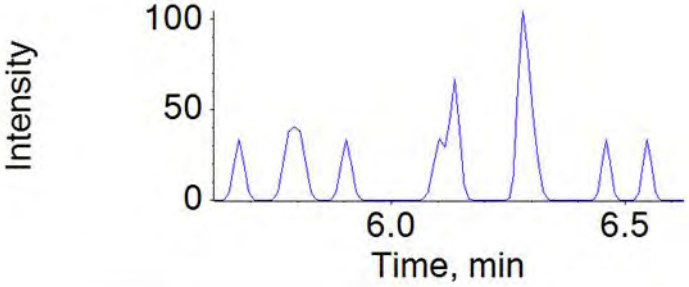
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



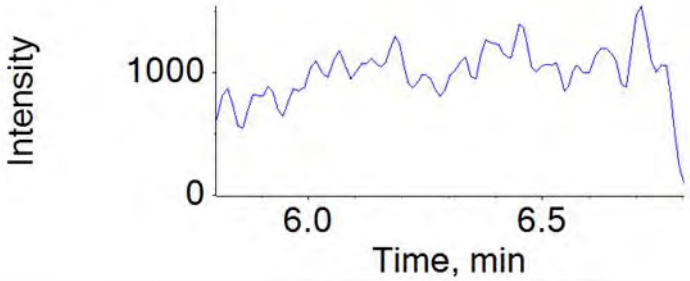
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



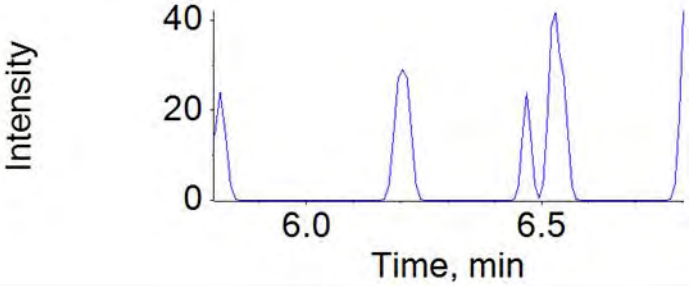
APPROVED
By JPT at 5:08 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

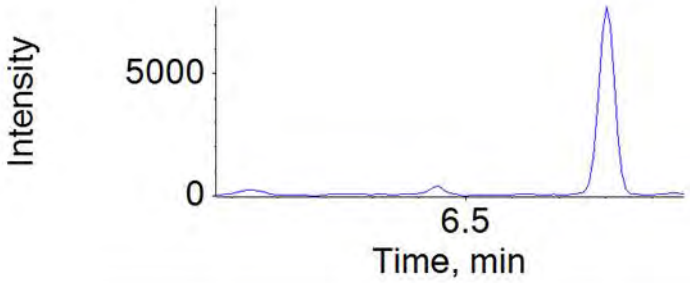
Component: PFTrDA
Primary Mass: 663.0 / 619.0



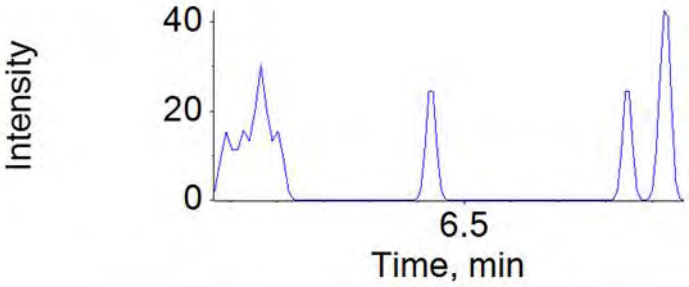
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



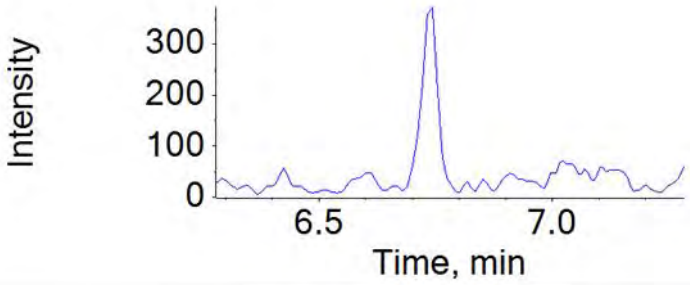
Component: PFTeDA
Primary Mass: 713.0 / 669.0



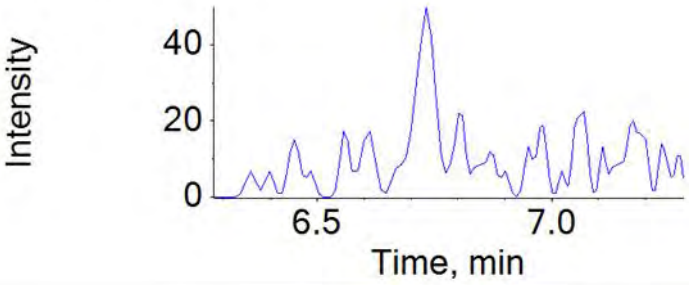
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



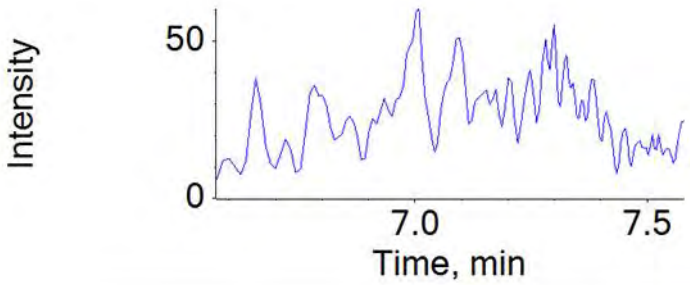
Component: PFHxDA
Primary Mass: 813.0 / 769.0



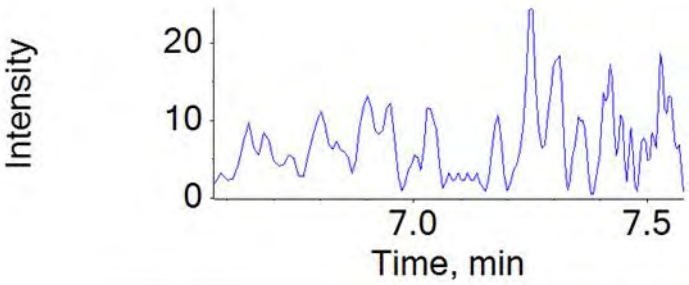
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



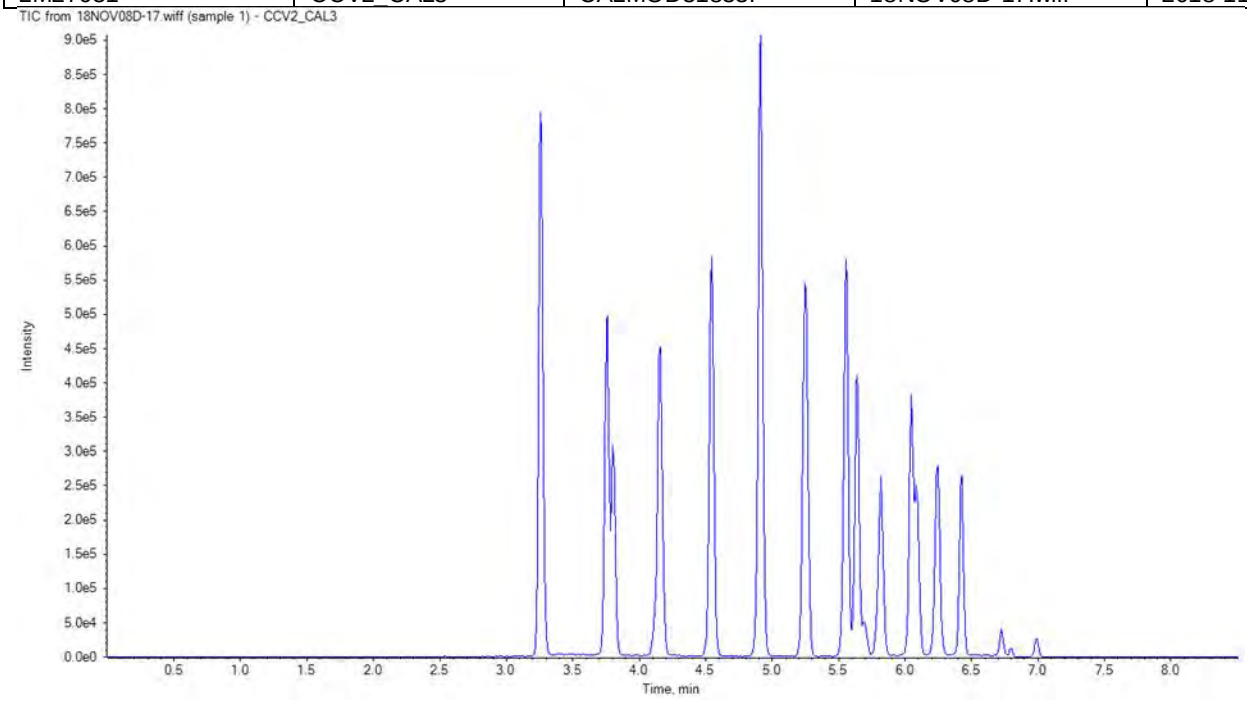
APPROVED
By JPT at 5:08 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALMOD31833F	18NOV08D-17.wiff	2018-11-08T14:12:52



Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	716299.0	728839.7	-2	50	
13C2-PFOA	5.0	501346.5	491983.1	2	50	
13C4-PFOS	4.8	270057.5	255568.1	6	50	
13C2-PFDA	5.0	302256.9	315407.5	-4	50	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV2_CAL3	CALMOD31833F	18NOV08D-17.wiff	2018-11-08T14:12:52

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	285907.1	10	13C4-PFBA	773868.7	5.0	0.369	3.26	1.000	2.000	2.162	8	30	
PFPeA	277846.4	12	13C5-PFPeA	829583.2	5.0	0.335	3.76	1.000	2.000	1.990	0	30	
PFBS	156460.3	11	13C3-PFBS	428951.7	4.7	0.365	3.81	1.000	1.770	1.839	4	30	
4:2-FTS	34764.3	11	13C2-4:2-FTS	52873.3	4.7	0.658	4.12	1.000	1.868	1.768	-5	30	
PFHxA	335347.1	12	13C5-PFHxA	665695.6	5.0	0.504	4.15	1.000	2.000	2.160	8	30	
PFPeS	83722.5	11	13C3-PFBS	428951.7	4.7	0.195	4.17	1.100	1.880	1.925	2	30	
PFHxS	124186.1	12	13C3-PFHxS	336729.8	4.7	0.369	4.54	1.000	1.890	1.869	-1	30	
PFHpA	347629.0	12	13C4-PFHpA	542528.1	5.0	0.641	4.54	1.000	2.000	2.155	8	30	
6:2-FTS	29608.3	11	13C2-6:2-FTS	36308.1	4.8	0.815	4.90	1.000	1.896	2.034	7	30	
PFHpS	120458.6	11	13C3-PFHxS	336729.8	4.7	0.358	4.91	1.080	1.900	1.872	-1	30	
PFOA	359644.3	11	13C8-PFOA	940929.6	5.0	0.382	4.91	1.000	2.000	2.152	8	30	
PFOS	109104.0	11	13C8-PFOS	296596.7	4.8	0.368	5.24	1.000	1.910	1.907	0	30	
PFNA	282136.2	11	13C9-PFNA	501498.2	5.0	0.563	5.26	1.000	2.000	2.103	5	30	
PFNS	69598.3	10	13C8-PFOS	296596.7	4.8	0.235	5.53	1.060	1.920	1.861	-3	30	
PFDA	242141.4	11	13C6-PFDA	650917.5	5.0	0.372	5.56	1.000	2.000	2.047	2	30	
8:2-FTS	22599.9	10	13C2-8:2-FTS	25025.2	4.8	0.903	5.56	1.000	1.916	2.036	6	30	
PFOSA	255229.4	12	13C8-PFOSA	705820.1	5.0	0.362	5.64	1.000	2.000	1.955	-2	30	
NMeFOSAA	29918.2	11	d3-NMeFOSAA	84329.5	5.0	0.355	5.70	1.000	2.000	1.826	-9	30	
PFDS	63911.9	12	13C8-PFOS	296596.7	4.8	0.215	5.79	1.110	1.930	2.058	7	30	
PFUnDA	193109.7	12	13C7-PFUnDA	275804.8	5.0	0.700	5.82	1.000	2.000	2.008	0	30	
NEtFOSAA	27108.5	12	d5-NEtFOSAA	65902.8	5.0	0.411	5.83	1.000	2.000	1.768	-12	30	
PFDoDA	218277.5	12	13C2-PFDoDA	568386.8	5.0	0.384	6.04	1.000	2.000	2.081	4	30	
10:2-FTS	18821.0	12	13C2-8:2-FTS	25025.2	4.8	0.752	6.06	1.090	1.928	2.342	21	30	
NMePFOSAE	158967.8	11	d7-NMePFOSAE	307762.3	5.0	0.517	6.09	1.000	2.000	2.315	16	30	
NMePFOSA	27483.9	12	d3-NMePFOSA	82999.9	5.0	0.331	6.10	1.000	2.000	1.853	-7	30	
PFDoS	27855.2	11	13C8-PFOS	296596.7	4.8	0.094	6.21	1.190	1.940	1.813	-7	30	
NEtPFOSAE	173375.6	11	d9-NEtPFOSAE	261642.2	5.0	0.663	6.25	1.000	2.000	2.124	6	30	
NEtPFOSA	28388.5	11	d5-NEtPFOSA	65205.8	5.0	0.435	6.26	1.000	2.000	1.917	-4	30	
PFTrDA	181400.4	11	13C2-PFDoDA	568386.8	5.0	0.319	6.24	1.030	2.000	2.013	1	30	
PFTeDA	142507.9	11	13C2-PFTeDA	414820.0	5.0	0.344	6.42	1.000	2.000	2.017	1	30	
PFHxDA	69146.5	11	13C2-PFTeDA	414820.0	5.0	0.167	6.72	1.050	2.000	2.069	3	30	
PFODA	57062.5	10	13C2-PFTeDA	414820.0	5.0	0.138	6.99	1.090	2.000	1.971	-1	30	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

Continuing Calibration Verfication

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13

Result Table: 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	CCV2_CAL3			**Data File:**		18NOV08D-17.wiff
Sample ID:	CALMOD31833F			**Acquis Date:**		2018-11-08T14:12:52
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV08DCCV1-3
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV08D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	716299.0	728839.7	-2	50	
13C2-PFOA	5.0	501346.5	491983.1	2	50	
13C4-PFOS	4.8	270057.5	255568.1	6	50	
13C2-PFDA	5.0	302256.9	315407.5	-4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	773868.7	13C3-PFBA	716299.0	1.080	5.000	5.000	100	70-130	
E13C5-PFPeA	829583.2	13C3-PFBA	716299.0	1.158	5.000	5.045	101	70-130	
E13C3-PFBS	428951.7	13C3-PFBA	716299.0	0.599	4.650	4.395	95	70-130	
E13C2-4:2-FTS	52873.3	13C2-PFOA	501346.5	0.105	4.670	4.759	102	70-130	
E13C5-PFHxA	665695.6	13C2-PFOA	501346.5	1.328	5.000	4.884	98	70-130	
E13C3-PFHxS	336729.8	13C2-PFOA	501346.5	0.672	4.730	4.822	102	70-130	
E13C4-PFHpA	542528.1	13C2-PFOA	501346.5	1.082	5.000	4.923	98	70-130	
E13C2-6:2-FTS	36308.1	13C2-PFOA	501346.5	0.072	4.750	4.829	102	70-130	
E13C8-PFOA	940929.6	13C2-PFOA	501346.5	1.877	5.000	5.234	105	70-130	
E13C8-PFOS	296596.7	13C4-PFOS	270057.5	1.098	4.780	4.856	102	70-130	
E13C9-PFNA	501498.2	13C4-PFOS	270057.5	1.857	5.000	5.073	101	70-130	
E13C6-PFDA	650917.5	13C2-PFDA	302256.9	2.154	5.000	5.416	108	70-130	
E13C2-8:2-FTS	25025.2	13C2-PFDA	302256.9	0.083	4.790	4.381	91	70-130	
E13C8-PFOSA	705820.1	13C2-PFDA	302256.9	2.335	5.000	5.096	102	70-130	
Ed3-NMeFOSAA	84329.5	13C2-PFDA	302256.9	0.279	5.000	5.188	104	70-130	
E13C7-PFUnDA	275804.8	13C2-PFDA	302256.9	0.912	5.000	5.264	105	70-130	
Ed5-NEtFOSAA	65902.8	13C2-PFDA	302256.9	0.218	5.000	5.046	101	70-130	
E13C2-PFDoDA	568386.8	13C2-PFDA	302256.9	1.880	5.000	5.069	101	70-130	
Ed7-NMePFOSAE	307762.3	13C2-PFDA	302256.9	1.018	5.000	4.735	95	70-130	
Ed3-NMePFOSA	82999.9	13C2-PFDA	302256.9	0.275	5.000	5.027	101	70-130	
Ed9-NEtPFOSAE	261642.2	13C2-PFDA	302256.9	0.866	5.000	4.943	99	70-130	
Ed5-NEtPFOSA	65205.8	13C2-PFDA	302256.9	0.216	5.000	4.995	100	70-130	
E13C2-PFTeDA	414820.0	13C2-PFDA	302256.9	1.372	5.000	4.941	99	70-130	

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

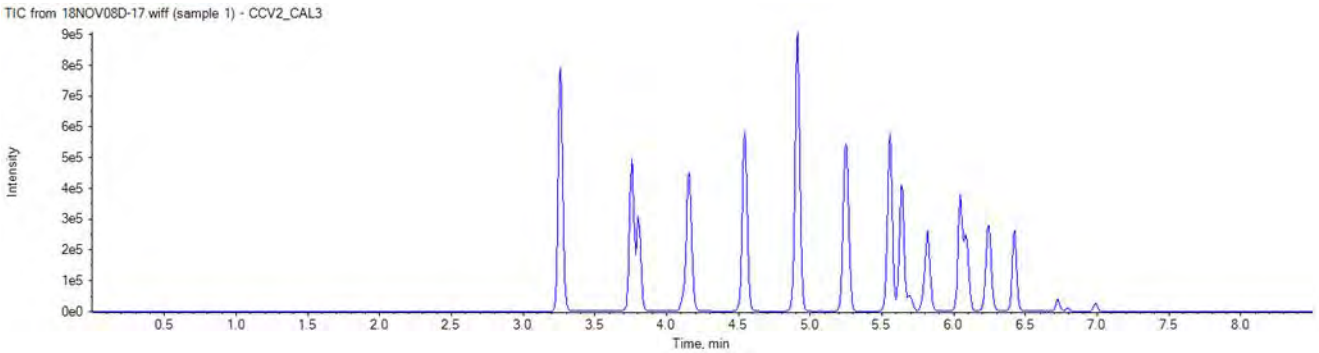
Analyte Quantitation Peak Table

Sample Name: CCV2_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV08D-17.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	285907.1		A	13C4-PFBA	3.26	773868.7	0.369	2.162
PFPeA	3.76	1.000	277846.4		A	13C5-PFPeA	3.76	829583.2	0.335	1.990
PFBS	3.81	1.000	156460.3		A	13C3-PFBS	3.81	428951.7	0.365	1.839
4:2-FTS	4.12	1.000	34764.3		A	13C2-4:2-FTS	4.12	52873.3	0.658	1.768
PFHxA	4.15	1.000	335347.1		A	13C5-PFHxA	4.15	665695.6	0.504	2.160
PFPeS	4.17	1.100	83722.5		A	13C3-PFBS	3.81	428951.7	0.195	1.925
PFHxS	4.54	1.000	124186.1		A	13C3-PFHxS	4.54	336729.8	0.369	1.869
PFHpA	4.54	1.000	347629.0		A	13C4-PFHpA	4.54	542528.1	0.641	2.155
6:2-FTS	4.90	1.000	29608.3		A	13C2-6:2-FTS	4.90	36308.1	0.815	2.034
PFHpS	4.91	1.080	120458.6		A	13C3-PFHxS	4.54	336729.8	0.358	1.872
PFOA	4.91	1.000	359644.3		A	13C8-PFOA	4.91	940929.6	0.382	2.152
PFOS	5.24	1.000	109104.0		M	13C8-PFOS	5.24	296596.7	0.368	1.907
PFNA	5.26	1.000	282136.2		A	13C9-PFNA	5.26	501498.2	0.563	2.103
PFNS	5.53	1.060	69598.3		A	13C8-PFOS	5.24	296596.7	0.235	1.861
PFDA	5.56	1.000	242141.4		A	13C6-PFDA	5.56	650917.5	0.372	2.047
8:2-FTS	5.56	1.000	22599.9		A	13C2-8:2-FTS	5.56	25025.2	0.903	2.036
PFOSA	5.64	1.000	255229.4		A	13C8-PFOSA	5.64	705820.1	0.362	1.955
NMeFOSAA	5.70	1.000	29918.2		A	d3-NMeFOSAA	5.69	84329.5	0.355	1.826
PFDS	5.79	1.110	63911.9		A	13C8-PFOS	5.24	296596.7	0.215	2.058
PFUnDA	5.82	1.000	193109.7		A	13C7-PFUnDA	5.82	275804.8	0.700	2.008
NEtFOSAA	5.83	1.000	27108.5		A	d5-NEtFOSAA	5.83	65902.8	0.411	1.768
PFDoDA	6.04	1.000	218277.5		A	13C2-PFDoDA	6.05	568386.8	0.384	2.081
10:2-FTS	6.06	1.090	18821.0		A	13C2-8:2-FTS	5.56	25025.2	0.752	2.342
NMePFOSAE	6.09	1.000	158967.8		A	d7-NMePFOSAE	6.08	307762.3	0.517	2.315
NMePFOSA	6.10	1.000	27483.9		A	d3-NMePFOSA	6.10	82999.9	0.331	1.853
PFDoS	6.21	1.190	27855.2		A	13C8-PFOS	5.24	296596.7	0.094	1.813
NEtPFOSAE	6.25	1.000	173375.6		A	d9-NEtPFOSAE	6.24	261642.2	0.663	2.124
NEtPFOSA	6.26	1.000	28388.5		A	d5-NEtPFOSA	6.25	65205.8	0.435	1.917
PFTrDA	6.24	1.030	181400.4		A	13C2-PFDoDA	6.05	568386.8	0.319	2.013
PFTeDA	6.42	1.000	142507.9		A	13C2-PFTeDA	6.42	414820.0	0.344	2.017
PFHxDA	6.72	1.050	69146.5		A	13C2-PFTeDA	6.42	414820.0	0.167	2.069
PFODA	6.99	1.090	57062.5		A	13C2-PFTeDA	6.42	414820.0	0.138	1.971

Total Ion Chromatogram

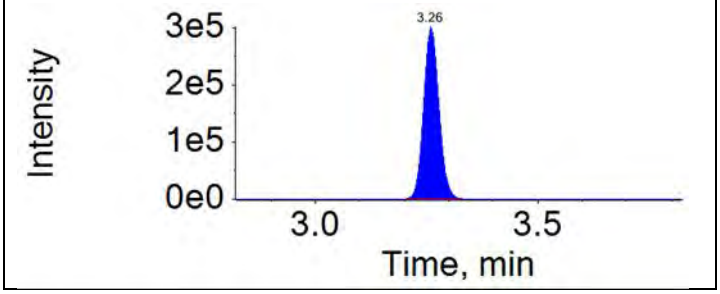


APPROVED
By JPT at 5:07 pm, 11/8/18

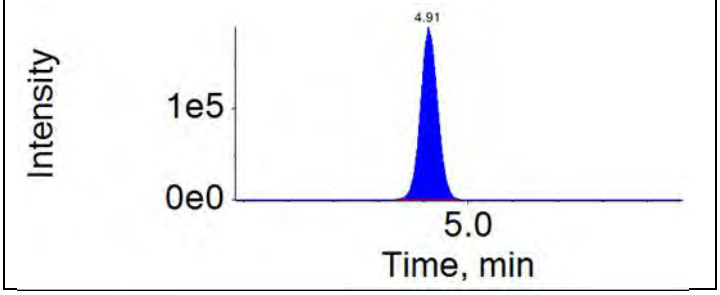
REVIEWED
By umar at 12:13 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

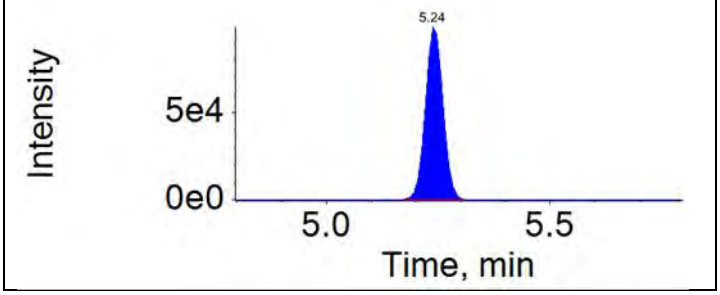
Injection Standard: 13C3-PFBA
216.0 / 172.0



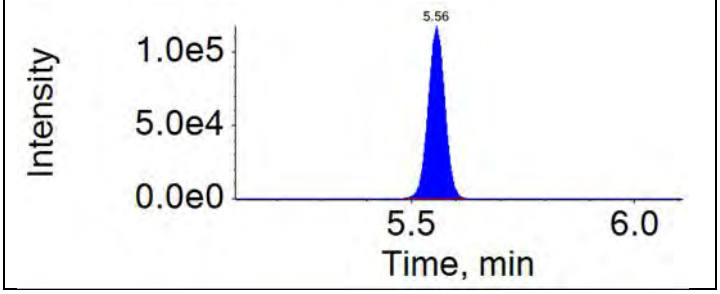
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

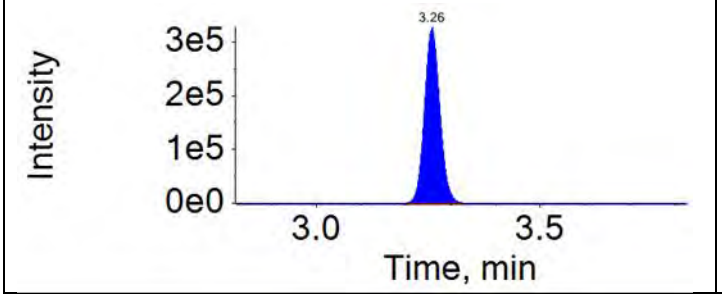


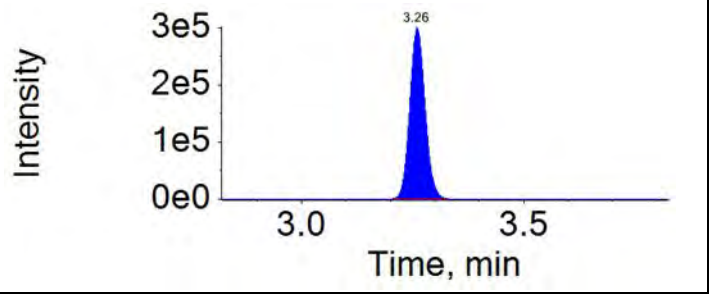
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

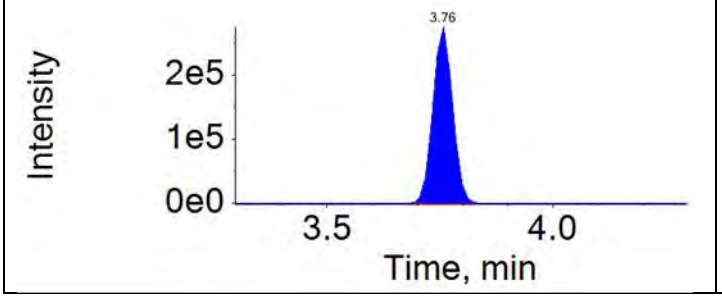
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

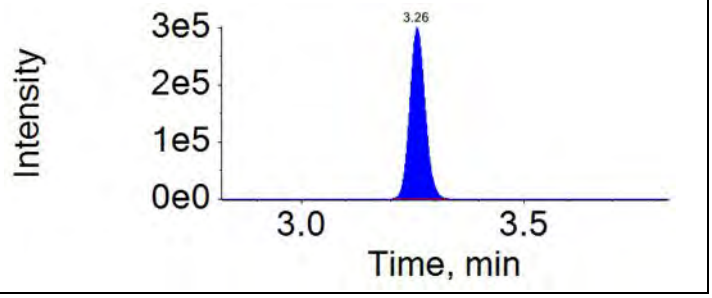
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



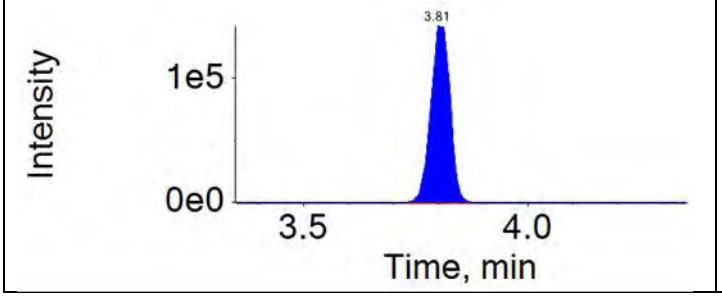


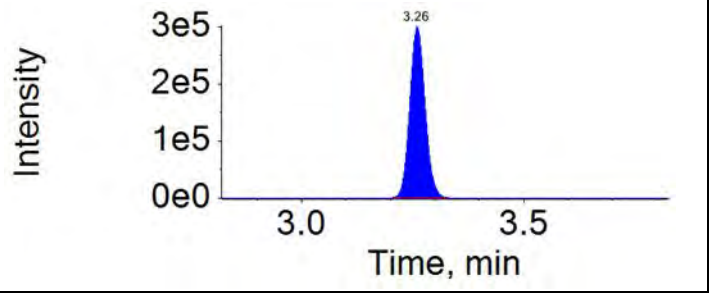
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



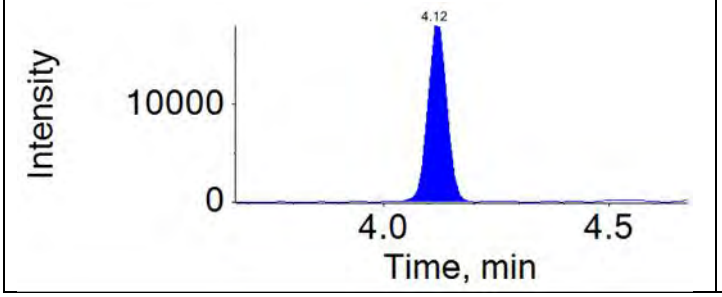


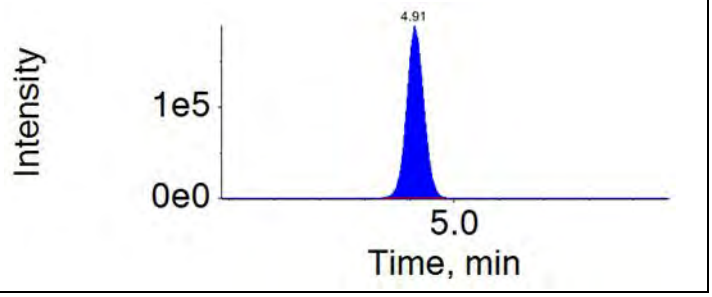
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





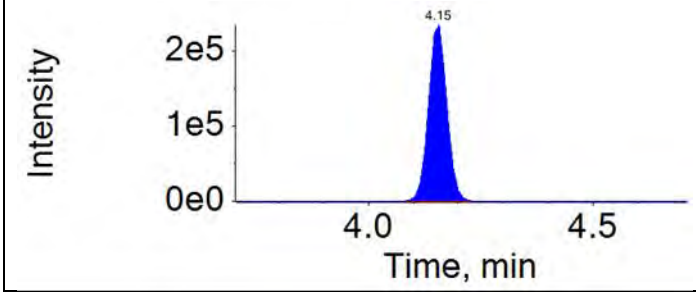
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

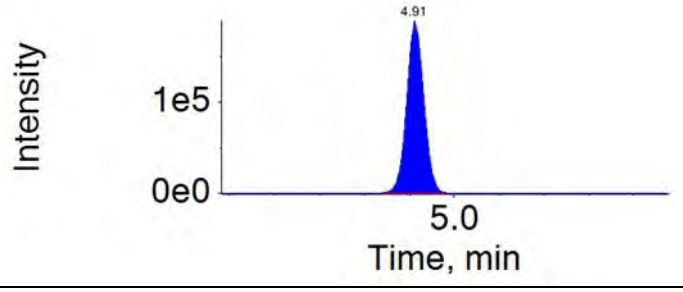




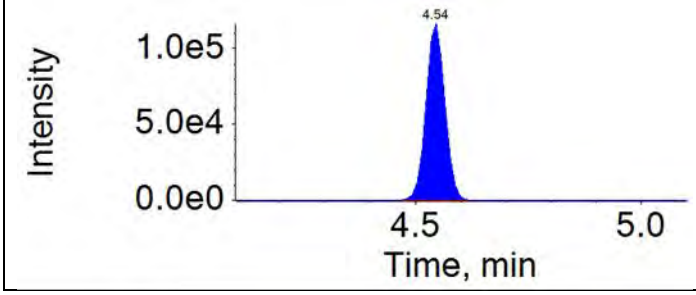
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

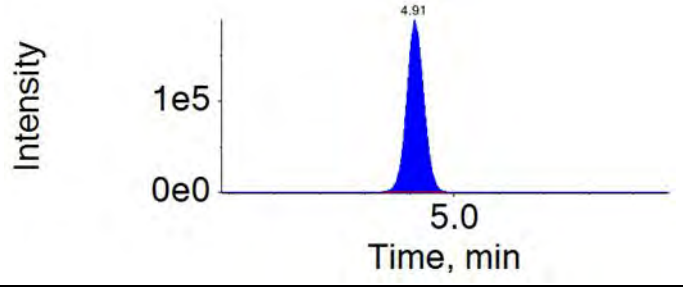
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



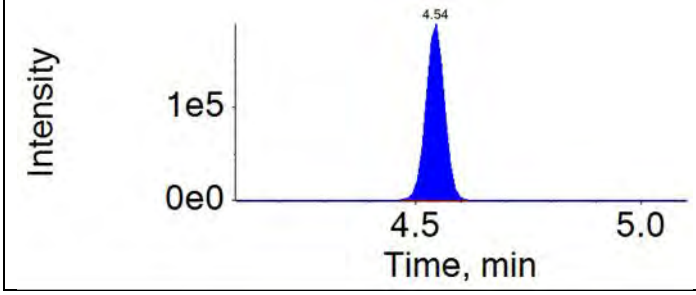


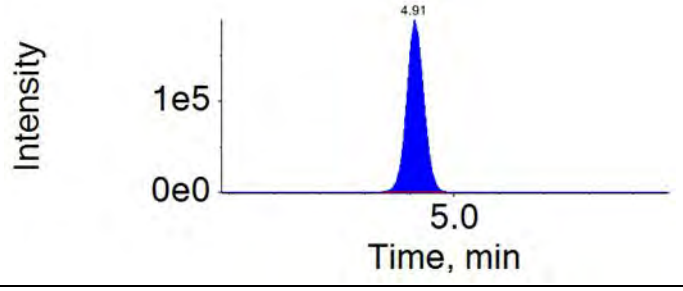
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



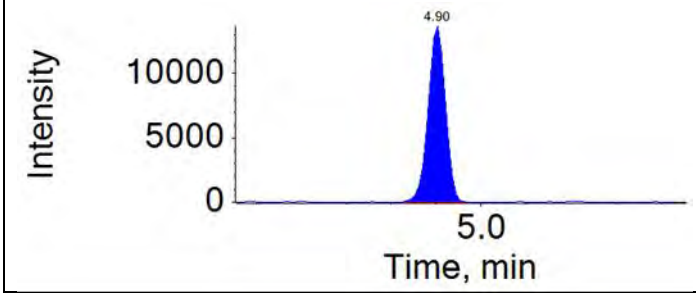


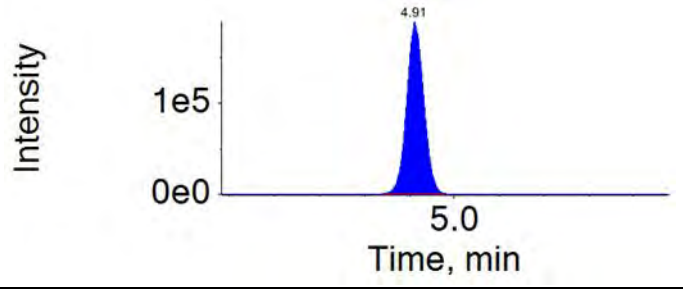
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

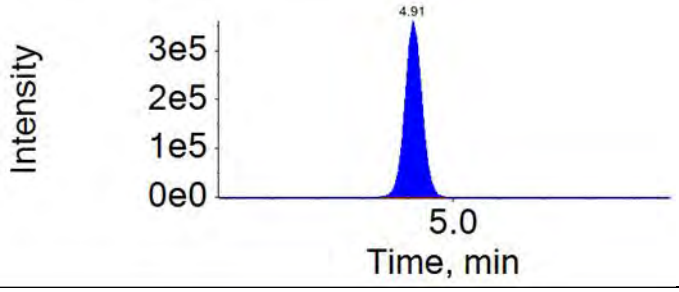
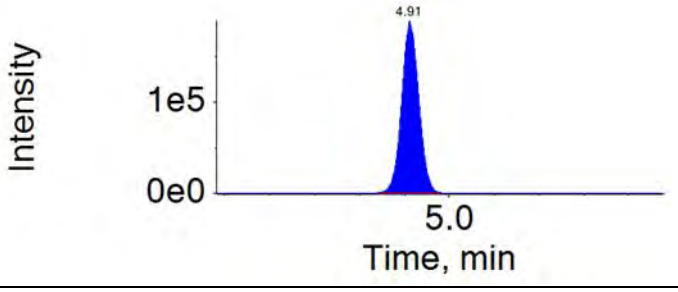


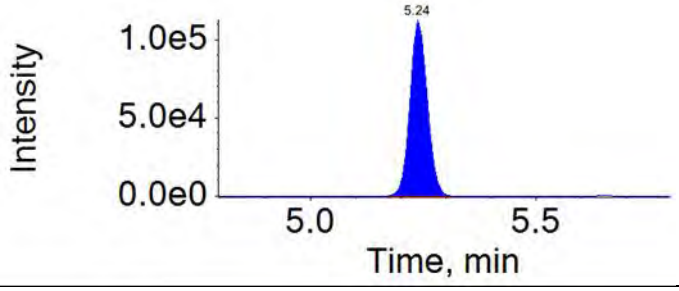
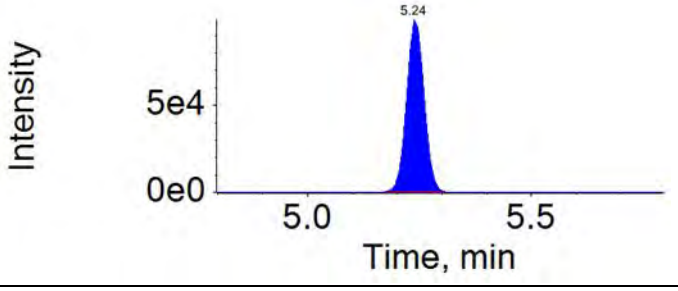


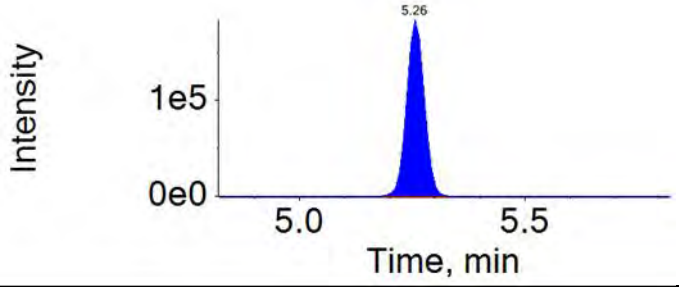
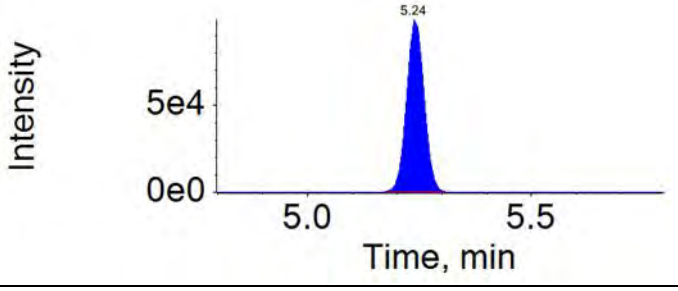
APPROVED
By JPT at 5:07 pm, 11/8/18

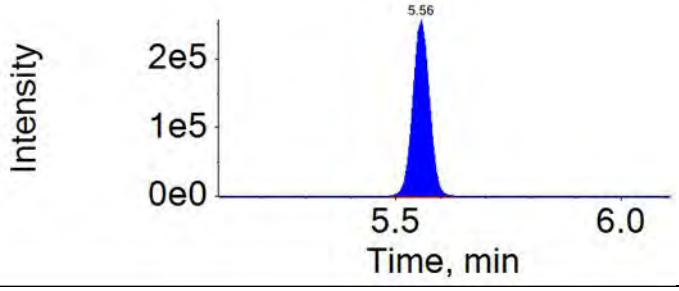
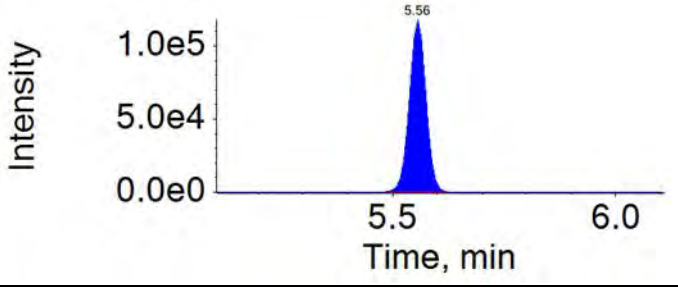
REVIEWED
By umar at 12:13 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

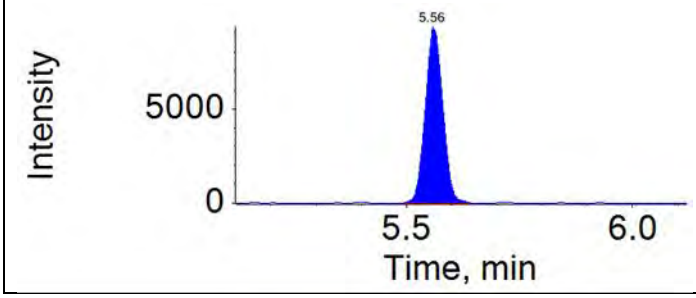
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

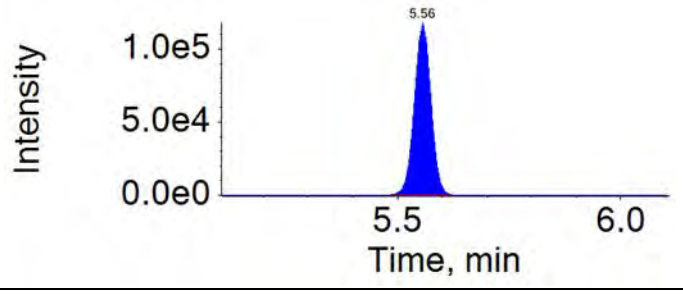
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

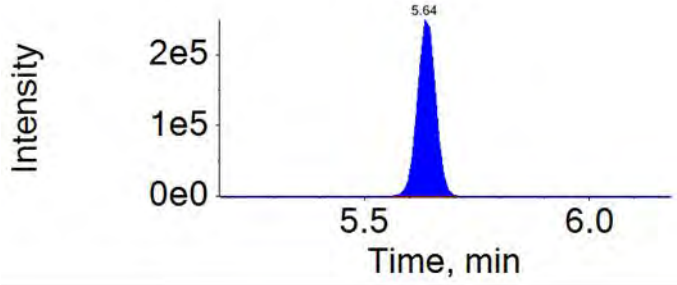
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

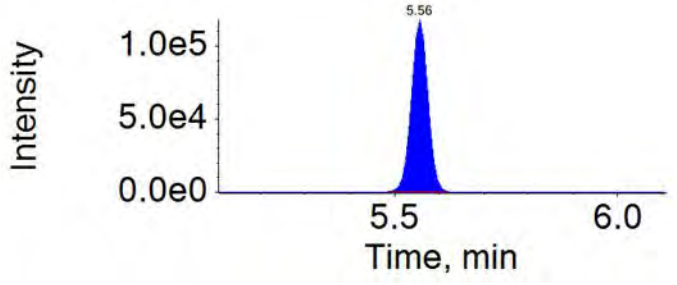
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



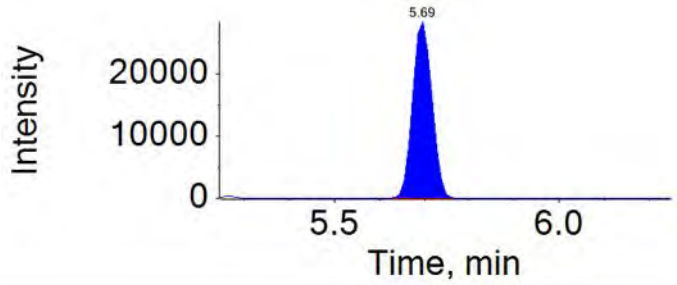


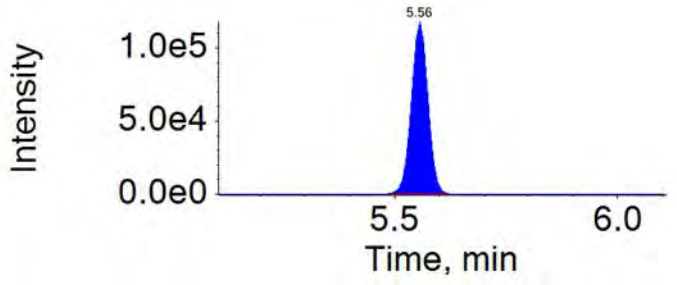
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



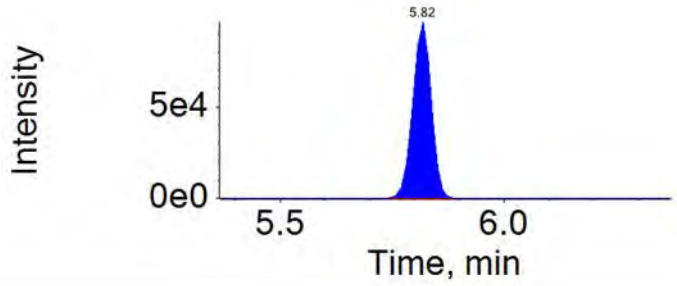


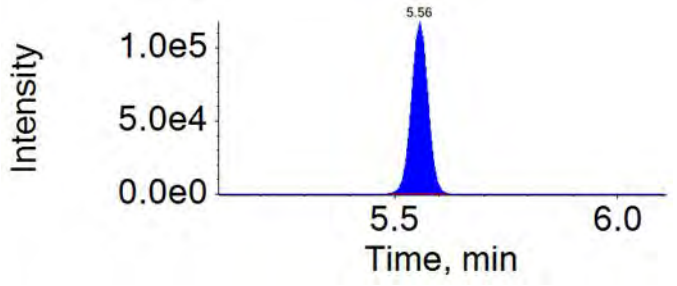
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





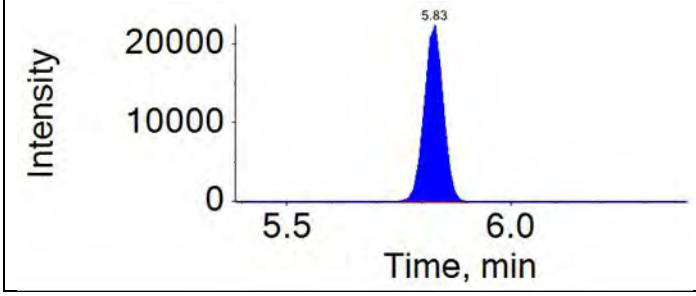
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

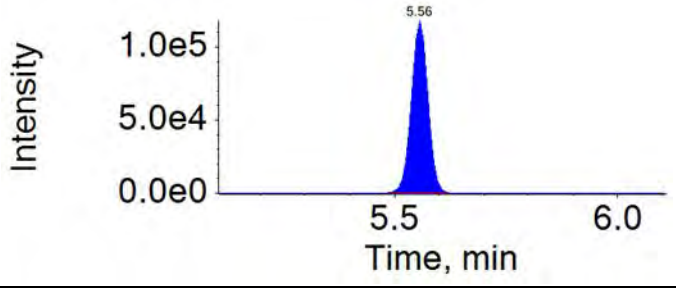




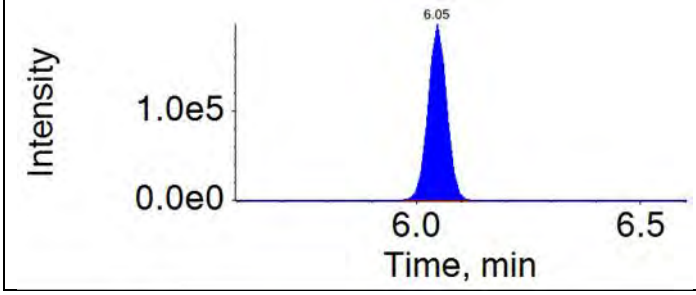
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

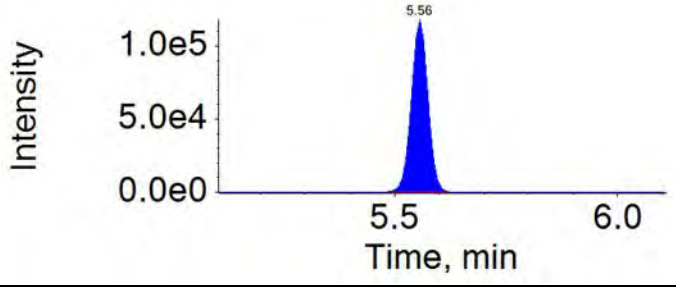
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



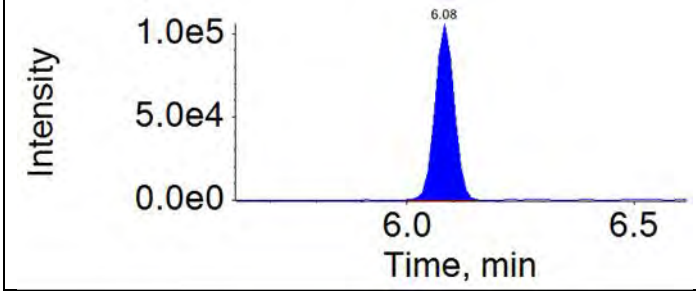


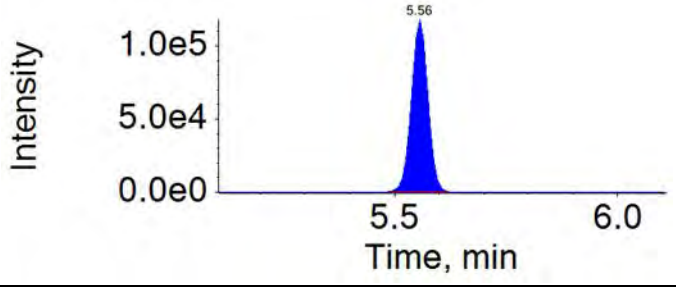
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



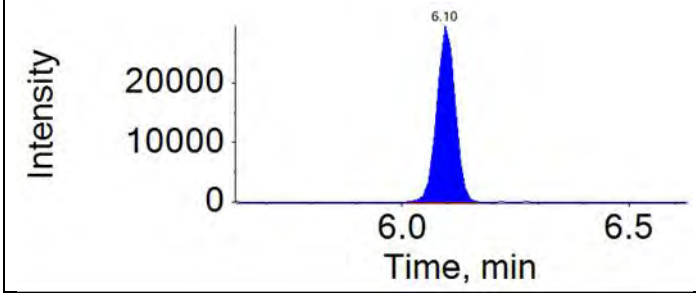


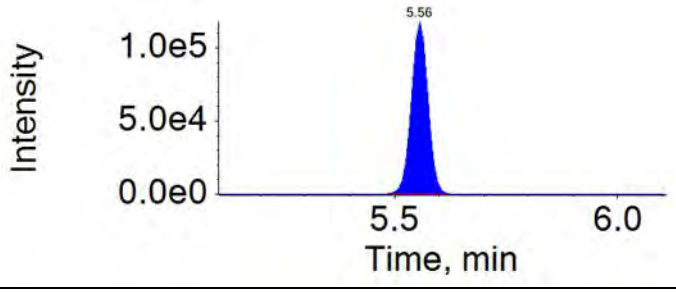
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



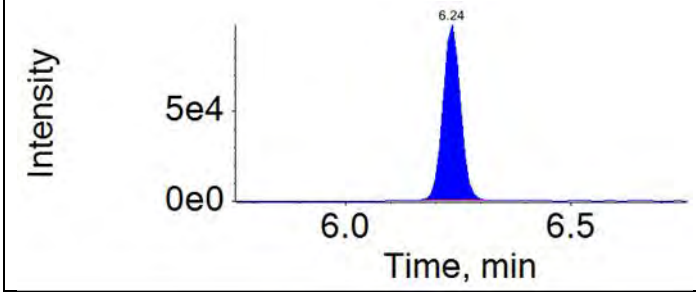


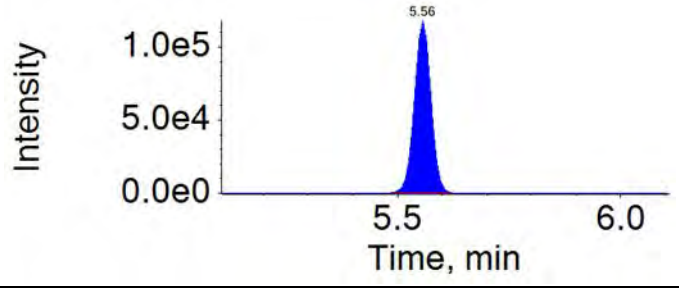
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

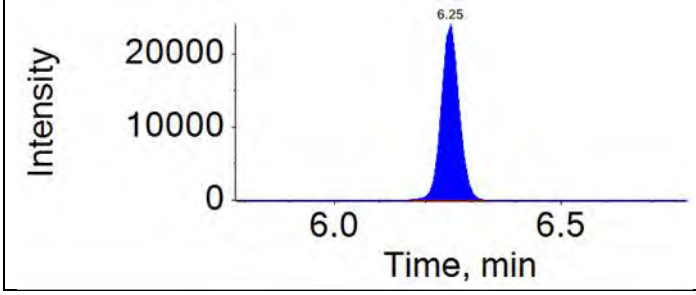
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

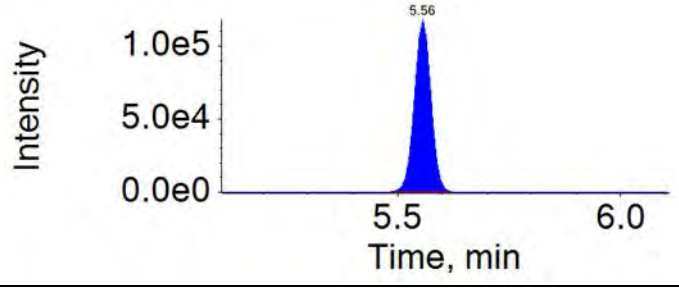
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



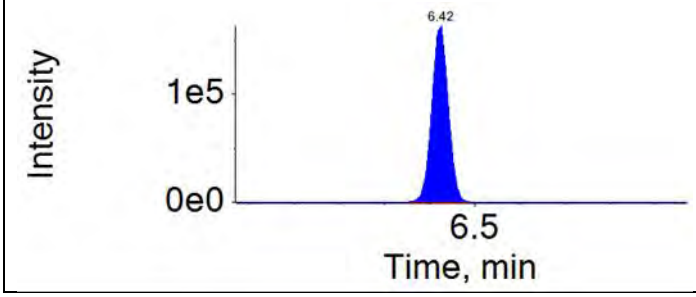


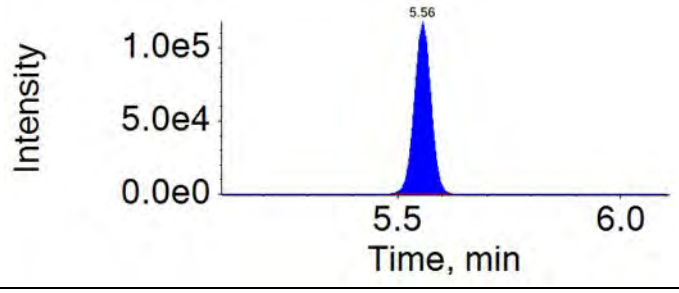
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



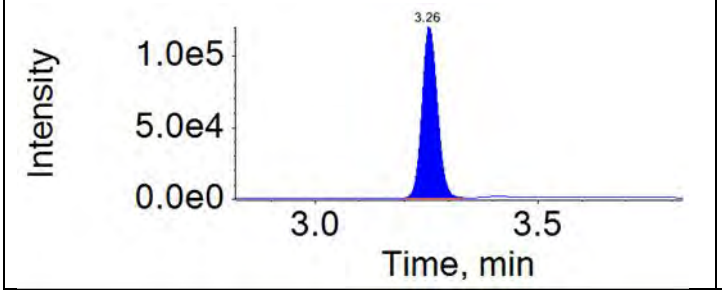


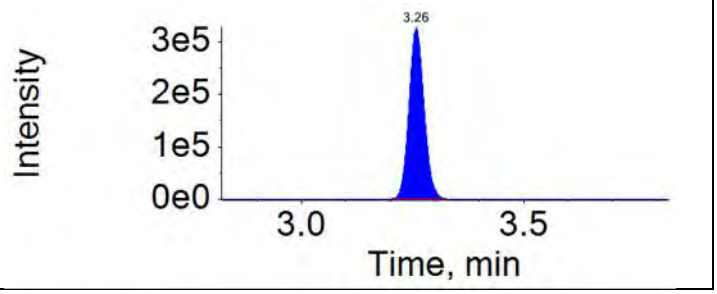
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

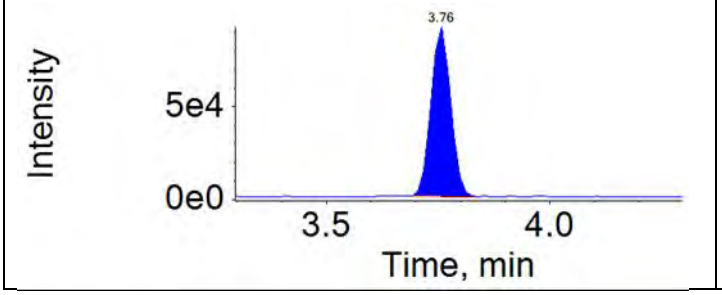
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

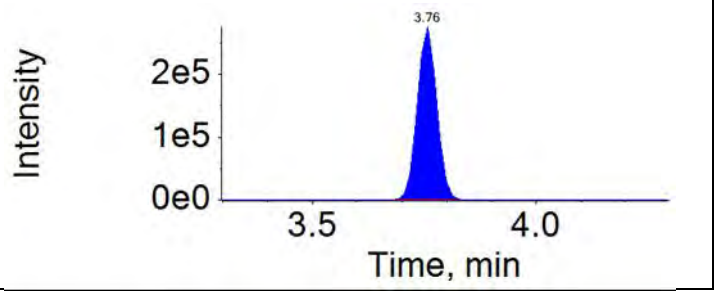
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



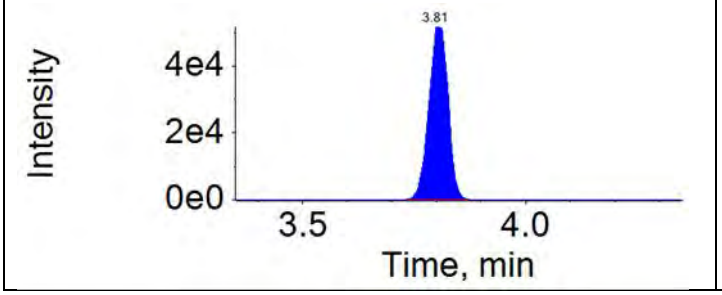


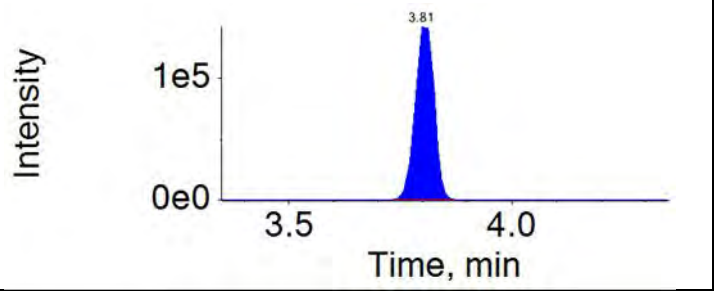
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



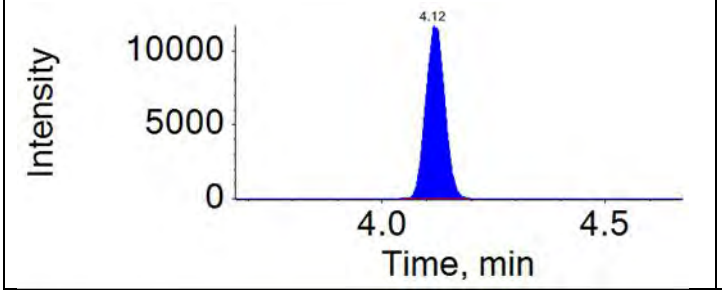


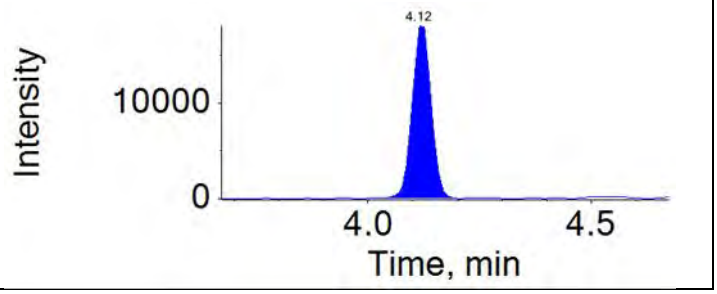
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



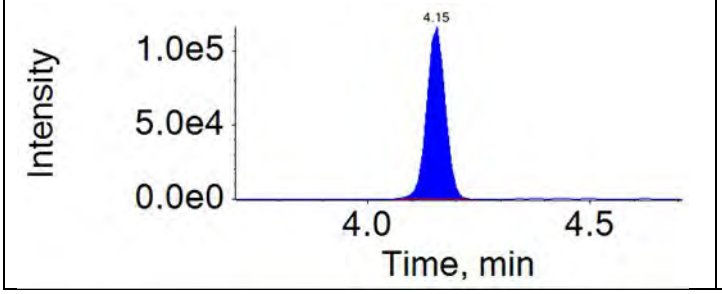


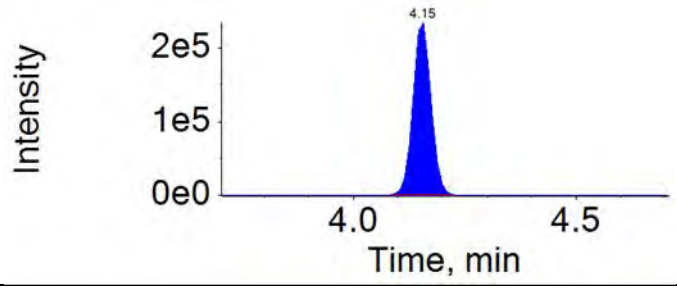
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

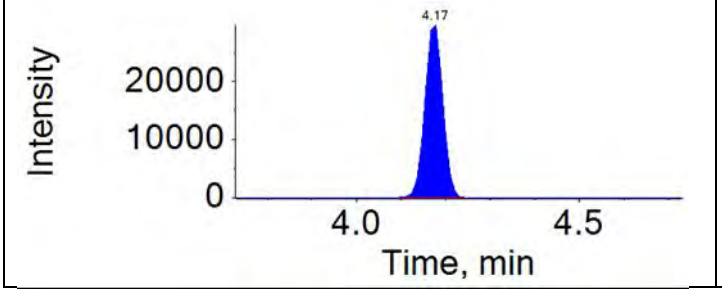
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

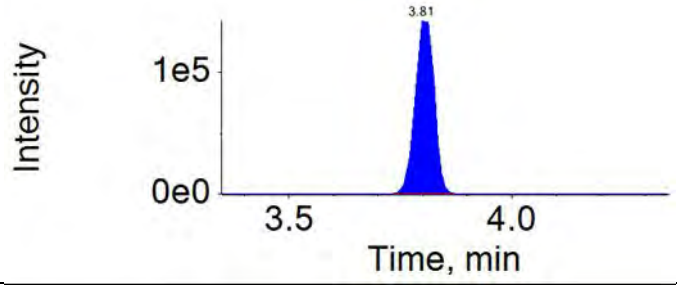
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



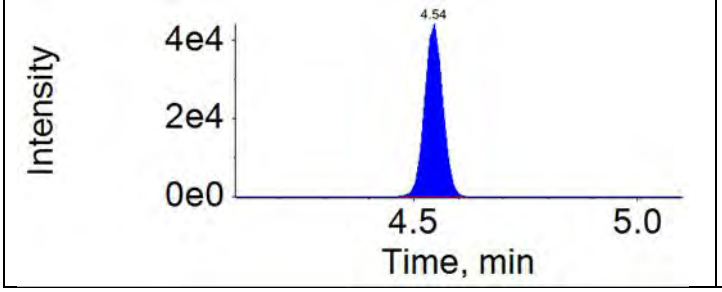


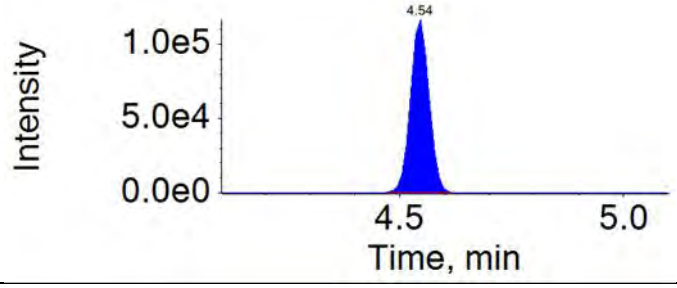
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



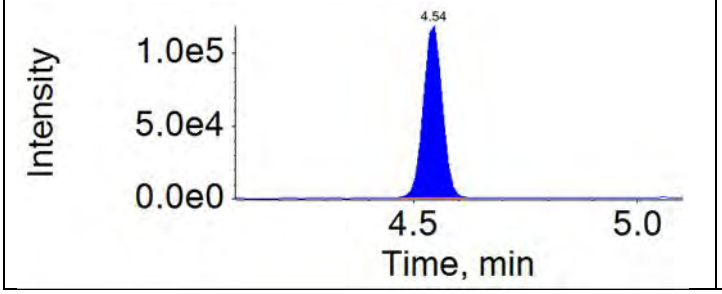


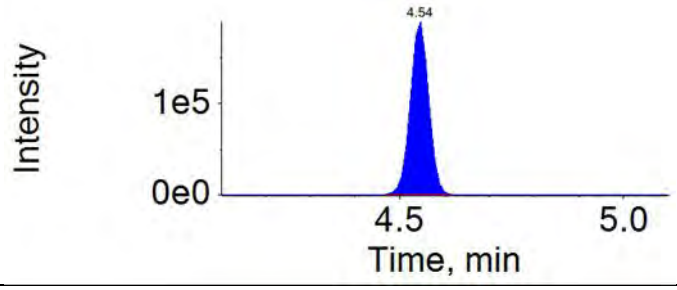
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





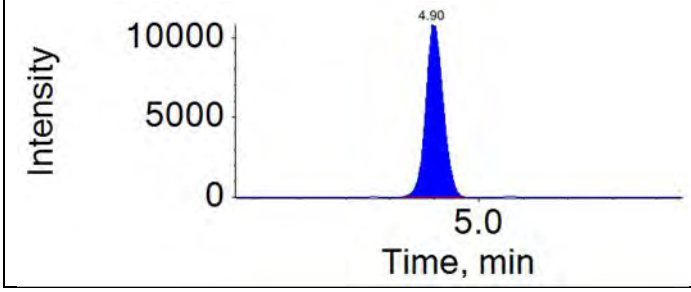
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

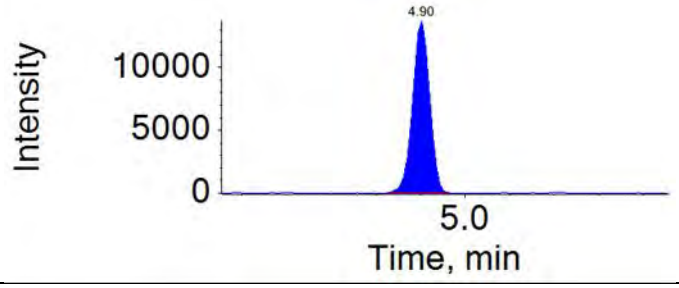




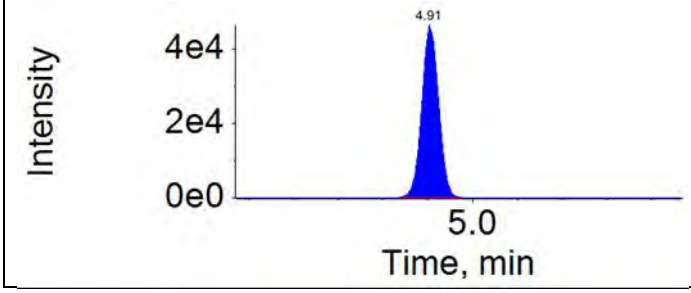
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

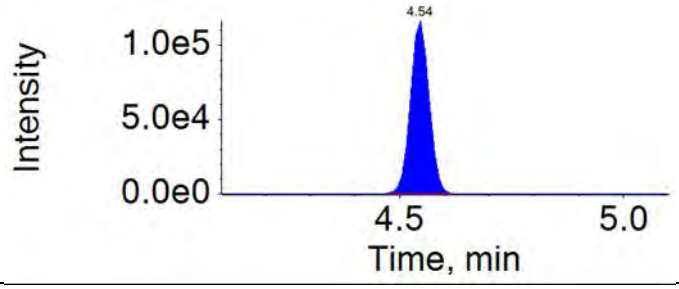
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



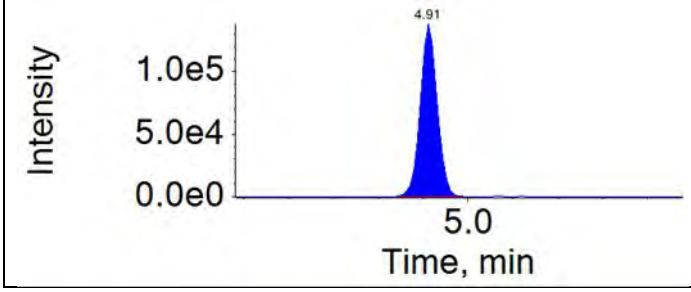


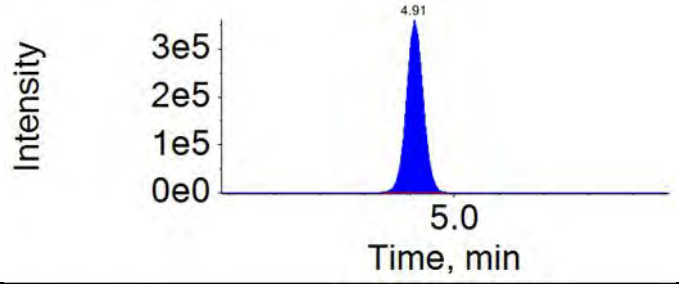
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



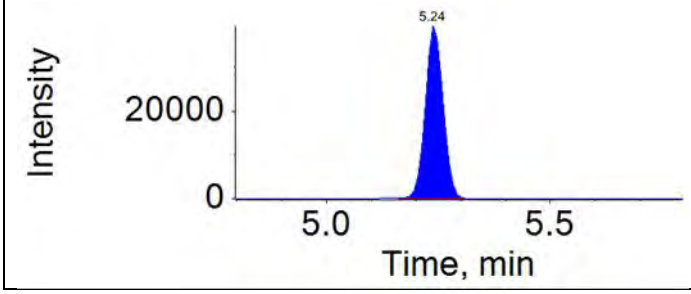


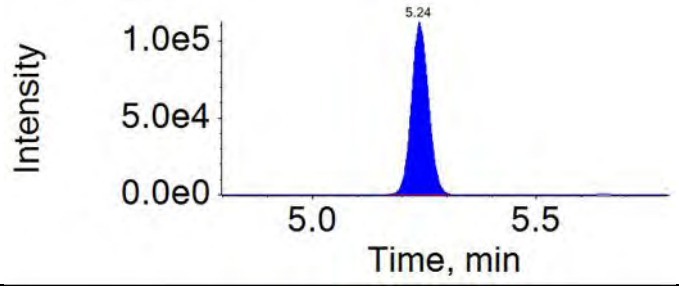
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



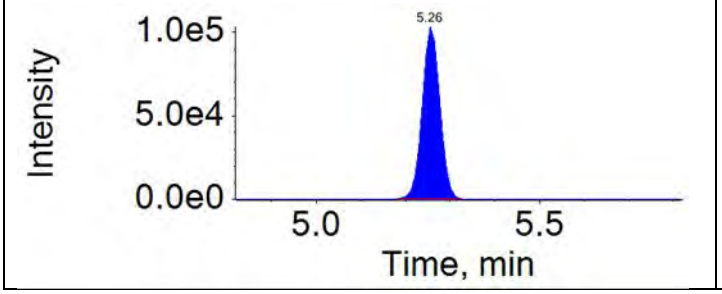


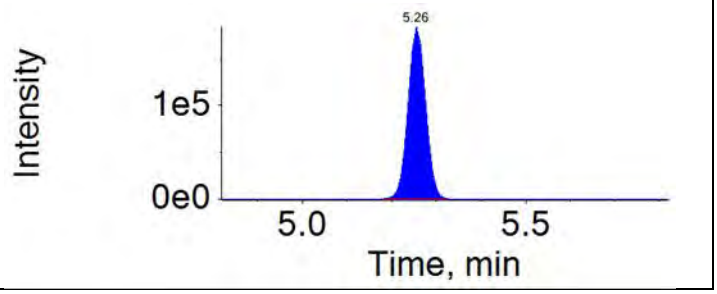
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

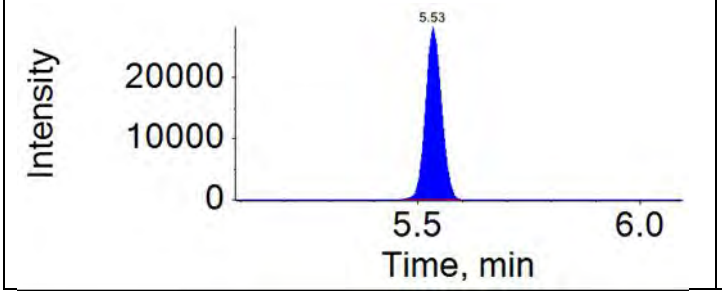
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

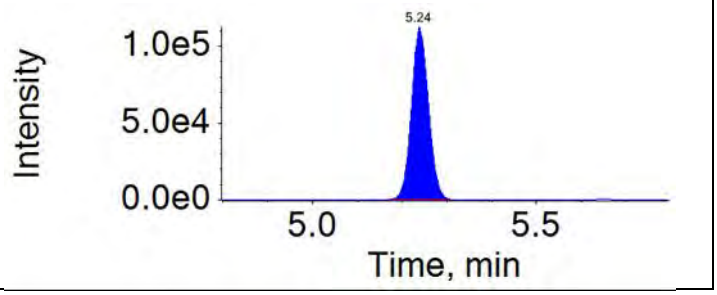
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



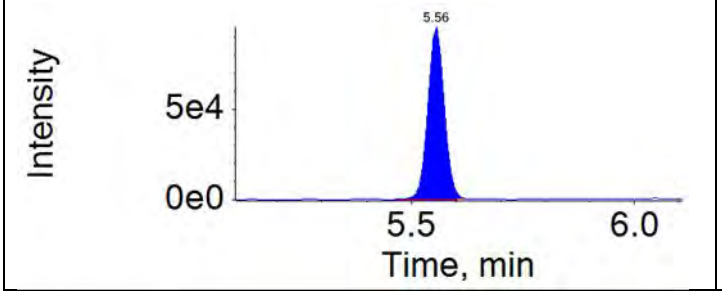


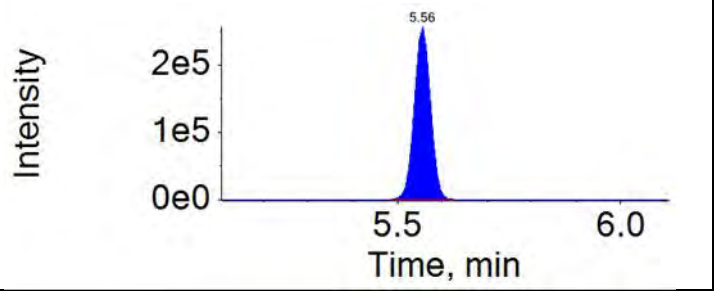
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



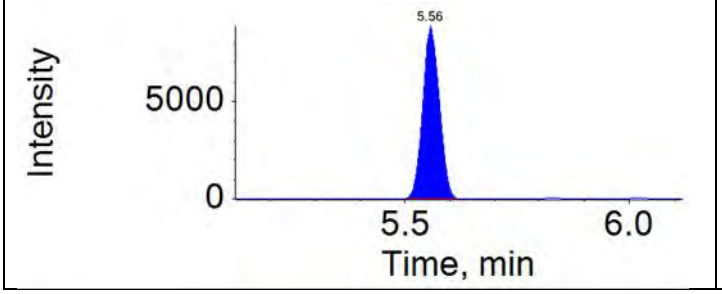


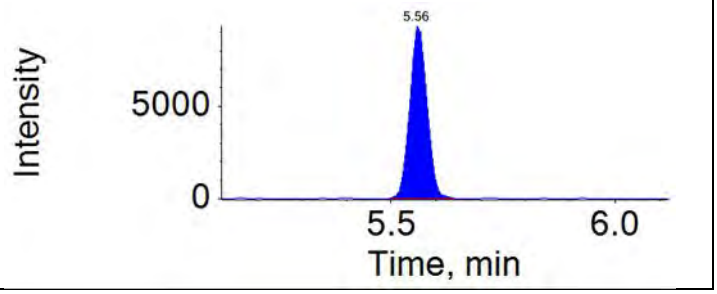
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



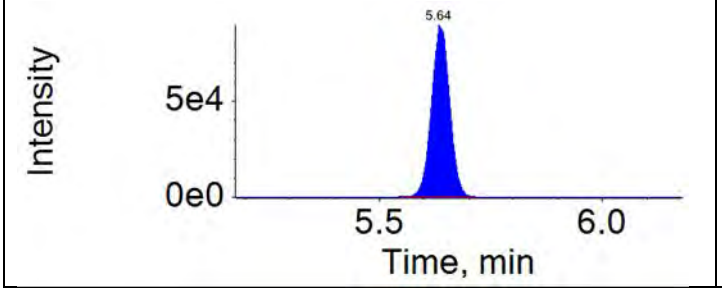


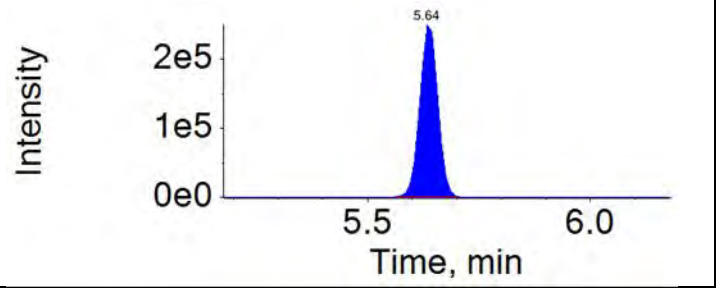
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

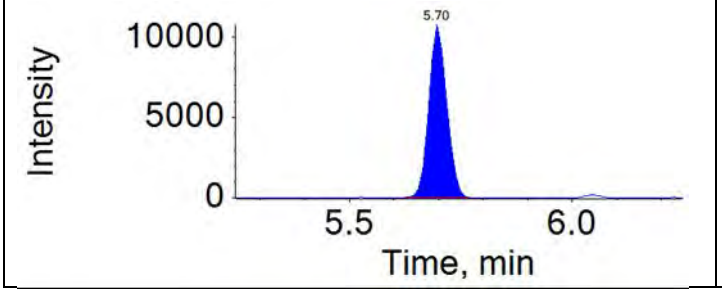
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

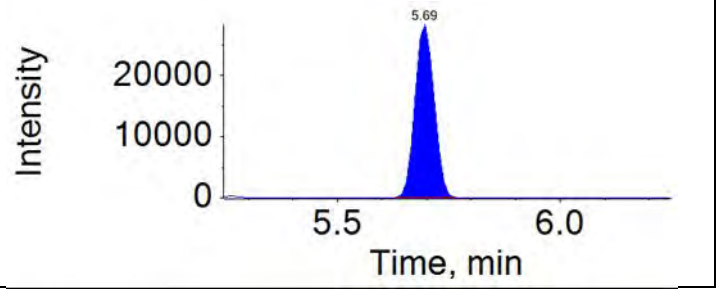
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



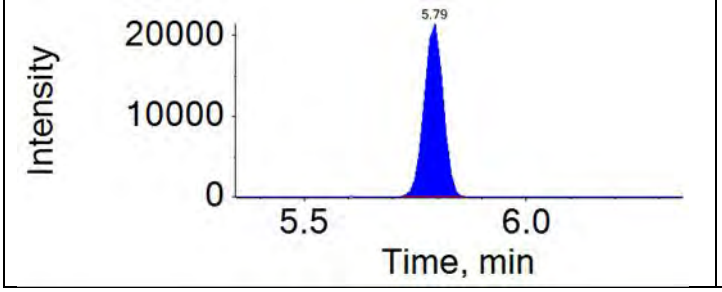


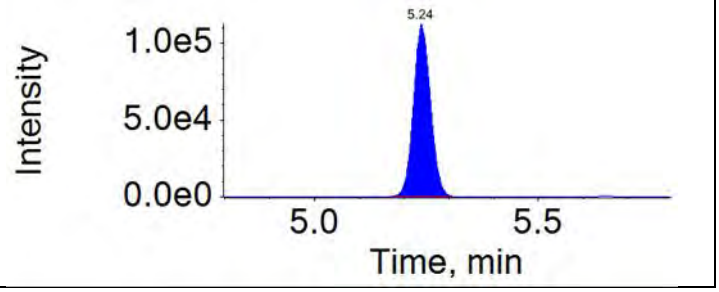
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



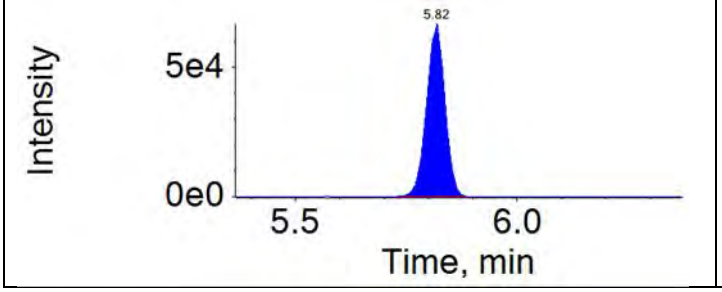


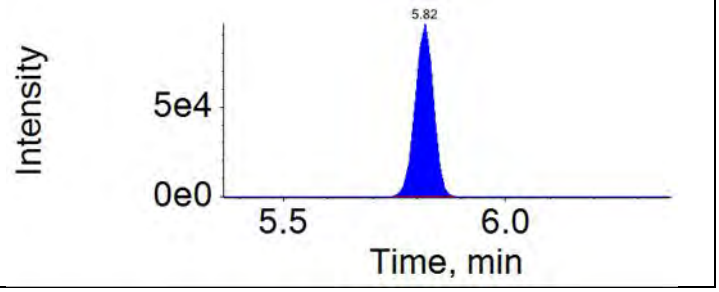
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



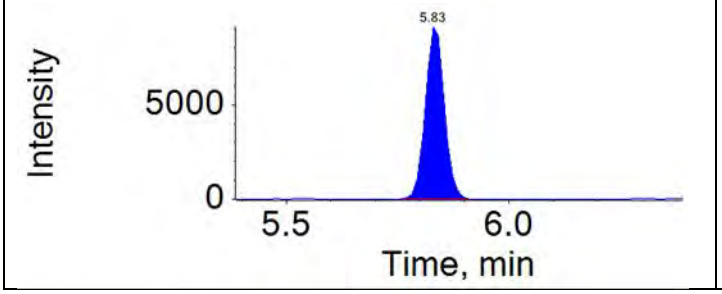


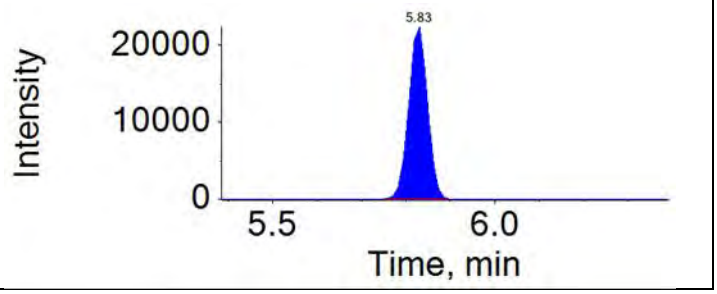
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

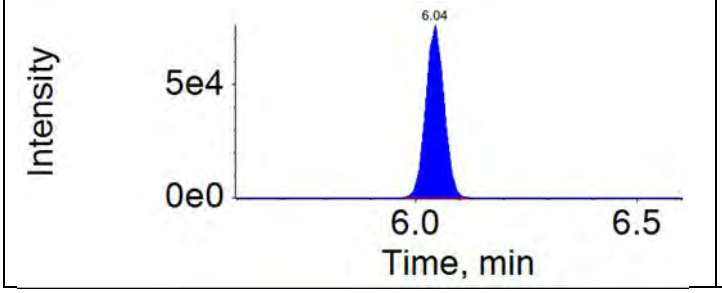
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

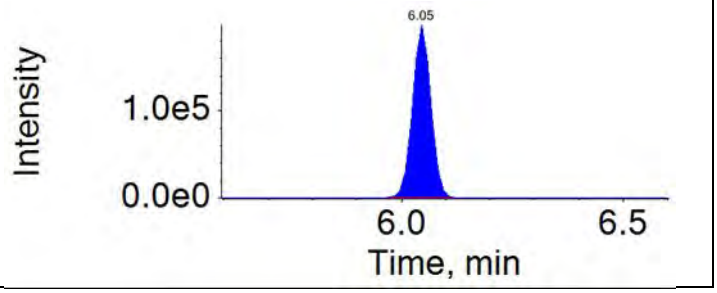
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



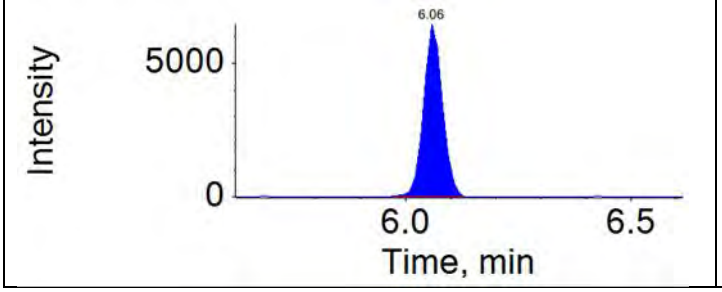


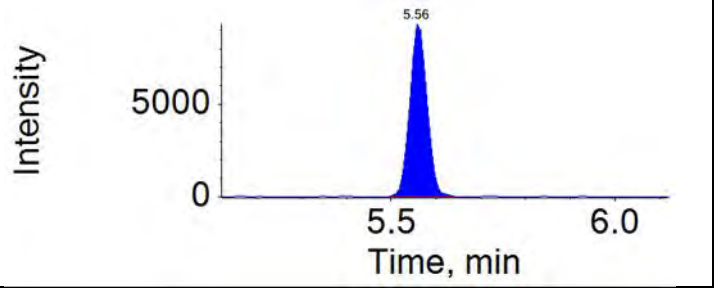
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



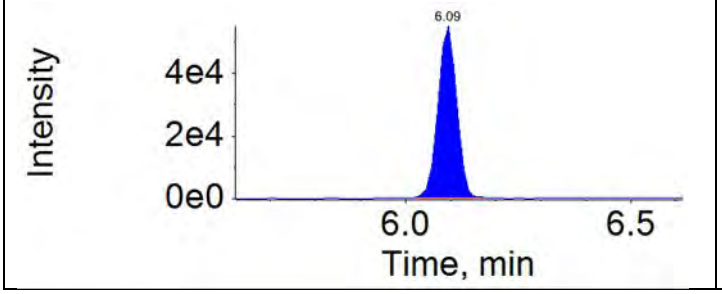


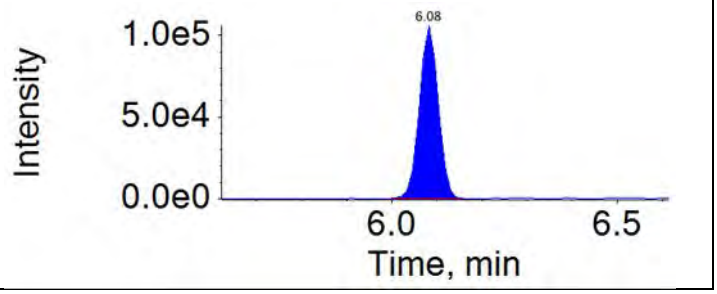
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





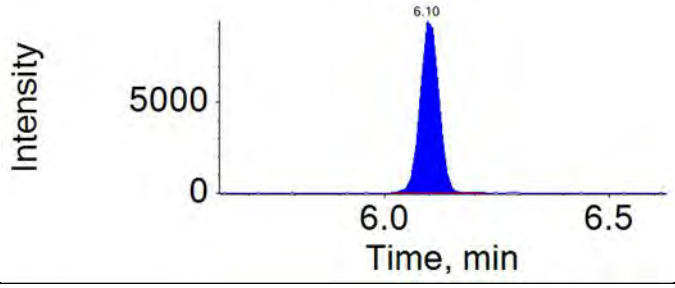
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0

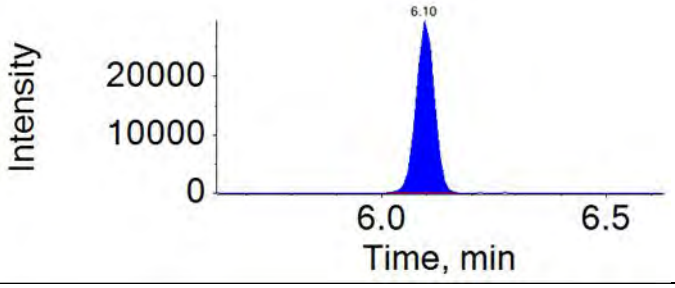




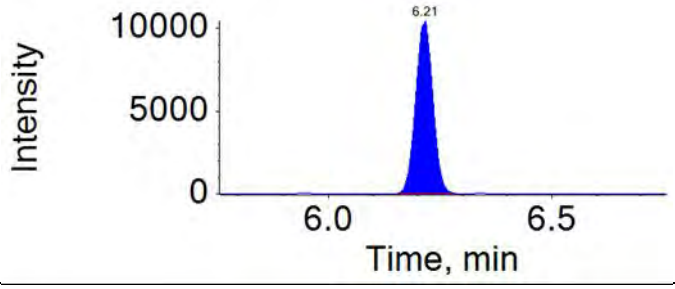
ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

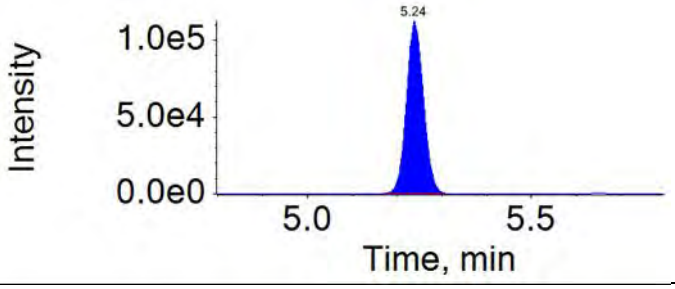
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



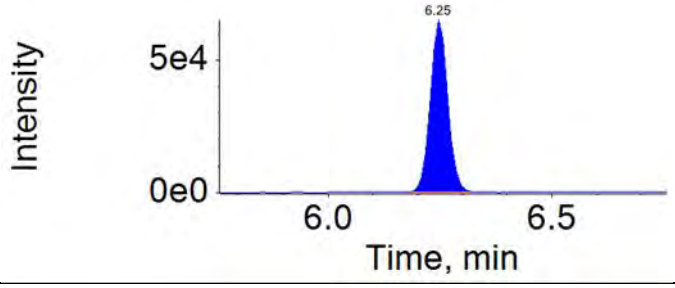


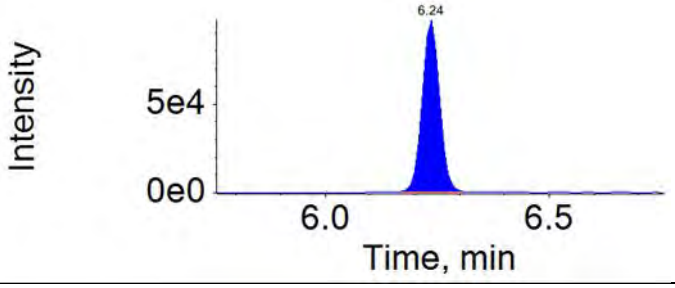
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



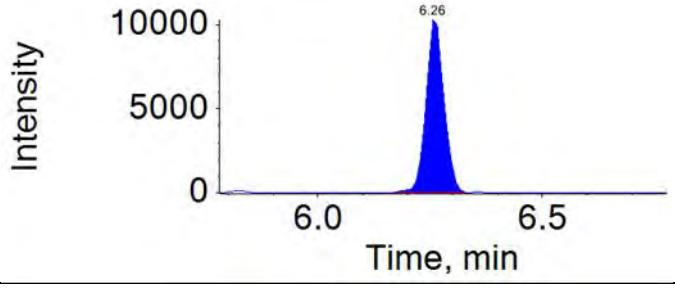


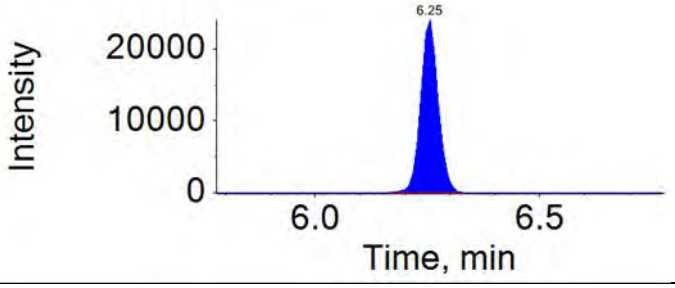
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0



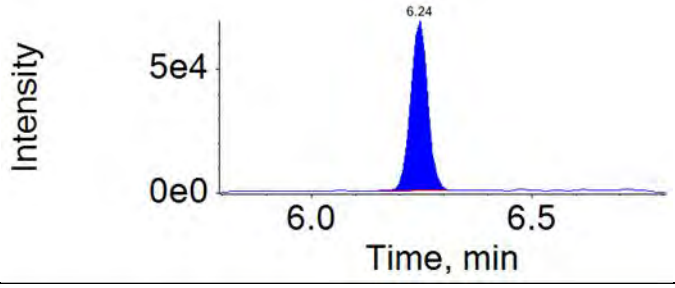
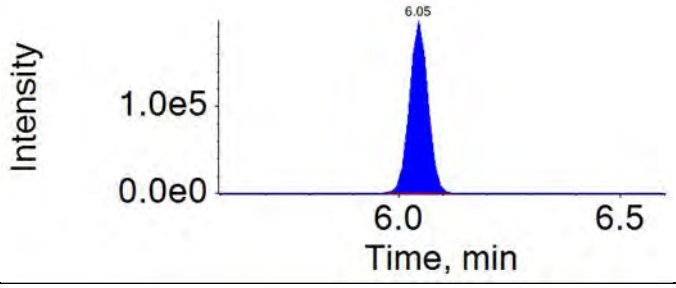


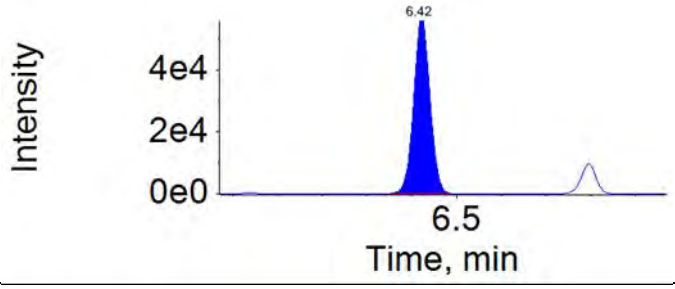
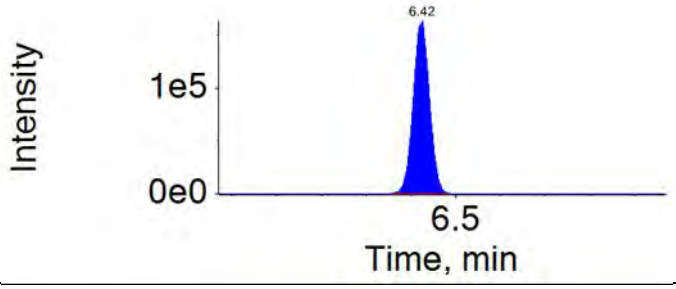
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

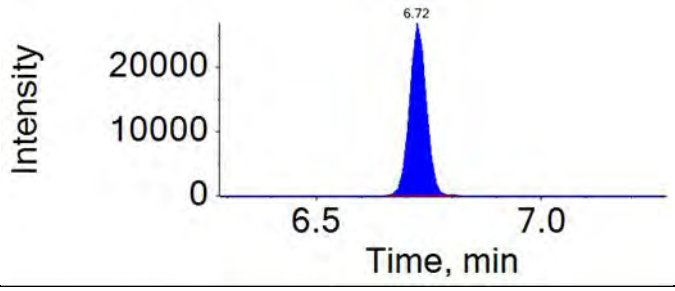
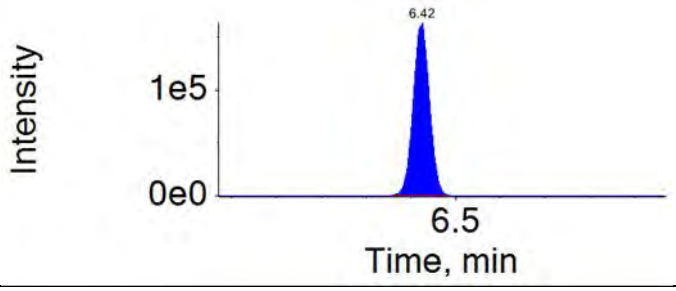


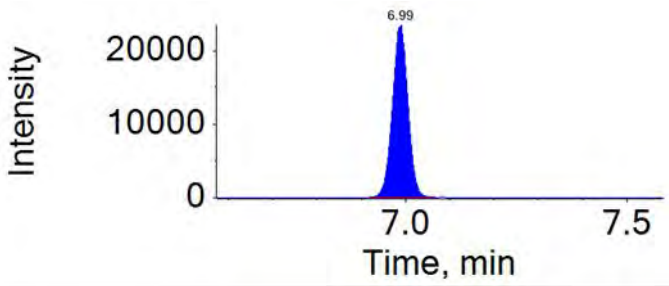
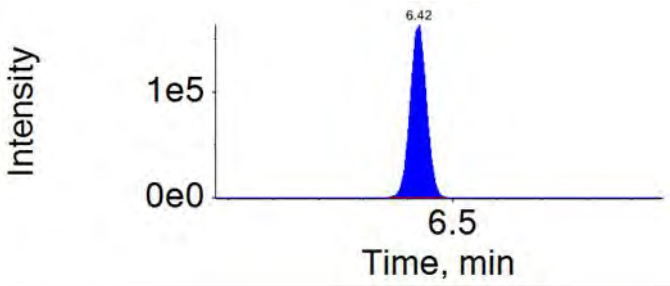


ICAL Name: 18NOV07DCAL **Result Table:** 18NOV08DCCV1-3 11/8/2018 5:00:30 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

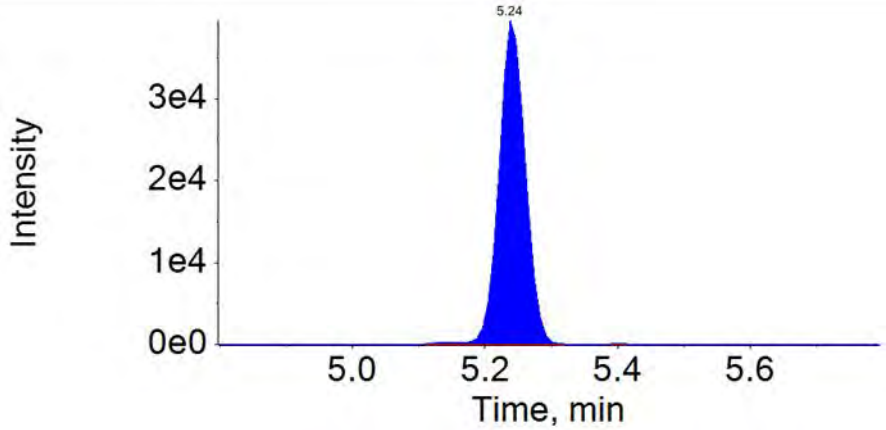
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

Results Table Name: 18NOV08DCCV1-3
Results Table Date: 11/8/2018 5:00:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
109990.6
Mass Range:
499.0 / 80.0
File Name:
18NOV08D-17.wiff
Sample Name:
CCV2_CAL3



Integration Comment: incorrect integration

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

Results Table Name: 18NOV08DCCV1-3
Results Table Date: 11/8/2018 5:00:30 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

Ion Ratio Report

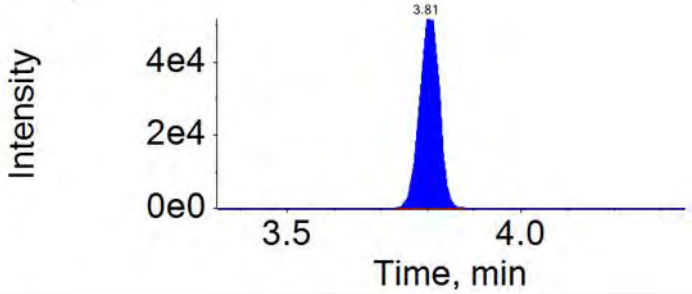
Sample Name: CCV2_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV08D-17.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	156460.3	A	N/A	1.0000			
PFBS_2	3.80	1.00	57573.4	A	N/A	0.3680	3	50	
4:2-FTS	4.12	1.00	34764.3	A	N/A	1.0000			
4:2-FTS_2	4.12	1.00	20777.1	A	N/A	0.5977	-6	50	
PFHxA	4.15	1.00	335347.1	A	N/A	1.0000			
PFHxA_2	4.15	1.00	3674.6	A	N/A	0.0110	-5	50	
PFPeS	4.17	1.10	83722.5	A	N/A	1.0000			
PFPeS_2	4.17	1.10	42732.0	A	N/A	0.5104	-5	50	
PFHxS	4.54	1.00	124186.1	A	N/A	1.0000			
PFHxS_2	4.54	1.00	44615.0	A	N/A	0.3593	1	50	
PFHpA	4.54	1.00	347629.0	A	N/A	1.0000			
PFHpA_2	4.54	1.00	20995.6	A	N/A	0.0604	5	50	
6:2-FTS	4.90	1.00	29608.3	A	N/A	1.0000			
6:2-FTS_2	4.90	1.00	20578.7	A	N/A	0.6950	3	50	
PFHpS	4.91	1.08	120458.6	A	N/A	1.0000			
PFHpS_2	4.90	1.08	49873.1	A	N/A	0.4140	5	50	
PFOA	4.91	1.00	359644.3	A	N/A	1.0000			
PFOA_2	4.91	1.00	20435.1	A	N/A	0.0568	-10	50	
PFOS	5.24	1.00	109104.0	M	N/A	1.0000			
PFOS_2	5.24	1.00	38436.5	A	N/A	0.3523	1	50	
PFNA	5.26	1.00	282136.2	A	N/A	1.0000			
PFNA_2	5.26	1.00	6037.5	A	N/A	0.0214	3	50	
PFNS	5.53	1.06	69598.3	A	N/A	1.0000			
PFNS_2	5.54	1.06	33908.1	A	N/A	0.4872	0	50	
PFDA	5.56	1.00	242141.4	A	N/A	1.0000			
PFDA_2	5.55	1.00	1492.8	A	N/A	0.0062	9	50	
8:2-FTS	5.56	1.00	22599.9	A	N/A	1.0000			
8:2-FTS_2	5.56	1.00	16769.7	A	N/A	0.7420	20	50	
NMeFOSAA	5.70	1.00	29918.2	A	N/A	1.0000			
NMeFOSAA_2	5.70	1.00	6430.6	A	N/A	0.2149	-3	50	
PFDS	5.79	1.11	63911.9	A	N/A	1.0000			
PFDS_2	5.79	1.11	27450.2	A	N/A	0.4295	-8	50	
PFUnDA	5.82	1.00	193109.7	A	N/A	1.0000			
PFUnDA_2	5.83	1.00	545.7	A	N/A	0.0028	-10	50	
NEtFOSAA	5.83	1.00	27108.5	A	N/A	1.0000			
NEtFOSAA_2	5.83	1.00	19491.8	A	N/A	0.7190	18	50	
PFDoDA	6.04	1.00	218277.5	A	N/A	1.0000			
PFDoDA_2	6.05	1.00	2769.6	A	N/A	0.0127	16	50	
10:2-FTS	6.06	1.09	18821.0	A	N/A	1.0000			
10:2-FTS_2	6.06	1.09	10609.0	A	N/A	0.5637	-20	50	
PFTrDA	6.24	1.03	181400.4	A	N/A	1.0000			
PFTrDA_2	6.24	1.03	1471.5	A	N/A	0.0081	-16	50	
PFTeDA	6.42	1.00	142507.9	A	N/A	1.0000			
PFTeDA_2	6.42	1.00	831.3	A	N/A	0.0058	5	50	
PFHxDA	6.72	1.05	69146.5	A	N/A	1.0000			
PFHxDA_2	6.72	1.05	3705.6	A	N/A	0.0536	-10	50	
PFODA	6.99	1.09	57062.5	A	N/A	1.0000			
PFODA_2	6.99	1.09	1616.7	A	N/A	0.0283	10	50	

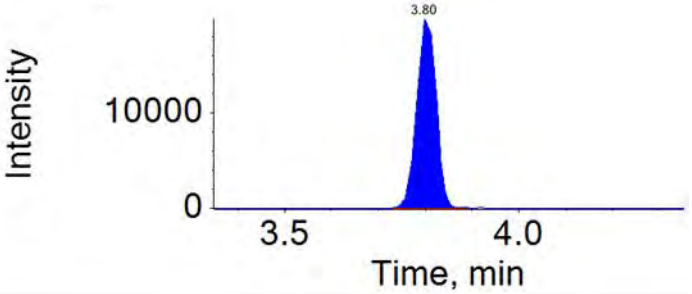
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

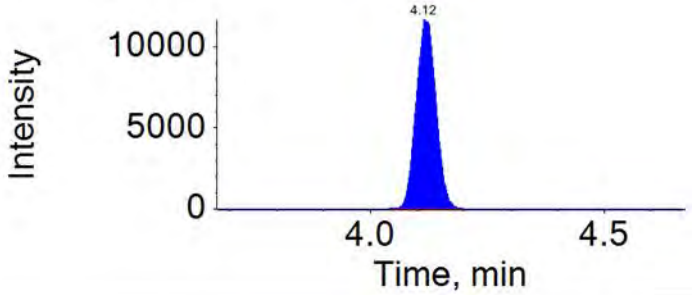
Component: PFBS
Primary Mass: 299.0 / 80.0



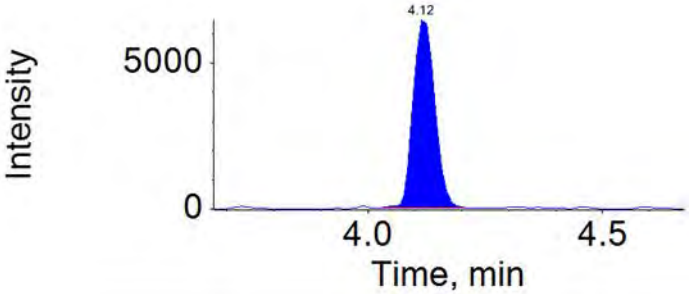
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



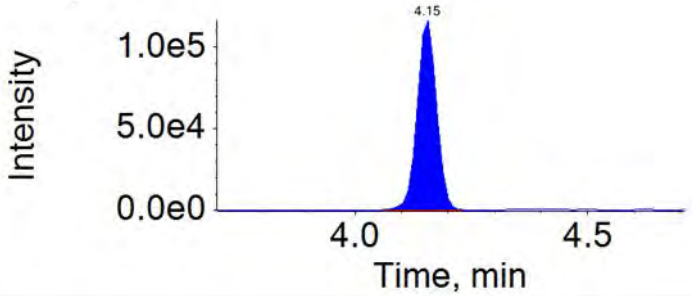
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



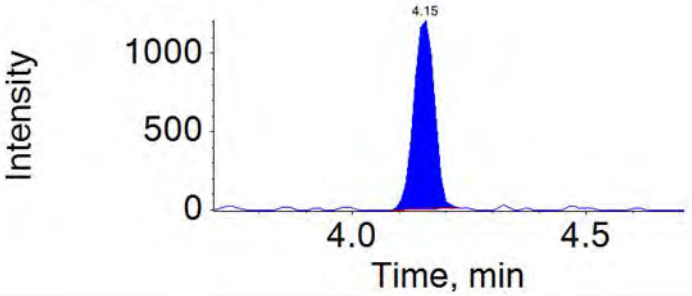
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



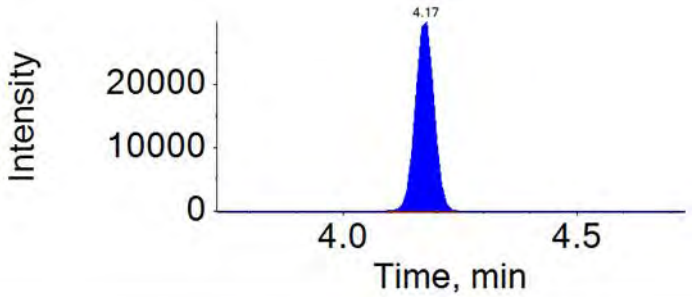
Component: PFHxA
Primary Mass: 313.0 / 269.0



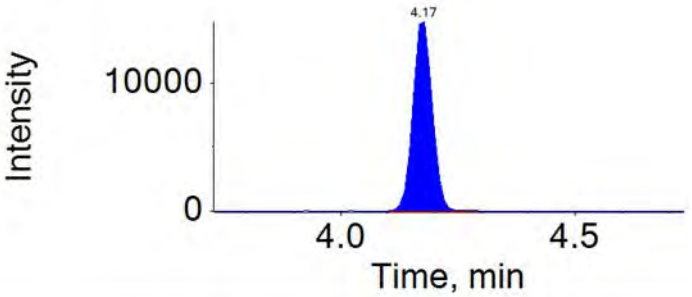
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



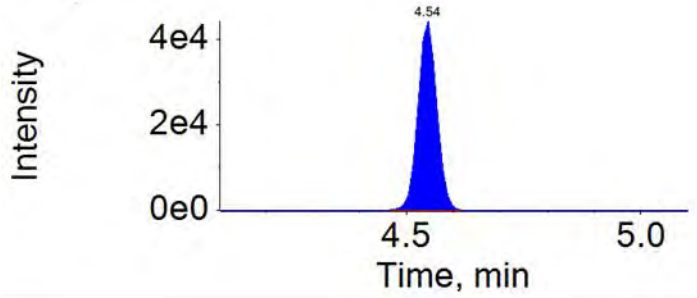
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



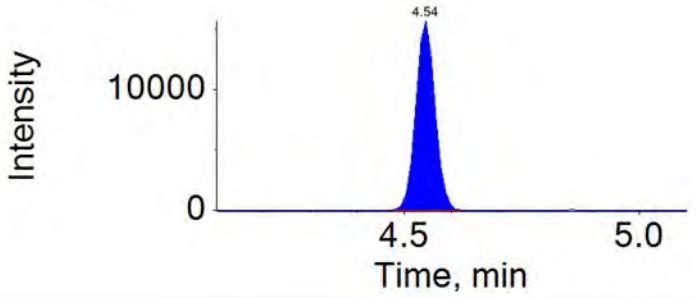
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

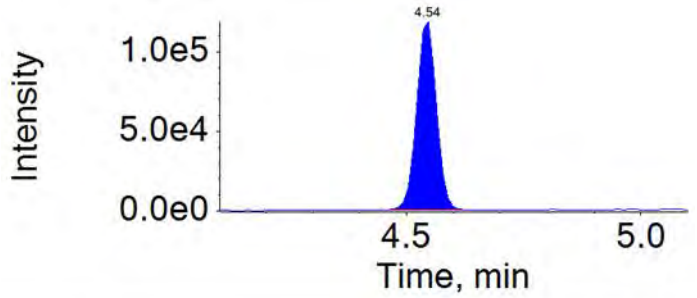
Component: PFHxS
Primary Mass: 399.0 / 80.0



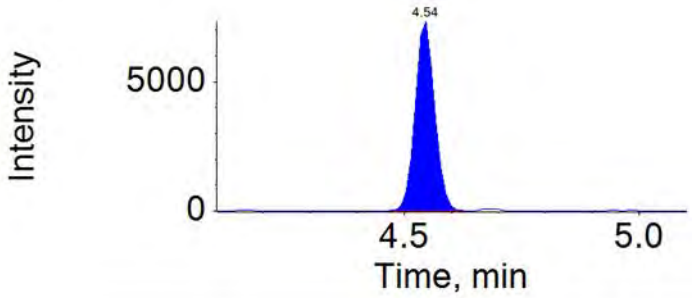
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



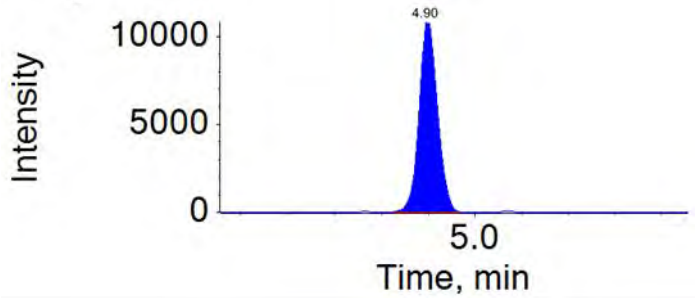
Component: PFHpA
Primary Mass: 363.0 / 319.0



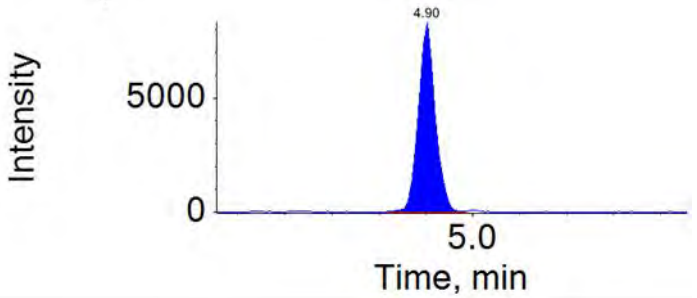
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



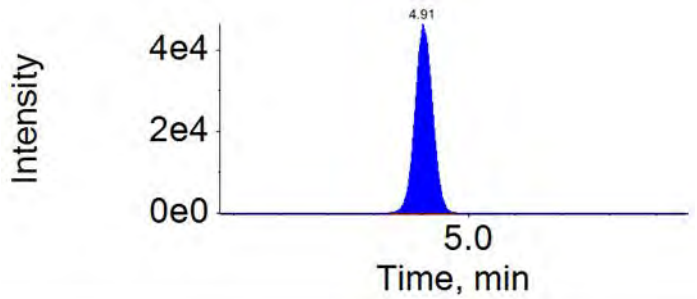
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



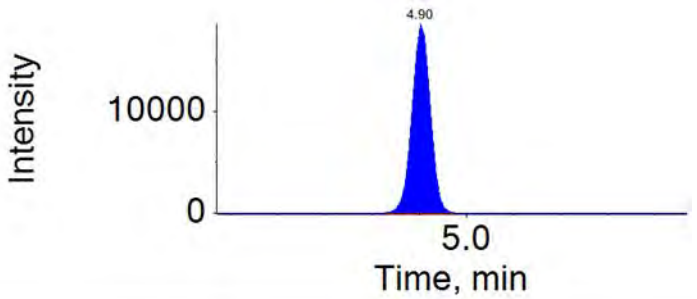
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



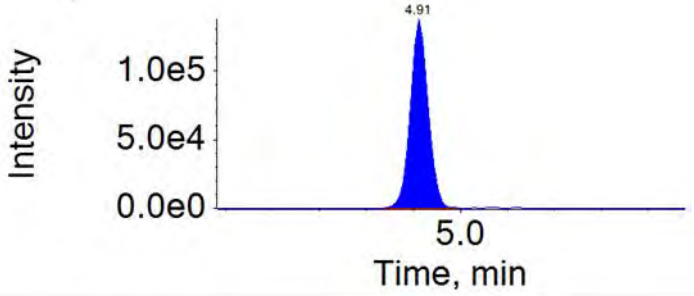
Component: PFHpS
Primary Mass: 449.0 / 80.0



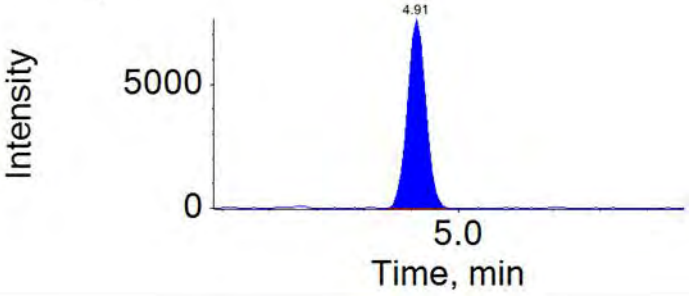
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



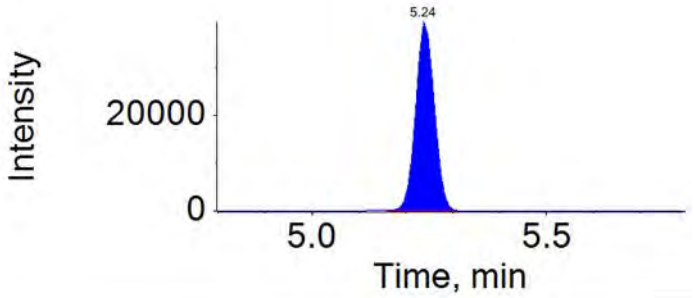
Component: PFOA
Primary Mass: 413.0 / 369.0



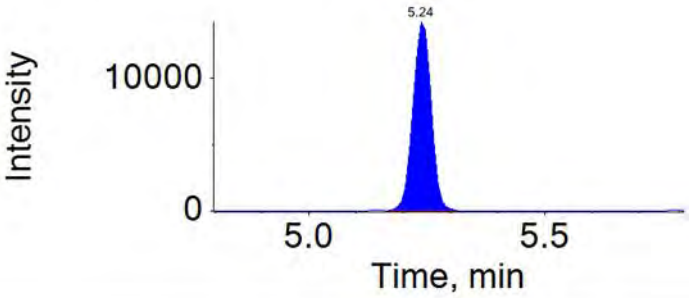
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



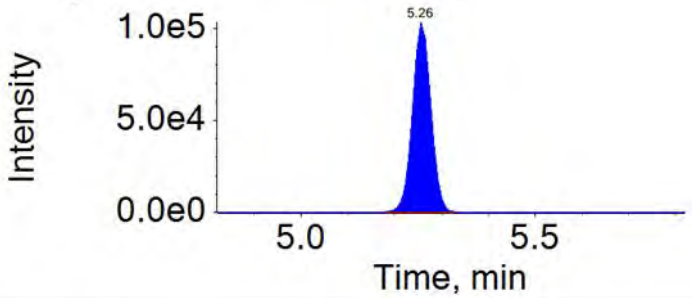
Component: PFOS
Primary Mass: 499.0 / 80.0



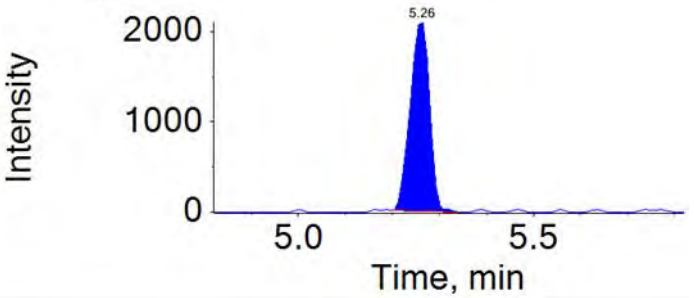
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



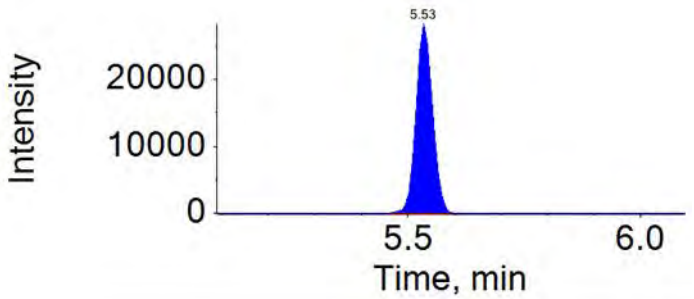
Component: PFNA
Primary Mass: 463.0 / 419.0



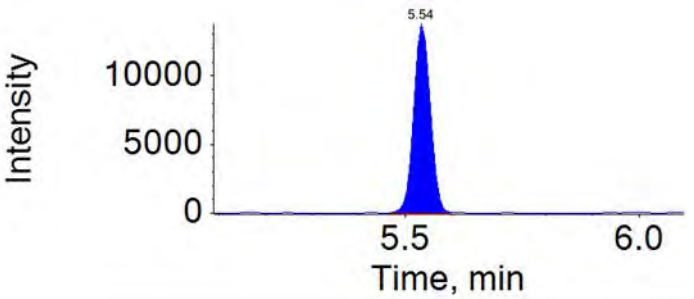
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



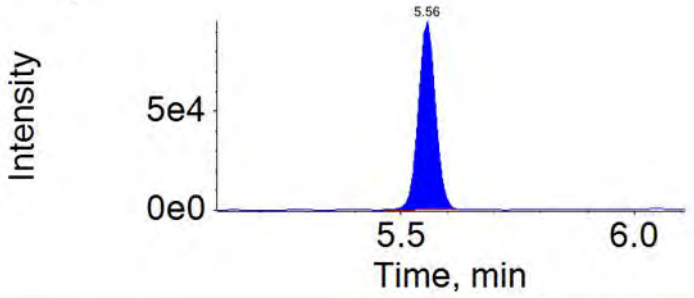
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



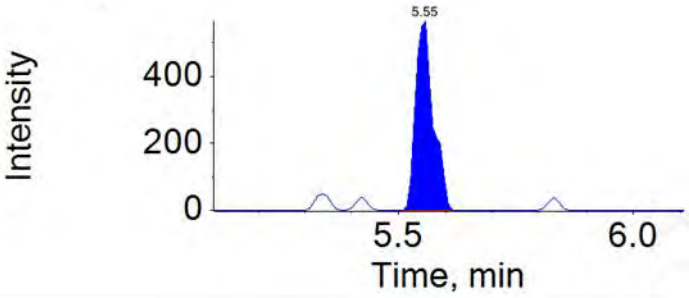
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

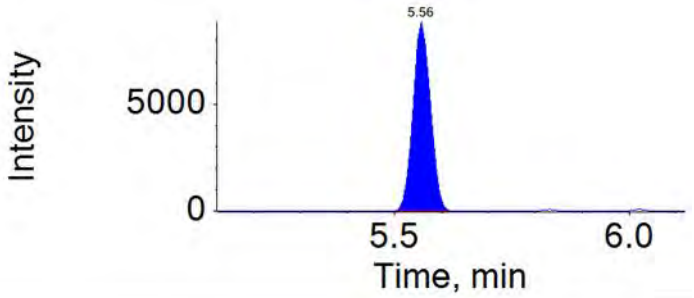
Component: PFDA
Primary Mass: 513.0 / 469.0



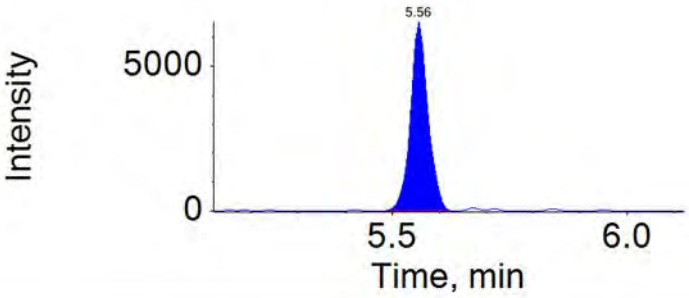
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



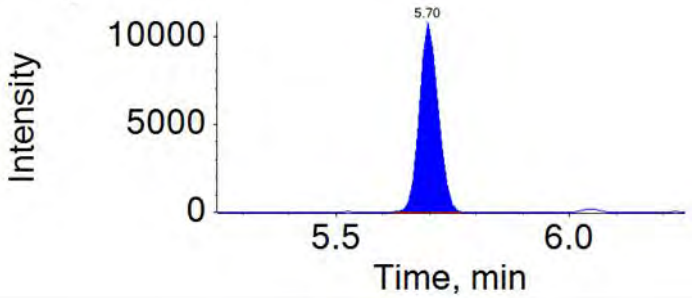
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



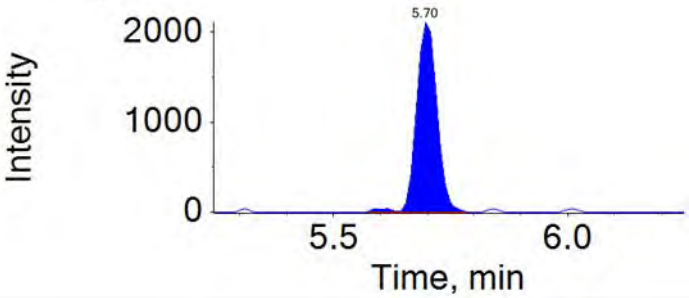
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



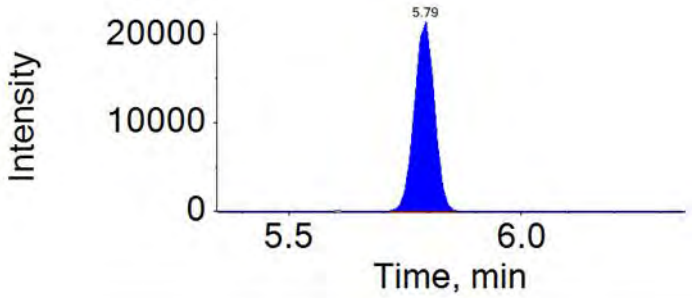
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



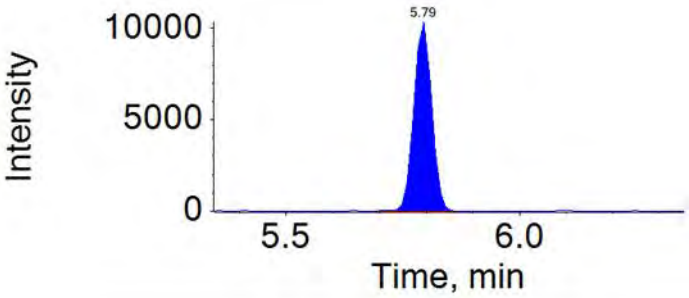
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



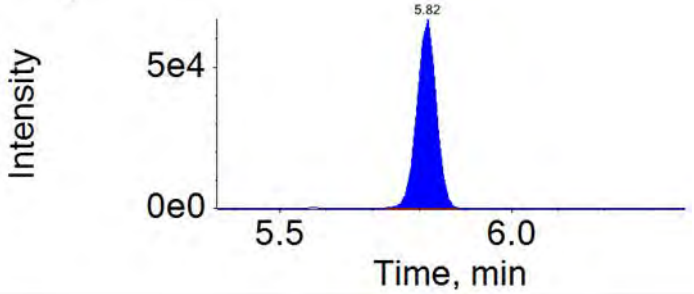
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



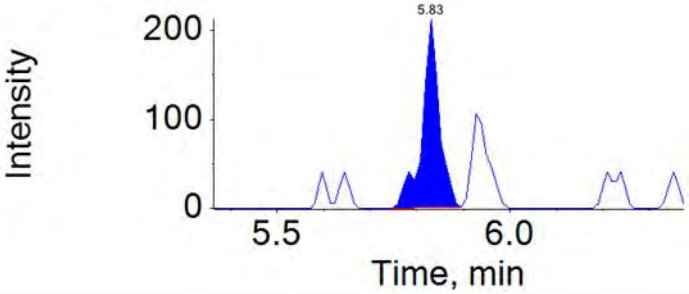
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

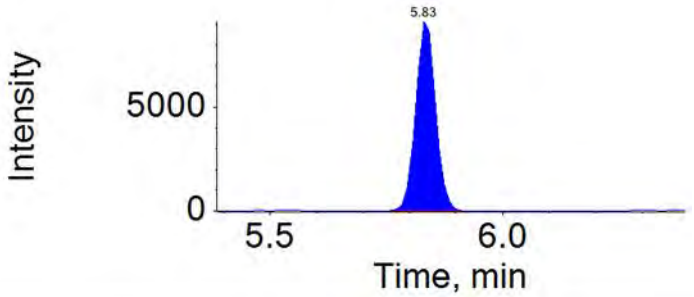
Component: PFUnDA
Primary Mass: 563.0 / 519.0



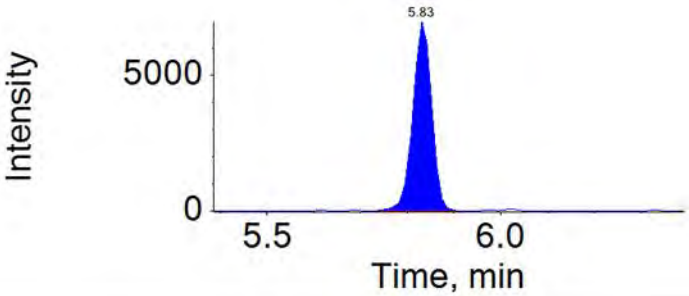
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



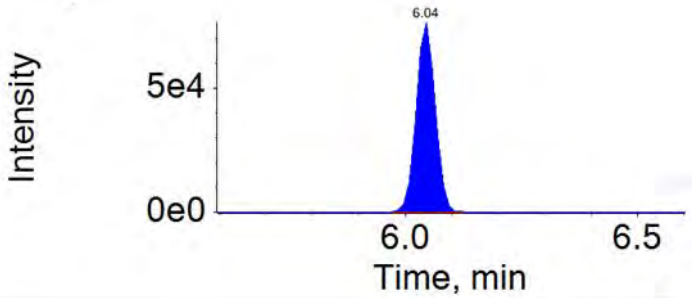
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



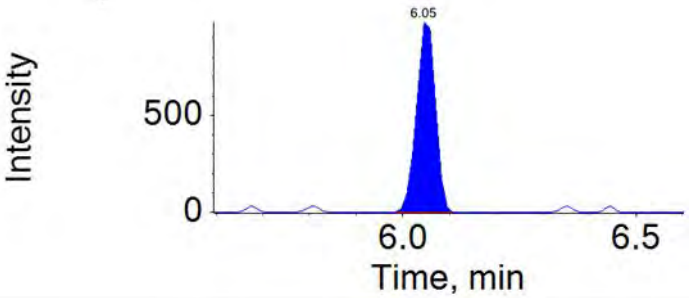
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



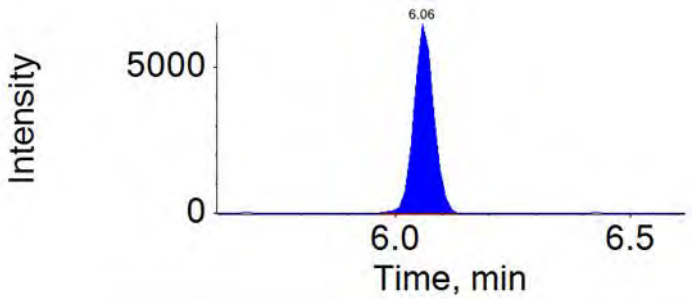
Component: PFDoDA
Primary Mass: 613.0 / 569.0



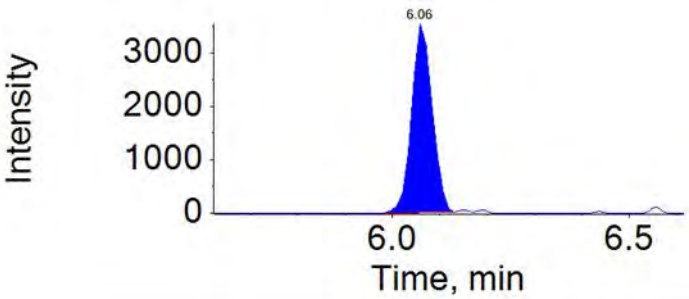
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



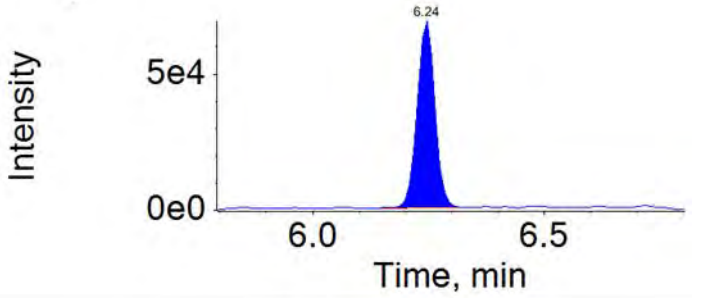
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



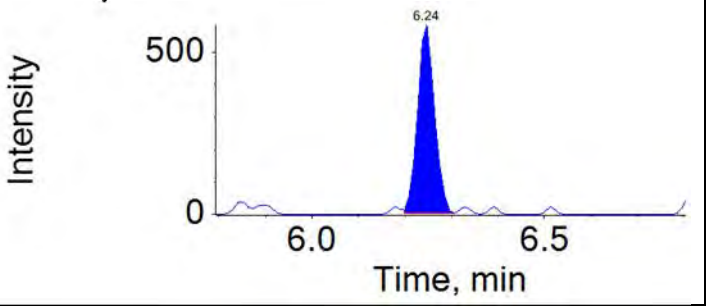
APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

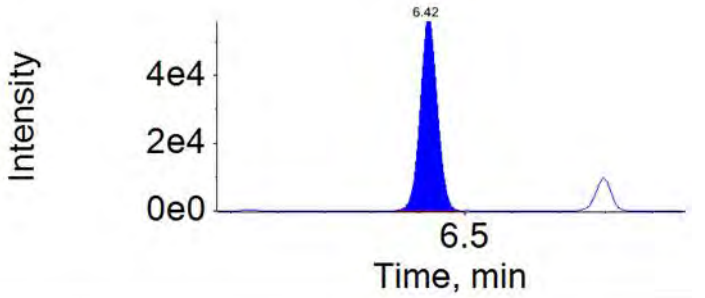
Component: PFTrDA
Primary Mass: 663.0 / 619.0



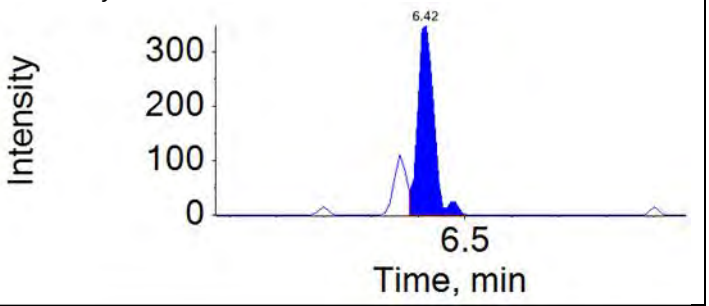
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



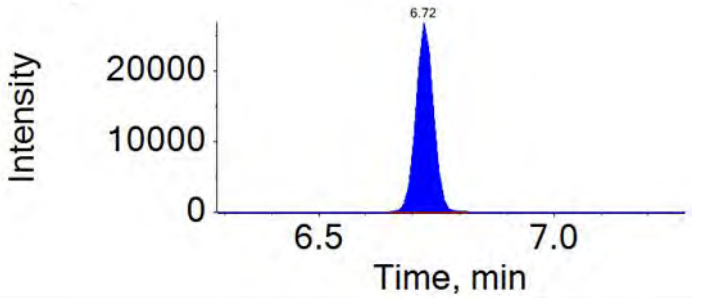
Component: PFTeDA
Primary Mass: 713.0 / 669.0



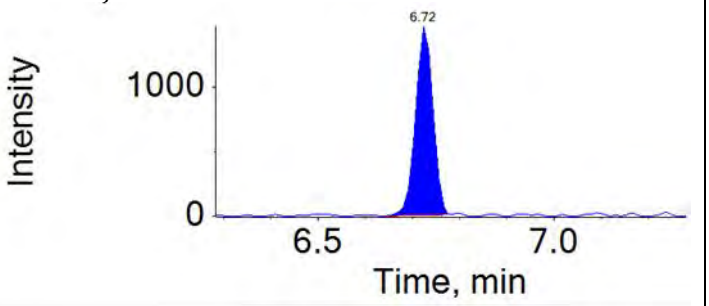
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



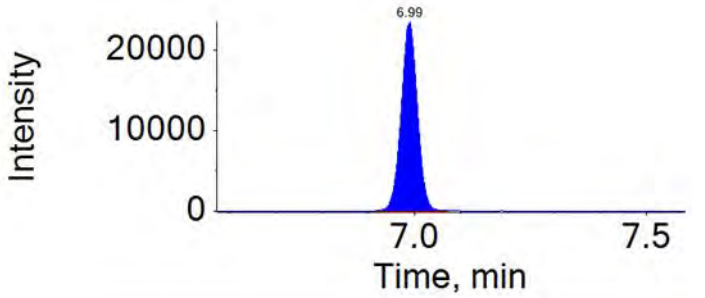
Component: PFHxDA
Primary Mass: 813.0 / 769.0



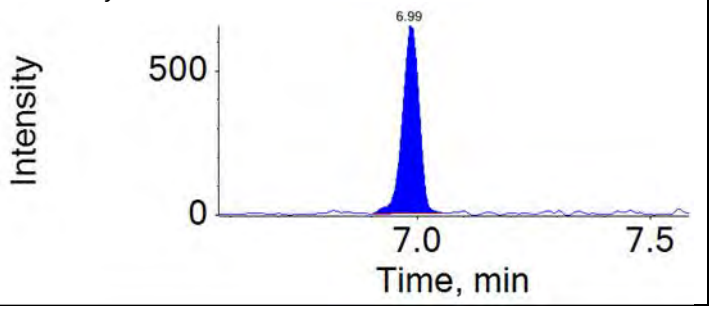
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 5:07 pm, 11/8/18

REVIEWED
By umar at 12:13 pm, 11/12/18

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample File Name	Acquisition Date	Sample ID	Sample Name
18NOV28DCAL-06.wiff	11/28/2018 1:42:10 PM	CALBRN11833C	CAL1
18NOV28DCAL-07.wiff	11/28/2018 1:51:13 PM	CALBRN21833C	CAL2
18NOV28DCAL-08.wiff	11/28/2018 2:00:13 PM	CALBRN31833B	CAL3
18NOV28DCAL-09.wiff	11/28/2018 2:09:13 PM	CALBRN41833B	CAL4
18NOV28DCAL-10.wiff	11/28/2018 2:18:16 PM	CALBRN51833B	CAL5
18NOV28DCAL-11.wiff	11/28/2018 2:27:16 PM	CALBRN61833B	CAL6
18NOV28DCAL-12.wiff	11/28/2018 2:36:16 PM	CALBRN71833B	CAL7

CAL3 Injection Standard Areas

Sample Name	Injection Std Name	Injection Std Area
CAL3	13C3-PFBA	887248.9
CAL3	13C2-PFOA	498501.6
CAL3	13C4-PFOS	283214.2
CAL3	13C2-PFDA	441790.6

APPROVED
By MCD at 3:40 pm, 1/10/19

REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Response Factor Table

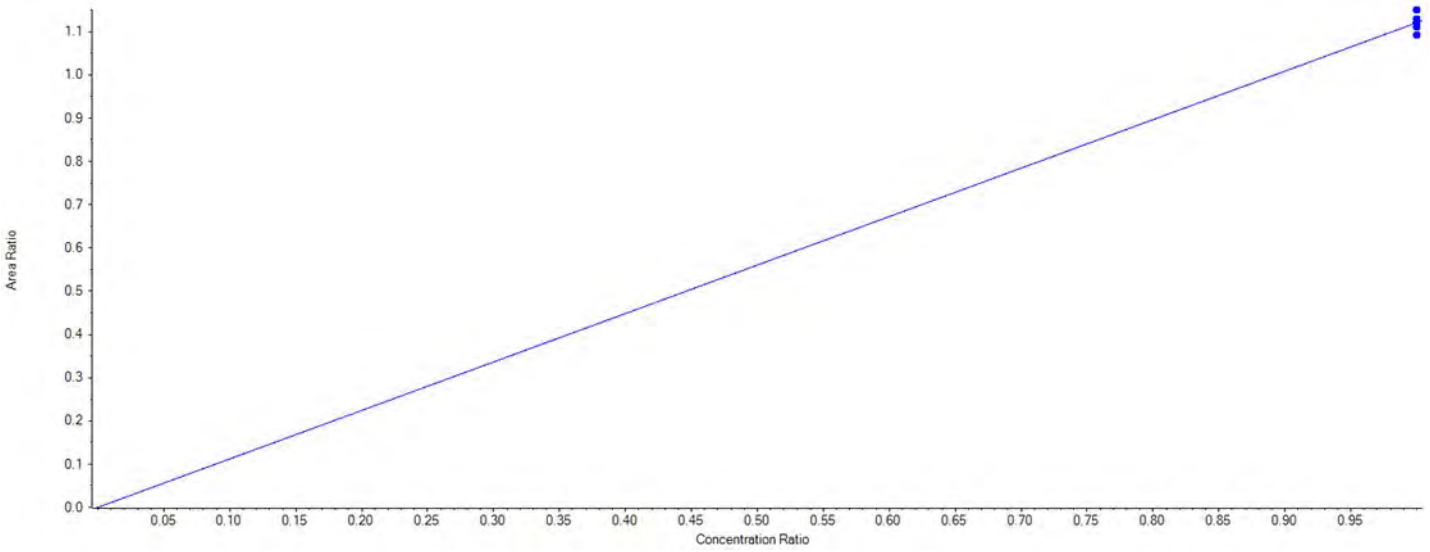
Analyte Name	CAL 1	CAL 2	CAL 3	CAL 4	CAL 5	CAL 6	CAL 7	%RSD	Limit	OOS	r^2	OOS
PFBA	1.080	0.888	1.015	0.915	0.953	0.891	N/A	7	20		0.999	
PFPeA	1.146	0.858	1.164	0.972	1.027	N/A	N/A	11	20		0.997	
PFBS	1.048	0.856	1.054	0.915	0.956	0.951	0.964	7	20		1.000	
4:2-FTS	1.863	1.681	1.998	1.784	1.847	1.760	1.708	6	20		0.999	
PFHxA	1.451	1.216	1.377	1.252	1.229	N/A	N/A	7	20		0.999	
PFPeS	0.506	0.448	0.528	0.456	0.472	0.446	0.463	6	20		0.999	
PFHpA	1.943	1.531	1.813	1.585	1.614	N/A	N/A	9	20		0.999	
PFHxS	1.004	0.803	1.016	0.911	1.002	0.973	1.040	8	20		0.999	
6:2-FTS	2.165	1.891	2.059	2.052	1.835	1.766	N/A	7	20		0.998	
PFHpS	1.044	0.805	0.986	0.926	0.943	0.954	0.947	7	20		1.000	
PFOA	1.031	0.860	1.063	1.011	0.988	0.950	N/A	7	20		0.999	
PFOS	1.059	0.938	1.163	1.051	1.126	1.119	1.160	7	20		0.999	
PFNA	1.496	1.303	1.470	1.315	1.403	1.256	N/A	6	20		0.997	
PFNS	0.763	0.638	0.735	0.777	0.756	0.755	0.758	6	20		1.000	
PFDA	0.983	0.901	1.042	0.908	0.922	0.863	0.880	6	20		0.999	
8:2-FTS	2.600	2.366	2.661	2.405	2.587	N/A	N/A	5	20		0.999	
PFOSA	1.045	0.925	1.050	0.976	1.003	0.980	N/A	4	20		1.000	
NMeFOSAA	0.755	0.760	0.870	0.777	0.807	0.800	0.770	5	20		0.999	
PFDS	0.533	0.491	0.644	0.594	0.609	0.592	0.608	8	20		1.000	
PFUnDA	1.551	1.312	1.564	1.466	1.465	1.452	1.350	6	20		0.998	
NEtFOSAA	0.994	0.958	1.016	0.921	1.027	1.030	1.034	4	20		1.000	
PFDoDA	1.137	0.896	1.115	0.896	0.918	0.904	N/A	11	20		0.999	
10:2-FTS	2.409	2.294	2.697	2.170	2.584	2.172	2.078	9	20		0.994	
NMePFOSAE	1.232	1.162	1.330	1.183	1.252	1.229	1.152	5	20		0.999	
NMePFOSA	0.955	0.904	1.028	0.928	0.970	0.938	0.940	4	20		1.000	
PFDoS	0.310	0.304	0.325	0.333	0.321	0.319	0.343	4	20		0.999	
NEtPFOSAE	1.702	1.382	1.766	1.478	1.516	1.392	1.348	10	20		0.998	
NEtPFOSA	1.208	0.986	1.184	1.112	1.104	1.170	1.090	6	20		0.999	
PFTrDA	1.034	0.859	1.068	0.881	0.826	0.812	N/A	11	20		0.998	
PFTeDA	0.975	0.858	1.016	0.886	0.921	0.861	N/A	6	20		0.999	
PFHxDA	0.549	0.429	0.516	0.455	0.493	0.431	0.426	10	20		0.997	
PFODA	0.411	0.354	0.413	0.374	0.405	0.373	0.370	6	20		0.999	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFBA

y = 1.12068 x (std. dev. = 0.01800) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFBA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1018752.8	907350.543	True	5.00	1.123	3.28	1.000	5.000	5.009	0	30	
CAL2	1033122.1	898154.232	True	5.00	1.150	3.27	1.000	5.000	5.132	3	30	
CAL3	993144.1	887248.863	True	5.00	1.119	3.28	1.000	5.000	4.994	0	30	
CAL4	974000.9	892443.927	True	5.00	1.091	3.28	1.000	5.000	4.869	-3	30	
CAL5	951695.0	857159.817	True	5.00	1.110	3.28	1.000	5.000	4.954	-1	30	
CAL6	897566.7	793954.989	True	5.00	1.131	3.27	1.000	5.000	5.044	1	30	
CAL7	803704.8	717475.737	True	5.00	1.120	3.27	1.000	5.000	4.998	0	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

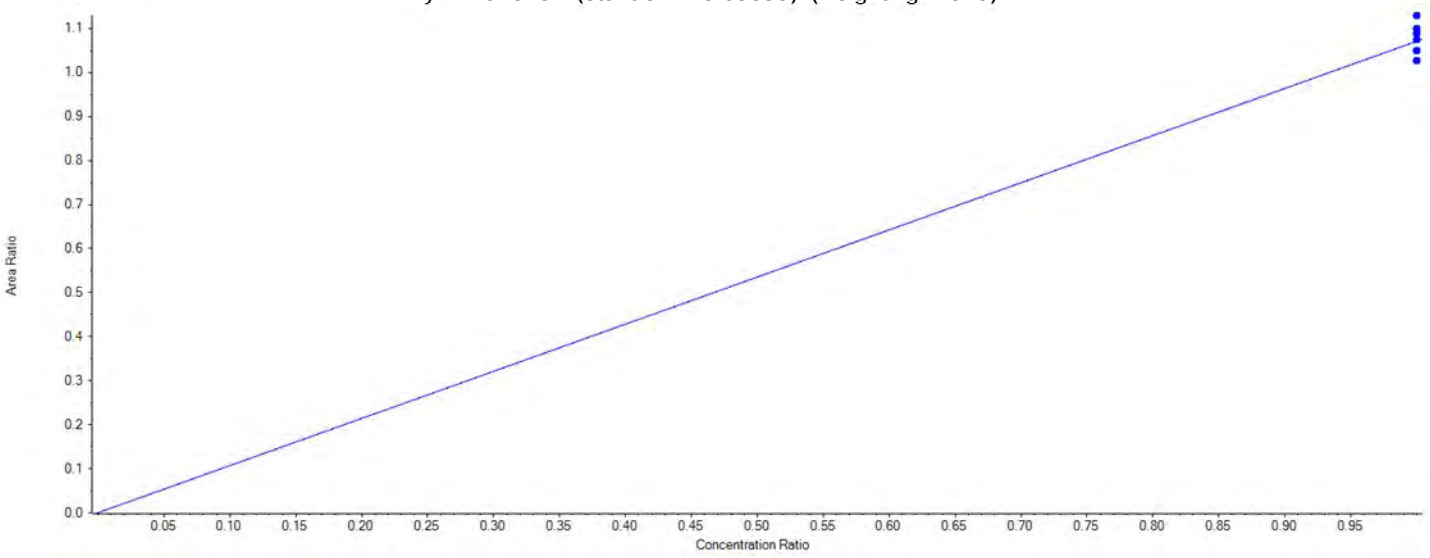
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFPeA

y = 1.07075 x (std. dev. = 0.03855) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C5-PFPeA Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	975339.0	907350.543	True	5.00	1.075	3.77	1.150	5.000	5.019	0	30	
CAL2	1014125.0	898154.232	True	5.00	1.129	3.77	1.150	5.000	5.273	5	30	
CAL3	910953.7	887248.863	True	5.00	1.027	3.78	1.150	5.000	4.794	-4	30	
CAL4	915824.6	892443.927	True	5.00	1.026	3.77	1.150	5.000	4.792	-4	30	
CAL5	900153.4	857159.817	True	5.00	1.050	3.78	1.150	5.000	4.904	-2	30	
CAL6	872922.6	793954.989	True	5.00	1.099	3.77	1.150	5.000	5.134	3	30	
CAL7	781113.8	717475.737	True	5.00	1.089	3.77	1.150	5.000	5.084	2	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

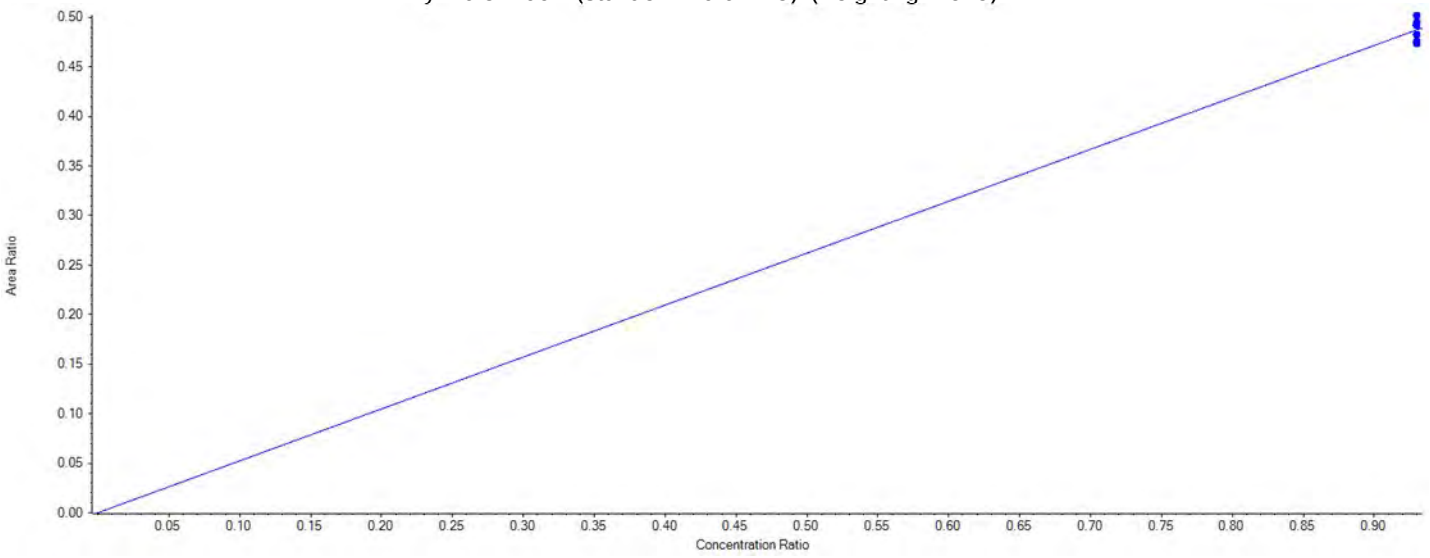
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFBS

y = 0.52409 x (std. dev. = 0.01145) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C3-PFBS Area	13C3-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	437838.9	907350.543	True	5.00	0.483	3.82	1.160	4.650	4.604	-1	30	
CAL2	442149.9	898154.232	True	5.00	0.492	3.82	1.160	4.650	4.697	1	30	
CAL3	419929.2	887248.863	True	5.00	0.473	3.82	1.170	4.650	4.515	-3	30	
CAL4	424041.3	892443.927	True	5.00	0.475	3.82	1.160	4.650	4.533	-3	30	
CAL5	424059.2	857159.817	True	5.00	0.495	3.83	1.160	4.650	4.720	2	30	
CAL6	398441.3	793954.989	True	5.00	0.502	3.82	1.160	4.650	4.788	3	30	
CAL7	352994.8	717475.737	True	5.00	0.492	3.82	1.160	4.650	4.694	1	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

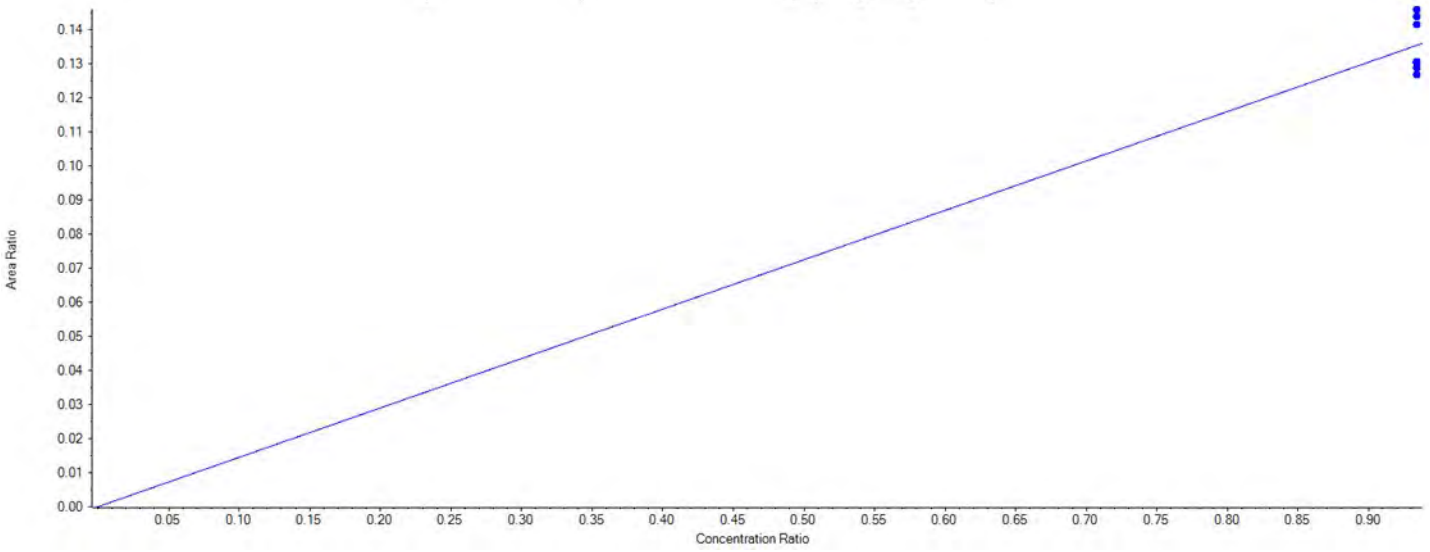
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-4:2-FTS

y = 0.14509 x (std. dev. = 0.00860) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-4:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	75119.1	521822.847	True	5.00	0.144	4.13	0.840	4.670	4.961	6	30	
CAL2	72067.1	493545.206	True	5.00	0.146	4.13	0.840	4.670	5.032	8	30	
CAL3	70629.1	498501.619	True	5.00	0.142	4.14	0.840	4.670	4.883	5	30	
CAL4	67043.7	528506.765	True	5.00	0.127	4.13	0.840	4.670	4.372	-6	30	
CAL5	67423.0	516457.167	True	5.00	0.131	4.14	0.840	4.670	4.499	-4	30	
CAL6	65255.4	499608.504	True	5.00	0.131	4.13	0.840	4.670	4.501	-4	30	
CAL7	62236.8	482796.463	True	5.00	0.129	4.13	0.840	4.670	4.442	-5	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

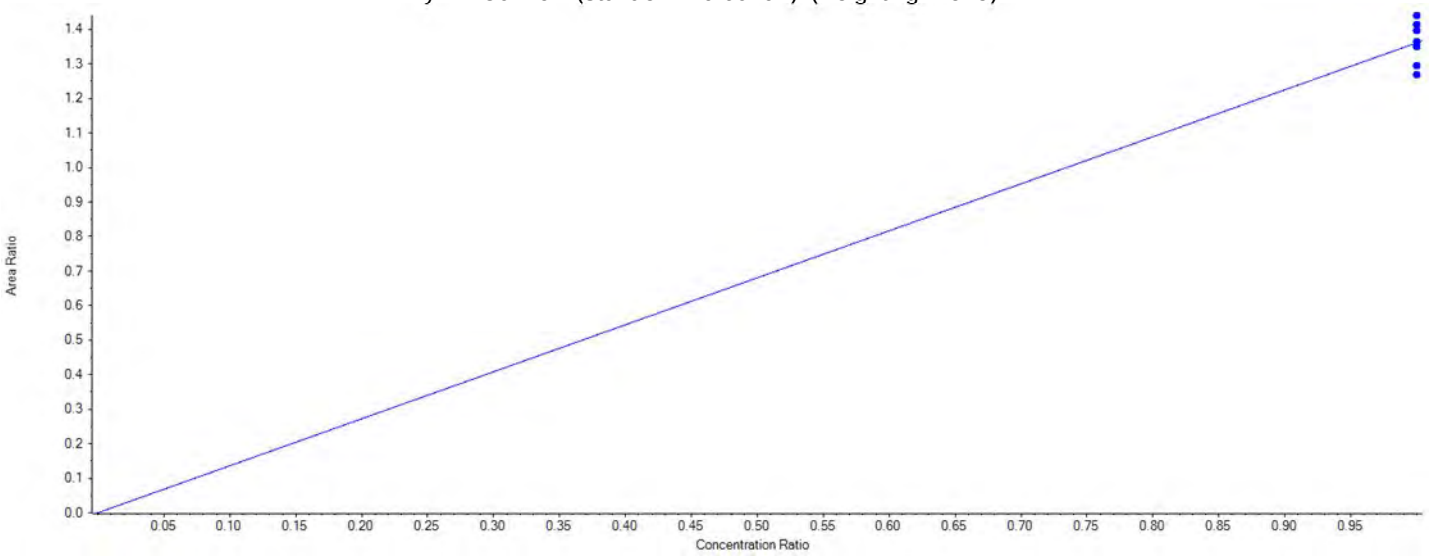
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C5-PFHxA

y = 1.36129 x (std. dev. = 0.06204) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C5-PFHxA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	728340.5	521822.847	True	5.00	1.396	4.17	0.850	5.000	5.127	3	30	
CAL2	697229.0	493545.206	True	5.00	1.413	4.16	0.850	5.000	5.189	4	30	
CAL3	717900.1	498501.619	True	5.00	1.440	4.17	0.850	5.000	5.290	6	30	
CAL4	670407.7	528506.765	True	5.00	1.268	4.17	0.850	5.000	4.659	-7	30	
CAL5	704953.5	516457.167	True	5.00	1.365	4.17	0.850	5.000	5.014	0	30	
CAL6	675219.8	499608.504	True	5.00	1.351	4.16	0.850	5.000	4.964	-1	30	
CAL7	625449.8	482796.463	True	5.00	1.295	4.16	0.850	5.000	4.758	-5	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

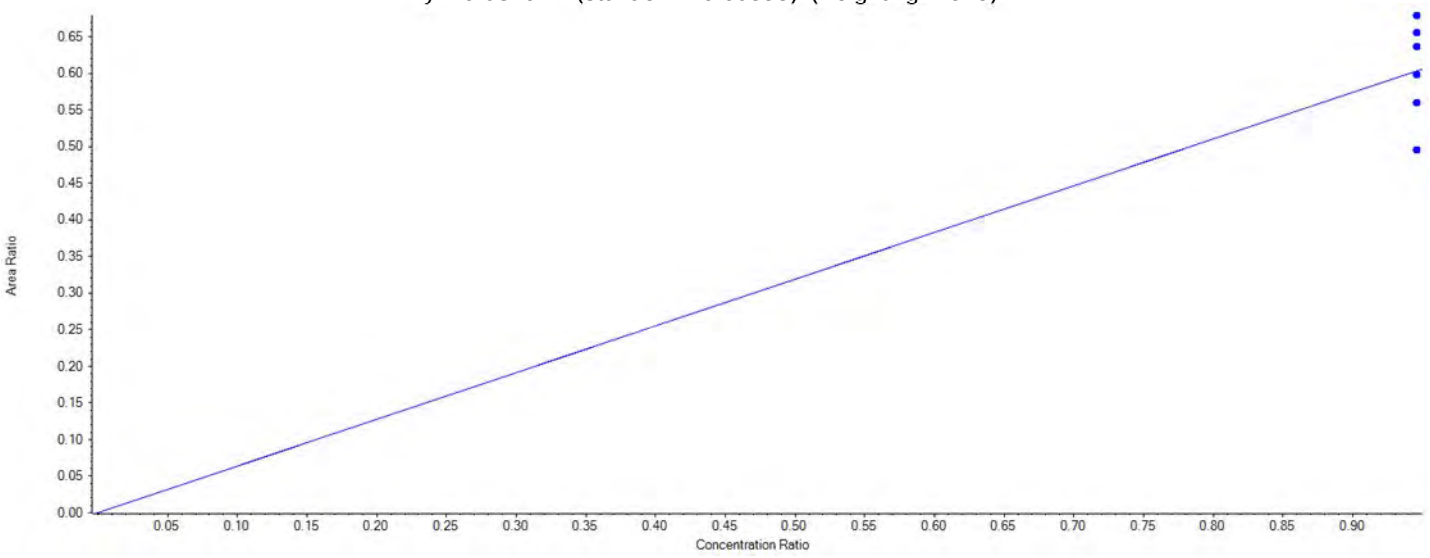
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C3-PFHxS

y = 0.63794 x (std. dev. = 0.06553) (weighting: None)



Extraction Standard Calibration Verification

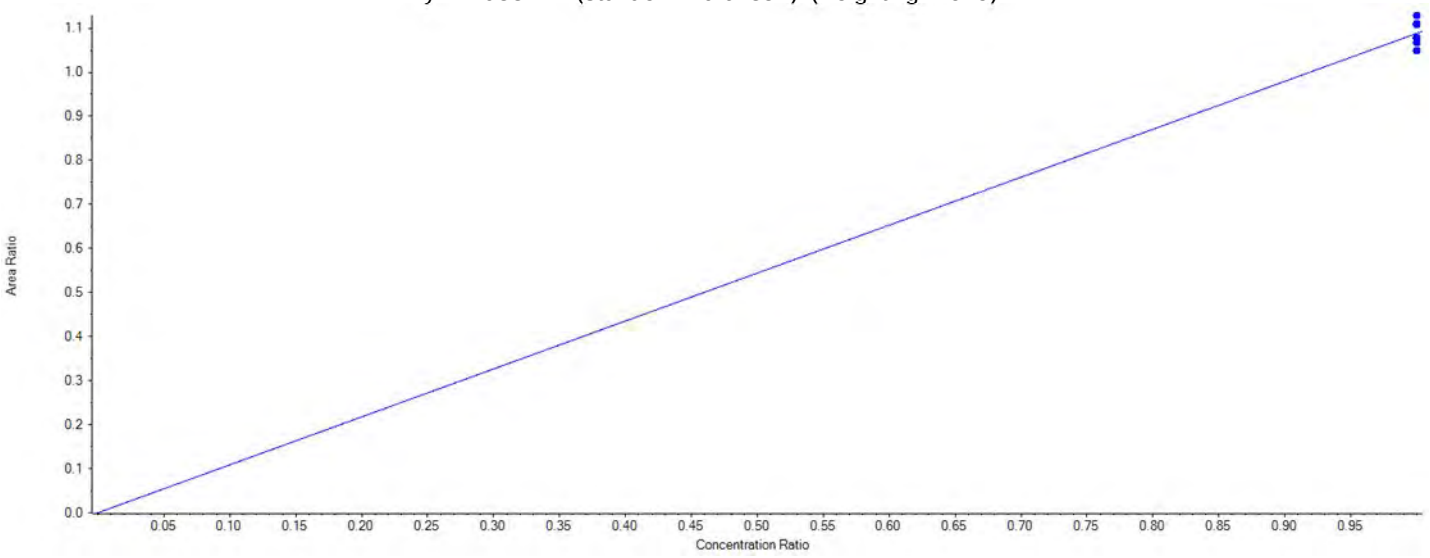
Sample Name	E13C3-PFHxS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	331982.9	521822.847	True	5.00	0.636	4.56	0.930	4.730	4.986	5	30	
CAL2	335129.7	493545.206	True	5.00	0.679	4.55	0.930	4.730	5.322	13	30	
CAL3	326982.4	498501.619	True	5.00	0.656	4.56	0.930	4.730	5.141	9	30	
CAL4	316393.3	528506.765	True	5.00	0.599	4.56	0.930	4.730	4.692	-1	30	
CAL5	309184.7	516457.167	True	5.00	0.599	4.56	0.930	4.730	4.692	-1	30	
CAL6	279894.6	499608.504	True	5.00	0.560	4.55	0.930	4.730	4.391	-7	30	
CAL7	239327.4	482796.463	True	5.00	0.496	4.56	0.930	4.730	3.885	-18	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C4-PFHpA

y = 1.08817 x (std. dev. = 0.02857) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C4-PFHpA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	547365.1	521822.847	True	5.00	1.049	4.55	0.920	5.000	4.820	-4	30	
CAL2	547372.0	493545.206	True	5.00	1.109	4.55	0.920	5.000	5.096	2	30	
CAL3	535993.3	498501.619	True	5.00	1.075	4.56	0.920	5.000	4.940	-1	30	
CAL4	563673.9	528506.765	True	5.00	1.067	4.55	0.920	5.000	4.901	-2	30	
CAL5	556455.9	516457.167	True	5.00	1.077	4.56	0.920	5.000	4.951	-1	30	
CAL6	555281.5	499608.504	True	5.00	1.111	4.55	0.920	5.000	5.107	2	30	
CAL7	544866.9	482796.463	True	5.00	1.129	4.55	0.920	5.000	5.186	4	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

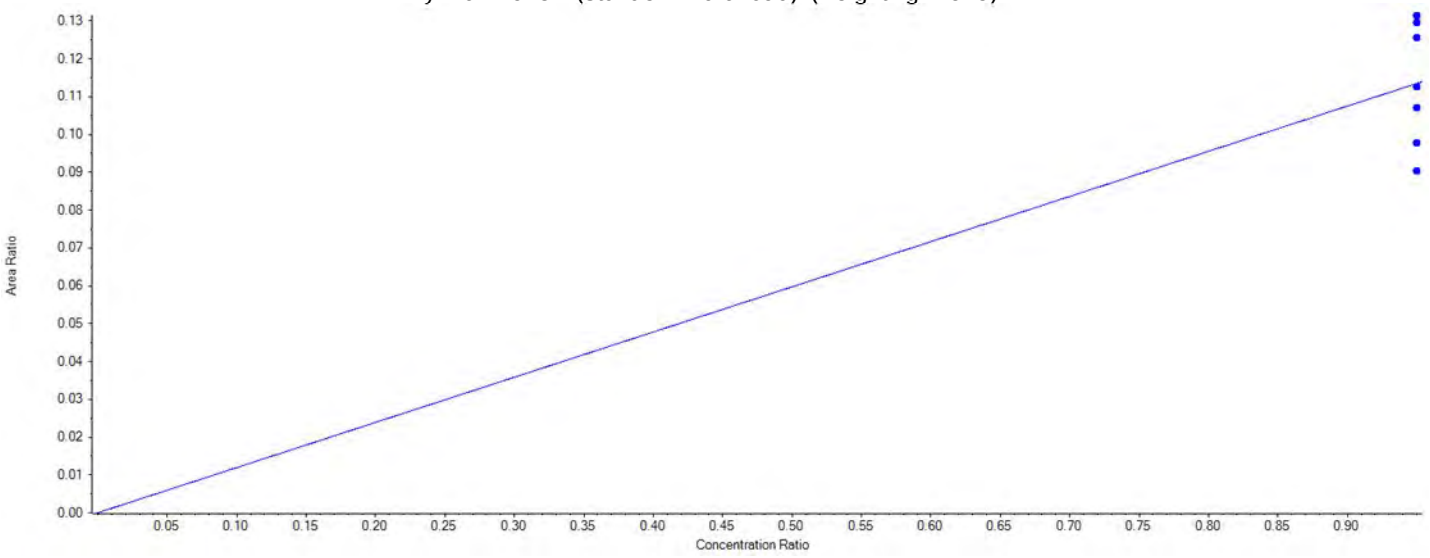
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-6:2-FTS

y = 0.11945 x (std. dev. = 0.01690) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-6:2-FTS Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	65543.8	521822.847	True	5.00	0.126	4.91	1.000	4.750	5.258	11	30	
CAL2	63922.7	493545.206	True	5.00	0.130	4.91	1.000	4.750	5.422	14	30	
CAL3	65518.3	498501.619	True	5.00	0.131	4.92	1.000	4.750	5.502	16	30	
CAL4	56580.1	528506.765	True	5.00	0.107	4.91	1.000	4.750	4.481	-6	30	
CAL5	58122.8	516457.167	True	5.00	0.113	4.92	1.000	4.750	4.711	-1	30	
CAL6	48807.6	499608.504	True	5.00	0.098	4.91	1.000	4.750	4.089	-14	30	
CAL7	43678.3	482796.463	True	5.00	0.090	4.91	1.000	4.750	3.787	-20	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

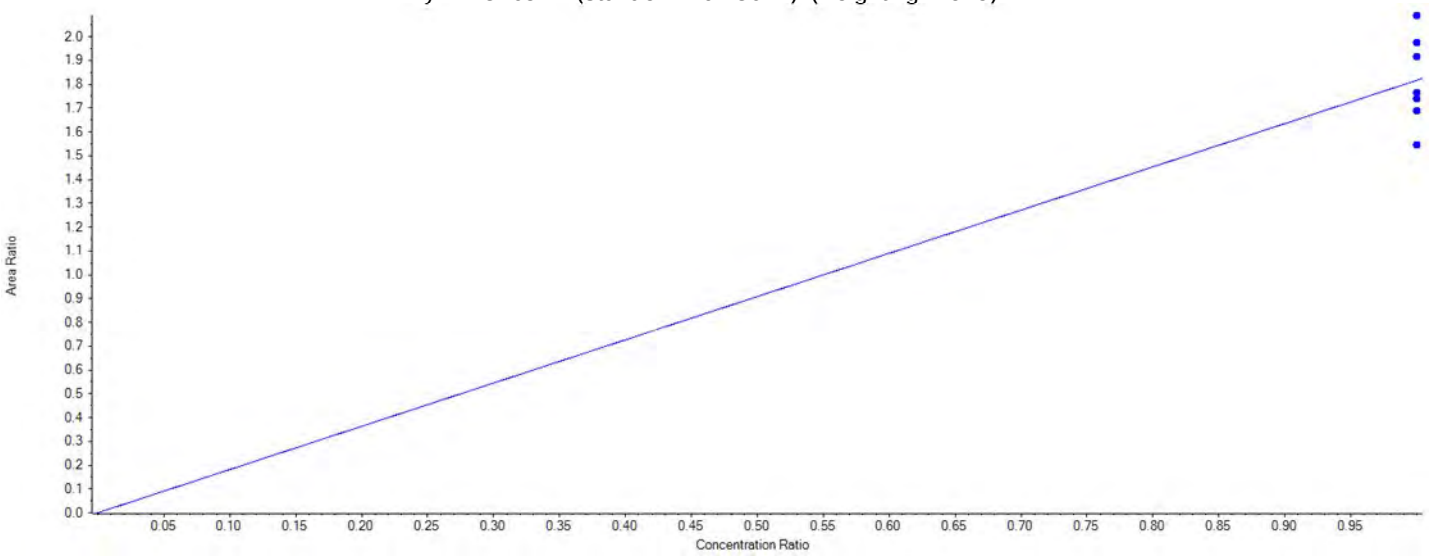
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOA

y = 1.81654 x (std. dev. = 0.18621) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1030597.9	521822.847	True	5.00	1.975	4.92	1.000	5.000	5.436	9	30	
CAL2	1030866.6	493545.206	True	5.00	2.089	4.92	1.000	5.000	5.749	15	30	
CAL3	954678.0	498501.619	True	5.00	1.915	4.93	1.000	5.000	5.271	5	30	
CAL4	918995.3	528506.765	True	5.00	1.739	4.92	1.000	5.000	4.786	-4	30	
CAL5	911756.1	516457.167	True	5.00	1.765	4.93	1.000	5.000	4.859	-3	30	
CAL6	843522.3	499608.504	True	5.00	1.688	4.92	1.000	5.000	4.647	-7	30	
CAL7	745616.3	482796.463	True	5.00	1.544	4.92	1.000	5.000	4.251	-15	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

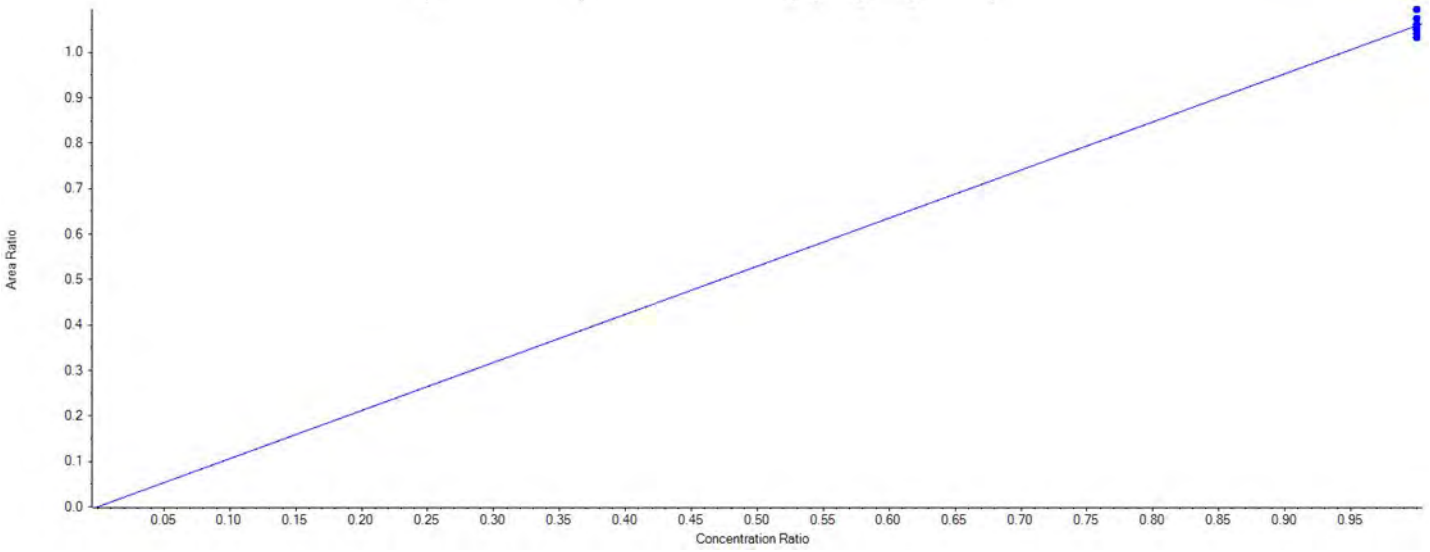
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOS

y = 1.05888 x (std. dev. = 0.02078) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOS Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	318525.4	296225.157	True	4.78	1.075	5.25	1.000	4.780	4.854	2	30	
CAL2	313894.3	295669.685	True	4.78	1.062	5.25	1.000	4.780	4.792	0	30	
CAL3	309913.7	283214.231	True	4.78	1.094	5.26	1.000	4.780	4.940	3	30	
CAL4	296147.5	281778.555	True	4.78	1.051	5.25	1.000	4.780	4.744	-1	30	
CAL5	299574.5	287732.638	True	4.78	1.041	5.26	1.000	4.780	4.700	-2	30	
CAL6	279204.4	264408.934	True	4.78	1.056	5.25	1.000	4.780	4.767	0	30	
CAL7	250004.2	242045.223	True	4.78	1.033	5.25	1.000	4.780	4.663	-2	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

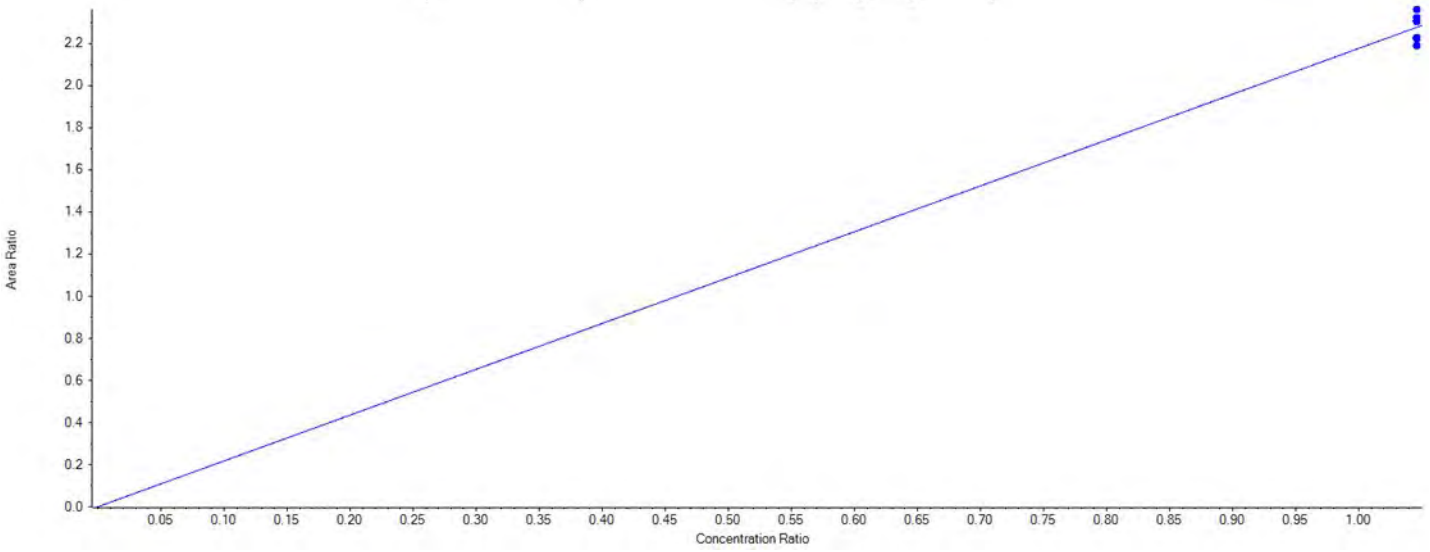
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C9-PFNA

y = 2.17630 x (std. dev. = 0.05982) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C9-PFNA Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	659714.6	296225.157	True	4.78	2.227	5.27	1.000	5.000	4.892	-2	30	
CAL2	682380.7	295669.685	True	4.78	2.308	5.26	1.000	5.000	5.069	1	30	
CAL3	629954.6	283214.231	True	4.78	2.224	5.27	1.000	5.000	4.885	-2	30	
CAL4	648727.0	281778.555	True	4.78	2.302	5.27	1.000	5.000	5.057	1	30	
CAL5	630201.5	287732.638	True	4.78	2.190	5.27	1.000	5.000	4.811	-4	30	
CAL6	624202.7	264408.934	True	4.78	2.361	5.26	1.000	5.000	5.185	4	30	
CAL7	562206.9	242045.223	True	4.78	2.323	5.27	1.000	5.000	5.102	2	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

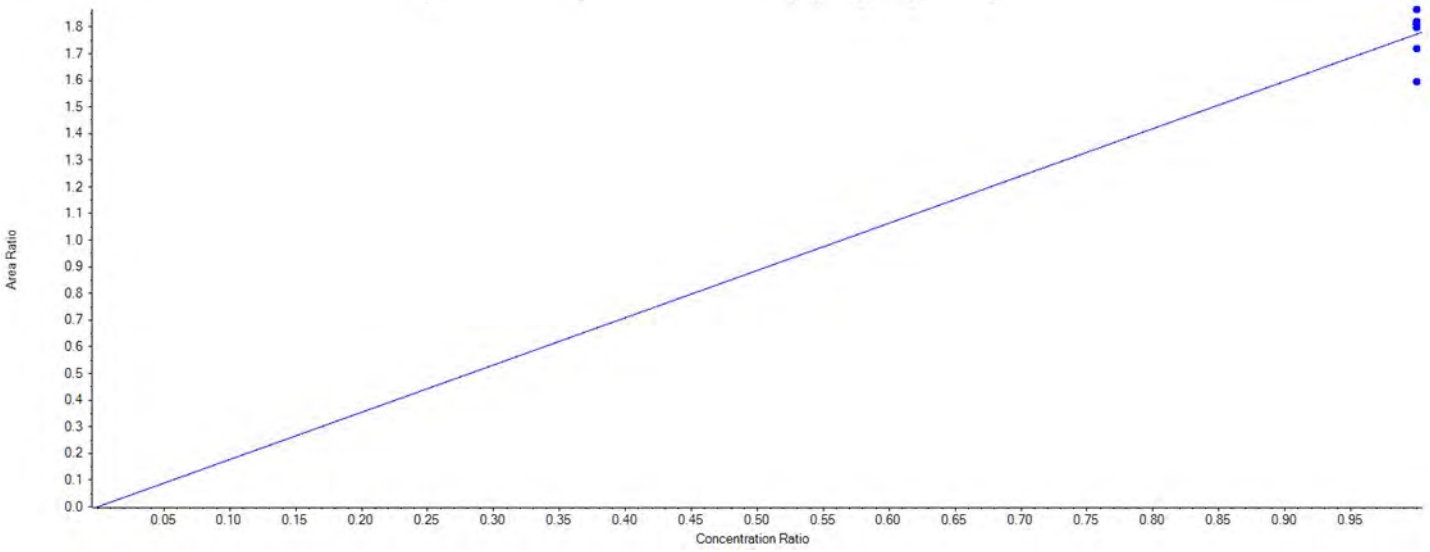
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C6-PFDA

y = 1.77338 x (std. dev. = 0.09043) (weighting: None)



Extraction Standard Calibration Verification

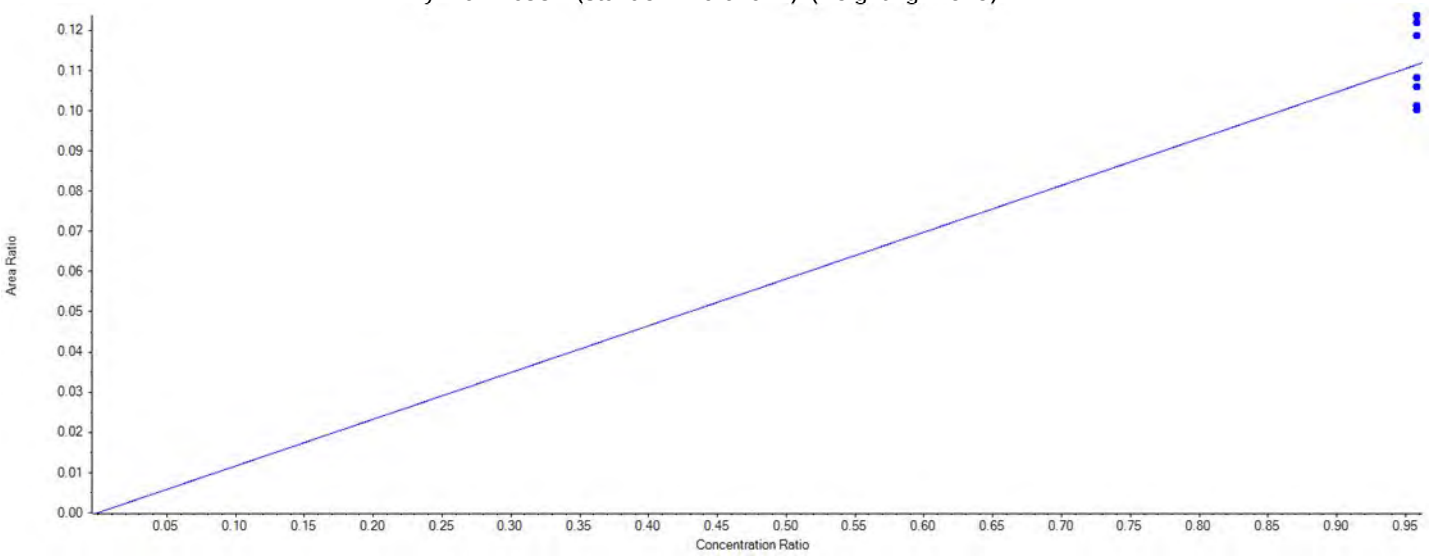
Sample Name	E13C6-PFDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	855362.9	476146.560	True	5.00	1.796	5.57	1.000	5.000	5.065	1	30	
CAL2	839100.7	460926.236	True	5.00	1.820	5.56	1.000	5.000	5.133	3	30	
CAL3	824072.9	441790.617	True	5.00	1.865	5.57	1.000	5.000	5.259	5	30	
CAL4	841970.5	489439.830	True	5.00	1.720	5.57	1.000	5.000	4.850	-3	30	
CAL5	833462.1	460232.679	True	5.00	1.811	5.57	1.000	5.000	5.106	2	30	
CAL6	758832.8	419913.240	True	5.00	1.807	5.56	1.000	5.000	5.095	2	30	
CAL7	645932.5	405454.995	True	5.00	1.593	5.57	1.000	5.000	4.492	-10	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-8:2-FTS

y = 0.11633 x (std. dev. = 0.01027) (weighting: None)



Extraction Standard Calibration Verification

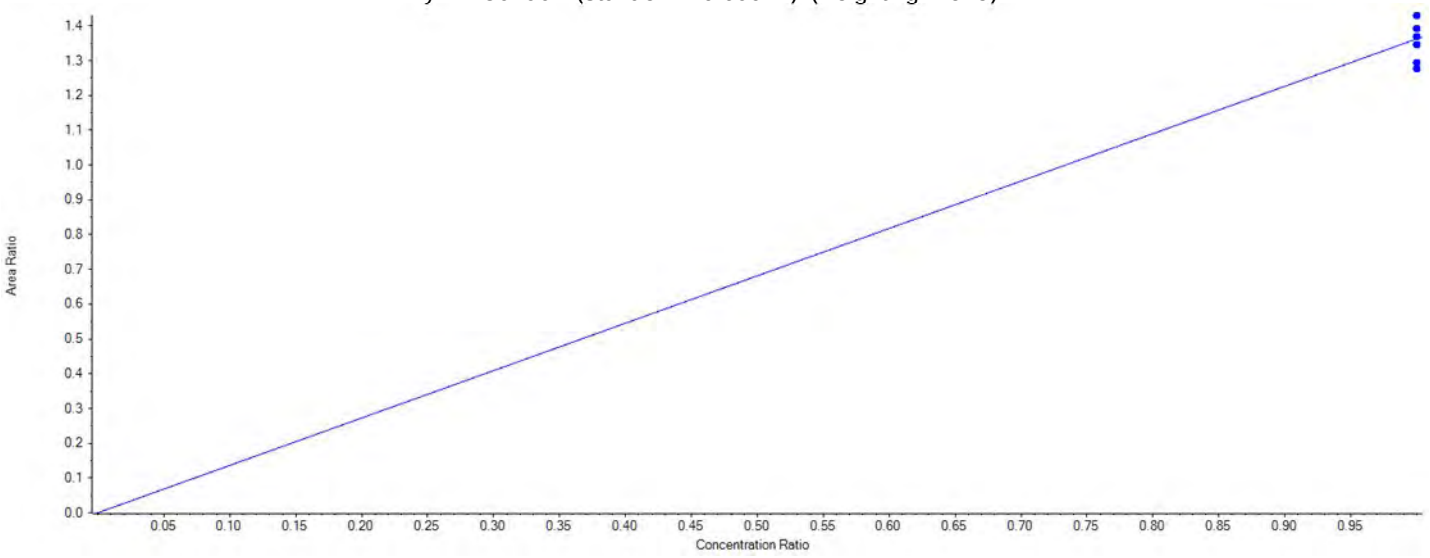
Sample Name	E13C2-8:2-FTS Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	58895.0	476146.560	True	5.00	0.124	5.57	1.000	4.790	5.316	11	30	
CAL2	54757.9	460926.236	True	5.00	0.119	5.57	1.000	4.790	5.106	7	30	
CAL3	53847.1	441790.617	True	5.00	0.122	5.58	1.000	4.790	5.239	9	30	
CAL4	52961.9	489439.830	True	5.00	0.108	5.57	1.000	4.790	4.651	-3	30	
CAL5	46142.4	460232.679	True	5.00	0.100	5.58	1.000	4.790	4.309	-10	30	
CAL6	44487.5	419913.240	True	5.00	0.106	5.57	1.000	4.790	4.553	-5	30	
CAL7	41093.0	405454.995	True	5.00	0.101	5.57	1.000	4.790	4.356	-9	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C8-PFOSA

y = 1.36266 x (std. dev. = 0.06042) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C8-PFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	662264.7	476146.560	True	5.00	1.391	5.65	1.020	5.000	5.104	2	30	
CAL2	658778.5	460926.236	True	5.00	1.429	5.65	1.020	5.000	5.244	5	30	
CAL3	631627.9	441790.617	True	5.00	1.430	5.66	1.020	5.000	5.246	5	30	
CAL4	625021.8	489439.830	True	5.00	1.277	5.65	1.020	5.000	4.686	-6	30	
CAL5	596189.5	460232.679	True	5.00	1.295	5.66	1.020	5.000	4.753	-5	30	
CAL6	565326.0	419913.240	True	5.00	1.346	5.65	1.020	5.000	4.940	-1	30	
CAL7	555500.5	405454.995	True	5.00	1.370	5.65	1.020	5.000	5.027	1	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

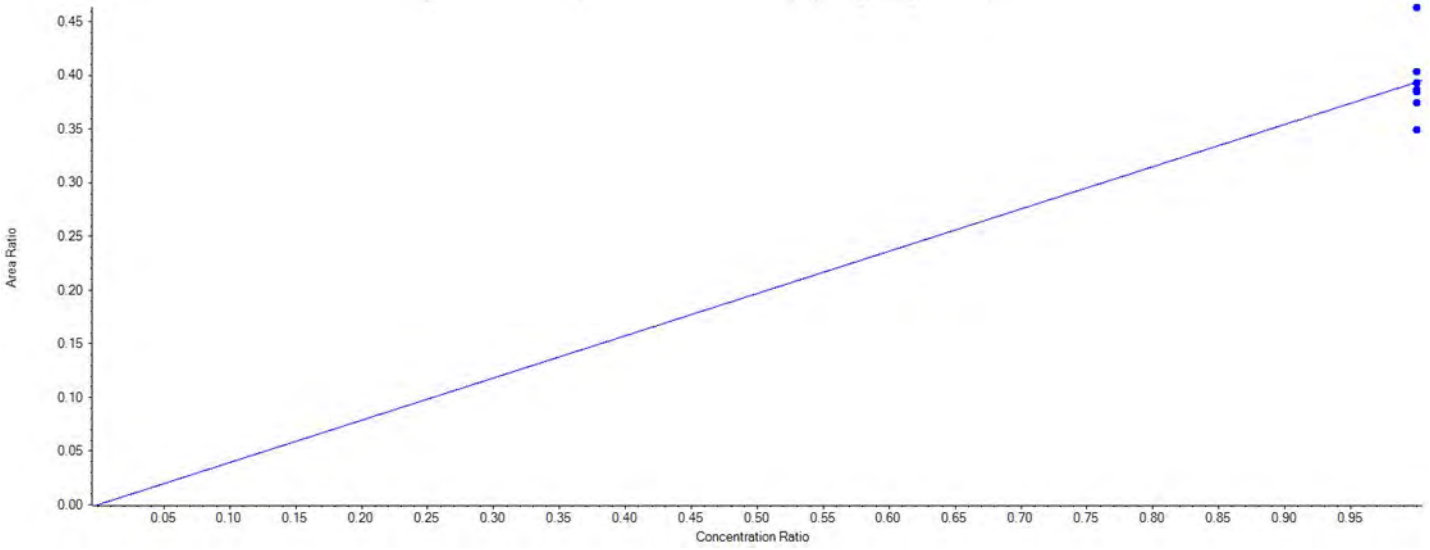
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMeFOSAA

y = 0.39380 x (std. dev. = 0.03499) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMeFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	220597.3	476146.560	True	5.00	0.463	5.71	1.030	5.000	5.882	18	30	
CAL2	181261.2	460926.236	True	5.00	0.393	5.70	1.020	5.000	4.993	0	30	
CAL3	178338.1	441790.617	True	5.00	0.404	5.71	1.020	5.000	5.125	3	30	
CAL4	171203.9	489439.830	True	5.00	0.350	5.71	1.030	5.000	4.441	-11	30	
CAL5	172574.2	460232.679	True	5.00	0.375	5.71	1.020	5.000	4.761	-5	30	
CAL6	161673.3	419913.240	True	5.00	0.385	5.70	1.030	5.000	4.888	-2	30	
CAL7	156760.8	405454.995	True	5.00	0.387	5.71	1.030	5.000	4.909	-2	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

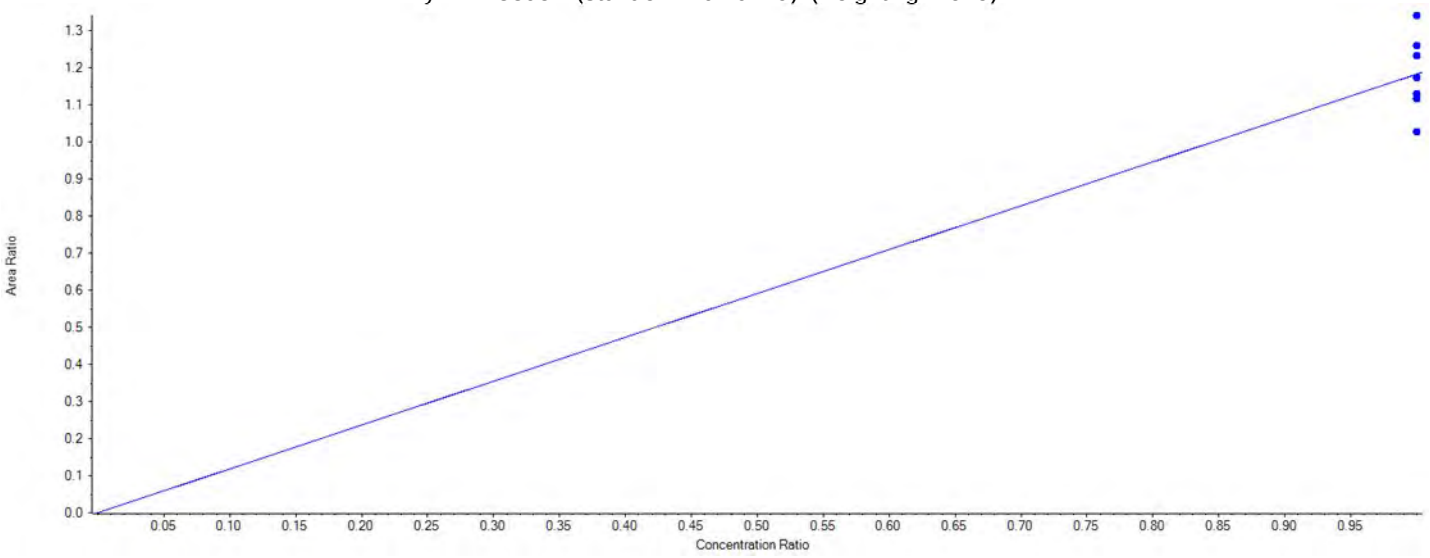
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C7-PFUnDA

y = 1.18305 x (std. dev. = 0.10419) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C7-PFUnDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	587155.4	476146.560	True	5.00	1.233	5.83	1.050	5.000	5.212	4	30	
CAL2	581207.0	460926.236	True	5.00	1.261	5.82	1.050	5.000	5.329	7	30	
CAL3	592495.7	441790.617	True	5.00	1.341	5.83	1.050	5.000	5.668	13	30	
CAL4	546359.3	489439.830	True	5.00	1.116	5.83	1.050	5.000	4.718	-6	30	
CAL5	539842.9	460232.679	True	5.00	1.173	5.83	1.050	5.000	4.957	-1	30	
CAL6	474122.1	419913.240	True	5.00	1.129	5.82	1.050	5.000	4.772	-5	30	
CAL7	416723.9	405454.995	True	5.00	1.028	5.83	1.050	5.000	4.344	-13	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

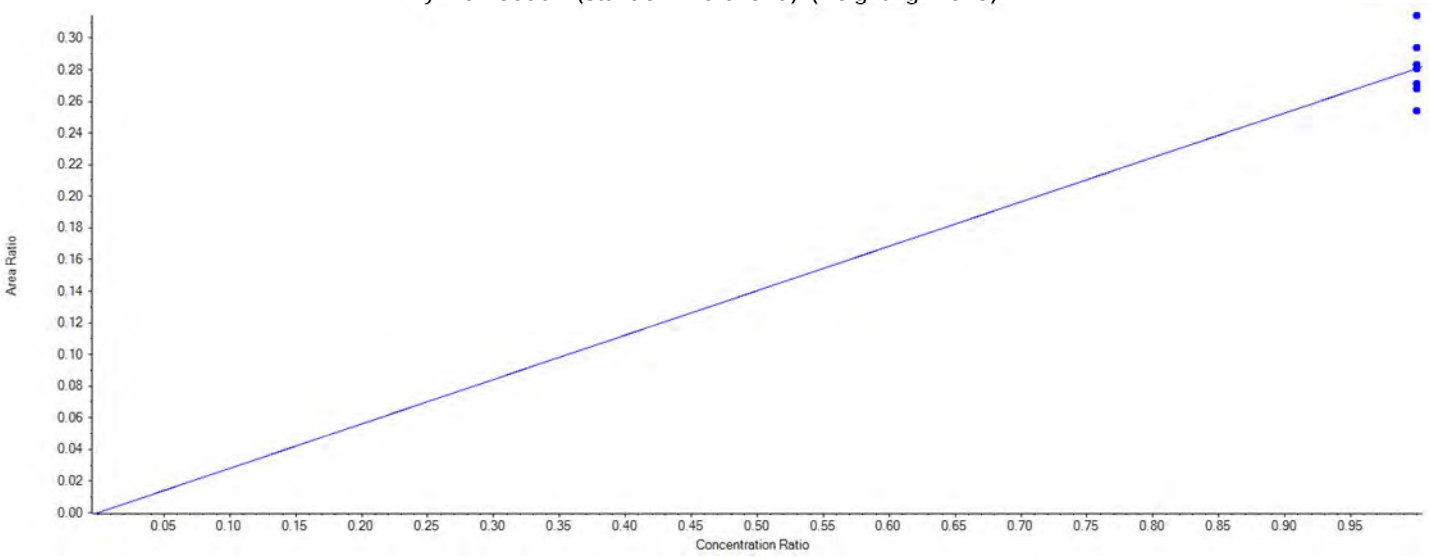
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtFOSAA

y = 0.28066 x (std. dev. = 0.01949) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed5-NEtFOSAA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	127543.5	476146.560	True	5.00	0.268	5.84	1.050	5.000	4.772	-5	30	
CAL2	144803.2	460926.236	True	5.00	0.314	5.83	1.050	5.000	5.597	12	30	
CAL3	129810.7	441790.617	True	5.00	0.294	5.84	1.050	5.000	5.235	5	30	
CAL4	138500.8	489439.830	True	5.00	0.283	5.84	1.050	5.000	5.041	1	30	
CAL5	124785.0	460232.679	True	5.00	0.271	5.85	1.050	5.000	4.830	-3	30	
CAL6	117934.2	419913.240	True	5.00	0.281	5.83	1.050	5.000	5.004	0	30	
CAL7	102891.6	405454.995	True	5.00	0.254	5.84	1.050	5.000	4.521	-10	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

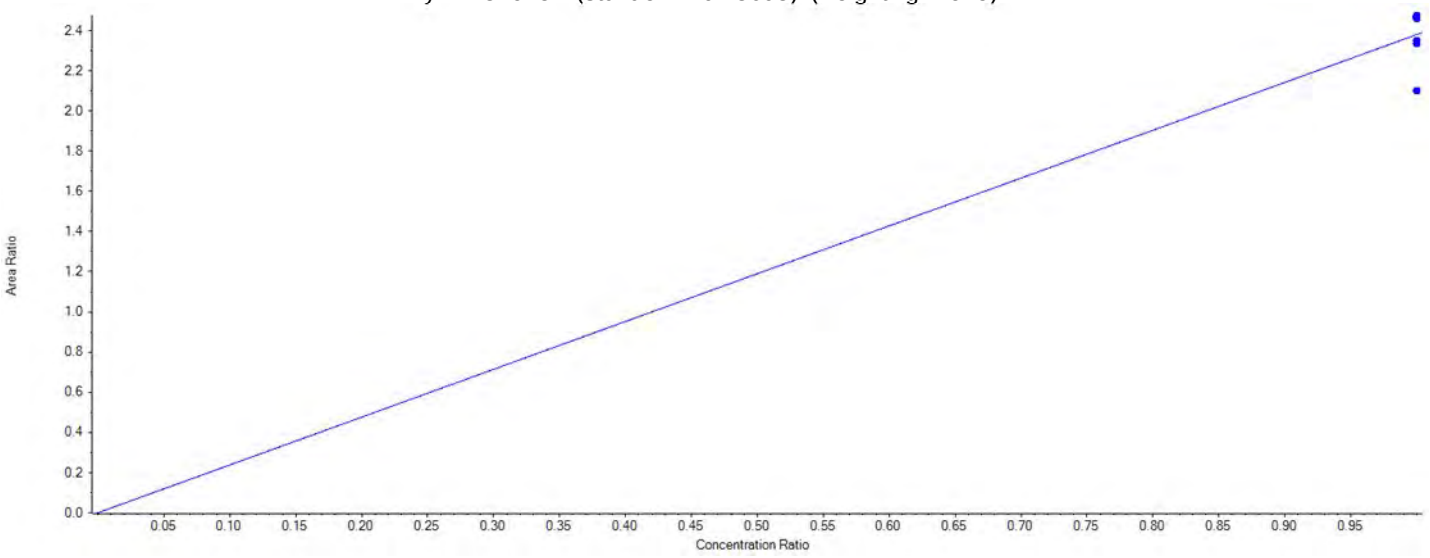
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFDoDA

y = 2.37975 x (std. dev. = 0.13603) (weighting: None)



Extraction Standard Calibration Verification

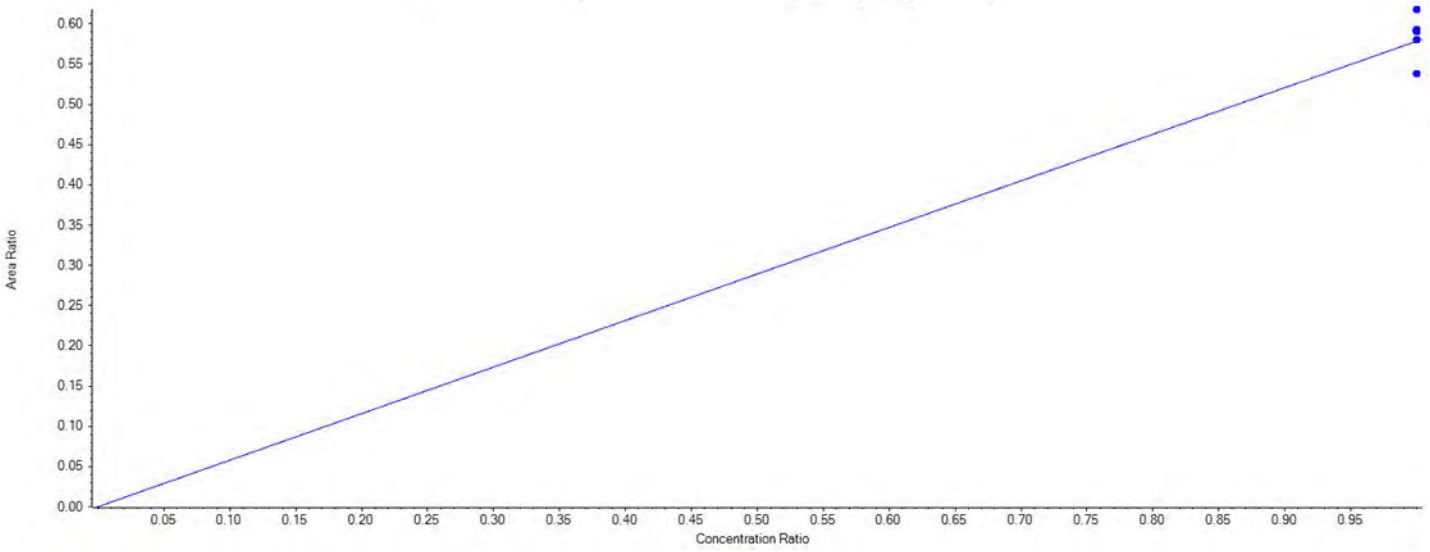
Sample Name	E13C2-PFDoDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	1173339.1	476146.560	True	5.00	2.464	6.06	1.090	5.000	5.178	4	30	
CAL2	1140522.3	460926.236	True	5.00	2.474	6.05	1.090	5.000	5.199	4	30	
CAL3	1091194.9	441790.617	True	5.00	2.470	6.06	1.090	5.000	5.189	4	30	
CAL4	1150927.4	489439.830	True	5.00	2.352	6.06	1.090	5.000	4.941	-1	30	
CAL5	1133027.9	460232.679	True	5.00	2.462	6.06	1.090	5.000	5.173	3	30	
CAL6	980215.4	419913.240	True	5.00	2.334	6.05	1.090	5.000	4.905	-2	30	
CAL7	852235.6	405454.995	True	5.00	2.102	6.06	1.090	5.000	4.416	-12	30	

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed7-NMePFOSAE

y = 0.57855 x (std. dev. = 0.02979) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed7-NMePFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	281912.7	476146.560	True	5.00	0.592	6.09	1.090	5.000	5.117	2	30	
CAL2	272071.3	460926.236	True	5.00	0.590	6.09	1.090	5.000	5.101	2	30	
CAL3	256577.3	441790.617	True	5.00	0.581	6.10	1.090	5.000	5.019	0	30	
CAL4	263412.8	489439.830	True	5.00	0.538	6.10	1.090	5.000	4.651	-7	30	
CAL5	247663.8	460232.679	True	5.00	0.538	6.10	1.090	5.000	4.651	-7	30	
CAL6	248871.1	419913.240	True	5.00	0.593	6.09	1.100	5.000	5.122	2	30	
CAL7	250467.6	405454.995	True	5.00	0.618	6.10	1.090	5.000	5.339	7	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

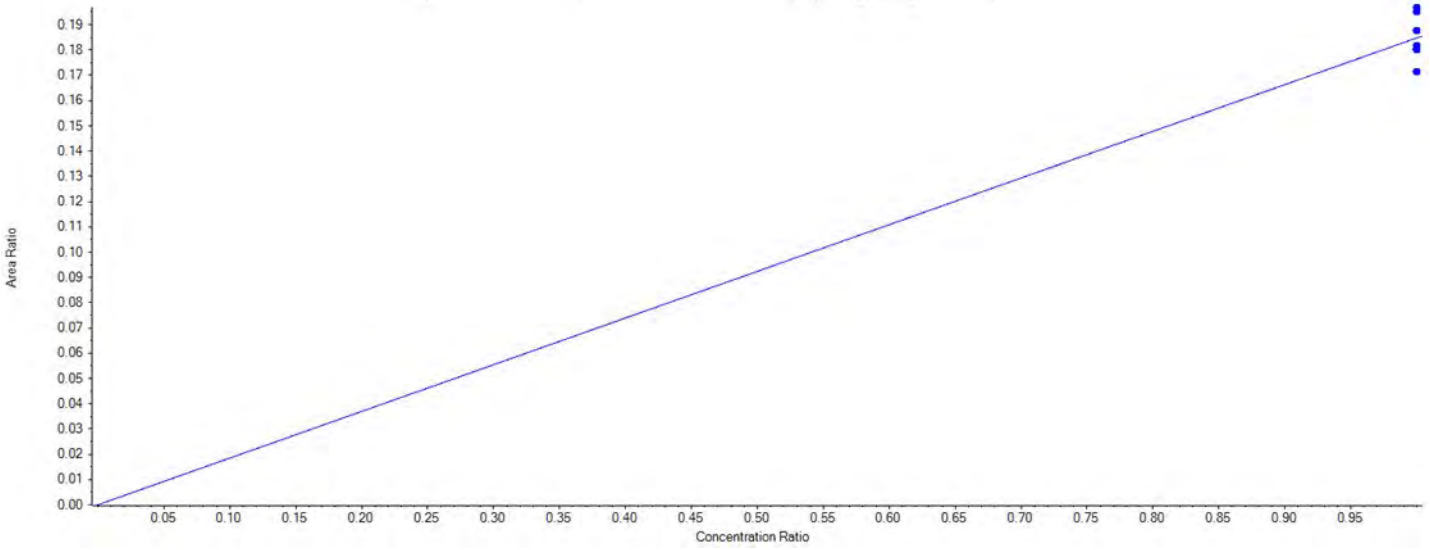
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed3-NMePFOSA

y = 0.18475 x (std. dev. = 0.00902) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed3-NMePFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	85678.0	476146.560	True	5.00	0.180	6.11	1.100	5.000	4.870	-3	30	
CAL2	86471.7	460926.236	True	5.00	0.188	6.10	1.100	5.000	5.077	2	30	
CAL3	80294.1	441790.617	True	5.00	0.182	6.11	1.100	5.000	4.919	-2	30	
CAL4	83886.6	489439.830	True	5.00	0.171	6.11	1.100	5.000	4.639	-7	30	
CAL5	83129.0	460232.679	True	5.00	0.181	6.11	1.100	5.000	4.888	-2	30	
CAL6	81949.3	419913.240	True	5.00	0.195	6.10	1.100	5.000	5.282	6	30	
CAL7	79780.2	405454.995	True	5.00	0.197	6.11	1.100	5.000	5.325	7	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

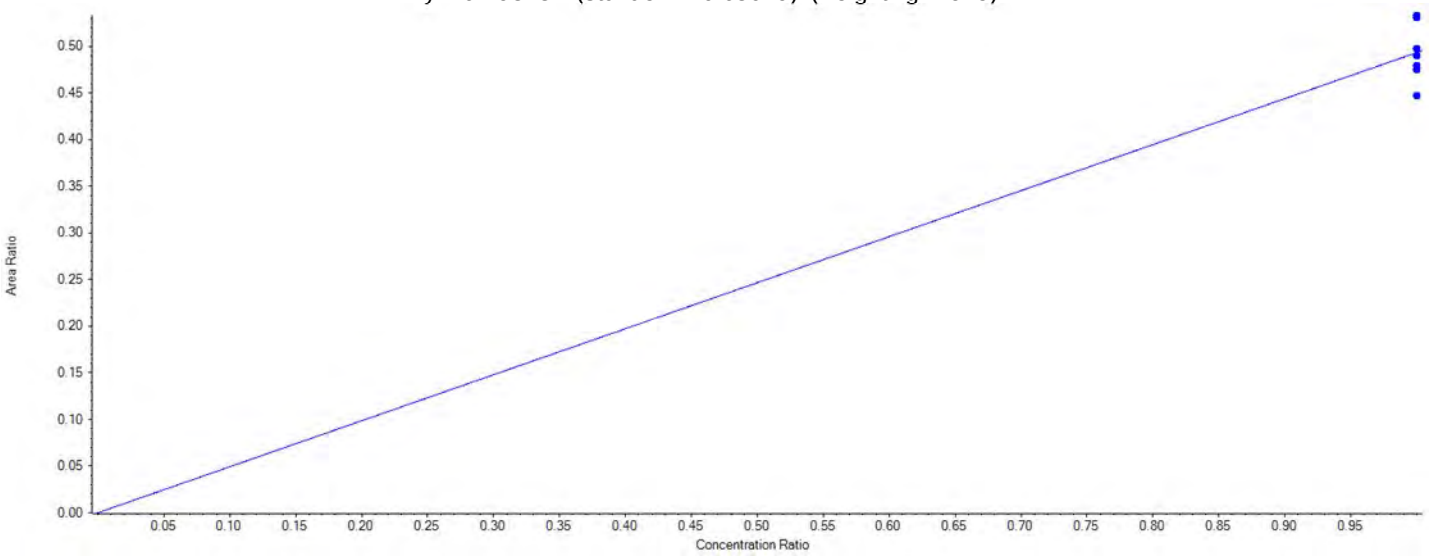
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed9-NEtPFOSAE

y = 0.49318 x (std. dev. = 0.03079) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed9-NEtPFOSAE Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	226256.0	476146.560	True	5.00	0.475	6.25	1.120	5.000	4.818	-4	30	
CAL2	229050.7	460926.236	True	5.00	0.497	6.24	1.120	5.000	5.038	1	30	
CAL3	216571.5	441790.617	True	5.00	0.490	6.25	1.120	5.000	4.970	-1	30	
CAL4	218635.8	489439.830	True	5.00	0.447	6.25	1.120	5.000	4.529	-9	30	
CAL5	220689.9	460232.679	True	5.00	0.480	6.26	1.120	5.000	4.861	-3	30	
CAL6	222924.1	419913.240	True	5.00	0.531	6.24	1.120	5.000	5.382	8	30	
CAL7	216042.0	405454.995	True	5.00	0.533	6.25	1.120	5.000	5.402	8	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

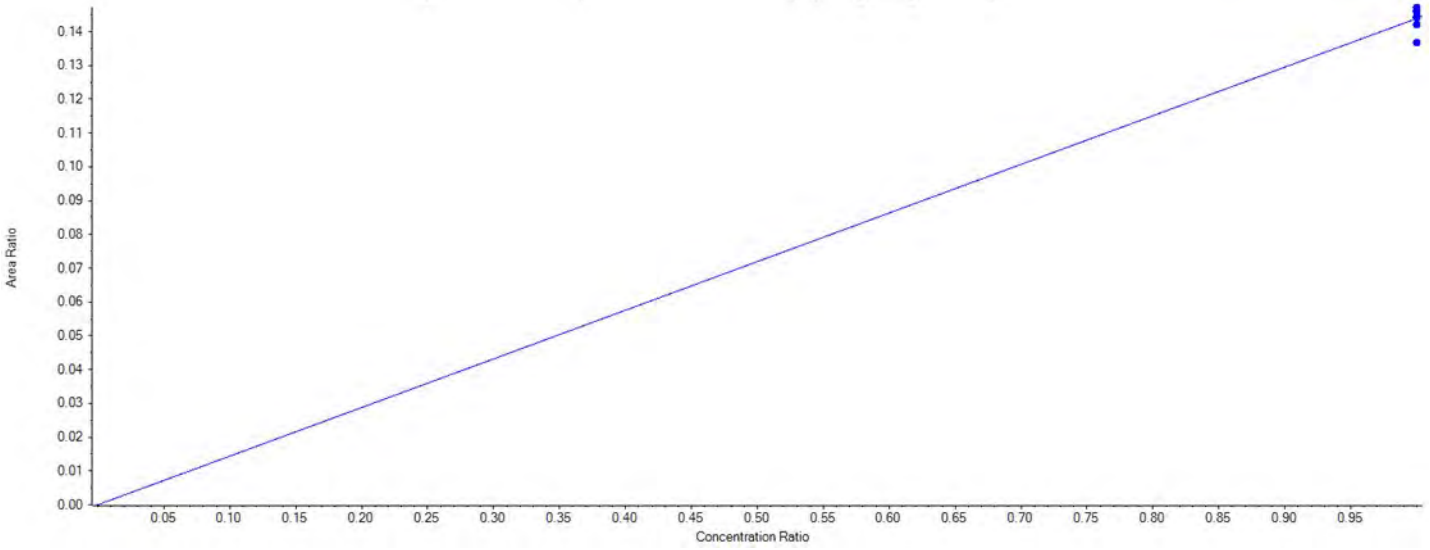
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Ed5-NEtPFOSA

y = 0.14390 x (std. dev. = 0.00352) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	Ed5-NEtPFOSA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	70050.4	476146.560	True	5.00	0.147	6.27	1.130	5.000	5.112	2	30	
CAL2	66646.8	460926.236	True	5.00	0.145	6.26	1.130	5.000	5.024	0	30	
CAL3	64623.7	441790.617	True	5.00	0.146	6.27	1.130	5.000	5.083	2	30	
CAL4	66966.4	489439.830	True	5.00	0.137	6.27	1.130	5.000	4.754	-5	30	
CAL5	66384.6	460232.679	True	5.00	0.144	6.27	1.130	5.000	5.012	0	30	
CAL6	59705.8	419913.240	True	5.00	0.142	6.26	1.130	5.000	4.941	-1	30	
CAL7	59209.1	405454.995	True	5.00	0.146	6.27	1.130	5.000	5.074	1	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

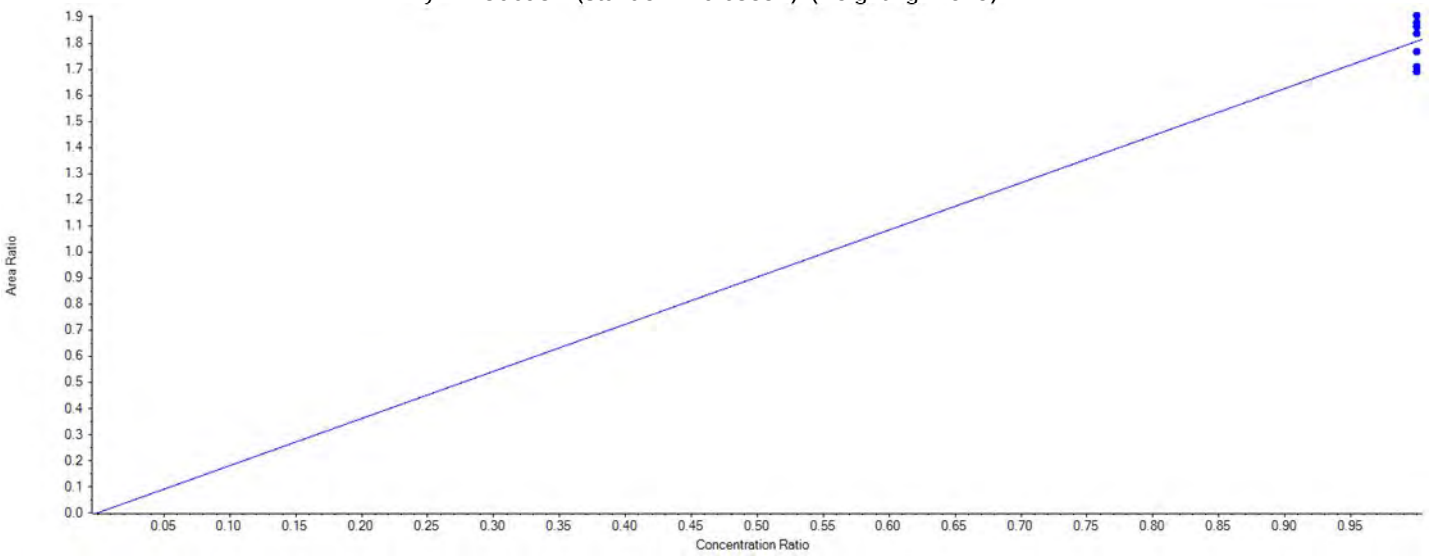
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

E13C2-PFTeDA

y = 1.80693 x (std. dev. = 0.08557) (weighting: None)



Extraction Standard Calibration Verification

Sample Name	E13C2-PFTeDA Area	13C2-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	873945.6	476146.560	True	5.00	1.835	6.43	1.160	5.000	5.079	2	30	
CAL2	858145.1	460926.236	True	5.00	1.862	6.43	1.150	5.000	5.152	3	30	
CAL3	841931.1	441790.617	True	5.00	1.906	6.43	1.150	5.000	5.273	5	30	
CAL4	826670.0	489439.830	True	5.00	1.689	6.43	1.160	5.000	4.674	-7	30	
CAL5	786107.5	460232.679	True	5.00	1.708	6.44	1.150	5.000	4.726	-5	30	
CAL6	789168.4	419913.240	True	5.00	1.879	6.43	1.160	5.000	5.200	4	30	
CAL7	717297.7	405454.995	True	5.00	1.769	6.43	1.160	5.000	4.895	-2	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

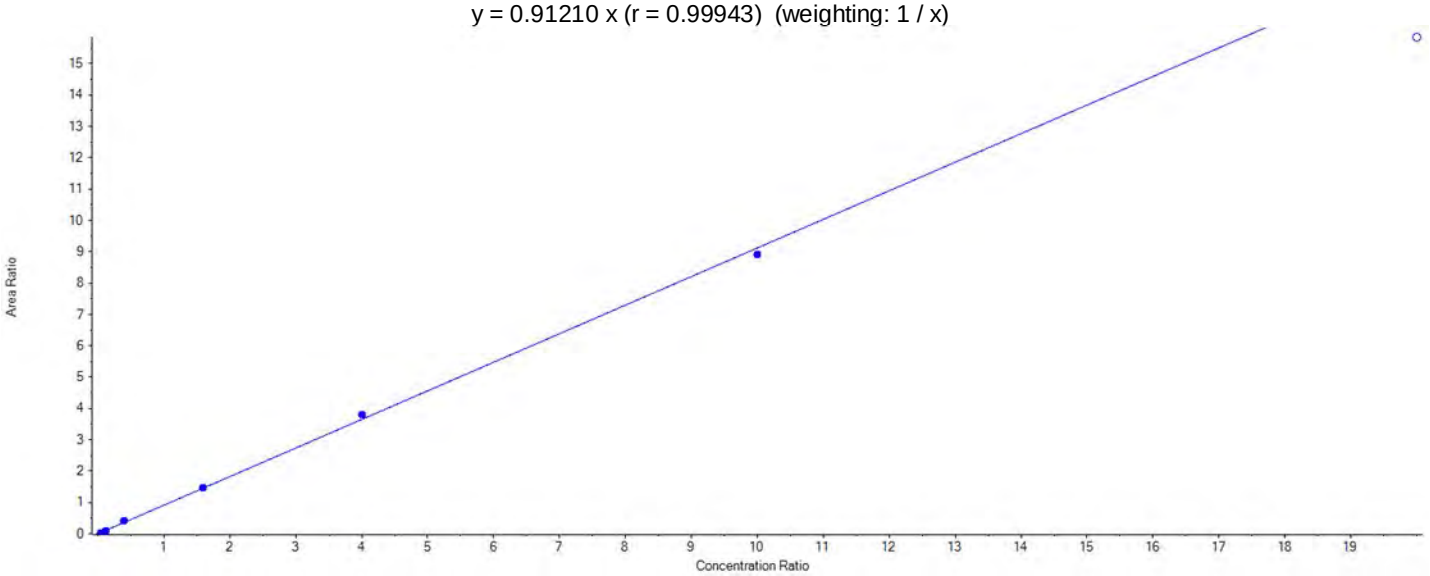
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBA

y = 0.91210 x (r = 0.99943) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBA Area	S/N	13C4-PFBA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	43996.2	249.7	1018752.836	True	5.00	0.043	3.28	1.000	0.200	0.237	18	30	
CAL2	110036.6	487.6	1033122.100	True	5.00	0.107	3.27	1.000	0.600	0.584	-3	30	
CAL3	403055.8	822.1	993144.063	True	5.00	0.406	3.28	1.000	2.000	2.225	11	30	
CAL4	1425164.4	1298.8	974000.882	True	5.00	1.463	3.28	1.000	8.000	8.021	0	30	
CAL5	3627061.5	1931.2	951694.967	True	5.00	3.811	3.28	1.000	20.000	20.892	4	30	
CAL6	7996964.8	2615.4	897566.729	True	5.00	8.910	3.27	1.000	50.000	48.841	-2	30	
CAL7	12734942.7	3050.8	803704.793	False	5.00	15.845	3.27	1.000	100.000	86.862	-13	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

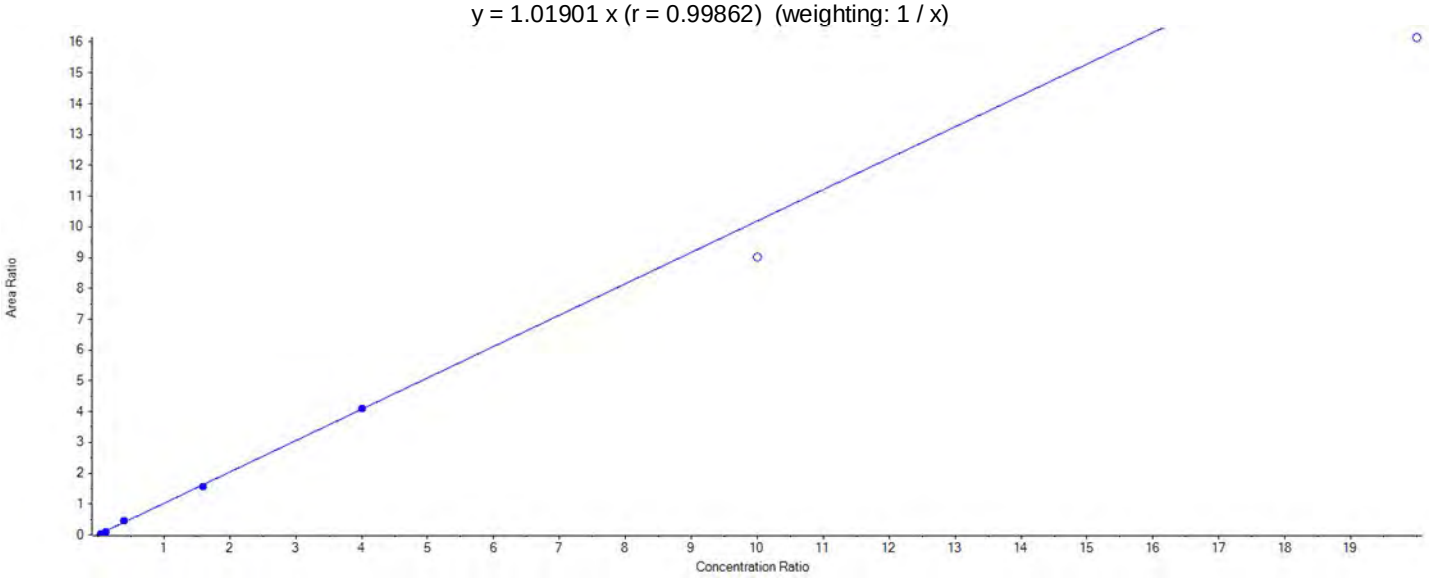
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeA

y = 1.01901 x (r = 0.99862) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeA Area	S/N	13C5-PFPeA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	44706.1	168.1	975339.046	True	5.00	0.046	3.77	1.000	0.200	0.225	12	30	
CAL2	104393.1	258.3	1014125.030	True	5.00	0.103	3.77	1.000	0.600	0.505	-16	30	
CAL3	424089.1	470.0	910953.705	True	5.00	0.466	3.78	1.000	2.000	2.284	14	30	
CAL4	1424845.3	869.3	915824.561	True	5.00	1.556	3.77	1.000	8.000	7.634	-5	30	
CAL5	3696889.3	1332.4	900153.389	True	5.00	4.107	3.78	1.000	20.000	20.152	1	30	
CAL6	7873655.4	2197.1	872922.614	False	5.00	9.020	3.77	1.000	50.000	44.258	-11	30	
CAL7	12611040.3	1779.7	781113.823	False	5.00	16.145	3.77	1.000	100.000	79.219	-21	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

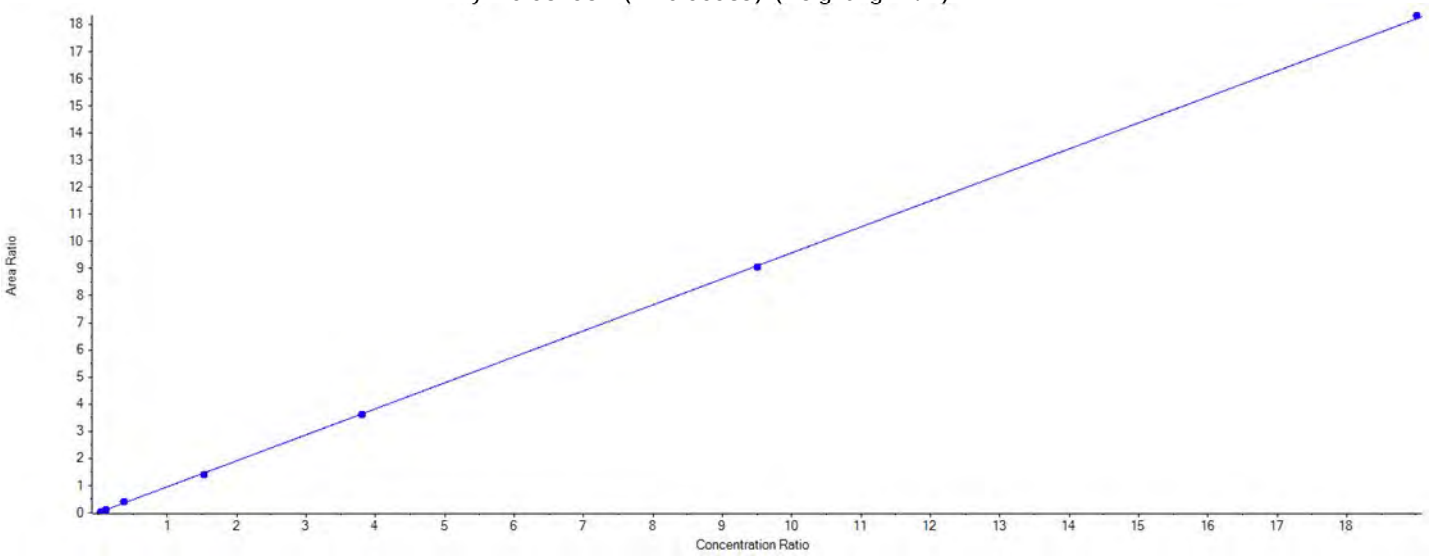
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFBS

y = 0.95795 x (r = 0.99985) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFBS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	17465.3	759.3	437838.938	True	4.65	0.040	3.82	1.000	0.177	0.194	9	30	
CAL2	43237.4	921.9	442149.949	True	4.65	0.098	3.81	1.000	0.531	0.475	-11	30	
CAL3	168534.1	2117.3	419929.218	True	4.65	0.401	3.82	1.000	1.770	1.948	10	30	
CAL4	590590.2	3233.1	424041.313	True	4.65	1.393	3.82	1.000	7.080	6.761	-5	30	
CAL5	1542881.7	3193.4	424059.219	True	4.65	3.638	3.82	1.000	17.700	17.661	0	30	
CAL6	3600470.8	4364.1	398441.322	True	4.65	9.036	3.82	1.000	44.200	43.864	-1	30	
CAL7	6468971.4	4045.2	352994.776	True	4.65	18.326	3.82	1.000	88.400	88.956	1	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

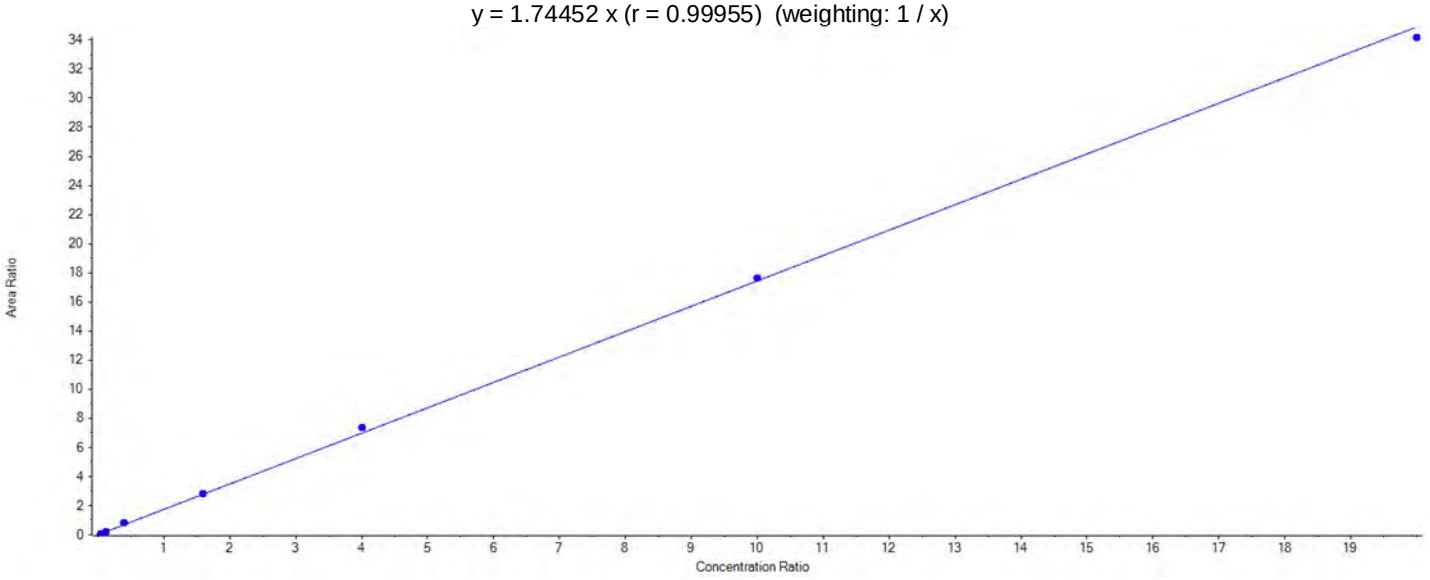
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

4:2-FTS

y = 1.74452 x (r = 0.99955) (weighting: 1 / x)



Component Calibration Verification

Sample Name	4:2-FTS Area	S/N	13C2-4:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5603.8	2243.2	75119.122	True	4.67	0.075	4.13	1.000	0.187	0.200	7	30	
CAL2	14524.8	4777.1	72067.149	True	4.67	0.202	4.13	1.000	0.560	0.540	-4	30	
CAL3	56502.5	1225.4	70629.114	True	4.67	0.800	4.14	1.000	1.870	2.142	15	30	
CAL4	191344.6	1753.2	67043.698	True	4.67	2.854	4.13	1.000	7.470	7.640	2	30	
CAL5	498650.7	4269.7	67422.965	True	4.67	7.396	4.14	1.000	18.700	19.798	6	30	
CAL6	1148569.2	2995.6	65255.390	True	4.67	17.601	4.13	1.000	46.700	47.117	1	30	
CAL7	2126148.2	3609.5	62236.773	True	4.67	34.162	4.13	1.000	93.400	91.451	-2	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

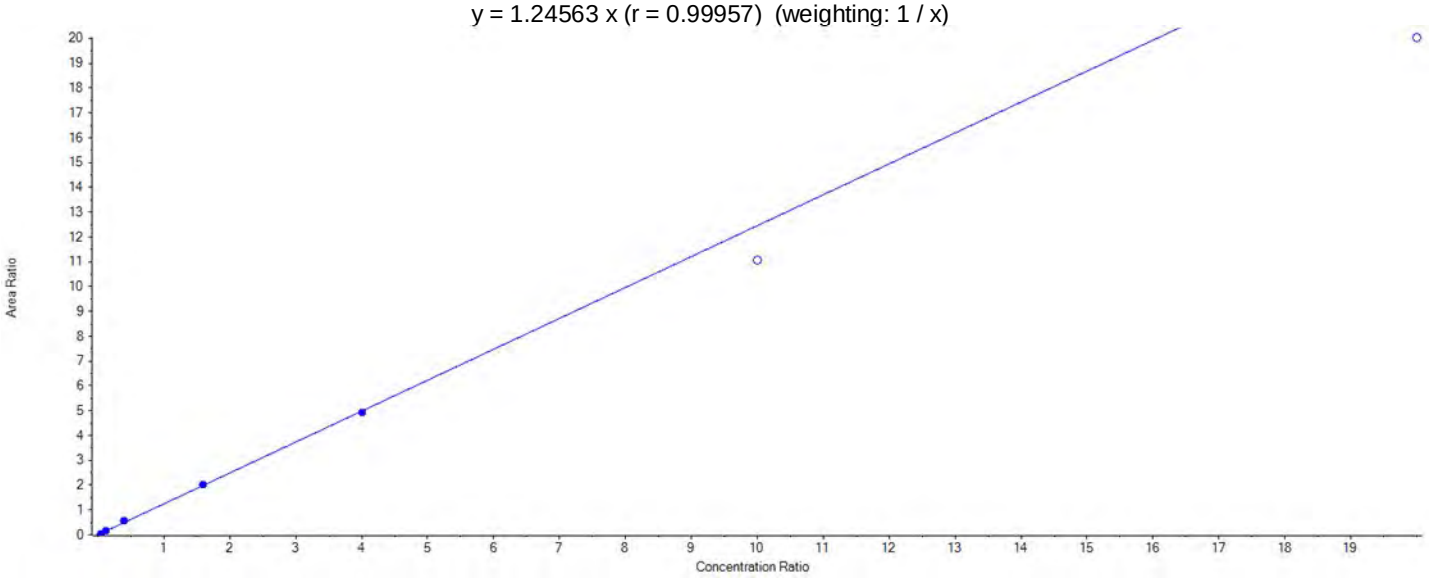
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxA

y = 1.24563 x (r = 0.99957) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxA Area	S/N	13C5-PFHxA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	42281.8	270.9	728340.451	True	5.00	0.058	4.17	1.000	0.200	0.233	17	30	
CAL2	101713.2	383.4	697229.019	True	5.00	0.146	4.16	1.000	0.600	0.586	-2	30	
CAL3	395421.4	731.7	717900.058	True	5.00	0.551	4.17	1.000	2.000	2.211	11	30	
CAL4	1343216.4	1177.9	670407.711	True	5.00	2.004	4.16	1.000	8.000	8.042	1	30	
CAL5	3464657.3	1836.2	704953.498	True	5.00	4.915	4.17	1.000	20.000	19.728	-1	30	
CAL6	7468739.1	2191.3	675219.804	False	5.00	11.061	4.16	1.000	50.000	44.400	-11	30	
CAL7	12530843.0	2376.6	625449.752	False	5.00	20.035	4.16	1.000	100.000	80.421	-20	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

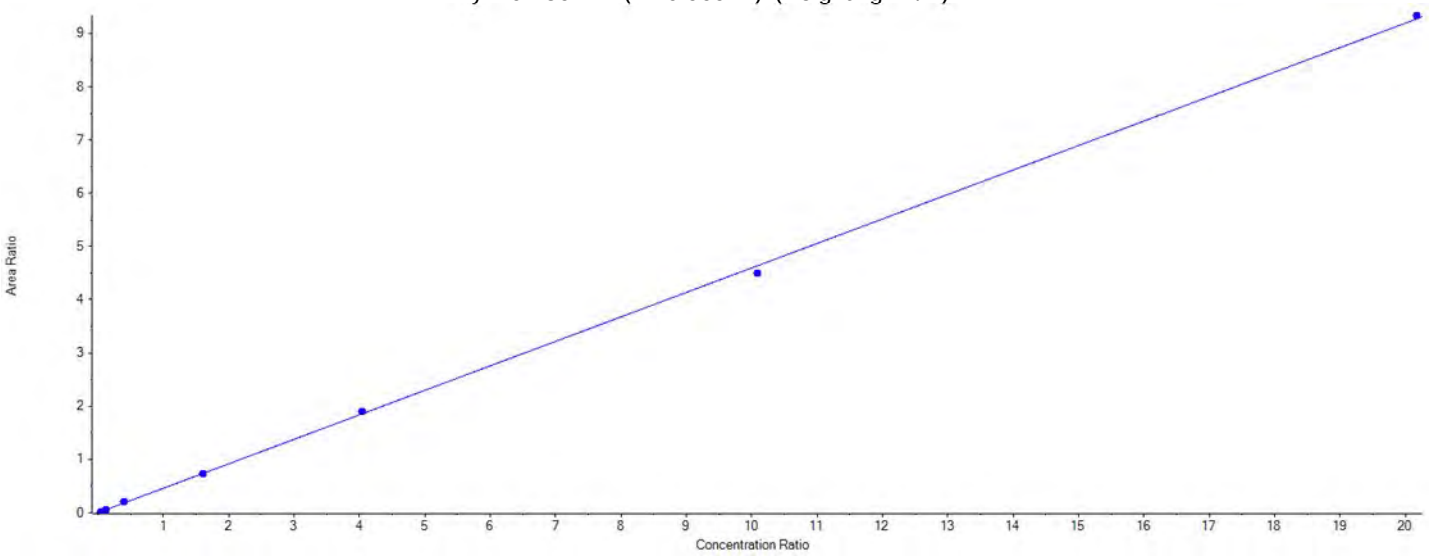
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFPeS

y = 0.45971 x (r = 0.99971) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFPeS Area	S/N	13C3-PFBS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	8956.0	383.7	437838.938	True	4.65	0.020	4.19	1.100	0.188	0.207	10	30	
CAL2	24007.2	778.6	442149.949	True	4.65	0.054	4.18	1.100	0.563	0.549	-2	30	
CAL3	89559.7	2347.5	419929.218	True	4.65	0.213	4.19	1.100	1.880	2.157	15	30	
CAL4	311741.6	2021.0	424041.313	True	4.65	0.735	4.19	1.100	7.500	7.436	-1	30	
CAL5	809728.0	3003.6	424059.219	True	4.65	1.909	4.19	1.100	18.800	19.314	3	30	
CAL6	1793808.0	3890.0	398441.322	True	4.65	4.502	4.18	1.100	46.900	45.538	-3	30	
CAL7	3295381.6	3138.3	352994.776	True	4.65	9.335	4.18	1.100	93.800	94.429	1	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

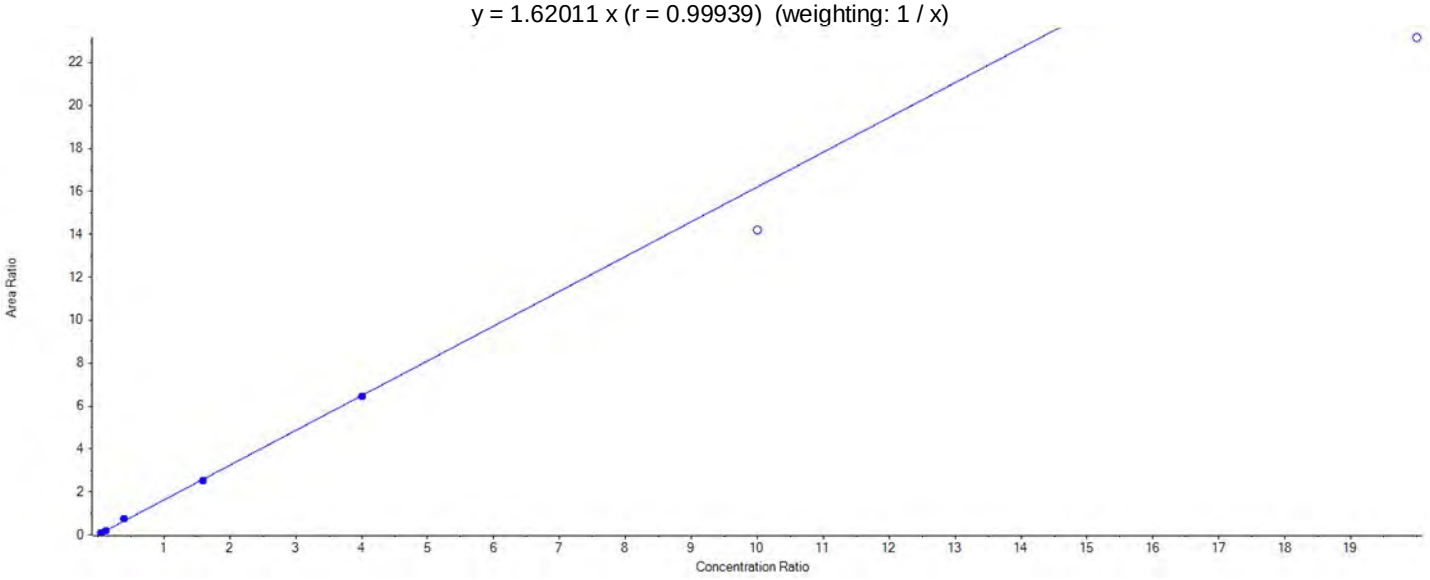
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpA

y = 1.62011 x (r = 0.99939) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpA Area	S/N	13C4-PFHpA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	42530.6	366.7	547365.130	True	5.00	0.078	4.56	1.000	0.200	0.240	20	30	
CAL2	100593.8	599.3	547371.985	True	5.00	0.184	4.55	1.000	0.600	0.567	-5	30	
CAL3	388626.7	1091.3	535993.324	True	5.00	0.725	4.56	1.000	2.000	2.238	12	30	
CAL4	1429895.3	2152.8	563673.949	True	5.00	2.537	4.55	1.000	8.000	7.829	-2	30	
CAL5	3592806.2	2355.3	556455.908	True	5.00	6.457	4.56	1.000	20.000	19.926	0	30	
CAL6	7873271.2	3361.6	555281.473	False	5.00	14.179	4.55	1.000	50.000	43.759	-12	30	
CAL7	12619701.6	2617.8	544866.925	False	5.00	23.161	4.55	1.000	100.000	71.480	-29	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

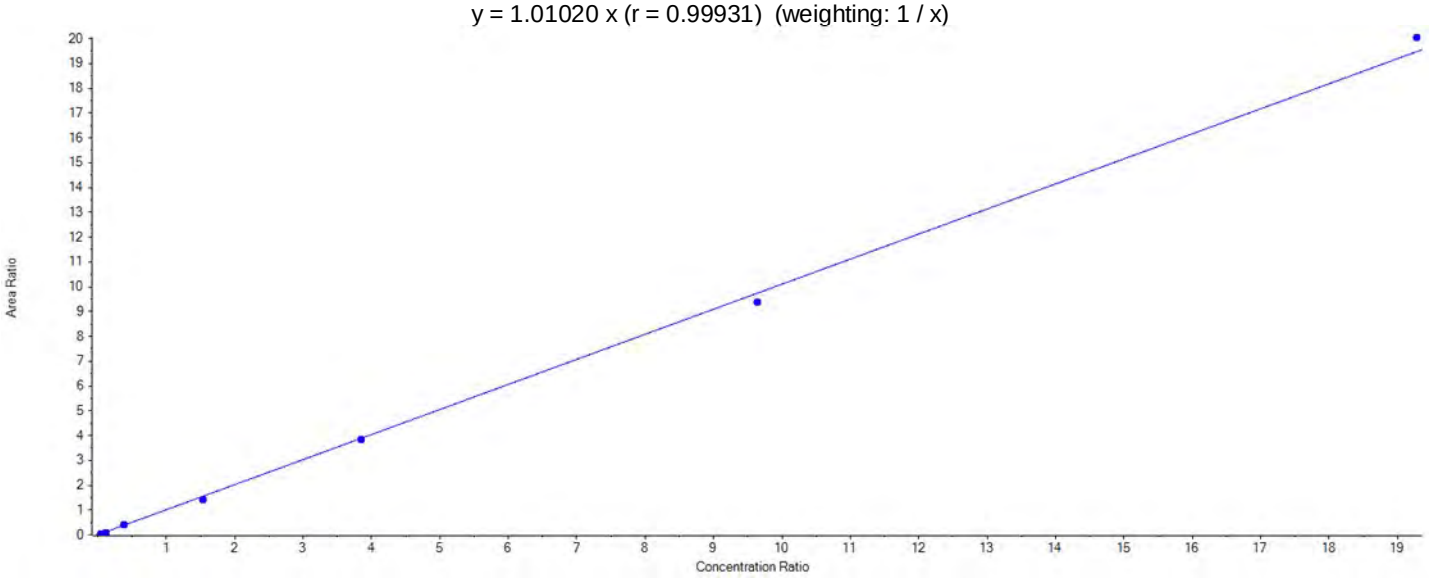
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxS

y = 1.01020 x (r = 0.99931) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	12830.8	10643.6	331982.904	True	4.73	0.039	4.56	1.000	0.182	0.181	-1	30	
CAL2	31104.5	1568.4	335129.691	True	4.73	0.093	4.55	1.000	0.547	0.435	-21	30	
CAL3	127889.2	1553.1	326982.370	True	4.73	0.391	4.56	1.000	1.820	1.831	1	30	
CAL4	444626.0	1772.0	316393.280	True	4.73	1.405	4.56	1.000	7.300	6.580	-10	30	
CAL5	1191482.7	2091.1	309184.702	True	4.73	3.854	4.56	1.000	18.200	18.044	-1	30	
CAL6	2625950.9	1900.1	279894.643	True	4.73	9.382	4.55	1.000	45.600	43.929	-4	30	
CAL7	4797026.7	1752.4	239327.412	True	4.73	20.044	4.55	1.000	91.200	93.850	3	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

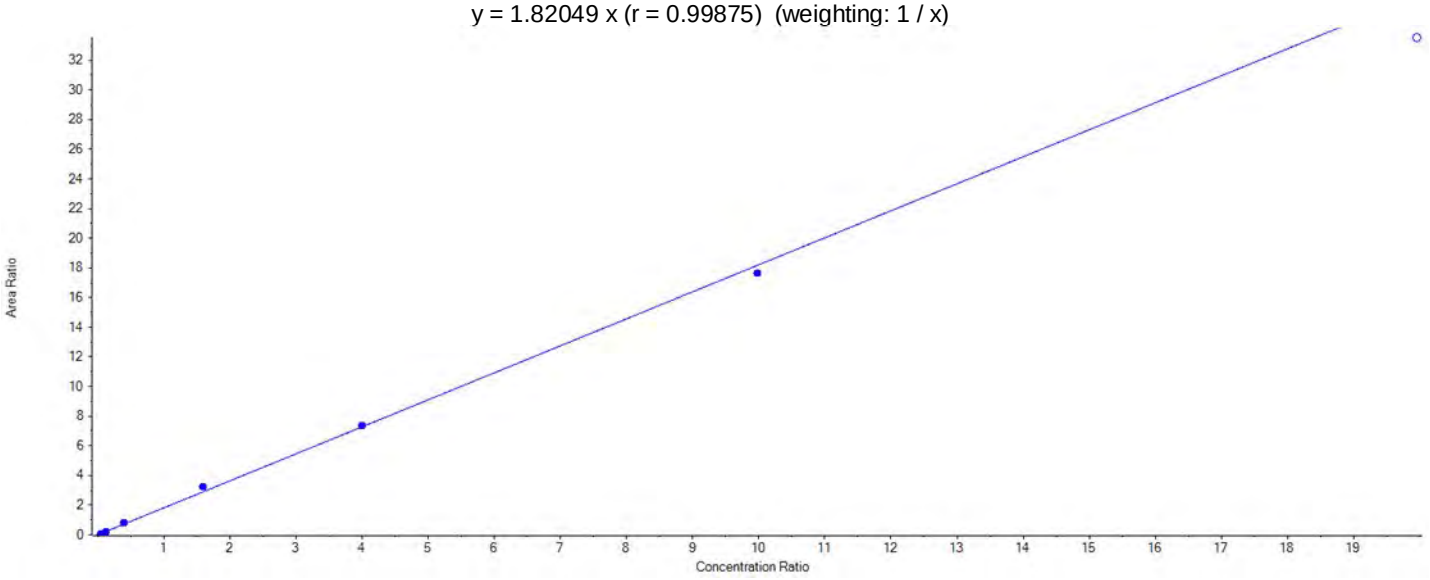
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

6:2-FTS

y = 1.82049 x (r = 0.99875) (weighting: 1 / x)



Component Calibration Verification

Sample Name	6:2-FTS Area	S/N	13C2-6:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5676.7	534.7	65543.766	True	4.75	0.087	4.91	1.000	0.190	0.226	19	30	
CAL2	14479.8	1089.2	63922.654	True	4.75	0.227	4.91	1.000	0.569	0.591	4	30	
CAL3	53951.0	2408.1	65518.288	True	4.75	0.823	4.92	1.000	1.900	2.149	13	30	
CAL4	185311.5	2003.0	56580.079	True	4.75	3.275	4.91	1.000	7.580	8.546	13	30	
CAL5	426727.7	3587.1	58122.789	True	4.75	7.342	4.92	1.000	19.000	19.156	1	30	
CAL6	859948.6	2867.7	48807.560	True	4.75	17.619	4.90	1.000	47.400	45.972	-3	30	
CAL7	1464447.0	3167.3	43678.325	False	4.75	33.528	4.91	1.000	94.800	87.481	-8	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

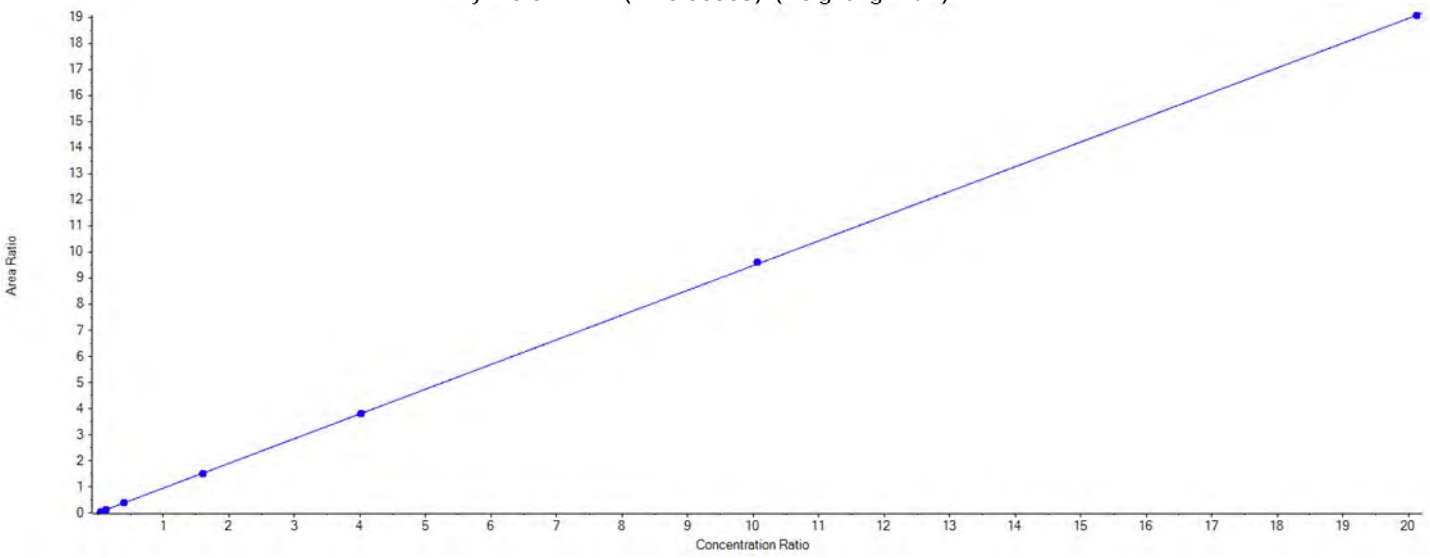
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHpS

y = 0.94774 x (r = 0.99993) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHpS Area	S/N	13C3-PFHxS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13921.8	19272.6	331982.904	True	4.73	0.042	4.92	1.080	0.190	0.209	10	30	
CAL2	32553.7	4447.1	335129.691	True	4.73	0.097	4.91	1.080	0.571	0.485	-15	30	
CAL3	129450.9	9073.5	326982.370	True	4.73	0.396	4.92	1.080	1.900	1.976	4	30	
CAL4	471580.6	3167.3	316393.280	True	4.73	1.490	4.92	1.080	7.610	7.439	-2	30	
CAL5	1171216.6	2826.6	309184.702	True	4.73	3.788	4.92	1.080	19.000	18.906	0	30	
CAL6	2686833.3	2573.7	279894.643	True	4.73	9.599	4.91	1.080	47.600	47.909	1	30	
CAL7	4562639.6	2438.6	239327.412	True	4.73	19.064	4.91	1.080	95.200	95.147	0	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

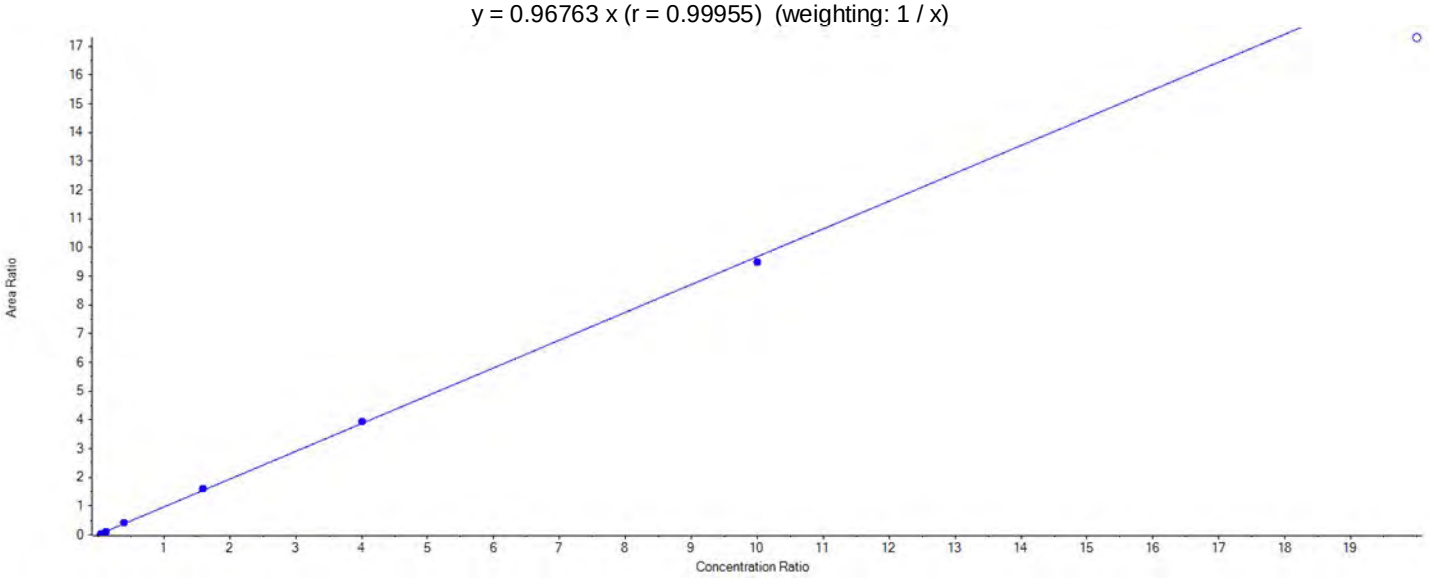
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOA

y = 0.96763 x (r = 0.99955) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOA Area	S/N	13C8-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	42517.4	185.7	1030597.916	True	5.00	0.041	4.93	1.000	0.200	0.213	7	30	
CAL2	106420.8	337.5	1030866.619	True	5.00	0.103	4.92	1.000	0.600	0.533	-11	30	
CAL3	405879.4	495.1	954677.960	True	5.00	0.425	4.93	1.000	2.000	2.197	10	30	
CAL4	1486960.4	1291.2	918995.325	True	5.00	1.618	4.92	1.000	8.000	8.361	5	30	
CAL5	3601538.3	1584.3	911756.077	True	5.00	3.950	4.93	1.000	20.000	20.411	2	30	
CAL6	8012665.3	1863.3	843522.332	True	5.00	9.499	4.92	1.000	50.000	49.084	-2	30	
CAL7	12900182.7	2063.6	745616.325	False	5.00	17.301	4.92	1.000	100.000	89.401	-11	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

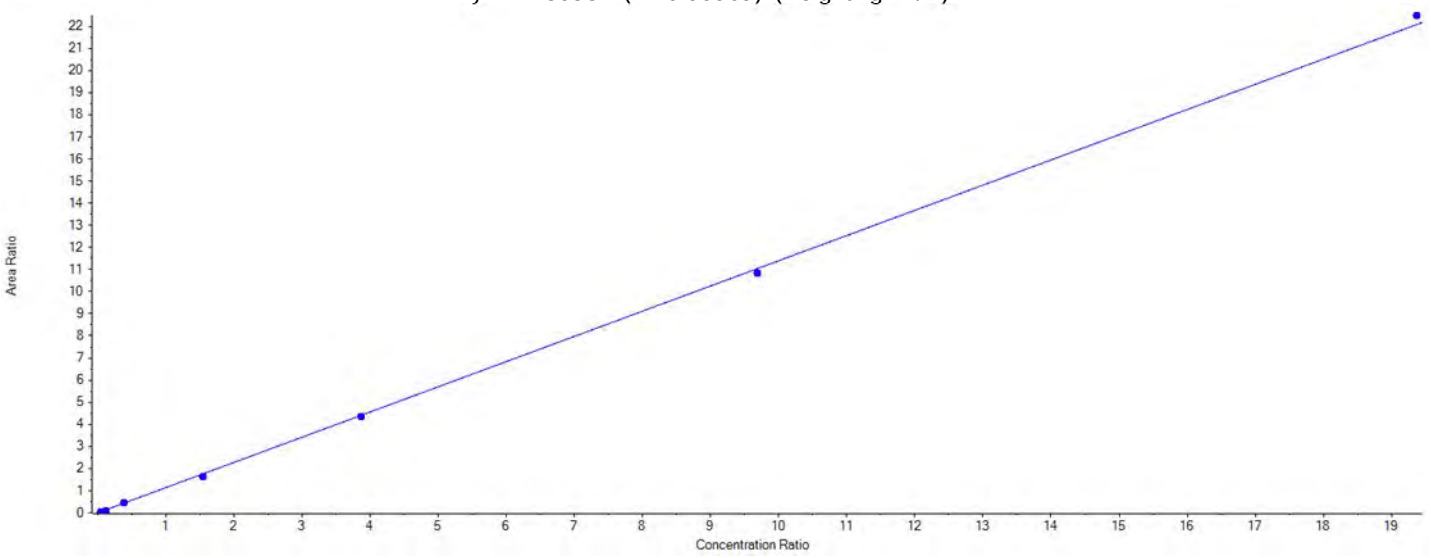
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOS

y = 1.13953 x (r = 0.99969) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13060.0	1060.4	318525.429	True	4.78	0.041	5.25	1.000	0.185	0.172	-7	30	
CAL2	34203.6	972.6	313894.271	True	4.78	0.109	5.25	1.000	0.555	0.457	-18	30	
CAL3	139506.6	732.7	309913.737	True	4.78	0.450	5.26	1.000	1.850	1.888	2	30	
CAL4	481950.0	1137.9	296147.525	True	4.78	1.627	5.25	1.000	7.400	6.826	-8	30	
CAL5	1305020.5	988.3	299574.476	True	4.78	4.356	5.26	1.000	18.500	18.273	-1	30	
CAL6	3026664.4	1448.1	279204.362	True	4.78	10.840	5.25	1.000	46.300	45.472	-2	30	
CAL7	5620329.0	1278.0	250004.233	True	4.78	22.481	5.25	1.000	92.600	94.301	2	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

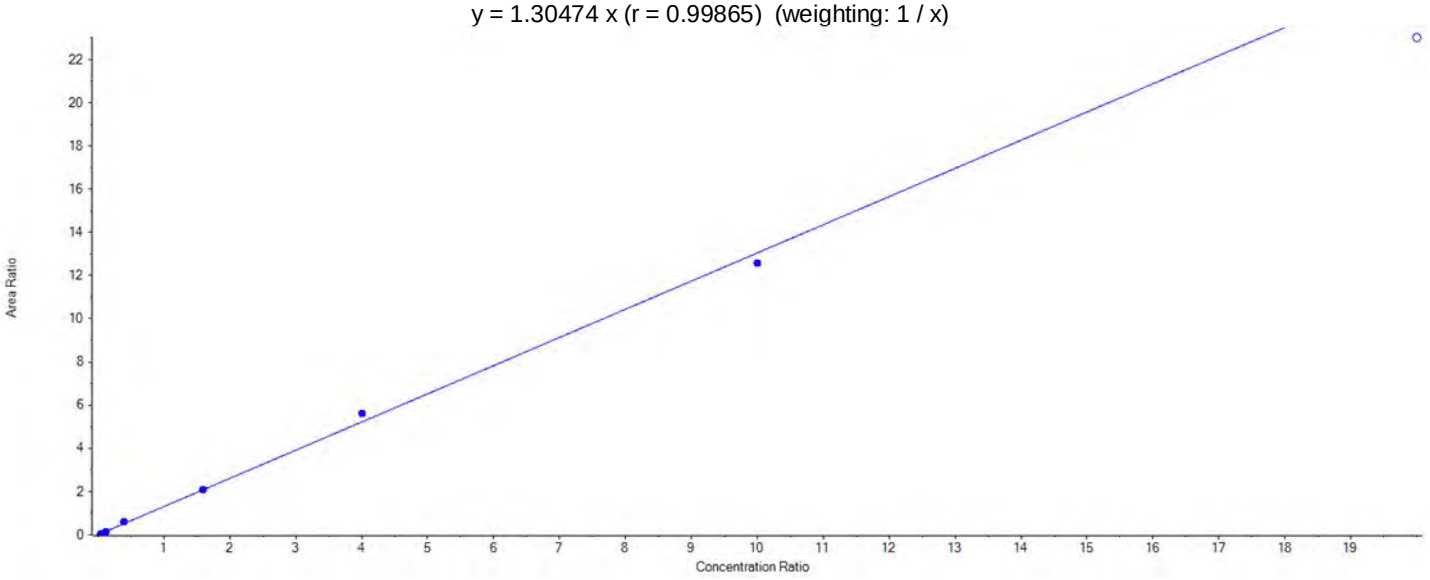
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNA

y = 1.30474 x (r = 0.99865) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNA Area	S/N	13C9-PFNA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	39485.1	336.0	659714.648	True	5.00	0.060	5.27	1.000	0.200	0.229	15	30	
CAL2	106720.9	560.6	682380.696	True	5.00	0.156	5.26	1.000	0.600	0.599	0	30	
CAL3	370292.0	1397.5	629954.590	True	5.00	0.588	5.27	1.000	2.000	2.253	13	30	
CAL4	1365056.4	2099.1	648727.023	True	5.00	2.104	5.27	1.000	8.000	8.064	1	30	
CAL5	3536255.1	3740.5	630201.519	True	5.00	5.611	5.27	1.000	20.000	21.504	8	30	
CAL6	7843086.9	3448.1	624202.702	True	5.00	12.565	5.26	1.000	50.000	48.151	-4	30	
CAL7	12939629.1	3220.8	562206.893	False	5.00	23.016	5.27	1.000	100.000	88.201	-12	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

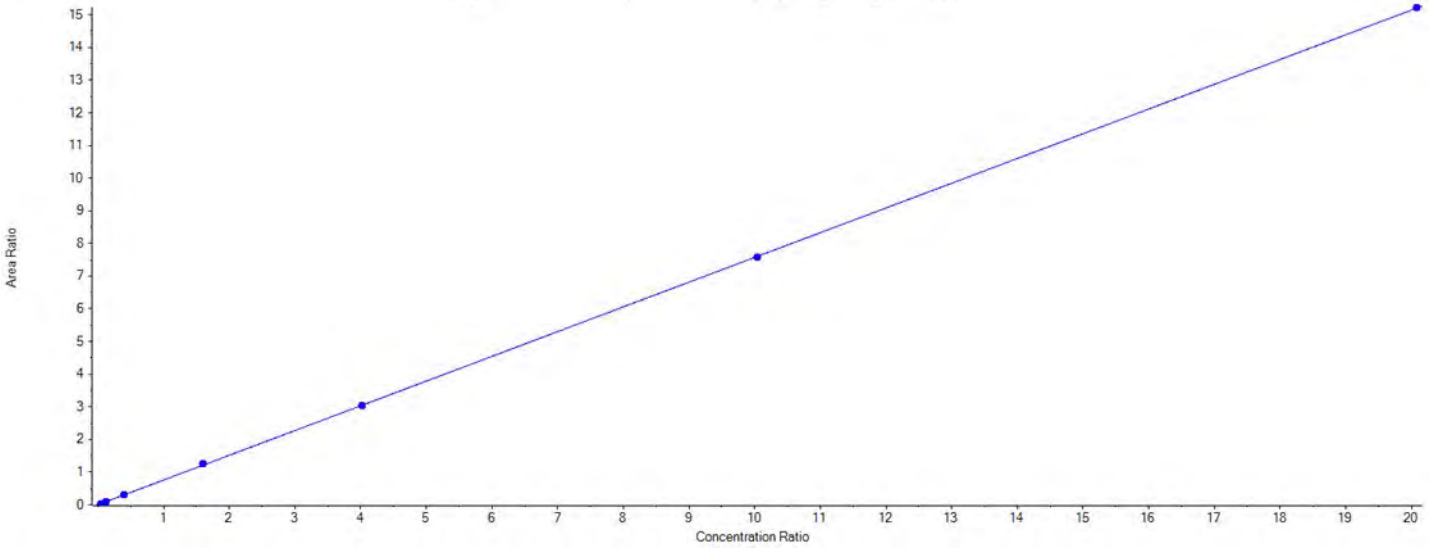
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFNS

y = 0.75705 x (r = 0.99994) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFNS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	9756.6	2226.5	318525.429	True	4.78	0.031	5.55	1.060	0.192	0.193	1	30	
CAL2	24149.9	10822.9	313894.271	True	4.78	0.077	5.54	1.060	0.576	0.486	-16	30	
CAL3	91471.0	43486.9	309913.737	True	4.78	0.295	5.55	1.060	1.920	1.864	-3	30	
CAL4	369833.4	4460.8	296147.525	True	4.78	1.249	5.55	1.060	7.680	7.885	3	30	
CAL5	909879.2	4615.6	299574.476	True	4.78	3.037	5.55	1.060	19.200	19.177	0	30	
CAL6	2116661.5	2721.3	279204.362	True	4.78	7.581	5.54	1.060	48.000	47.867	0	30	
CAL7	3804945.2	2191.8	250004.233	True	4.78	15.220	5.54	1.060	96.000	96.096	0	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

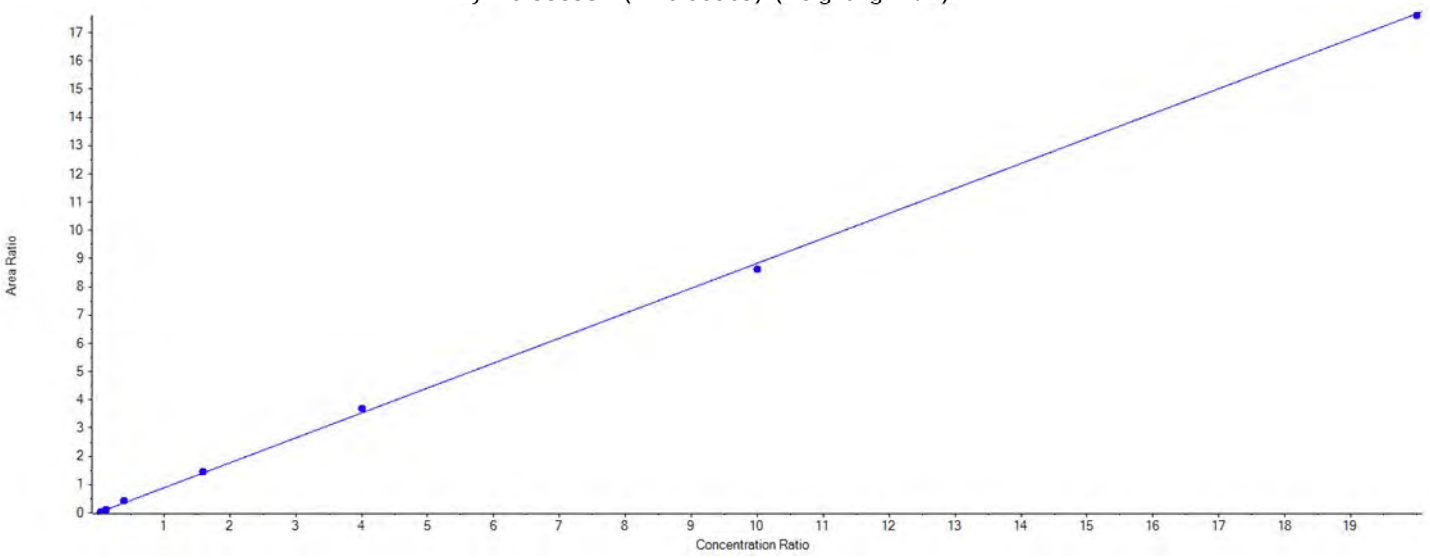
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDA

y = 0.88335 x (r = 0.99965) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDA Area	S/N	13C6-PFDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	33621.2	252.1	855362.920	True	5.00	0.039	5.57	1.000	0.200	0.222	11	30	
CAL2	90730.3	547.0	839100.670	True	5.00	0.108	5.57	1.000	0.600	0.612	2	30	
CAL3	343523.0	1010.2	824072.930	True	5.00	0.417	5.57	1.000	2.000	2.360	18	30	
CAL4	1223810.4	1419.5	841970.480	True	5.00	1.454	5.57	1.000	8.000	8.227	3	30	
CAL5	3072749.0	2173.2	833462.150	True	5.00	3.687	5.57	1.000	20.000	20.868	4	30	
CAL6	6551370.5	3228.5	758832.768	True	5.00	8.633	5.56	1.000	50.000	48.868	-2	30	
CAL7	11371047.0	2538.0	645932.474	True	5.00	17.604	5.57	1.000	100.000	99.643	0	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

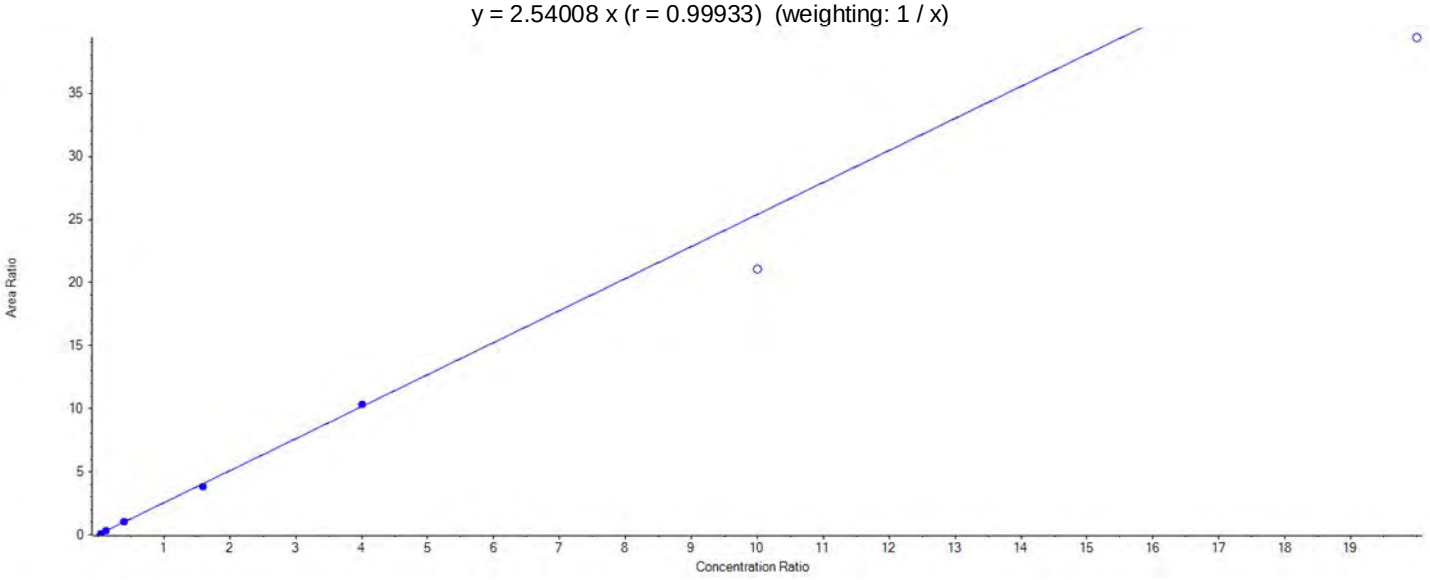
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

8:2-FTS

y = 2.54008 x (r = 0.99933) (weighting: 1 / x)



Component Calibration Verification

Sample Name	8:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6138.7	138.9	58895.024	True	4.79	0.104	5.57	1.000	0.192	0.197	2	30	
CAL2	15550.2	278.8	54757.914	True	4.79	0.284	5.57	1.000	0.575	0.536	-7	30	
CAL3	57433.9	686.2	53847.149	True	4.79	1.067	5.57	1.000	1.920	2.011	5	30	
CAL4	203687.7	1309.3	52961.880	True	4.79	3.846	5.57	1.000	7.660	7.253	-5	30	
CAL5	478390.1	1550.6	46142.417	True	4.79	10.368	5.58	1.000	19.200	19.551	2	30	
CAL6	938590.1	1617.4	44487.495	False	4.79	21.098	5.57	1.000	47.900	39.786	-17	30	
CAL7	1620286.0	2884.0	41093.046	False	4.79	39.430	5.57	1.000	95.800	74.355	-22	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

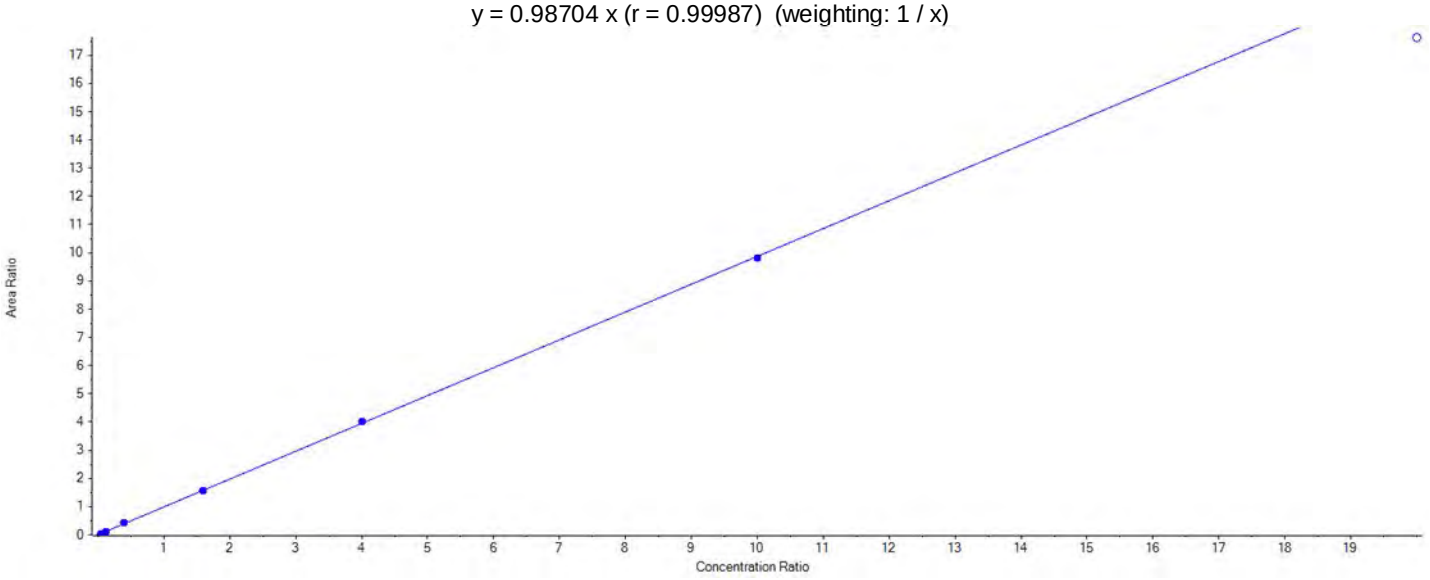
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFOSA

y = 0.98704 x (r = 0.99987) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFOSA Area	S/N	13C8-PFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	27693.0	14496.4	662264.748	True	5.00	0.042	5.65	1.000	0.200	0.212	6	30	
CAL2	73112.3	749.8	658778.467	True	5.00	0.111	5.65	1.000	0.600	0.562	-6	30	
CAL3	265394.0	1340.3	631627.878	True	5.00	0.420	5.66	1.000	2.000	2.128	6	30	
CAL4	976434.1	2479.8	625021.840	True	5.00	1.562	5.65	1.000	8.000	7.914	-1	30	
CAL5	2392584.6	2838.0	596189.464	True	5.00	4.013	5.66	1.000	20.000	20.329	2	30	
CAL6	5541493.1	2884.6	565326.016	True	5.00	9.802	5.65	1.000	50.000	49.655	-1	30	
CAL7	9792009.5	2446.5	555500.490	False	5.00	17.627	5.65	1.000	100.000	89.294	-11	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

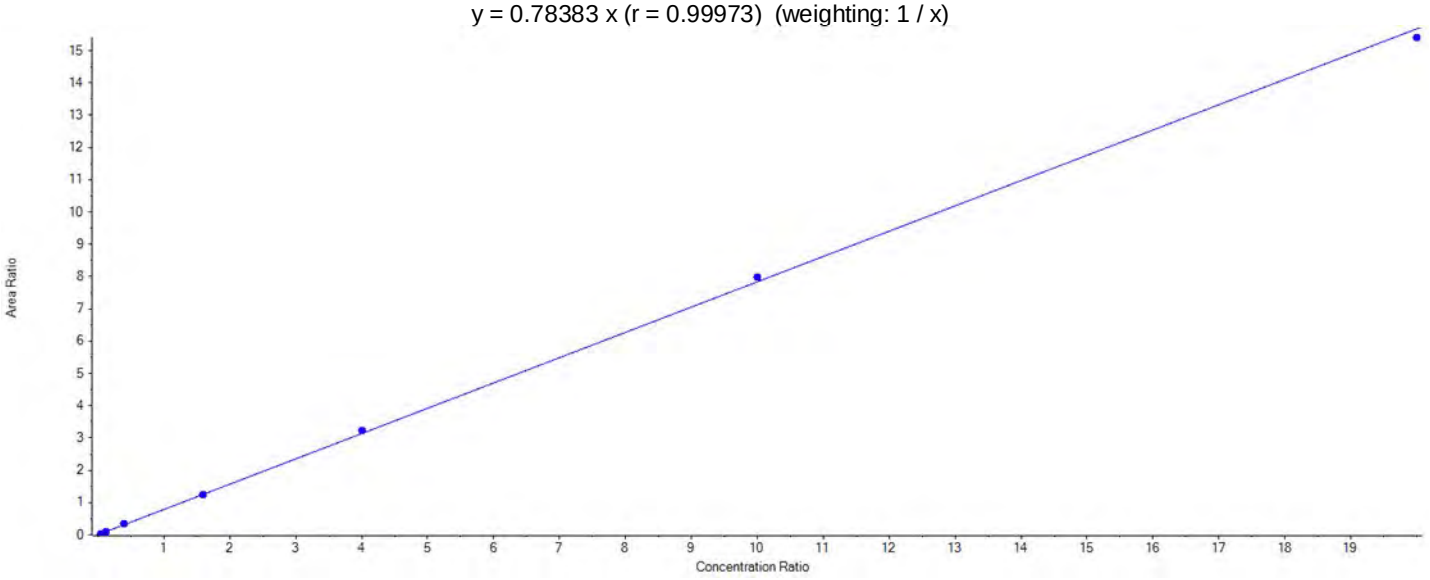
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

NMeFOSAA

y = 0.78383 x (r = 0.99973) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMeFOSAA Area	S/N	d3-NMeFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6661.0	153.4	220597.274	True	5.00	0.030	5.71	1.000	0.200	0.193	-4	30	
CAL2	16533.1	308.9	181261.245	True	5.00	0.091	5.70	1.000	0.600	0.582	-3	30	
CAL3	62054.8	533.8	178338.072	True	5.00	0.348	5.71	1.000	2.000	2.220	11	30	
CAL4	212775.3	1656.4	171203.949	True	5.00	1.243	5.71	1.000	8.000	7.928	-1	30	
CAL5	557354.6	1407.3	172574.166	True	5.00	3.230	5.71	1.000	20.000	20.602	3	30	
CAL6	1292829.8	1422.7	161673.270	True	5.00	7.997	5.70	1.000	50.000	51.010	2	30	
CAL7	2414874.8	1441.0	156760.846	True	5.00	15.405	5.71	1.000	100.000	98.267	-2	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

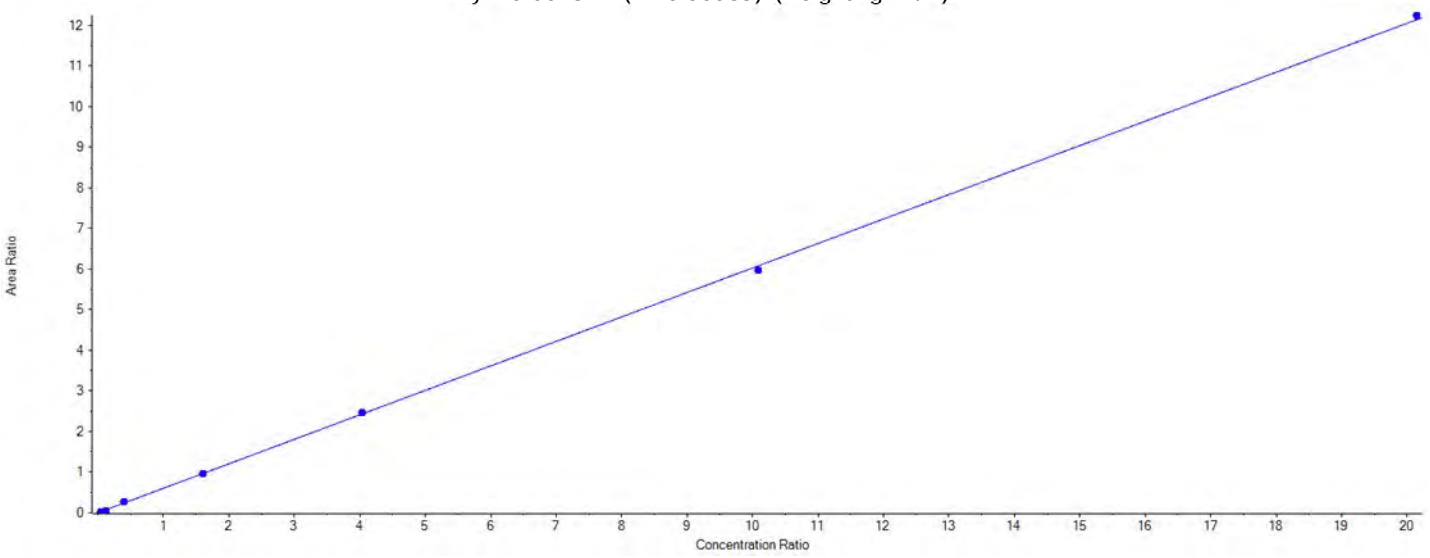
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDS

y = 0.60287 x (r = 0.99985) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	6850.7	4223.9	318525.429	True	4.78	0.022	5.81	1.110	0.193	0.171	-12	30	
CAL2	18654.8	1288.4	313894.271	True	4.78	0.059	5.80	1.100	0.578	0.471	-18	30	
CAL3	80537.4	288059.6	309913.737	True	4.78	0.260	5.80	1.100	1.930	2.060	7	30	
CAL4	283198.5	3741.0	296147.525	True	4.78	0.956	5.80	1.100	7.700	7.582	-2	30	
CAL5	737231.9	1757.0	299574.476	True	4.78	2.461	5.81	1.100	19.300	19.512	1	30	
CAL6	1665920.2	2887.4	279204.362	True	4.78	5.967	5.80	1.100	48.200	47.309	-2	30	
CAL7	3061543.5	4095.0	250004.233	True	4.78	12.246	5.80	1.110	96.300	97.096	1	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

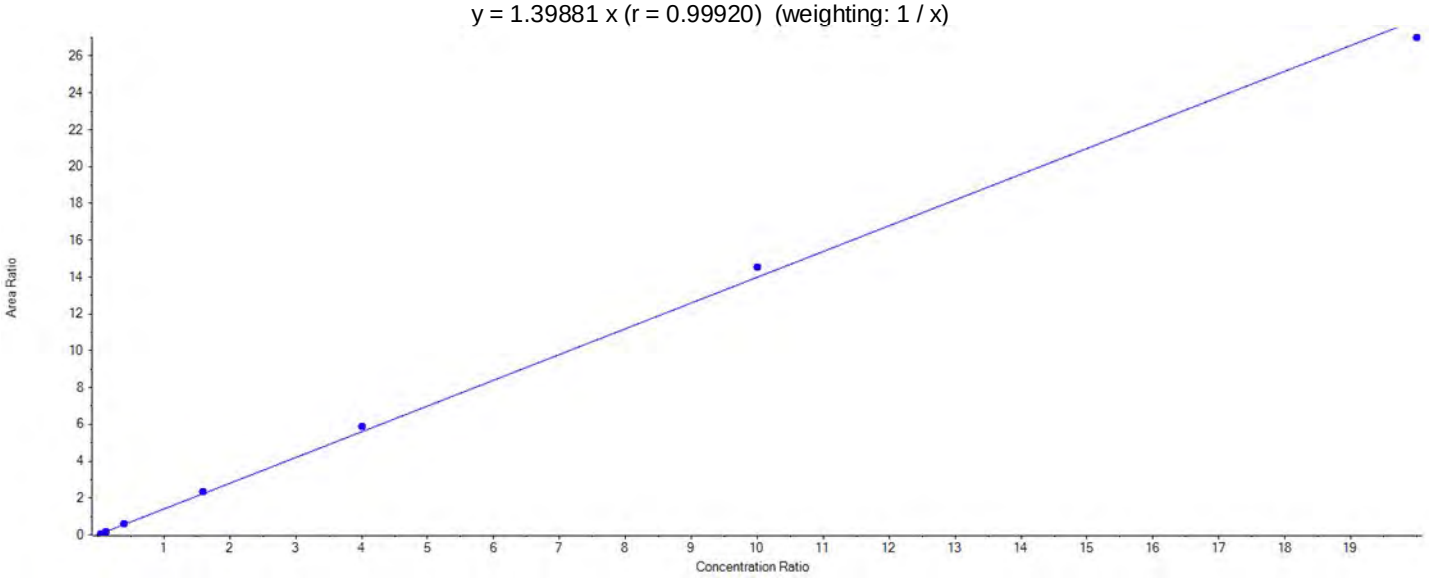
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFUnDA

y = 1.39881 x (r = 0.99920) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFUnDA Area	S/N	13C7-PFUnDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	36428.0	274.5	587155.422	True	5.00	0.062	5.82	1.000	0.200	0.222	11	30	
CAL2	91490.4	441.2	581206.992	True	5.00	0.157	5.82	1.000	0.600	0.563	-6	30	
CAL3	370693.6	883.5	592495.657	True	5.00	0.626	5.83	1.000	2.000	2.236	12	30	
CAL4	1281938.5	1471.5	546359.257	True	5.00	2.346	5.83	1.000	8.000	8.387	5	30	
CAL5	3163283.8	2050.7	539842.914	True	5.00	5.860	5.83	1.000	20.000	20.945	5	30	
CAL6	6885622.6	2756.7	474122.075	True	5.00	14.523	5.82	1.000	50.000	51.912	4	30	
CAL7	11254483.8	2696.8	416723.902	True	5.00	27.007	5.83	1.000	100.000	96.536	-3	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

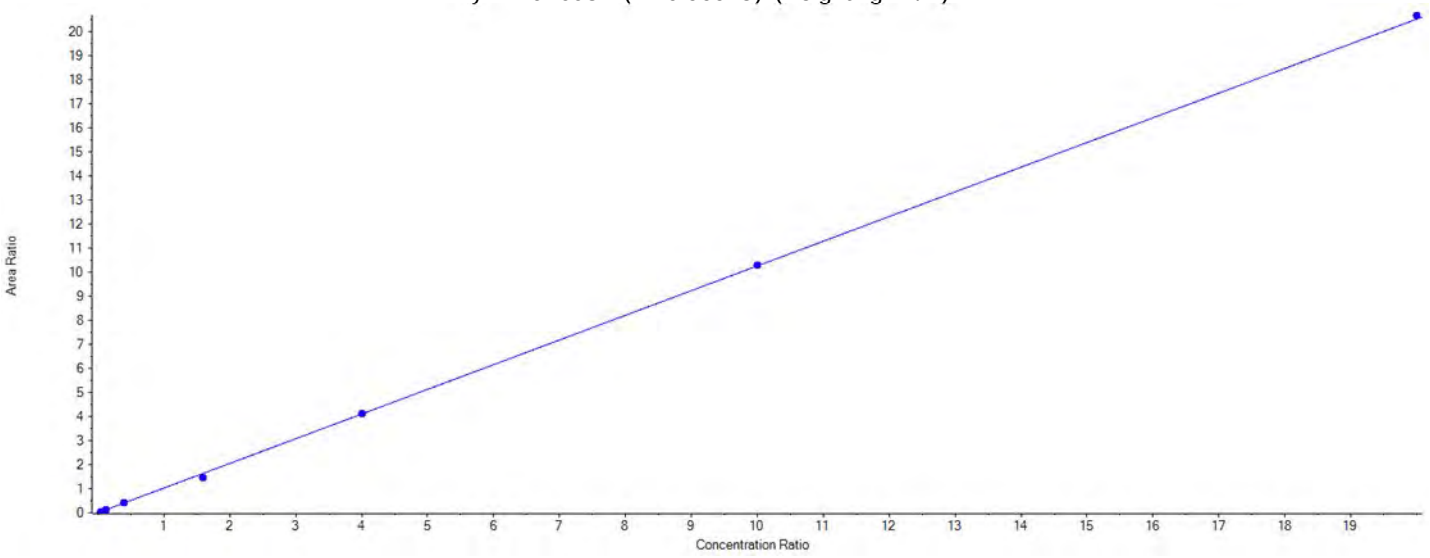
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtFOSAA

y = 1.02663 x (r = 0.99975) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtFOSAA Area	S/N	d5-NEtFOSAA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5069.2	122.5	127543.478	True	5.00	0.040	5.85	1.000	0.200	0.194	-3	30	
CAL2	16643.3	670.6	144803.235	True	5.00	0.115	5.84	1.000	0.600	0.560	-7	30	
CAL3	52769.5	534.0	129810.704	True	5.00	0.407	5.84	1.000	2.000	1.980	-1	30	
CAL4	204048.6	1145.4	138500.791	True	5.00	1.473	5.84	1.000	8.000	7.175	-10	30	
CAL5	512792.4	1631.6	124785.046	True	5.00	4.109	5.85	1.000	20.000	20.014	0	30	
CAL6	1214766.4	1707.9	117934.241	True	5.00	10.300	5.84	1.000	50.000	50.166	0	30	
CAL7	2127663.4	1866.1	102891.604	True	5.00	20.679	5.85	1.000	100.000	100.712	1	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

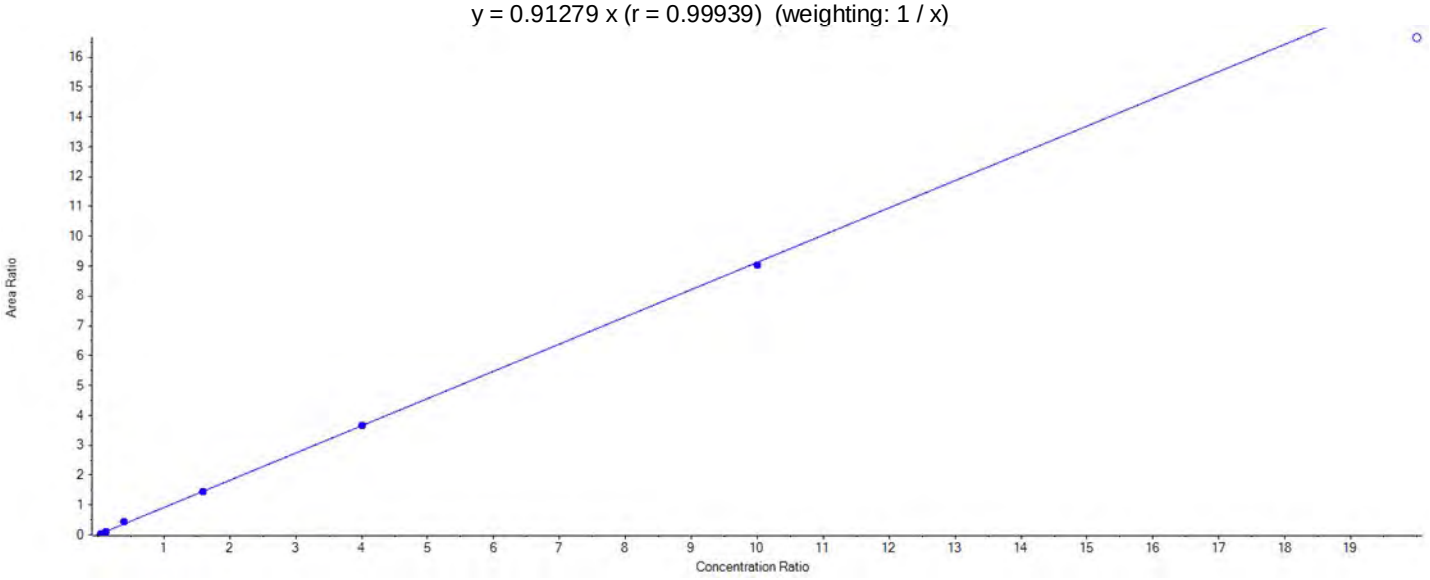
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoDA

y = 0.91279 x (r = 0.99939) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	53386.6	440.3	1173339.125	True	5.00	0.045	6.06	1.000	0.200	0.249	25	30	
CAL2	122586.0	435.7	1140522.314	True	5.00	0.107	6.05	1.000	0.600	0.589	-2	30	
CAL3	486489.2	1014.9	1091194.874	True	5.00	0.446	6.06	1.000	2.000	2.442	22	30	
CAL4	1650301.1	2076.9	1150927.360	True	5.00	1.434	6.06	1.000	8.000	7.854	-2	30	
CAL5	4161895.9	2283.1	1133027.856	True	5.00	3.673	6.06	1.000	20.000	20.121	1	30	
CAL6	8865844.7	2437.0	980215.411	True	5.00	9.045	6.05	1.000	50.000	49.545	-1	30	
CAL7	14195839.1	2288.5	852235.609	False	5.00	16.657	6.06	1.000	100.000	91.243	-9	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

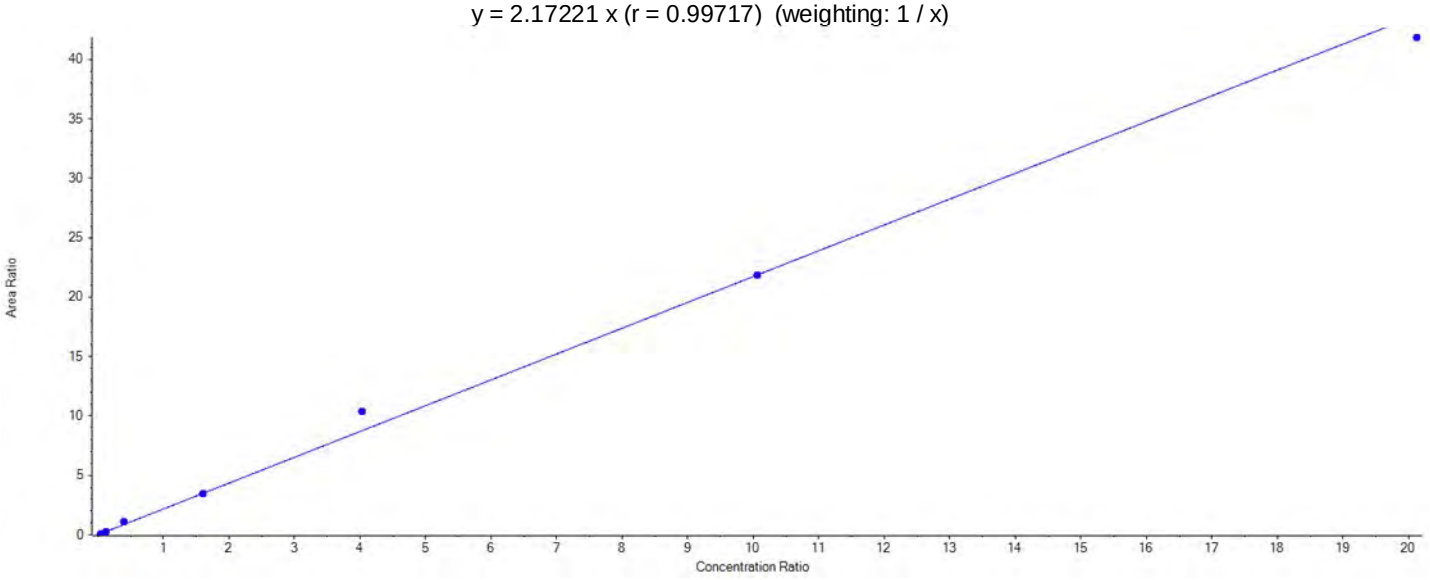
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

10:2-FTS

y = 2.17221 x (r = 0.99717) (weighting: 1 / x)



Component Calibration Verification

Sample Name	10:2-FTS Area	S/N	13C2-8:2-FTS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	5717.7	1172.1	58895.024	True	4.79	0.097	6.07	1.090	0.193	0.214	11	30	
CAL2	15157.8	2880.5	54757.914	True	4.79	0.277	6.07	1.090	0.578	0.610	6	30	
CAL3	58508.2	2664.2	53847.149	True	4.79	1.087	6.07	1.090	1.930	2.396	24	30	
CAL4	184968.5	809.2	52961.880	True	4.79	3.492	6.08	1.090	7.710	7.701	0	30	
CAL5	480384.1	12789.5	46142.417	True	4.79	10.411	6.08	1.090	19.300	22.957	19	30	
CAL6	972346.8	3139.7	44487.495	True	4.79	21.857	6.07	1.090	48.200	48.197	0	30	
CAL7	1718827.3	2423.5	41093.046	True	4.79	41.828	6.08	1.090	96.400	92.235	-4	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

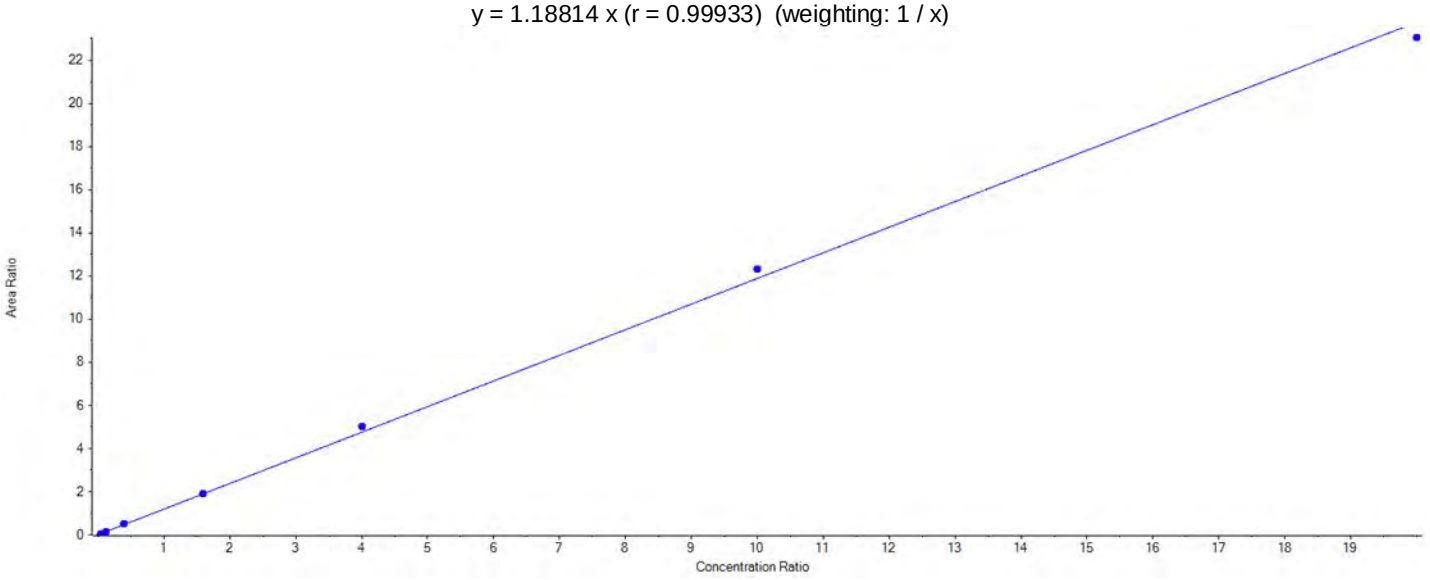
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSAE

y = 1.18814 x (r = 0.99933) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSAE Area	S/N	d7-NMePFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	13889.2	162.0	281912.738	True	5.00	0.049	6.10	1.000	0.200	0.207	4	30	
CAL2	37932.7	340.7	272071.295	True	5.00	0.139	6.10	1.000	0.600	0.587	-2	30	
CAL3	136518.3	546.2	256577.302	True	5.00	0.532	6.11	1.000	2.000	2.239	12	30	
CAL4	498735.8	911.9	263412.818	True	5.00	1.893	6.11	1.000	8.000	7.968	0	30	
CAL5	1240182.1	1072.1	247663.757	True	5.00	5.008	6.11	1.000	20.000	21.073	5	30	
CAL6	3059430.5	1565.7	248871.057	True	5.00	12.293	6.10	1.000	50.000	51.733	3	30	
CAL7	5772837.2	1358.0	250467.595	True	5.00	23.048	6.11	1.000	100.000	96.993	-3	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

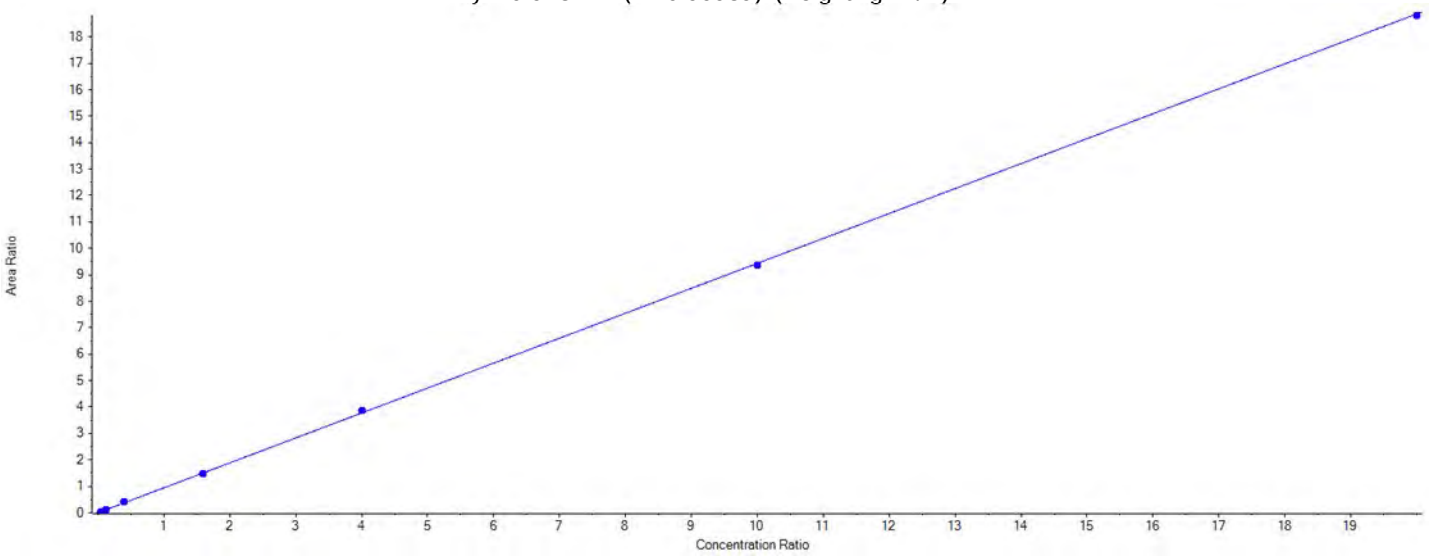
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

NMePFOSA

y = 0.94317 x (r = 0.99989) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NMePFOSA Area	S/N	d3-NMePFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3274.2	928.4	85677.959	True	5.00	0.038	6.11	1.000	0.200	0.203	1	30	
CAL2	9381.3	543.9	86471.674	True	5.00	0.108	6.11	1.000	0.600	0.575	-4	30	
CAL3	33009.7	588.1	80294.101	True	5.00	0.411	6.11	1.000	2.000	2.179	9	30	
CAL4	124582.5	1113.8	83886.643	True	5.00	1.485	6.11	1.000	8.000	7.873	-2	30	
CAL5	322671.1	1106.7	83129.042	True	5.00	3.882	6.12	1.000	20.000	20.577	3	30	
CAL6	768521.6	1393.3	81949.264	True	5.00	9.378	6.11	1.000	50.000	49.716	-1	30	
CAL7	1500056.2	1711.5	79780.244	True	5.00	18.802	6.11	1.000	100.000	99.677	0	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

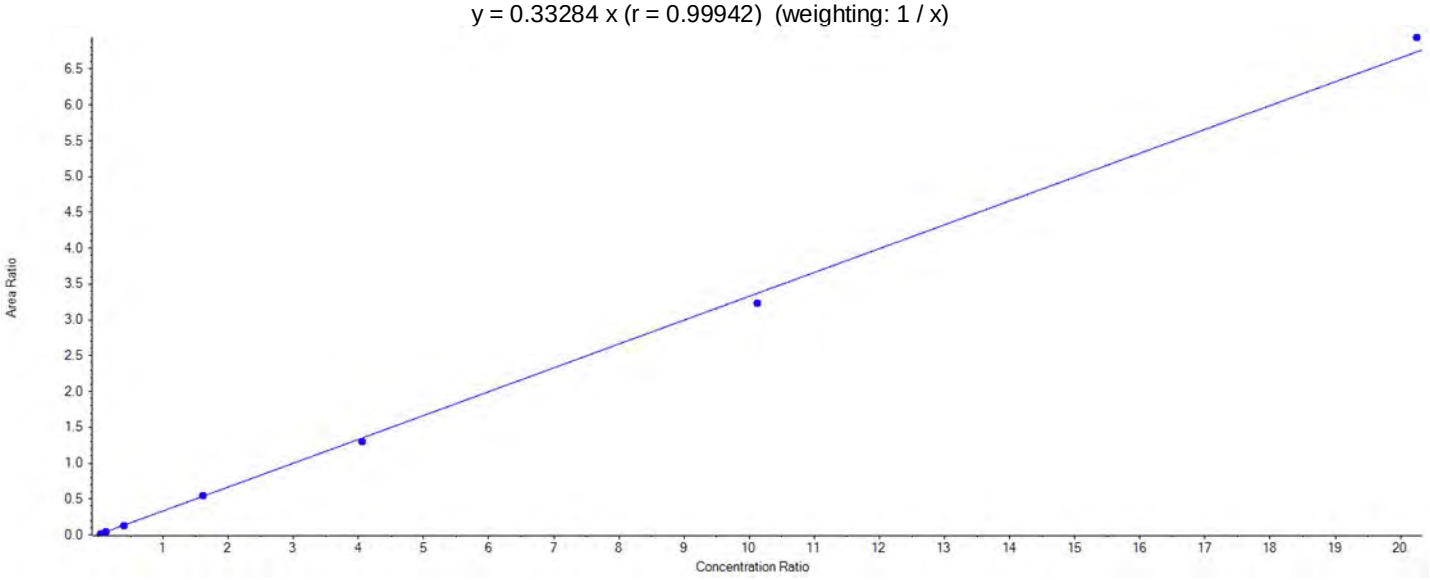
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFDoS

y = 0.33284 x (r = 0.99942) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFDoS Area	S/N	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	4012.1	80345.8	318525.429	True	4.78	0.013	6.23	1.190	0.194	0.181	-7	30	
CAL2	11606.3	870710.1	313894.271	True	4.78	0.037	6.22	1.190	0.581	0.531	-9	30	
CAL3	40838.1	5802.7	309913.737	True	4.78	0.132	6.23	1.180	1.940	1.892	-2	30	
CAL4	159682.3	51383.7	296147.525	True	4.78	0.539	6.23	1.190	7.740	7.744	0	30	
CAL5	390444.7	2445.2	299574.476	True	4.78	1.303	6.23	1.190	19.400	18.718	-4	30	
CAL6	900508.4	3292.0	279204.362	True	4.78	3.225	6.22	1.190	48.400	46.320	-4	30	
CAL7	1735049.5	2191.9	250004.233	True	4.78	6.940	6.22	1.190	96.800	99.670	3	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

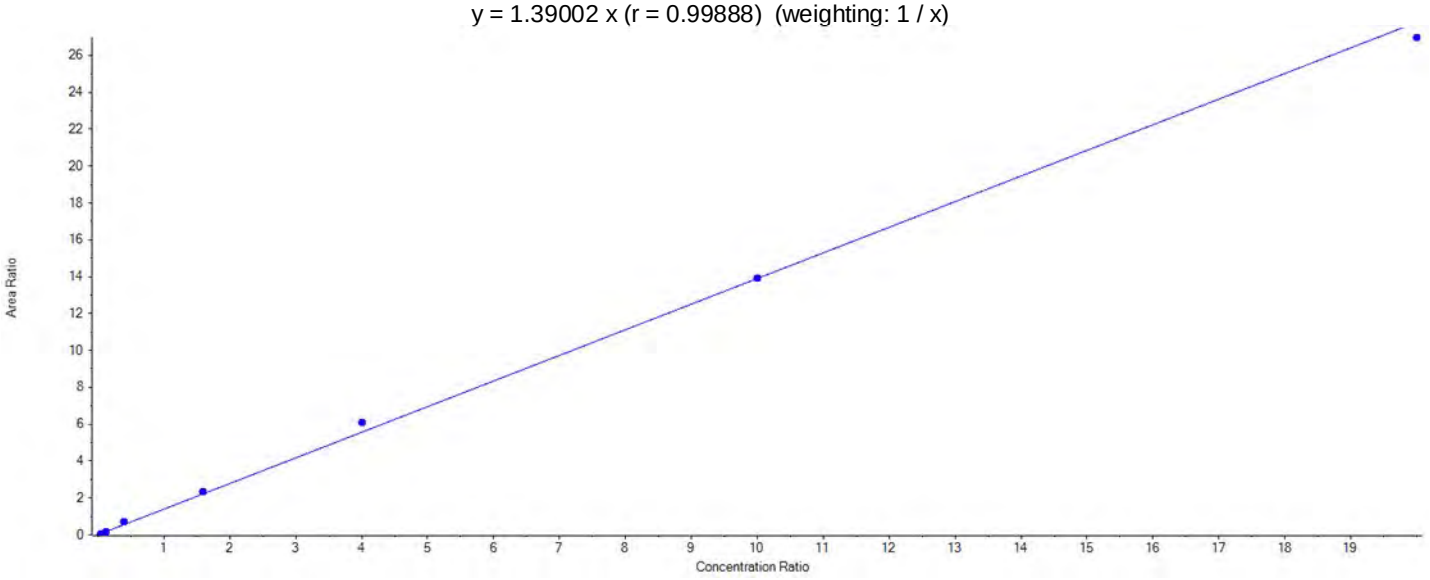
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSAE

y = 1.39002 x (r = 0.99888) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSAE Area	S/N	d9-NEtPFOSAE Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	15402.7	148.0	226256.026	True	5.00	0.068	6.26	1.000	0.200	0.245	22	30	
CAL2	37977.7	267.1	229050.658	True	5.00	0.166	6.26	1.000	0.600	0.596	-1	30	
CAL3	152952.1	535.6	216571.501	True	5.00	0.706	6.26	1.000	2.000	2.540	27	30	
CAL4	516882.1	779.8	218635.780	True	5.00	2.364	6.26	1.000	8.000	8.504	6	30	
CAL5	1338584.5	1109.4	220689.862	True	5.00	6.065	6.27	1.000	20.000	21.818	9	30	
CAL6	3104174.6	1257.6	222924.109	True	5.00	13.925	6.26	1.000	50.000	50.088	0	30	
CAL7	5826370.7	1137.3	216042.000	True	5.00	26.969	6.26	1.000	100.000	97.008	-3	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

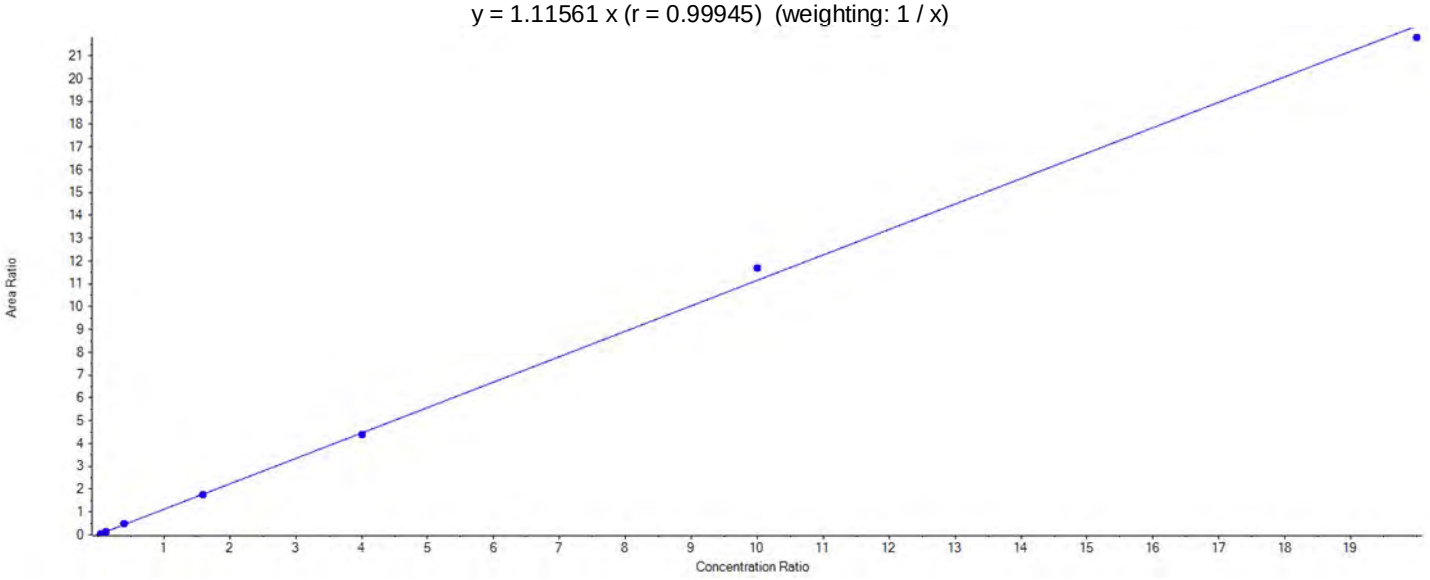
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

NEtPFOSA

y = 1.11561 x (r = 0.99945) (weighting: 1 / x)



Component Calibration Verification

Sample Name	NEtPFOSA Area	S/N	d5-NEtPFOSA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	3384.4	107.2	70050.412	True	5.00	0.048	6.27	1.000	0.200	0.217	8	30	
CAL2	7883.3	201.2	66646.838	True	5.00	0.118	6.27	1.000	0.600	0.530	-12	30	
CAL3	30595.3	507.0	64623.659	True	5.00	0.473	6.27	1.000	2.000	2.122	6	30	
CAL4	119152.1	624.5	66966.371	True	5.00	1.779	6.28	1.000	8.000	7.975	0	30	
CAL5	293215.8	1053.2	66384.647	True	5.00	4.417	6.28	1.000	20.000	19.796	-1	30	
CAL6	698744.6	1184.9	59705.755	True	5.00	11.703	6.27	1.000	50.000	52.452	5	30	
CAL7	1290814.8	1076.0	59209.120	True	5.00	21.801	6.27	1.000	100.000	97.709	-2	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

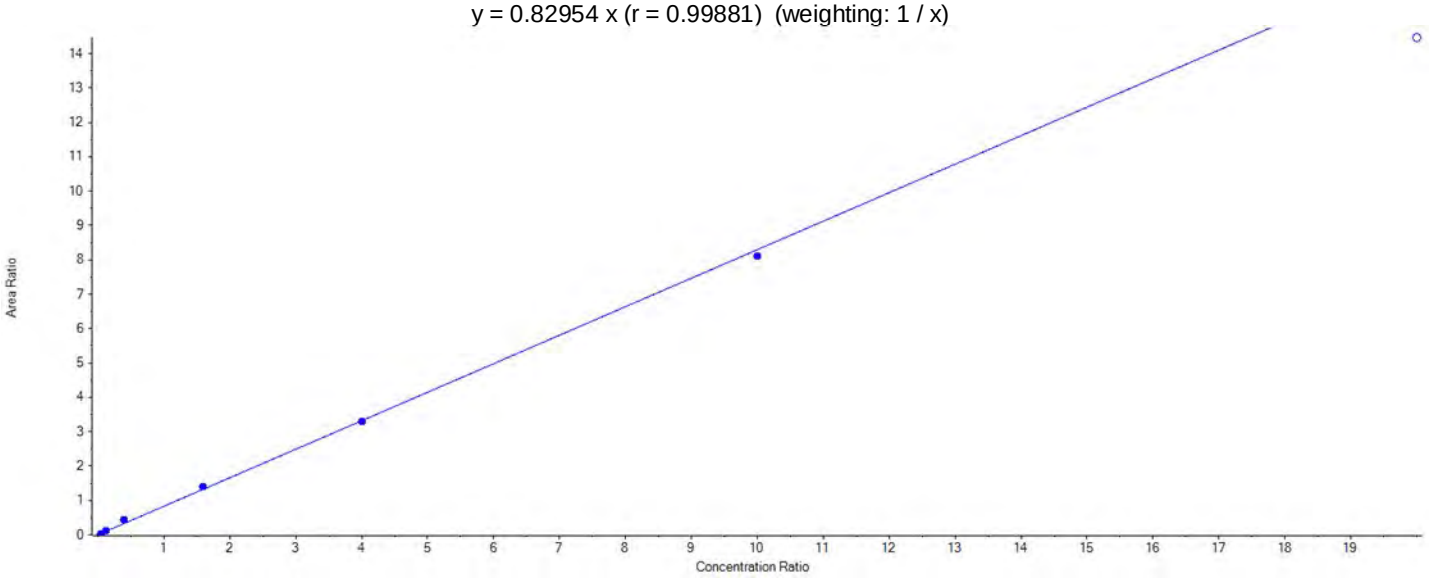
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTrDA

y = 0.82954 x (r = 0.99881) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTrDA Area	S/N	13C2-PFDoDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	48537.6	415.6	1173339.125	True	5.00	0.041	6.26	1.030	0.200	0.249	25	30	
CAL2	117562.3	613.3	1140522.314	True	5.00	0.103	6.25	1.030	0.600	0.621	4	30	
CAL3	466266.9	1132.7	1091194.874	True	5.00	0.427	6.26	1.030	2.000	2.576	29	30	
CAL4	1622977.7	2016.4	1150927.360	True	5.00	1.410	6.26	1.030	8.000	8.500	6	30	
CAL5	3743763.6	1689.2	1133027.856	True	5.00	3.304	6.26	1.030	20.000	19.916	0	30	
CAL6	7958673.4	2584.3	980215.411	True	5.00	8.119	6.25	1.030	50.000	48.938	-2	30	
CAL7	12329126.1	2217.5	852235.609	False	5.00	14.467	6.26	1.030	100.000	87.197	-13	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

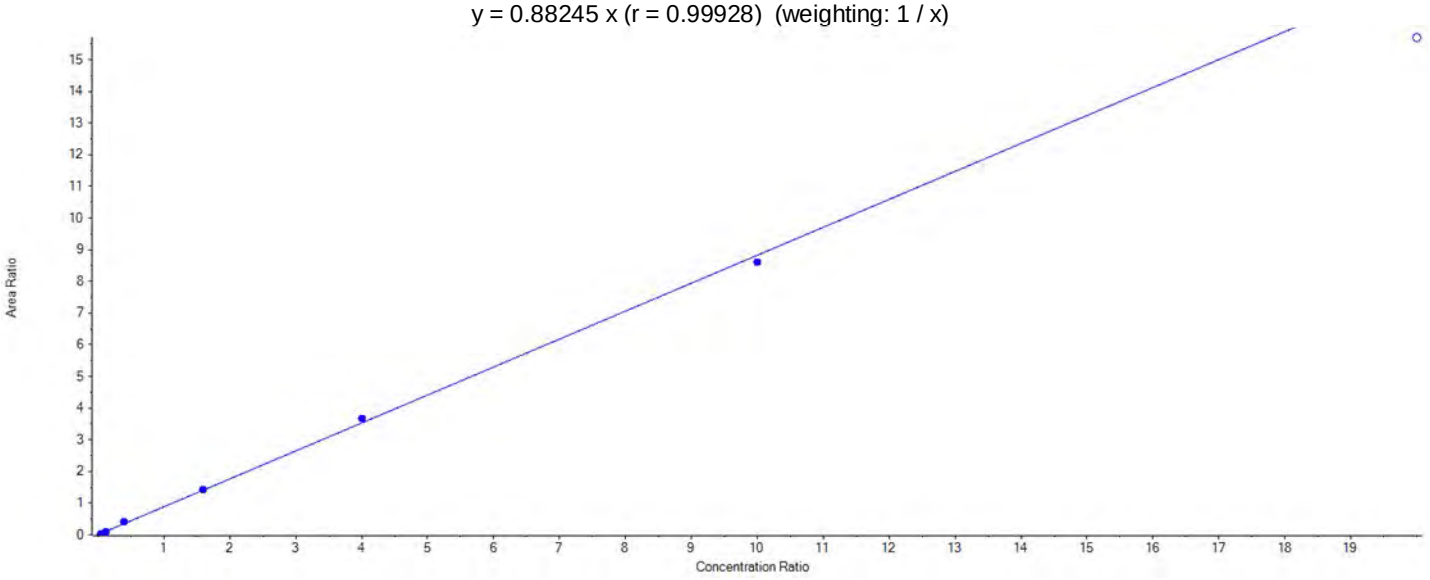
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTeDA

y = 0.88245 x (r = 0.99928) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFTeDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	34099.2	261.8	873945.602	True	5.00	0.039	6.43	1.000	0.200	0.221	11	30	
CAL2	88360.3	524.6	858145.146	True	5.00	0.103	6.43	1.000	0.600	0.583	-3	30	
CAL3	342239.8	919.9	841931.091	True	5.00	0.406	6.43	1.000	2.000	2.303	15	30	
CAL4	1172052.0	1455.1	826669.980	True	5.00	1.418	6.43	1.000	8.000	8.033	0	30	
CAL5	2897106.2	1865.2	786107.475	True	5.00	3.685	6.44	1.000	20.000	20.882	4	30	
CAL6	6793735.3	2537.2	789168.429	True	5.00	8.609	6.43	1.000	50.000	48.777	-2	30	
CAL7	11258874.1	2188.3	717297.714	False	5.00	15.696	6.43	1.000	100.000	88.936	-11	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

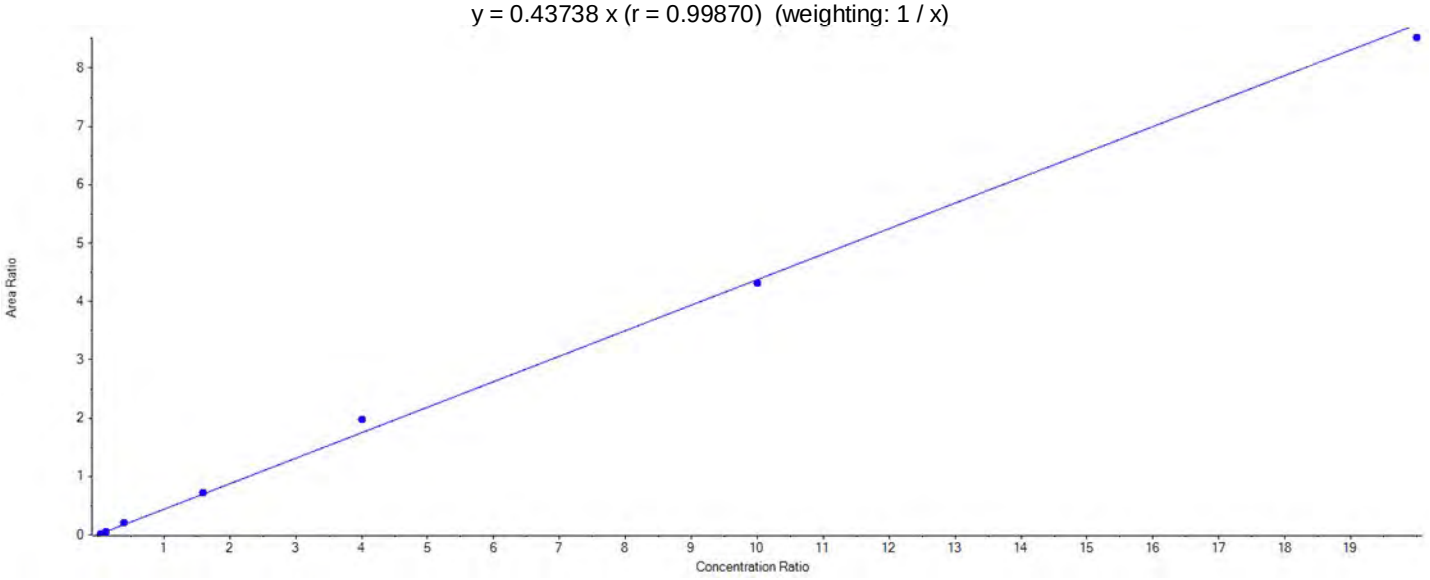
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFHxDA

y = 0.43738 x (r = 0.99870) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFHxDA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	19206.4	679.6	873945.602	True	5.00	0.022	6.74	1.050	0.200	0.251	26	30	
CAL2	44164.6	964.5	858145.146	True	5.00	0.051	6.73	1.050	0.600	0.588	-2	30	
CAL3	173721.0	2652.8	841931.091	True	5.00	0.206	6.74	1.050	2.000	2.359	18	30	
CAL4	601723.8	3198.2	826669.980	True	5.00	0.728	6.74	1.050	8.000	8.321	4	30	
CAL5	1551331.1	2619.4	786107.475	True	5.00	1.973	6.74	1.050	20.000	22.560	13	30	
CAL6	3402004.4	2973.0	789168.429	True	5.00	4.311	6.73	1.050	50.000	49.281	-1	30	
CAL7	6113985.1	2964.4	717297.714	True	5.00	8.524	6.73	1.050	100.000	97.440	-3	30	

APPROVED
By MCD at 3:40 pm, 1/10/19

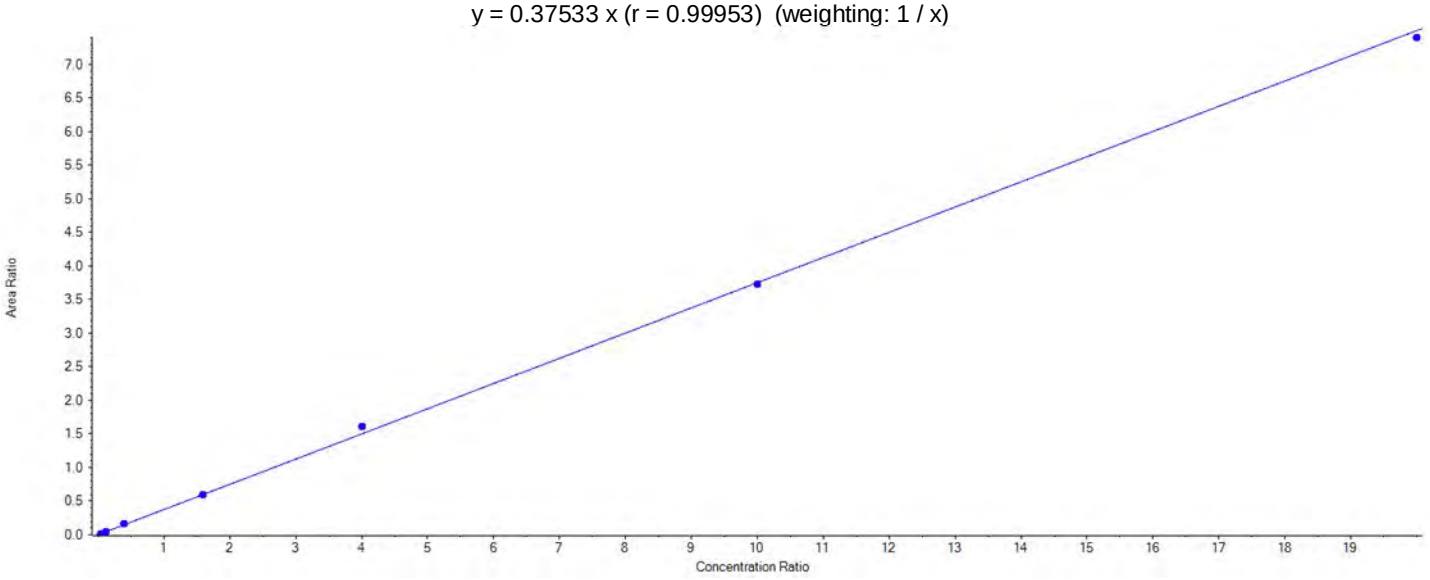
REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFODA

y = 0.37533 x (r = 0.99953) (weighting: 1 / x)



Component Calibration Verification

Sample Name	PFODA Area	S/N	13C2-PFTeDA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	14378.0	1085.0	873945.602	True	5.00	0.016	7.00	1.090	0.200	0.219	10	30	
CAL2	36421.5	1561.1	858145.146	True	5.00	0.042	6.99	1.090	0.600	0.565	-6	30	
CAL3	139071.5	2402.7	841931.091	True	5.00	0.165	7.00	1.090	2.000	2.201	10	30	
CAL4	494210.7	3411.6	826669.980	True	5.00	0.598	7.00	1.090	8.000	7.964	0	30	
CAL5	1272897.4	4522.2	786107.475	True	5.00	1.619	7.00	1.090	20.000	21.571	8	30	
CAL6	2942000.1	3495.7	789168.429	True	5.00	3.728	6.99	1.090	50.000	49.663	-1	30	
CAL7	5309889.9	3965.5	717297.714	True	5.00	7.403	7.00	1.090	100.000	98.616	-1	30	

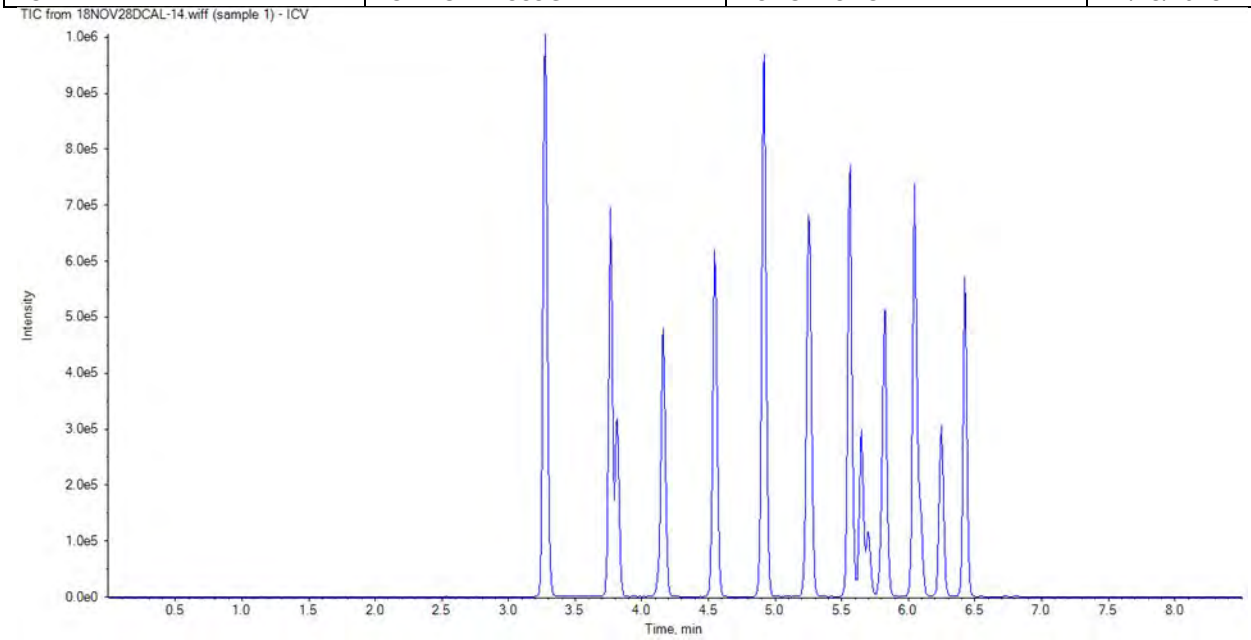
APPROVED
By MCD at 3:40 pm, 1/10/19

REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV28DCAL-14.wiff	11/28/2018 2:54:22 PM



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	CAL3 Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.000	909586.4	887248.9	2.5	50	
13C2-PFOA	5.000	531347.1	498501.6	6.6	50	
13C4-PFOS	4.780	296756.3	283214.2	4.8	50	
13C2-PFDA	5.000	468972.3	441790.6	6.2	50	

APPROVED
By MCD at 3:40 pm, 1/10/19

REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICVMODX1833G	18NOV28DCAL-14.wiff	11/28/2018 2:54:22 PM

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	387187.0	13C4-PFBA	992615.758	5.00	0.390	3.27	1.00	2.000	2.138	7	30	
PFPeA	377961.6	13C5-PFPeA	975580.855	5.00	0.387	3.77	1.00	2.000	1.901	-5	30	
PFBS	159425.0	13C3-PFBS	446010.999	4.65	0.357	3.81	1.00	1.769	1.735	-2	30	
4:2-FTS	N/A	13C2-4:2-FTS	68184.320	4.67	N/A	N/A	N/A	0.000	N/A		30	
PFHxA	369137.1	13C5-PFHxA	699371.272	5.00	0.528	4.16	1.00	2.000	2.119	6	30	
PFPeS	N/A	13C3-PFBS	446010.999	4.65	N/A	N/A	N/A	0.000	N/A		30	
PFHpA	373590.8	13C4-PFHpA	556403.086	5.00	0.671	4.55	1.00	2.000	2.072	4	30	
PFHxS	125085.3	13C3-PFHxS	317108.955	4.73	0.394	4.55	1.00	1.890	1.847	-2	30	
6:2-FTS	N/A	13C2-6:2-FTS	63350.515	4.75	N/A	N/A	N/A	0.000	N/A		30	
PFHpS	131043.1	13C3-PFHxS	317108.955	4.73	0.413	4.91	1.08	1.900	2.062	9	30	
PFOA	404358.9	13C8-PFOA	1001731.379	5.00	0.404	4.92	1.00	2.000	2.086	4	30	
PFOS	122334.6	13C8-PFOS	316117.130	4.78	0.387	5.25	1.00	1.910	1.623	-15	30	
PFNA	351872.0	13C9-PFNA	647064.116	5.00	0.544	5.26	1.00	2.000	2.084	4	30	
PFNS	N/A	13C8-PFOS	316117.130	4.78	N/A	N/A	N/A	0.000	N/A		30	
PFDA	325191.9	13C6-PFDA	857032.881	5.00	0.379	5.56	1.00	2.000	2.148	7	30	
8:2-FTS	N/A	13C2-8:2-FTS	51912.864	4.79	N/A	N/A	N/A	0.000	N/A		30	
PFOSA	N/A	13C8-PFOSA	637370.645	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMeFOSAA	74168.8	d3-NMeFOSAA	183040.018	5.00	0.405	5.70	1.00	2.000	2.585	29	30	
PFDS	72374.3	13C8-PFOS	316117.130	4.78	0.229	5.79	1.10	1.930	1.815	-6	30	
PFUnDA	354099.8	13C7-PFUnDA	559327.431	5.00	0.633	5.82	1.00	2.000	2.263	13	30	
NEtFOSAA	57367.9	d5-NEtFOSAA	140839.958	5.00	0.407	5.83	1.00	2.000	1.984	-1	30	
PFDoDA	427818.9	13C2-PFDoDA	1134142.098	5.00	0.377	6.05	1.00	2.000	2.066	3	30	
10:2-FTS	N/A	13C2-8:2-FTS	51912.864	4.79	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSAE	N/A	d7-NMePFOSAE	262732.239	5.00	N/A	N/A	N/A	0.000	N/A		30	
NMePFOSA	N/A	d3-NMePFOSA	81059.543	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFDoS	N/A	13C8-PFOS	316117.130	4.78	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSAE	N/A	d9-NEtPFOSAE	227167.682	5.00	N/A	N/A	N/A	0.000	N/A		30	
NEtPFOSA	N/A	d5-NEtPFOSA	67297.847	5.00	N/A	N/A	N/A	0.000	N/A		30	

APPROVED
By MCD at 3:40 pm, 1/10/19

REVIEWED
By UCMR at 7:00 pm, 1/21/19

DOD Initial Calibration Verification

Instrument ID: LM27631 **ICAL Name:** 18NOV28DCAL **QMethod Name:** 18AUG20QM
Result Table: 18NOV28DCAL_Updated1/10/2019 3:36:50 PM **Acquisition Method:** 18AUG13_3uL.dam

PFTrDA	416758.4	13C2-PFDoDA	1134142.098	5.00	0.367	6.25	1.03	2.000	2.215	11	30	
PFTeDA	312632.1	13C2-PFTeDA	820071.667	5.00	0.381	6.42	1.00	2.000	2.160	8	30	
PFHxDA	N/A	13C2-PFTeDA	820071.667	5.00	N/A	N/A	N/A	0.000	N/A		30	
PFODA	N/A	13C2-PFTeDA	820071.667	5.00	N/A	N/A	N/A	0.000	N/A		30	

APPROVED
By MCD at 3:40 pm, 1/10/19

REVIEWED
By UCMR at 7:00 pm, 1/21/19

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL1			**Data File:**		18NOV28DCAL-06.wiff
Sample ID:	CALBRN11833C			**Acquis Date:**		2018-11-28T13:42:10
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	3			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	907350.5	887248.9	2	50	
13C2-PFOA	5.0	521822.9	498501.6	5	50	
13C4-PFOS	4.8	296225.2	283214.2	5	50	
13C2-PFDA	5.0	476146.6	441790.6	8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1018752.8	13C3-PFBA	907350.5	1.123	5.000	5.009	100	70-130	
E13C5-PFPeA	975339.1	13C3-PFBA	907350.5	1.075	5.000	5.019	100	70-130	
E13C3-PFBS	437838.9	13C3-PFBA	907350.5	0.483	4.650	4.604	99	70-130	
E13C2-4:2-FTS	75119.1	13C2-PFOA	521822.9	0.144	4.670	4.961	106	70-130	
E13C5-PFHxA	728340.5	13C2-PFOA	521822.9	1.396	5.000	5.127	103	70-130	
E13C3-PFHxS	331982.9	13C2-PFOA	521822.9	0.636	4.730	4.986	105	70-130	
E13C4-PFHpA	547365.1	13C2-PFOA	521822.9	1.049	5.000	4.820	96	70-130	
E13C2-6:2-FTS	65543.8	13C2-PFOA	521822.9	0.126	4.750	5.258	111	70-130	
E13C8-PFOA	1030597.9	13C2-PFOA	521822.9	1.975	5.000	5.436	109	70-130	
E13C8-PFOS	318525.4	13C4-PFOS	296225.2	1.075	4.780	4.854	102	70-130	
E13C9-PFNA	659714.7	13C4-PFOS	296225.2	2.227	5.000	4.892	98	70-130	
E13C6-PFDA	855362.9	13C2-PFDA	476146.6	1.796	5.000	5.065	101	70-130	
E13C2-8:2-FTS	58895.0	13C2-PFDA	476146.6	0.124	4.790	5.316	111	70-130	
E13C8-PFOSA	662264.8	13C2-PFDA	476146.6	1.391	5.000	5.104	102	70-130	
Ed3-NMeFOSAA	220597.3	13C2-PFDA	476146.6	0.463	5.000	5.882	118	70-130	
E13C7-PFUnDA	587155.4	13C2-PFDA	476146.6	1.233	5.000	5.212	104	70-130	
Ed5-NEtFOSAA	127543.5	13C2-PFDA	476146.6	0.268	5.000	4.772	95	70-130	
E13C2-PFDoDA	1173339.1	13C2-PFDA	476146.6	2.464	5.000	5.178	104	70-130	
Ed7-NMePFOSAE	281912.7	13C2-PFDA	476146.6	0.592	5.000	5.117	102	70-130	
Ed3-NMePFOSA	85678.0	13C2-PFDA	476146.6	0.180	5.000	4.870	97	70-130	
Ed9-NEtPFOSAE	226256.0	13C2-PFDA	476146.6	0.475	5.000	4.818	96	70-130	
Ed5-NEtPFOSA	70050.4	13C2-PFDA	476146.6	0.147	5.000	5.112	102	70-130	
E13C2-PFTeDA	873945.6	13C2-PFDA	476146.6	1.835	5.000	5.079	102	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:21 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

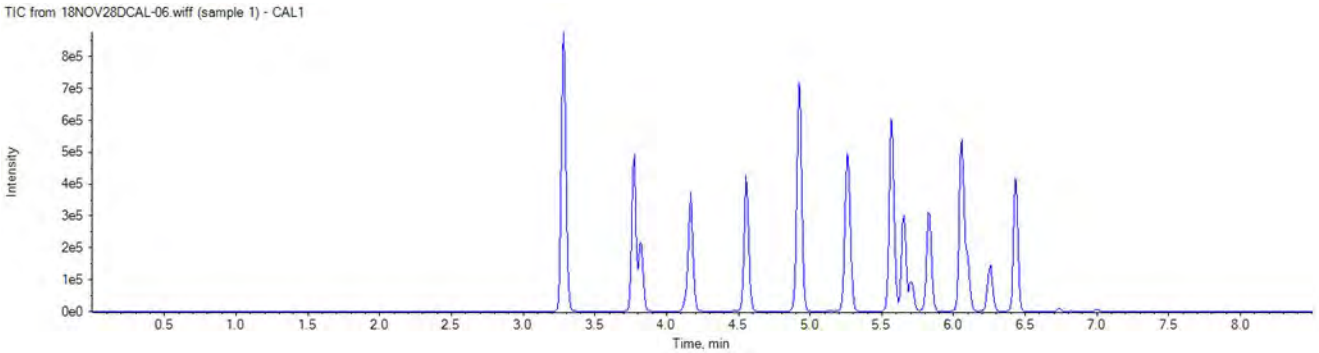
Analyte Quantitation Peak Table

Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-06.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.28	1.000	43996.2		A	13C4-PFBA	3.28	1018752.8	0.043	0.237
PFPeA	3.77	1.000	44706.1		A	13C5-PFPeA	3.77	975339.1	0.046	0.225
PFBS	3.82	1.000	17465.3		A	13C3-PFBS	3.82	437838.9	0.040	0.194
4:2-FTS	4.13	1.000	5603.9		A	13C2-4:2-FTS	4.13	75119.1	0.075	0.200
PFHxA	4.17	1.000	42281.8		A	13C5-PFHxA	4.17	728340.5	0.058	0.233
PFPeS	4.19	1.100	8956.0		A	13C3-PFBS	3.82	437838.9	0.020	0.207
PFHpA	4.56	1.000	42530.6		A	13C4-PFHpA	4.55	547365.1	0.078	0.240
PFHxS	4.56	1.000	12830.8		M	13C3-PFHxS	4.56	331982.9	0.039	0.181
6:2-FTS	4.91	1.000	5676.8		A	13C2-6:2-FTS	4.91	65543.8	0.087	0.226
PFHpS	4.92	1.080	13921.8		A	13C3-PFHxS	4.56	331982.9	0.042	0.209
PFOA	4.93	1.000	42517.4		A	13C8-PFOA	4.92	1030597.9	0.041	0.213
PFOS	5.25	1.000	13060.0		M	13C8-PFOS	5.25	318525.4	0.041	0.172
PFNA	5.27	1.000	39485.1		A	13C9-PFNA	5.27	659714.7	0.060	0.229
PFNS	5.55	1.060	9756.6		A	13C8-PFOS	5.25	318525.4	0.031	0.193
PFDA	5.57	1.000	33621.2		A	13C6-PFDA	5.57	855362.9	0.039	0.222
8:2-FTS	5.57	1.000	6138.7		A	13C2-8:2-FTS	5.57	58895.0	0.104	0.197
PFOSA	5.65	1.000	27693.0		A	13C8-PFOSA	5.65	662264.8	0.042	0.212
NMeFOSAA	5.71	1.000	6661.0		M	d3-NMeFOSAA	5.71	220597.3	0.030	0.193
PFDS	5.81	1.110	6850.7		A	13C8-PFOS	5.25	318525.4	0.022	0.171
PFUnDA	5.82	1.000	36428.0		A	13C7-PFUnDA	5.83	587155.4	0.062	0.222
NEtFOSAA	5.85	1.000	5069.2		M	d5-NEtFOSAA	5.84	127543.5	0.040	0.194
PFDoDA	6.06	1.000	53386.6		A	13C2-PFDoDA	6.06	1173339.1	0.045	0.249
10:2-FTS	6.07	1.090	5717.7		A	13C2-8:2-FTS	5.57	58895.0	0.097	0.214
NMePFOSAE	6.10	1.000	13889.2		A	d7-NMePFOSAE	6.09	281912.7	0.049	0.207
NMePFOSA	6.11	1.000	3274.2		A	d3-NMePFOSA	6.11	85678.0	0.038	0.203
PFDoS	6.23	1.190	4012.1		A	13C8-PFOS	5.25	318525.4	0.013	0.181
NEtPFOSAE	6.26	1.000	15402.7		A	d9-NEtPFOSAE	6.25	226256.0	0.068	0.245
NEtPFOSA	6.27	1.000	3384.4		A	d5-NEtPFOSA	6.27	70050.4	0.048	0.217
PFTrDA	6.26	1.030	48537.6		A	13C2-PFDoDA	6.06	1173339.1	0.041	0.249
PFTeDA	6.43	1.000	34099.2		A	13C2-PFTeDA	6.43	873945.6	0.039	0.221
PFHxDA	6.74	1.050	19206.4		A	13C2-PFTeDA	6.43	873945.6	0.022	0.251
PFODA	7.00	1.090	14378.0		A	13C2-PFTeDA	6.43	873945.6	0.016	0.219

Total Ion Chromatogram

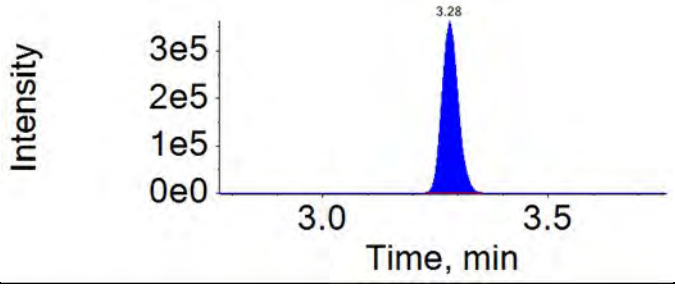


APPROVED
By MCD at 5:00 pm, 11/28/18

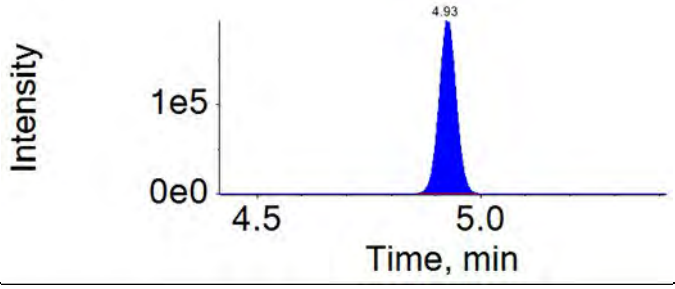
REVIEWED
By HMK at 12:21 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

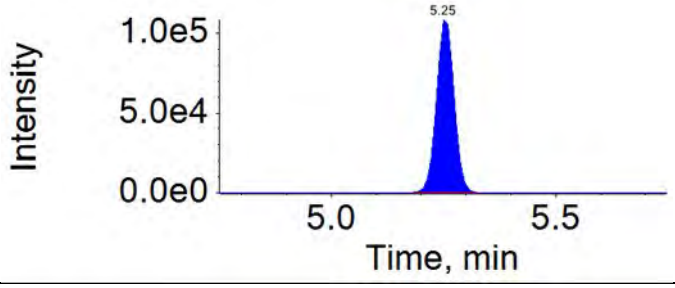
Injection Standard: 13C3-PFBA
216.0 / 172.0



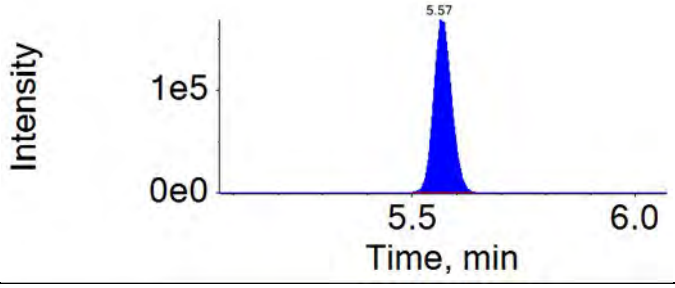
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

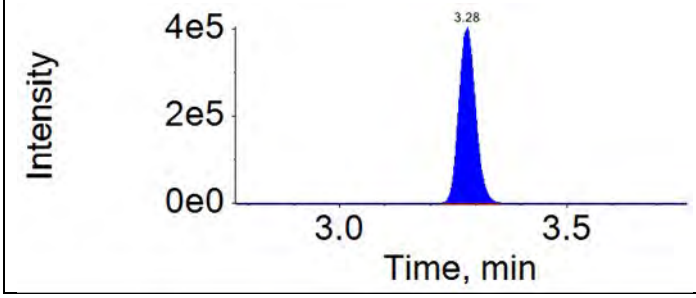


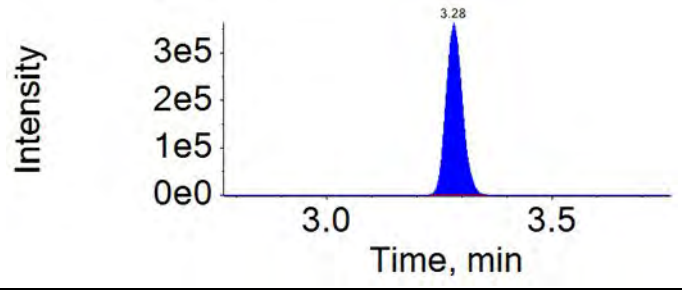
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:21 pm, 11/29/18

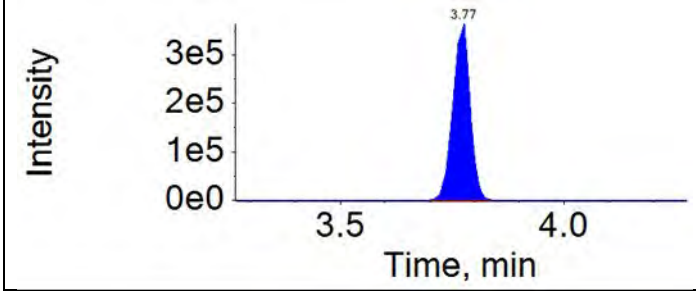
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

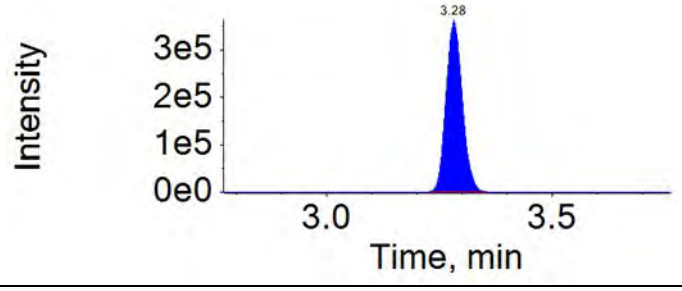
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



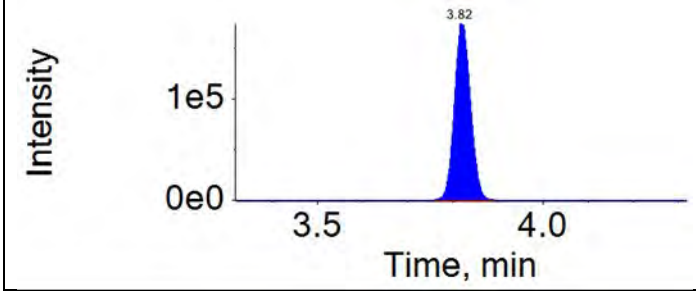


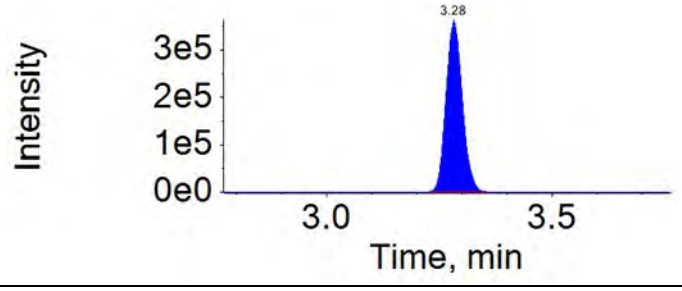
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



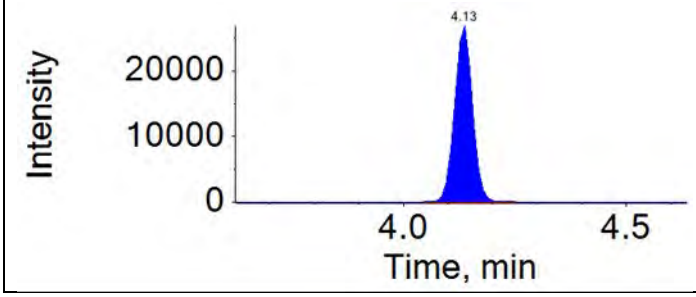


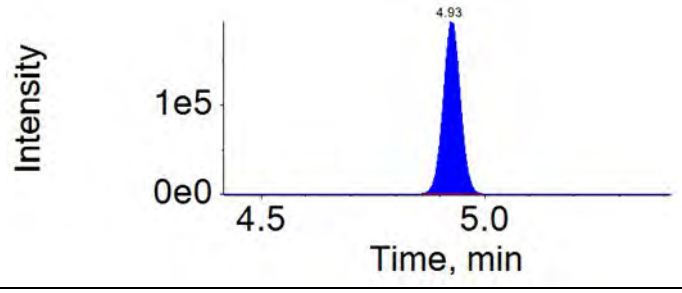
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



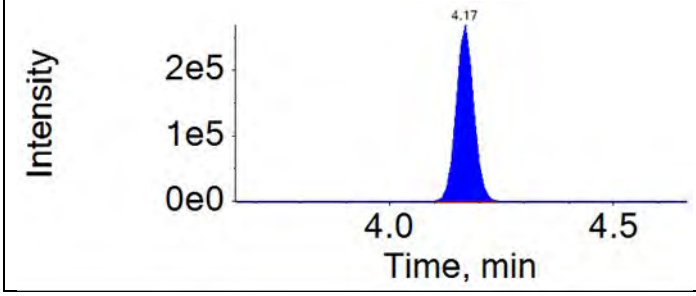


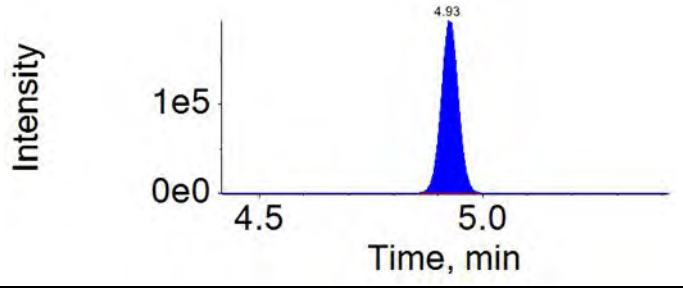
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:21 pm, 11/29/18

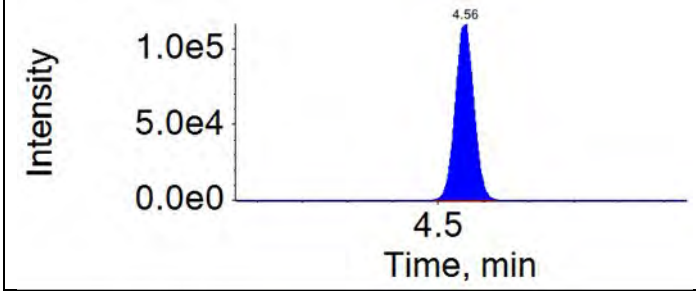
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

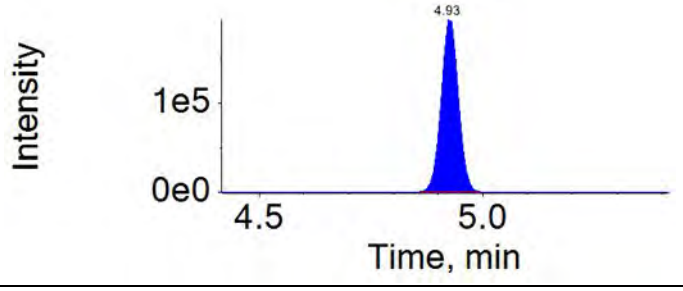
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



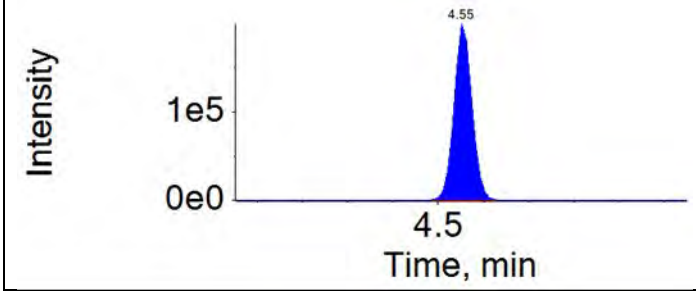


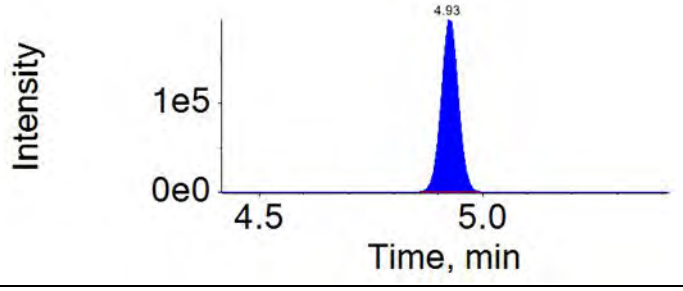
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



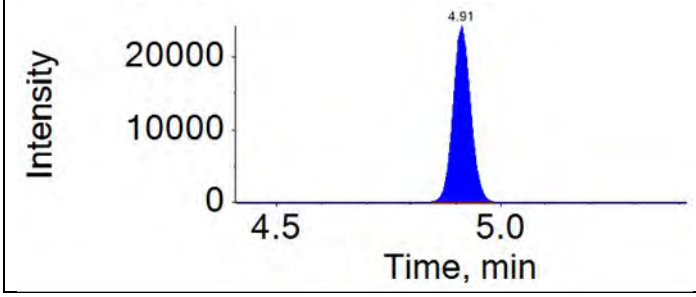


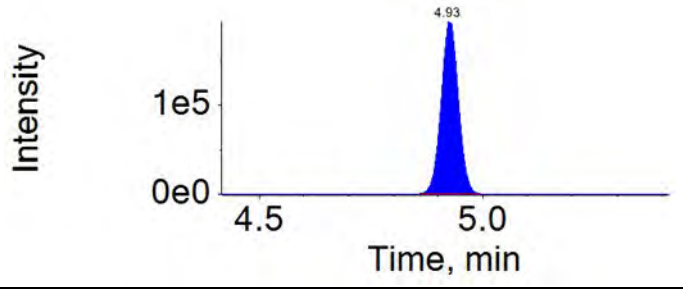
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

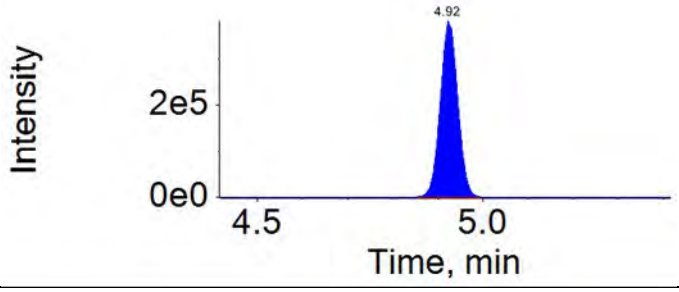
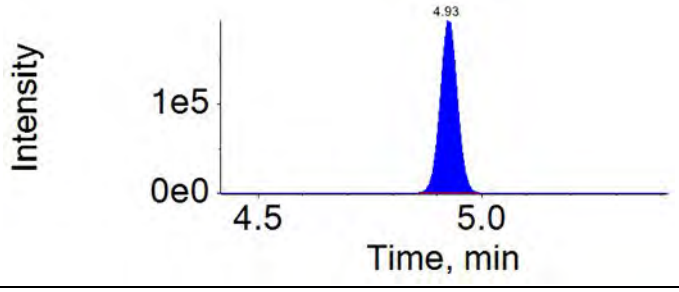


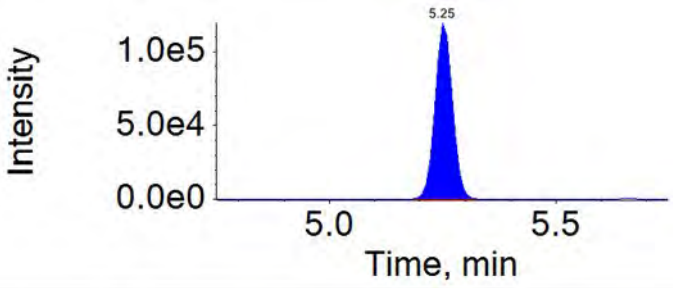
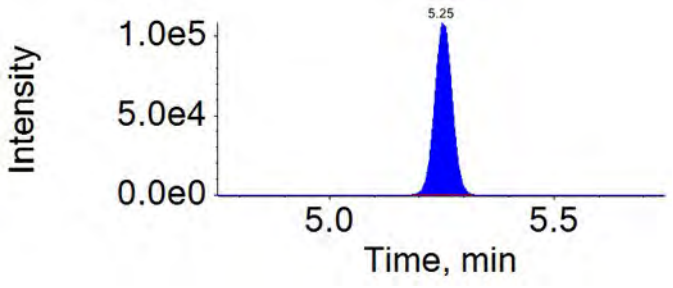


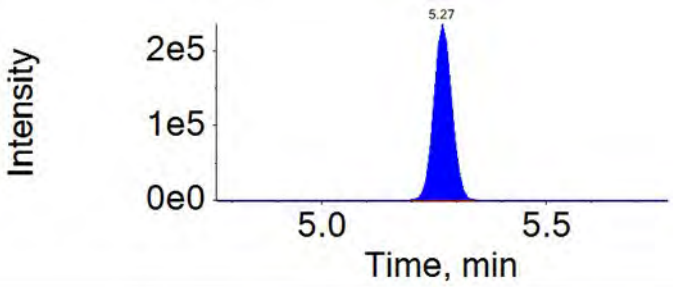
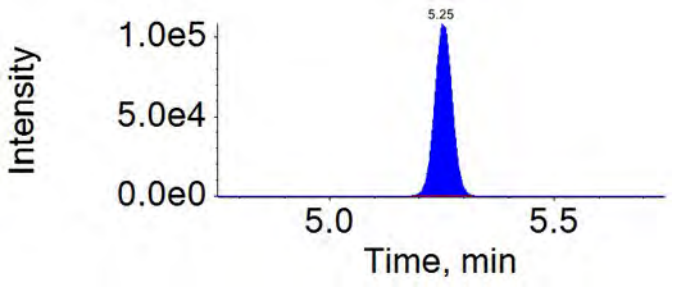
APPROVED
By MCD at 5:00 pm, 11/28/18

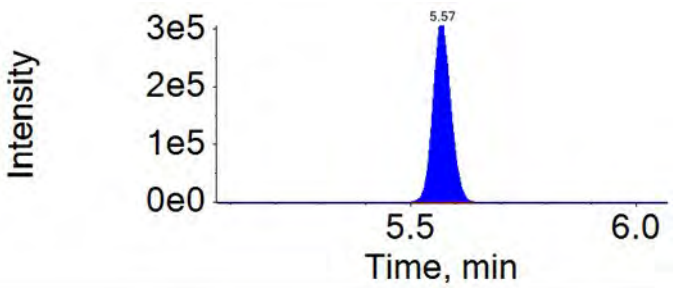
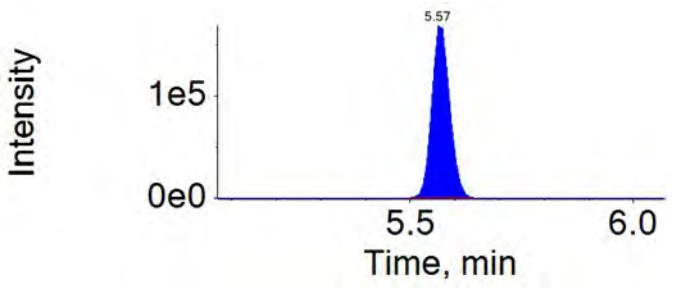
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

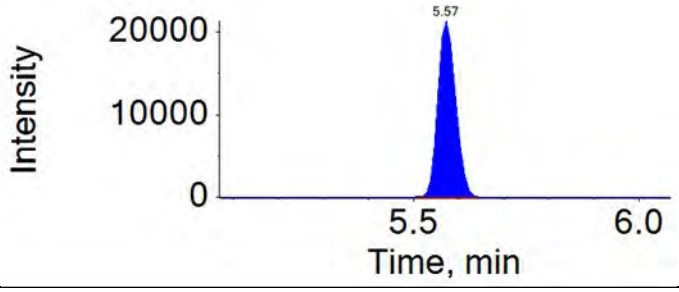
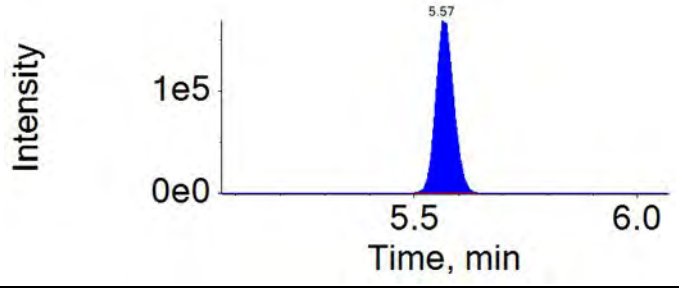
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

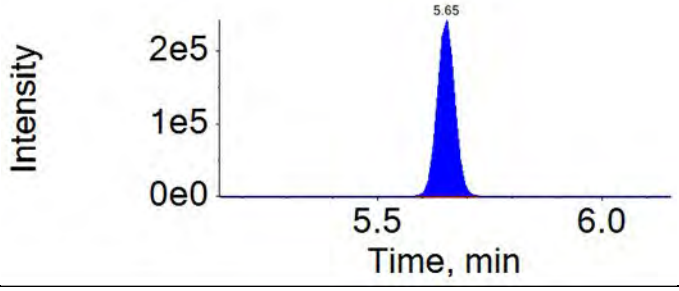
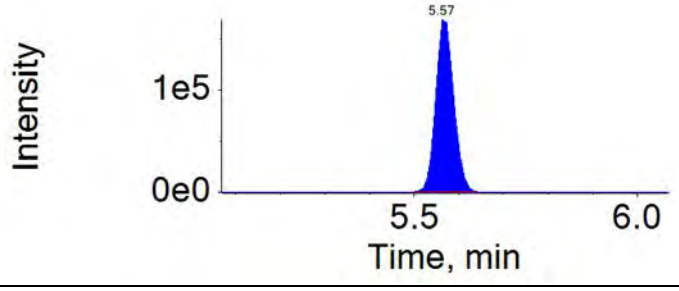
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

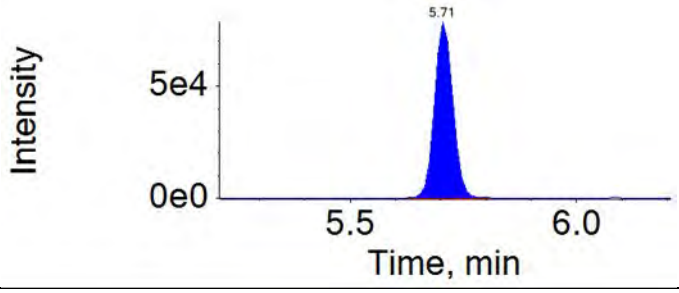
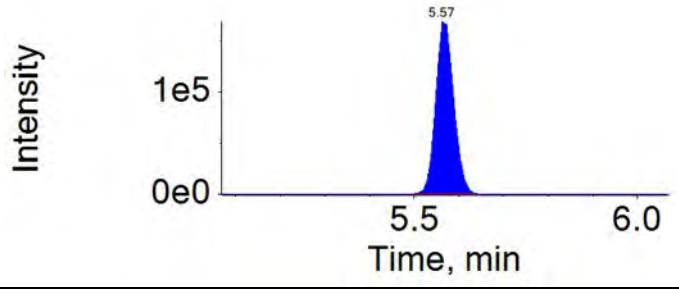
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

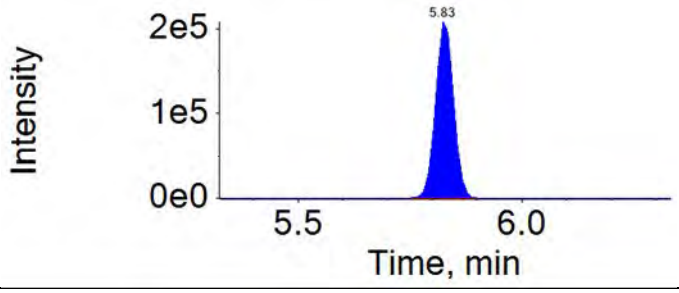
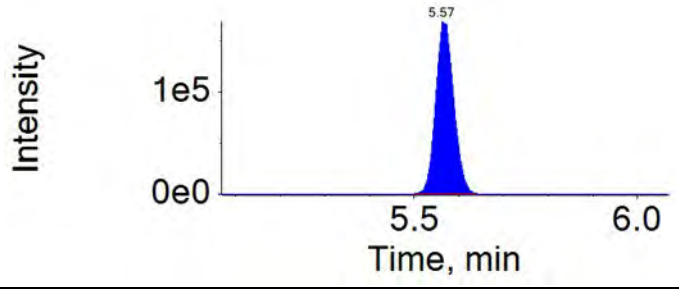
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

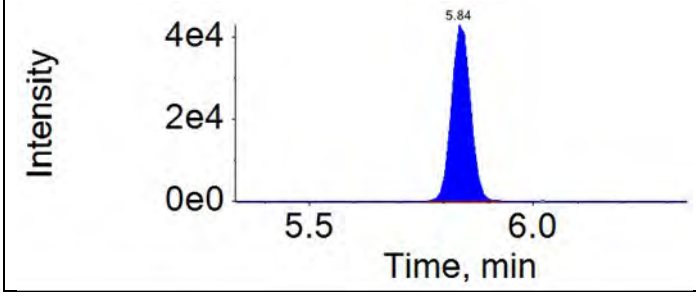
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

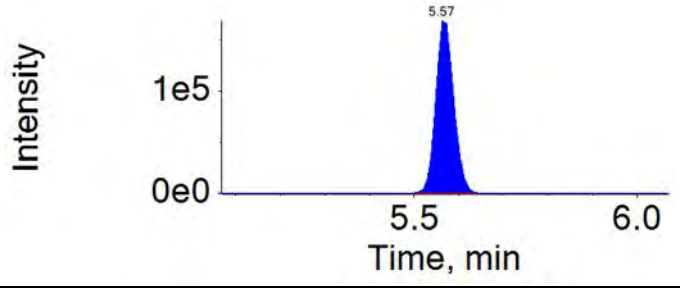
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

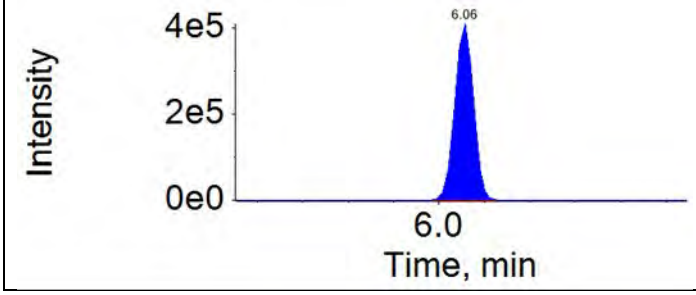
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

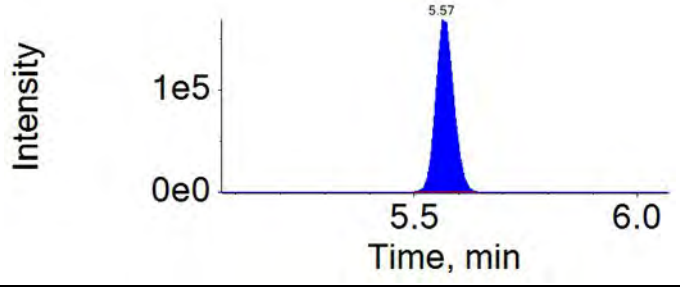
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



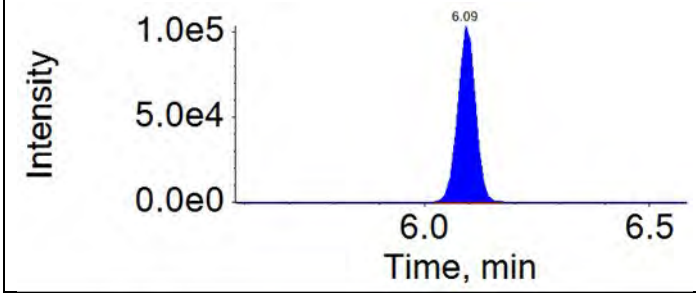


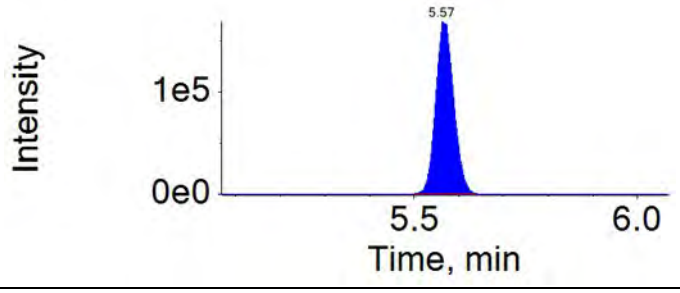
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



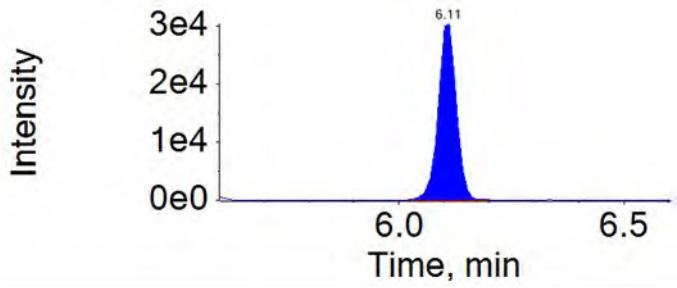


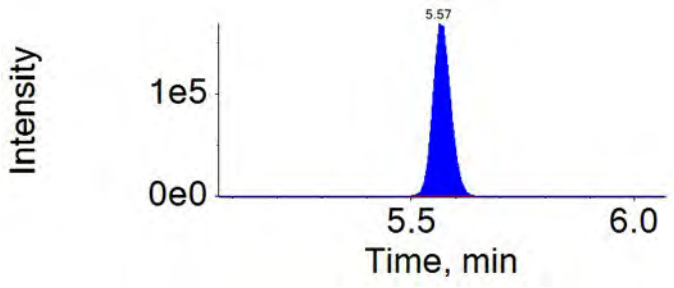
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



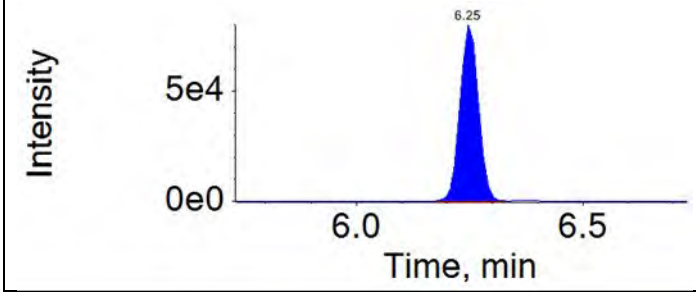


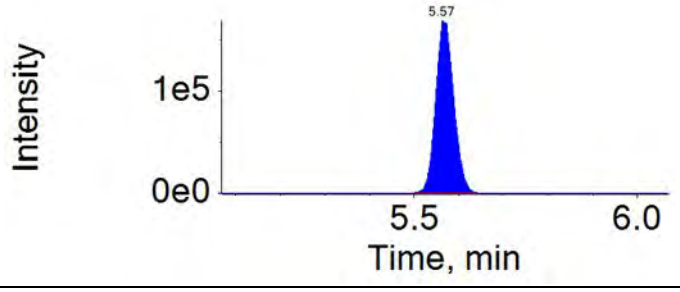
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

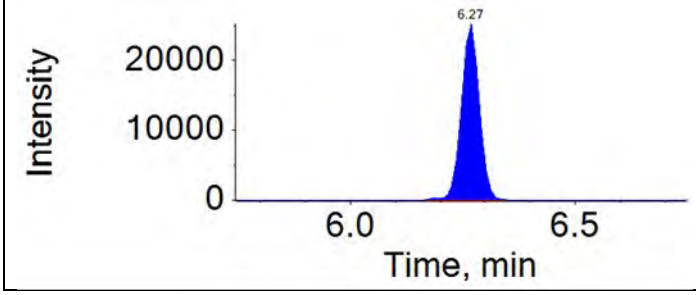
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

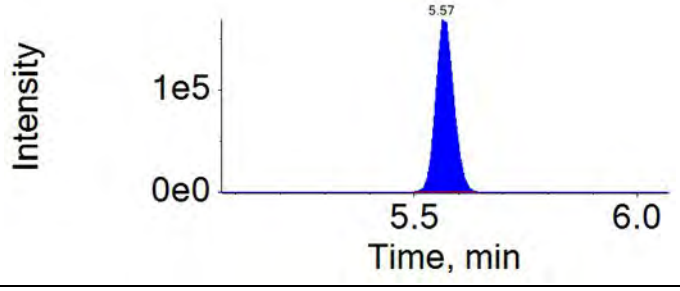
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



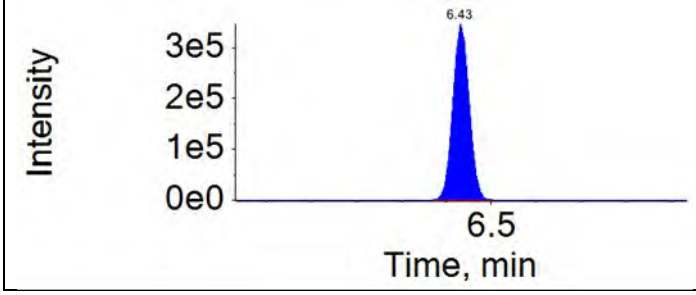


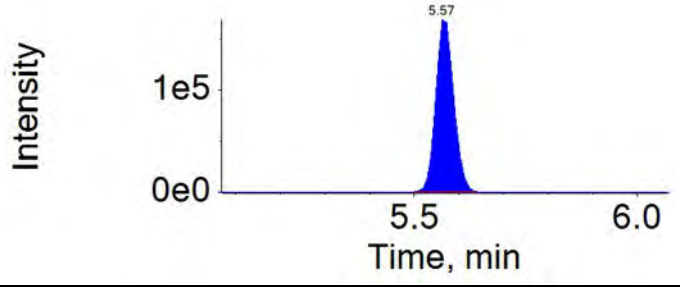
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



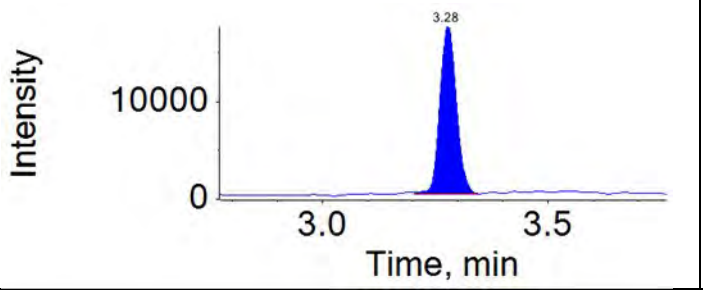


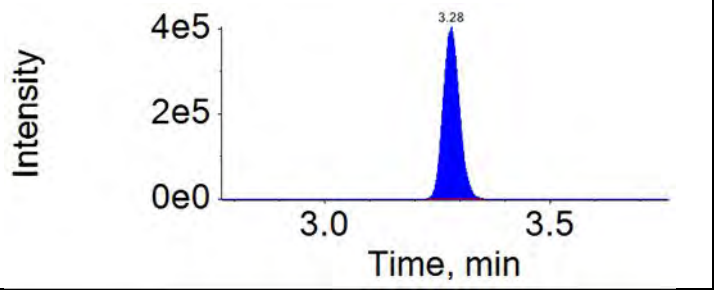
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

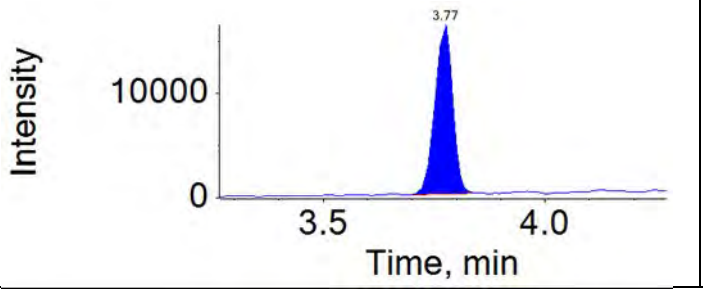
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

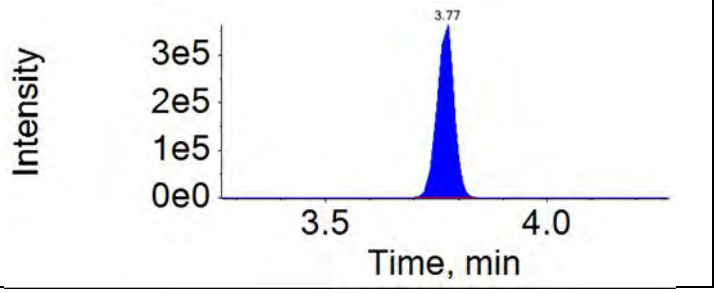
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



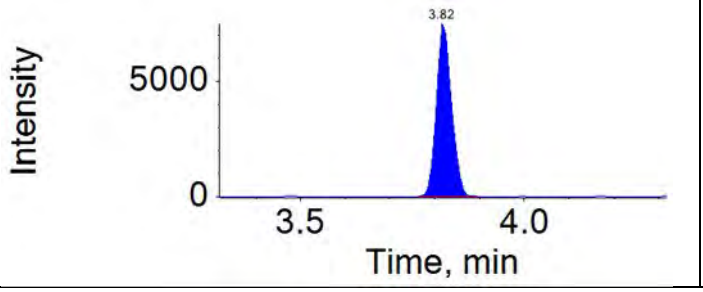


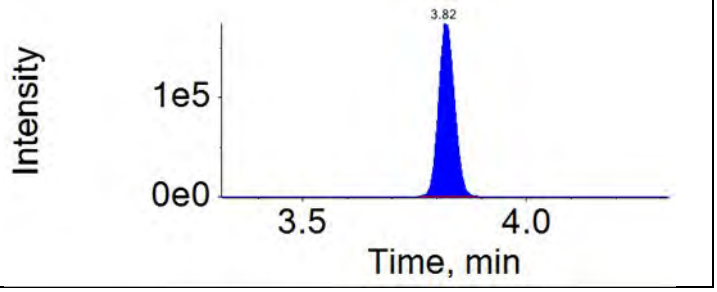
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



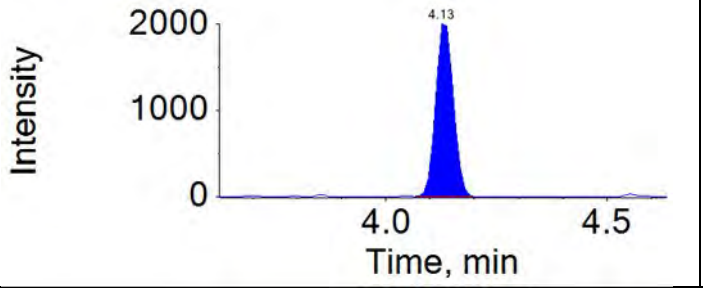


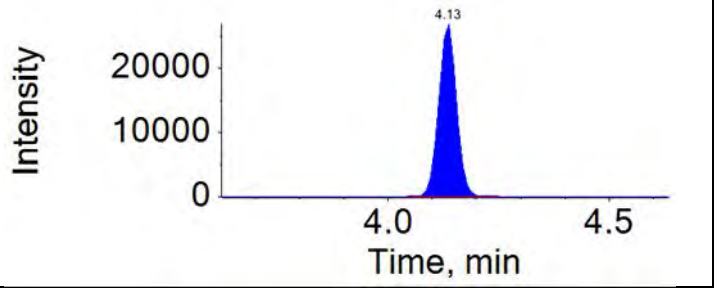
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



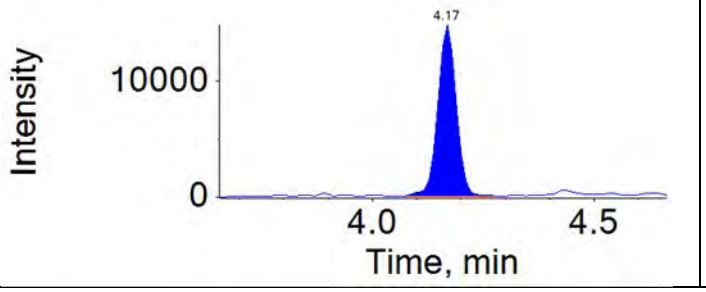


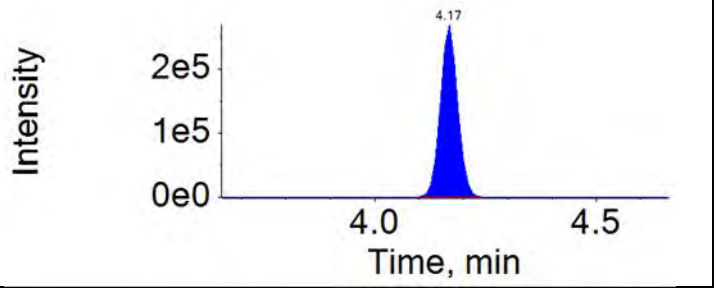
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

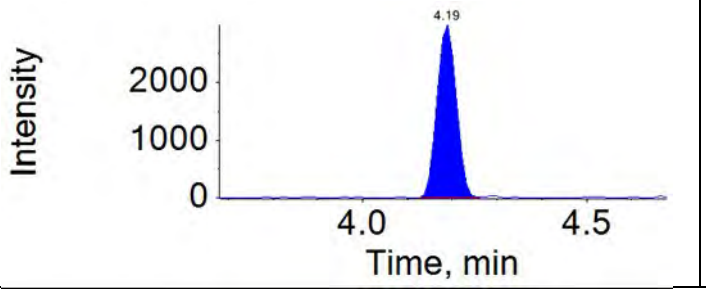
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

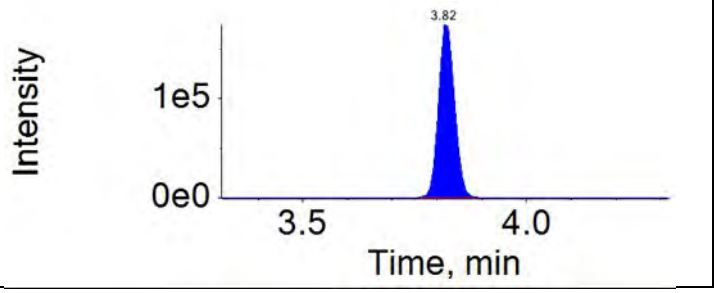
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



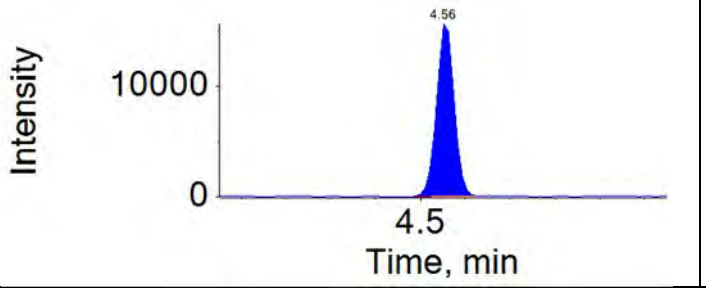


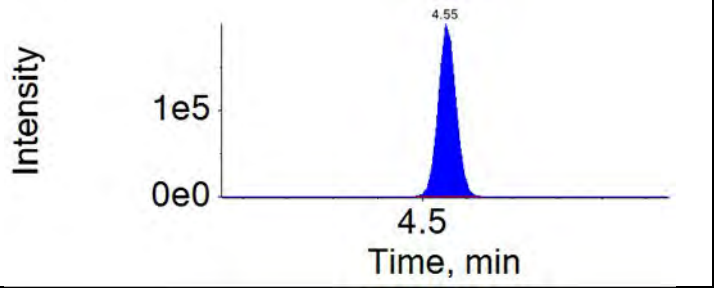
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



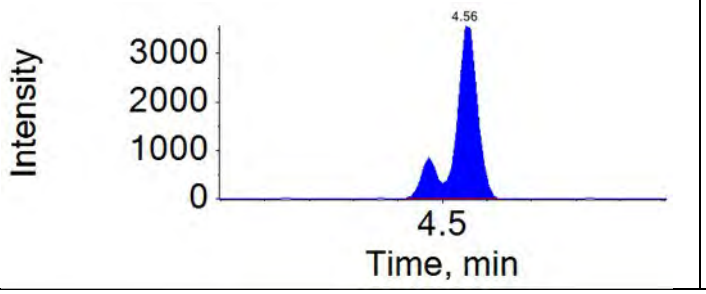


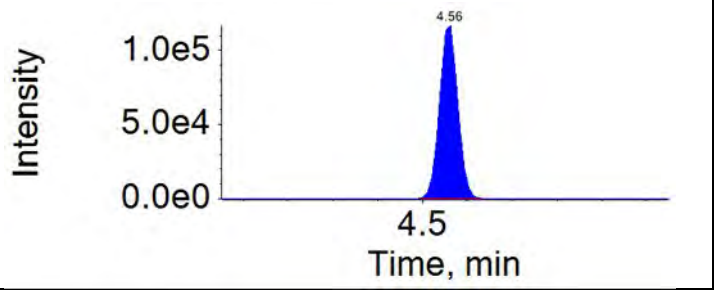
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



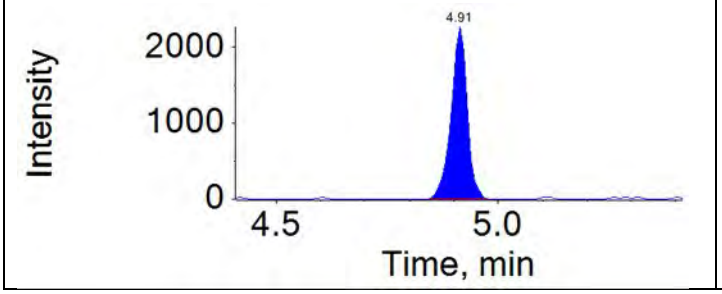


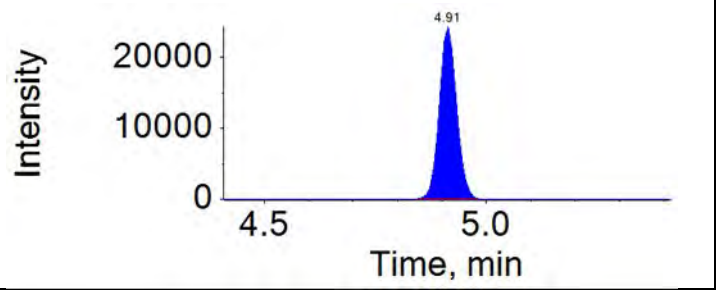
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

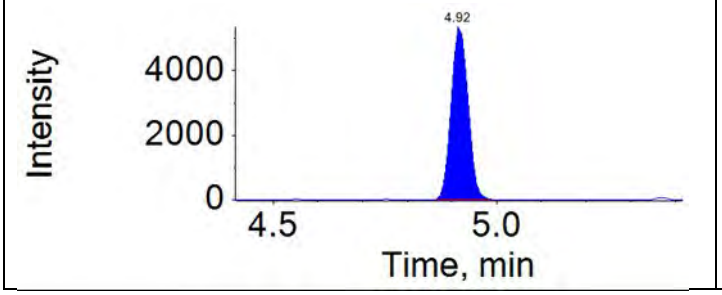
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

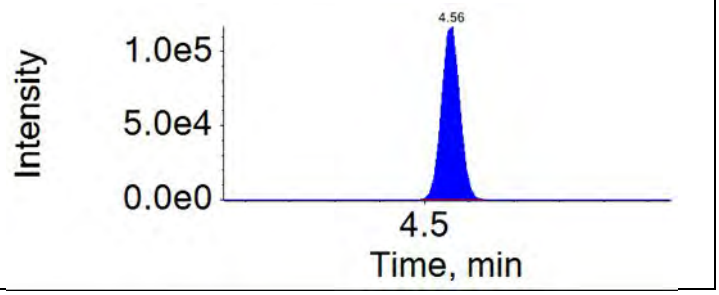
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



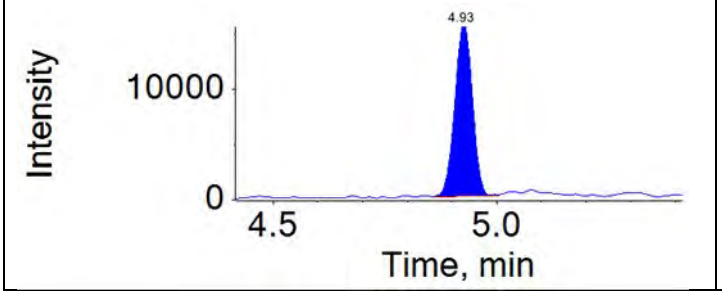


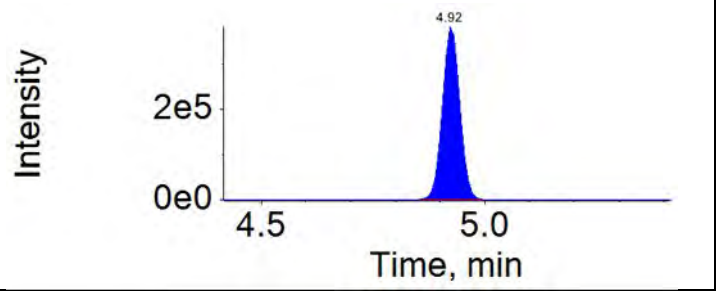
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



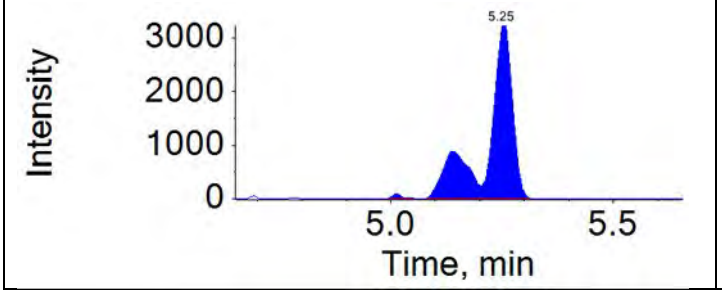


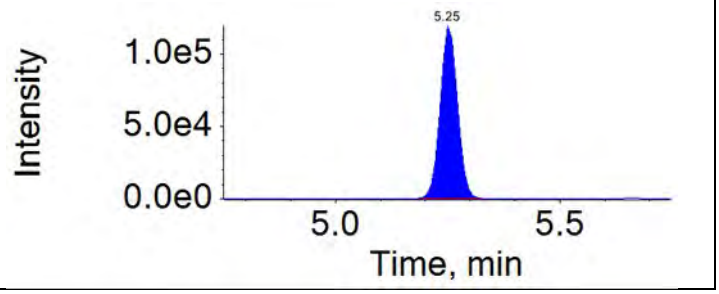
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



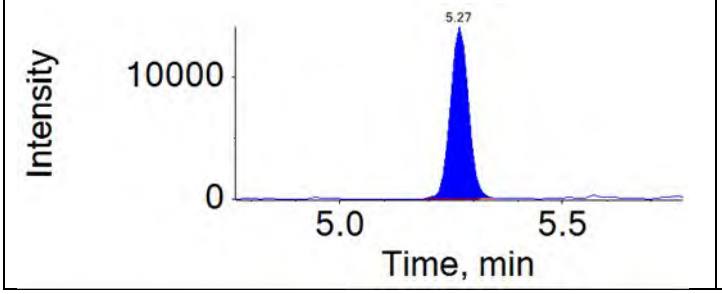


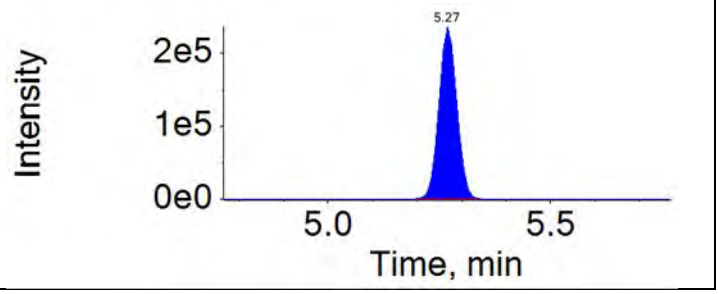
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

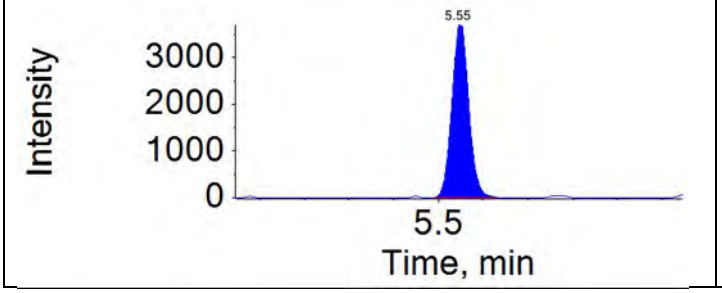
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

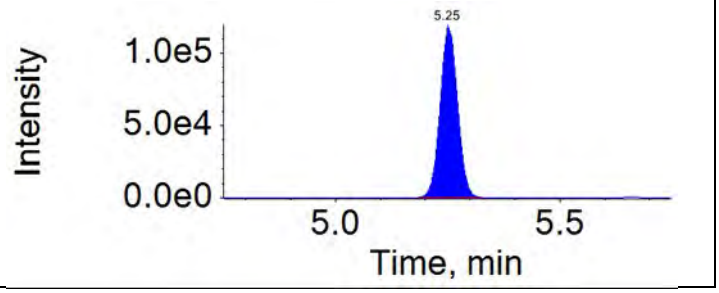
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



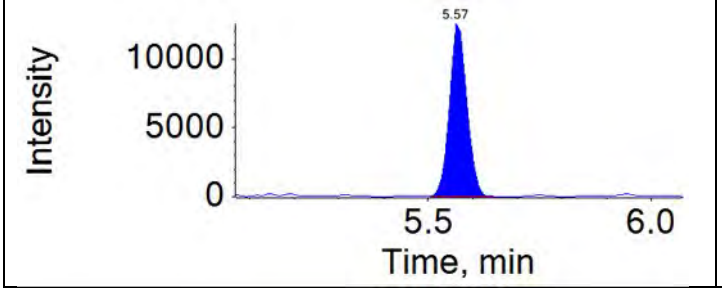


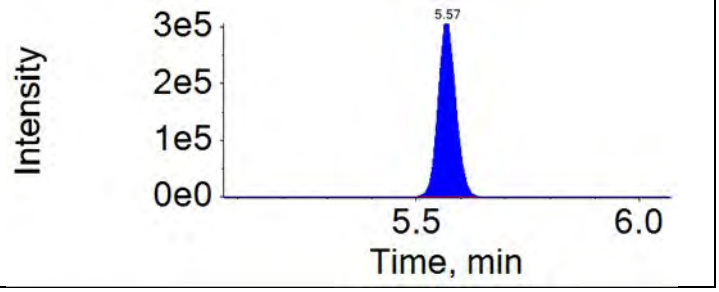
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



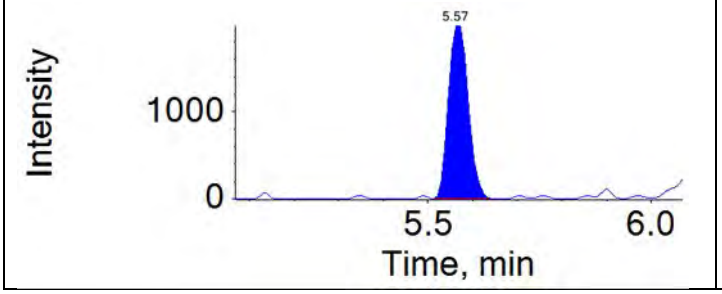


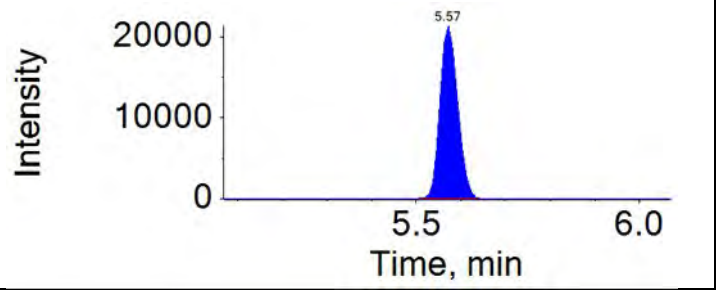
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

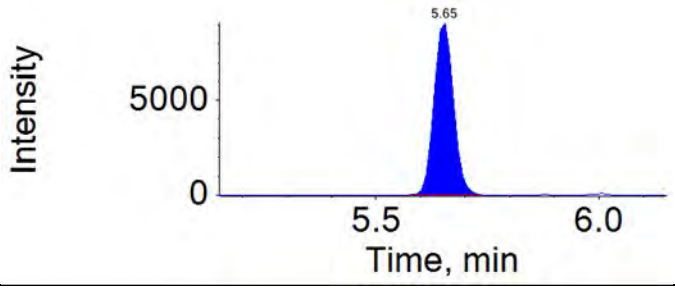
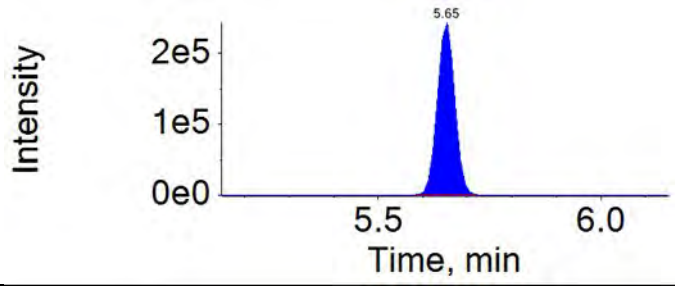


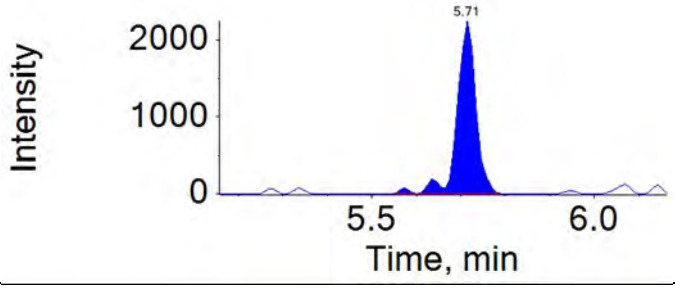
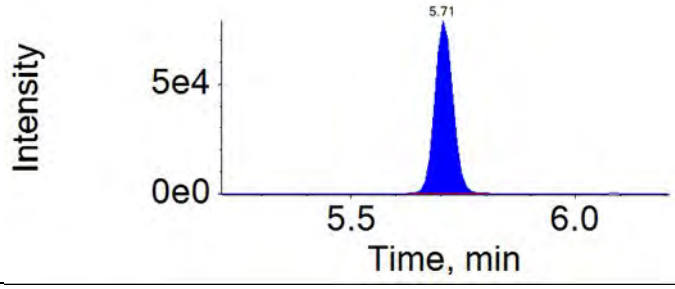


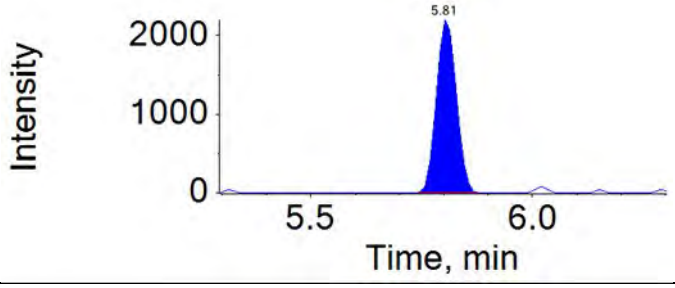
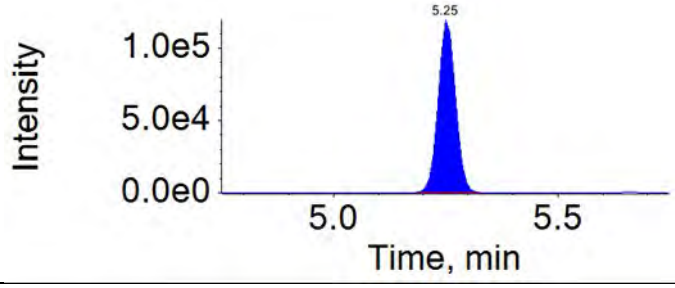
APPROVED
By MCD at 5:00 pm, 11/28/18

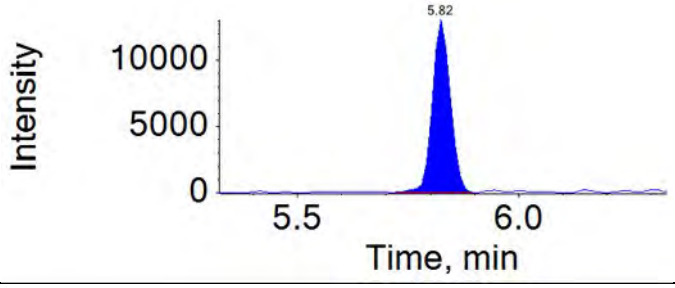
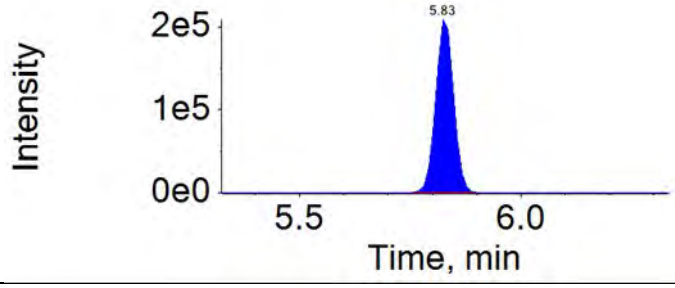
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

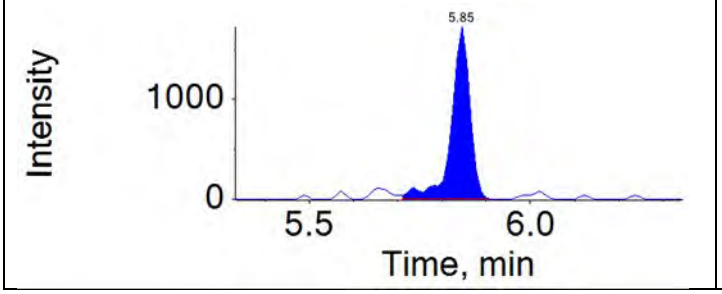
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

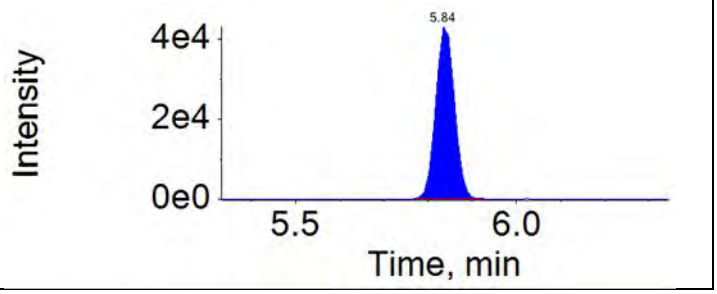
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

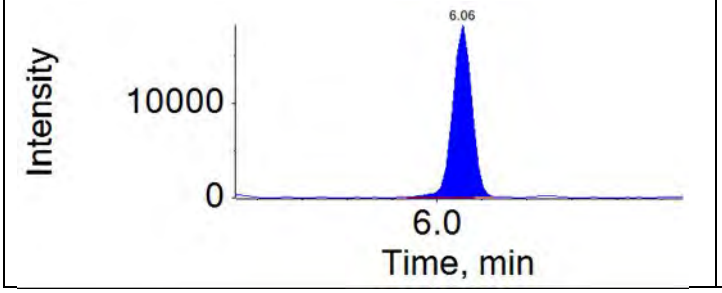
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

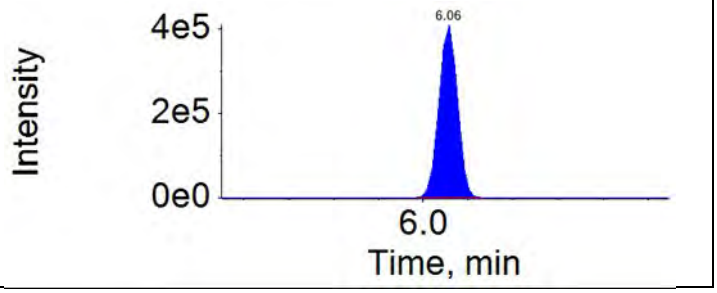
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



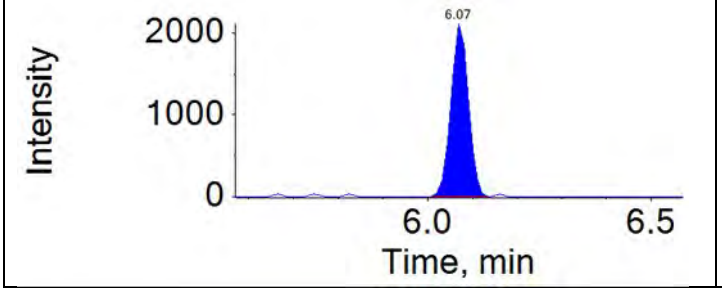


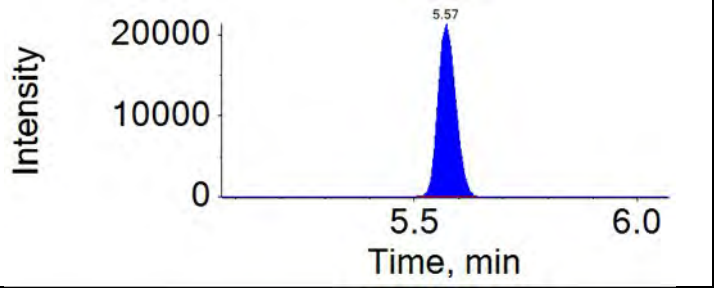
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



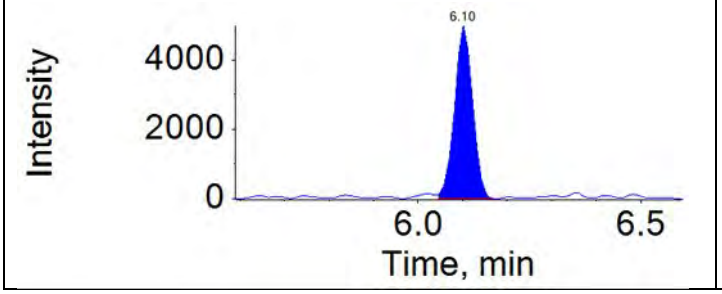


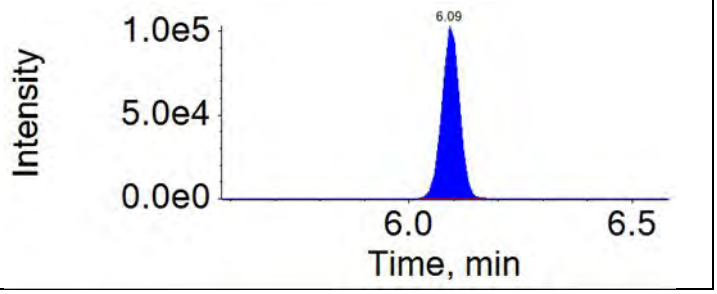
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



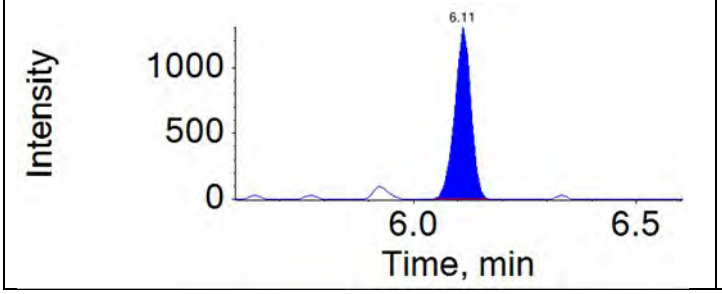


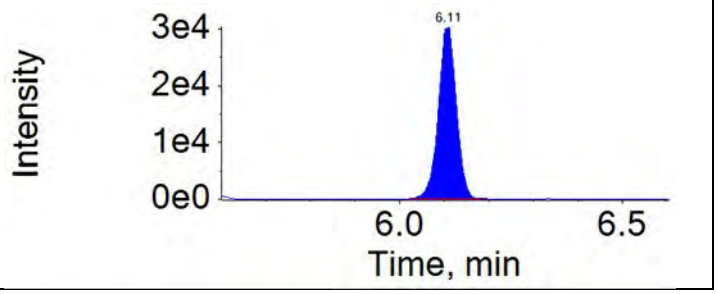
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

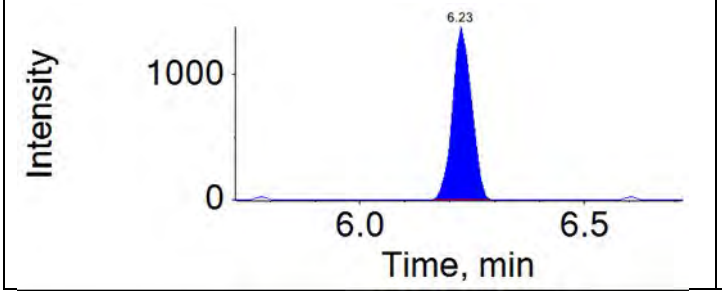
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

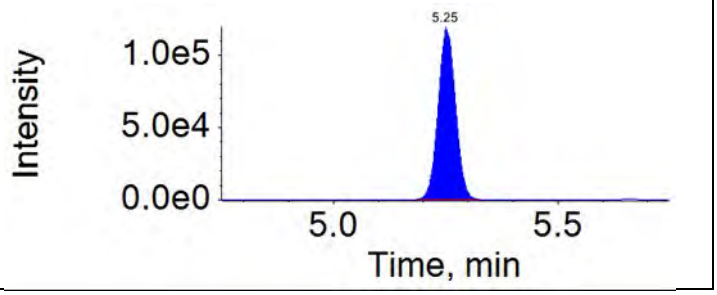
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



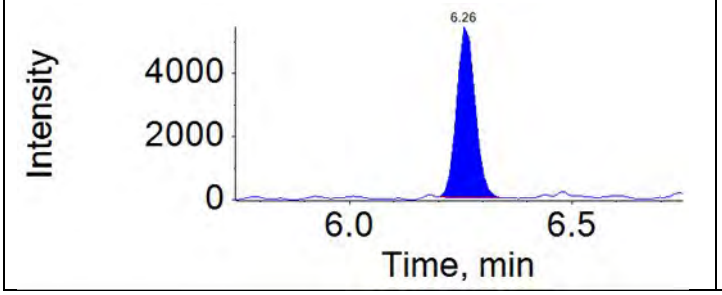


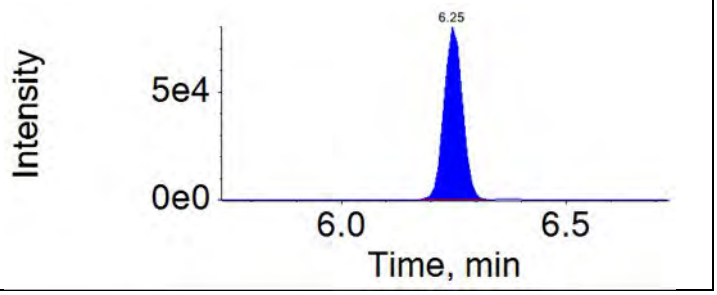
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



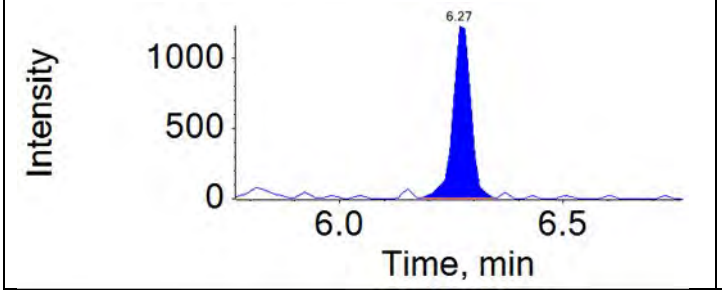


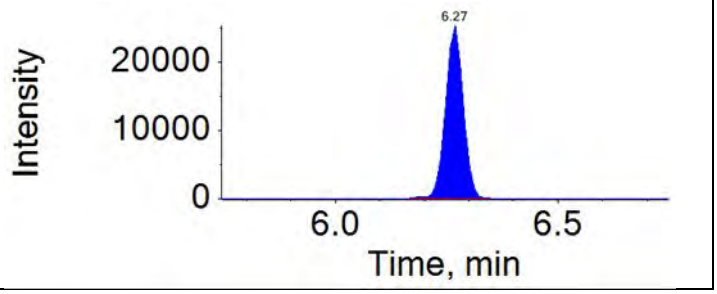
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



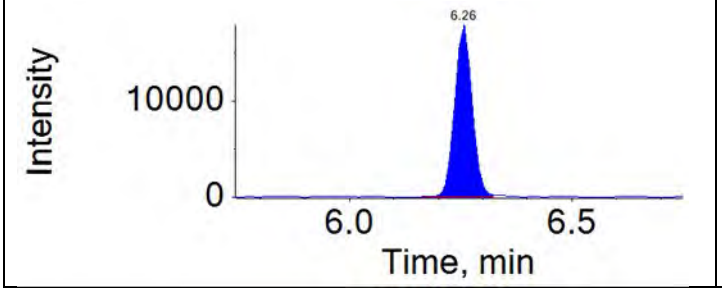


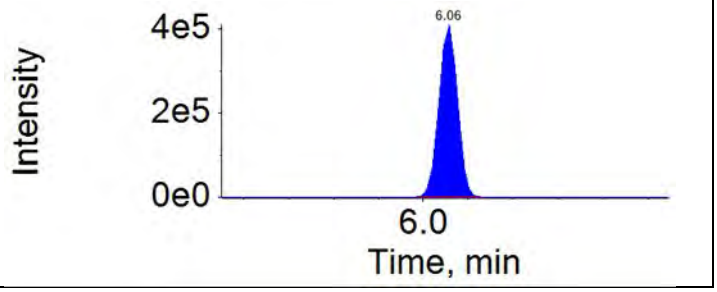
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

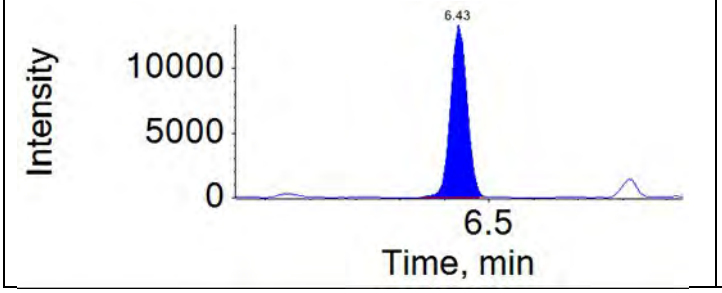
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

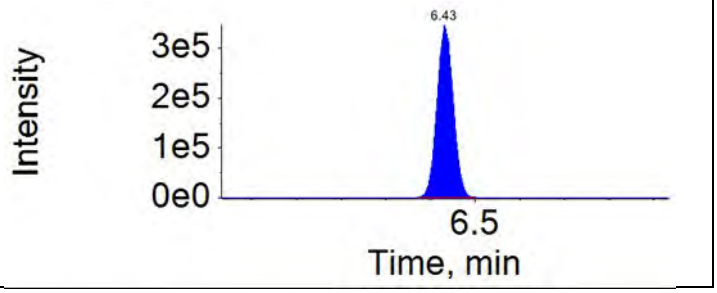
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



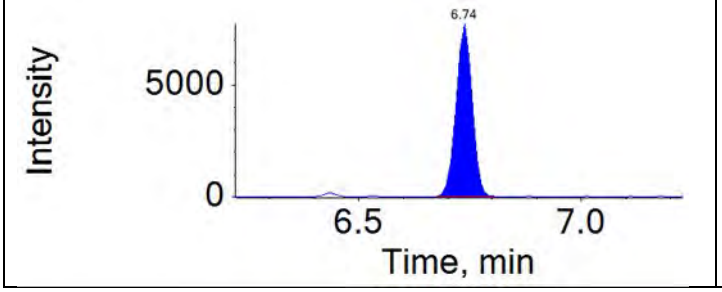


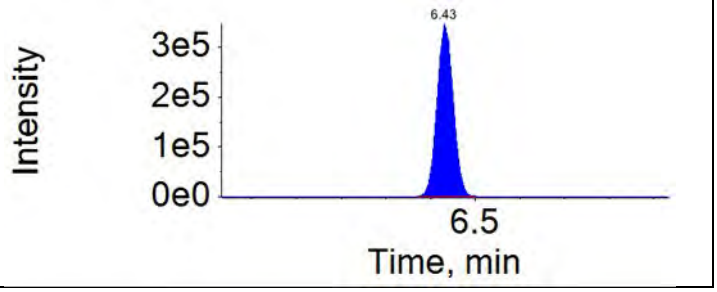
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



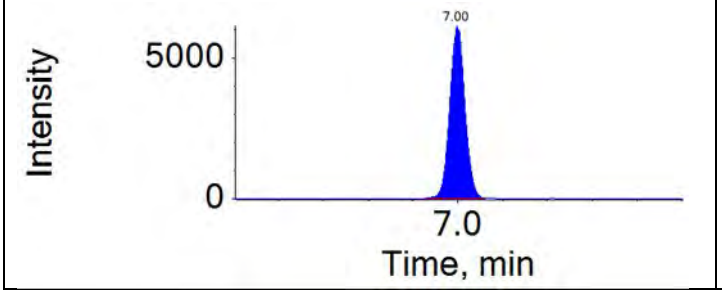


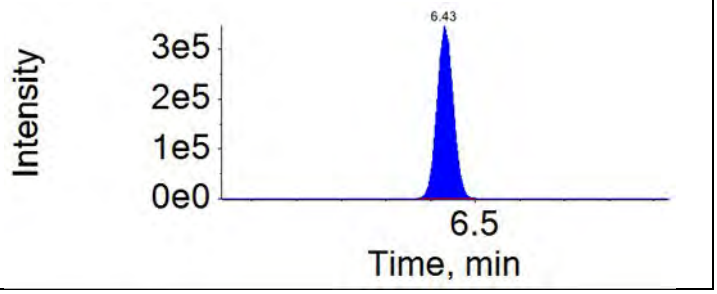
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



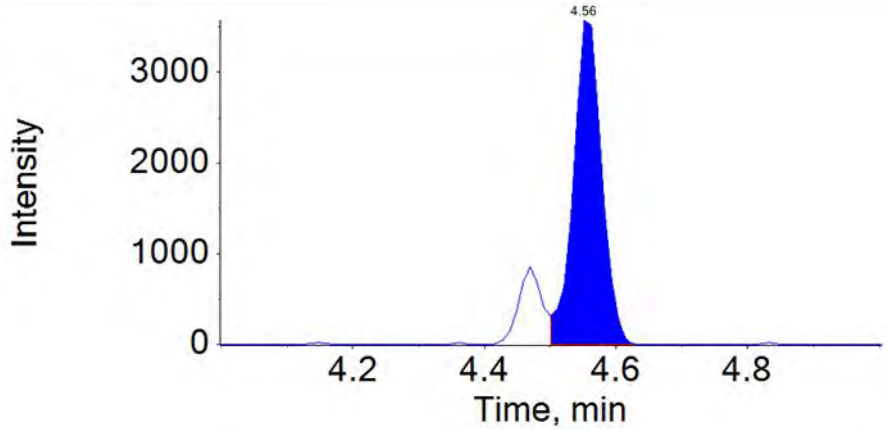


APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

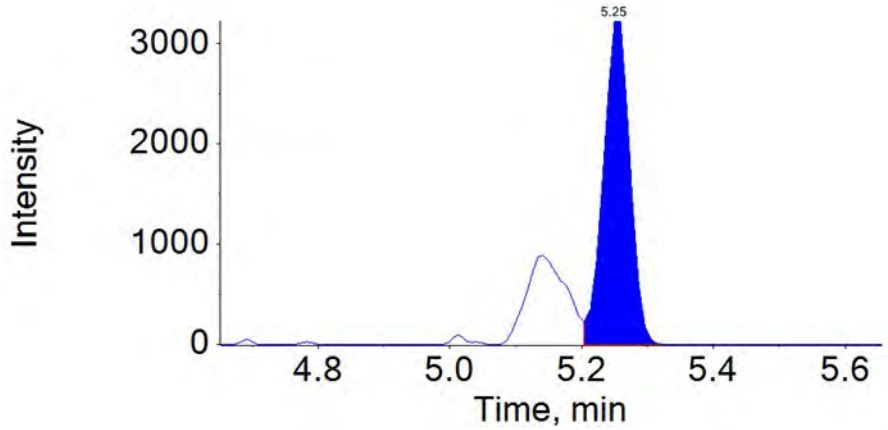
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
10746.52
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



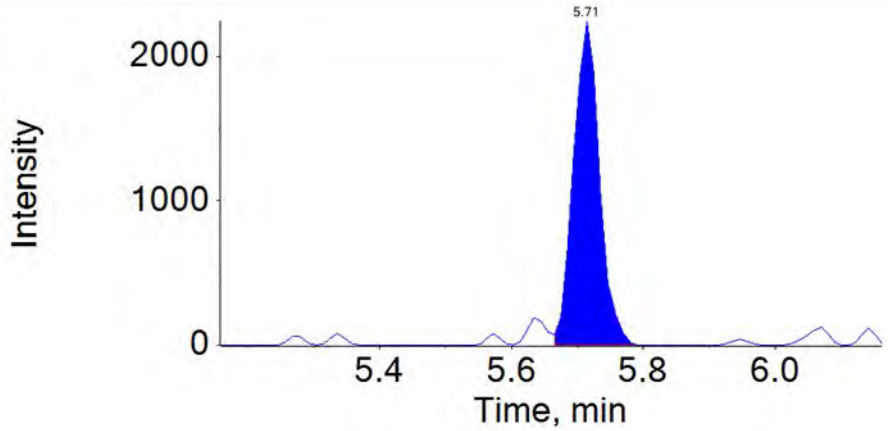
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
9112.28
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
6150.80
Mass Range:
570.0 / 419.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



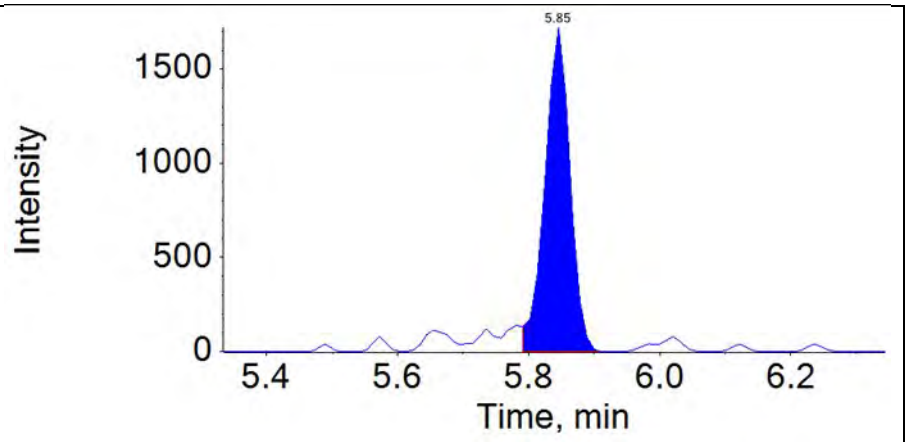
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

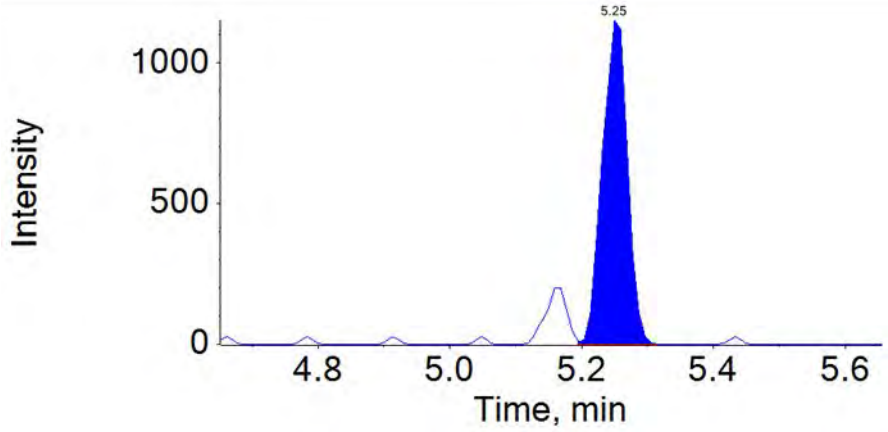
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.85
Peak Area:
4598.18
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



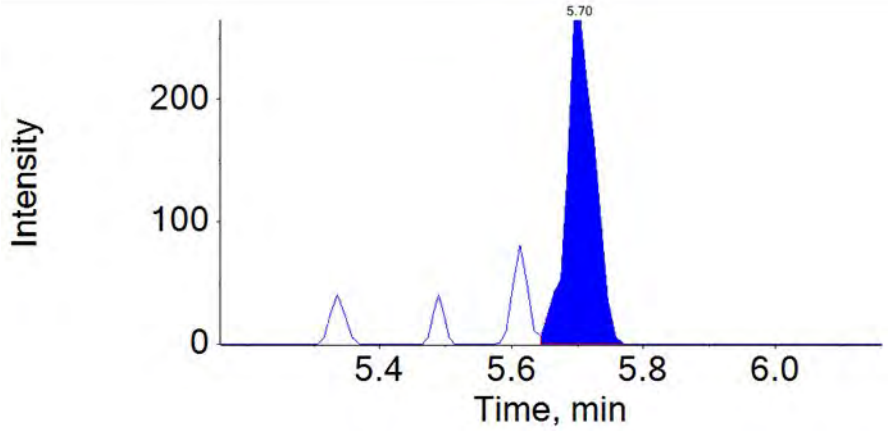
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
3075.05
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
797.95
Mass Range:
570.0 / 483.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



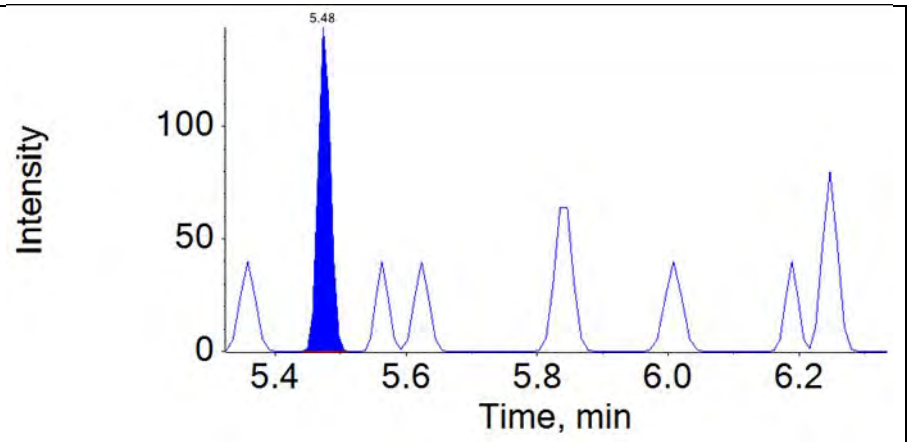
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

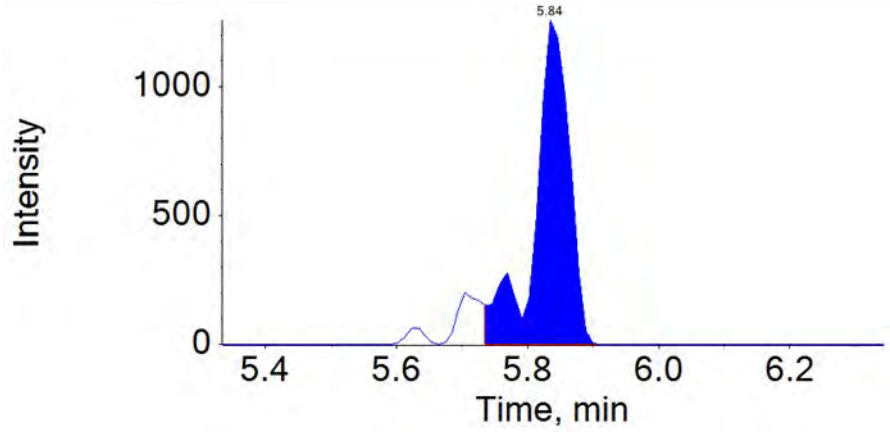
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFUnDA_2
RT (min.):
5.48
Peak Area:
191.73
Mass Range:
563.0 / 169.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



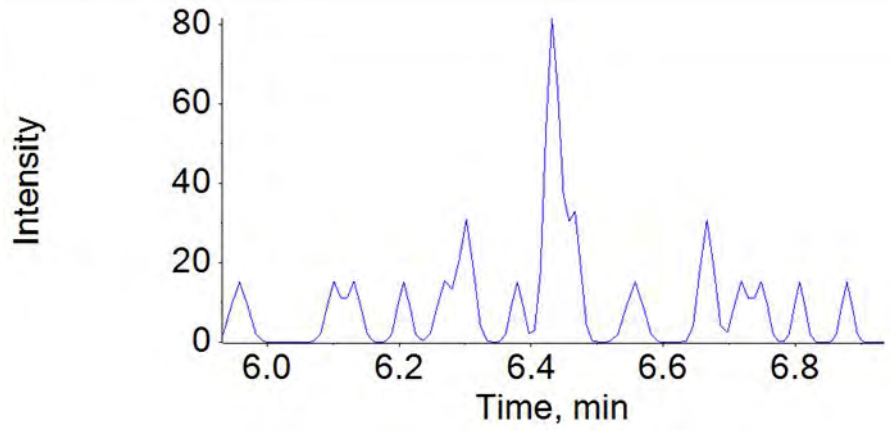
Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
4606.52
Mass Range:
584.0 / 526.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
713.0 / 169.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

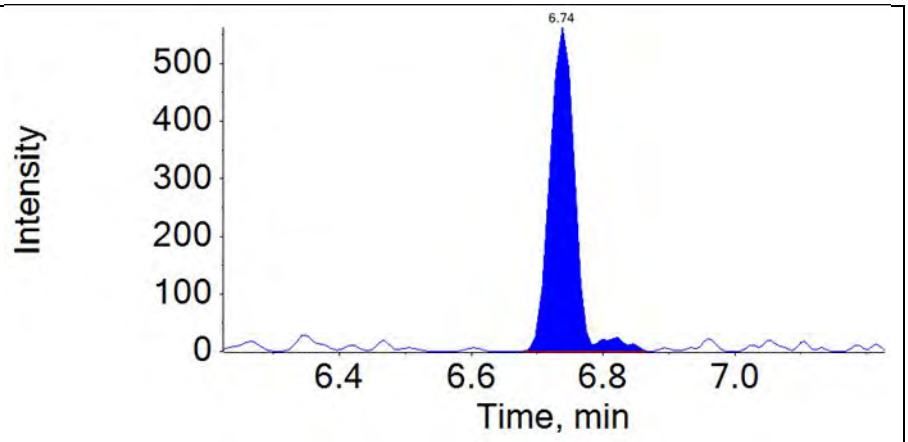
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxDA_2
RT (min.):
6.74
Peak Area:
1494.10
Mass Range:
813.0 / 169.0
File Name:
18NOV28DCAL-06.wiff
Sample Name:
CAL1



Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Ion Ratio Report

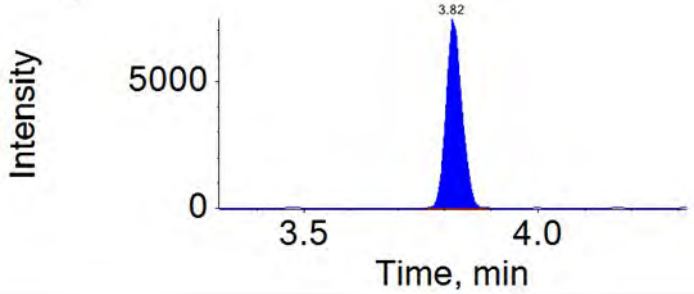
Sample Name: CAL1 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-06.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	17465.33	A	0.3655	0.3500			
PFBS_2	3.82	1.00	6112.35	A	0.3655	0.3500	-4	50	
4:2-FTS	4.13	1.00	5603.85	A	0.6383	0.6370			
4:2-FTS_2	4.14	1.00	3569.81	A	0.6383	0.6370	0	50	
PFHxA	4.17	1.00	42281.82	A	0.0103	0.0074			
PFHxA_2	4.16	1.00	313.30	A	0.0103	0.0074	-28	50	
PFPeS	4.19	1.10	8955.98	A	0.4976	0.5230			
PFPeS_2	4.18	1.10	4684.40	A	0.4976	0.5230	5	50	
PFHpA	4.56	1.00	42530.61	A	0.0557	0.0604			
PFHpA_2	4.55	1.00	2568.03	A	0.0557	0.0604	8	50	
PFHxS	4.56	1.00	12830.81	M	0.3693	0.3957			
PFHxS_2	4.56	1.00	5077.16	A	0.3693	0.3957	7	50	
6:2-FTS	4.91	1.00	5676.75	A	0.6625	0.7816			
6:2-FTS_2	4.91	1.00	4436.90	A	0.6625	0.7816	18	50	
PFHpS	4.92	1.08	13921.77	A	0.3915	0.3588			
PFHpS_2	4.92	1.08	4994.54	A	0.3915	0.3588	-8	50	
PFOA	4.93	1.00	42517.38	A	0.0573	0.0573			
PFOA_2	4.93	1.00	2436.09	A	0.0573	0.0573	0	50	
PFOS	5.25	1.00	13060.03	M	0.2960	0.2736			
PFOS_2	5.25	1.00	3573.10	M	0.2960	0.2736	-8	50	
PFNA	5.27	1.00	39485.10	A	0.0201	0.0194			
PFNA_2	5.27	1.00	766.34	A	0.0201	0.0194	-3	50	
PFNS	5.55	1.06	9756.60	A	0.4794	0.4912			
PFNS_2	5.55	1.06	4792.59	A	0.4794	0.4912	2	50	
PFDA	5.57	1.00	33621.18	A	0.0075	0.0082			
PFDA_2	5.57	1.00	276.74	A	0.0075	0.0082	10	50	
8:2-FTS	5.57	1.00	6138.74	A	0.5380	0.4422			
8:2-FTS_2	5.57	1.00	2714.43	A	0.5380	0.4422	-18	50	
NMeFOSAA	5.71	1.00	6660.95	M	0.2305	0.1393			
NMeFOSAA_2	5.70	1.00	927.90	M	0.2305	0.1393	-40	50	
PFDS	5.81	1.11	6850.74	A	0.5356	0.6929			
PFDS_2	5.80	1.10	4746.55	A	0.5356	0.6929	29	50	
PFUnDA	5.82	1.00	36428.01	A	0.0038	0.0036			
PFUnDA_2	5.84	1.00	129.75	M	0.0038	0.0036	-6	50	
NEtFOSAA	5.85	1.00	5069.19	M	0.7356	1.0075			
NEtFOSAA_2	5.84	1.00	5107.05	M	0.7356	1.0075	37	50	
PFDoDA	6.06	1.00	53386.61	A	0.0130	0.0169			
PFDoDA_2	6.06	1.00	904.01	A	0.0130	0.0169	30	50	
10:2-FTS	6.07	1.09	5717.74	A	0.6989	0.8898			
10:2-FTS_2	6.07	1.09	5087.40	A	0.6989	0.8898	27	50	
PFTrDA	6.26	1.03	48537.57	A	0.0090	0.0125			
PFTrDA_2	6.26	1.03	607.67	A	0.0090	0.0125	39	50	
PFTeDA	6.43	1.00	34099.24	A	0.0056	0.0053			
PFTeDA_2	6.43	1.00	180.96	M	0.0056	0.0053	-5	50	
PFHxDA	6.74	1.05	19206.41	A	0.0646	0.0740			
PFHxDA_2	6.74	1.05	1422.14	M	0.0646	0.0740	15	50	
PFODA	7.00	1.09	14377.98	A	0.0264	0.0304			
PFODA_2	7.00	1.09	436.46	A	0.0264	0.0304	15	50	

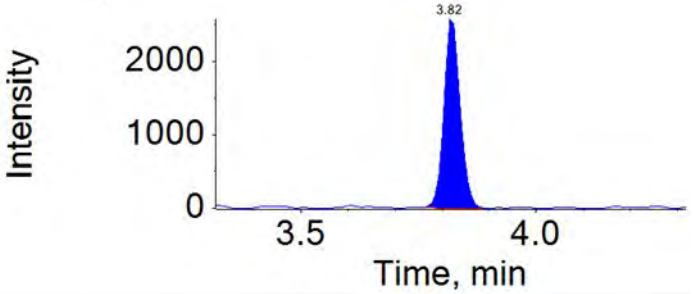
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

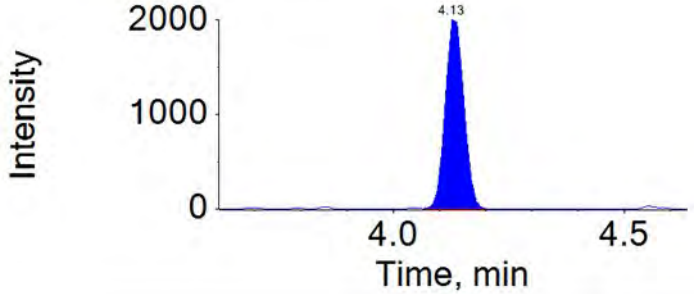
Component: PFBS
Primary Mass: 299.0 / 80.0



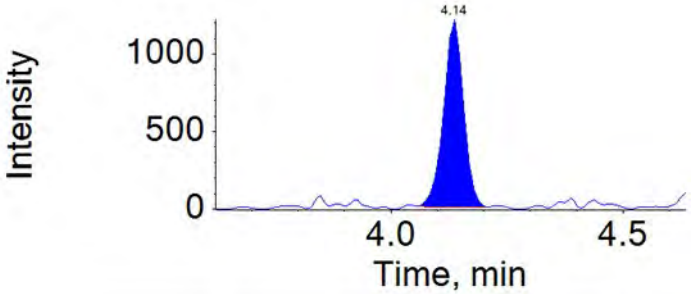
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



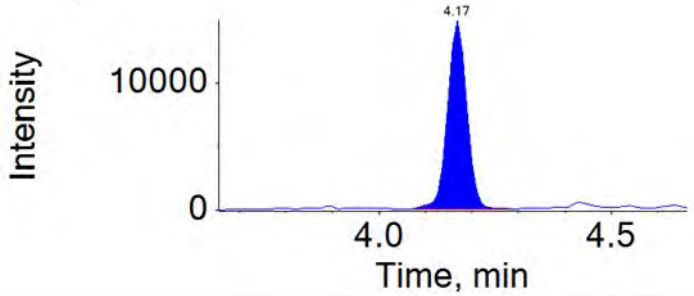
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



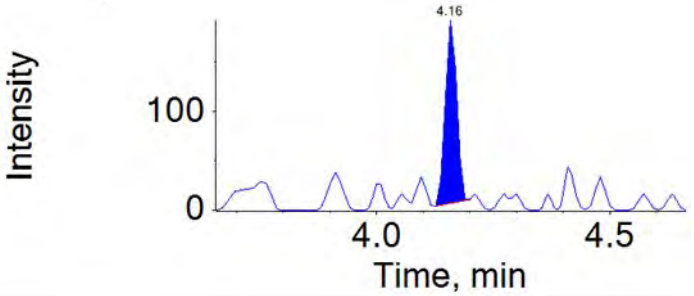
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



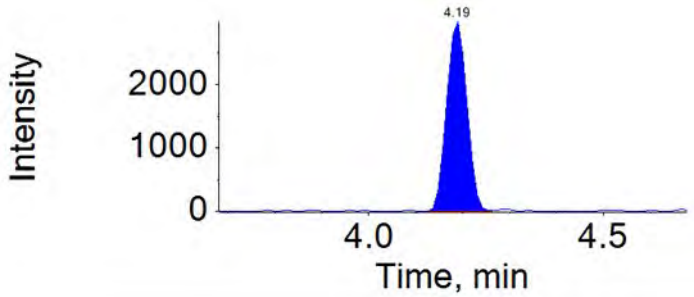
Component: PFHxA
Primary Mass: 313.0 / 269.0



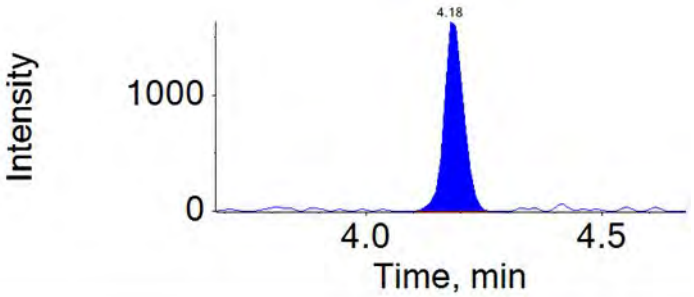
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



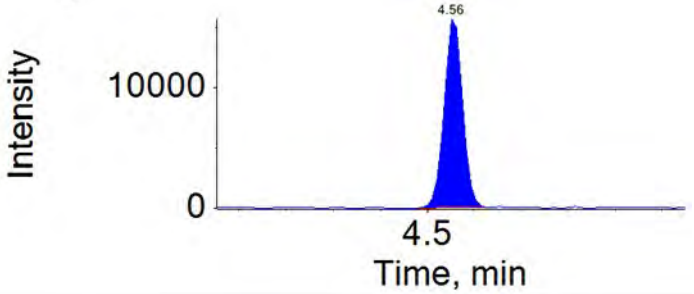
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



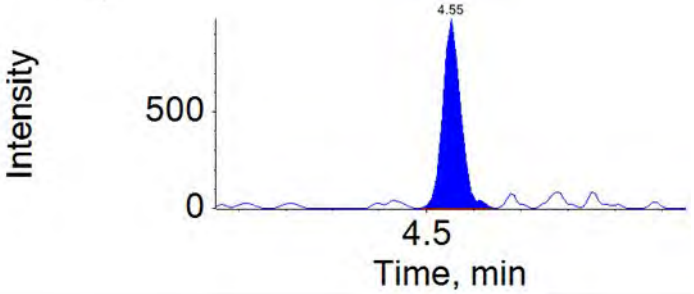
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

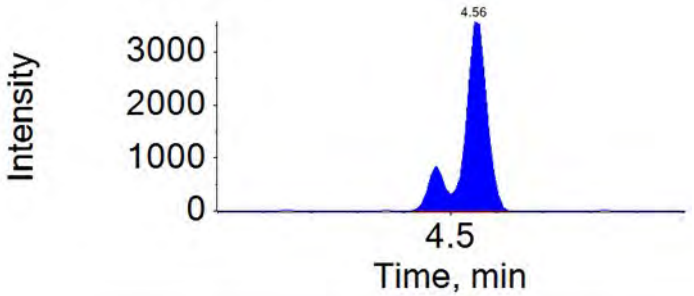
Component: PFHpA
Primary Mass: 363.0 / 319.0



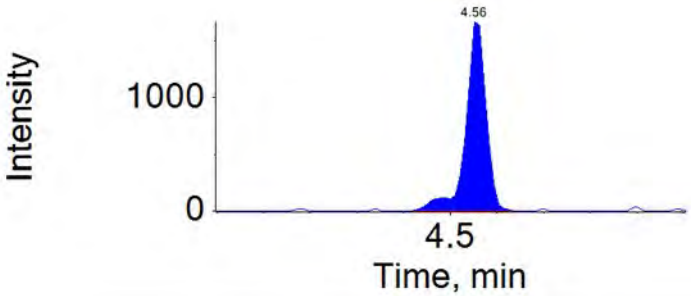
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



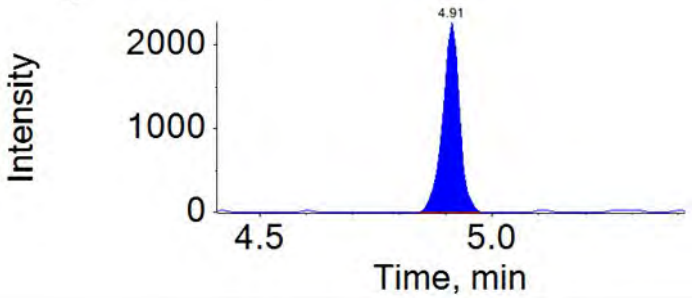
Component: PFHxS
Primary Mass: 399.0 / 80.0



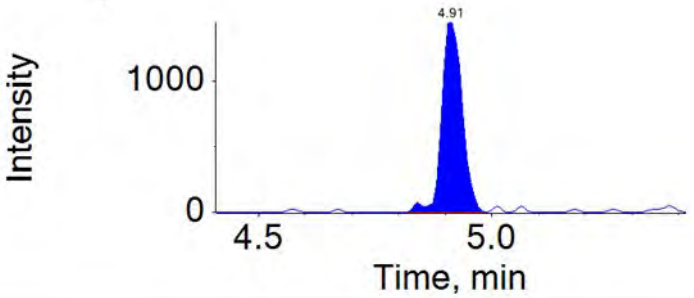
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



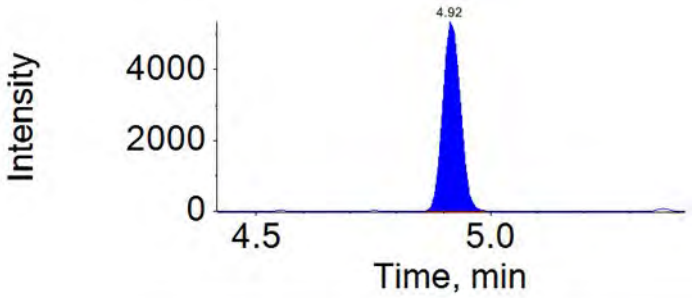
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



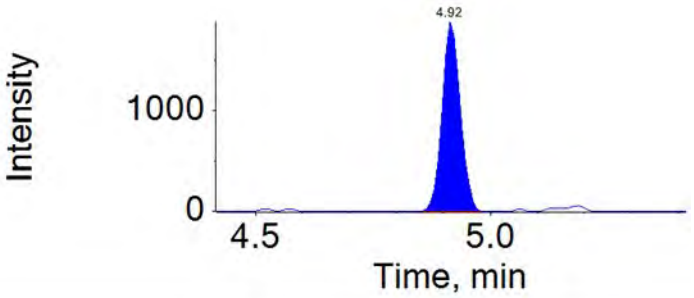
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



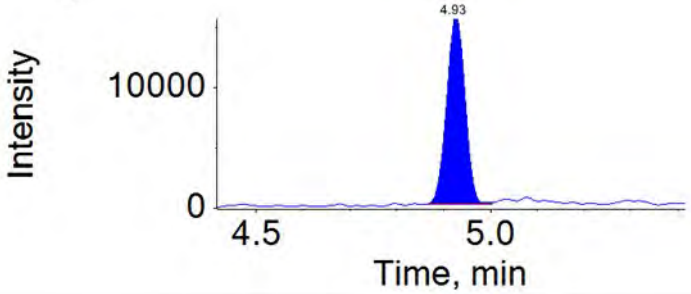
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



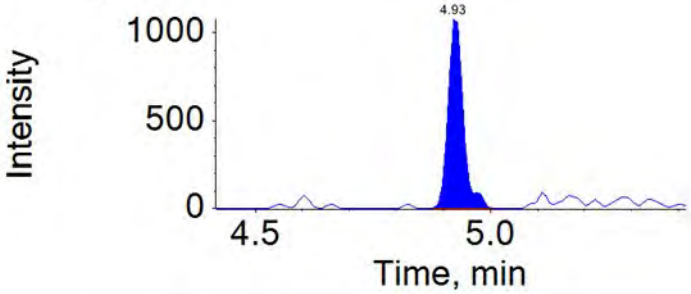
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

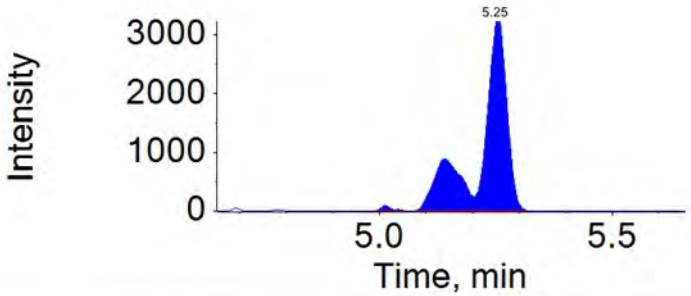
Component: PFOA
Primary Mass: 413.0 / 369.0



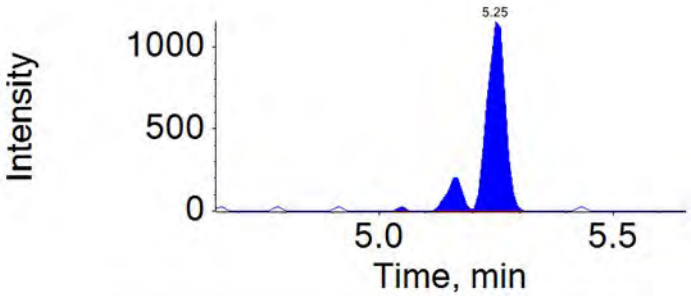
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



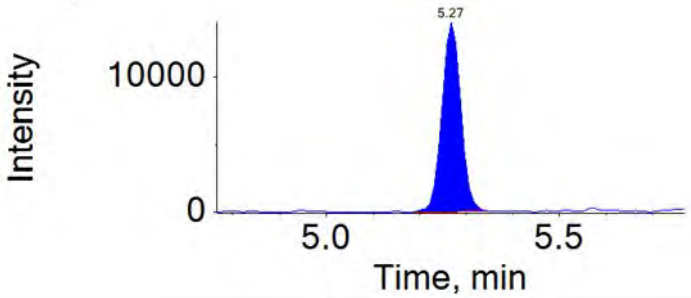
Component: PFOS
Primary Mass: 499.0 / 80.0



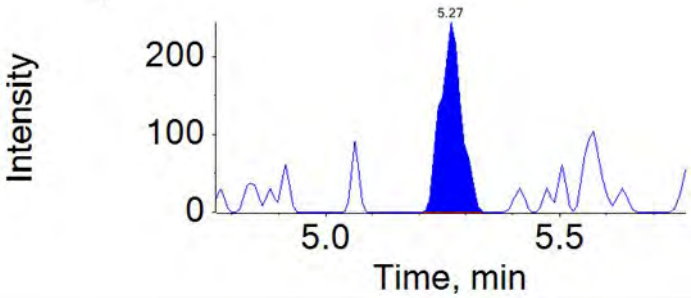
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



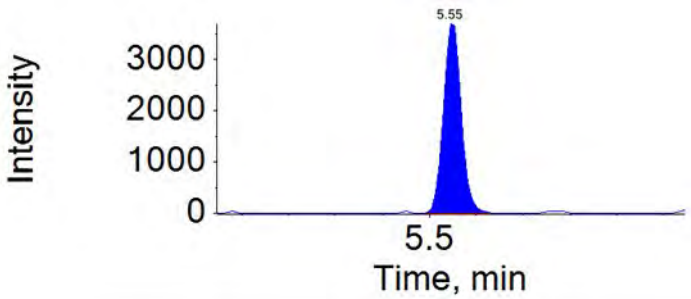
Component: PFNA
Primary Mass: 463.0 / 419.0



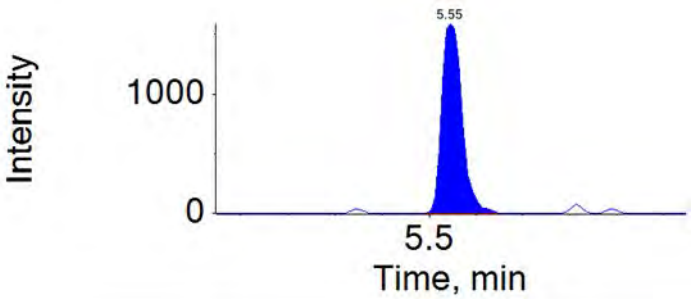
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



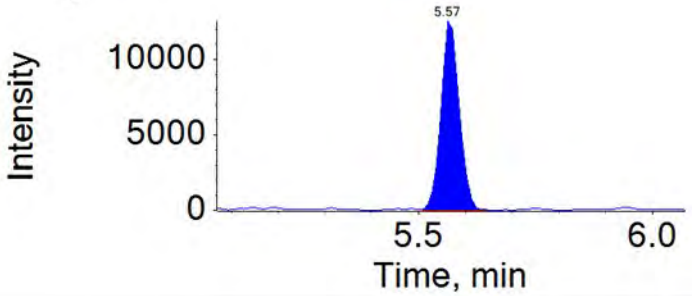
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



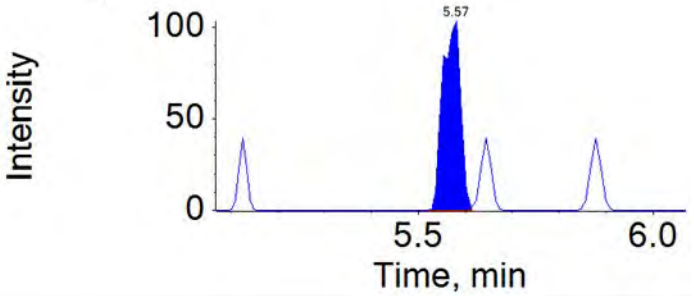
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

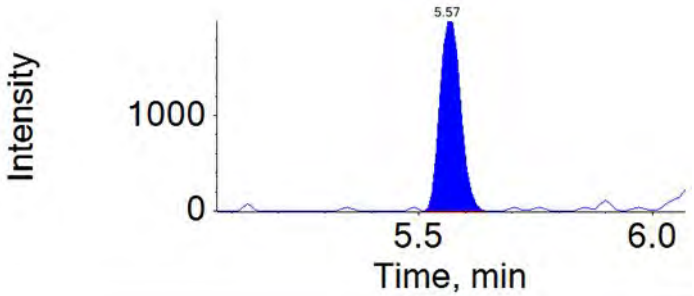
Component: PFDA
Primary Mass: 513.0 / 469.0



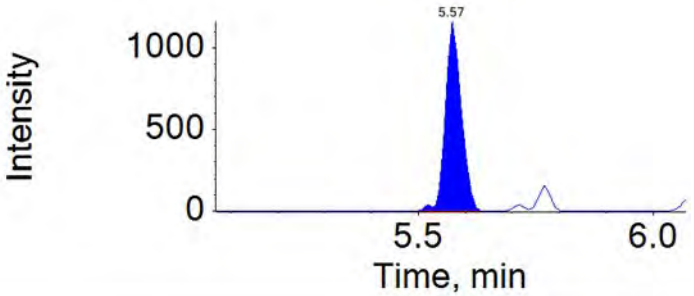
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



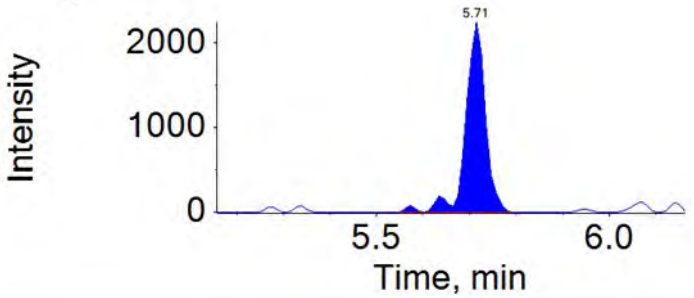
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



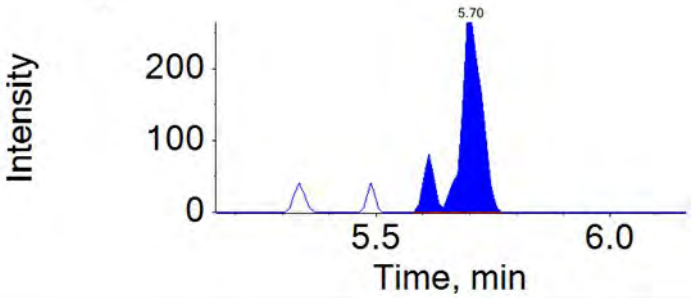
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



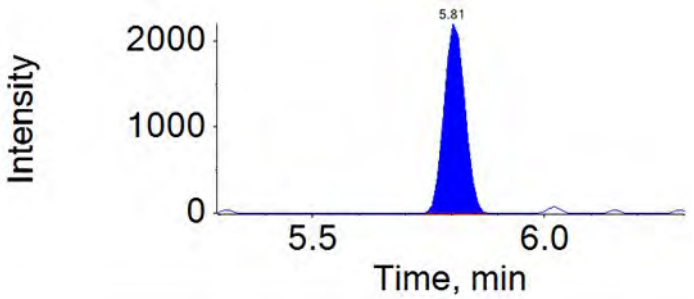
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



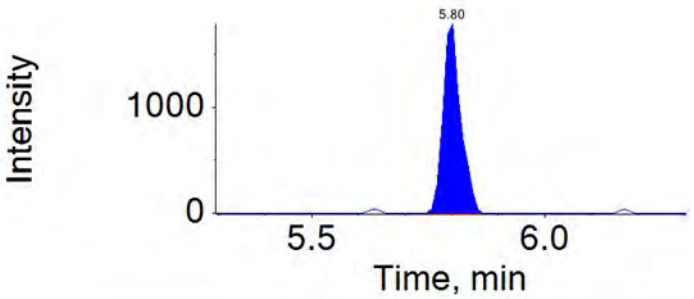
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



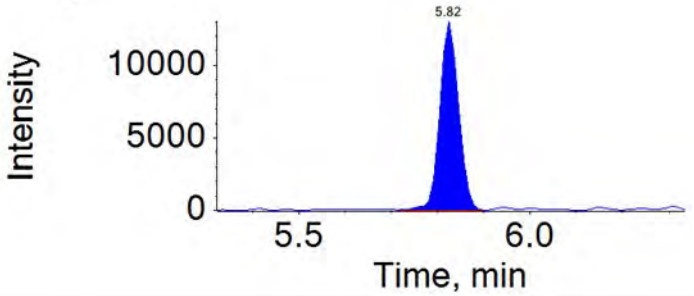
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



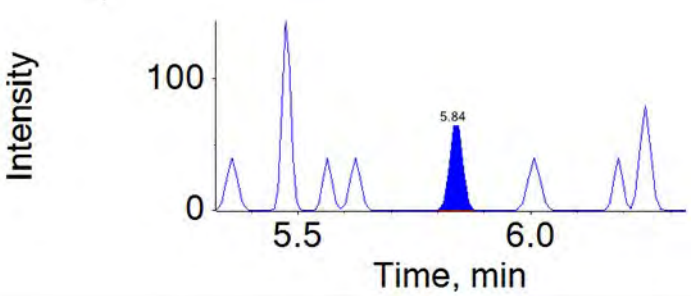
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

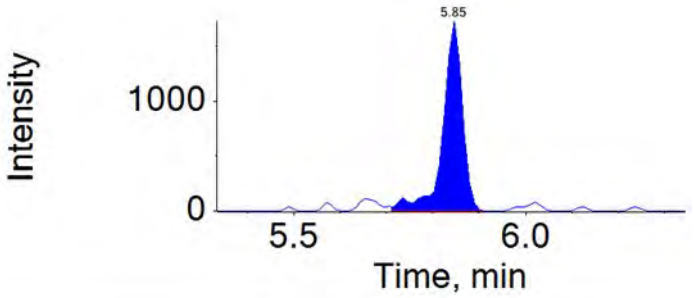
Component: PFUnDA
Primary Mass: 563.0 / 519.0



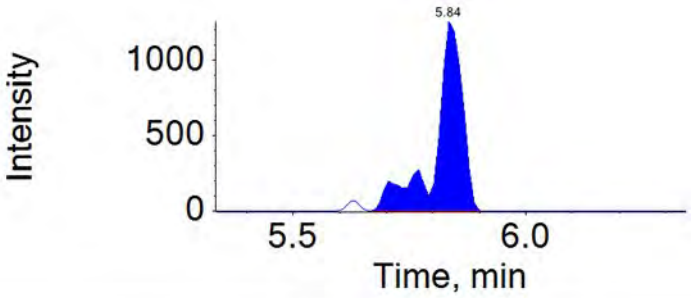
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



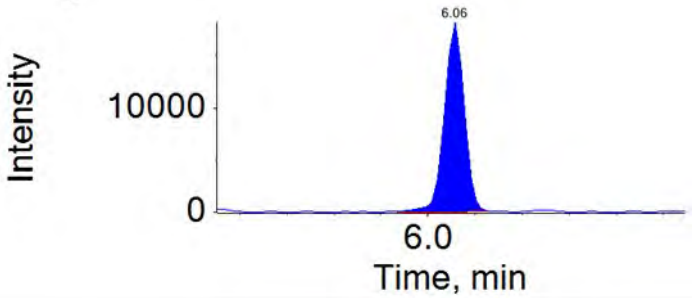
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



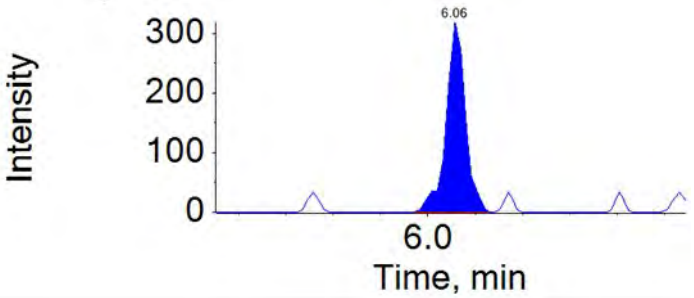
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



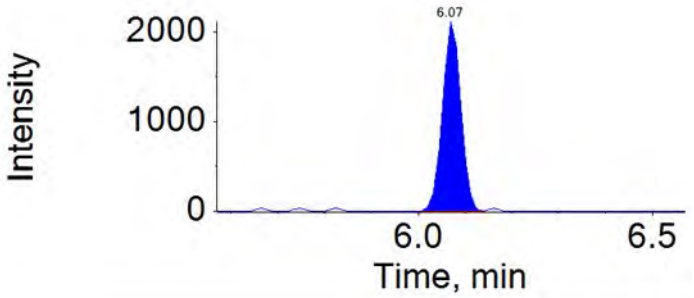
Component: PFDoDA
Primary Mass: 613.0 / 569.0



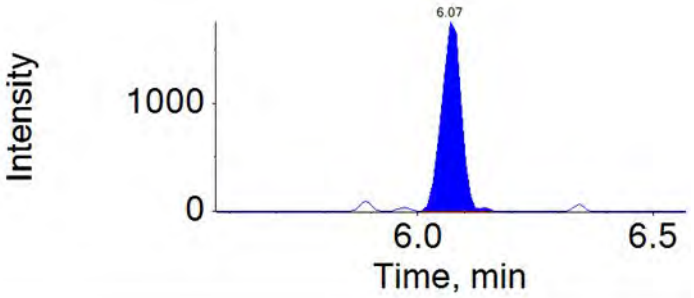
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



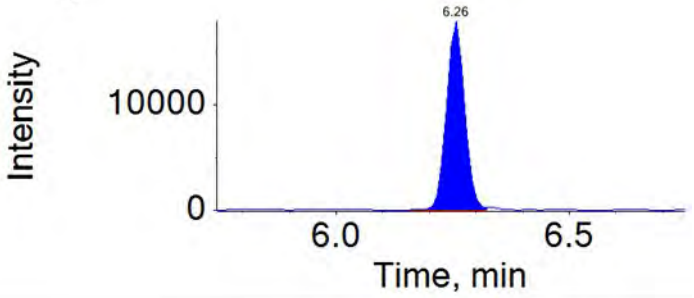
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



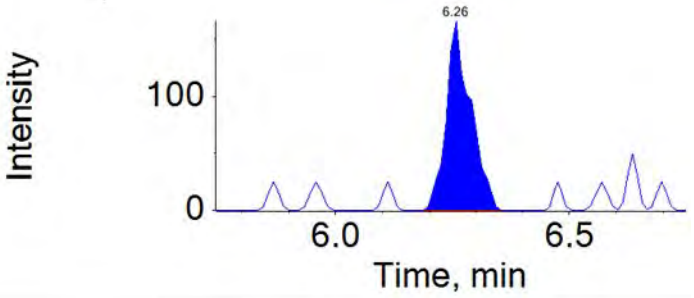
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

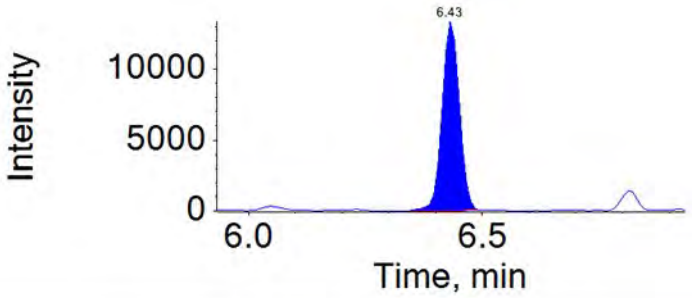
Component: PFTrDA
Primary Mass: 663.0 / 619.0



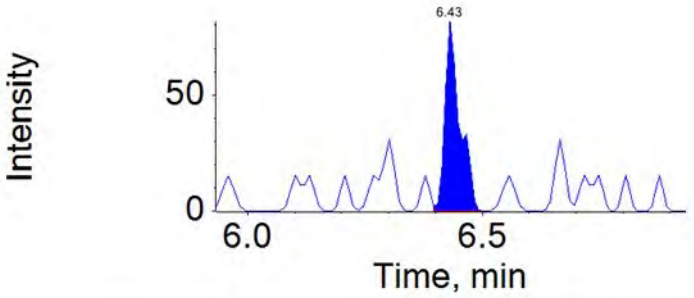
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



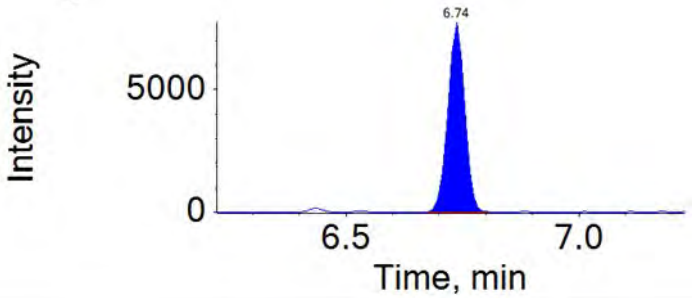
Component: PFTeDA
Primary Mass: 713.0 / 669.0



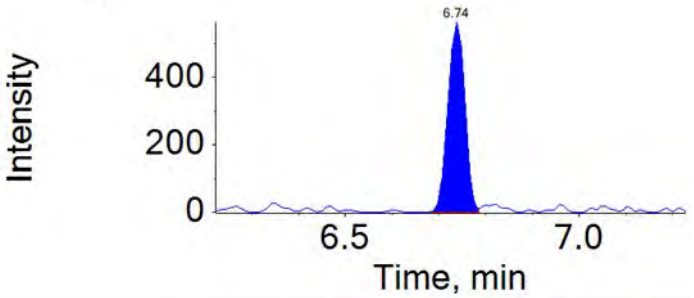
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



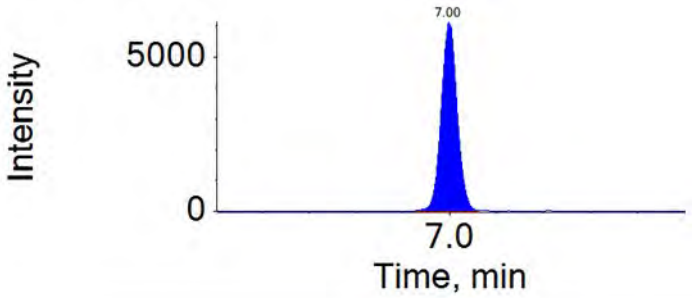
Component: PFHxDA
Primary Mass: 813.0 / 769.0



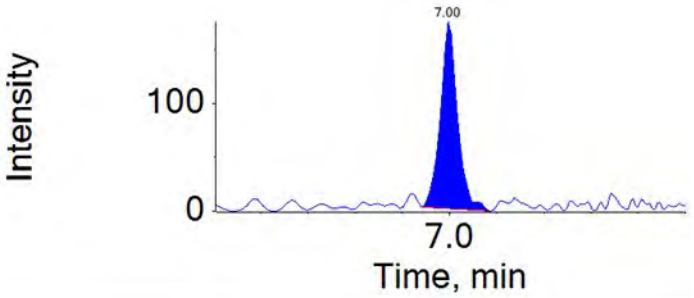
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL2			**Data File:**		18NOV28DCAL-07.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-28T13:51:13
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	898154.2	887248.9	1	50	
13C2-PFOA	5.0	493545.2	498501.6	-1	50	
13C4-PFOS	4.8	295669.7	283214.2	4	50	
13C2-PFDA	5.0	460926.2	441790.6	4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1033122.1	13C3-PFBA	898154.2	1.150	5.000	5.132	103	70-130	
E13C5-PFPeA	1014125.0	13C3-PFBA	898154.2	1.129	5.000	5.273	105	70-130	
E13C3-PFBS	442150.0	13C3-PFBA	898154.2	0.492	4.650	4.697	101	70-130	
E13C2-4:2-FTS	72067.2	13C2-PFOA	493545.2	0.146	4.670	5.032	108	70-130	
E13C5-PFHxA	697229.0	13C2-PFOA	493545.2	1.413	5.000	5.189	104	70-130	
E13C3-PFHxS	335129.7	13C2-PFOA	493545.2	0.679	4.730	5.322	113	70-130	
E13C4-PFHpA	547372.0	13C2-PFOA	493545.2	1.109	5.000	5.096	102	70-130	
E13C2-6:2-FTS	63922.7	13C2-PFOA	493545.2	0.130	4.750	5.422	114	70-130	
E13C8-PFOA	1030866.6	13C2-PFOA	493545.2	2.089	5.000	5.749	115	70-130	
E13C8-PFOS	313894.3	13C4-PFOS	295669.7	1.062	4.780	4.792	100	70-130	
E13C9-PFNA	682380.7	13C4-PFOS	295669.7	2.308	5.000	5.069	101	70-130	
E13C6-PFDA	839100.7	13C2-PFDA	460926.2	1.820	5.000	5.133	103	70-130	
E13C2-8:2-FTS	54757.9	13C2-PFDA	460926.2	0.119	4.790	5.106	107	70-130	
E13C8-PFOSA	658778.5	13C2-PFDA	460926.2	1.429	5.000	5.244	105	70-130	
Ed3-NMeFOSAA	181261.3	13C2-PFDA	460926.2	0.393	5.000	4.993	100	70-130	
E13C7-PFUnDA	581207.0	13C2-PFDA	460926.2	1.261	5.000	5.329	107	70-130	
Ed5-NEtFOSAA	144803.2	13C2-PFDA	460926.2	0.314	5.000	5.597	112	70-130	
E13C2-PFDoDA	1140522.3	13C2-PFDA	460926.2	2.474	5.000	5.199	104	70-130	
Ed7-NMePFOSAE	272071.3	13C2-PFDA	460926.2	0.590	5.000	5.101	102	70-130	
Ed3-NMePFOSA	86471.7	13C2-PFDA	460926.2	0.188	5.000	5.077	102	70-130	
Ed9-NEtPFOSAE	229050.7	13C2-PFDA	460926.2	0.497	5.000	5.038	101	70-130	
Ed5-NEtPFOSA	66646.8	13C2-PFDA	460926.2	0.145	5.000	5.024	100	70-130	
E13C2-PFTeDA	858145.2	13C2-PFDA	460926.2	1.862	5.000	5.152	103	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

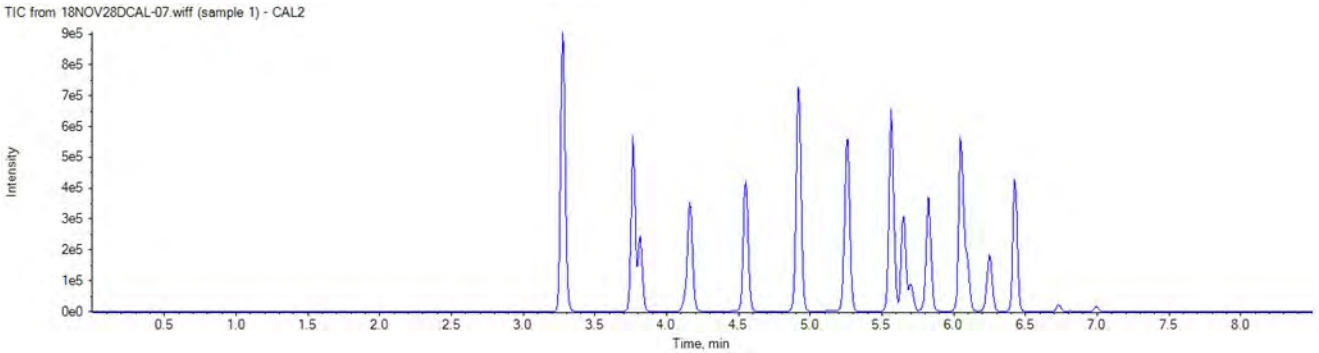
Analyte Quantitation Peak Table

Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-07.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	110036.6		A	13C4-PFBA	3.27	1033122.1	0.107	0.584
PFPeA	3.77	1.000	104393.1		A	13C5-PFPeA	3.77	1014125.0	0.103	0.505
PFBS	3.81	1.000	43237.4		A	13C3-PFBS	3.82	442150.0	0.098	0.475
4:2-FTS	4.13	1.000	14524.8		A	13C2-4:2-FTS	4.13	72067.2	0.202	0.540
PFHxA	4.16	1.000	101713.2		A	13C5-PFHxA	4.16	697229.0	0.146	0.586
PFPeS	4.18	1.100	24007.3		A	13C3-PFBS	3.82	442150.0	0.054	0.549
PFHpA	4.55	1.000	100593.8		A	13C4-PFHpA	4.55	547372.0	0.184	0.567
PFHxS	4.55	1.000	31104.5		M	13C3-PFHxS	4.55	335129.7	0.093	0.435
6:2-FTS	4.91	1.000	14479.8		A	13C2-6:2-FTS	4.91	63922.7	0.227	0.591
PFHpS	4.91	1.080	32553.7		A	13C3-PFHxS	4.55	335129.7	0.097	0.485
PFOA	4.92	1.000	106420.8		A	13C8-PFOA	4.92	1030866.6	0.103	0.533
PFOS	5.25	1.000	34203.6		M	13C8-PFOS	5.25	313894.3	0.109	0.457
PFNA	5.26	1.000	106720.9		A	13C9-PFNA	5.26	682380.7	0.156	0.599
PFNS	5.54	1.060	24149.9		A	13C8-PFOS	5.25	313894.3	0.077	0.486
PFDA	5.57	1.000	90730.3		A	13C6-PFDA	5.56	839100.7	0.108	0.612
8:2-FTS	5.57	1.000	15550.2		A	13C2-8:2-FTS	5.57	54757.9	0.284	0.536
PFOSA	5.65	1.000	73112.3		A	13C8-PFOSA	5.65	658778.5	0.111	0.562
NMeFOSAA	5.70	1.000	16533.1		A	d3-NMeFOSAA	5.70	181261.3	0.091	0.582
PFDS	5.80	1.100	18654.8		A	13C8-PFOS	5.25	313894.3	0.059	0.471
PFUnDA	5.82	1.000	91490.4		A	13C7-PFUnDA	5.82	581207.0	0.157	0.563
NEtFOSAA	5.84	1.000	16643.3		A	d5-NEtFOSAA	5.83	144803.2	0.115	0.560
PFDoDA	6.05	1.000	122586.0		A	13C2-PFDoDA	6.05	1140522.3	0.107	0.589
10:2-FTS	6.07	1.090	15157.8		A	13C2-8:2-FTS	5.57	54757.9	0.277	0.610
NMePFOSAE	6.10	1.000	37932.7		A	d7-NMePFOSAE	6.09	272071.3	0.139	0.587
NMePFOSA	6.11	1.000	9381.3		A	d3-NMePFOSA	6.10	86471.7	0.108	0.575
PFDoS	6.22	1.190	11606.3		A	13C8-PFOS	5.25	313894.3	0.037	0.531
NEtPFOSAE	6.26	1.000	37977.7		A	d9-NEtPFOSAE	6.24	229050.7	0.166	0.596
NEtPFOSA	6.27	1.000	7883.3		A	d5-NEtPFOSA	6.26	66646.8	0.118	0.530
PFTrDA	6.25	1.030	117562.3		A	13C2-PFDoDA	6.05	1140522.3	0.103	0.621
PFTeDA	6.43	1.000	88360.3		A	13C2-PFTeDA	6.43	858145.2	0.103	0.583
PFHxDA	6.73	1.050	44164.6		A	13C2-PFTeDA	6.43	858145.2	0.051	0.588
PFODA	6.99	1.090	36421.5		A	13C2-PFTeDA	6.43	858145.2	0.042	0.565

Total Ion Chromatogram

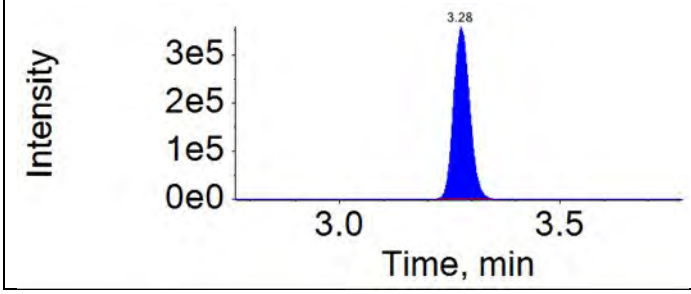


APPROVED
By MCD at 5:00 pm, 11/28/18

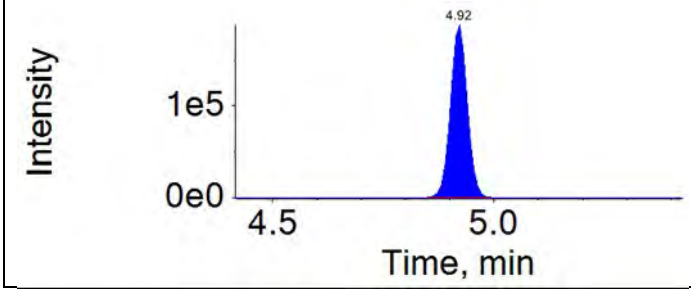
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

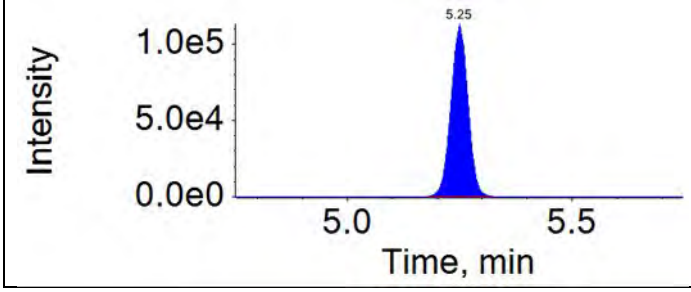
Injection Standard: 13C3-PFBA
216.0 / 172.0



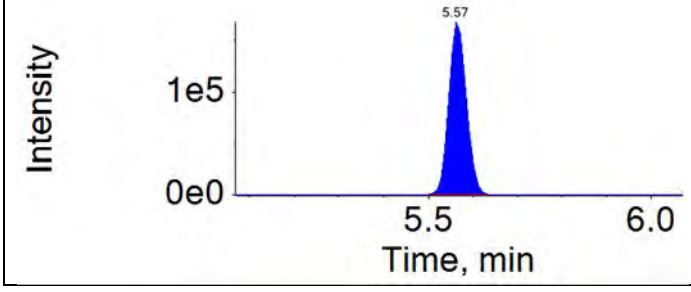
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

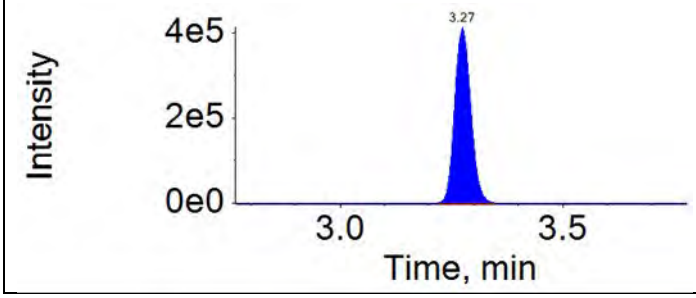


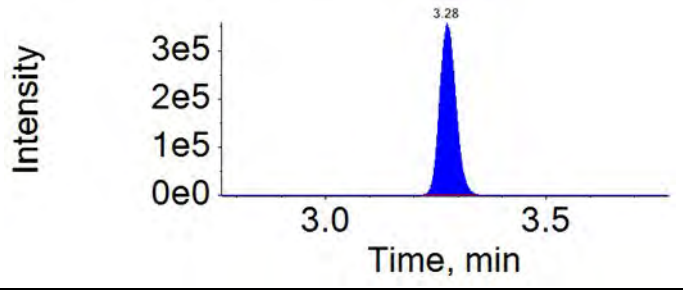
Injection Standard: 13C2-PFDA
515.0 / 470.0



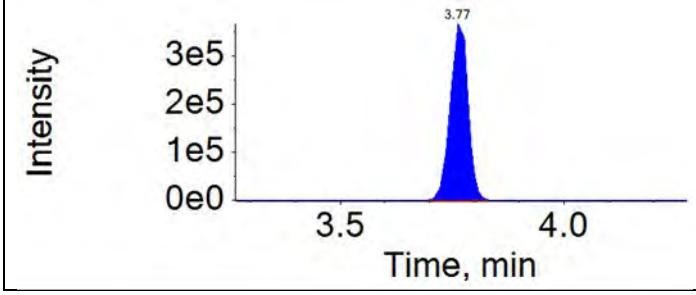
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

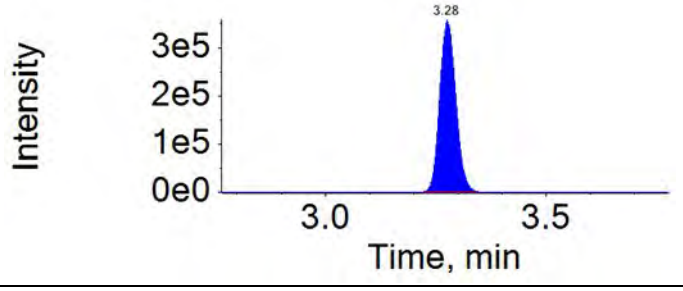
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



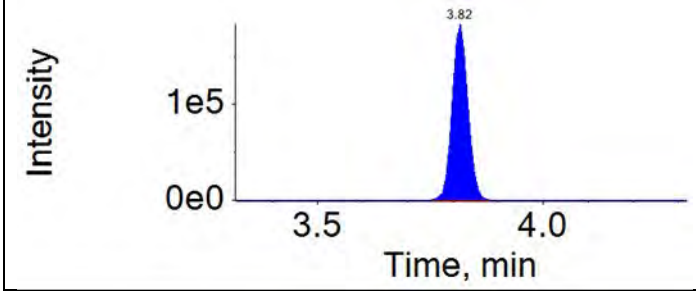


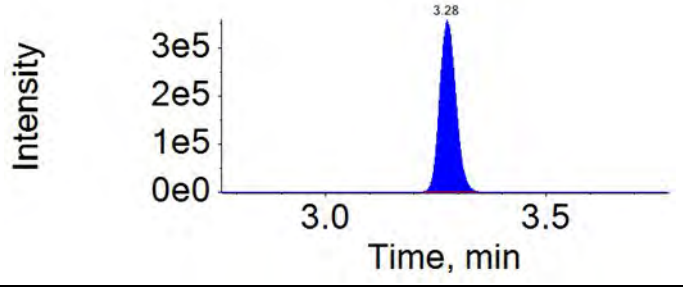
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



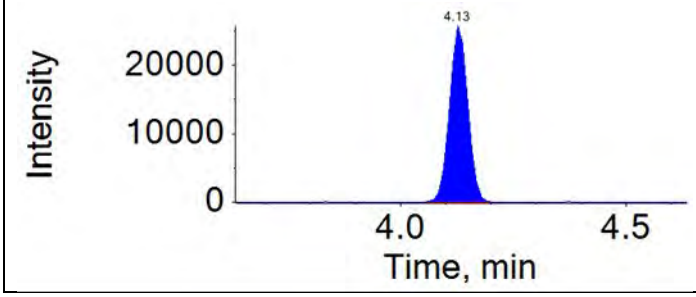


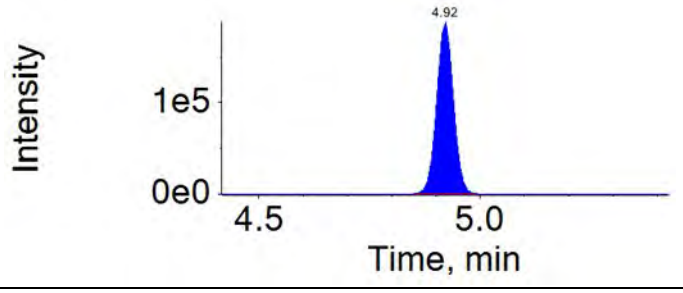
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



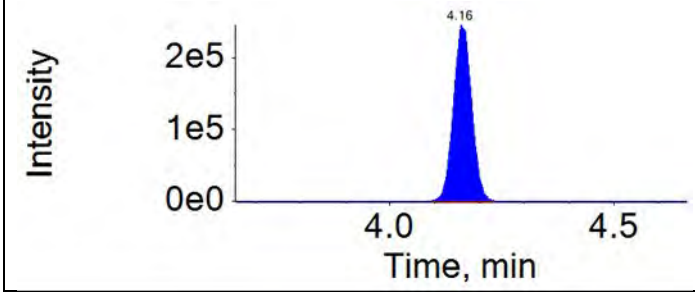


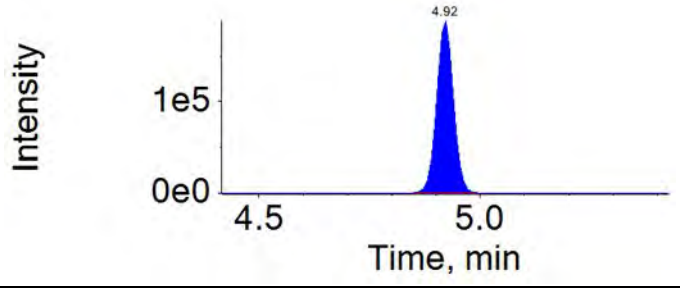
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

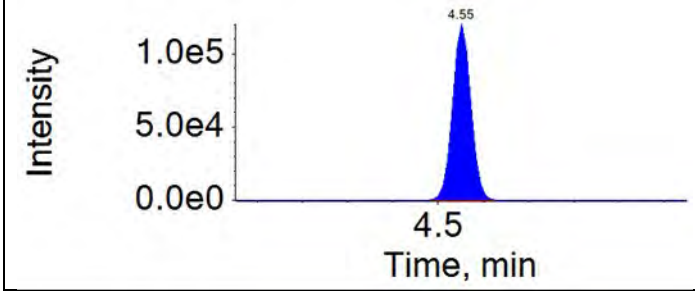
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

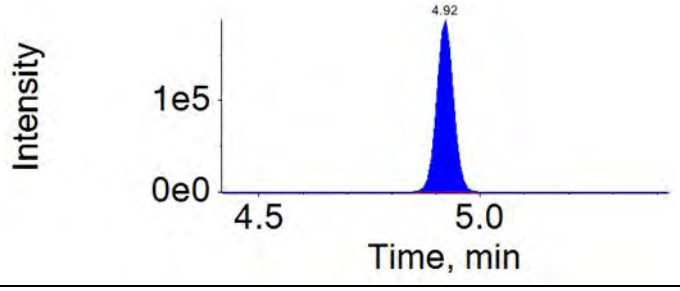
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



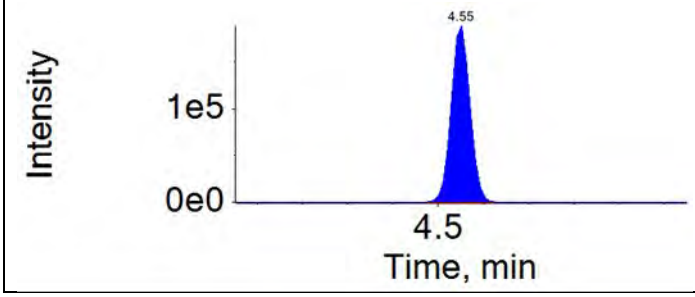


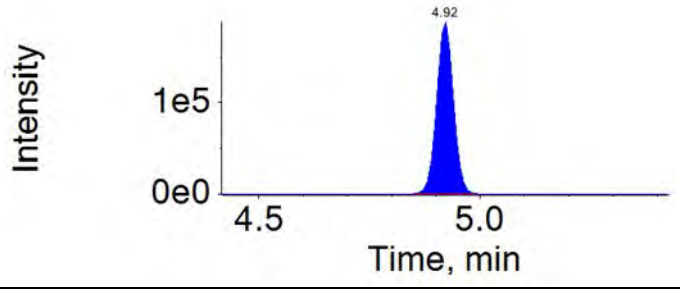
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



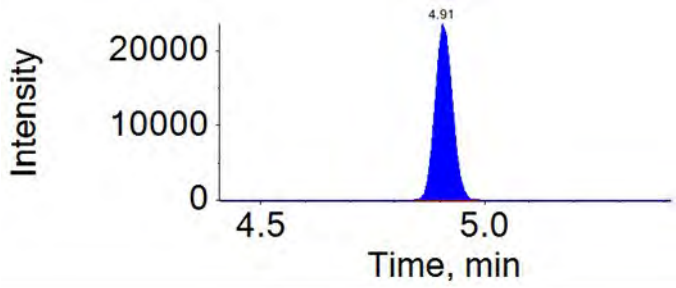


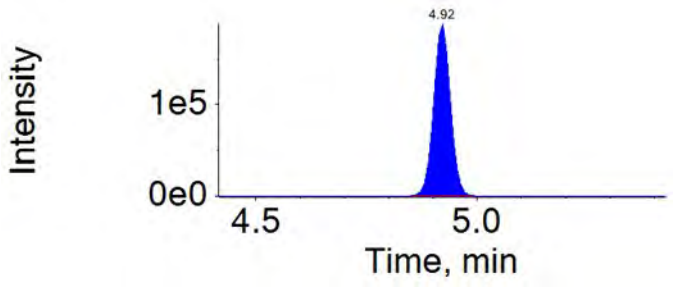
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



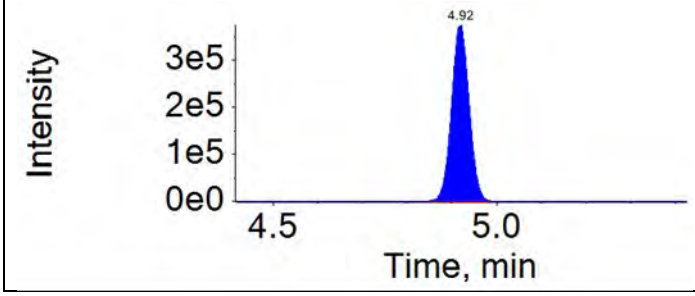


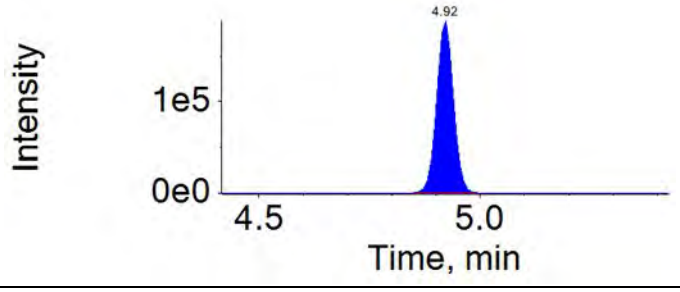
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

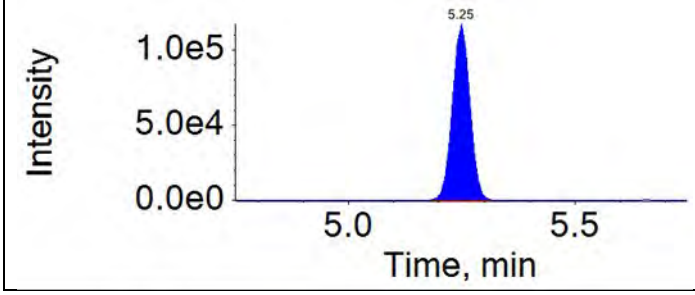
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

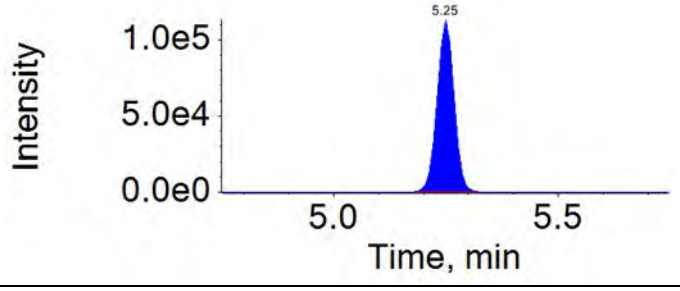
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



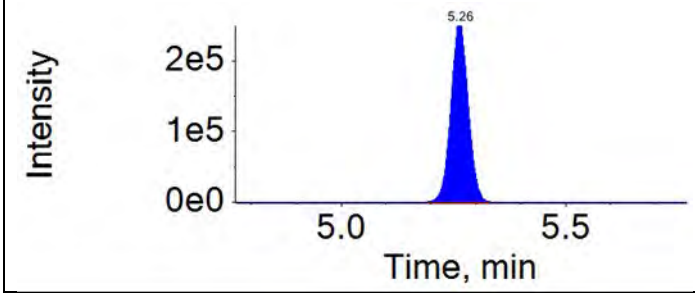


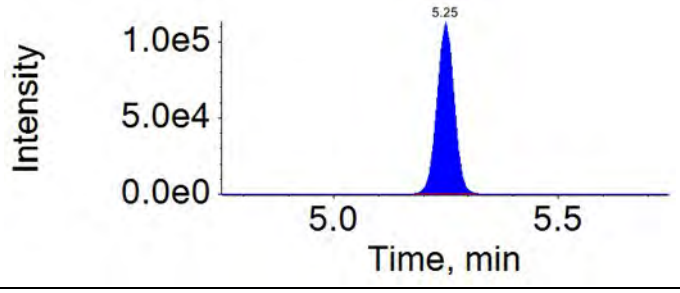
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



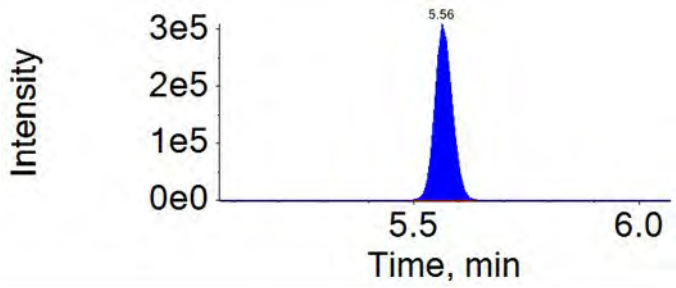


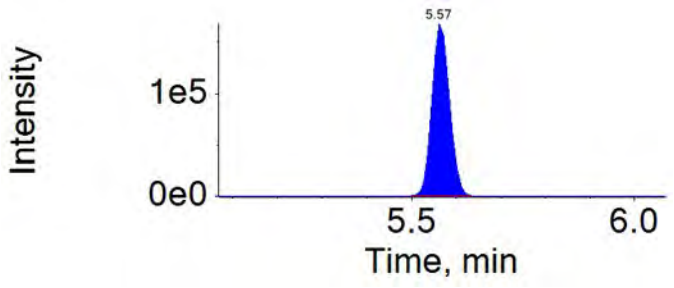
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0



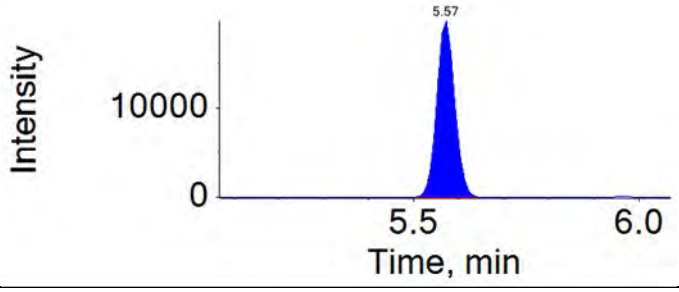
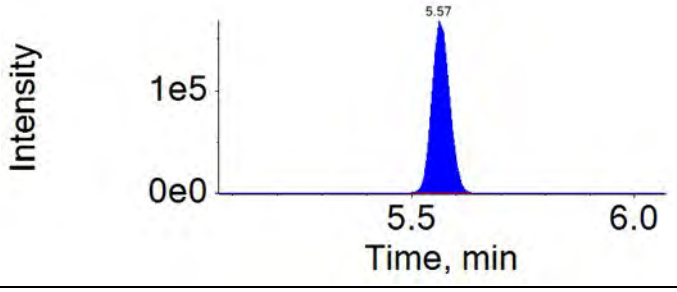


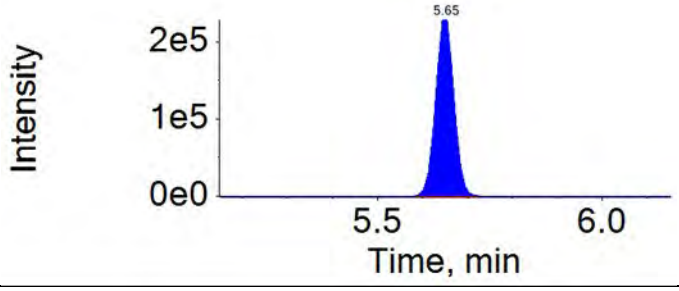
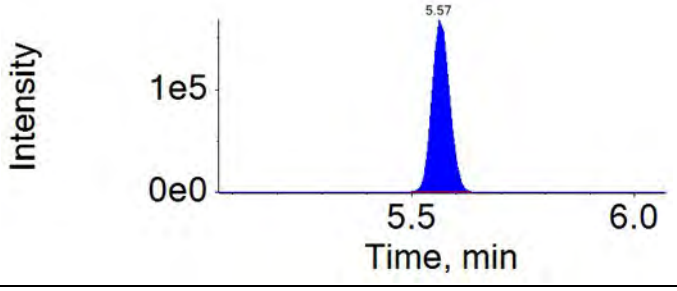
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

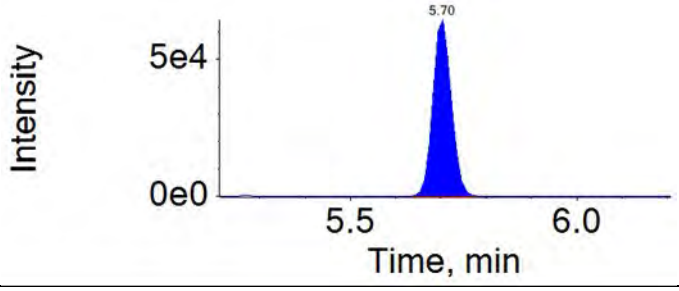
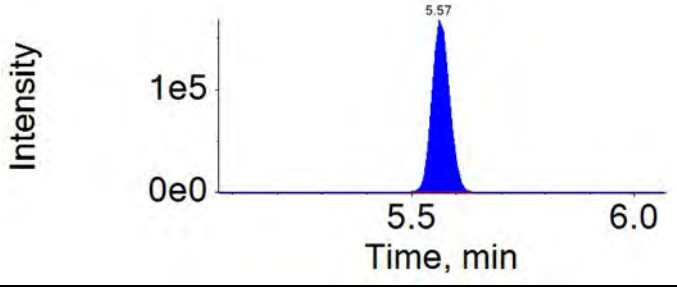


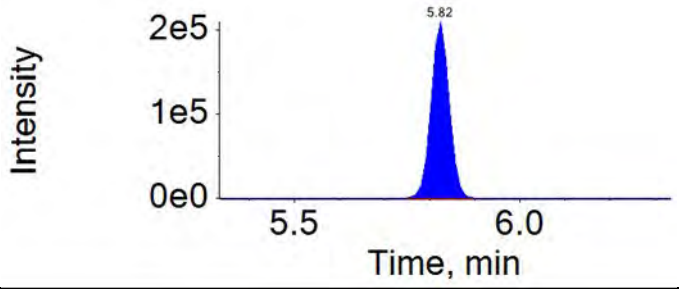
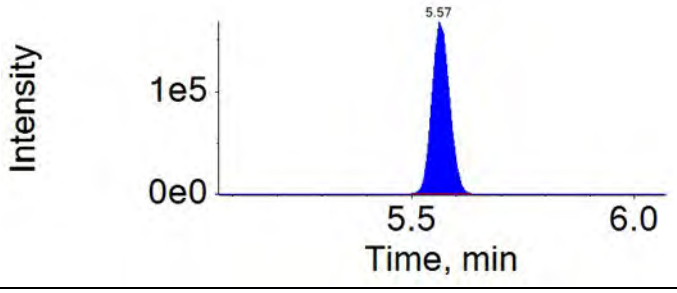


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

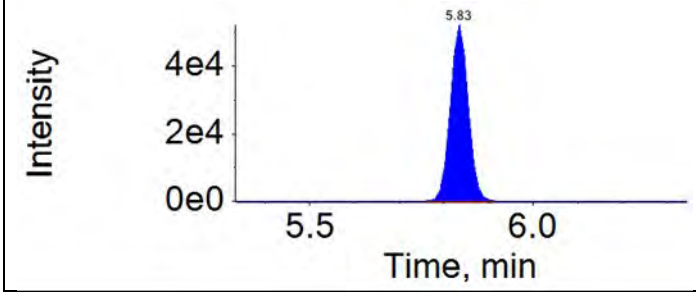
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

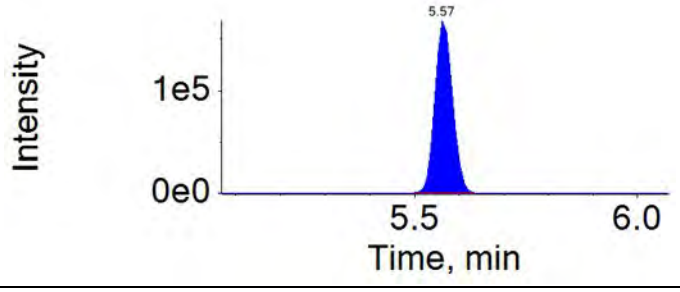
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

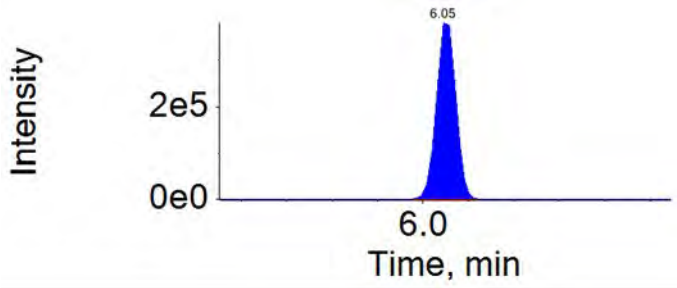
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

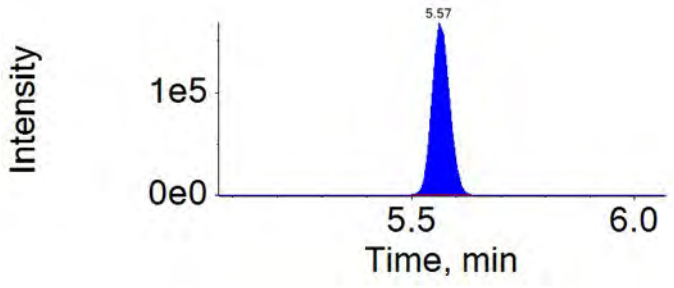
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



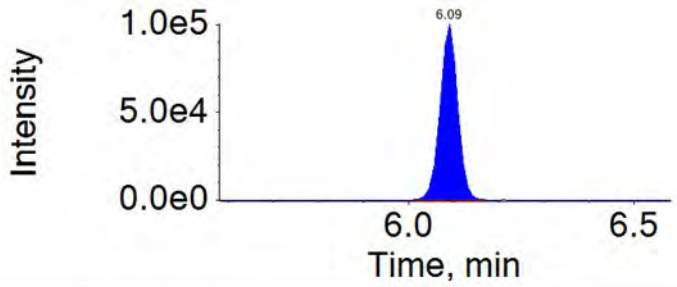


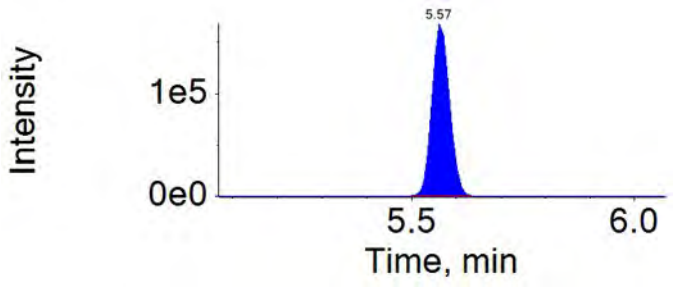
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



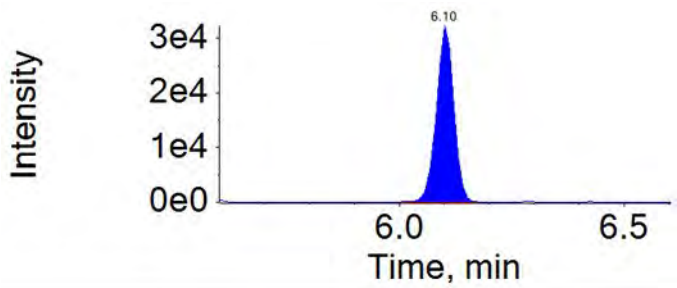


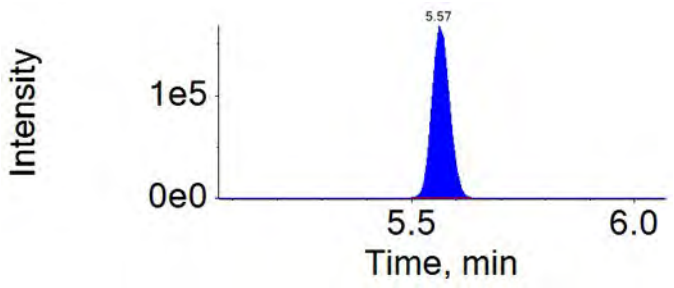
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



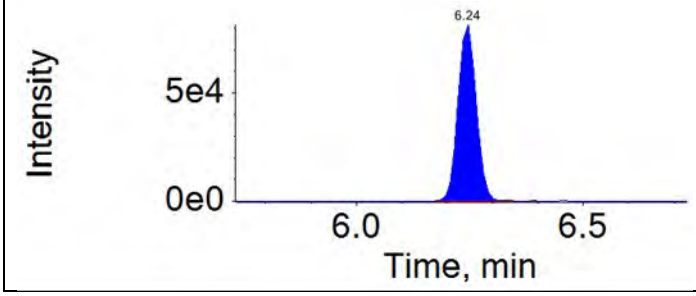


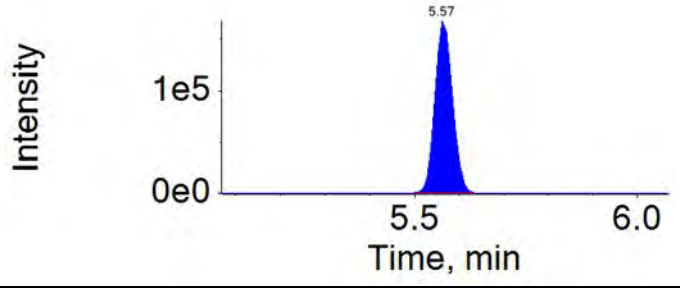
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

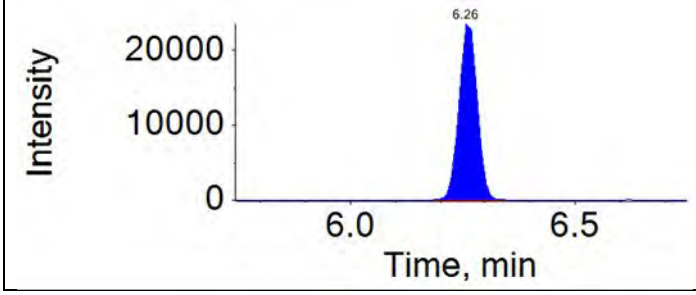
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

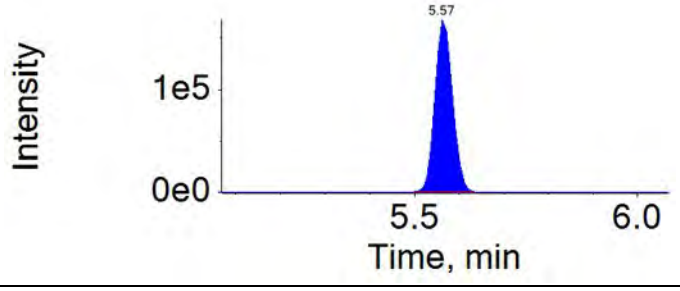
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



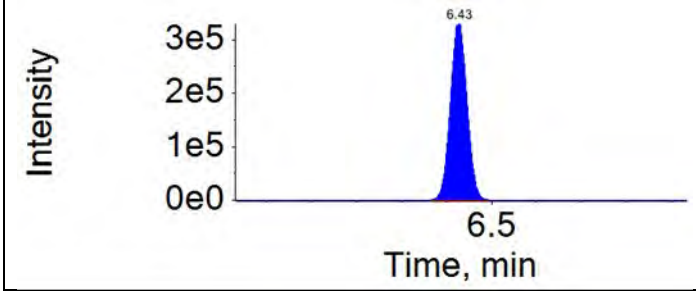


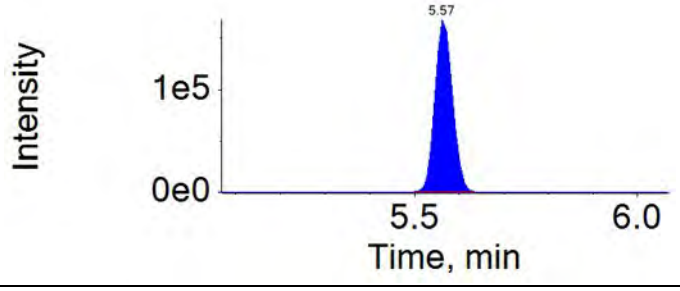
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



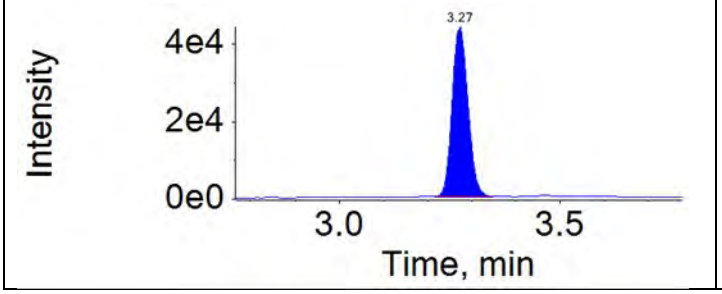


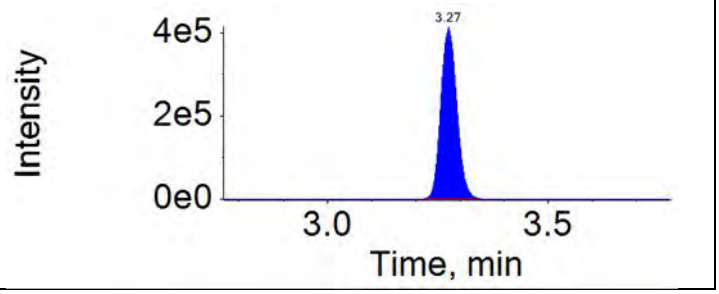
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

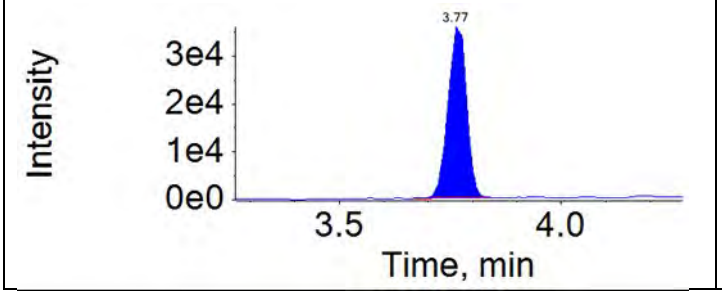
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

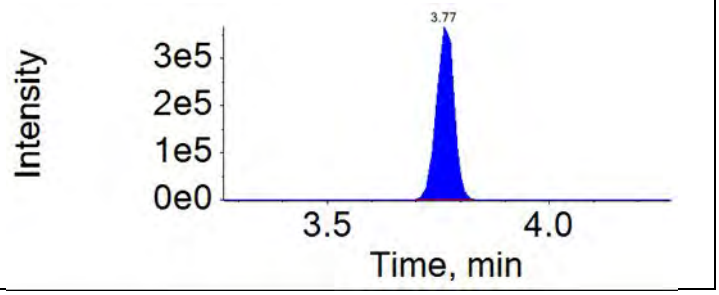
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



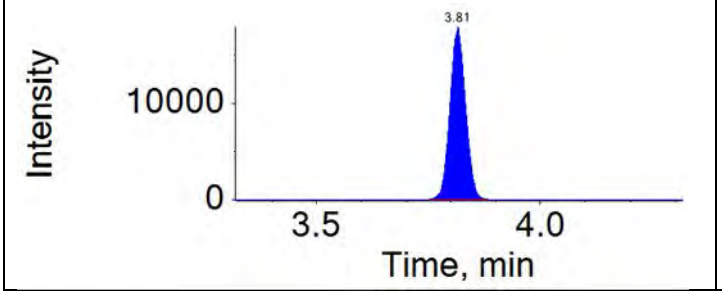


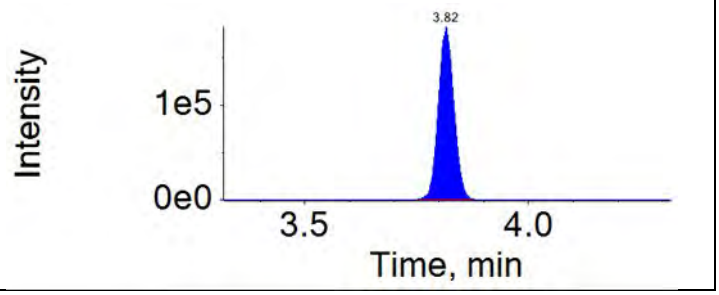
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



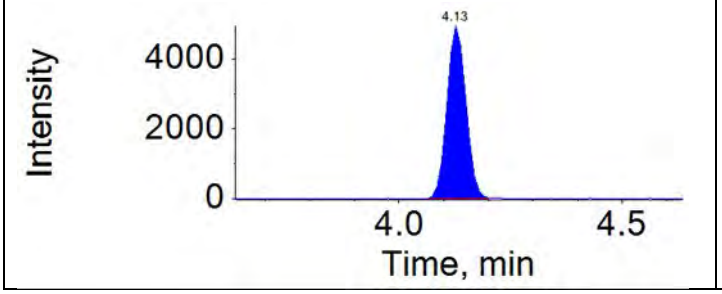


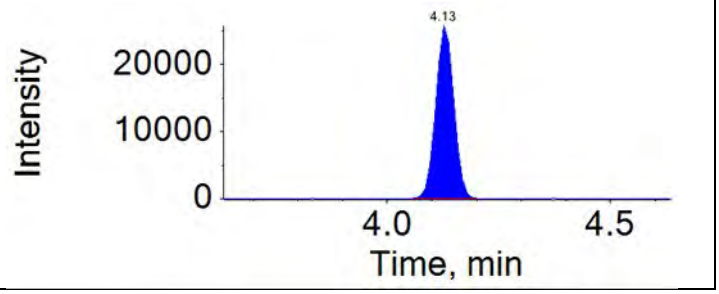
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



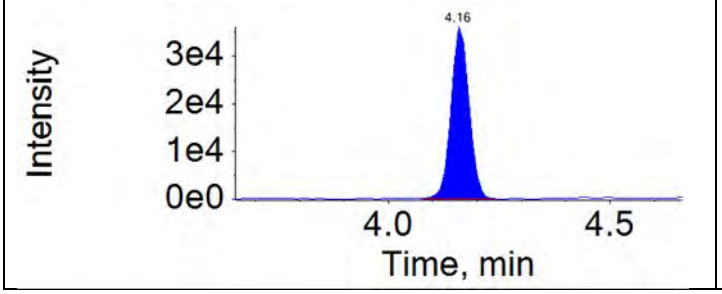


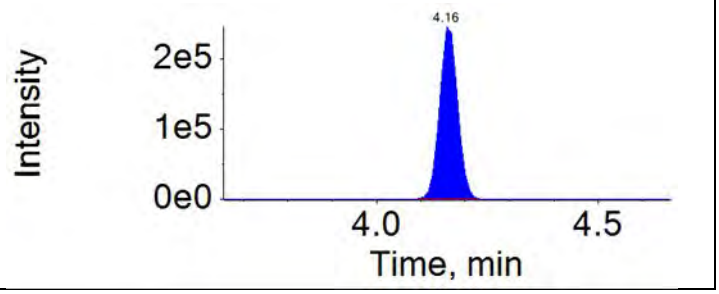
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

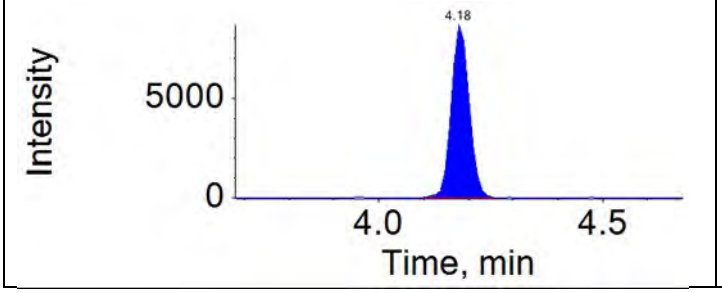
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

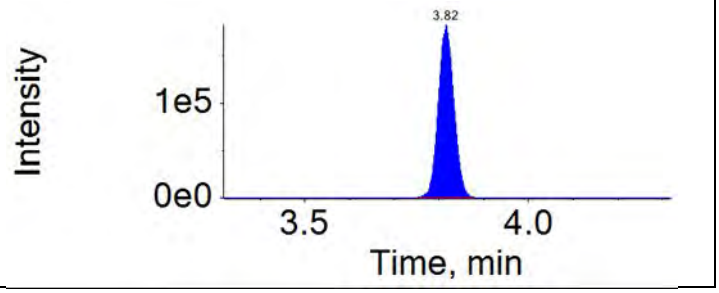
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



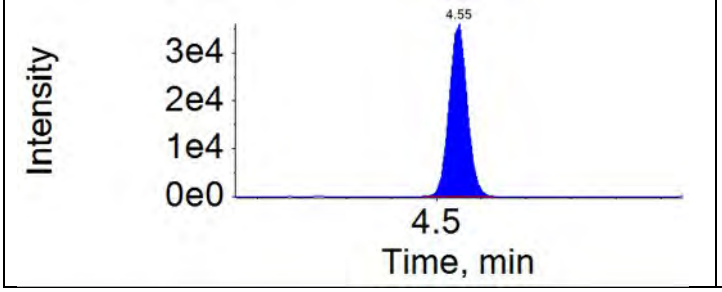


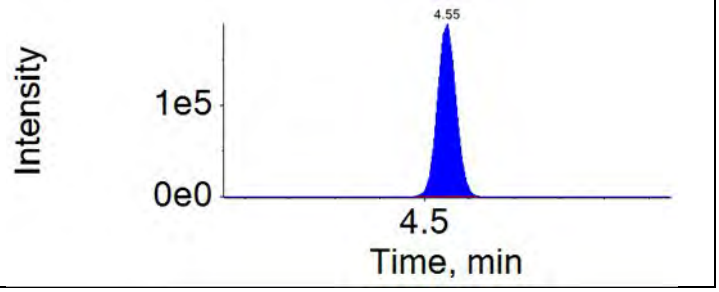
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



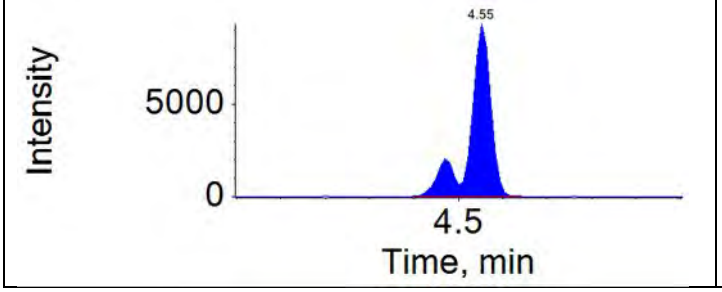


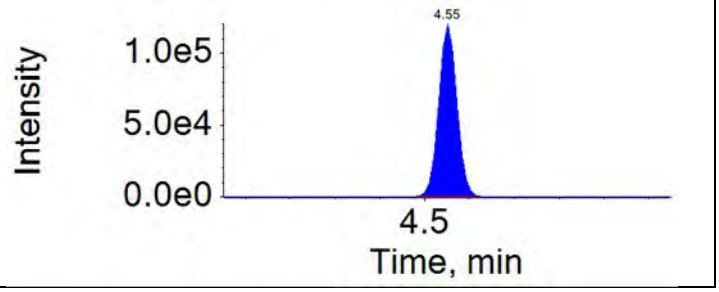
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



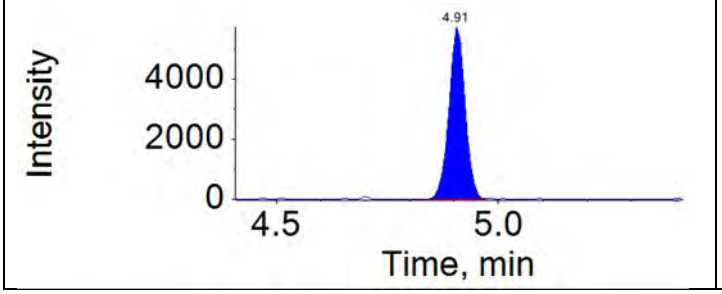


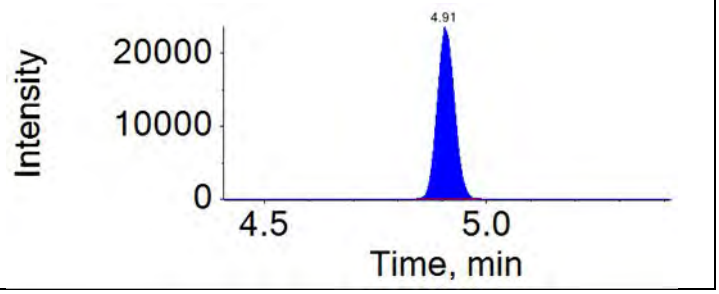
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

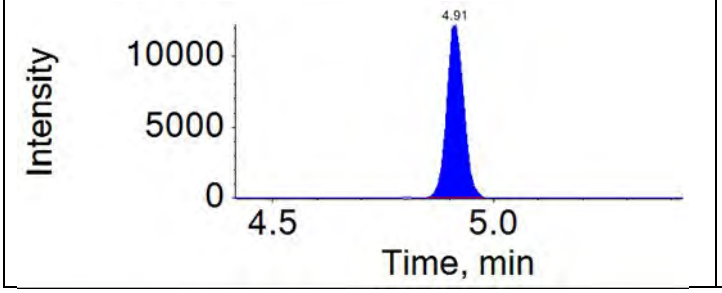
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

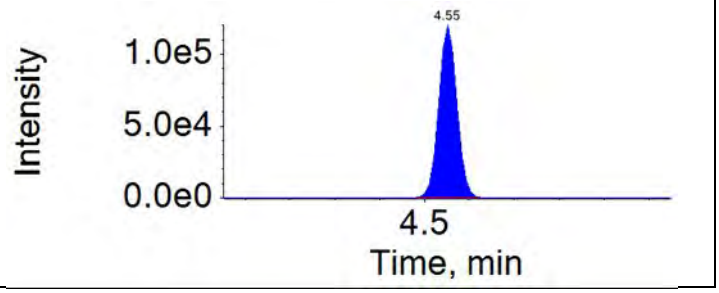
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



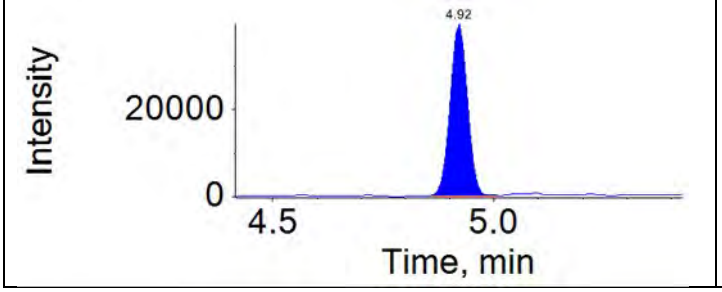


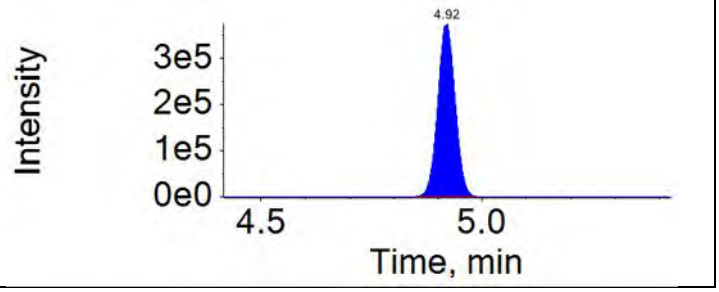
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



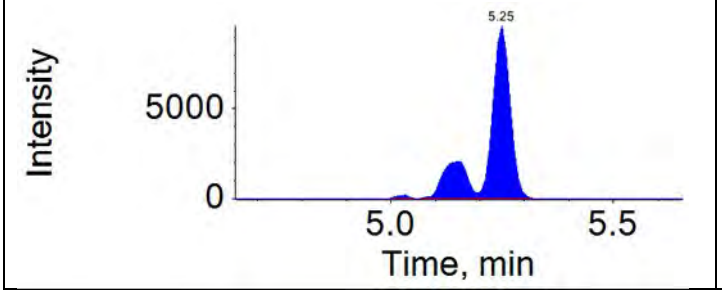


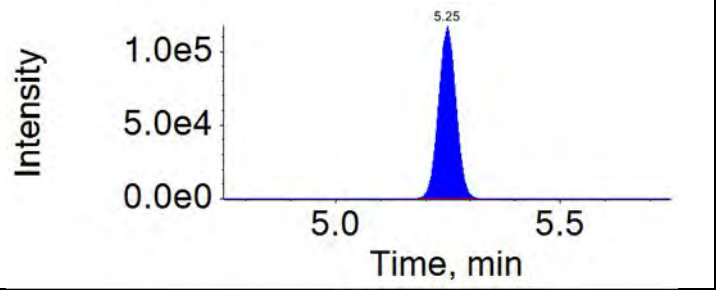
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



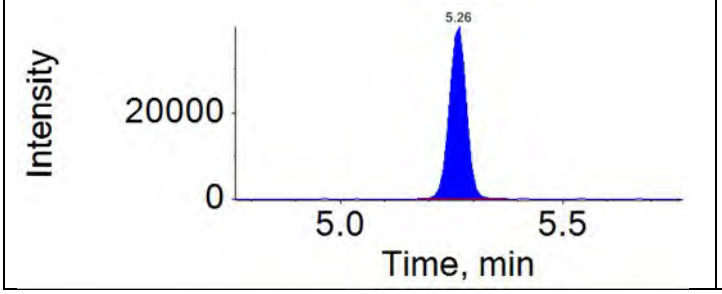


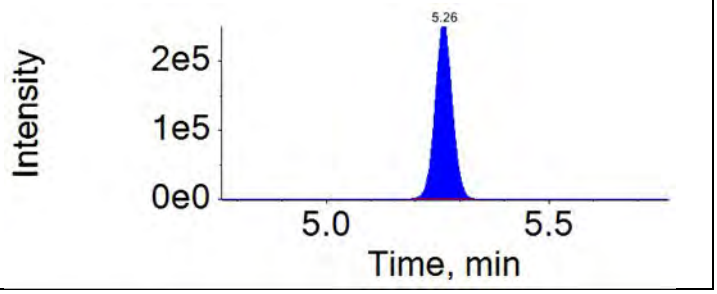
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

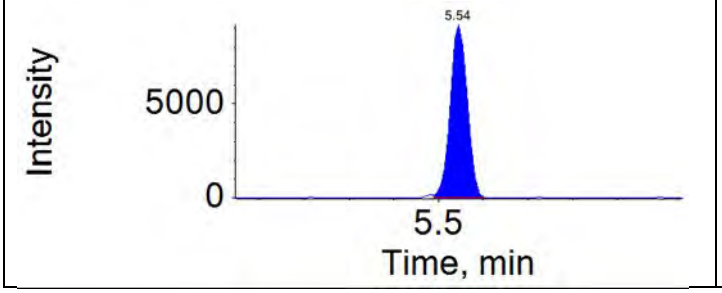
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

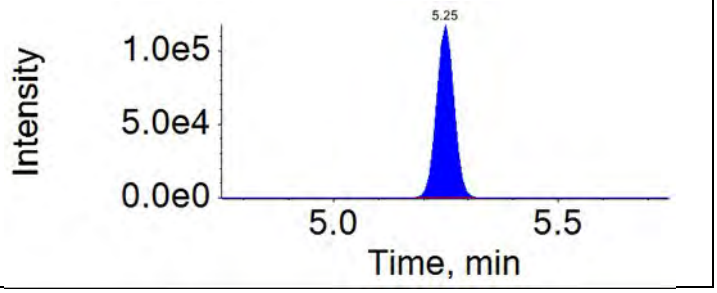
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



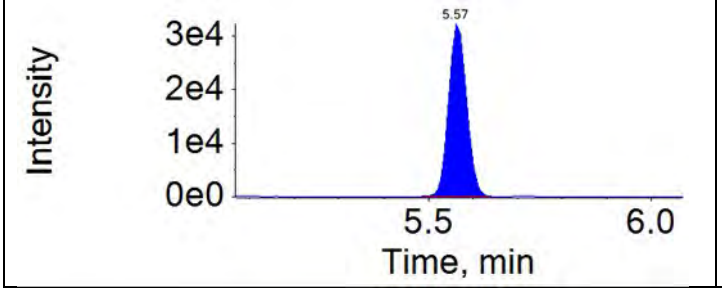


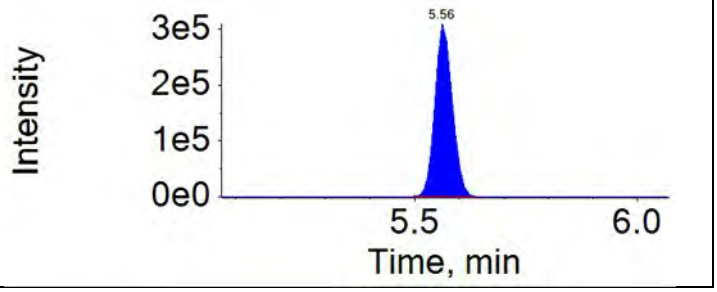
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



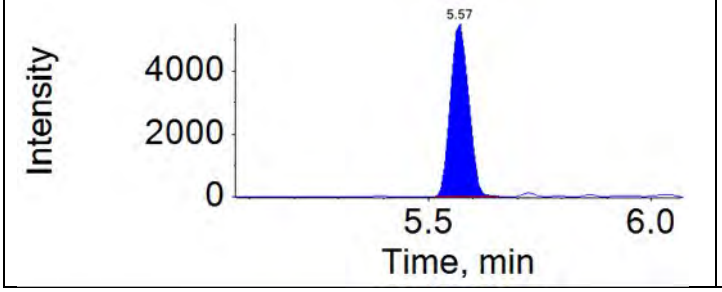


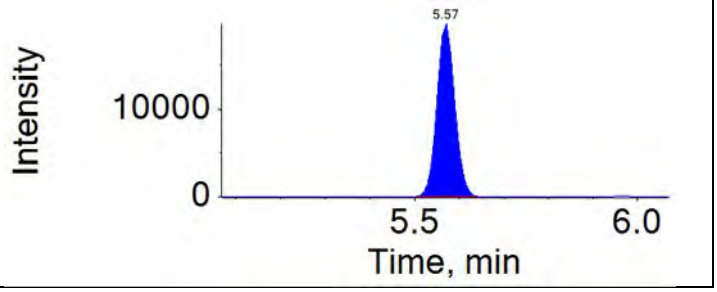
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



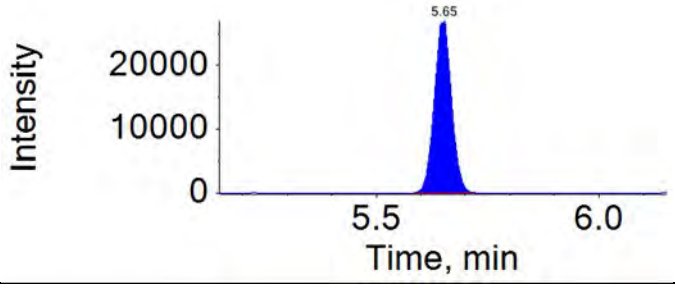


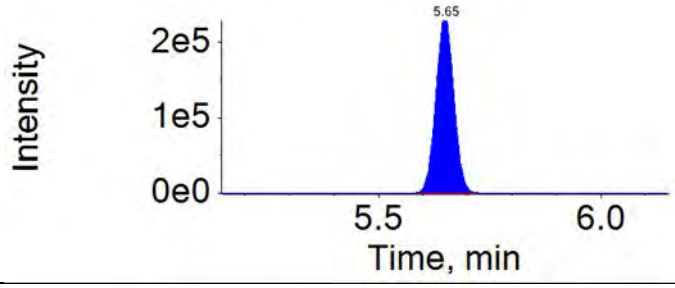
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

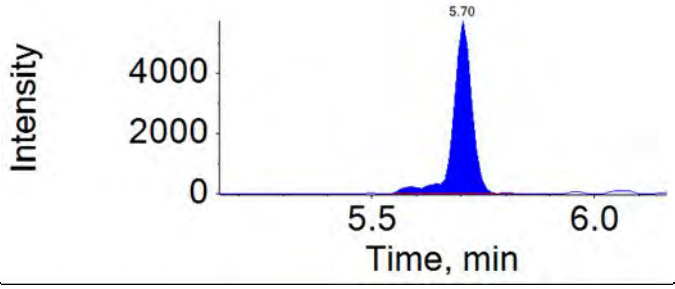
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

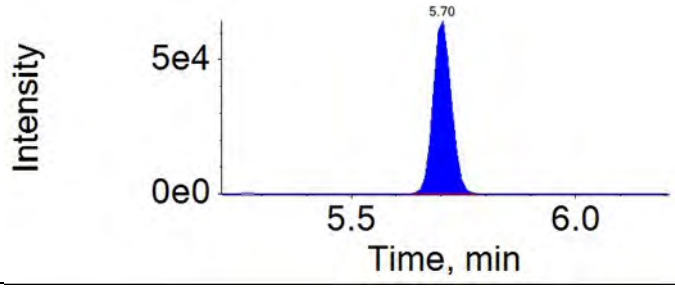
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



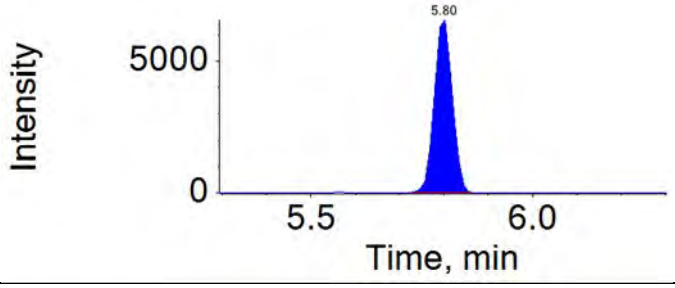


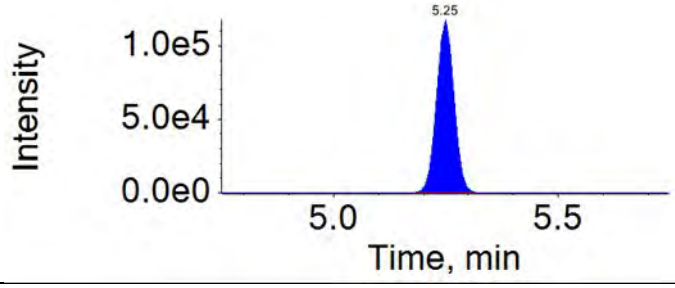
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



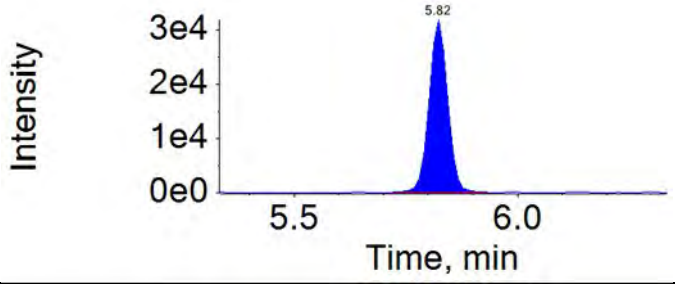


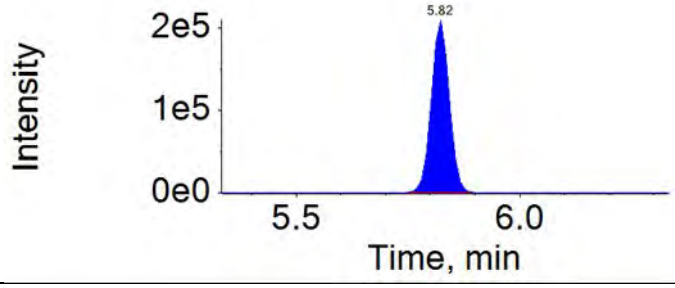
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

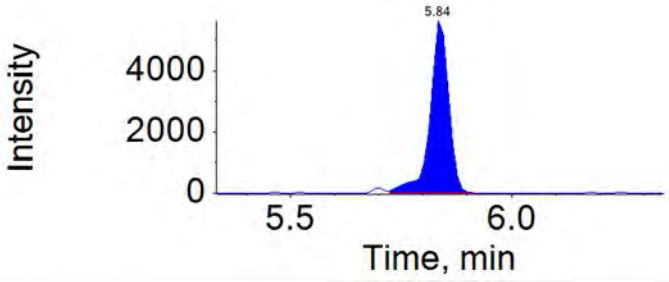
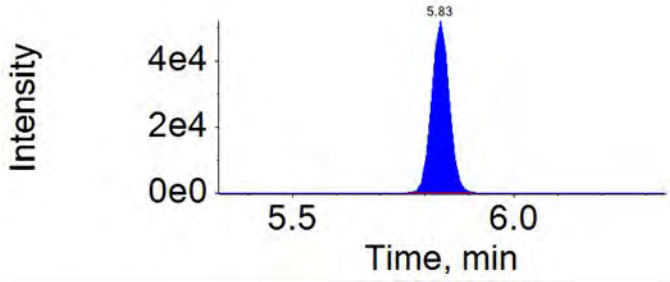


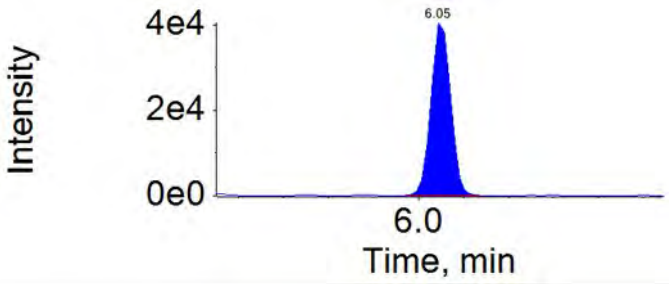
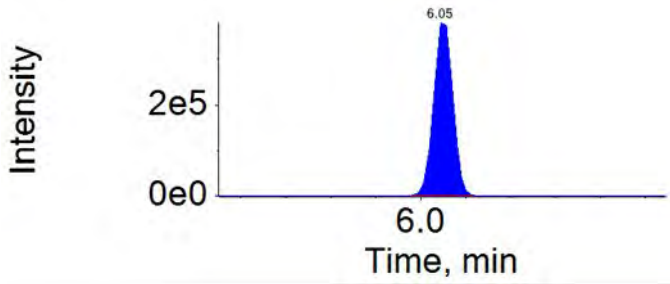


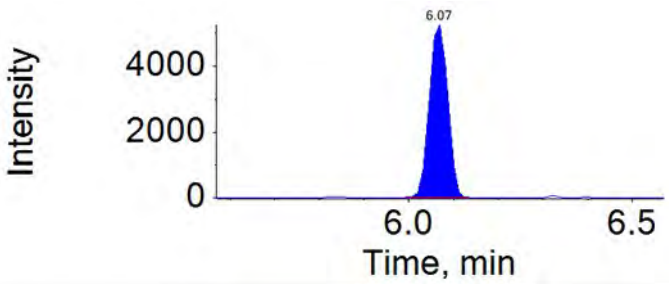
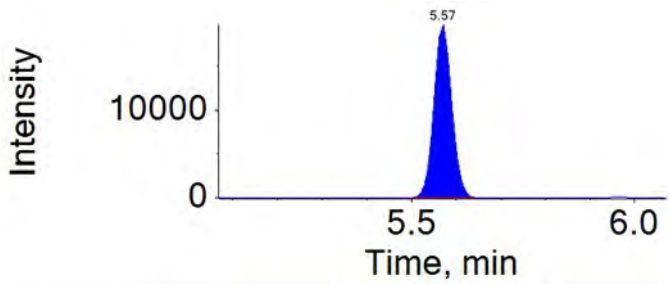
APPROVED
By MCD at 5:00 pm, 11/28/18

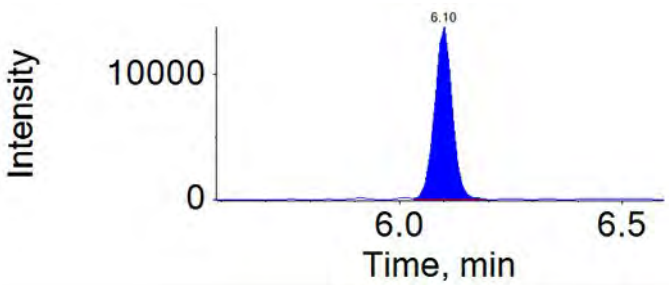
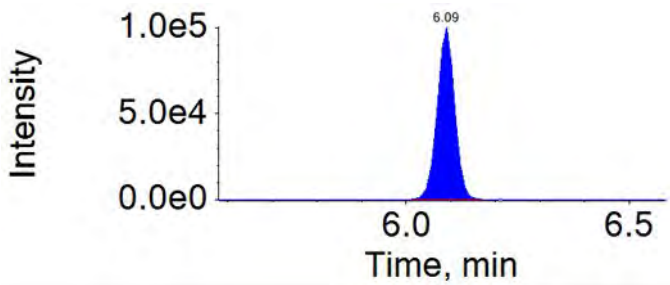
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

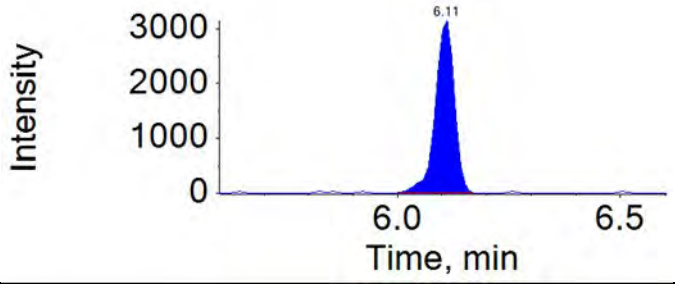
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

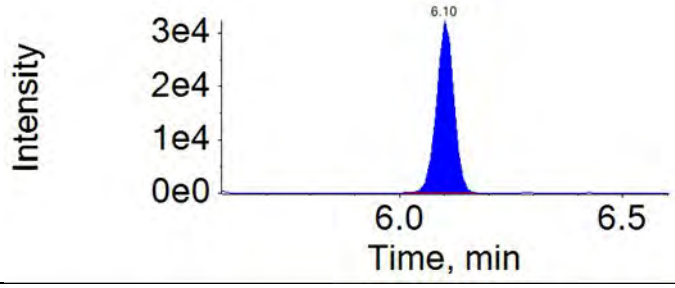
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

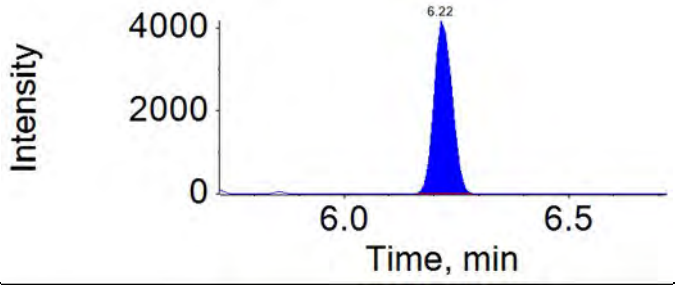
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

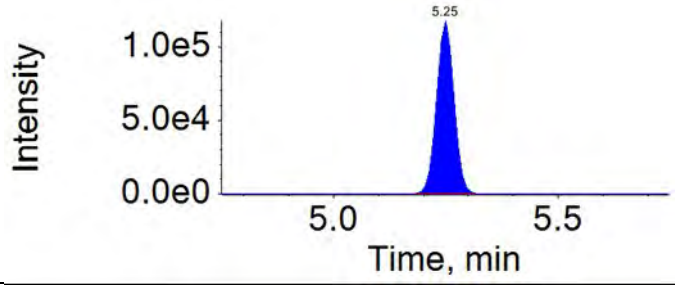
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



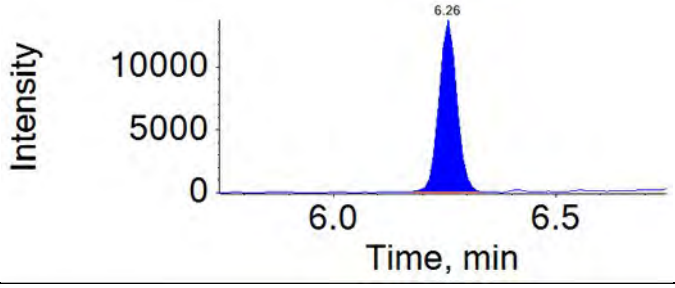


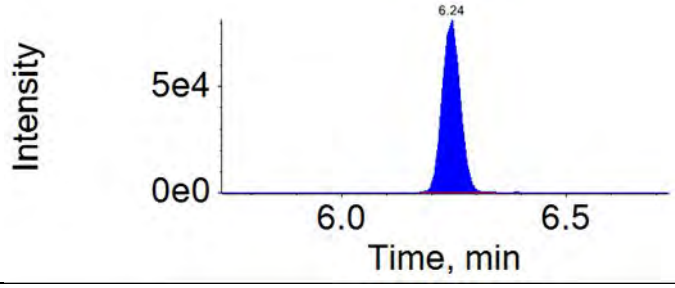
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



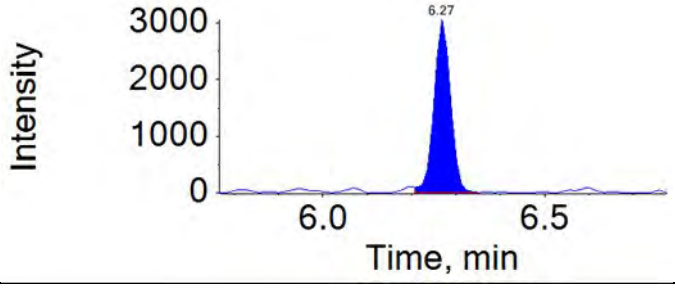


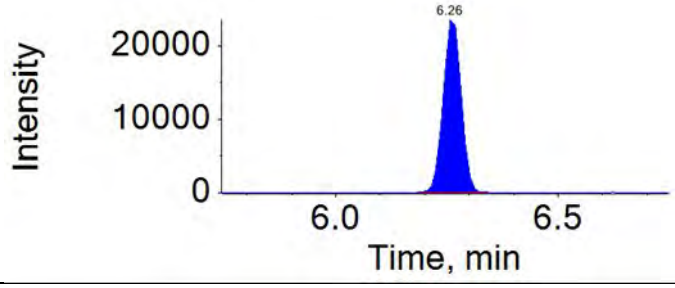
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



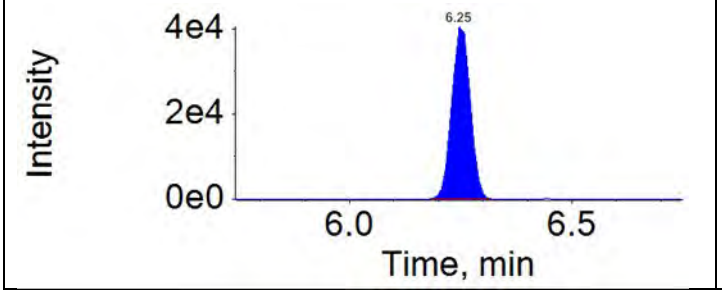


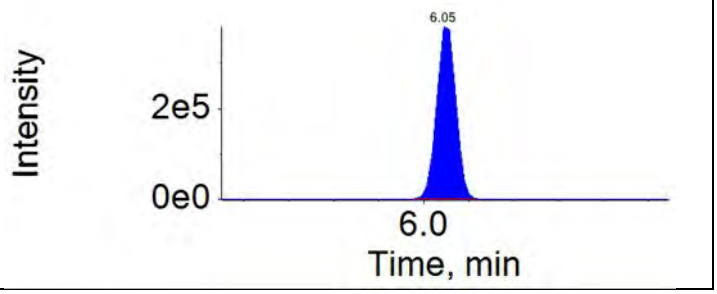
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

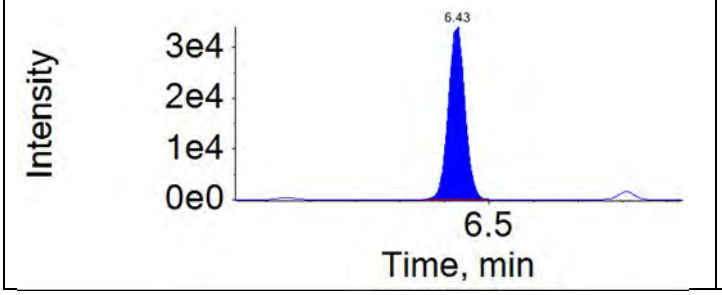
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

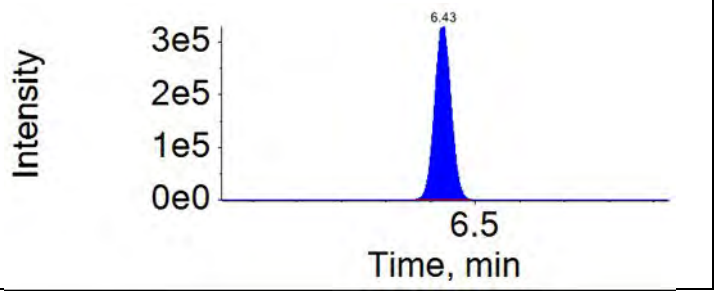
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



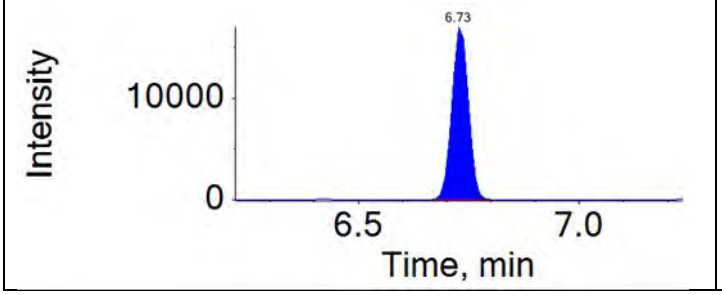


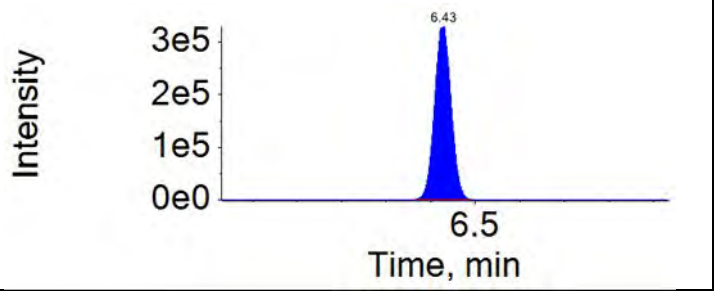
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



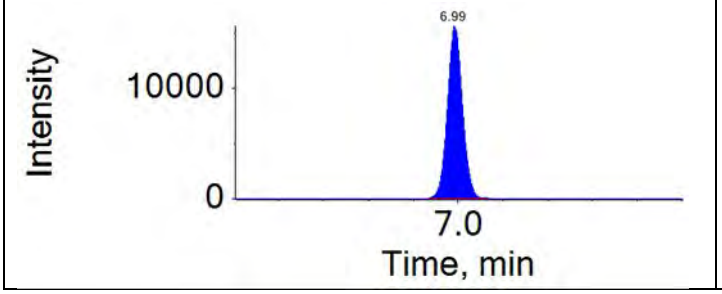


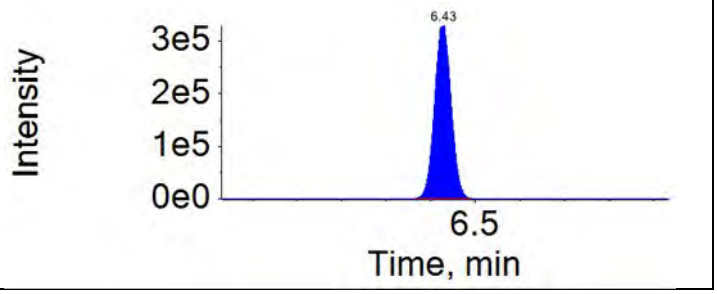
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



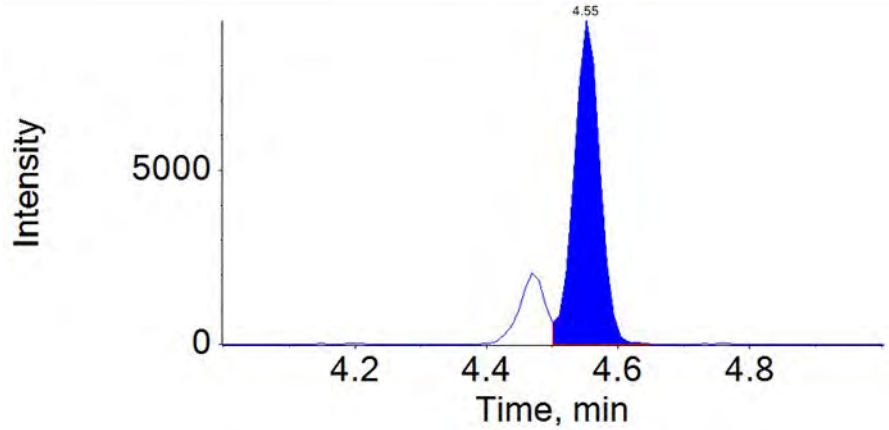


APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

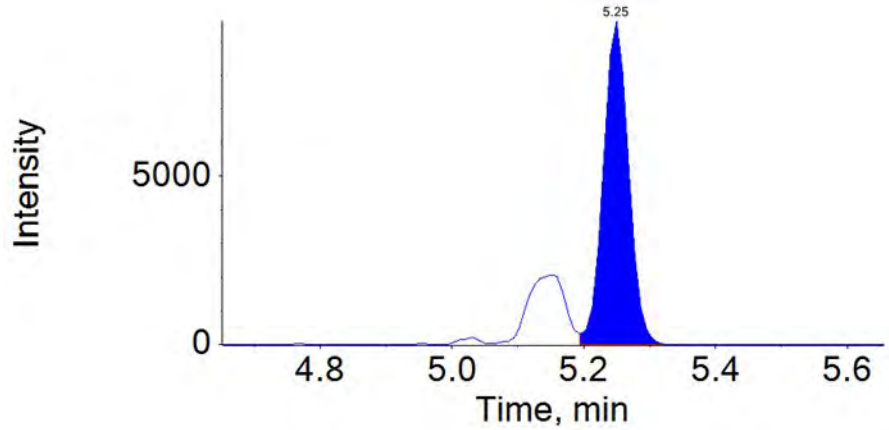
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
25567.97
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



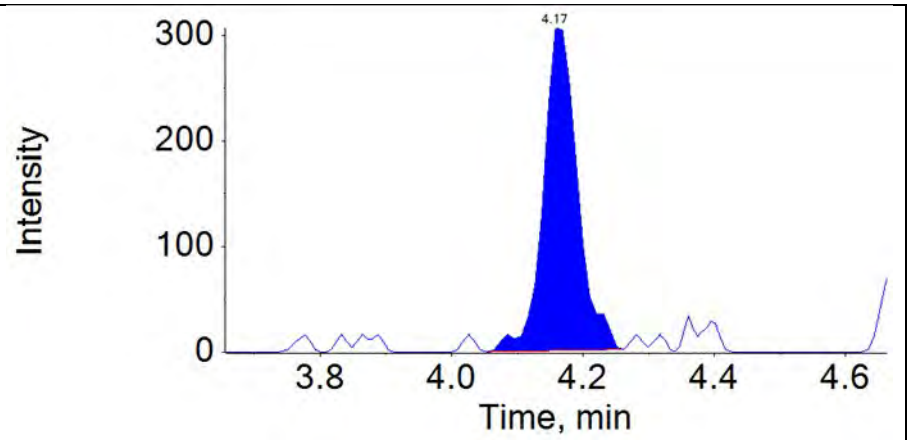
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
25590.10
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
4.17
Peak Area:
1118.24
Mass Range:
313.0 / 119.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



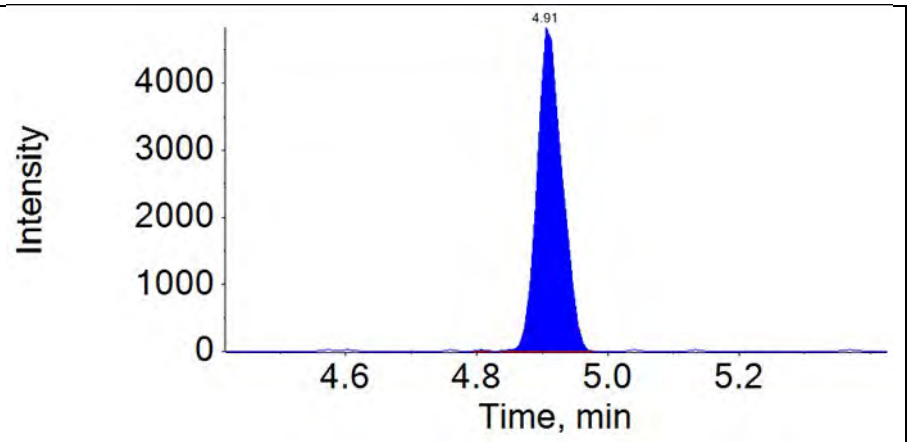
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

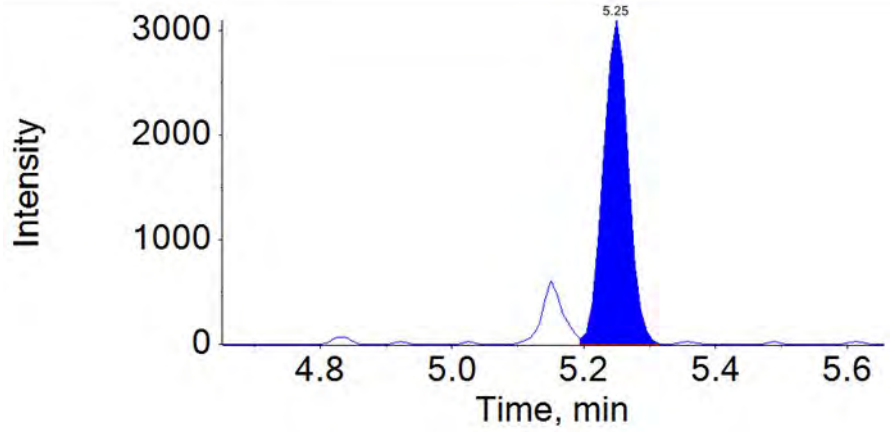
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpS_2
RT (min.):
4.91
Peak Area:
12887.35
Mass Range:
449.0 / 99.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



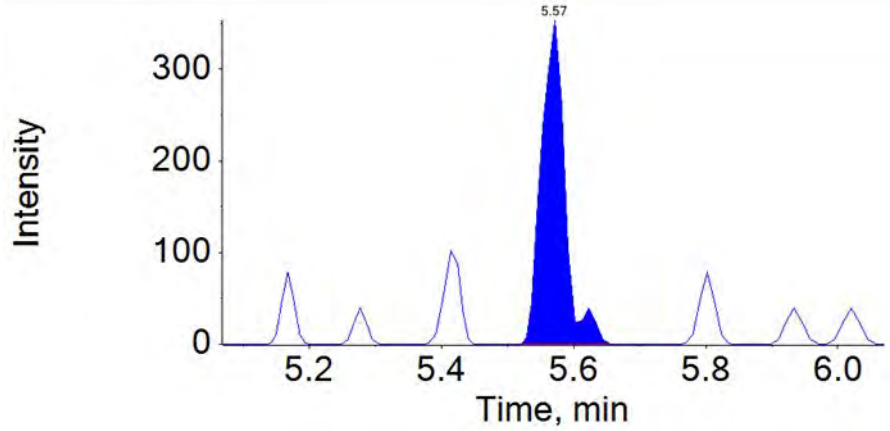
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
8192.52
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
5.57
Peak Area:
886.81
Mass Range:
513.0 / 169.0
File Name:
18NOV28DCAL-07.wiff
Sample Name:
CAL2



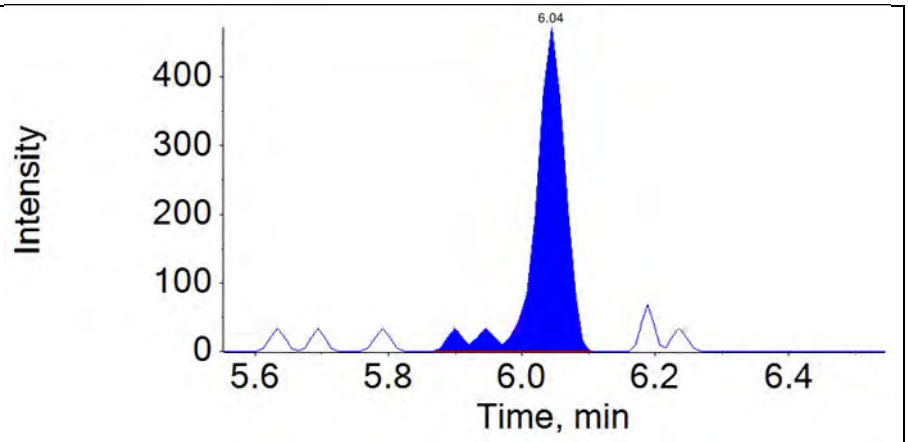
Integration Comment: incorrect integration

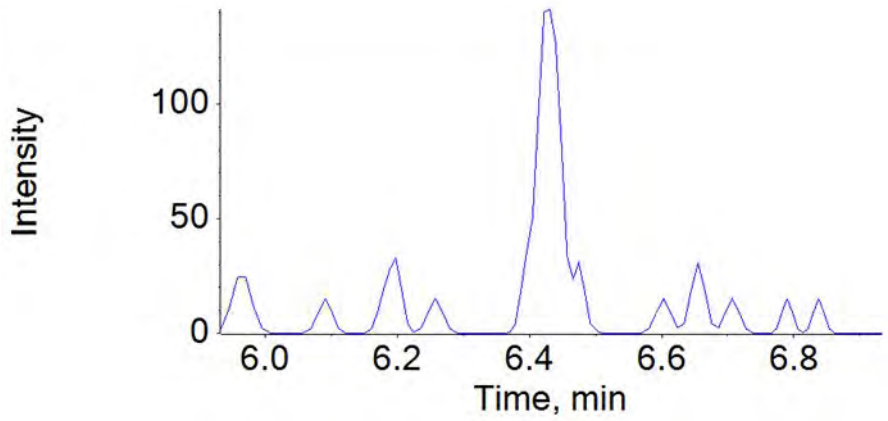
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFDoDA_2 **RT (min.):** 6.04 **Peak Area:** 1485.68 **Mass Range:** 613.0 / 169.0 **File Name:** 18NOV28DCAL-07.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

Component Name: PFTeDA_2 **RT (min.):** N/A **Peak Area:** N/A **Mass Range:** 713.0 / 169.0 **File Name:** 18NOV28DCAL-07.wiff **Sample Name:** CAL2	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Ion Ratio Report

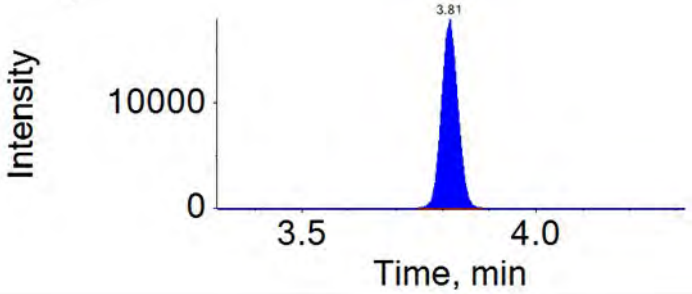
Sample Name: CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-07.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	43237.36	A	0.3655	0.3673			
PFBS_2	3.81	1.00	15879.57	A	0.3655	0.3673	0	50	
4:2-FTS	4.13	1.00	14524.83	A	0.6383	0.6894			
4:2-FTS_2	4.13	1.00	10014.03	A	0.6383	0.6894	8	50	
PFHxA	4.16	1.00	101713.19	A	0.0103	0.0108			
PFHxA_2	4.17	1.00	1097.96	M	0.0103	0.0108	4	50	
PFPeS	4.18	1.10	24007.25	A	0.4976	0.4701			
PFPeS_2	4.18	1.10	11284.85	A	0.4976	0.4701	-6	50	
PFHpA	4.55	1.00	100593.81	A	0.0557	0.0562			
PFHpA_2	4.55	1.00	5648.69	A	0.0557	0.0562	1	50	
PFHxS	4.55	1.00	31104.49	M	0.3693	0.4064			
PFHxS_2	4.55	1.00	12640.83	A	0.3693	0.4064	10	50	
6:2-FTS	4.91	1.00	14479.84	A	0.6625	0.5750			
6:2-FTS_2	4.91	1.00	8326.49	A	0.6625	0.5750	-13	50	
PFHpS	4.91	1.08	32553.66	A	0.3915	0.3950			
PFHpS_2	4.91	1.08	12858.96	M	0.3915	0.3950	1	50	
PFOA	4.92	1.00	106420.83	A	0.0573	0.0580			
PFOA_2	4.92	1.00	6175.90	A	0.0573	0.0580	1	50	
PFOS	5.25	1.00	34203.58	M	0.2960	0.2799			
PFOS_2	5.25	1.00	9573.24	M	0.2960	0.2799	-5	50	
PFNA	5.26	1.00	106720.90	A	0.0201	0.0208			
PFNA_2	5.26	1.00	2222.59	A	0.0201	0.0208	4	50	
PFNS	5.54	1.06	24149.87	A	0.4794	0.4687			
PFNS_2	5.55	1.06	11319.26	A	0.4794	0.4687	-2	50	
PFDA	5.57	1.00	90730.27	A	0.0075	0.0091			
PFDA_2	5.57	1.00	822.55	M	0.0075	0.0091	21	50	
8:2-FTS	5.57	1.00	15550.17	A	0.5380	0.4749			
8:2-FTS_2	5.57	1.00	7384.51	A	0.5380	0.4749	-12	50	
NMeFOSAA	5.70	1.00	16533.06	A	0.2305	0.2819			
NMeFOSAA_2	5.70	1.00	4660.20	A	0.2305	0.2819	22	50	
PFDS	5.80	1.10	18654.75	A	0.5356	0.5747			
PFDS_2	5.80	1.10	10721.43	A	0.5356	0.5747	7	50	
PFUnDA	5.82	1.00	91490.40	A	0.0038	0.0043			
PFUnDA_2	5.83	1.00	389.41	A	0.0038	0.0043	12	50	
NEtFOSAA	5.84	1.00	16643.25	A	0.7356	0.5363			
NEtFOSAA_2	5.84	1.00	8925.35	A	0.7356	0.5363	-27	50	
PFDoDA	6.05	1.00	122586.00	A	0.0130	0.0112			
PFDoDA_2	6.04	1.00	1368.20	M	0.0130	0.0112	-14	50	
10:2-FTS	6.07	1.09	15157.77	A	0.6989	0.5470			
10:2-FTS_2	6.07	1.09	8291.25	A	0.6989	0.5470	-22	50	
PFTrDA	6.25	1.03	117562.28	A	0.0090	0.0079			
PFTrDA_2	6.25	1.03	932.63	A	0.0090	0.0079	-12	50	
PFTeDA	6.43	1.00	88360.25	A	0.0056	0.0048			
PFTeDA_2	6.43	1.00	423.54	M	0.0056	0.0048	-15	50	
PFHxDA	6.73	1.05	44164.63	A	0.0646	0.0656			
PFHxDA_2	6.73	1.05	2895.58	A	0.0646	0.0656	2	50	
PFODA	6.99	1.09	36421.52	A	0.0264	0.0257			
PFODA_2	6.99	1.09	935.28	A	0.0264	0.0257	-3	50	

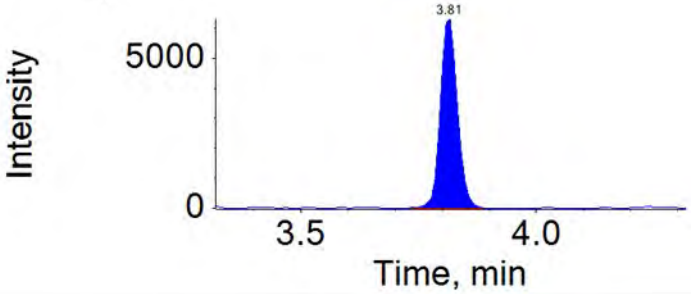
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

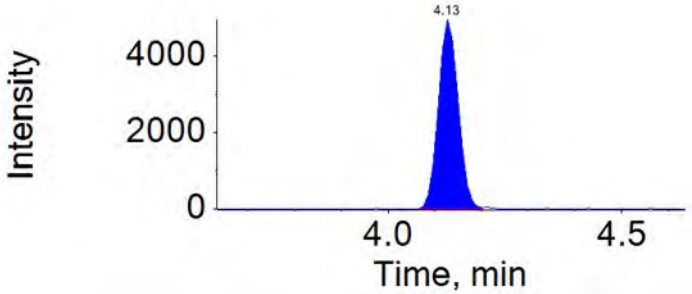
Component: PFBS
Primary Mass: 299.0 / 80.0



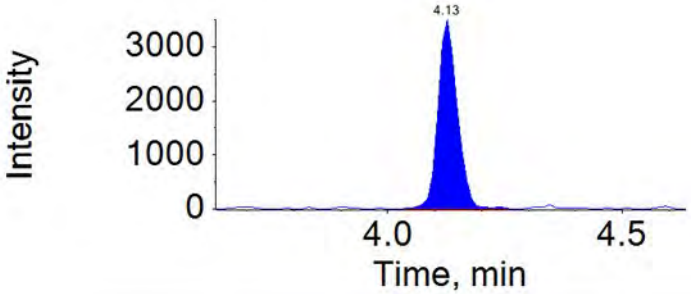
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



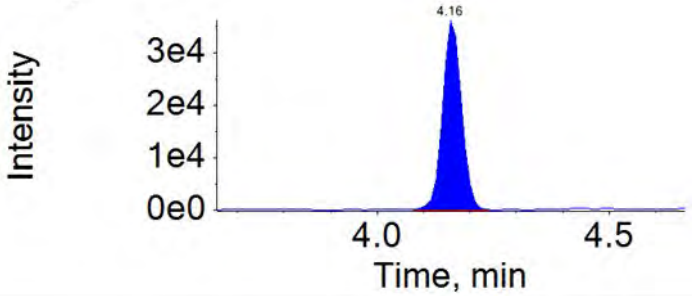
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



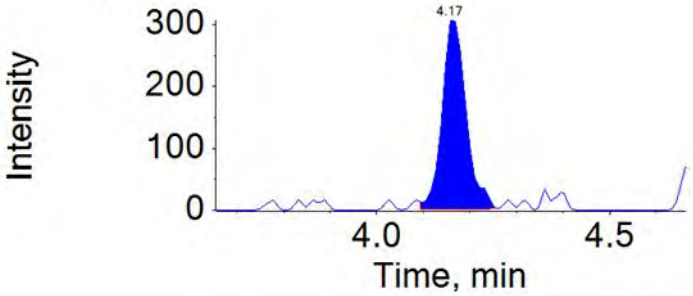
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



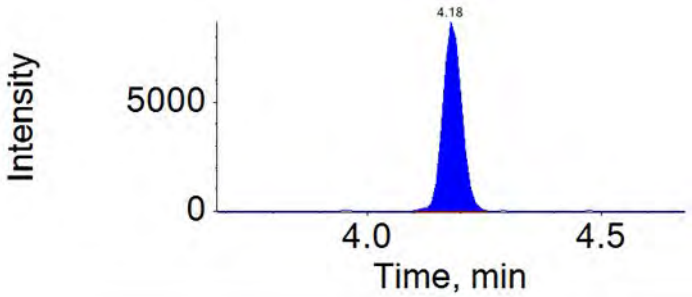
Component: PFHxA
Primary Mass: 313.0 / 269.0



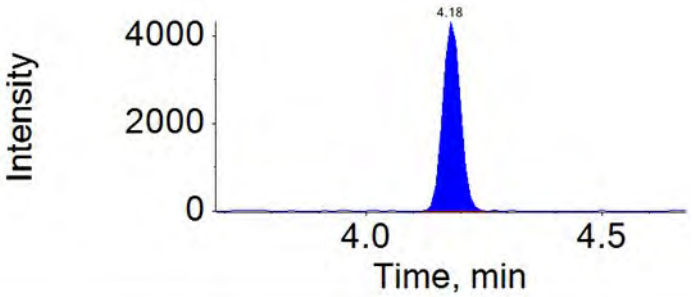
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



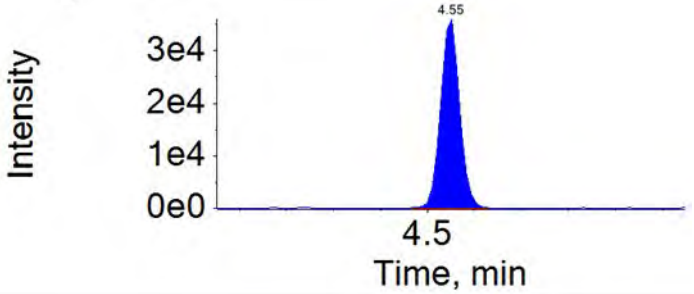
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



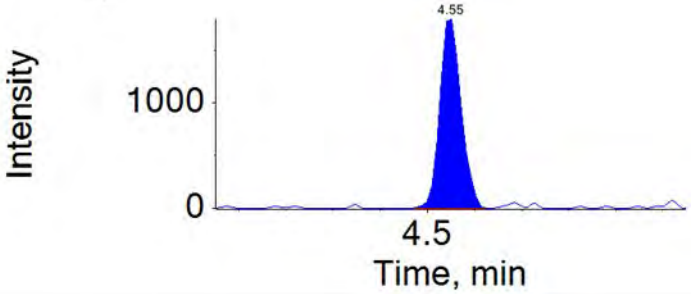
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

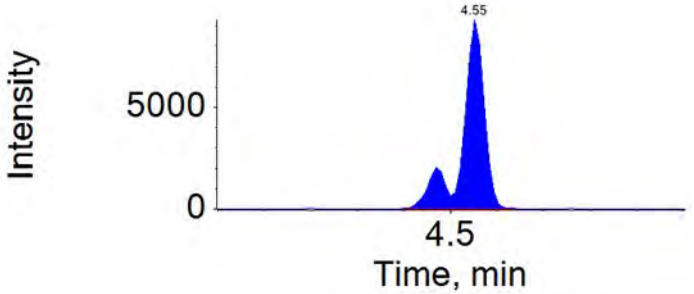
Component: PFHpA
Primary Mass: 363.0 / 319.0



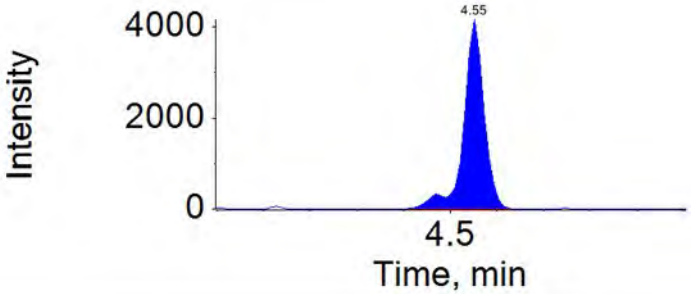
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



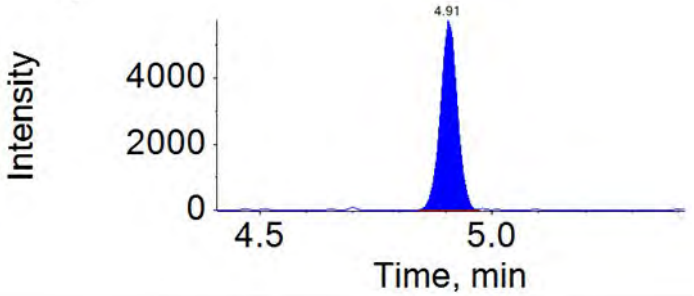
Component: PFHxS
Primary Mass: 399.0 / 80.0



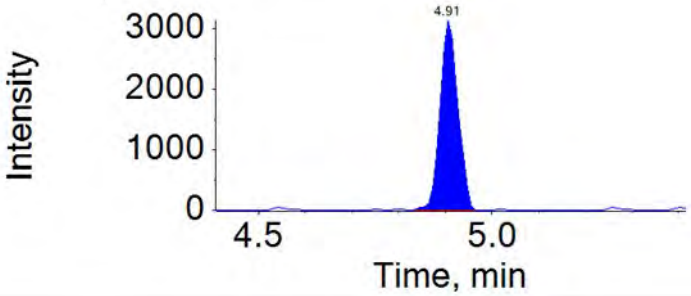
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



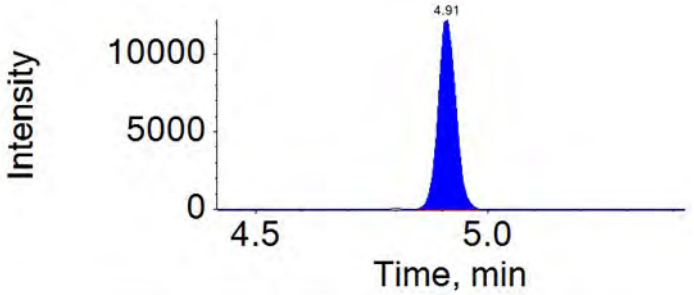
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



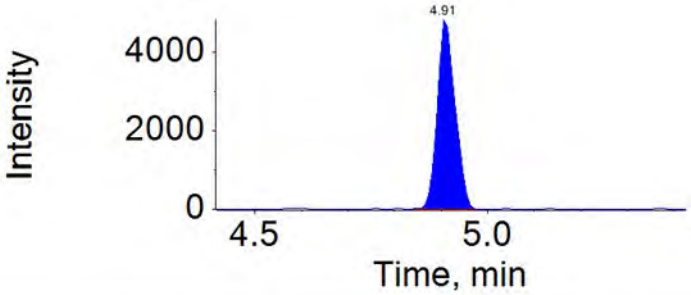
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



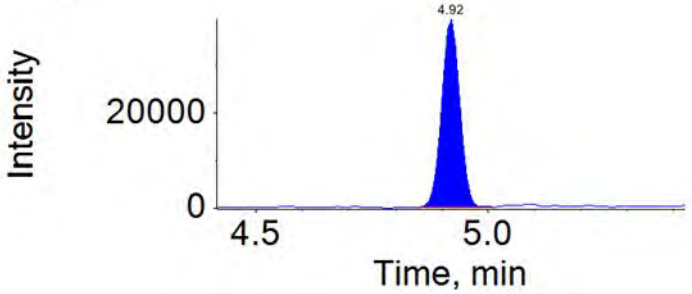
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



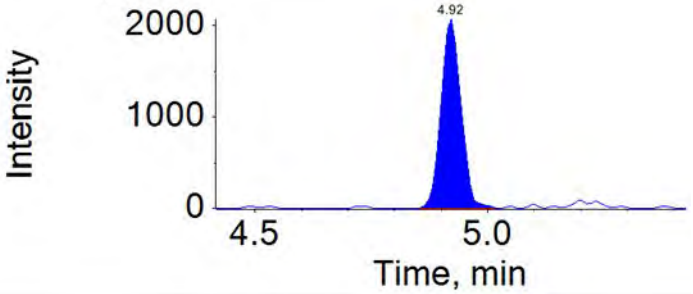
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

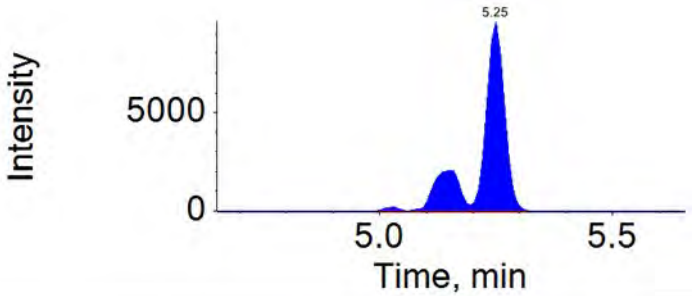
Component: PFOA
Primary Mass: 413.0 / 369.0



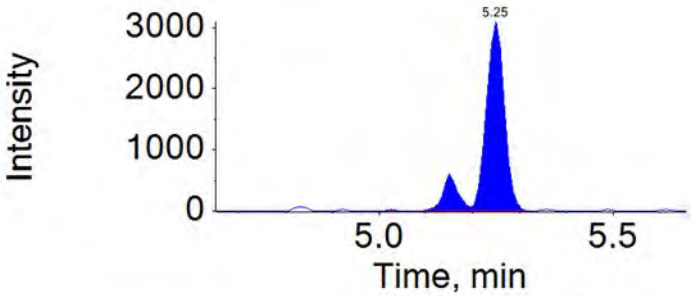
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



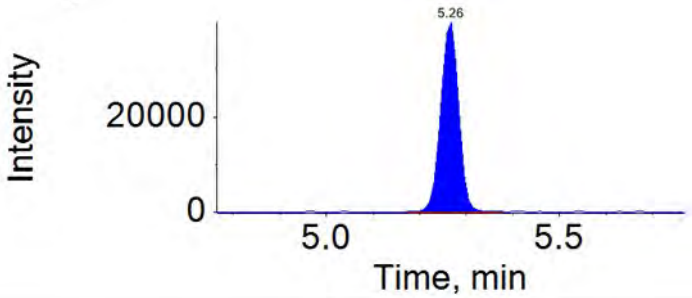
Component: PFOS
Primary Mass: 499.0 / 80.0



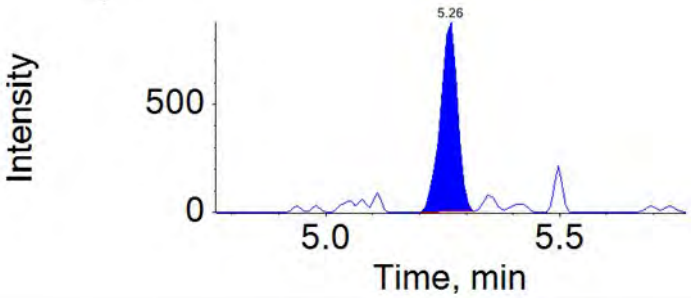
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



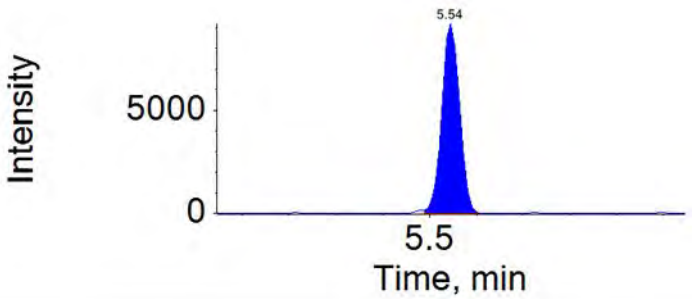
Component: PFNA
Primary Mass: 463.0 / 419.0



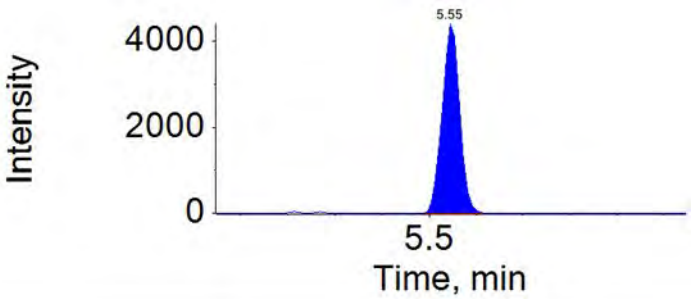
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



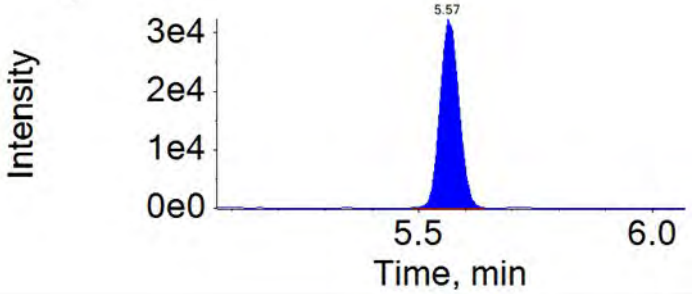
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



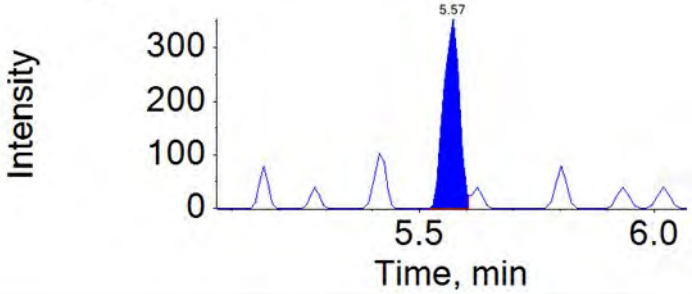
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

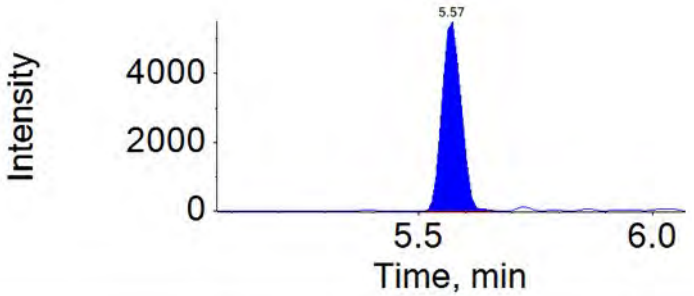
Component: PFDA
Primary Mass: 513.0 / 469.0



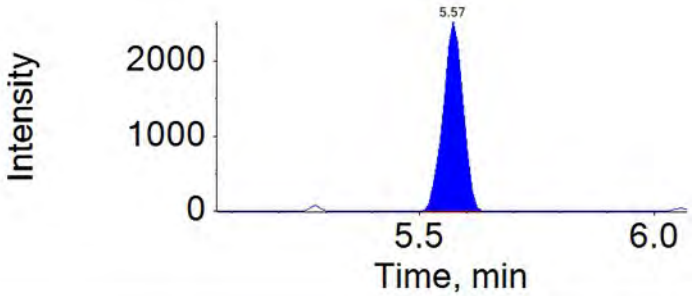
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



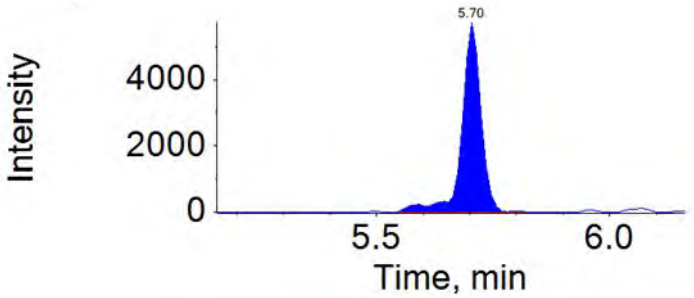
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



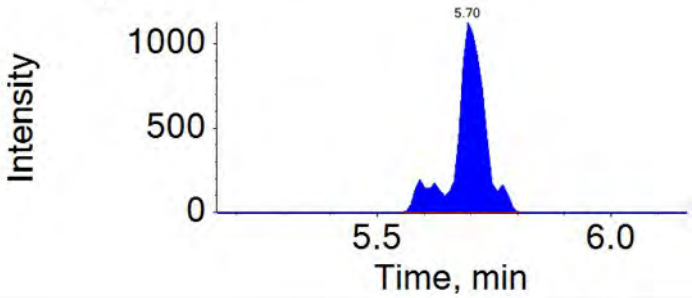
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



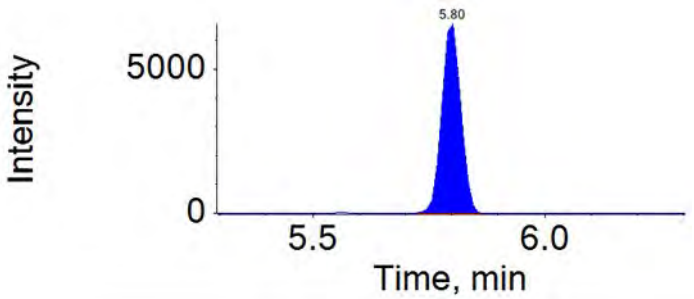
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



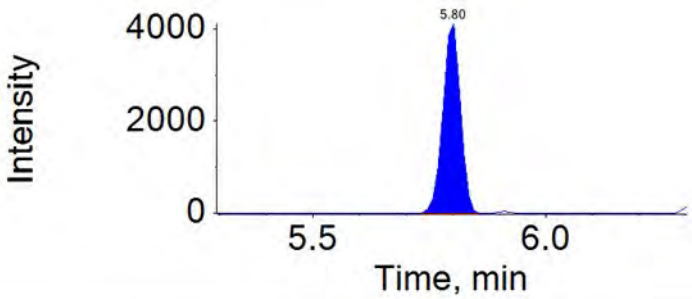
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



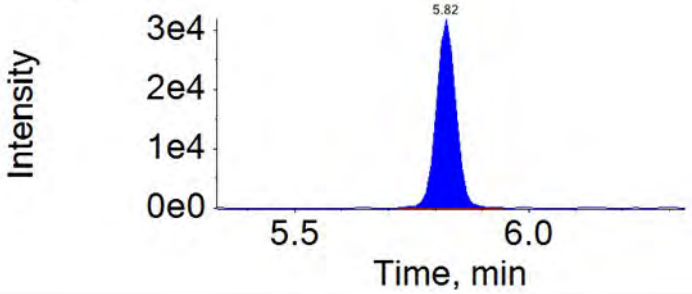
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



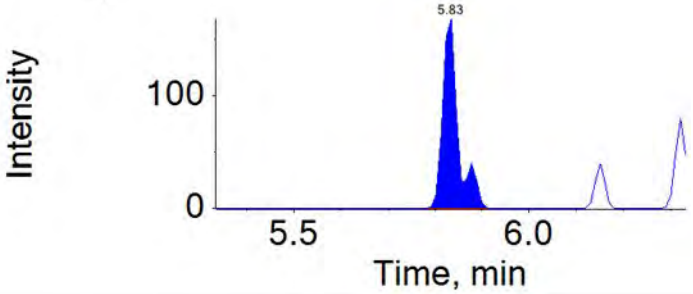
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

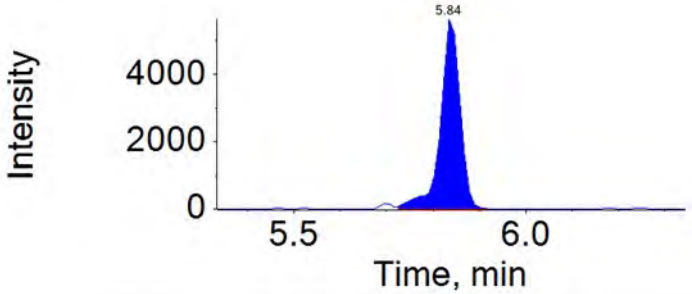
Component: PFUnDA
Primary Mass: 563.0 / 519.0



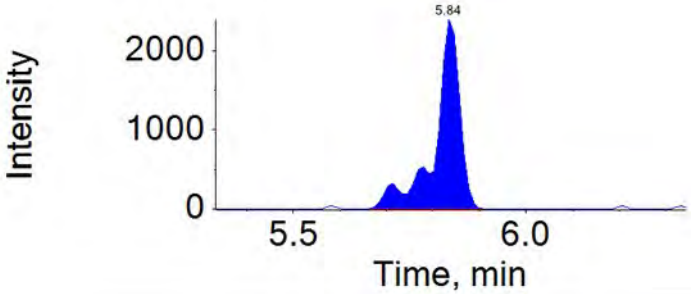
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



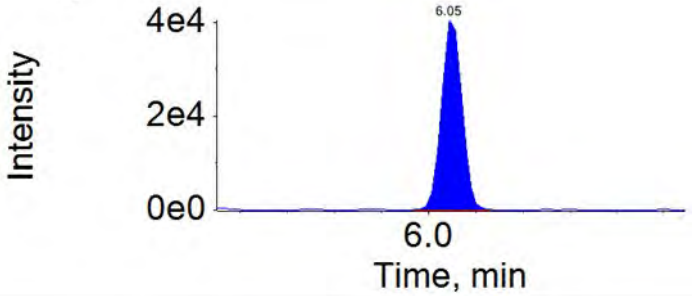
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



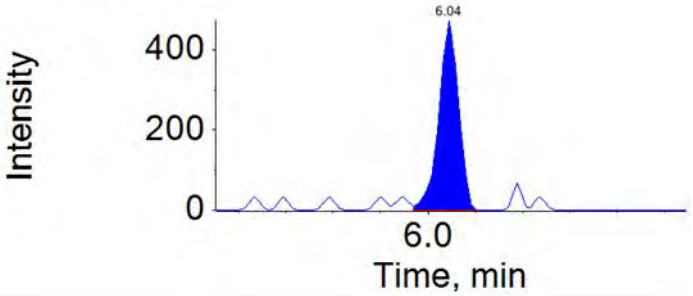
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



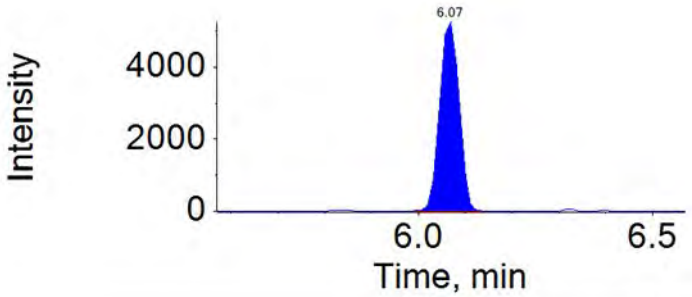
Component: PFDoDA
Primary Mass: 613.0 / 569.0



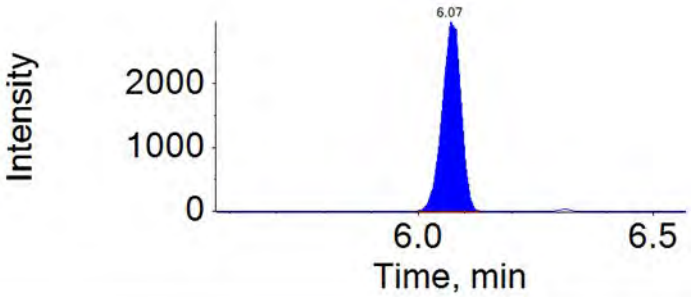
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



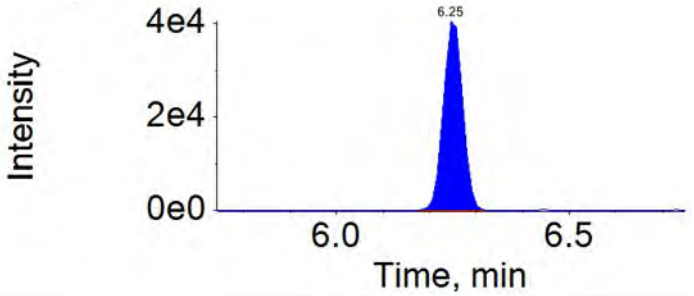
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



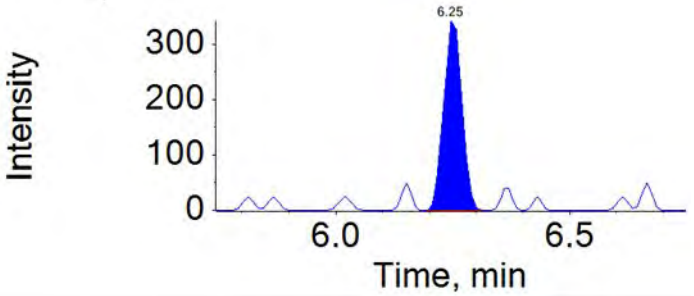
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

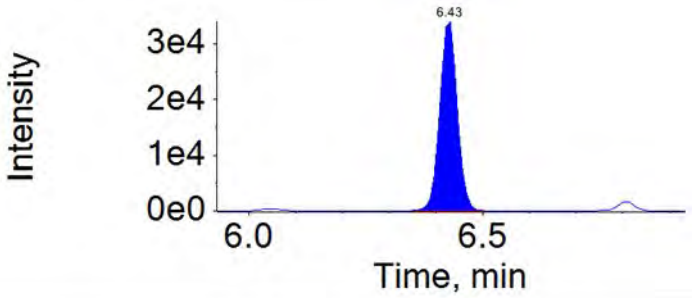
Component: PFTrDA
Primary Mass: 663.0 / 619.0



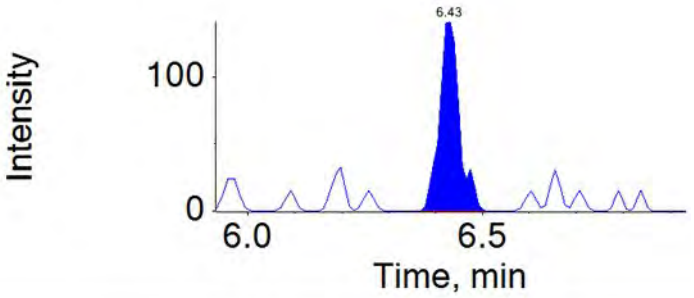
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



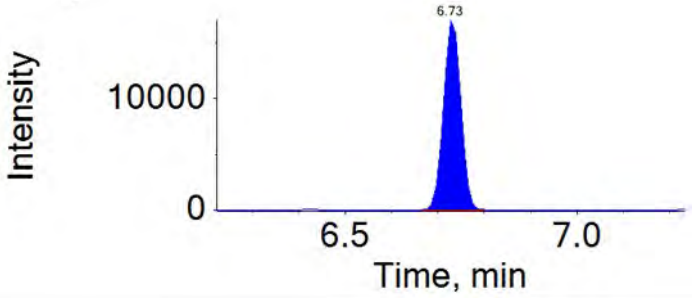
Component: PFTeDA
Primary Mass: 713.0 / 669.0



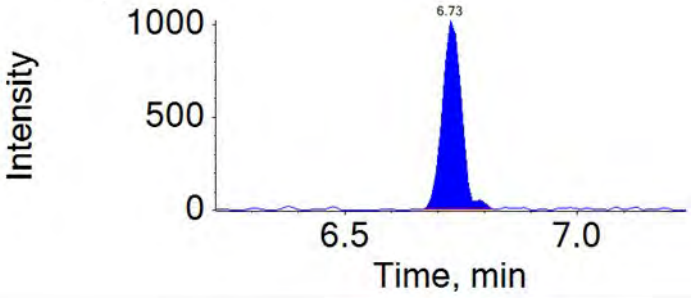
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



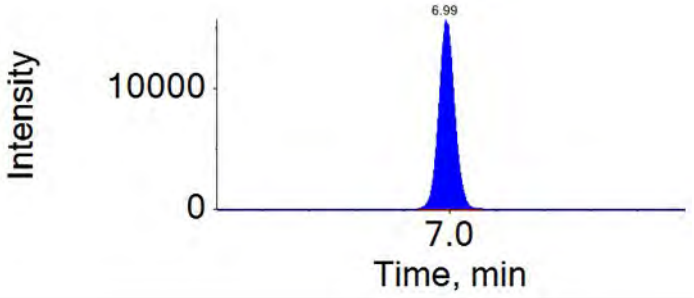
Component: PFHxDA
Primary Mass: 813.0 / 769.0



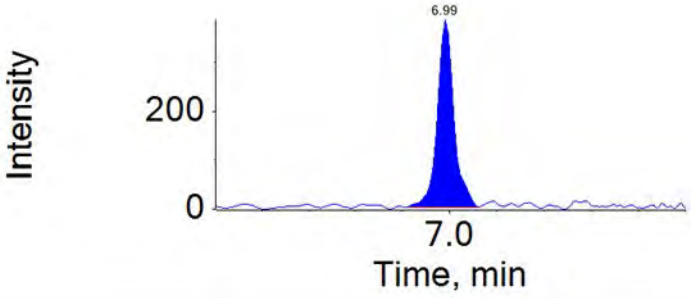
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL3			**Data File:**		18NOV28DCAL-08.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-28T14:00:13
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	887248.9	887248.9	0	50	
13C2-PFOA	5.0	498501.6	498501.6	0	50	
13C4-PFOS	4.8	283214.2	283214.2	0	50	
13C2-PFDA	5.0	441790.6	441790.6	0	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	993144.1	13C3-PFBA	887248.9	1.119	5.000	4.994	100	70-130	
E13C5-PFPeA	910953.7	13C3-PFBA	887248.9	1.027	5.000	4.794	96	70-130	
E13C3-PFBS	419929.2	13C3-PFBA	887248.9	0.473	4.650	4.515	97	70-130	
E13C2-4:2-FTS	70629.1	13C2-PFOA	498501.6	0.142	4.670	4.883	105	70-130	
E13C5-PFHxA	717900.1	13C2-PFOA	498501.6	1.440	5.000	5.290	106	70-130	
E13C3-PFHxS	326982.4	13C2-PFOA	498501.6	0.656	4.730	5.141	109	70-130	
E13C4-PFHpA	535993.3	13C2-PFOA	498501.6	1.075	5.000	4.940	99	70-130	
E13C2-6:2-FTS	65518.3	13C2-PFOA	498501.6	0.131	4.750	5.502	116	70-130	
E13C8-PFOA	954678.0	13C2-PFOA	498501.6	1.915	5.000	5.271	105	70-130	
E13C8-PFOS	309913.7	13C4-PFOS	283214.2	1.094	4.780	4.940	103	70-130	
E13C9-PFNA	629954.6	13C4-PFOS	283214.2	2.224	5.000	4.885	98	70-130	
E13C6-PFDA	824072.9	13C2-PFDA	441790.6	1.865	5.000	5.259	105	70-130	
E13C2-8:2-FTS	53847.2	13C2-PFDA	441790.6	0.122	4.790	5.239	109	70-130	
E13C8-PFOSA	631627.9	13C2-PFDA	441790.6	1.430	5.000	5.246	105	70-130	
Ed3-NMeFOSAA	178338.1	13C2-PFDA	441790.6	0.404	5.000	5.125	103	70-130	
E13C7-PFUnDA	592495.7	13C2-PFDA	441790.6	1.341	5.000	5.668	113	70-130	
Ed5-NEtFOSAA	129810.7	13C2-PFDA	441790.6	0.294	5.000	5.235	105	70-130	
E13C2-PFDoDA	1091194.9	13C2-PFDA	441790.6	2.470	5.000	5.189	104	70-130	
Ed7-NMePFOSAE	256577.3	13C2-PFDA	441790.6	0.581	5.000	5.019	100	70-130	
Ed3-NMePFOSA	80294.1	13C2-PFDA	441790.6	0.182	5.000	4.919	98	70-130	
Ed9-NEtPFOSAE	216571.5	13C2-PFDA	441790.6	0.490	5.000	4.970	99	70-130	
Ed5-NEtPFOSA	64623.7	13C2-PFDA	441790.6	0.146	5.000	5.083	102	70-130	
E13C2-PFTeDA	841931.1	13C2-PFDA	441790.6	1.906	5.000	5.273	105	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

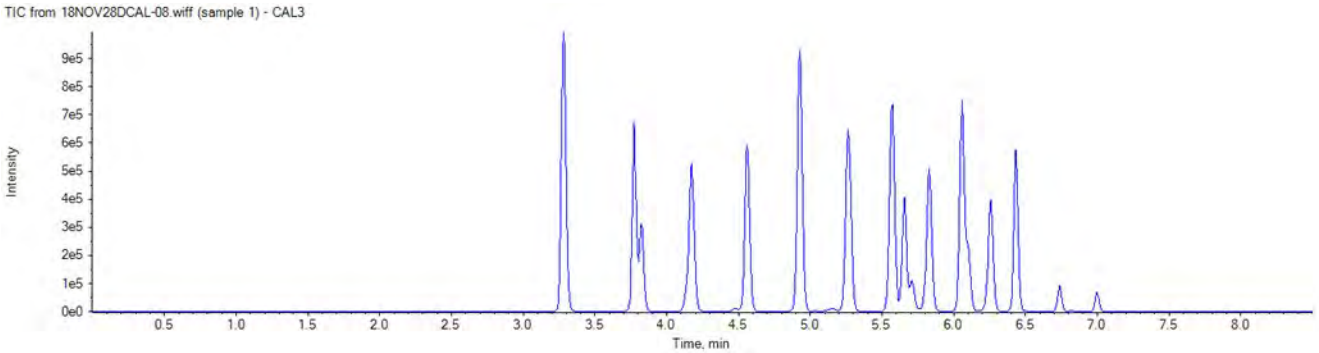
Analyte Quantitation Peak Table

Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-08.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.28	1.000	403055.9		A	13C4-PFBA	3.28	993144.1	0.406	2.225
PFPeA	3.78	1.000	424089.1		A	13C5-PFPeA	3.78	910953.7	0.466	2.284
PFBS	3.82	1.000	168534.1		A	13C3-PFBS	3.82	419929.2	0.401	1.948
4:2-FTS	4.14	1.000	56502.5		A	13C2-4:2-FTS	4.14	70629.1	0.800	2.142
PFHxA	4.17	1.000	395421.4		A	13C5-PFHxA	4.17	717900.1	0.551	2.211
PFPeS	4.19	1.100	89559.7		A	13C3-PFBS	3.82	419929.2	0.213	2.157
PFHpA	4.56	1.000	388626.7		A	13C4-PFHpA	4.56	535993.3	0.725	2.238
PFHxS	4.56	1.000	127889.2		M	13C3-PFHxS	4.56	326982.4	0.391	1.831
6:2-FTS	4.92	1.000	53951.0		A	13C2-6:2-FTS	4.92	65518.3	0.823	2.149
PFHpS	4.92	1.080	129450.9		A	13C3-PFHxS	4.56	326982.4	0.396	1.976
PFOA	4.93	1.000	405879.4		A	13C8-PFOA	4.93	954678.0	0.425	2.197
PFOS	5.26	1.000	139506.6		M	13C8-PFOS	5.26	309913.7	0.450	1.888
PFNA	5.27	1.000	370292.0		A	13C9-PFNA	5.27	629954.6	0.588	2.253
PFNS	5.55	1.060	91471.0		A	13C8-PFOS	5.26	309913.7	0.295	1.864
PFDA	5.57	1.000	343523.0		A	13C6-PFDA	5.57	824072.9	0.417	2.360
8:2-FTS	5.57	1.000	57433.9		A	13C2-8:2-FTS	5.58	53847.2	1.067	2.011
PFOSA	5.66	1.000	265394.0		A	13C8-PFOSA	5.66	631627.9	0.420	2.128
NMeFOSAA	5.71	1.000	62054.8		A	d3-NMeFOSAA	5.71	178338.1	0.348	2.220
PFDS	5.80	1.100	80537.4		A	13C8-PFOS	5.26	309913.7	0.260	2.060
PFUnDA	5.83	1.000	370693.6		A	13C7-PFUnDA	5.83	592495.7	0.626	2.236
NEtFOSAA	5.84	1.000	52769.5		M	d5-NEtFOSAA	5.84	129810.7	0.407	1.980
PFDoDA	6.06	1.000	486489.2		A	13C2-PFDoDA	6.06	1091194.9	0.446	2.442
10:2-FTS	6.07	1.090	58508.2		A	13C2-8:2-FTS	5.58	53847.2	1.087	2.396
NMePFOSAE	6.11	1.000	136518.3		A	d7-NMePFOSAE	6.10	256577.3	0.532	2.239
NMePFOSA	6.11	1.000	33009.7		A	d3-NMePFOSA	6.11	80294.1	0.411	2.179
PFDoS	6.23	1.180	40838.1		A	13C8-PFOS	5.26	309913.7	0.132	1.892
NEtPFOSAE	6.26	1.000	152952.1		A	d9-NEtPFOSAE	6.25	216571.5	0.706	2.540
NEtPFOSA	6.27	1.000	30595.3		A	d5-NEtPFOSA	6.27	64623.7	0.473	2.122
PFTrDA	6.26	1.030	466266.9		A	13C2-PFDoDA	6.06	1091194.9	0.427	2.576
PFTeDA	6.43	1.000	342239.8		A	13C2-PFTeDA	6.43	841931.1	0.406	2.303
PFHxDA	6.74	1.050	173721.0		A	13C2-PFTeDA	6.43	841931.1	0.206	2.359
PFODA	7.00	1.090	139071.5		A	13C2-PFTeDA	6.43	841931.1	0.165	2.201

Total Ion Chromatogram

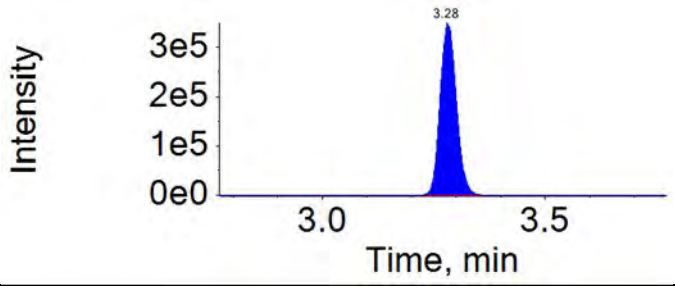


APPROVED
By MCD at 5:00 pm, 11/28/18

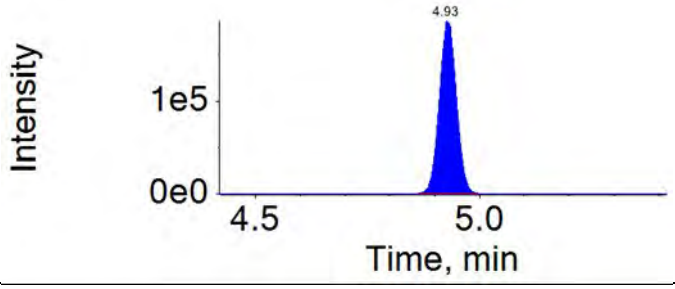
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

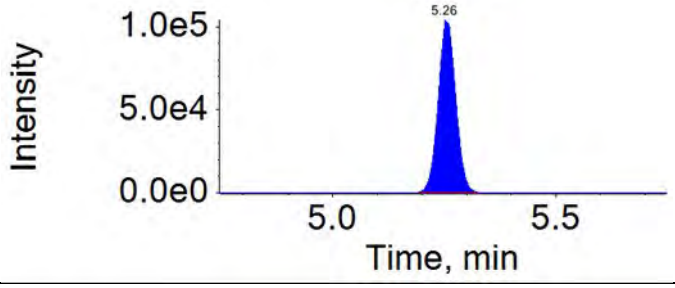
Injection Standard: 13C3-PFBA
216.0 / 172.0



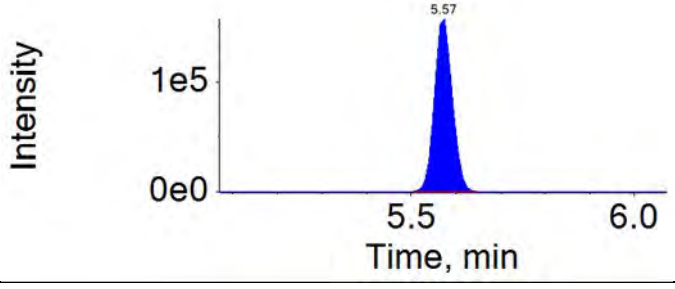
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

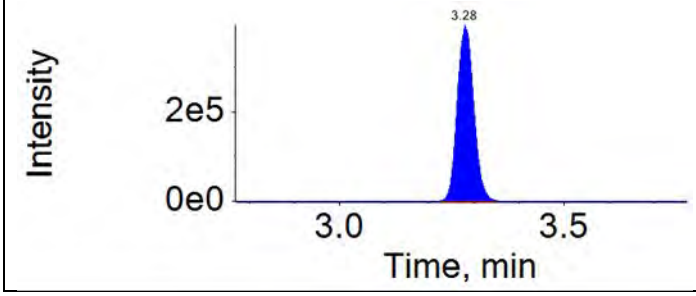


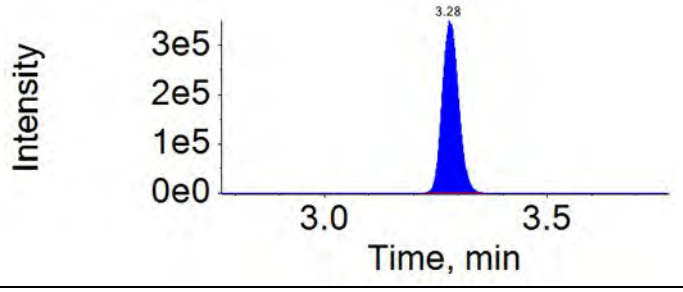
Injection Standard: 13C2-PFDA
515.0 / 470.0



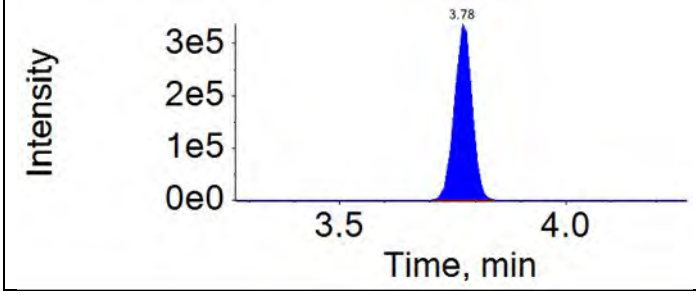
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

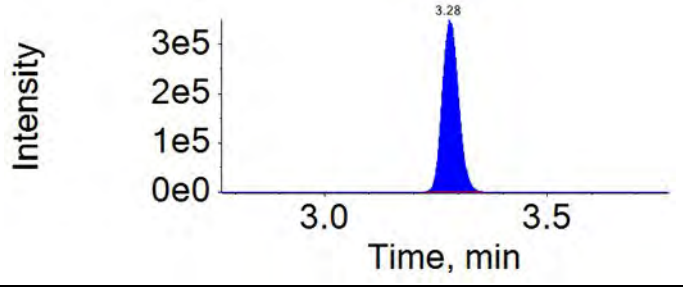
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



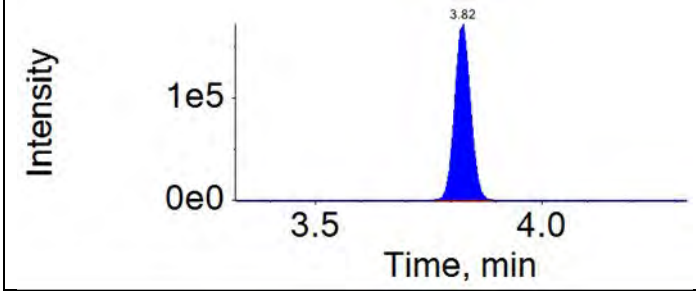


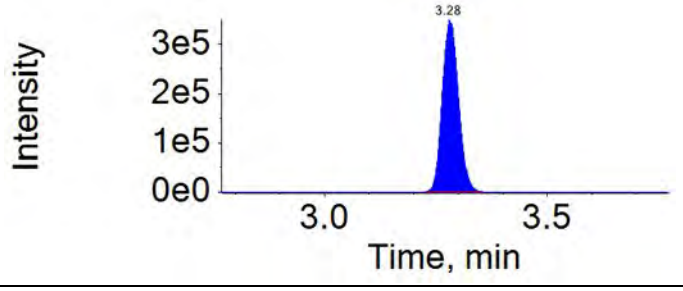
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



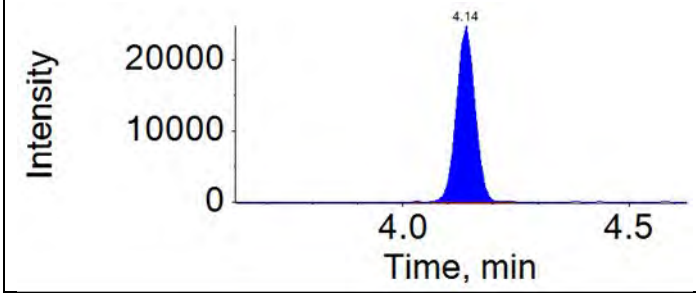


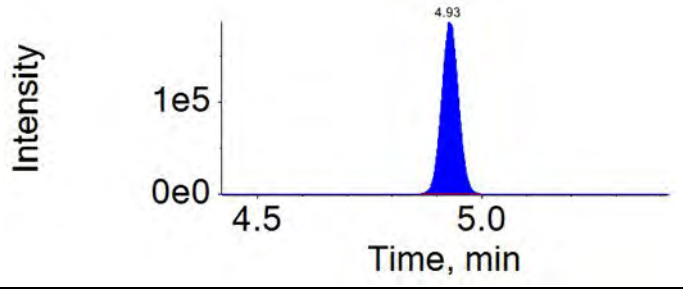
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



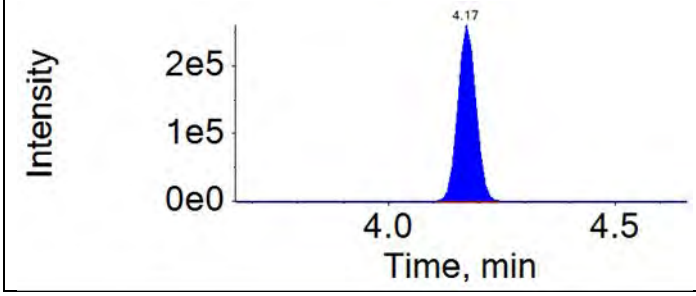


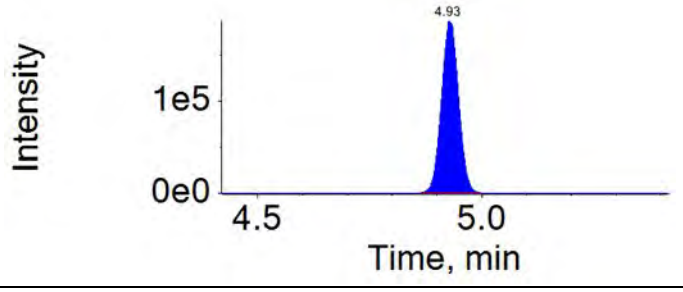
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

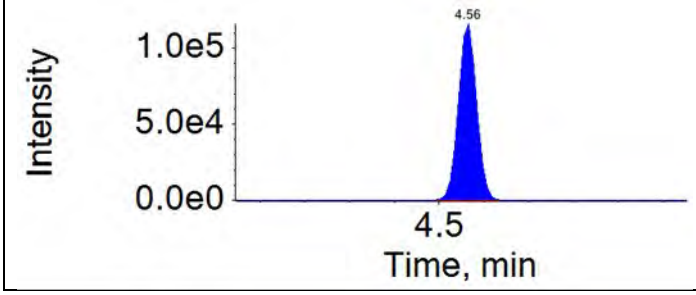
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

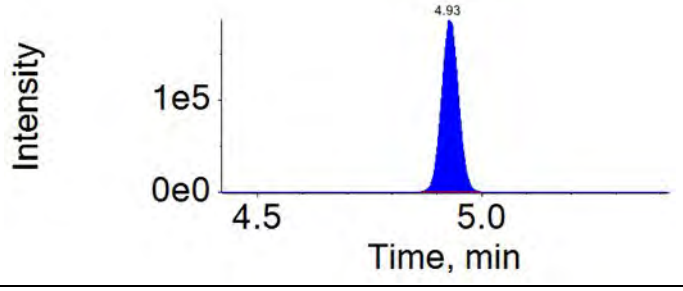
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



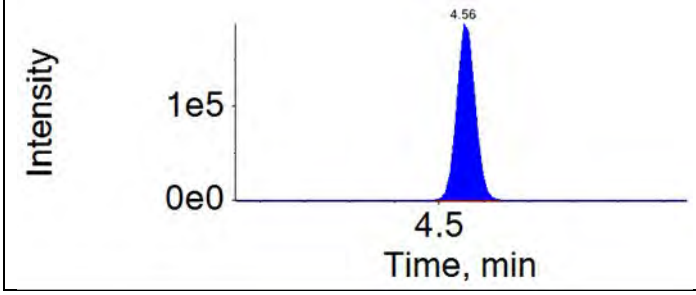


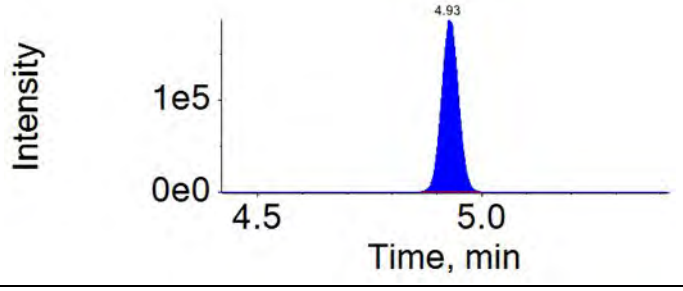
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



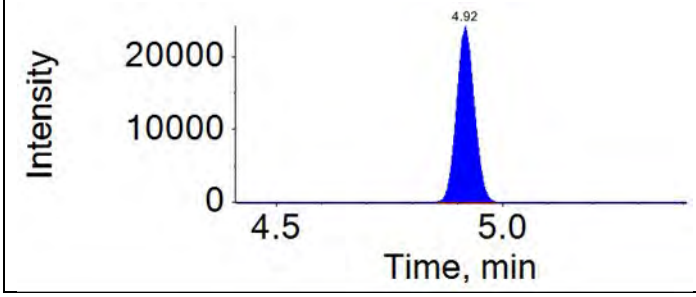


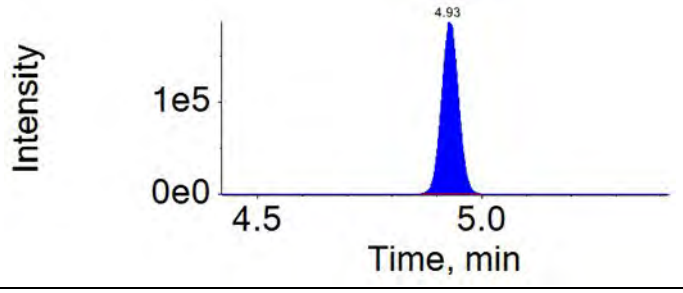
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

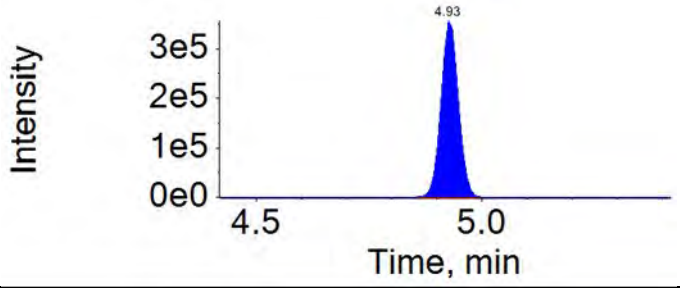
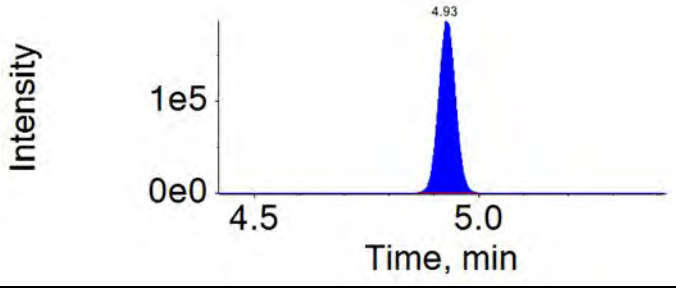


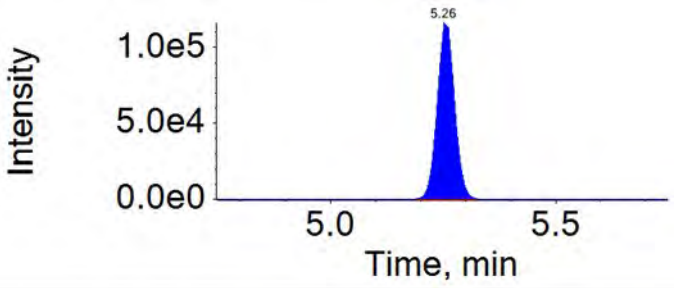
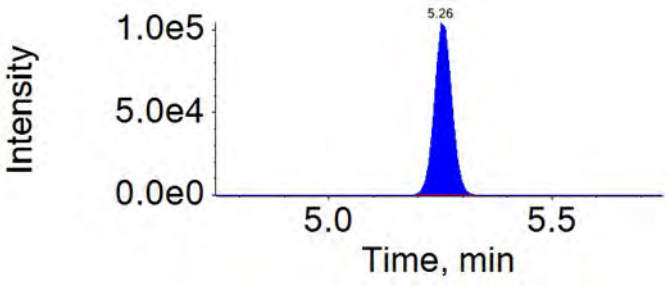


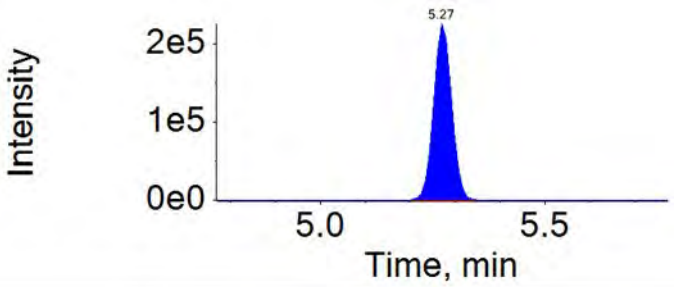
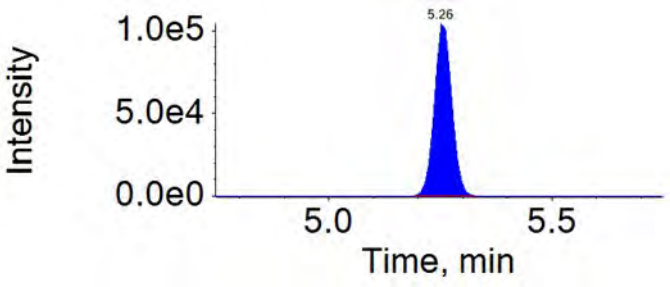
APPROVED
By MCD at 5:00 pm, 11/28/18

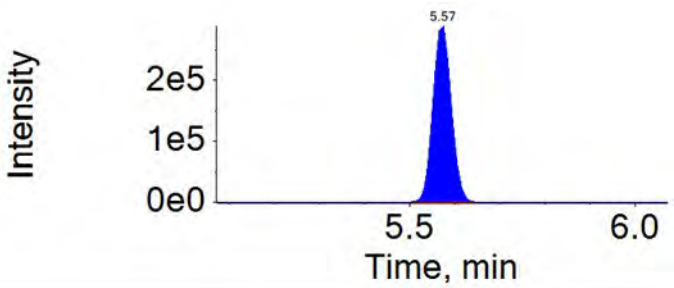
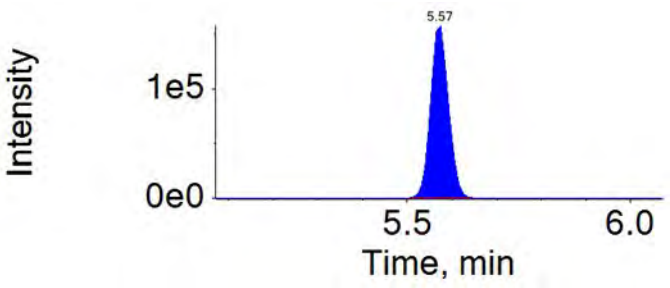
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

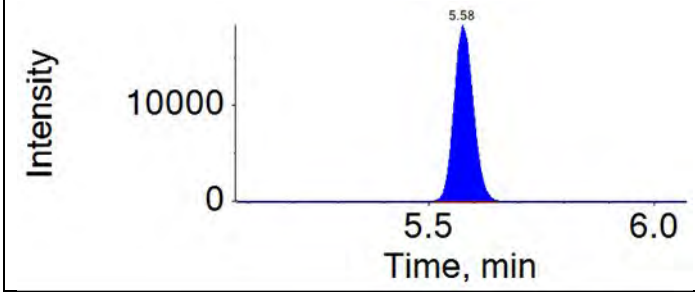
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

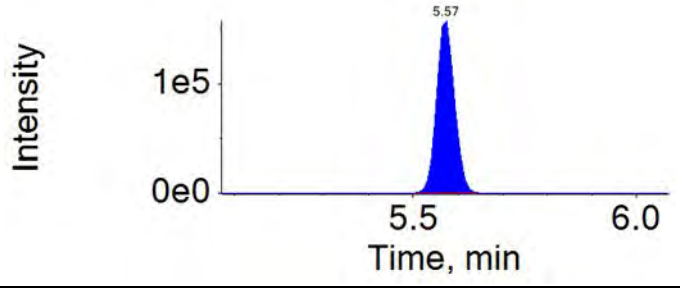
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

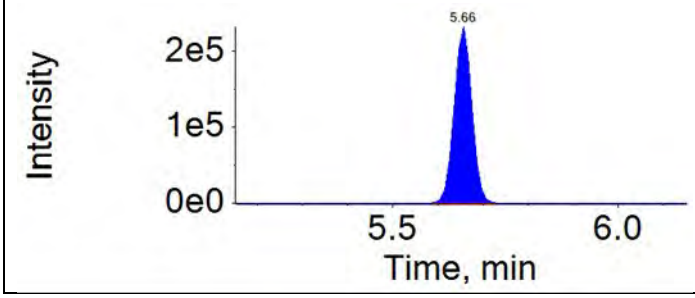
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

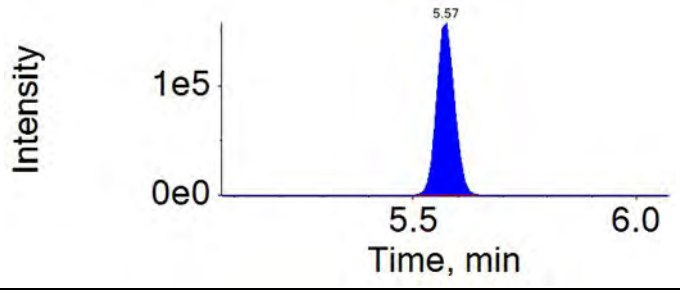
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



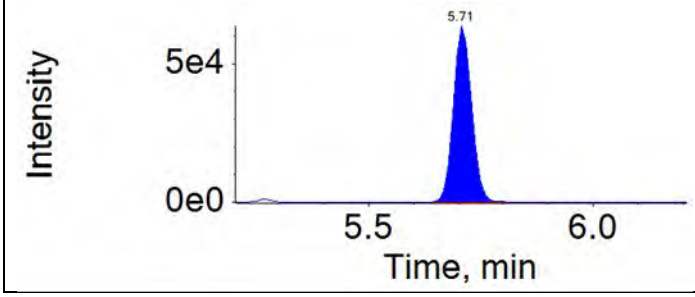


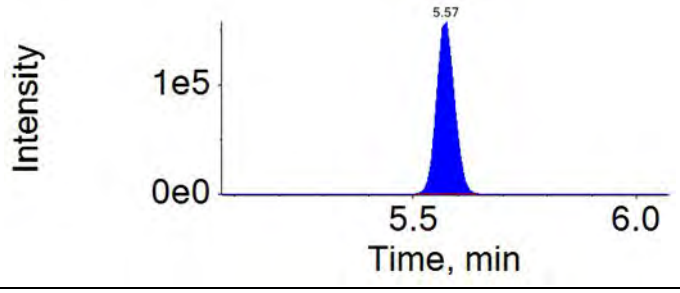
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



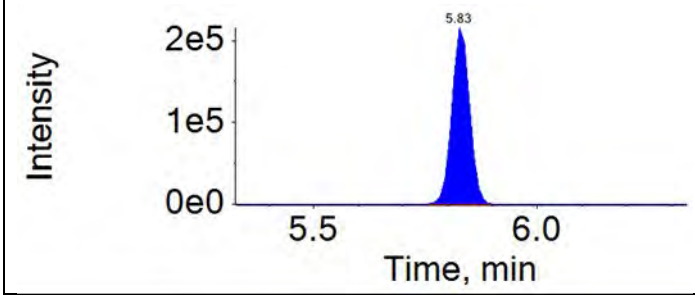


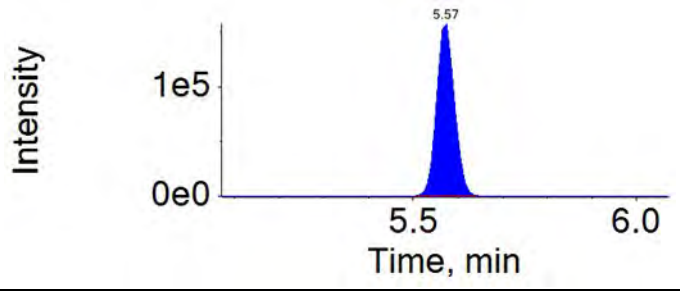
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



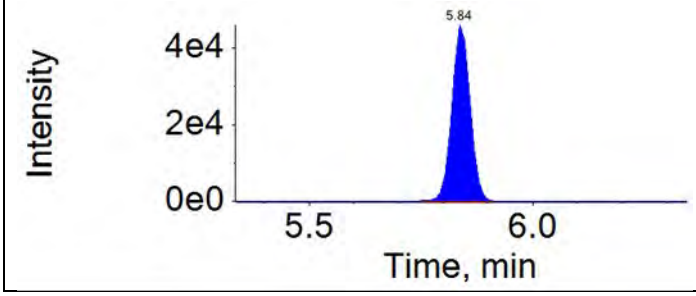


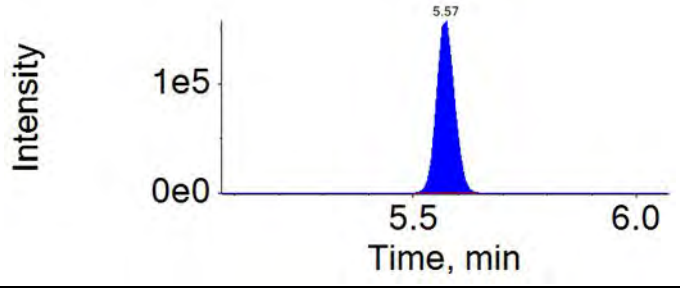
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

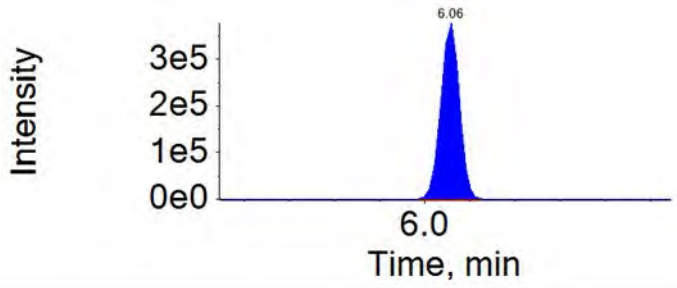
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

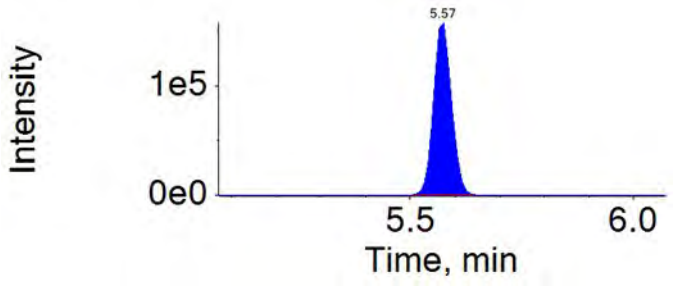
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



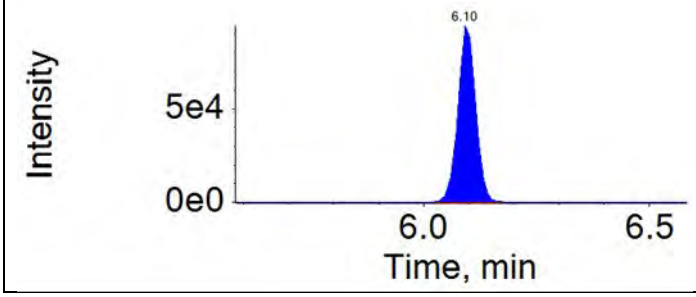


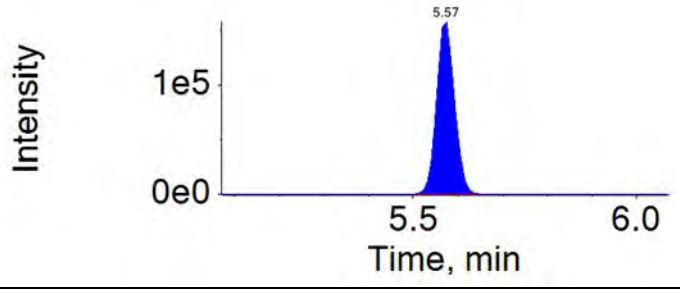
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



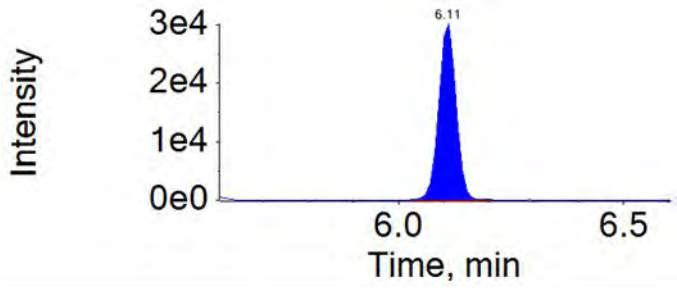


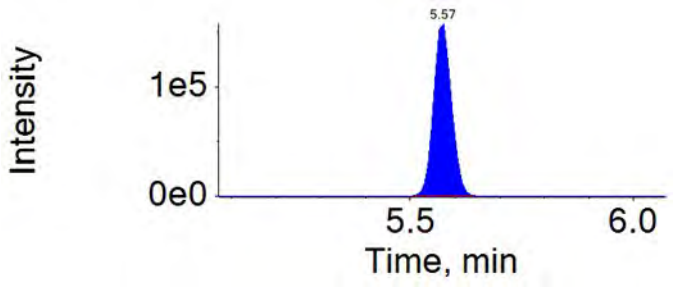
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



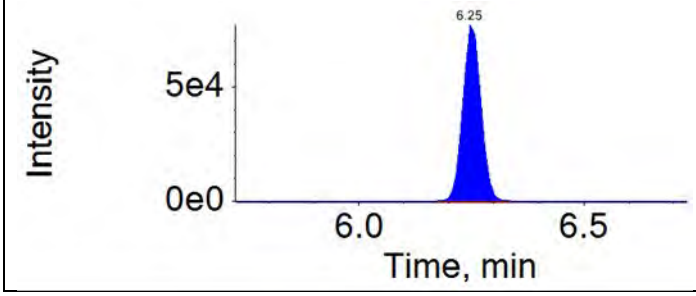


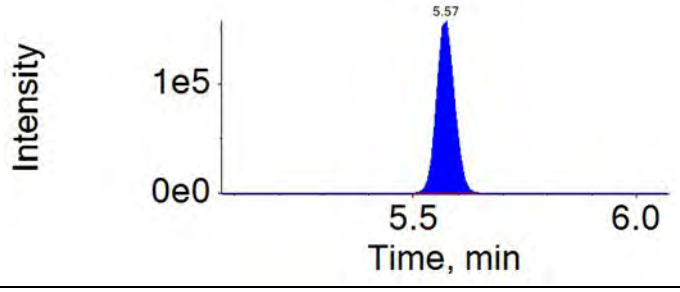
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

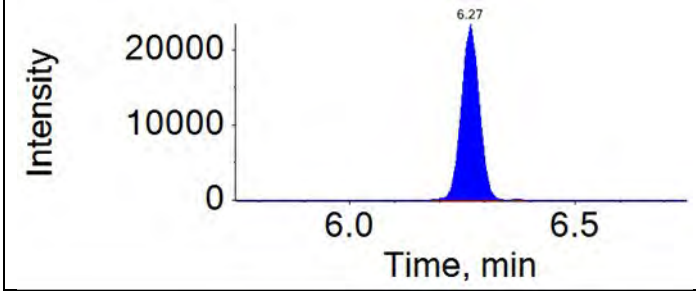
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

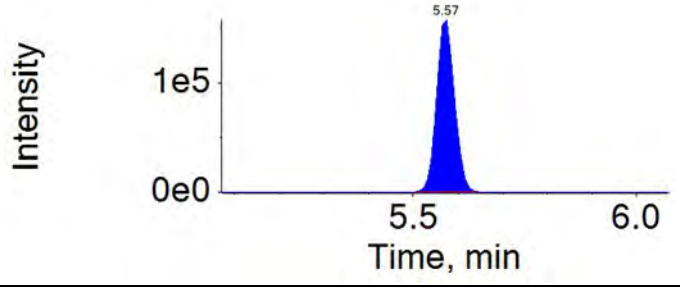
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



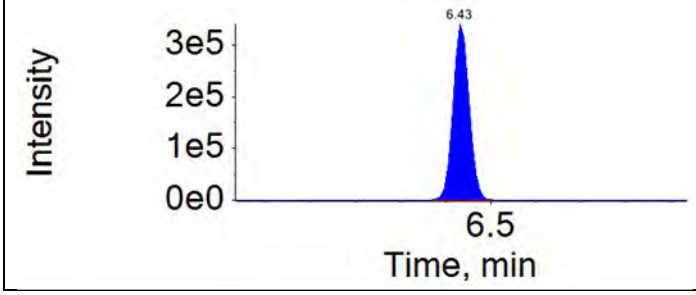


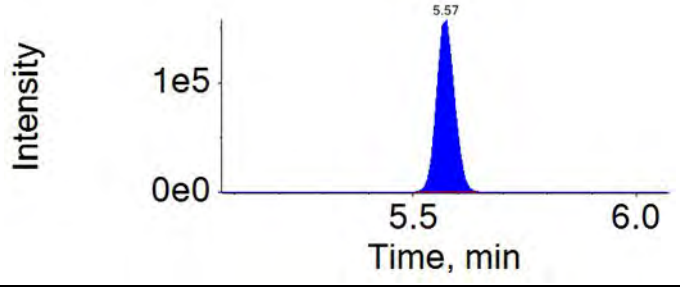
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



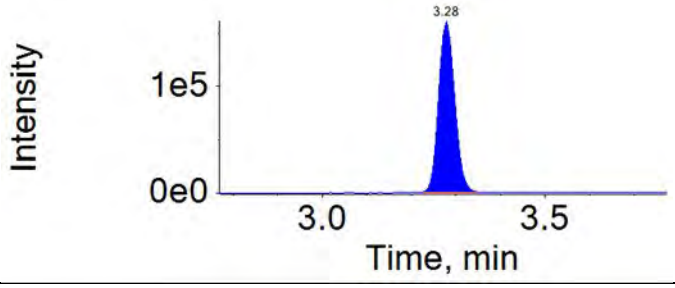


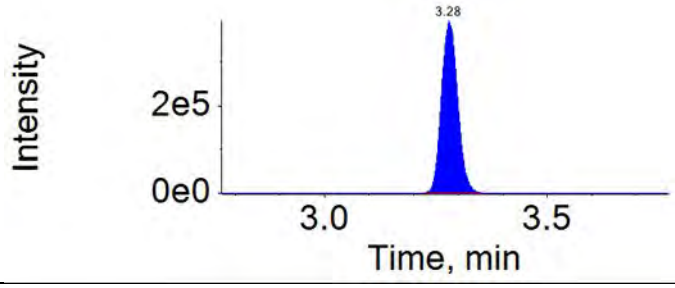
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

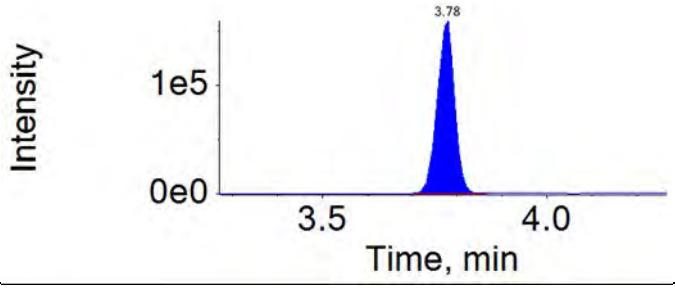
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

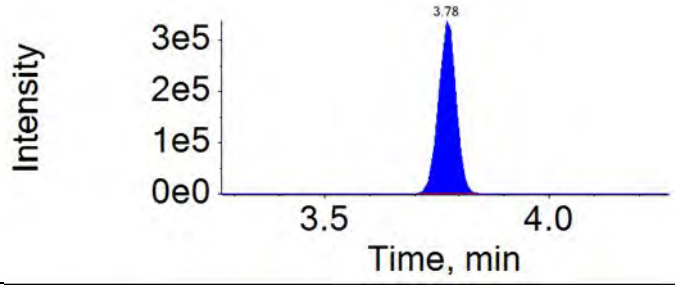
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



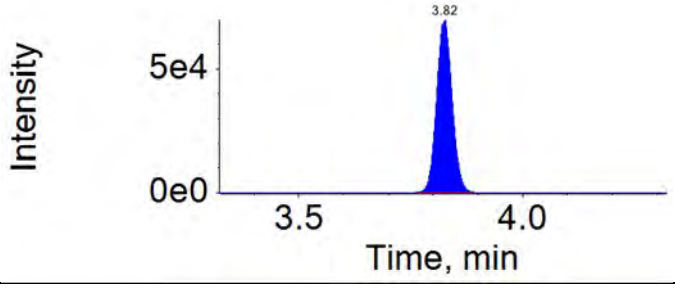


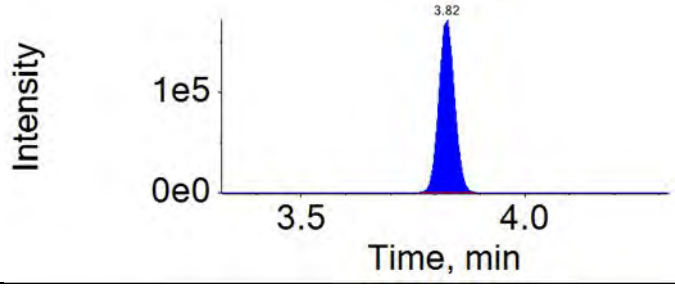
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



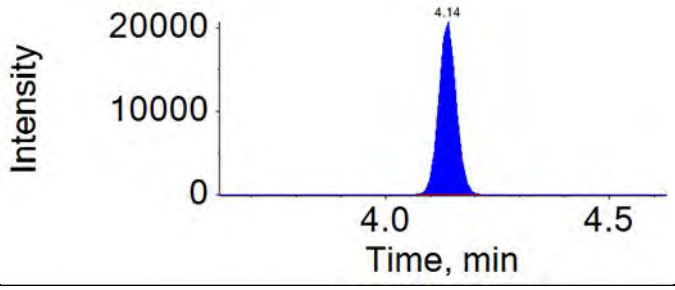


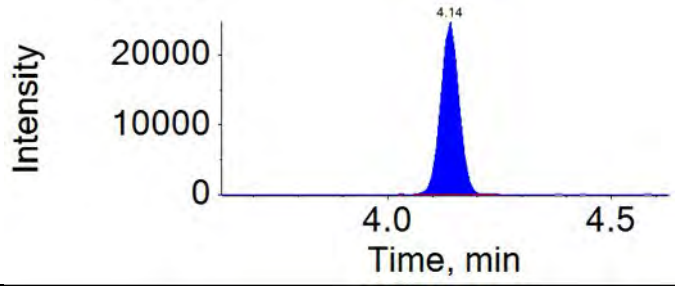
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



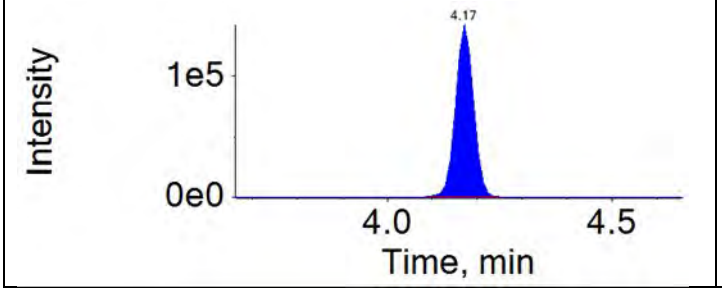


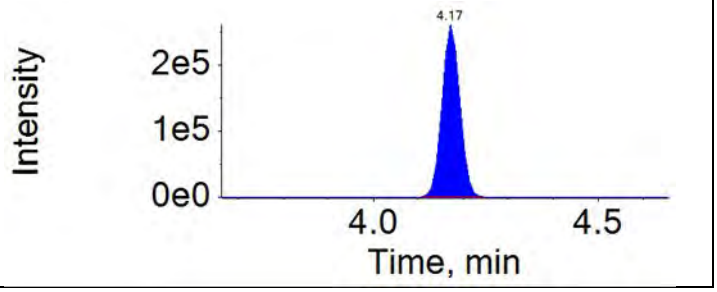
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

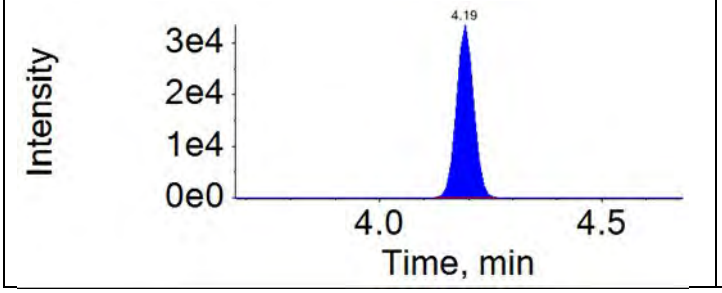
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

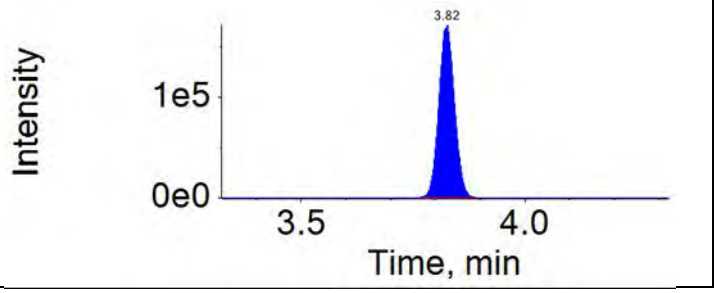
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



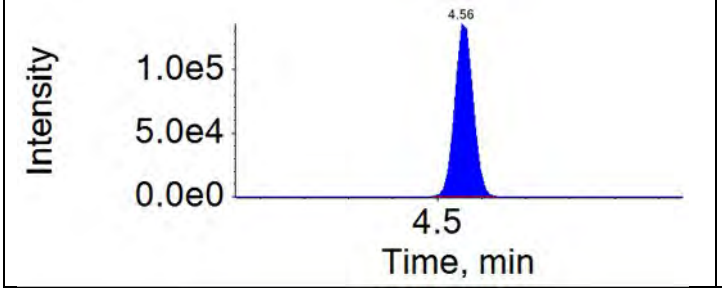


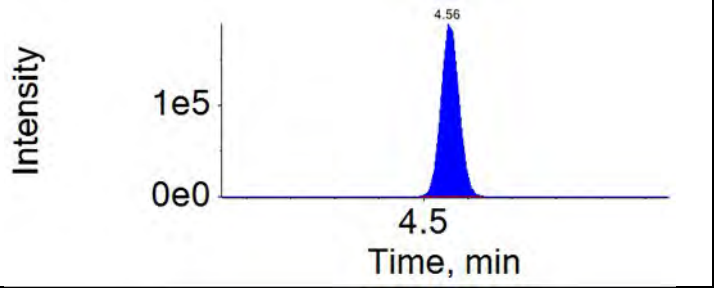
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



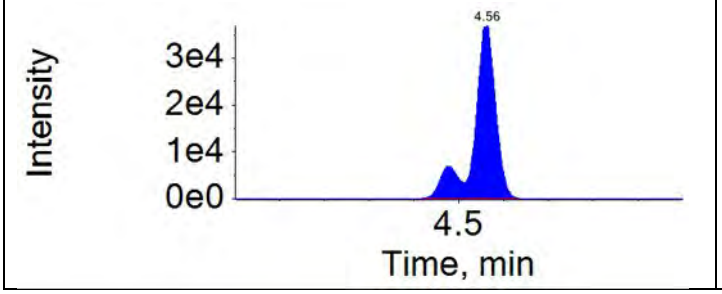


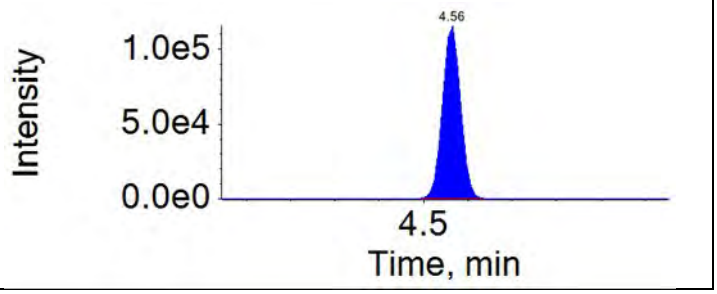
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



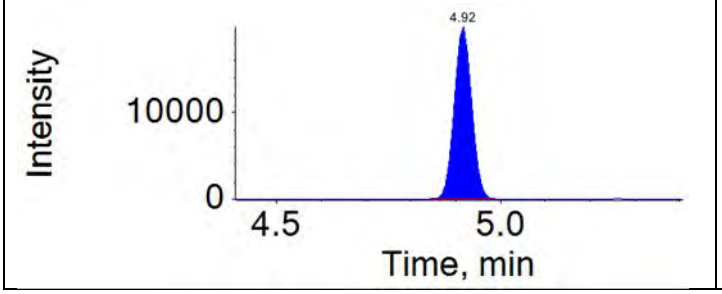


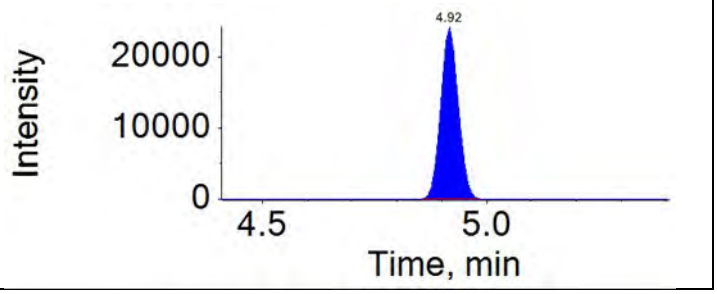
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

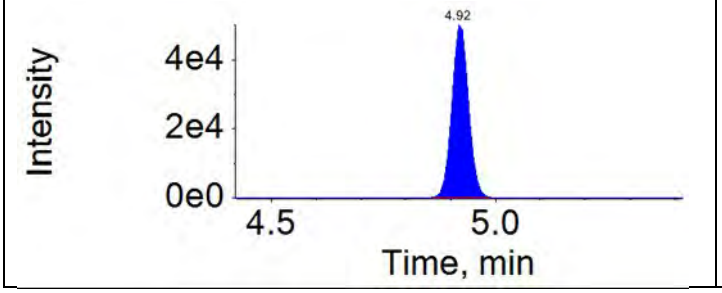
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

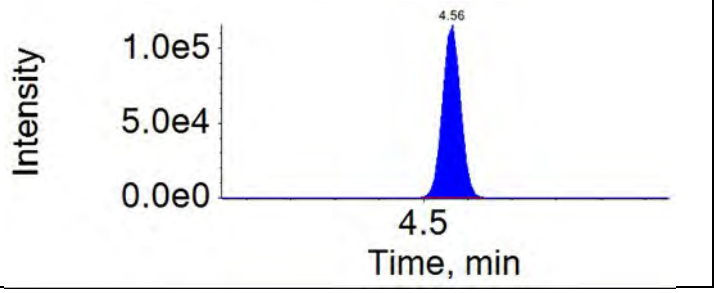
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



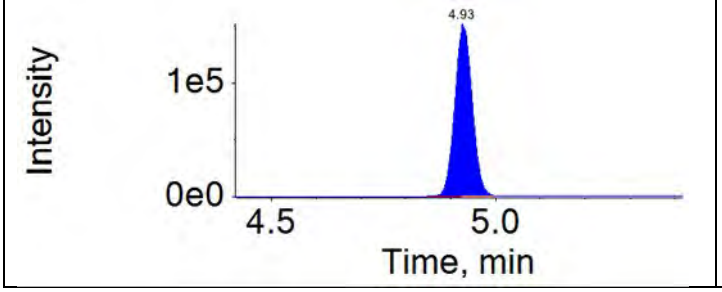


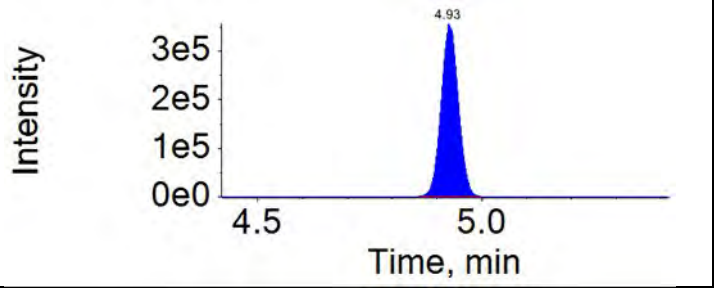
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



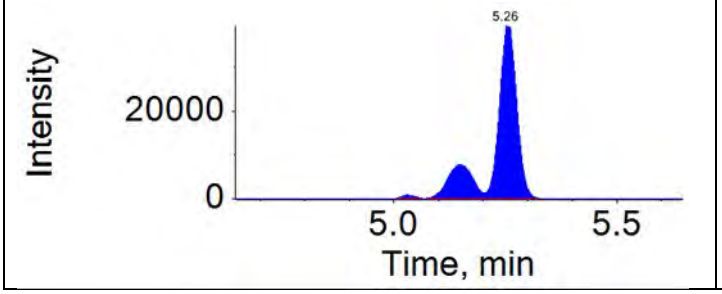


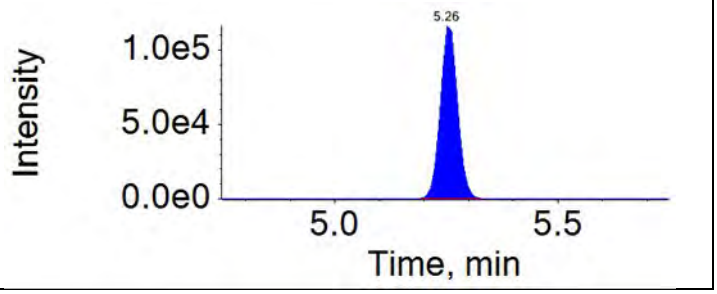
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



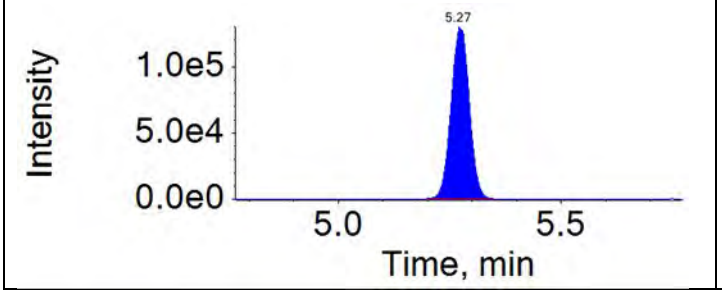


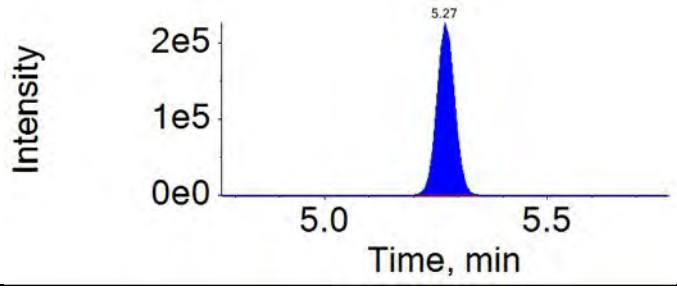
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

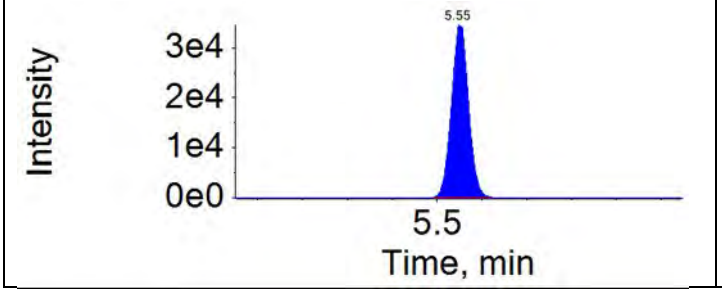
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

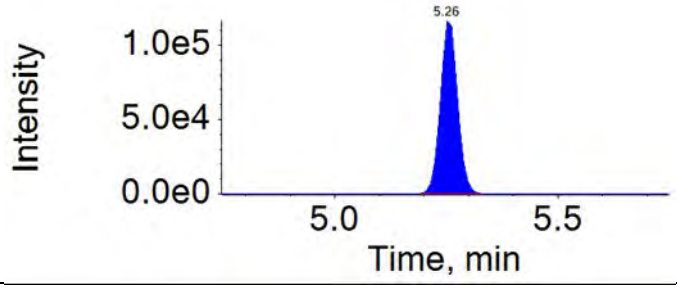
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



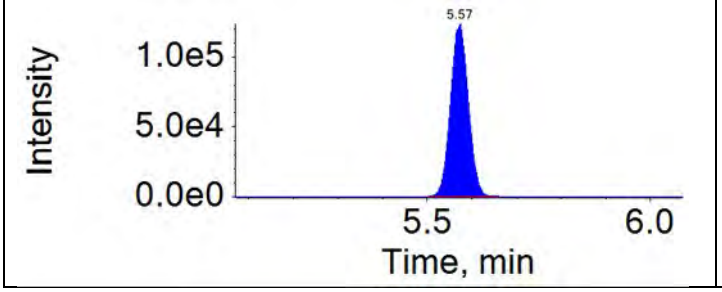


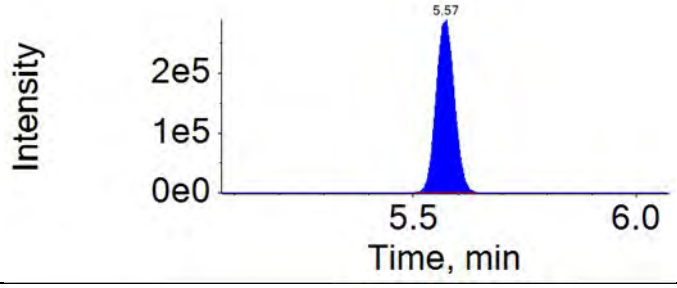
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



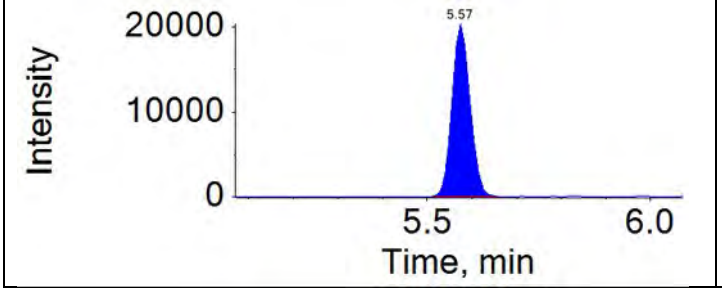


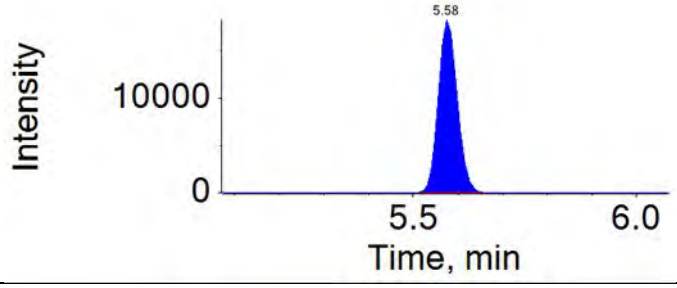
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



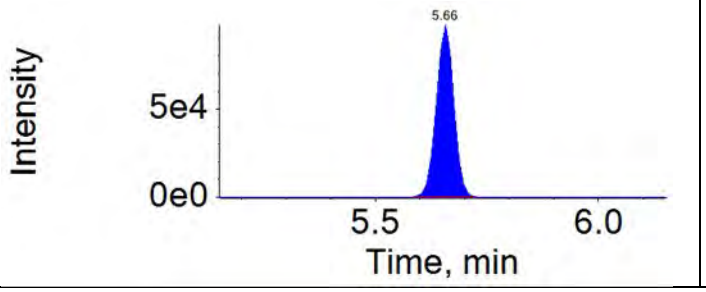


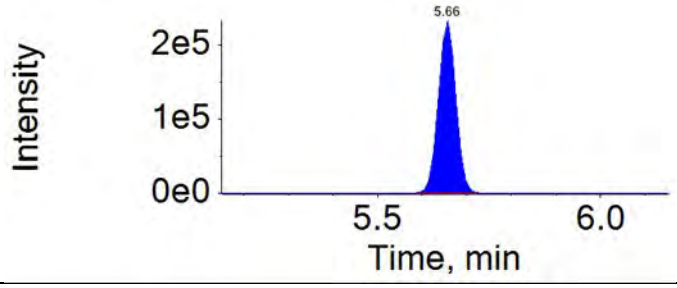
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

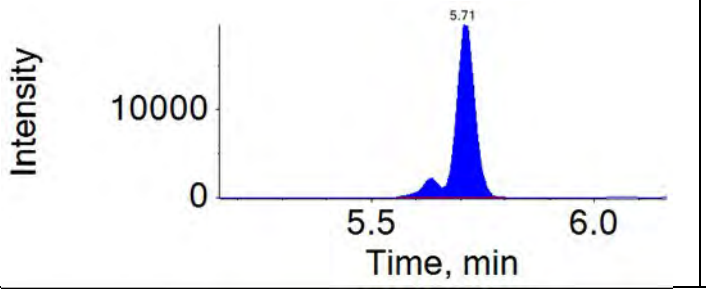
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

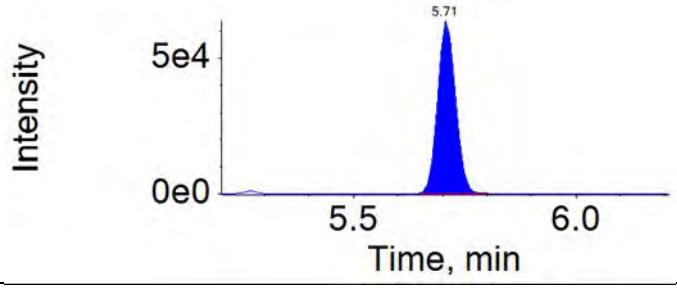
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



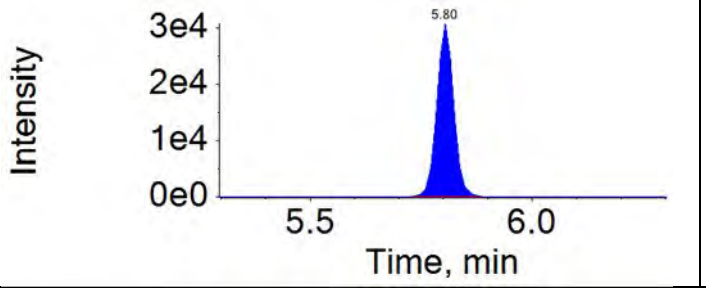


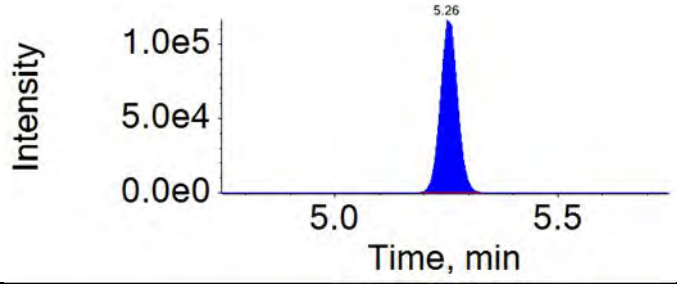
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



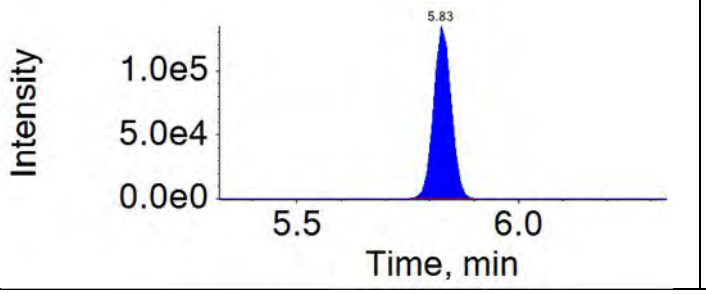


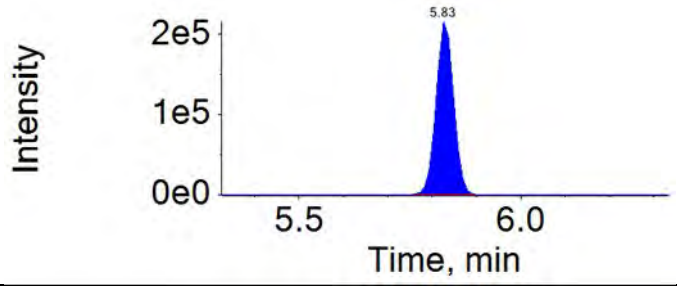
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



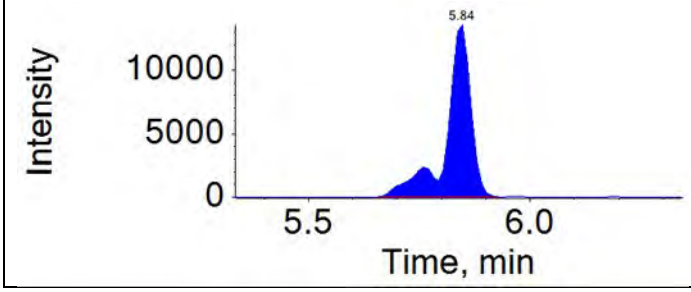


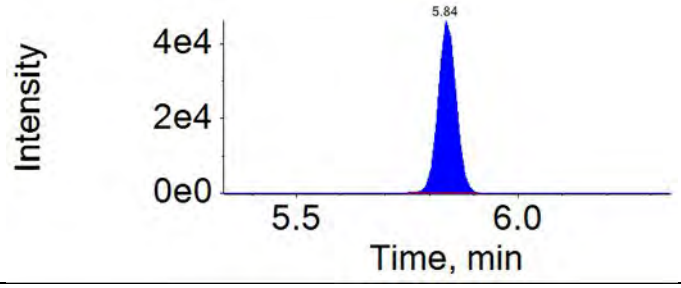
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

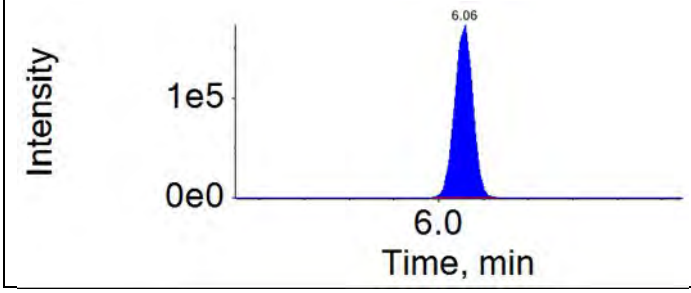
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

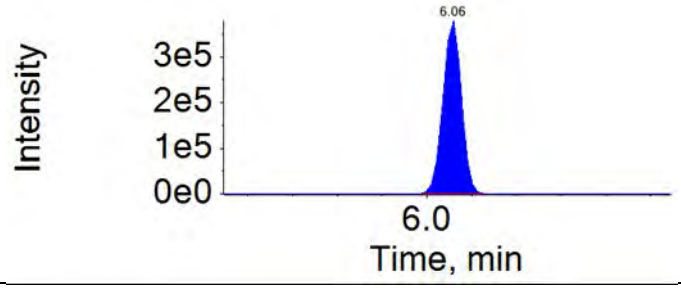
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



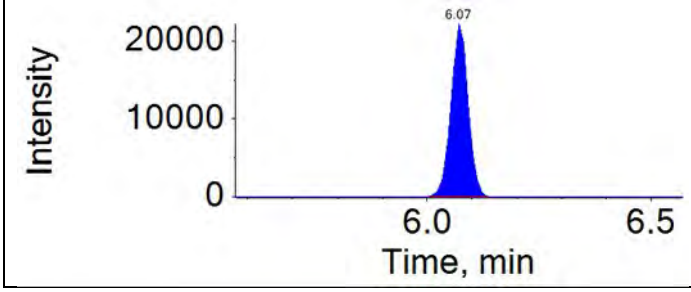


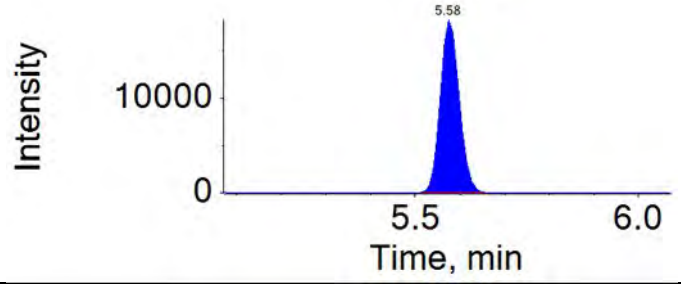
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



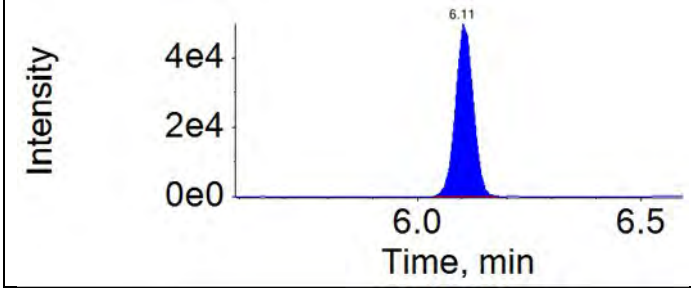


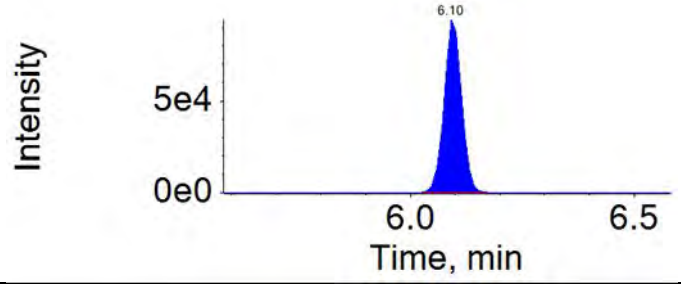
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



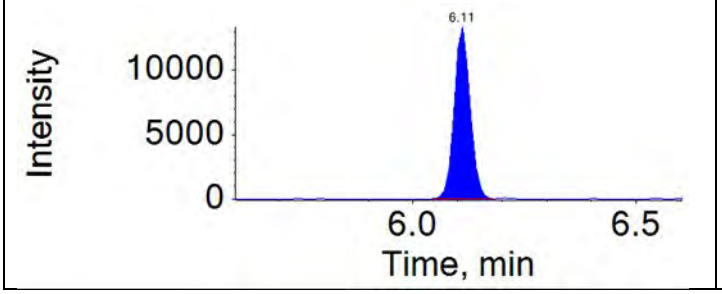


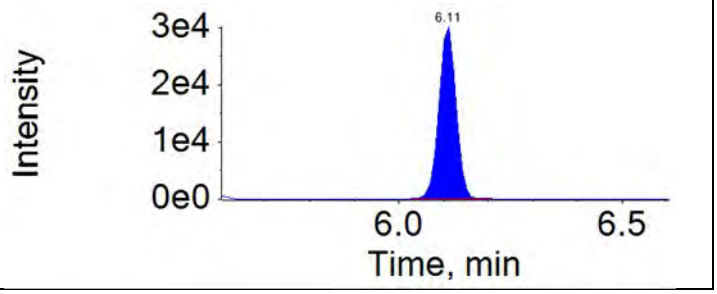
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

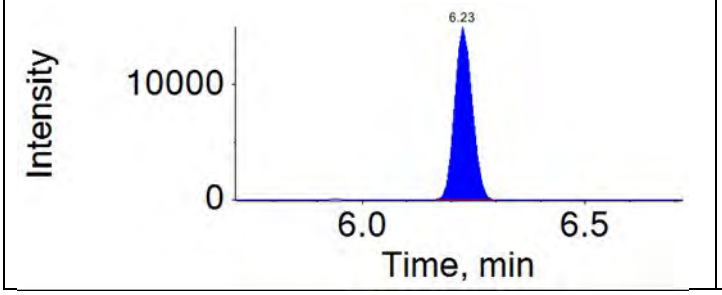
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

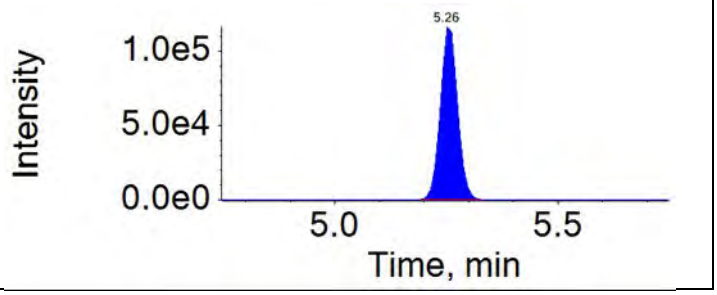
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



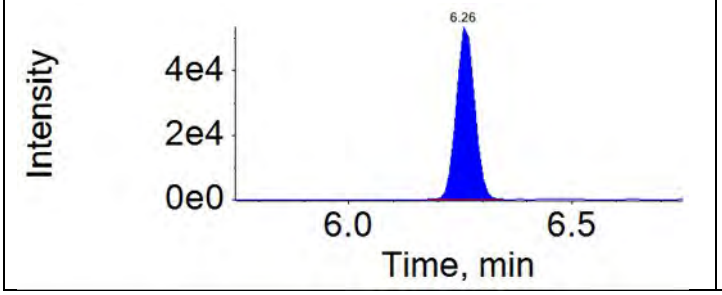


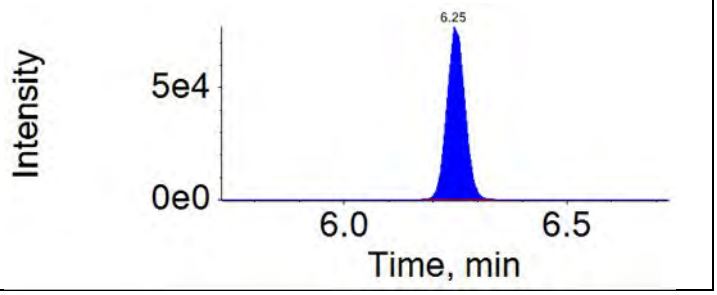
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



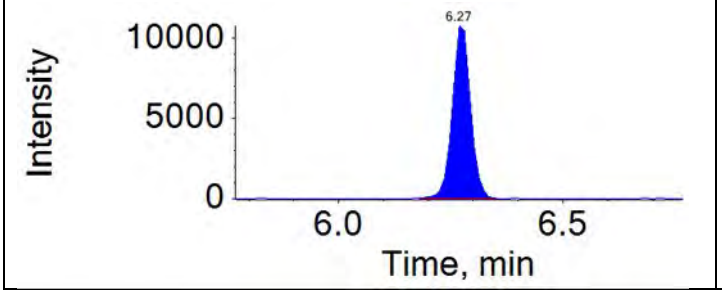


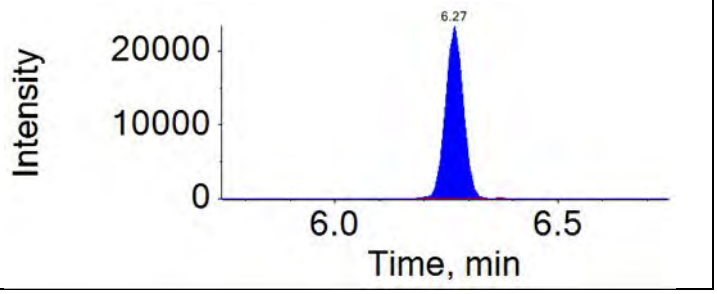
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



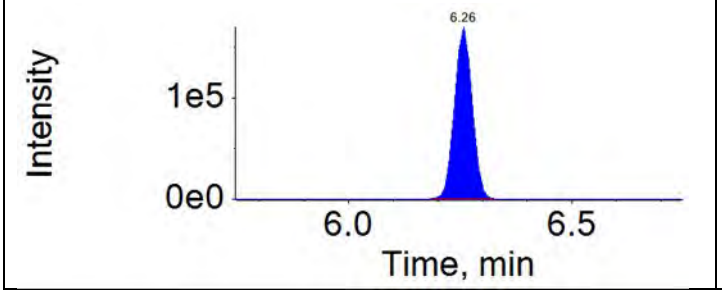


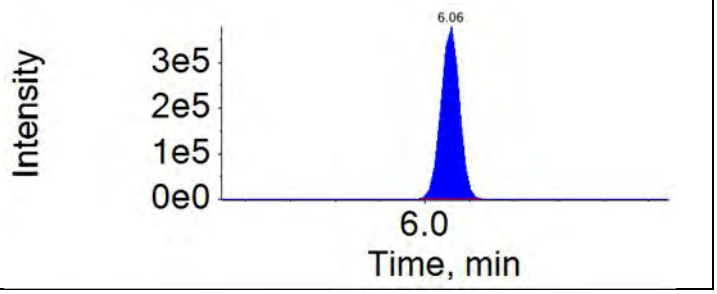
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

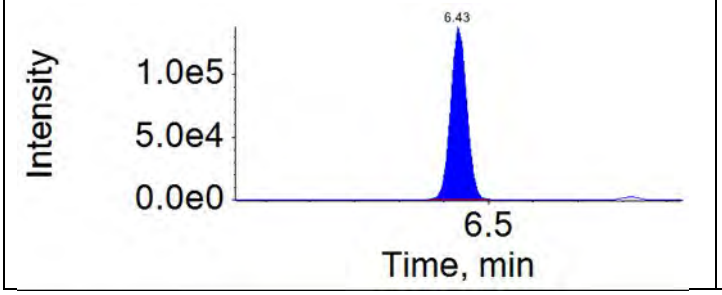
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

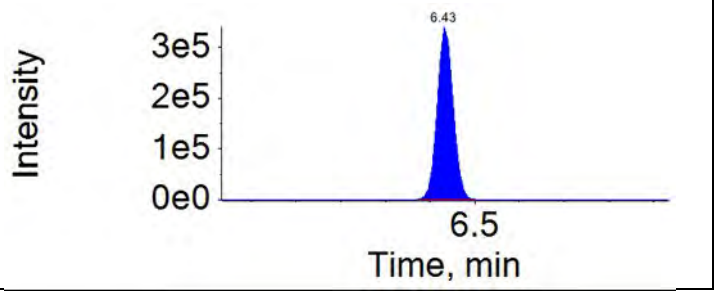
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



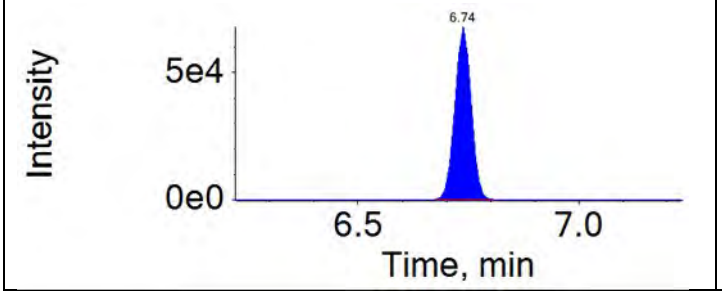


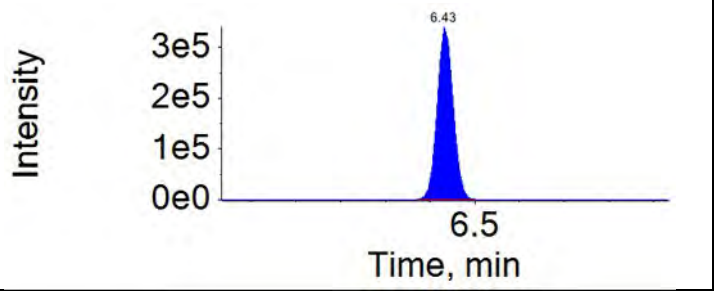
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



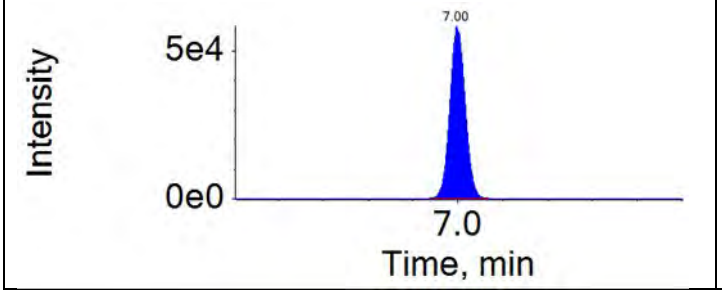


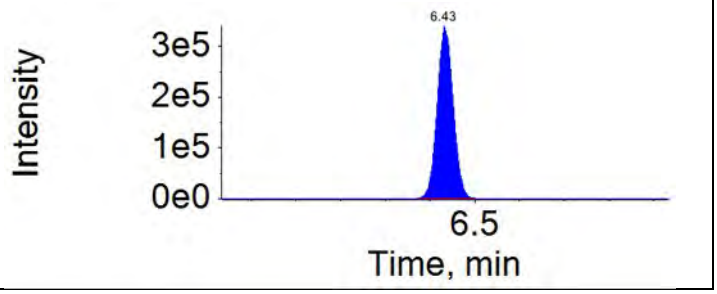
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



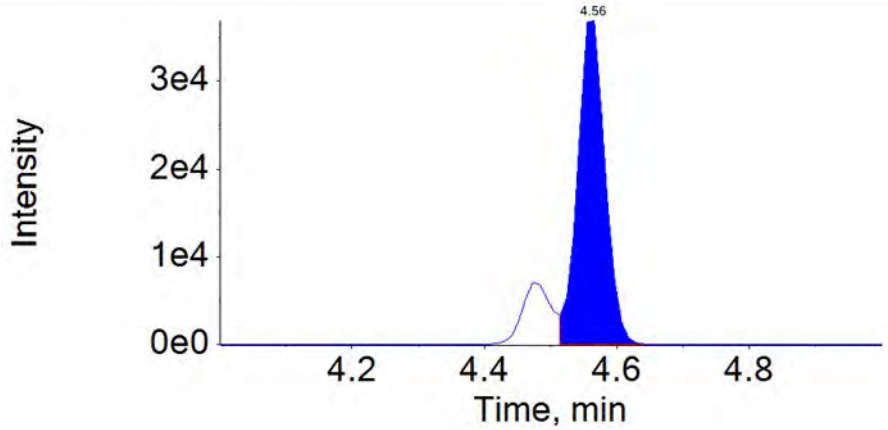


APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

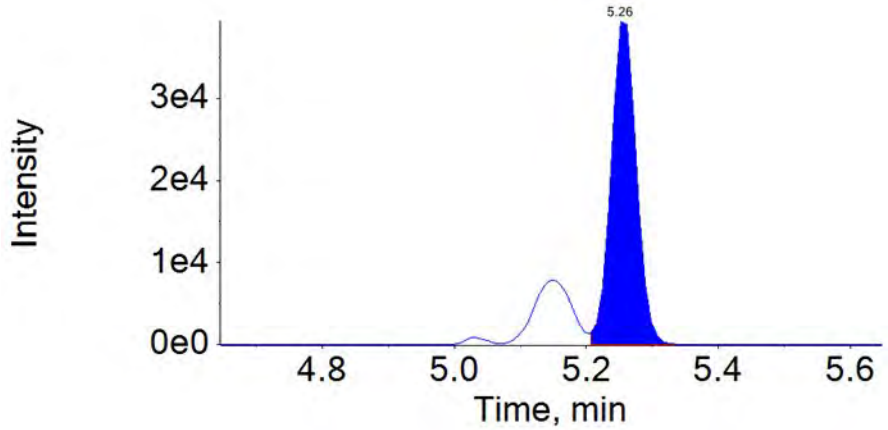
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
106597.62
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



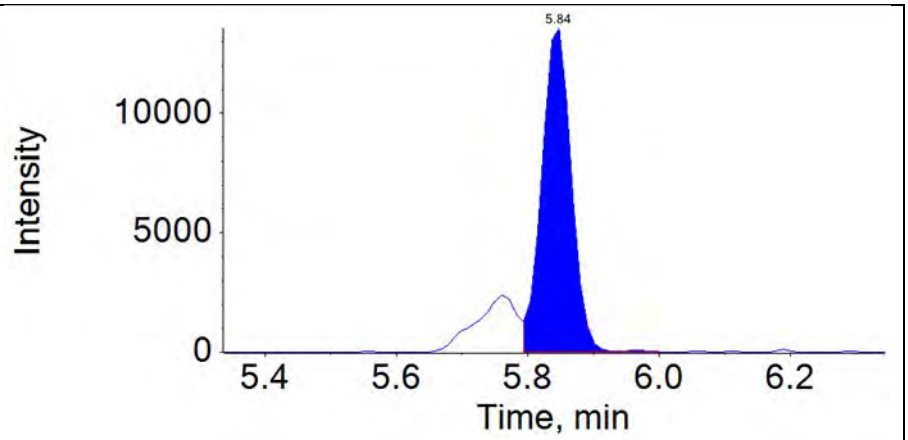
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.26
Peak Area:
105925.26
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
42641.99
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



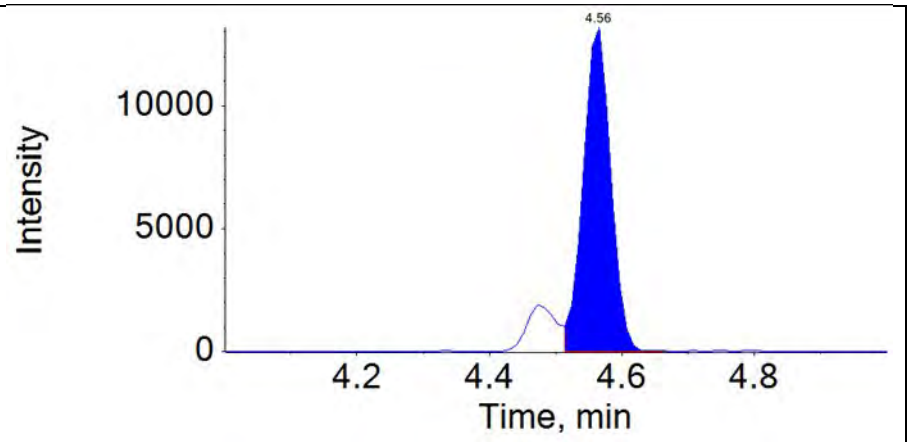
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

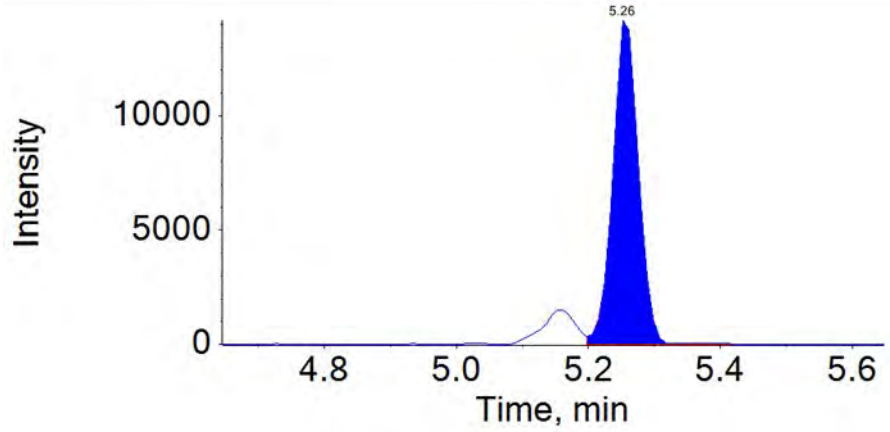
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
37946.39
Mass Range:
399.0 / 99.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



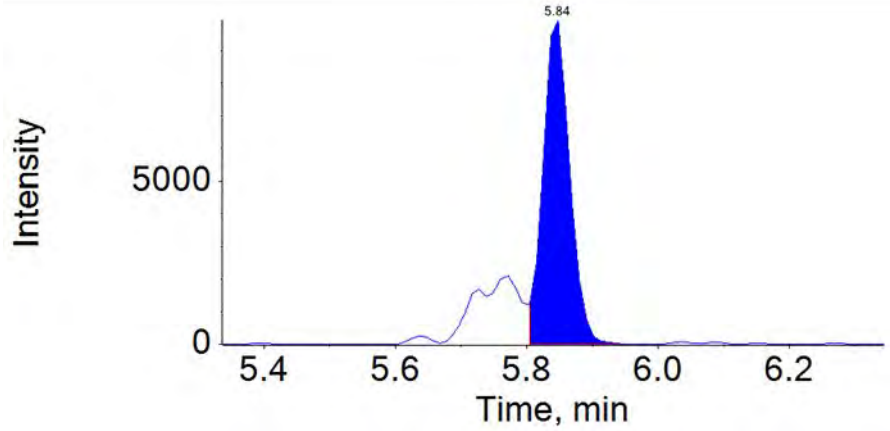
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.26
Peak Area:
38423.09
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
27991.83
Mass Range:
584.0 / 526.0
File Name:
18NOV28DCAL-08.wiff
Sample Name:
CAL3



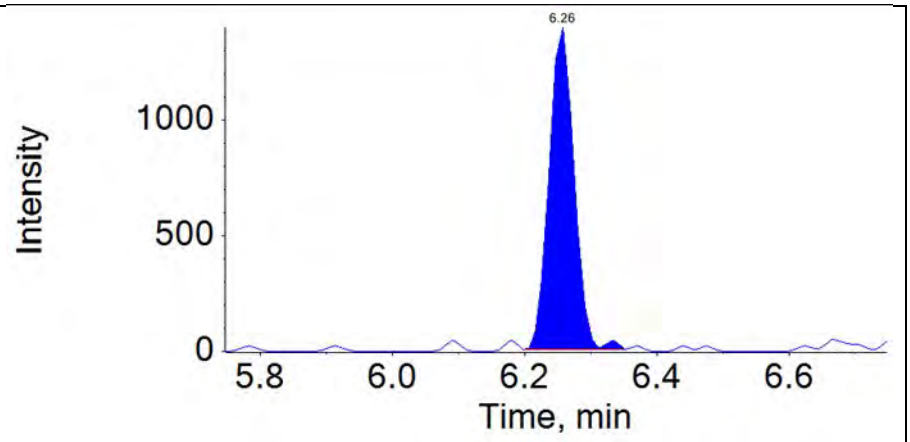
Integration Comment: incorrect integration

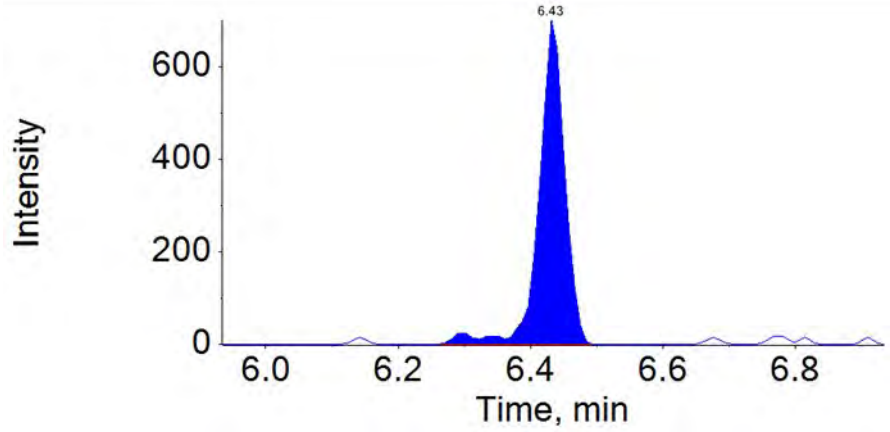
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFTrDA_2 **RT (min.):** 6.26 **Peak Area:** 3672.17 **Mass Range:** 663.0 / 169.0 **File Name:** 18NOV28DCAL-08.wiff **Sample Name:** CAL3	 **Integration Comment:** incorrect integration

Component Name: PFTeDA_2 **RT (min.):** 6.43 **Peak Area:** 1900.22 **Mass Range:** 713.0 / 169.0 **File Name:** 18NOV28DCAL-08.wiff **Sample Name:** CAL3	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Ion Ratio Report

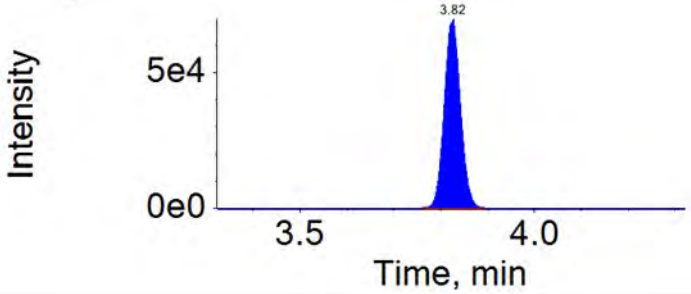
Sample Name: CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-08.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	168534.11	A	0.3655	0.3659			
PFBS_2	3.82	1.00	61662.80	A	0.3655	0.3659	0	50	
4:2-FTS	4.14	1.00	56502.46	A	0.6383	0.6021			
4:2-FTS_2	4.14	1.00	34020.61	A	0.6383	0.6021	-6	50	
PFHxA	4.17	1.00	395421.36	A	0.0103	0.0110			
PFHxA_2	4.18	1.00	4355.12	A	0.0103	0.0110	7	50	
PFPeS	4.19	1.10	89559.66	A	0.4976	0.4878			
PFPeS_2	4.19	1.10	43683.81	A	0.4976	0.4878	-2	50	
PFHpA	4.56	1.00	388626.66	A	0.0557	0.0548			
PFHpA_2	4.56	1.00	21286.44	A	0.0557	0.0548	-2	50	
PFHxS	4.56	1.00	127889.21	M	0.3693	0.3421			
PFHxS_2	4.56	1.00	43748.70	M	0.3693	0.3421	-7	50	
6:2-FTS	4.92	1.00	53951.03	A	0.6625	0.6864			
6:2-FTS_2	4.92	1.00	37034.45	A	0.6625	0.6864	4	50	
PFHpS	4.92	1.08	129450.89	A	0.3915	0.3990			
PFHpS_2	4.92	1.08	51651.50	A	0.3915	0.3990	2	50	
PFOA	4.93	1.00	405879.42	A	0.0573	0.0559			
PFOA_2	4.93	1.00	22683.88	A	0.0573	0.0559	-2	50	
PFOS	5.26	1.00	139506.62	M	0.2960	0.3122			
PFOS_2	5.26	1.00	43549.51	M	0.2960	0.3122	5	50	
PFNA	5.27	1.00	370292.03	A	0.0201	0.0194			
PFNA_2	5.27	1.00	7190.40	A	0.0201	0.0194	-3	50	
PFNS	5.55	1.06	91471.00	A	0.4794	0.4837			
PFNS_2	5.55	1.06	44242.69	A	0.4794	0.4837	1	50	
PFDA	5.57	1.00	343523.00	A	0.0075	0.0062			
PFDA_2	5.58	1.00	2142.58	A	0.0075	0.0062	-17	50	
8:2-FTS	5.57	1.00	57433.88	A	0.5380	0.6364			
8:2-FTS_2	5.57	1.00	36548.28	A	0.5380	0.6364	18	50	
NMeFOSAA	5.71	1.00	62054.84	A	0.2305	0.1960			
NMeFOSAA_2	5.71	1.00	12164.14	A	0.2305	0.1960	-15	50	
PFDS	5.80	1.10	80537.37	A	0.5356	0.4311			
PFDS_2	5.80	1.10	34716.06	A	0.5356	0.4311	-20	50	
PFUnDA	5.83	1.00	370693.61	A	0.0038	0.0032			
PFUnDA_2	5.83	1.00	1171.38	A	0.0038	0.0032	-17	50	
NEtFOSAA	5.84	1.00	52769.46	M	0.7356	0.7268			
NEtFOSAA_2	5.84	1.00	38354.97	M	0.7356	0.7268	-1	50	
PFDoDA	6.06	1.00	486489.15	A	0.0130	0.0107			
PFDoDA_2	6.06	1.00	5227.64	A	0.0130	0.0107	-18	50	
10:2-FTS	6.07	1.09	58508.21	A	0.6989	0.5755			
10:2-FTS_2	6.07	1.09	33673.51	A	0.6989	0.5755	-18	50	
PFTrDA	6.26	1.03	466266.85	A	0.0090	0.0078			
PFTrDA_2	6.26	1.03	3621.63	M	0.0090	0.0078	-14	50	
PFTeDA	6.43	1.00	342239.84	A	0.0056	0.0053			
PFTeDA_2	6.43	1.00	1811.16	M	0.0056	0.0053	-6	50	
PFHxDA	6.74	1.05	173721.02	A	0.0646	0.0595			
PFHxDA_2	6.74	1.05	10340.87	A	0.0646	0.0595	-8	50	
PFODA	7.00	1.09	139071.53	A	0.0264	0.0248			
PFODA_2	7.00	1.09	3451.82	A	0.0264	0.0248	-6	50	

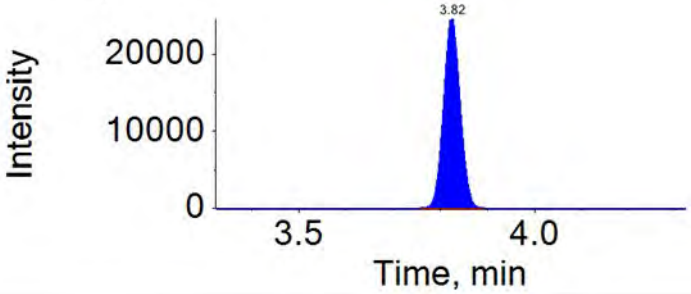
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

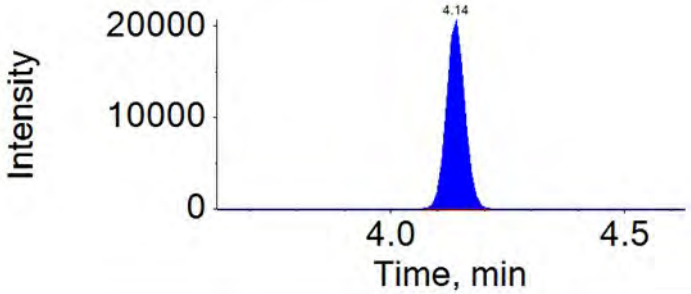
Component: PFBS
Primary Mass: 299.0 / 80.0



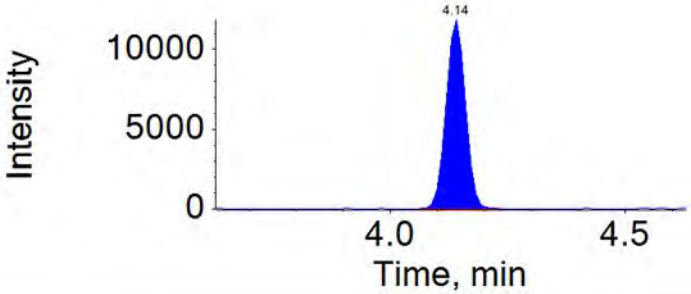
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



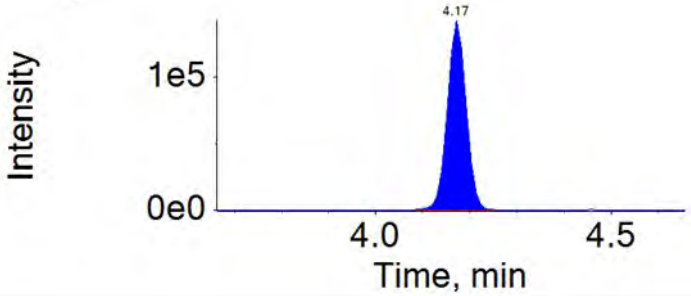
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



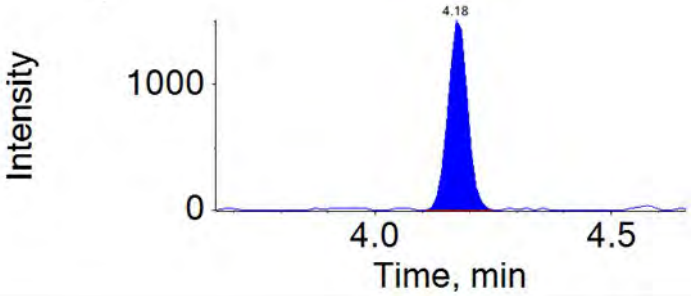
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



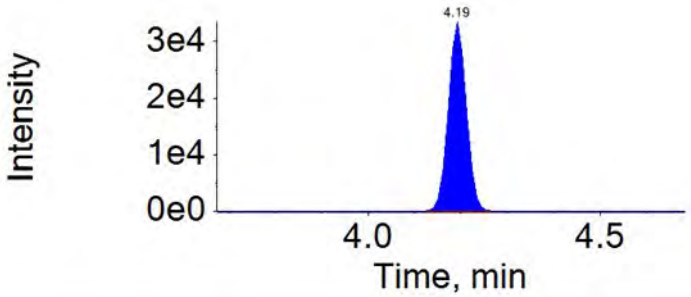
Component: PFHxA
Primary Mass: 313.0 / 269.0



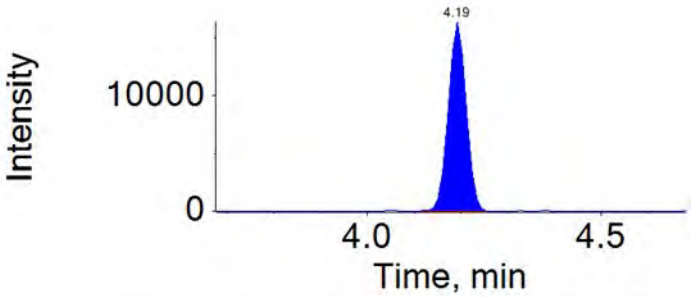
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



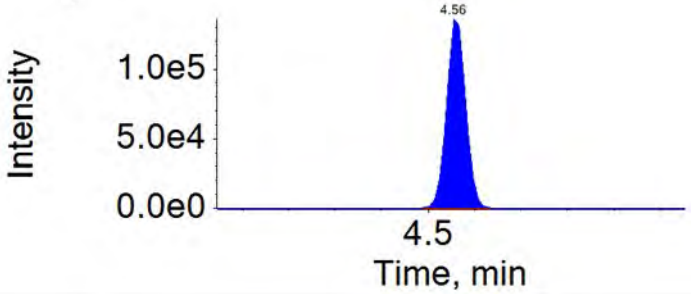
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



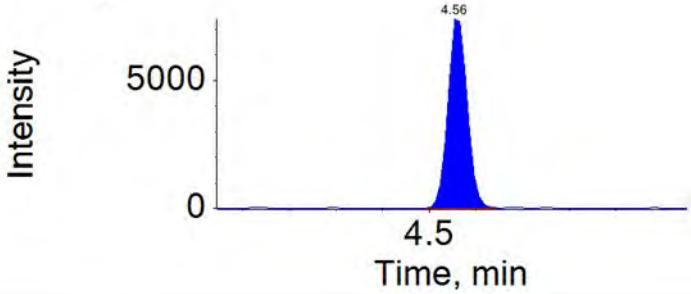
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

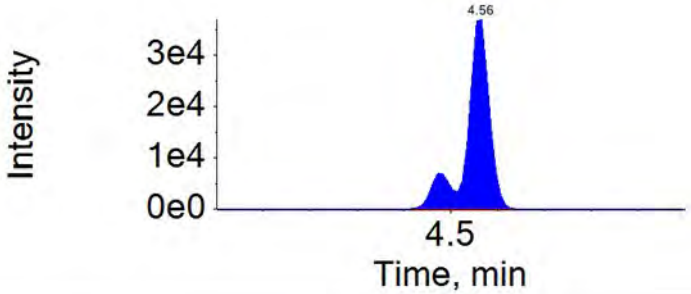
Component: PFHpA
Primary Mass: 363.0 / 319.0



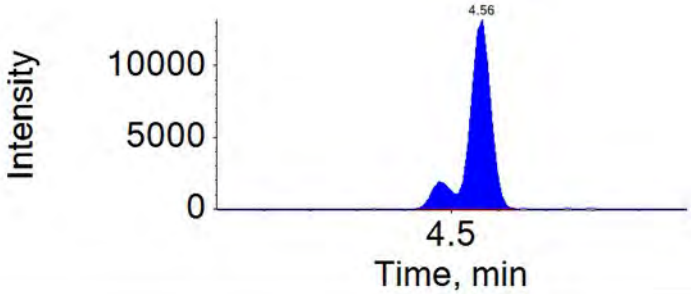
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



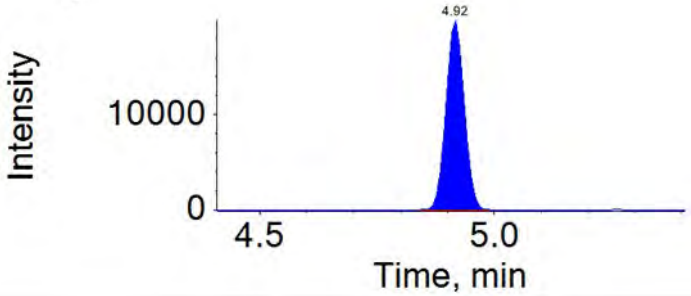
Component: PFHxS
Primary Mass: 399.0 / 80.0



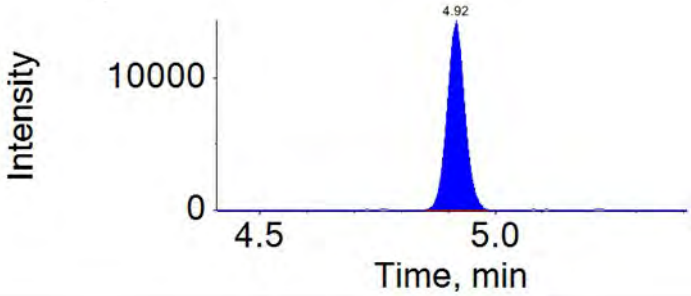
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



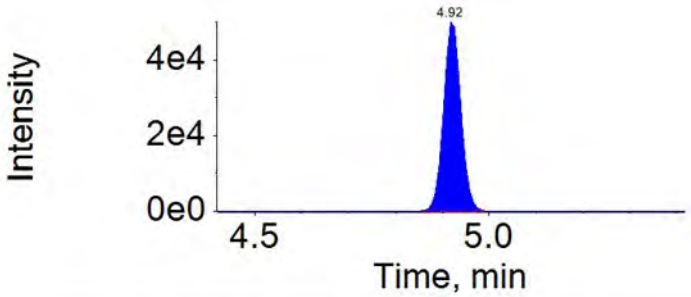
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



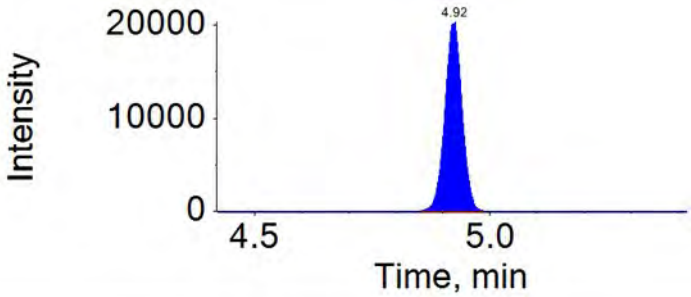
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



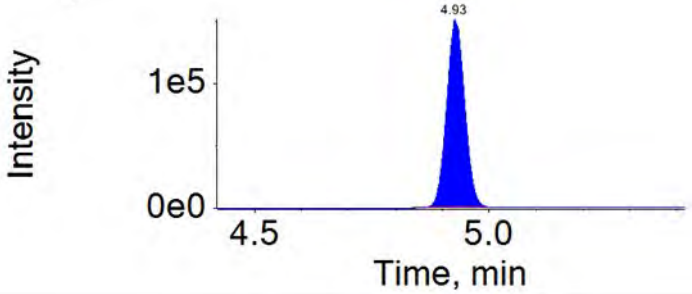
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



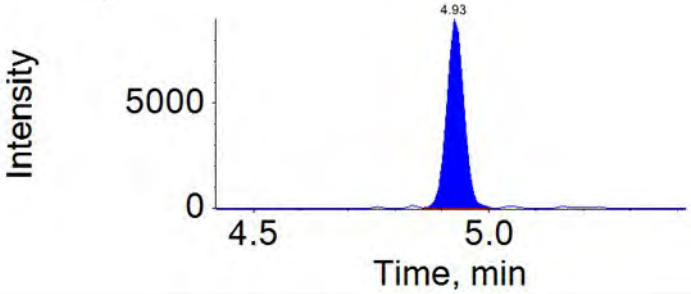
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

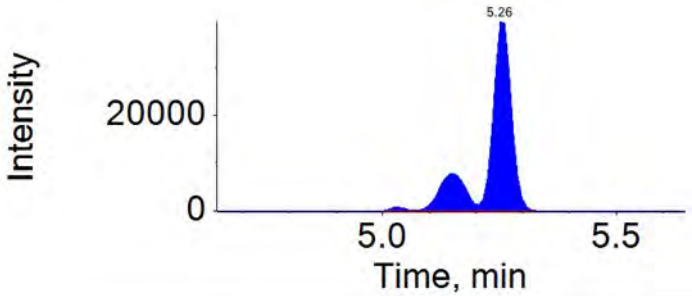
Component: PFOA
Primary Mass: 413.0 / 369.0



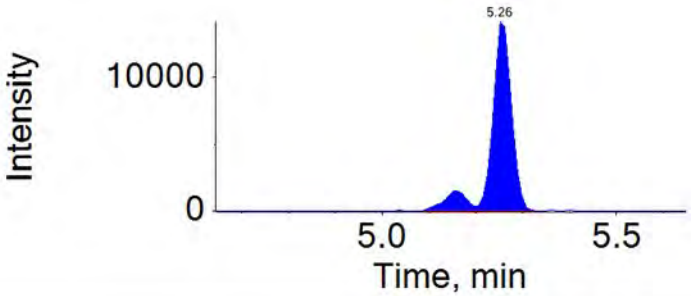
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



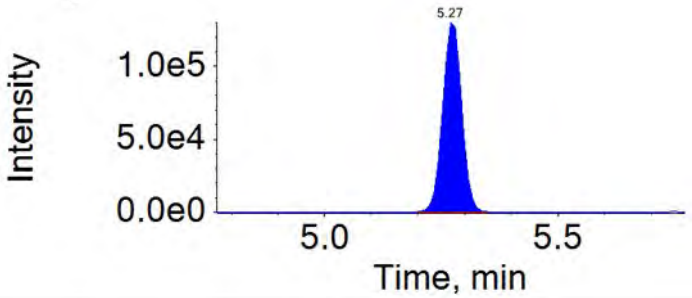
Component: PFOS
Primary Mass: 499.0 / 80.0



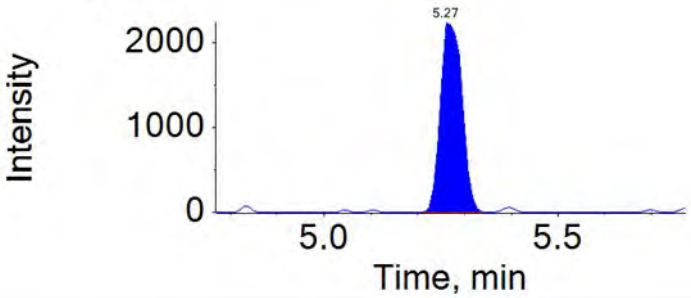
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



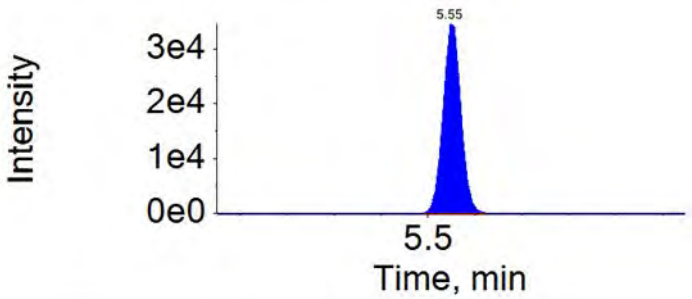
Component: PFNA
Primary Mass: 463.0 / 419.0



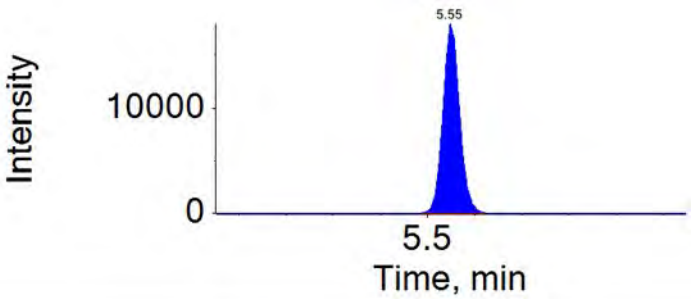
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



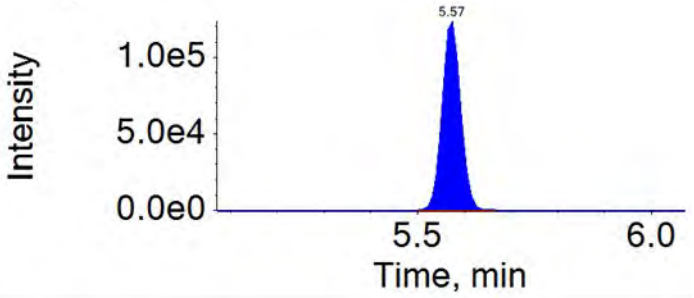
Component: PFNS
Primary Mass: 549.0 / 80.0



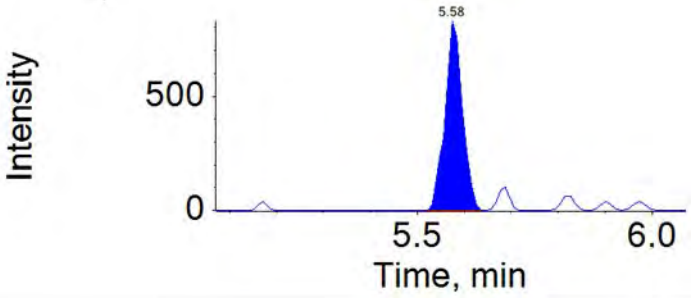
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



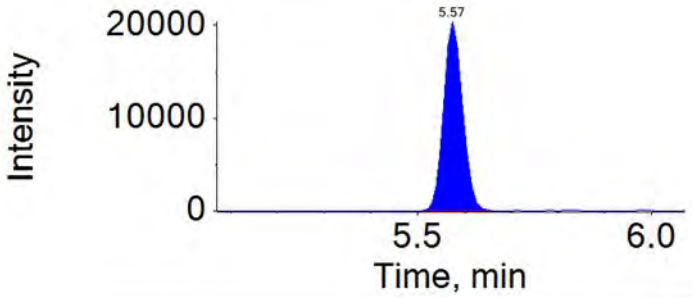
Component: PFDA
Primary Mass: 513.0 / 469.0



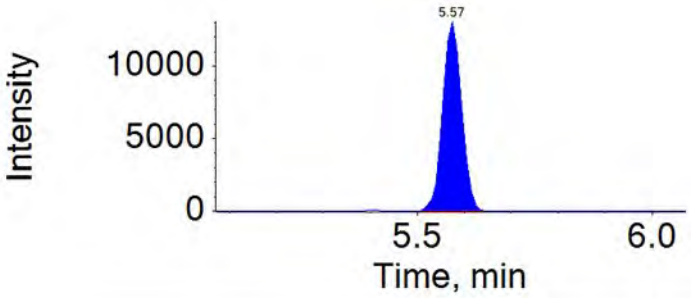
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



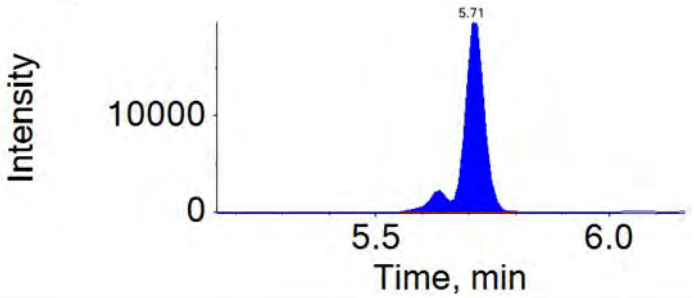
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



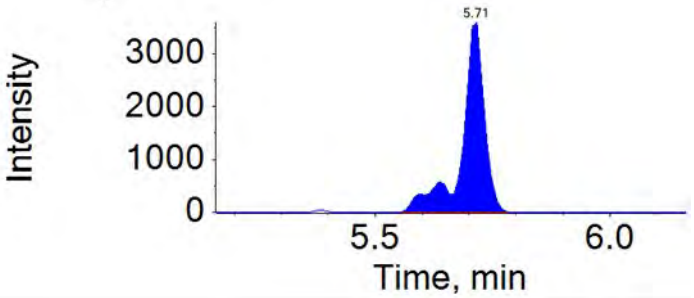
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



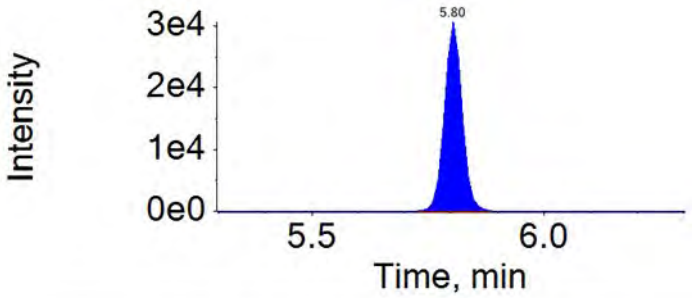
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



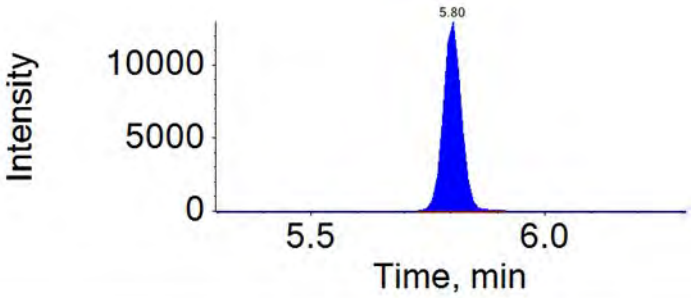
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



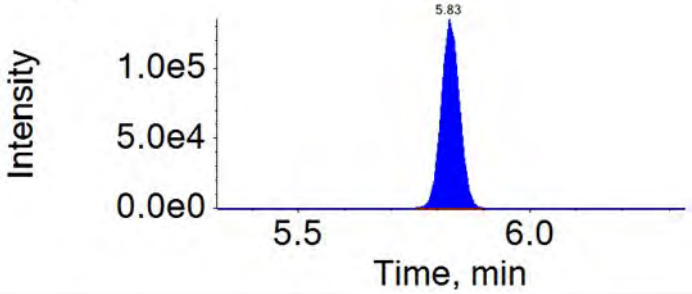
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



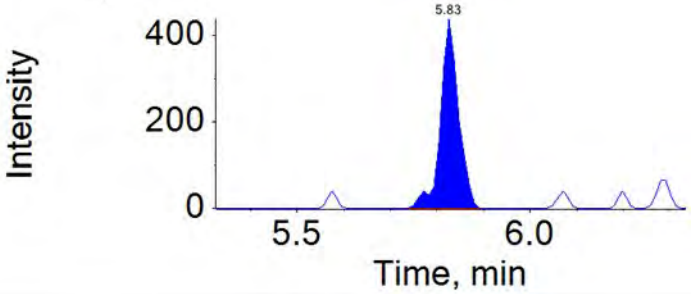
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

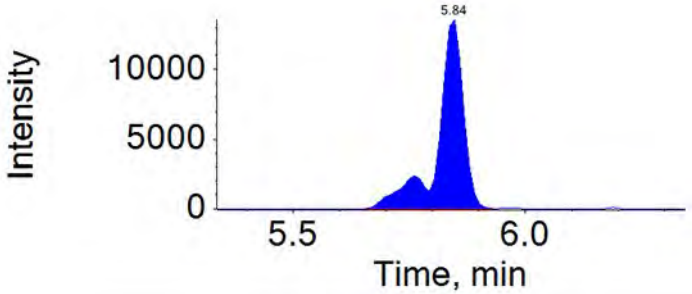
Component: PFUnDA
Primary Mass: 563.0 / 519.0



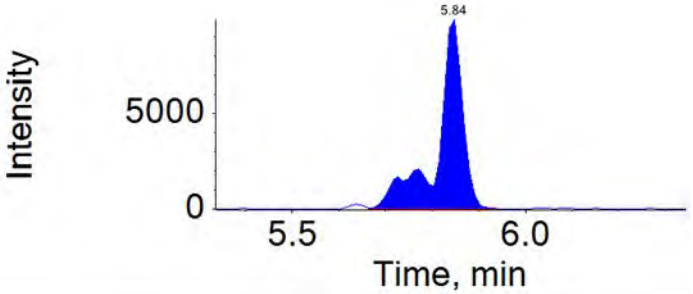
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



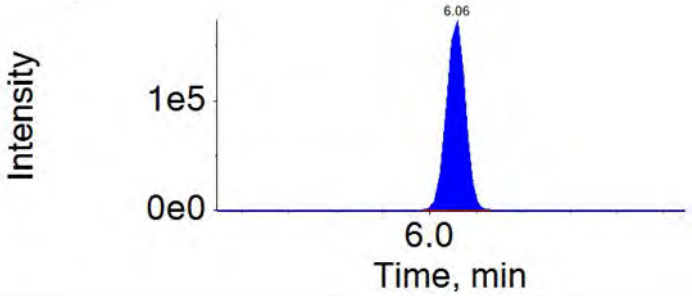
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



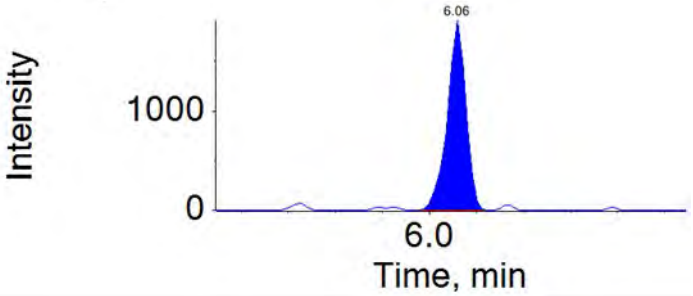
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



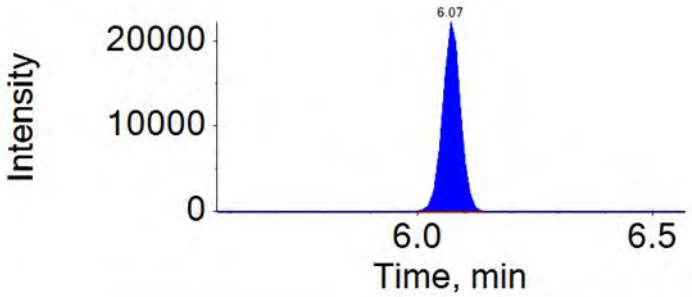
Component: PFDoDA
Primary Mass: 613.0 / 569.0



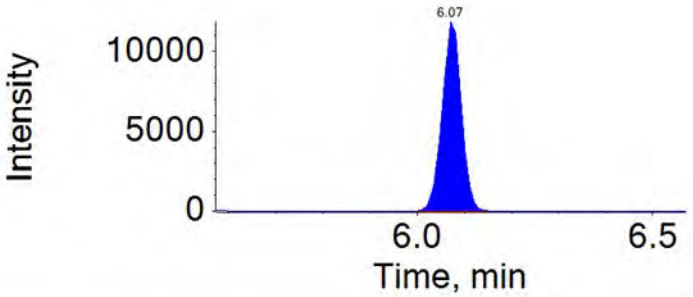
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



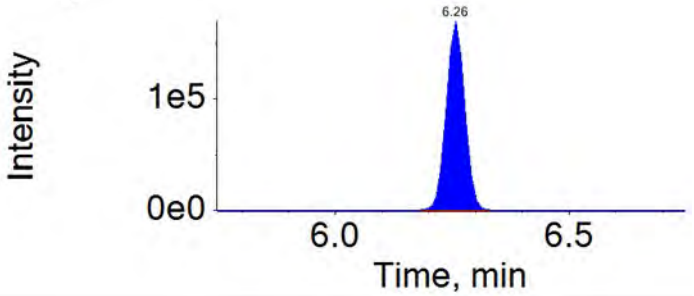
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



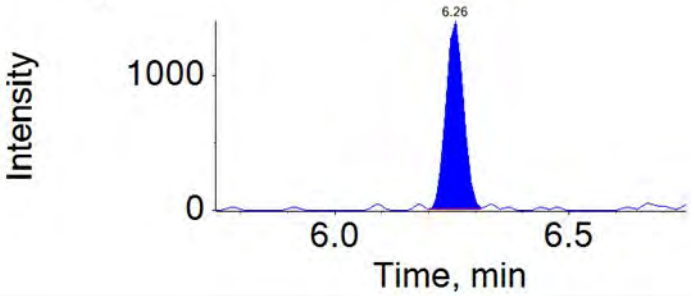
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



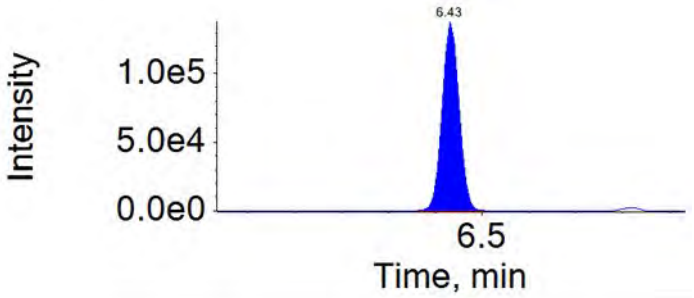
Component: PFTrDA
Primary Mass: 663.0 / 619.0



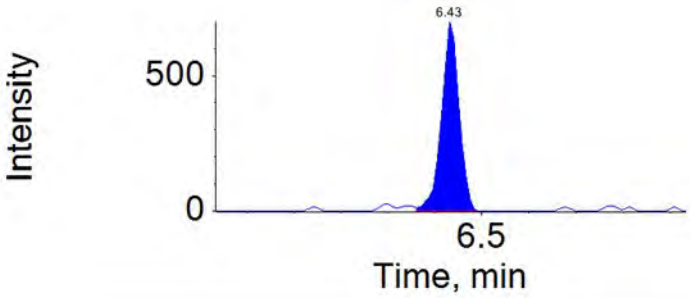
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



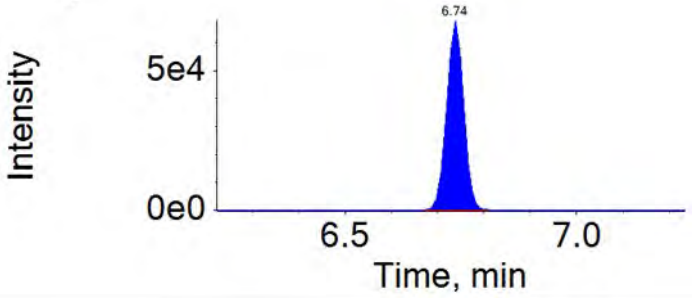
Component: PFTeDA
Primary Mass: 713.0 / 669.0



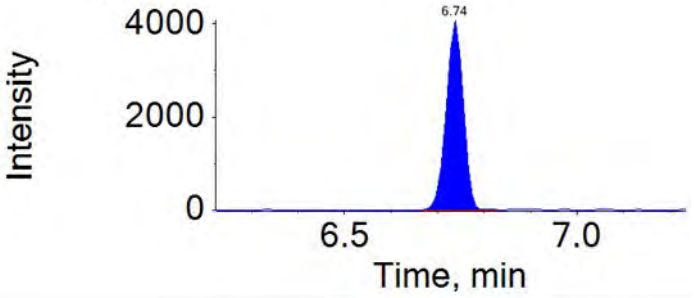
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



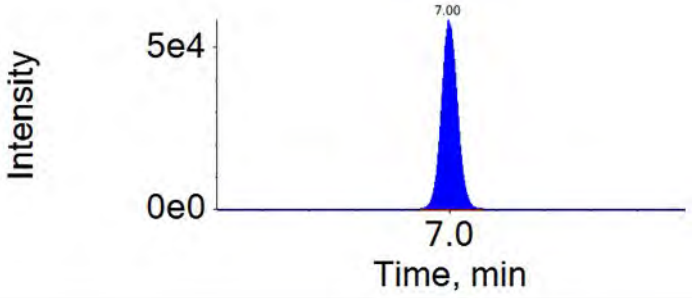
Component: PFHxDA
Primary Mass: 813.0 / 769.0



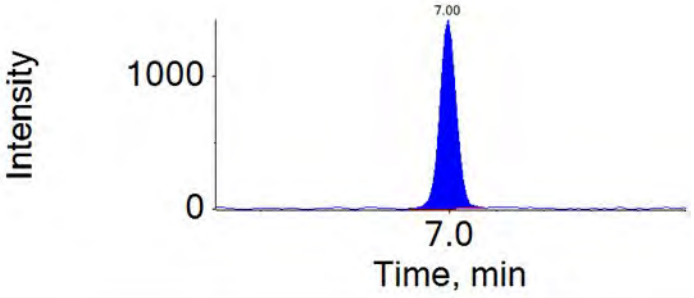
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL4			**Data File:**		18NOV28DCAL-09.wiff
Sample ID:	CALBRN41833B			**Acquis Date:**		2018-11-28T14:09:13
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	6			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	892443.9	887248.9	1	50	
13C2-PFOA	5.0	528506.8	498501.6	6	50	
13C4-PFOS	4.8	281778.6	283214.2	-1	50	
13C2-PFDA	5.0	489439.8	441790.6	11	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	974000.9	13C3-PFBA	892443.9	1.091	5.000	4.869	97	70-130	
E13C5-PFPeA	915824.6	13C3-PFBA	892443.9	1.026	5.000	4.792	96	70-130	
E13C3-PFBS	424041.3	13C3-PFBA	892443.9	0.475	4.650	4.533	97	70-130	
E13C2-4:2-FTS	67043.7	13C2-PFOA	528506.8	0.127	4.670	4.372	94	70-130	
E13C5-PFHxA	670407.7	13C2-PFOA	528506.8	1.268	5.000	4.659	93	70-130	
E13C3-PFHxS	316393.3	13C2-PFOA	528506.8	0.599	4.730	4.692	99	70-130	
E13C4-PFHpA	563674.0	13C2-PFOA	528506.8	1.067	5.000	4.901	98	70-130	
E13C2-6:2-FTS	56580.1	13C2-PFOA	528506.8	0.107	4.750	4.481	94	70-130	
E13C8-PFOA	918995.3	13C2-PFOA	528506.8	1.739	5.000	4.786	96	70-130	
E13C8-PFOS	296147.5	13C4-PFOS	281778.6	1.051	4.780	4.744	99	70-130	
E13C9-PFNA	648727.0	13C4-PFOS	281778.6	2.302	5.000	5.057	101	70-130	
E13C6-PFDA	841970.5	13C2-PFDA	489439.8	1.720	5.000	4.850	97	70-130	
E13C2-8:2-FTS	52961.9	13C2-PFDA	489439.8	0.108	4.790	4.651	97	70-130	
E13C8-PFOSA	625021.8	13C2-PFDA	489439.8	1.277	5.000	4.686	94	70-130	
Ed3-NMeFOSAA	171204.0	13C2-PFDA	489439.8	0.350	5.000	4.441	89	70-130	
E13C7-PFUnDA	546359.3	13C2-PFDA	489439.8	1.116	5.000	4.718	94	70-130	
Ed5-NEtFOSAA	138500.8	13C2-PFDA	489439.8	0.283	5.000	5.041	101	70-130	
E13C2-PFDoDA	1150927.4	13C2-PFDA	489439.8	2.352	5.000	4.941	99	70-130	
Ed7-NMePFOSAE	263412.8	13C2-PFDA	489439.8	0.538	5.000	4.651	93	70-130	
Ed3-NMePFOSA	83886.6	13C2-PFDA	489439.8	0.171	5.000	4.639	93	70-130	
Ed9-NEtPFOSAE	218635.8	13C2-PFDA	489439.8	0.447	5.000	4.529	91	70-130	
Ed5-NEtPFOSA	66966.4	13C2-PFDA	489439.8	0.137	5.000	4.754	95	70-130	
E13C2-PFTeDA	826670.0	13C2-PFDA	489439.8	1.689	5.000	4.674	93	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

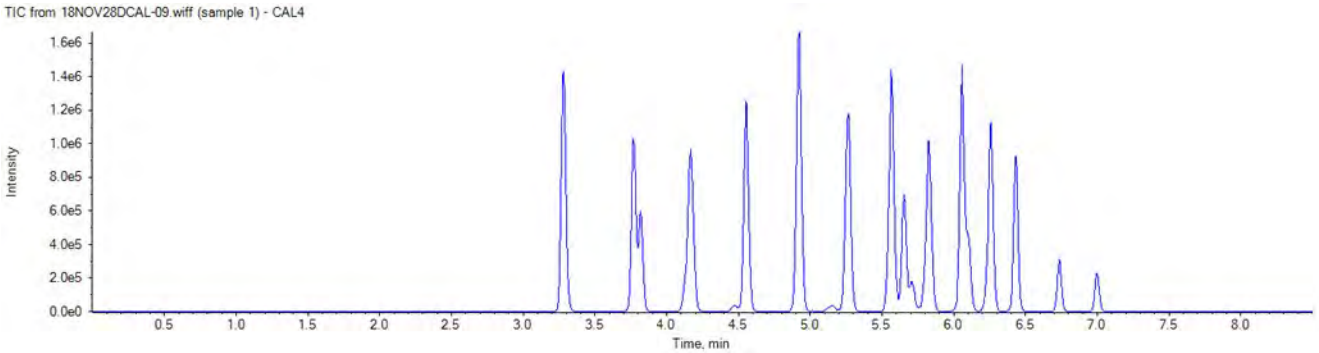
Analyte Quantitation Peak Table

Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-09.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.28	1.000	1425164.4		A	13C4-PFBA	3.28	974000.9	1.463	8.021
PFPeA	3.77	1.000	1424845.3		A	13C5-PFPeA	3.77	915824.6	1.556	7.634
PFBS	3.82	1.000	590590.3		A	13C3-PFBS	3.82	424041.3	1.393	6.761
4:2-FTS	4.13	1.000	191344.6		A	13C2-4:2-FTS	4.13	67043.7	2.854	7.640
PFHxA	4.16	1.000	1343216.4		A	13C5-PFHxA	4.17	670407.7	2.004	8.042
PFPeS	4.19	1.100	311741.6		A	13C3-PFBS	3.82	424041.3	0.735	7.436
PFHpA	4.55	1.000	1429895.3		A	13C4-PFHpA	4.55	563674.0	2.537	7.829
PFHxS	4.56	1.000	444626.0		M	13C3-PFHxS	4.56	316393.3	1.405	6.580
6:2-FTS	4.91	1.000	185311.5		A	13C2-6:2-FTS	4.91	56580.1	3.275	8.546
PFHpS	4.92	1.080	471580.6		A	13C3-PFHxS	4.56	316393.3	1.490	7.439
PFOA	4.92	1.000	1486960.4		A	13C8-PFOA	4.92	918995.3	1.618	8.361
PFOS	5.25	1.000	481950.0		M	13C8-PFOS	5.25	296147.5	1.627	6.826
PFNA	5.27	1.000	1365056.4		A	13C9-PFNA	5.27	648727.0	2.104	8.064
PFNS	5.55	1.060	369833.4		A	13C8-PFOS	5.25	296147.5	1.249	7.885
PFDA	5.57	1.000	1223810.4		A	13C6-PFDA	5.57	841970.5	1.454	8.227
8:2-FTS	5.57	1.000	203687.7		A	13C2-8:2-FTS	5.57	52961.9	3.846	7.253
PFOSA	5.65	1.000	976434.1		A	13C8-PFOSA	5.65	625021.8	1.562	7.914
NMeFOSAA	5.71	1.000	212775.3		M	d3-NMeFOSAA	5.71	171204.0	1.243	7.928
PFDS	5.80	1.100	283198.5		A	13C8-PFOS	5.25	296147.5	0.956	7.582
PFUnDA	5.83	1.000	1281938.5		A	13C7-PFUnDA	5.83	546359.3	2.346	8.387
NEtFOSAA	5.84	1.000	204048.6		M	d5-NEtFOSAA	5.84	138500.8	1.473	7.175
PFDoDA	6.06	1.000	1650301.1		A	13C2-PFDoDA	6.06	1150927.4	1.434	7.854
10:2-FTS	6.08	1.090	184968.5		A	13C2-8:2-FTS	5.57	52961.9	3.492	7.701
NMePFOSAE	6.11	1.000	498735.8		A	d7-NMePFOSAE	6.10	263412.8	1.893	7.968
NMePFOSA	6.11	1.000	124582.5		A	d3-NMePFOSA	6.11	83886.6	1.485	7.873
PFDoS	6.23	1.190	159682.3		A	13C8-PFOS	5.25	296147.5	0.539	7.744
NEtPFOSAE	6.26	1.000	516882.1		A	d9-NEtPFOSAE	6.25	218635.8	2.364	8.504
NEtPFOSA	6.28	1.000	119152.1		A	d5-NEtPFOSA	6.27	66966.4	1.779	7.975
PFTrDA	6.26	1.030	1622977.7		A	13C2-PFDoDA	6.06	1150927.4	1.410	8.500
PFTeDA	6.43	1.000	1172052.0		A	13C2-PFTeDA	6.43	826670.0	1.418	8.033
PFHxDA	6.74	1.050	601723.8		A	13C2-PFTeDA	6.43	826670.0	0.728	8.321
PFODA	7.00	1.090	494210.7		A	13C2-PFTeDA	6.43	826670.0	0.598	7.964

Total Ion Chromatogram

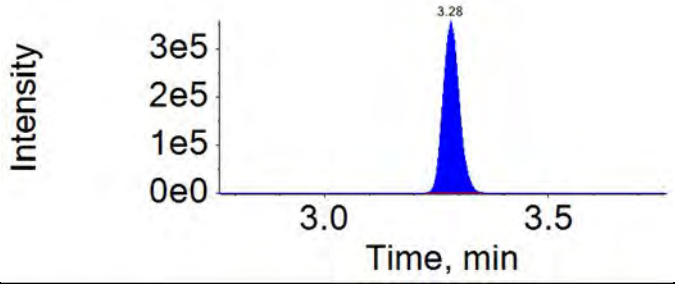


APPROVED
By MCD at 5:00 pm, 11/28/18

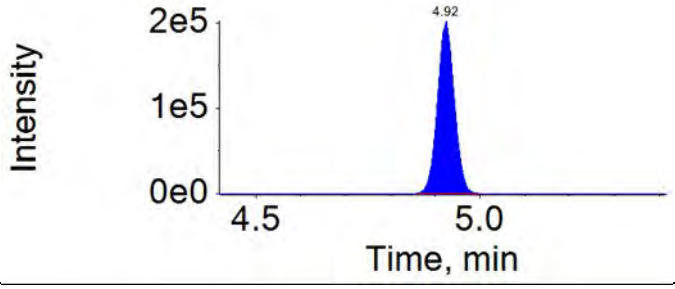
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

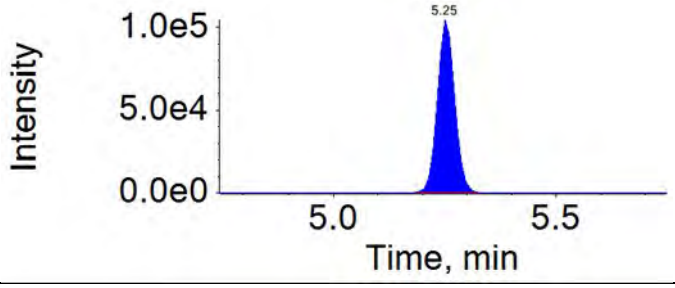
Injection Standard: 13C3-PFBA
216.0 / 172.0



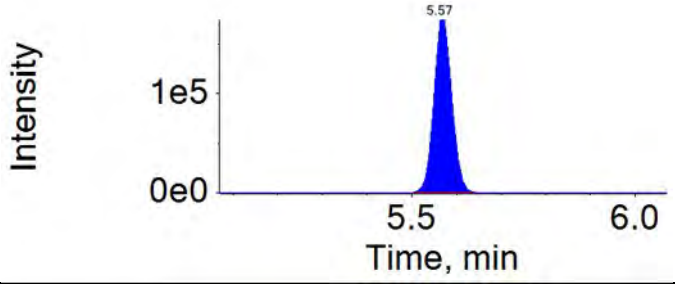
Injection Standard: 13C2-PFOA
415.0 / 370.0



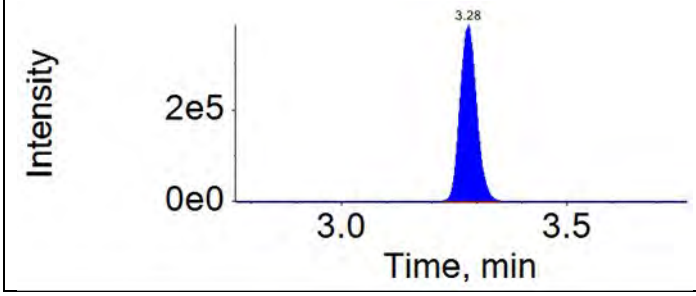
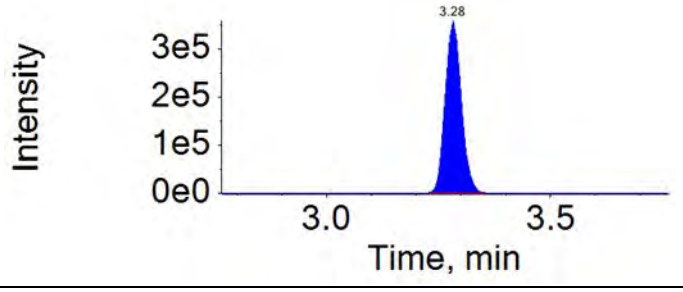
Injection Standard: 13C4-PFOS
503.0 / 80.0

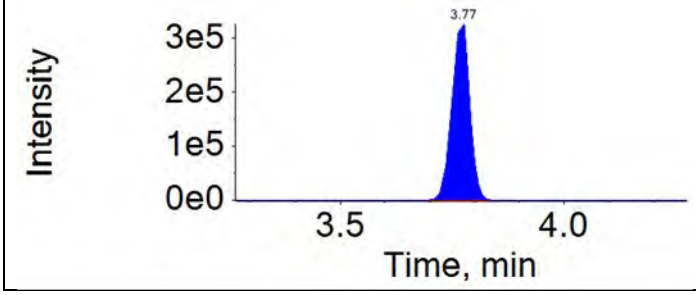
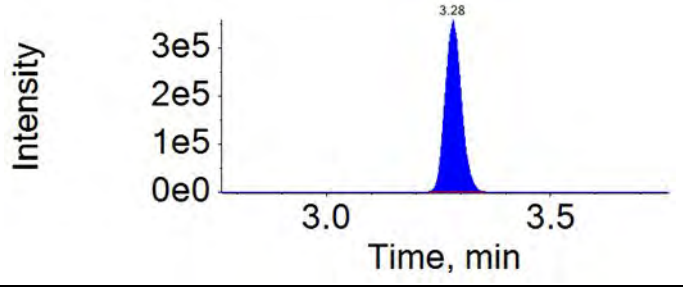


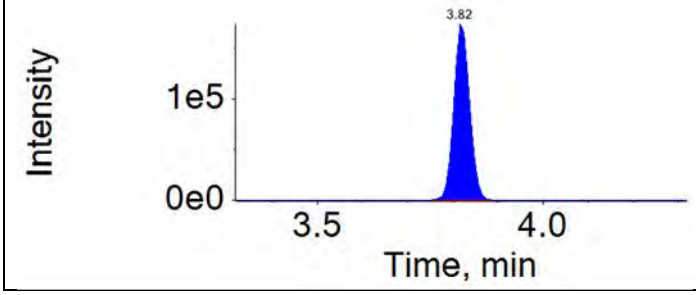
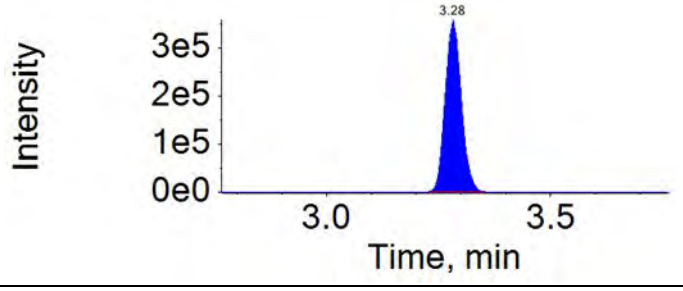
Injection Standard: 13C2-PFDA
515.0 / 470.0

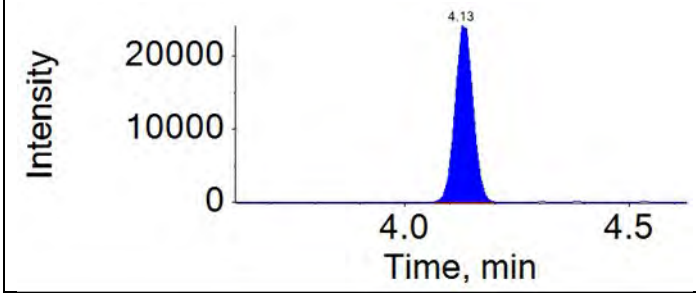
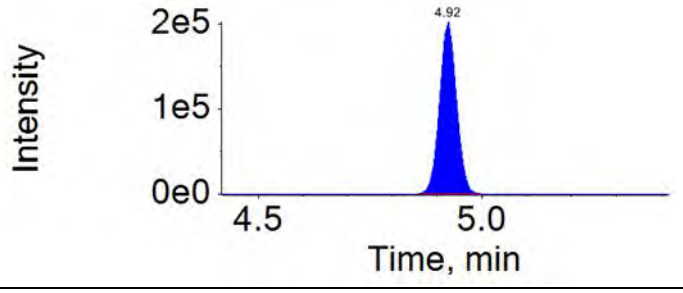


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

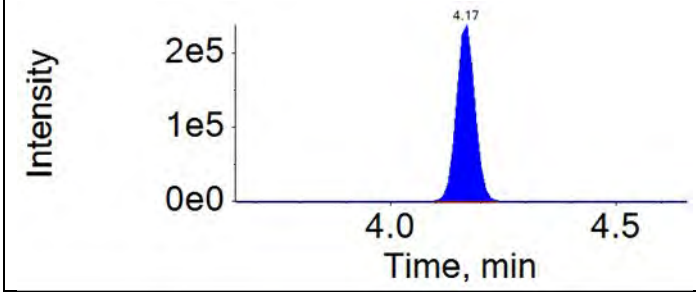
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

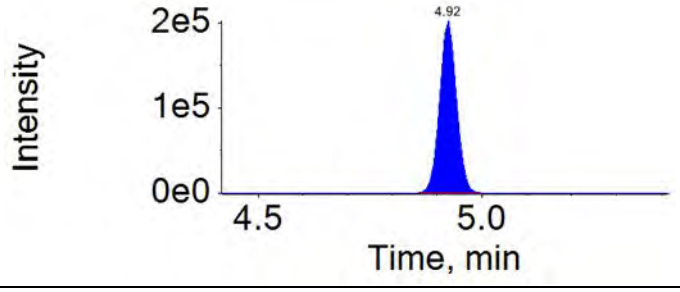
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

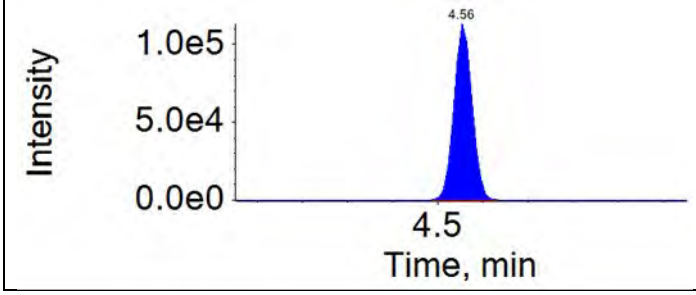
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

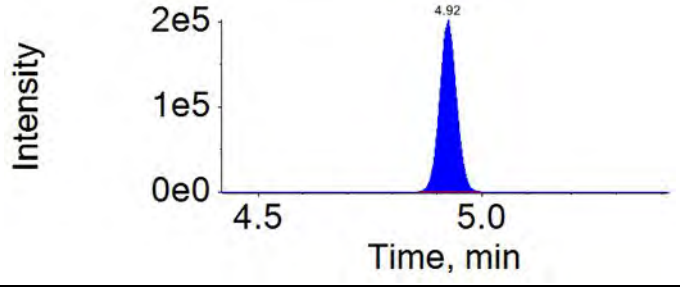
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



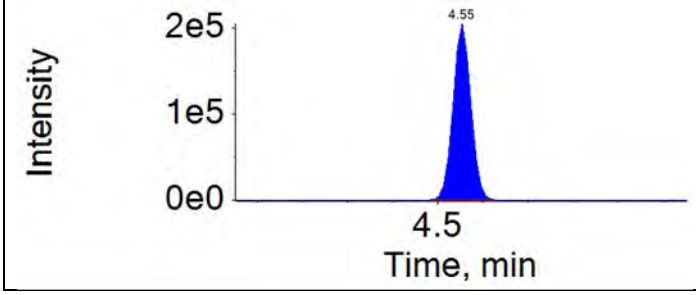


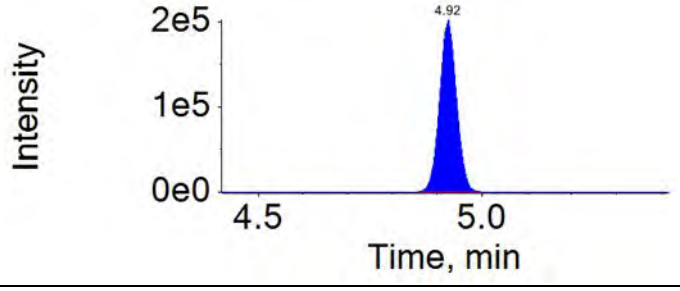
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



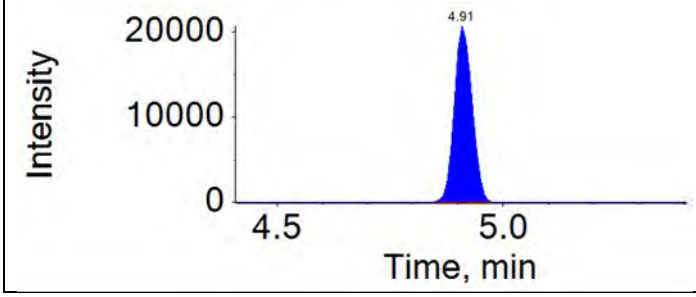


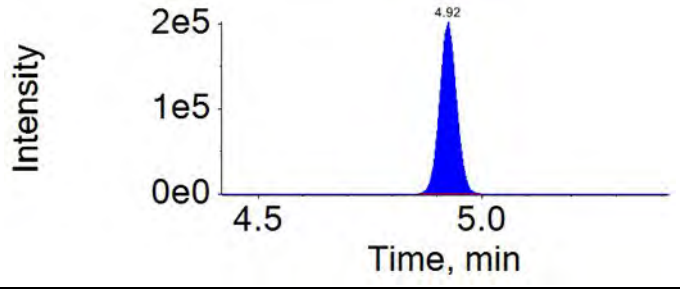
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

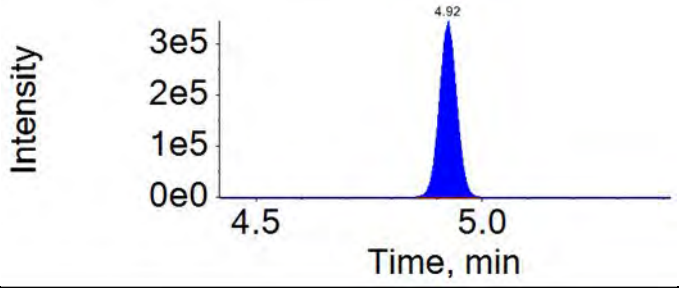
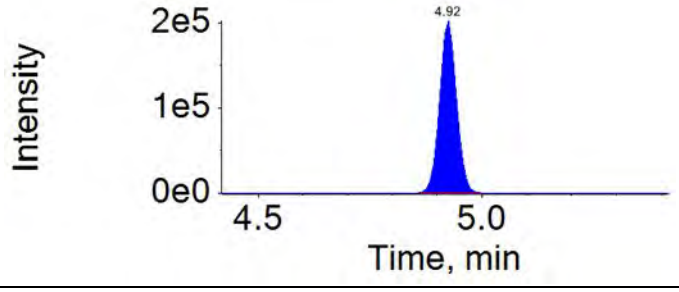


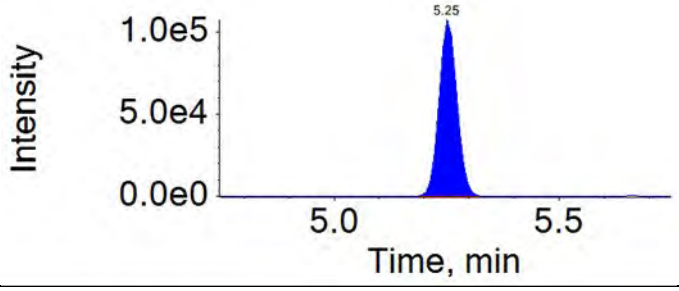
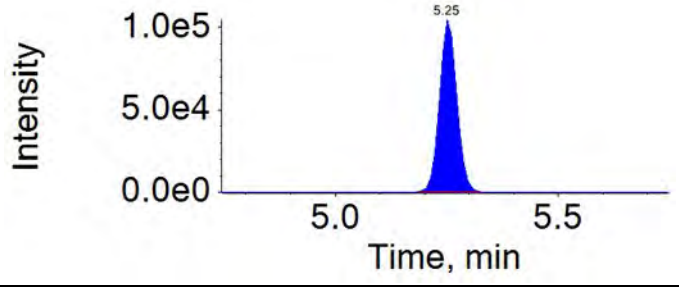


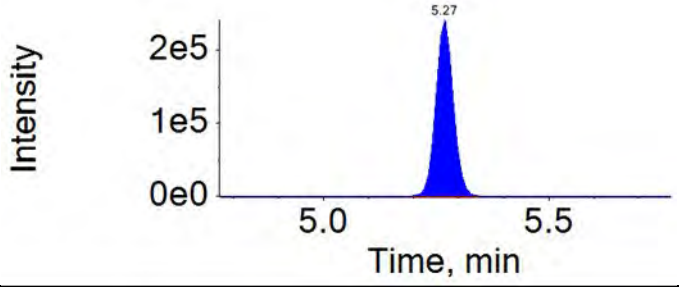
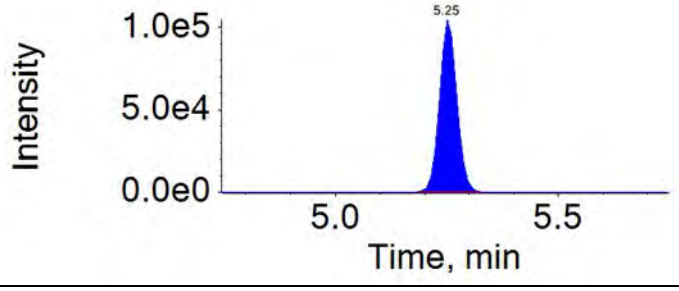
APPROVED
By MCD at 5:00 pm, 11/28/18

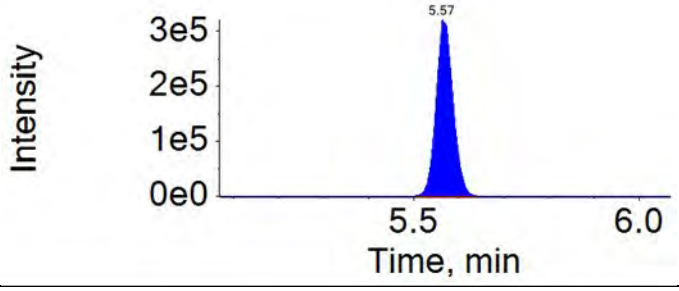
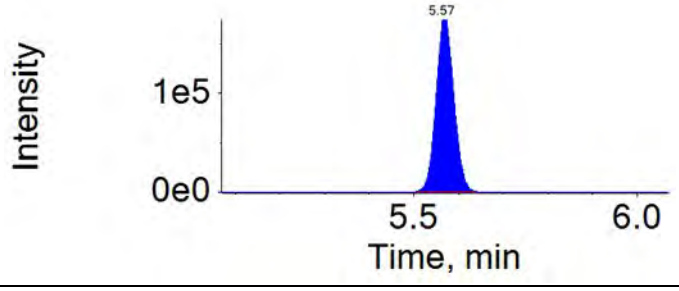
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

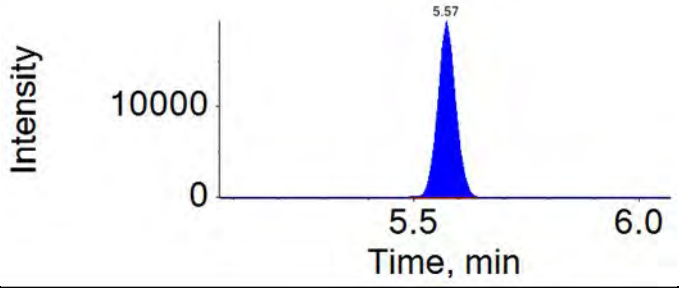
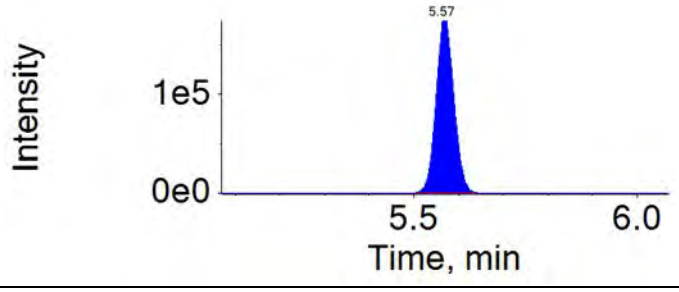
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

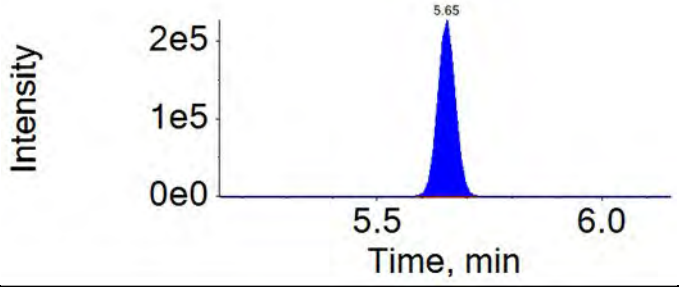
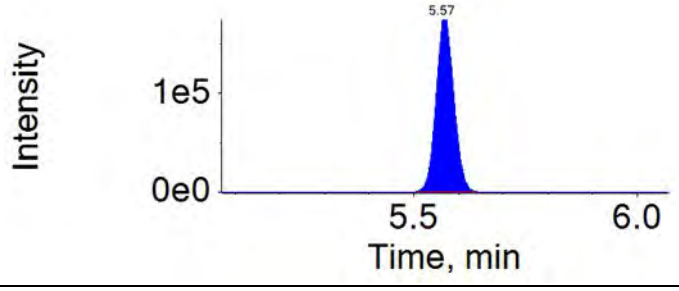
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

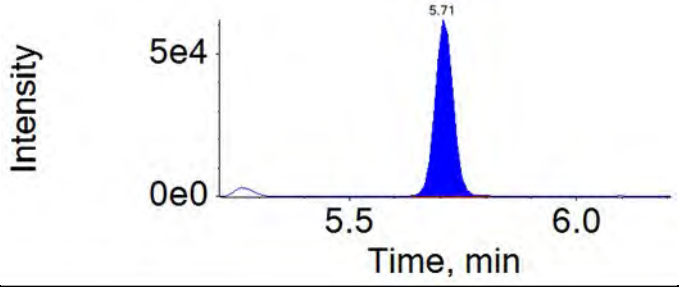
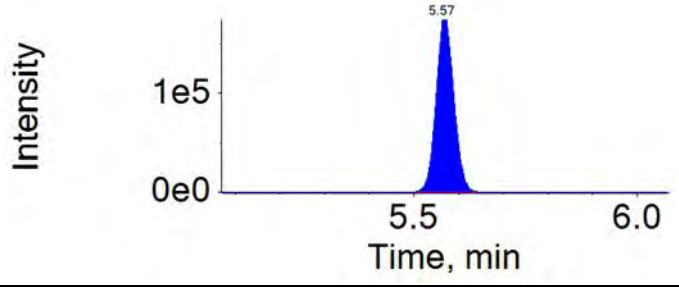
APPROVED
By MCD at 5:00 pm, 11/28/18

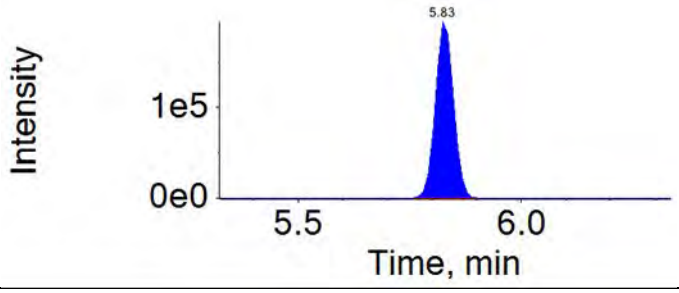
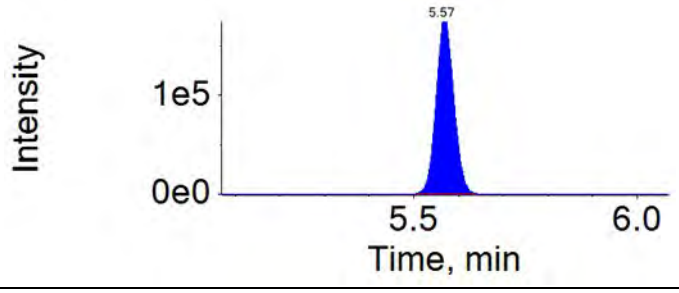
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

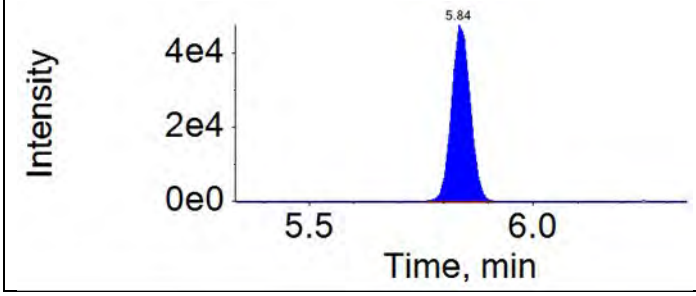
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

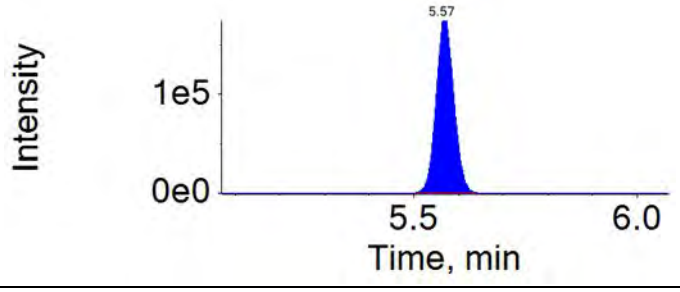
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

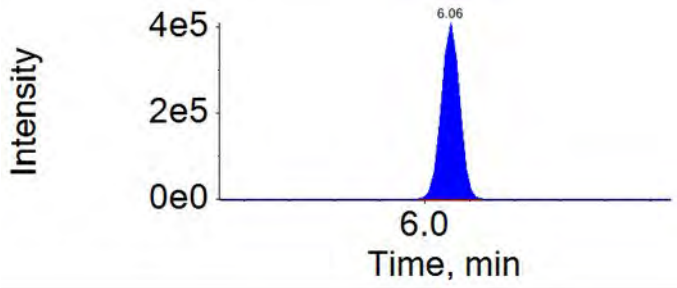
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

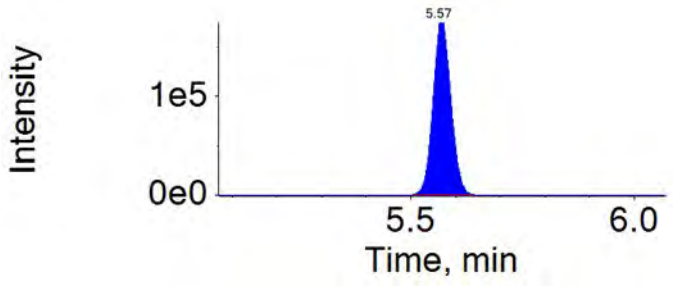
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



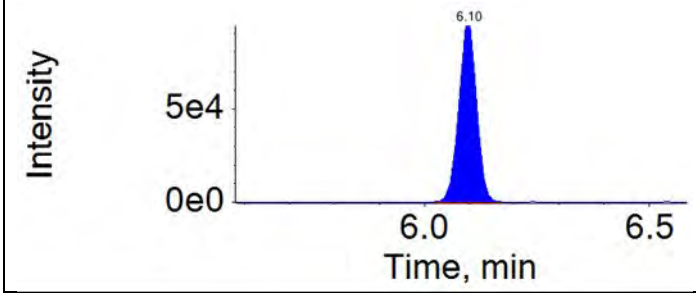


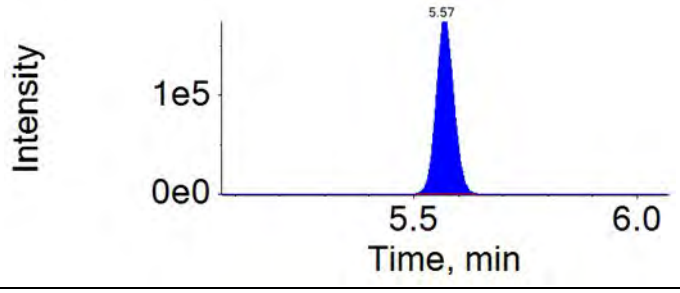
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



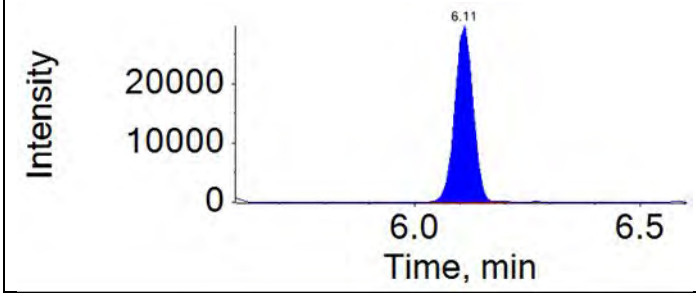


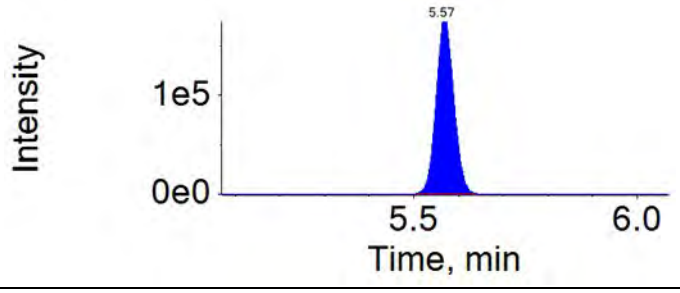
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



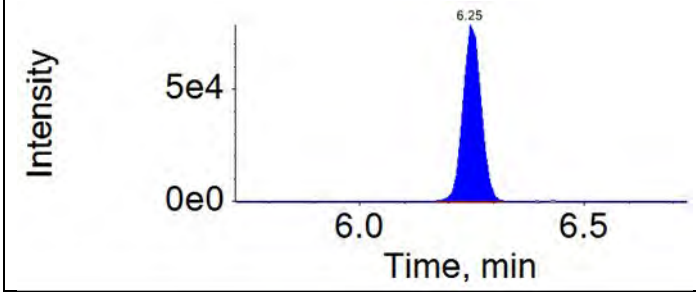


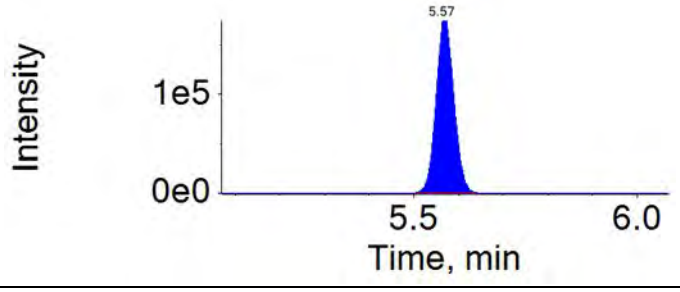
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

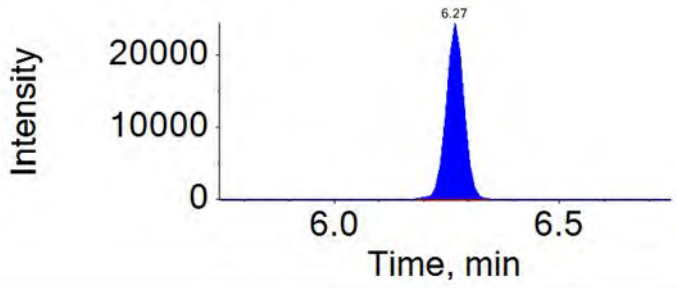
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

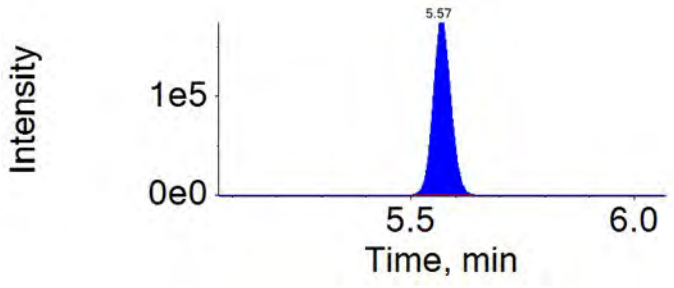
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



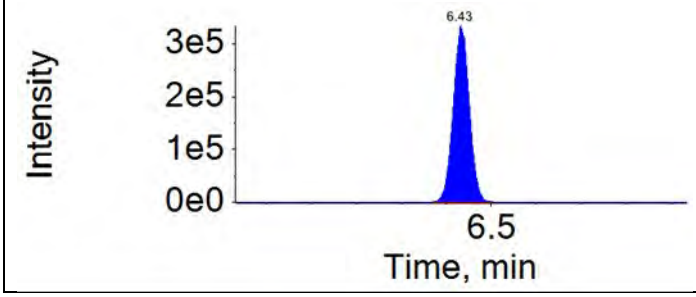


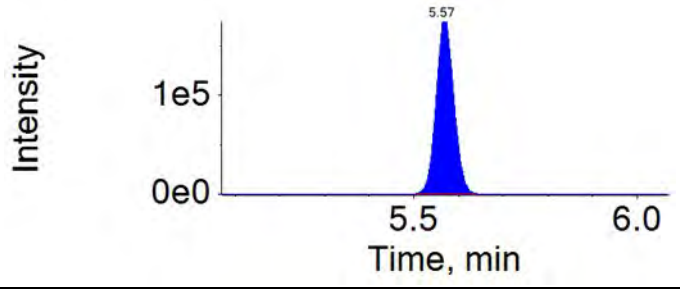
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



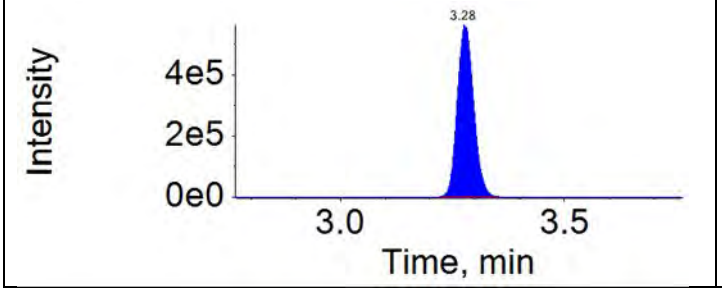


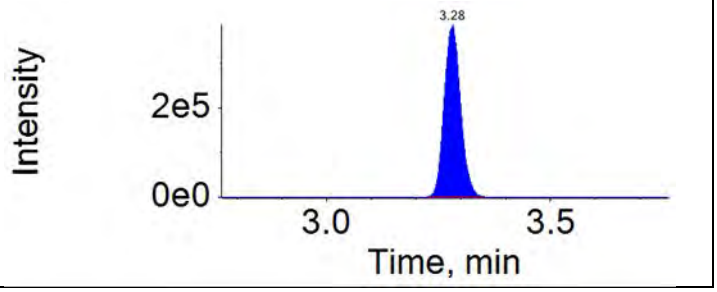
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

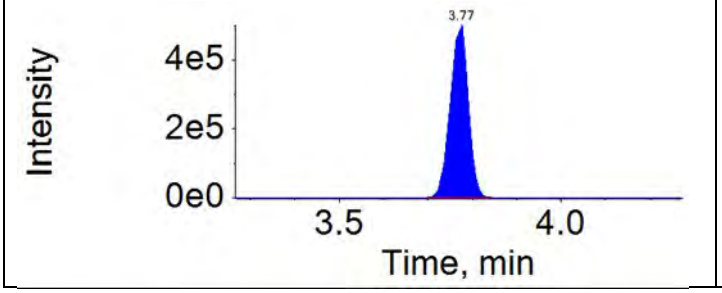
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

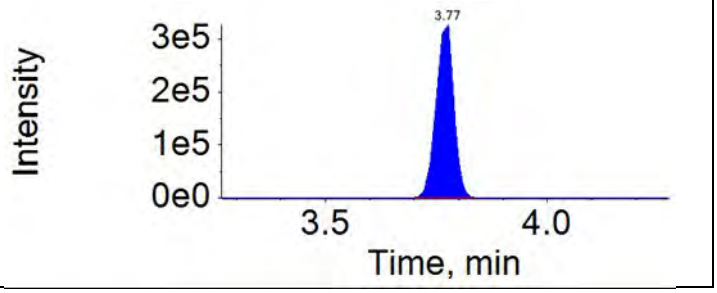
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



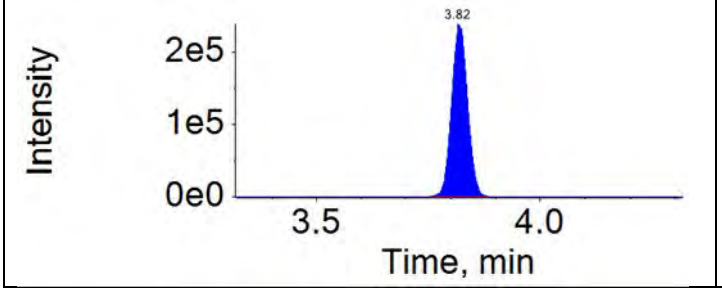


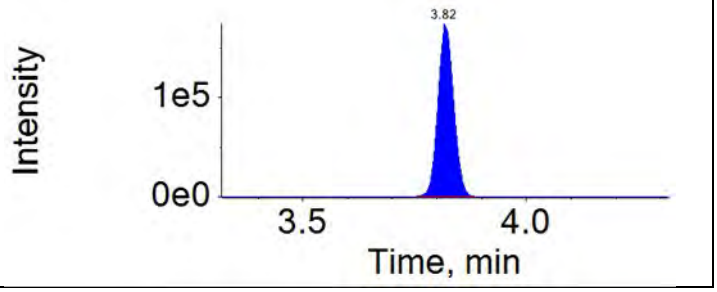
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



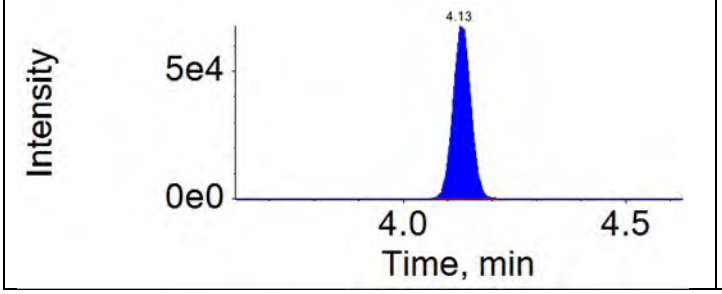


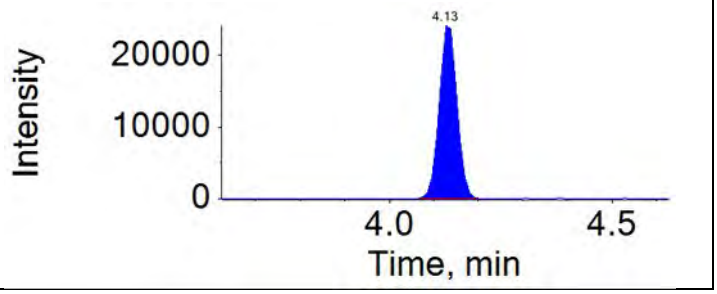
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



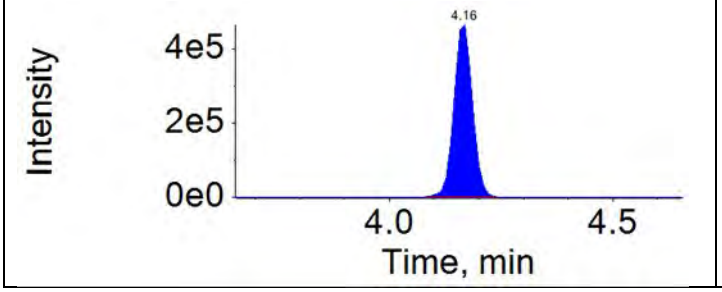


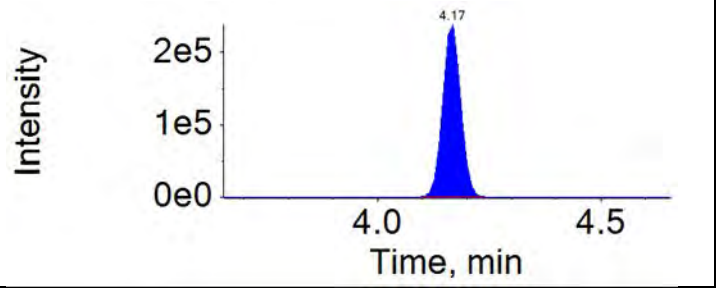
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

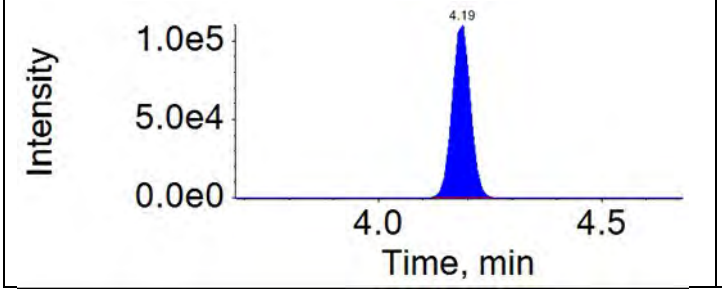
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

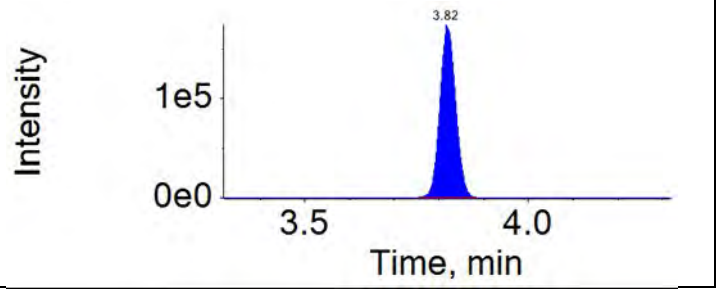
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



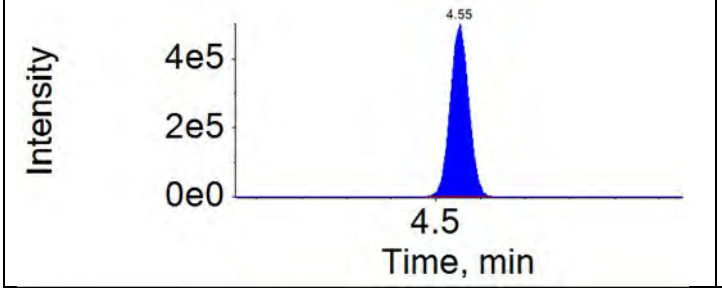


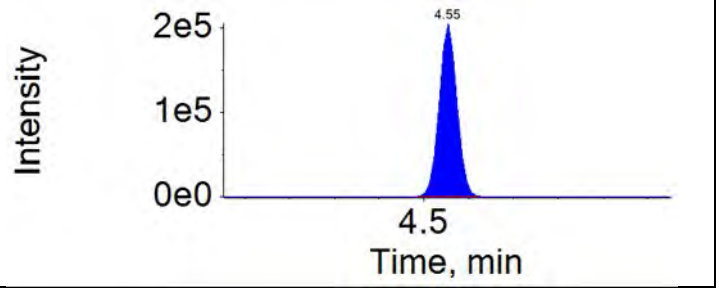
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



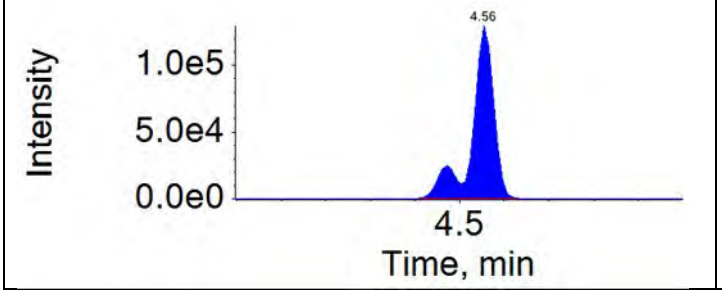


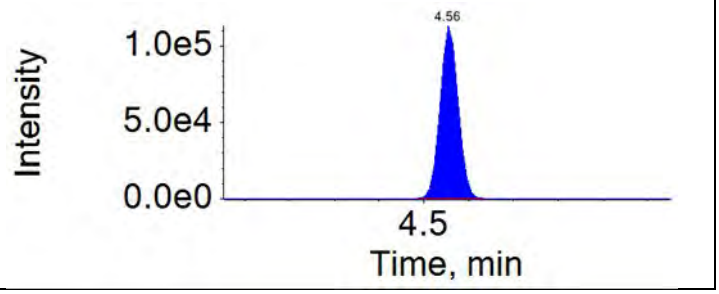
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



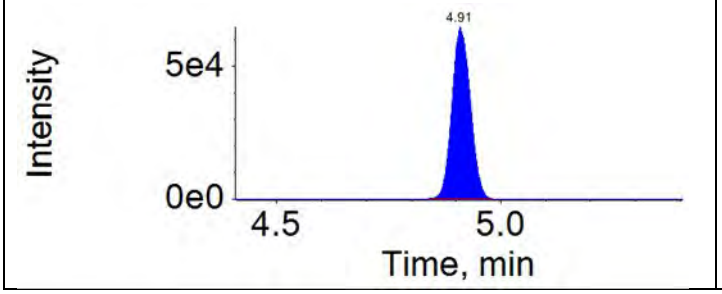


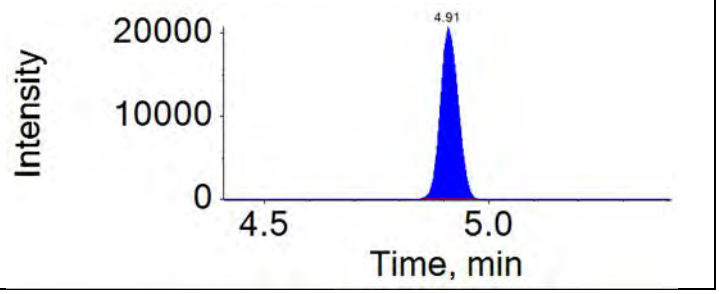
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

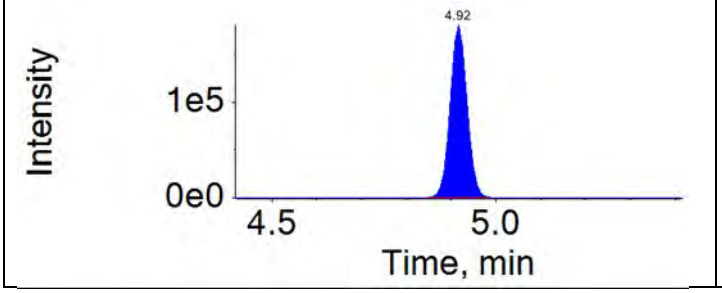
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

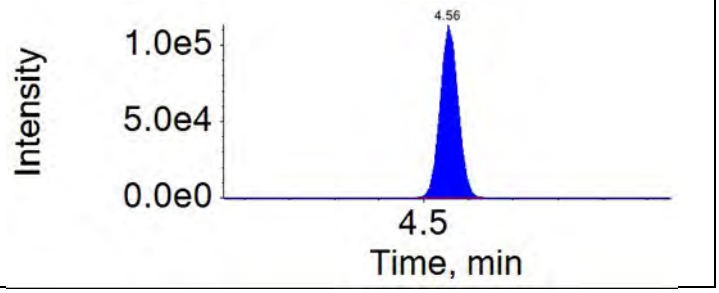
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



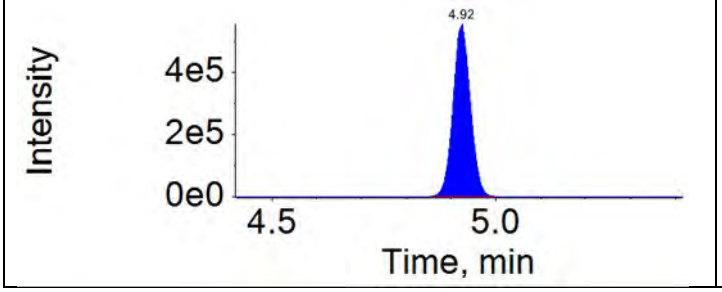


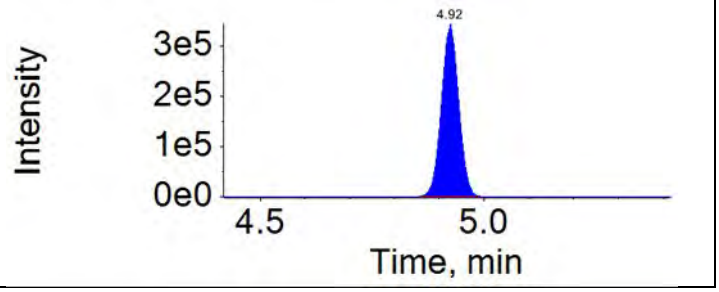
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



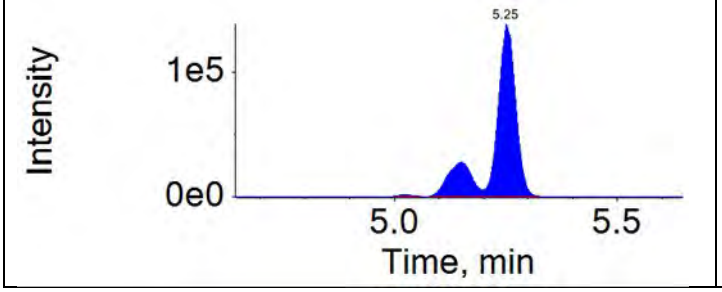


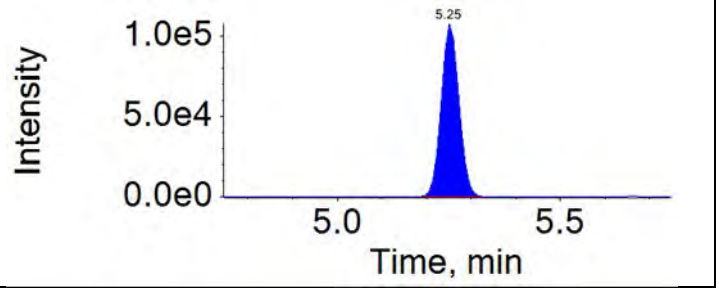
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



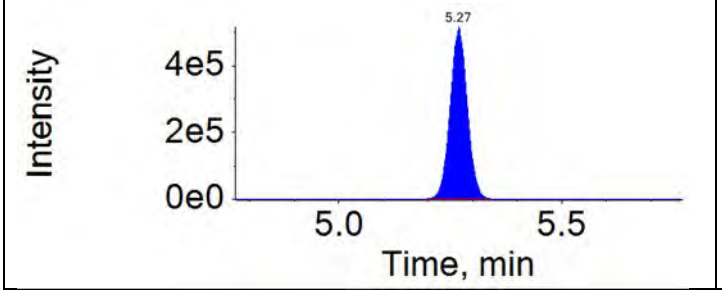


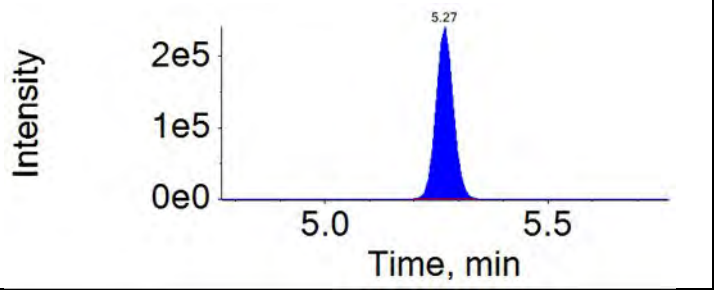
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

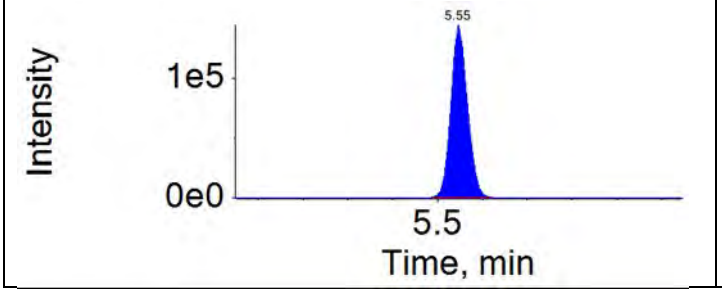
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

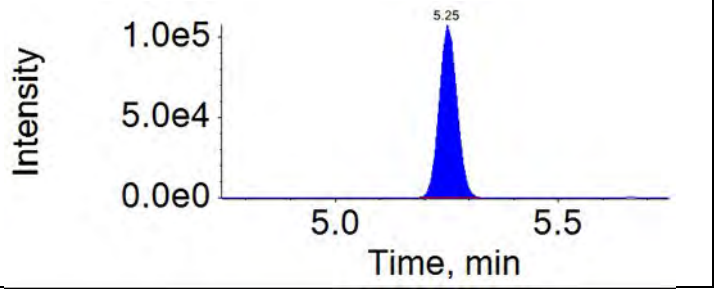
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



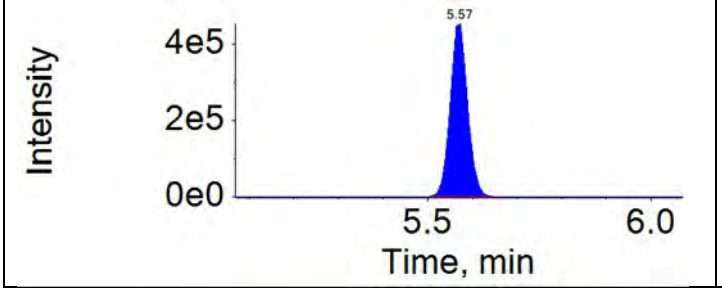


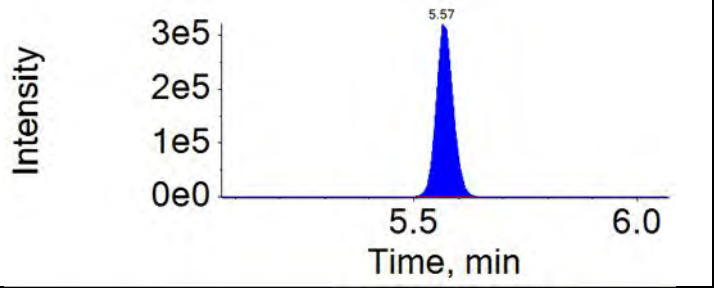
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



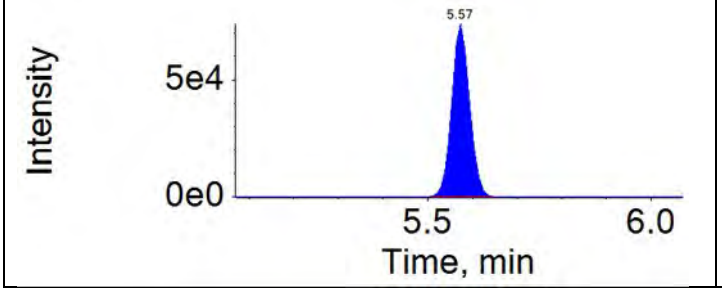


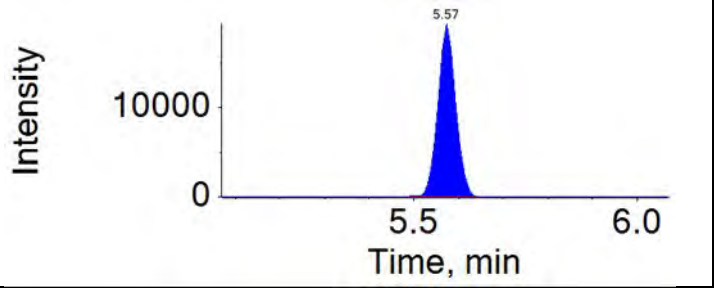
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

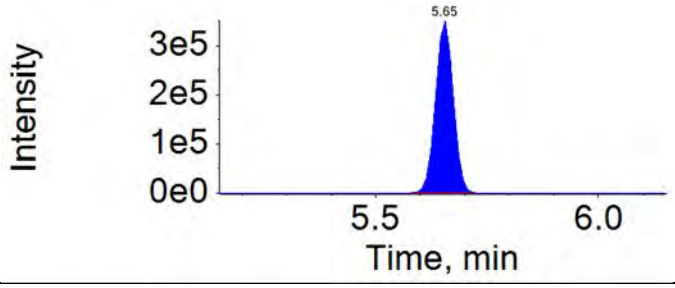
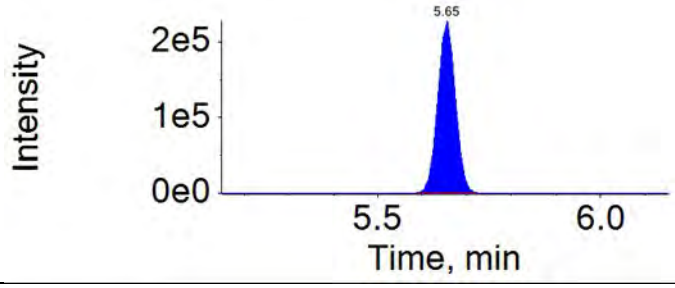


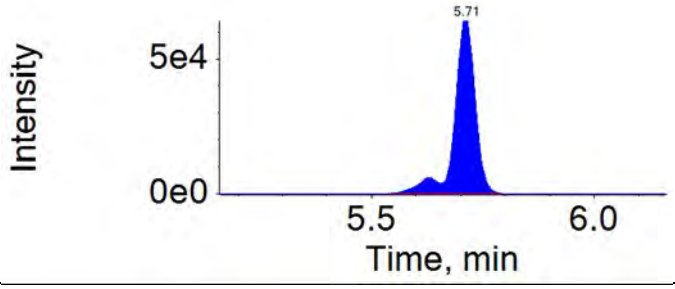
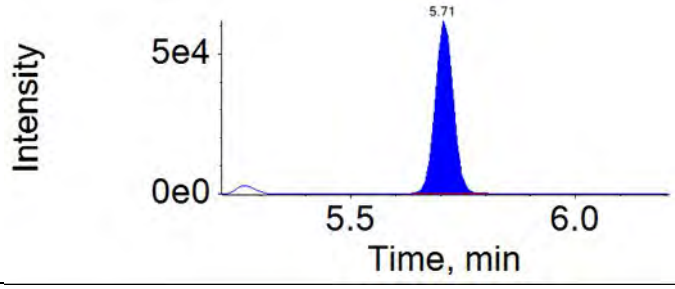


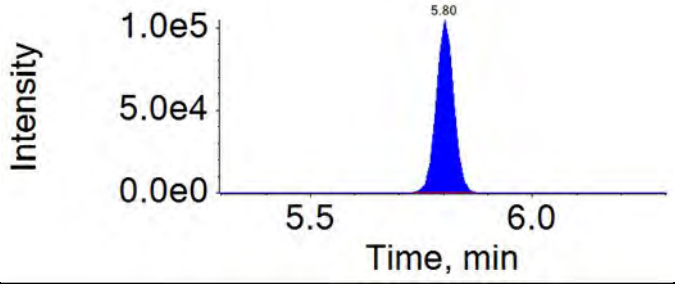
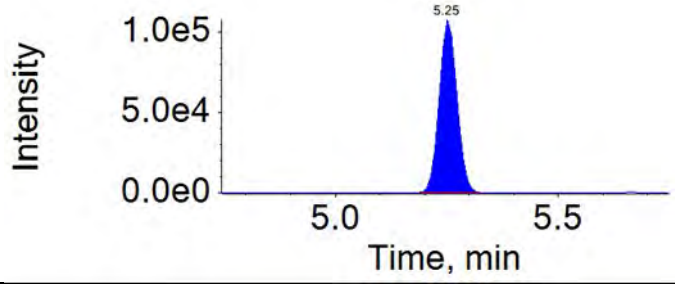
APPROVED
By MCD at 5:00 pm, 11/28/18

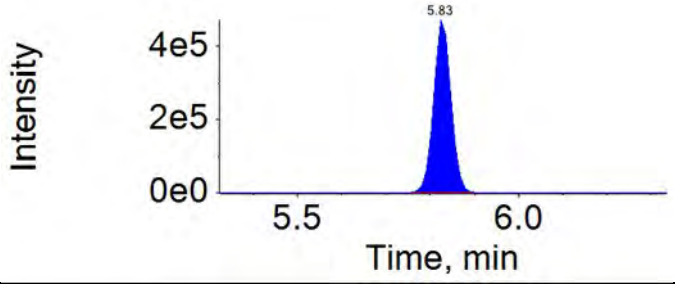
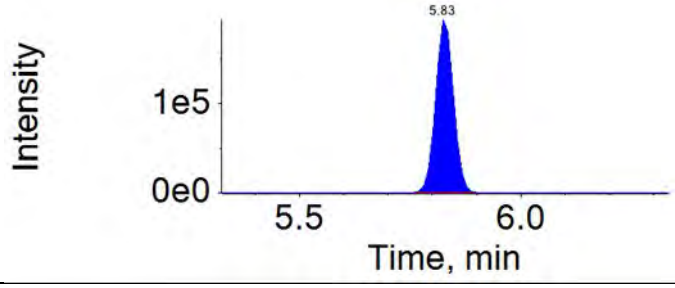
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

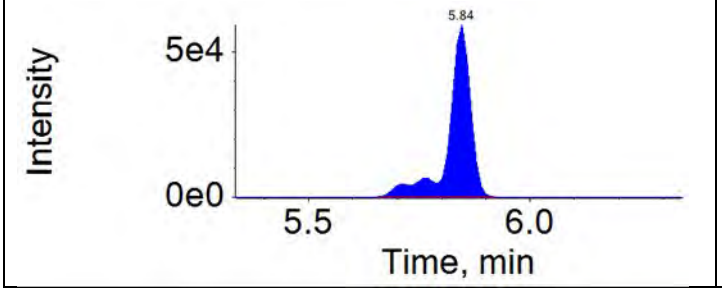
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

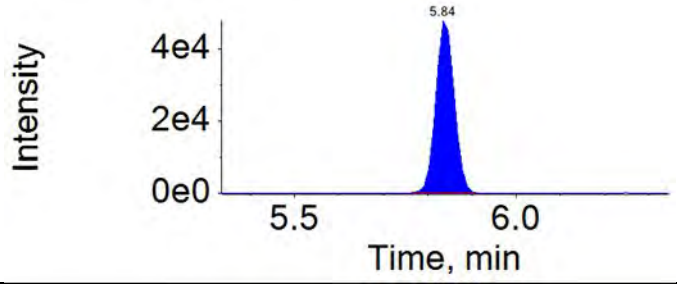
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

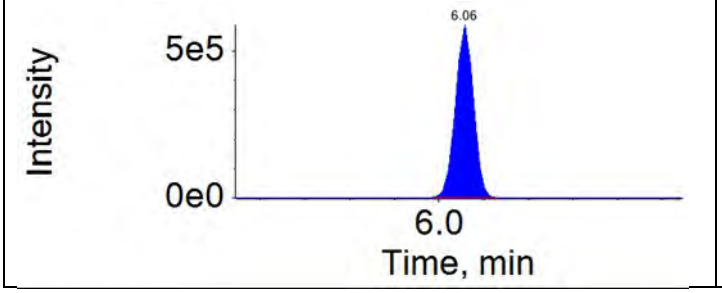
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

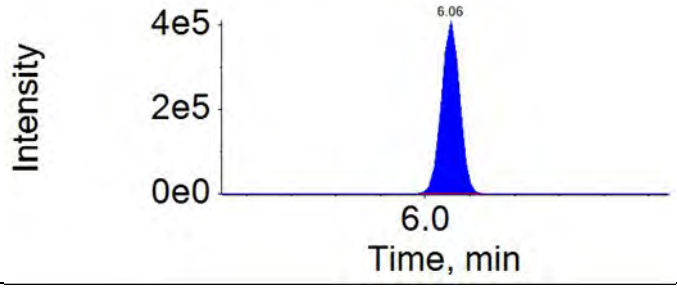
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



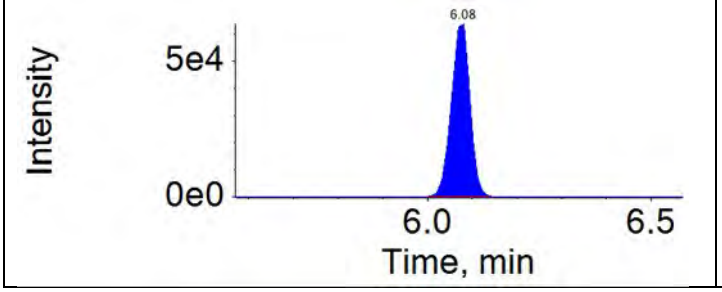


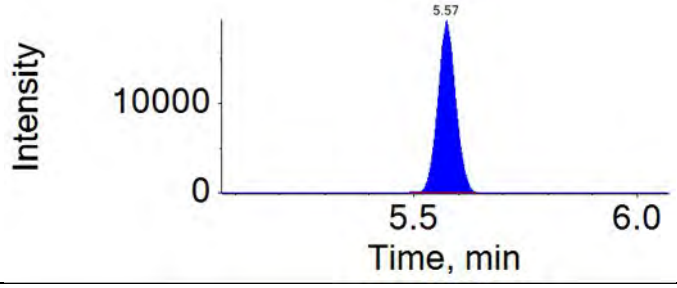
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



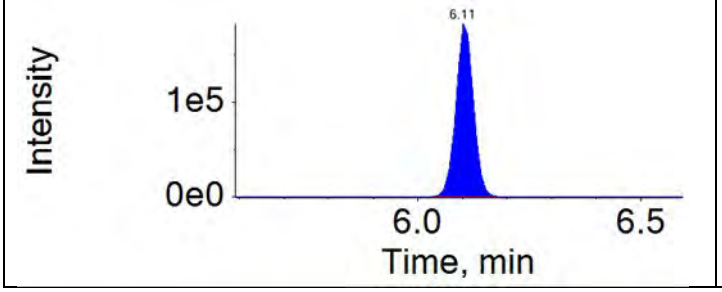


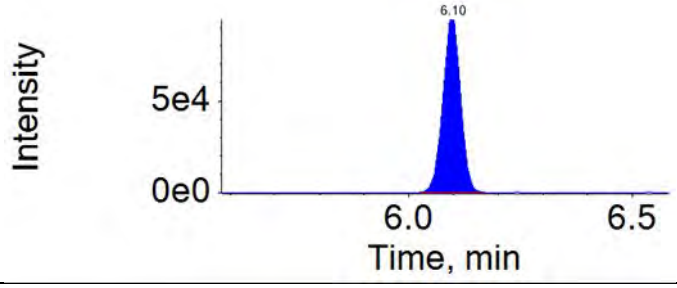
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



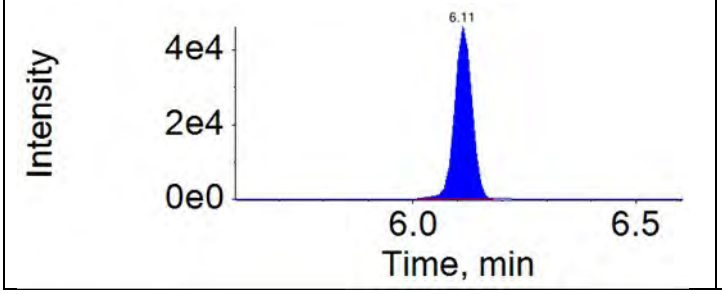


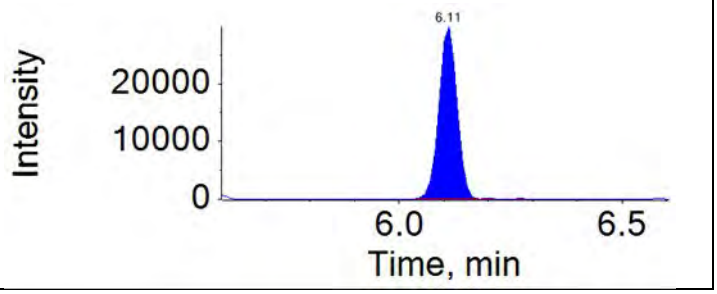
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

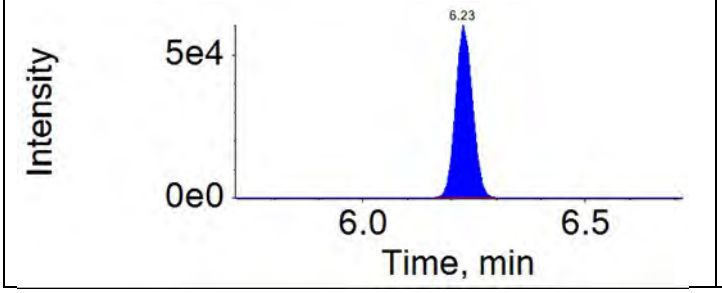
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

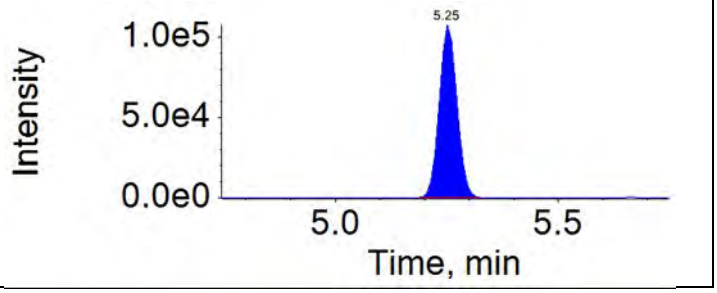
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



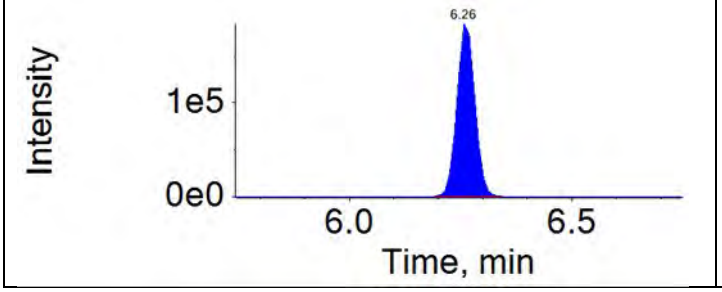


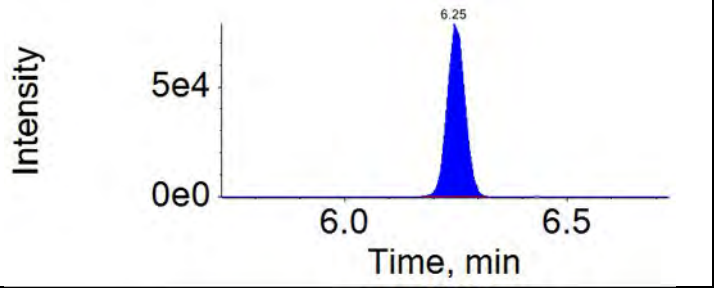
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



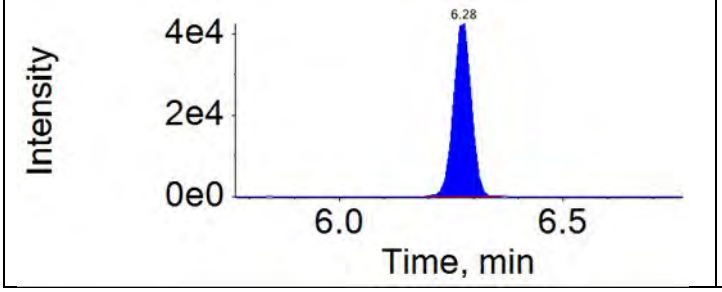


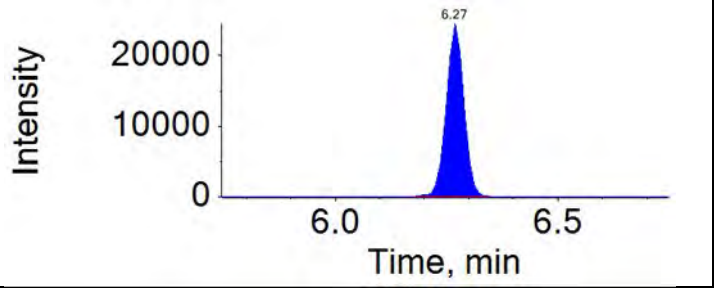
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



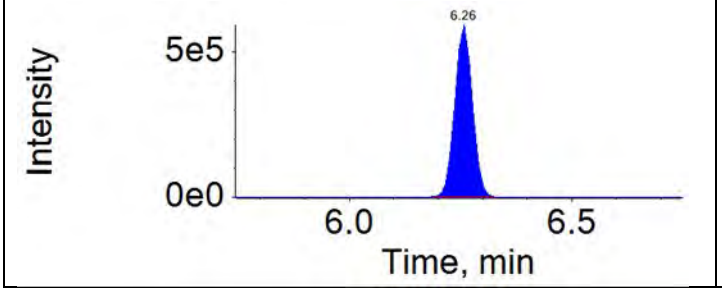


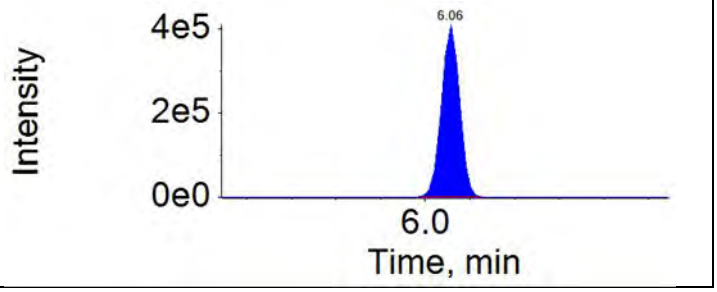
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

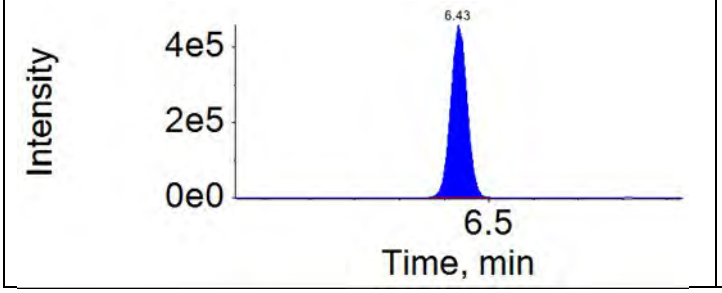
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

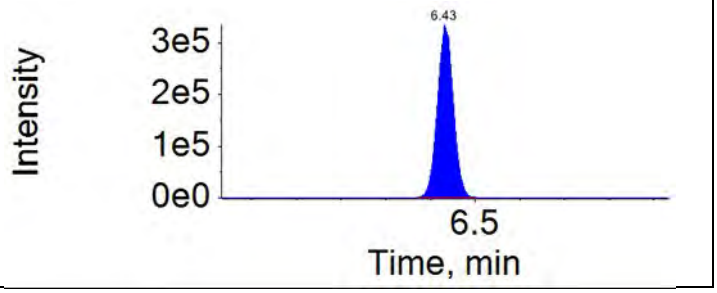
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



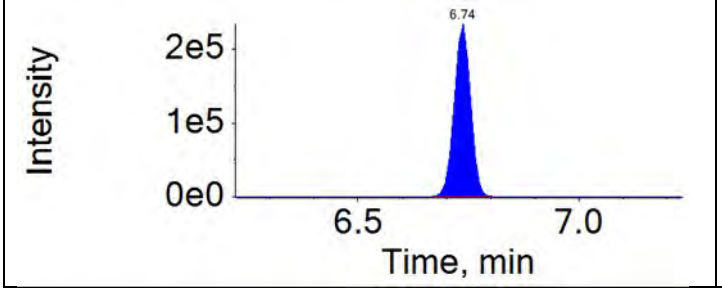


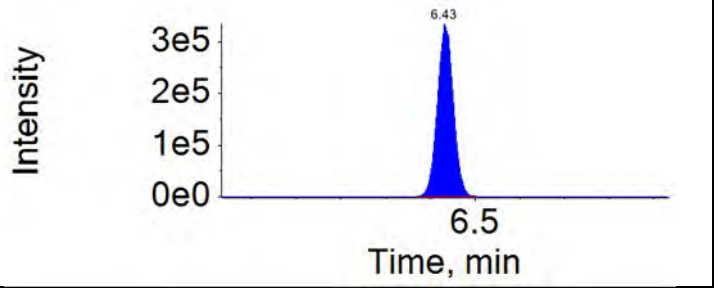
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



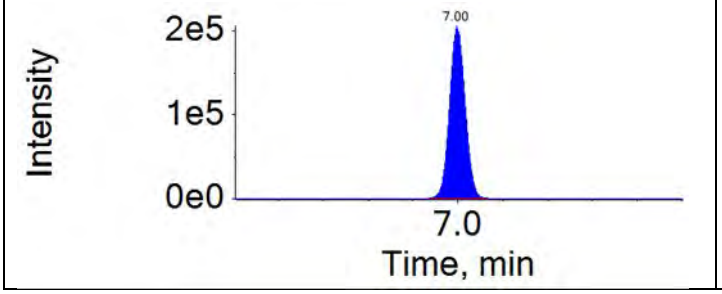


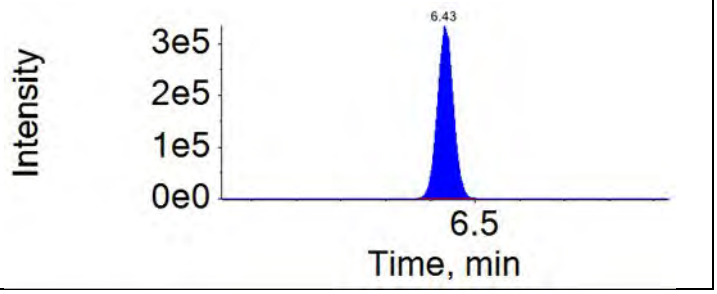
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



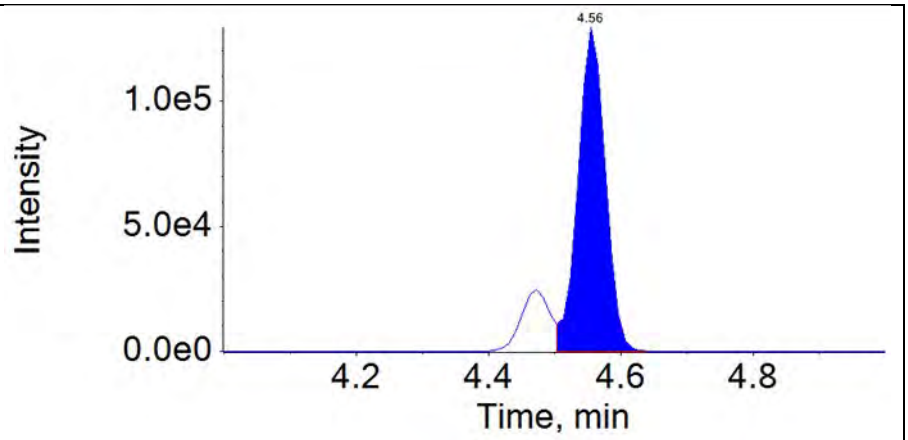


APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

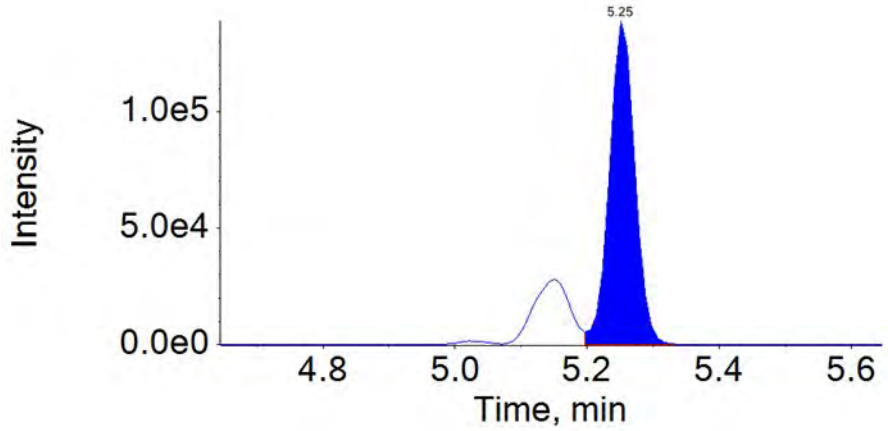
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
371393.69
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



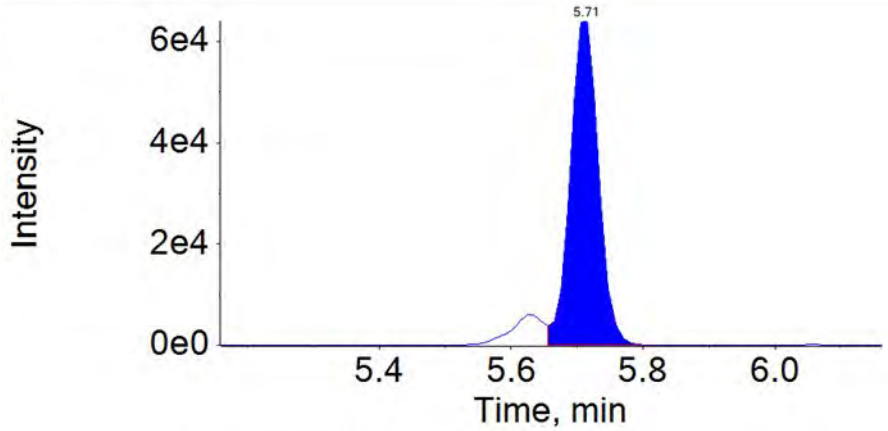
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
370801.21
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
191931.92
Mass Range:
570.0 / 419.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



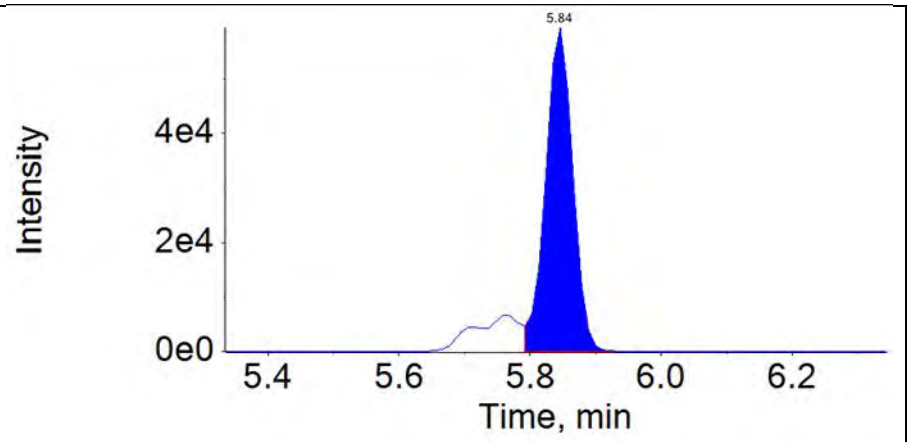
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

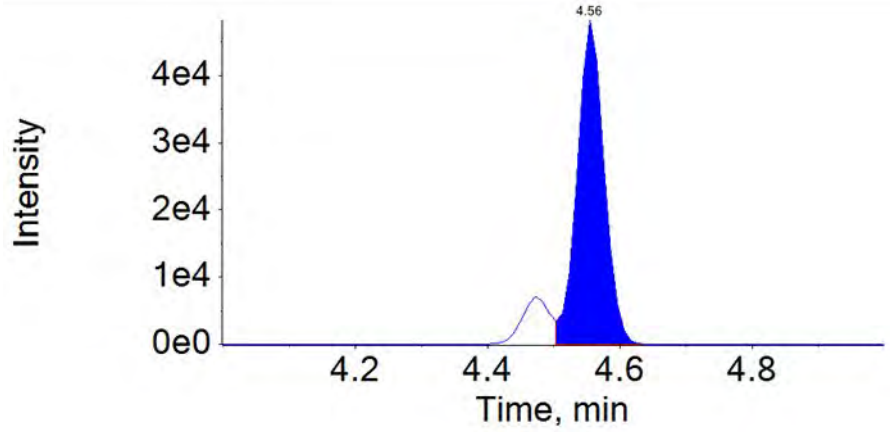
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
171264.64
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



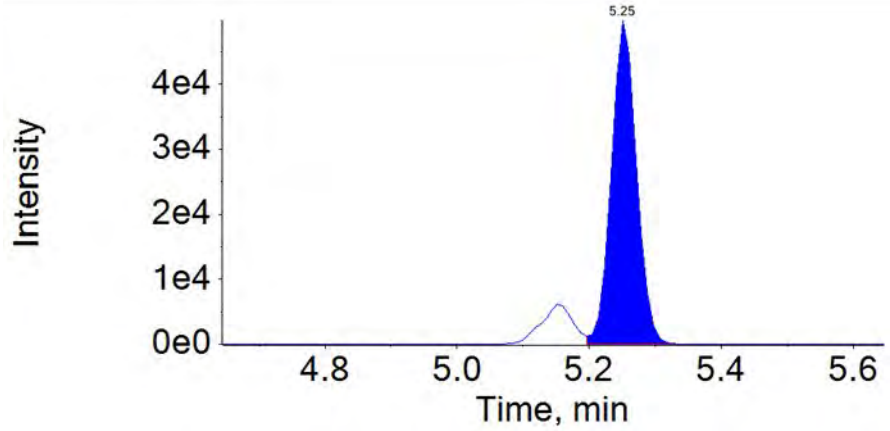
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
136580.68
Mass Range:
399.0 / 99.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
131435.94
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-09.wiff
Sample Name:
CAL4

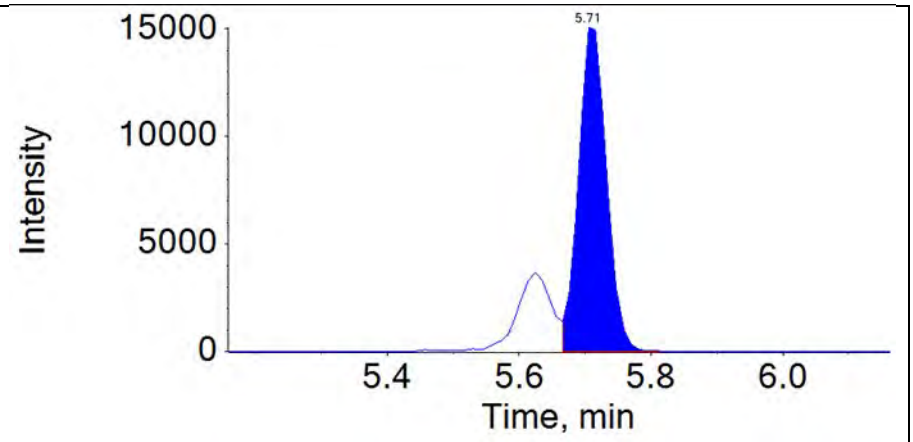


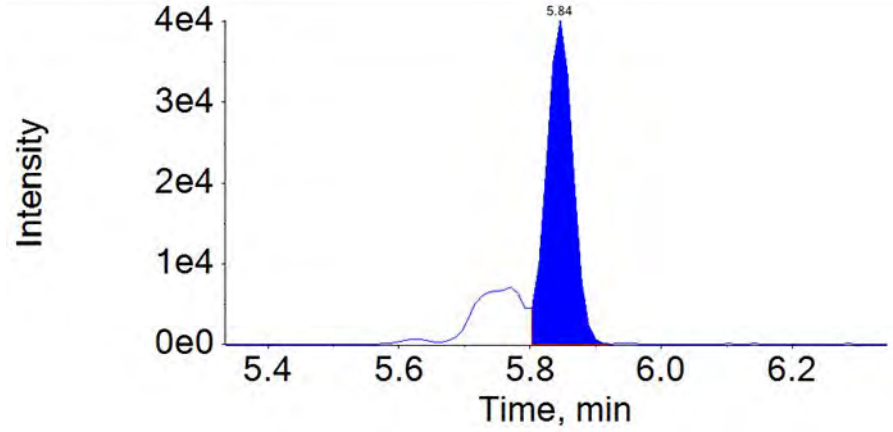
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NMeFOSAA_2 **RT (min.):** 5.71 **Peak Area:** 44801.82 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV28DCAL-09.wiff **Sample Name:** CAL4	 **Integration Comment:** incorrect integration

Component Name: NEtFOSAA_2 **RT (min.):** 5.84 **Peak Area:** 112154.28 **Mass Range:** 584.0 / 526.0 **File Name:** 18NOV28DCAL-09.wiff **Sample Name:** CAL4	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Ion Ratio Report

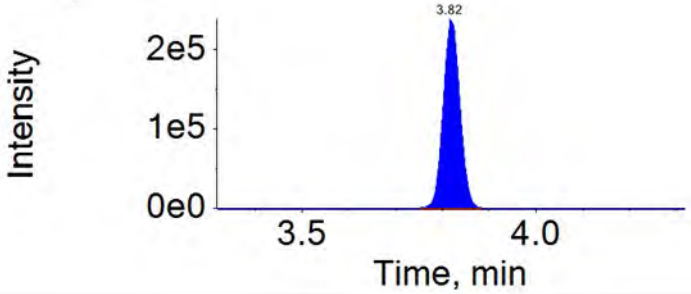
Sample Name: CAL4 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-09.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	590590.25	A	0.3655	0.3782			
PFBS_2	3.82	1.00	223343.90	A	0.3655	0.3782	3	50	
4:2-FTS	4.13	1.00	191344.61	A	0.6383	0.6348			
4:2-FTS_2	4.13	1.00	121465.15	A	0.6383	0.6348	-1	50	
PFHxA	4.16	1.00	1343216.41	A	0.0103	0.0115			
PFHxA_2	4.16	1.00	15497.56	A	0.0103	0.0115	12	50	
PFPeS	4.19	1.10	311741.60	A	0.4976	0.5181			
PFPeS_2	4.18	1.10	161508.14	A	0.4976	0.5181	4	50	
PFHpA	4.55	1.00	1429895.33	A	0.0557	0.0548			
PFHpA_2	4.55	1.00	78335.37	A	0.0557	0.0548	-2	50	
PFHxS	4.56	1.00	444626.01	M	0.3693	0.3529			
PFHxS_2	4.56	1.00	156906.17	M	0.3693	0.3529	-4	50	
6:2-FTS	4.91	1.00	185311.52	A	0.6625	0.6163			
6:2-FTS_2	4.91	1.00	114201.19	A	0.6625	0.6163	-7	50	
PFHpS	4.92	1.08	471580.62	A	0.3915	0.4081			
PFHpS_2	4.92	1.08	192431.36	A	0.3915	0.4081	4	50	
PFOA	4.92	1.00	1486960.43	A	0.0573	0.0582			
PFOA_2	4.92	1.00	86577.54	A	0.0573	0.0582	2	50	
PFOS	5.25	1.00	481949.96	M	0.2960	0.3159			
PFOS_2	5.25	1.00	152242.35	M	0.2960	0.3159	7	50	
PFNA	5.27	1.00	1365056.35	A	0.0201	0.0213			
PFNA_2	5.27	1.00	29087.24	A	0.0201	0.0213	6	50	
PFNS	5.55	1.06	369833.35	A	0.4794	0.4744			
PFNS_2	5.55	1.06	175461.18	A	0.4794	0.4744	-1	50	
PFDA	5.57	1.00	1223810.41	A	0.0075	0.0072			
PFDA_2	5.57	1.00	8850.86	A	0.0075	0.0072	-3	50	
8:2-FTS	5.57	1.00	203687.69	A	0.5380	0.5664			
8:2-FTS_2	5.57	1.00	115365.33	A	0.5380	0.5664	5	50	
NMeFOSAA	5.71	1.00	212775.33	M	0.2305	0.2723			
NMeFOSAA_2	5.71	1.00	57947.55	M	0.2305	0.2723	18	50	
PFDS	5.80	1.10	283198.51	A	0.5356	0.5185			
PFDS_2	5.80	1.10	146842.40	A	0.5356	0.5185	-3	50	
PFUnDA	5.83	1.00	1281938.52	A	0.0038	0.0041			
PFUnDA_2	5.83	1.00	5262.94	A	0.0038	0.0041	8	50	
NEtFOSAA	5.84	1.00	204048.64	M	0.7356	0.7330			
NEtFOSAA_2	5.84	1.00	149571.11	M	0.7356	0.7330	0	50	
PFDoDA	6.06	1.00	1650301.08	A	0.0130	0.0137			
PFDoDA_2	6.06	1.00	22542.02	A	0.0130	0.0137	5	50	
10:2-FTS	6.08	1.09	184968.53	A	0.6989	0.7539			
10:2-FTS_2	6.07	1.09	139452.05	A	0.6989	0.7539	8	50	
PFTrDA	6.26	1.03	1622977.68	A	0.0090	0.0088			
PFTrDA_2	6.26	1.03	14275.05	A	0.0090	0.0088	-2	50	
PFTeDA	6.43	1.00	1172052.04	A	0.0056	0.0065			
PFTeDA_2	6.43	1.00	7656.17	A	0.0056	0.0065	16	50	
PFHxDA	6.74	1.05	601723.77	A	0.0646	0.0614			
PFHxDA_2	6.73	1.05	36942.33	A	0.0646	0.0614	-5	50	
PFODA	7.00	1.09	494210.71	A	0.0264	0.0257			
PFODA_2	7.00	1.09	12722.45	A	0.0264	0.0257	-3	50	

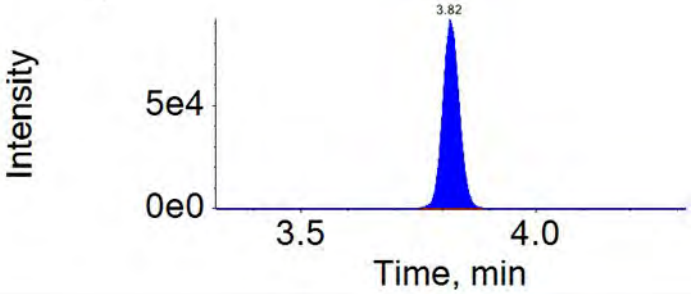
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

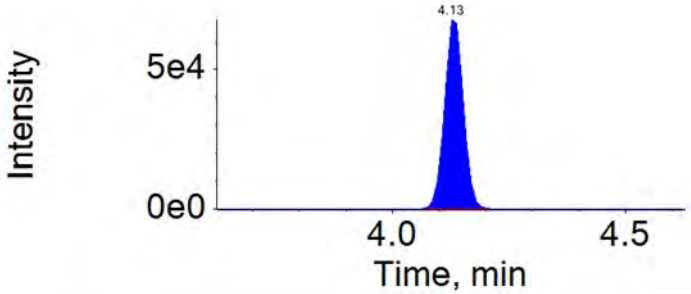
Component: PFBS
Primary Mass: 299.0 / 80.0



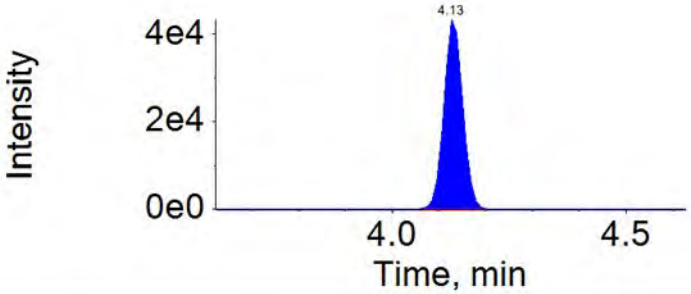
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



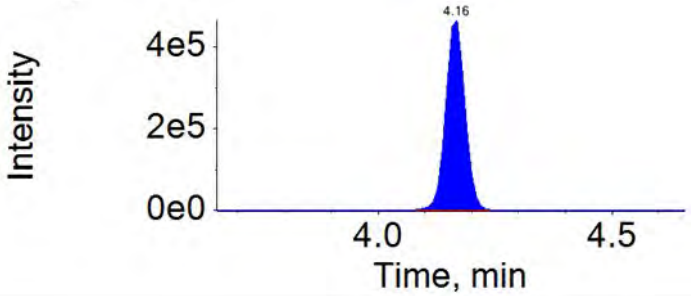
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



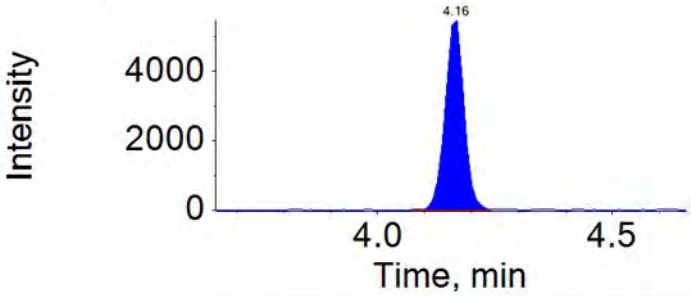
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



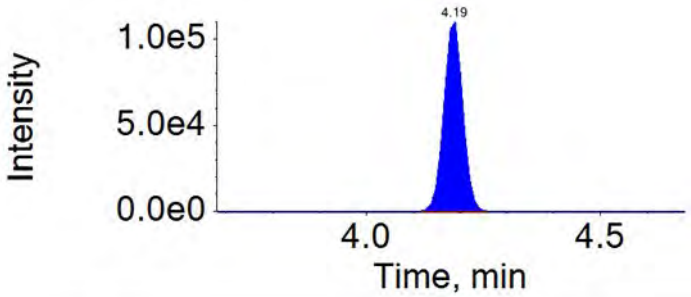
Component: PFHxA
Primary Mass: 313.0 / 269.0



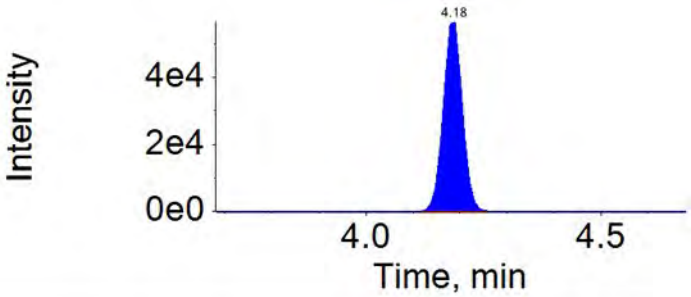
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



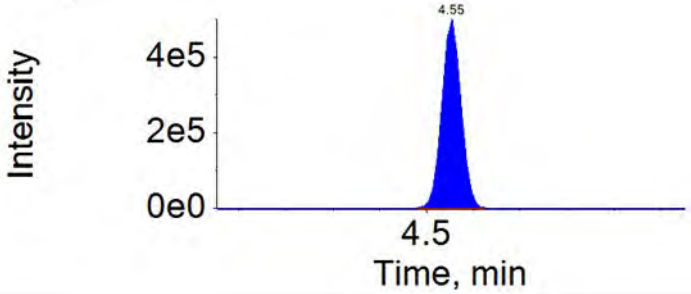
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



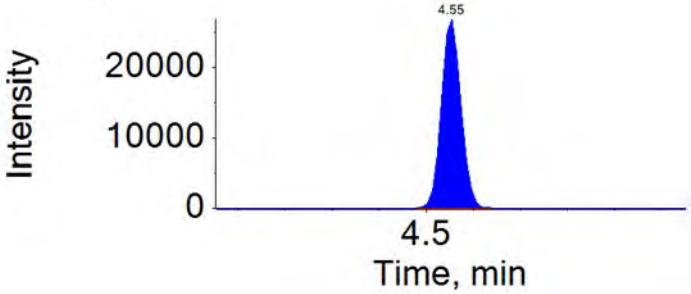
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

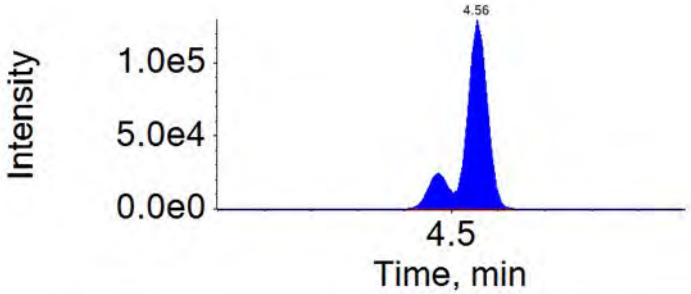
Component: PFHpA
Primary Mass: 363.0 / 319.0



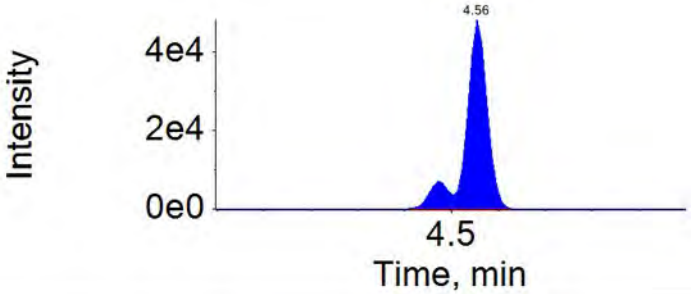
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



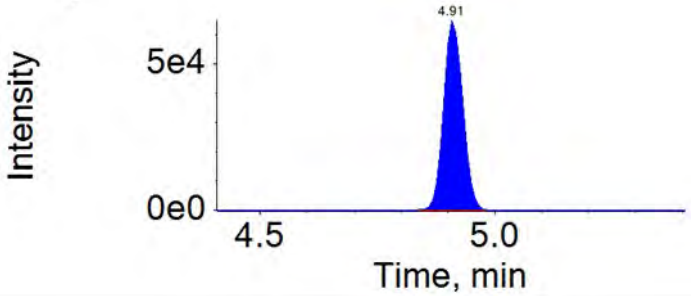
Component: PFHxS
Primary Mass: 399.0 / 80.0



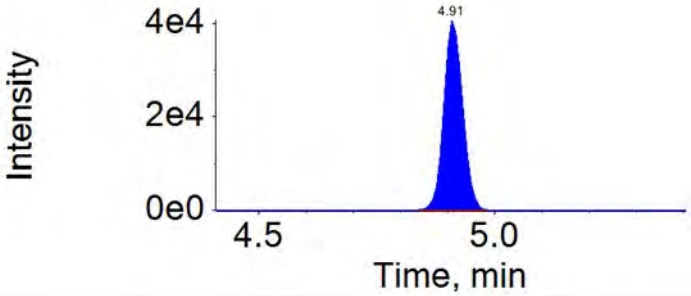
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



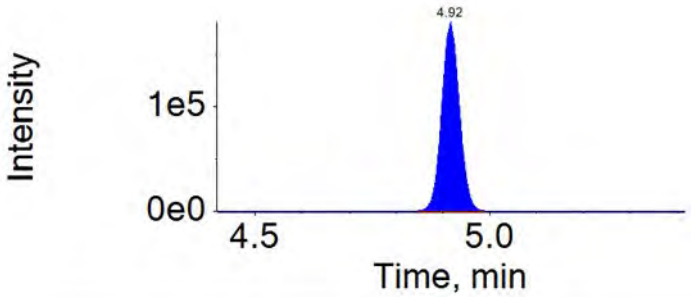
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



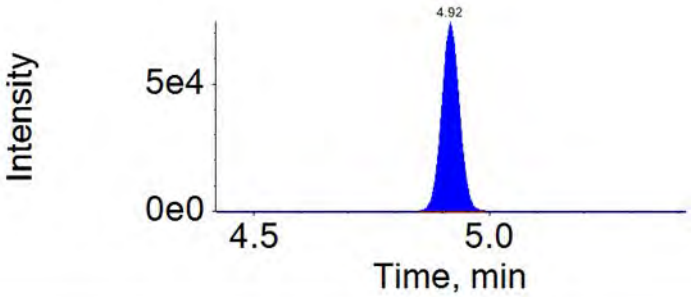
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



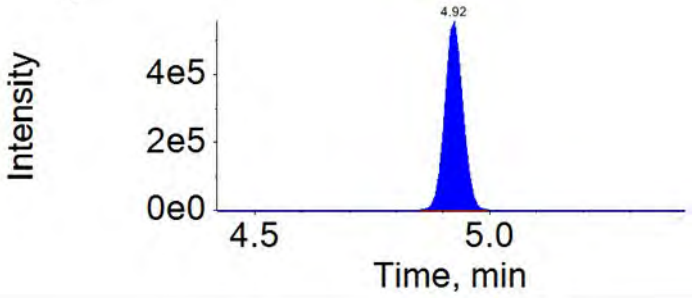
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



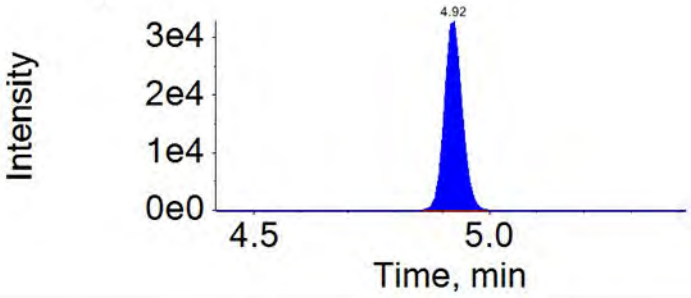
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

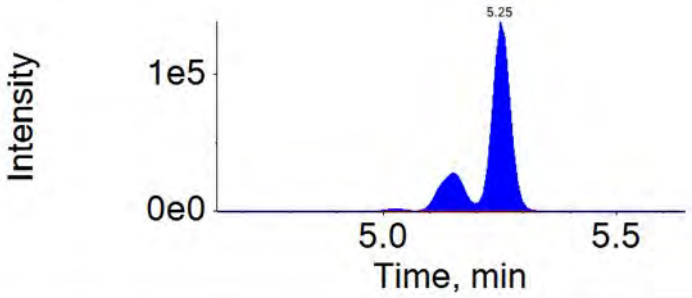
Component: PFOA
Primary Mass: 413.0 / 369.0



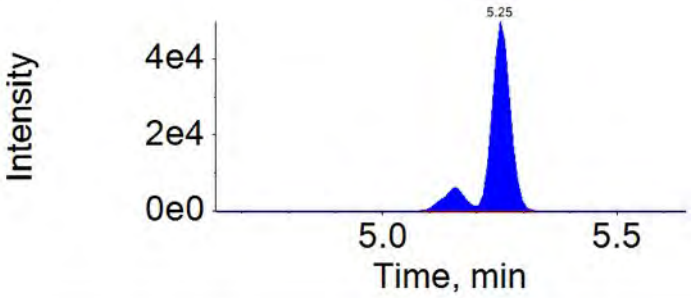
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



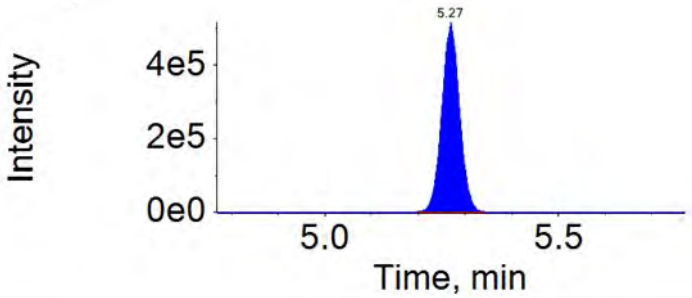
Component: PFOS
Primary Mass: 499.0 / 80.0



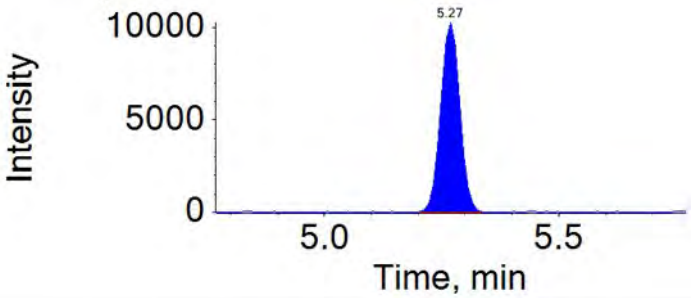
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



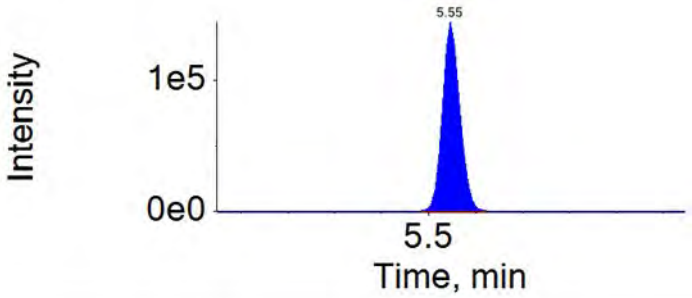
Component: PFNA
Primary Mass: 463.0 / 419.0



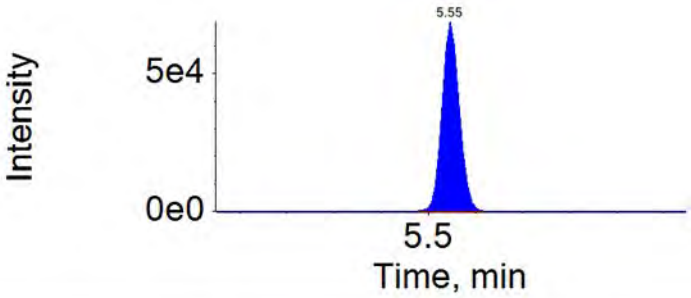
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



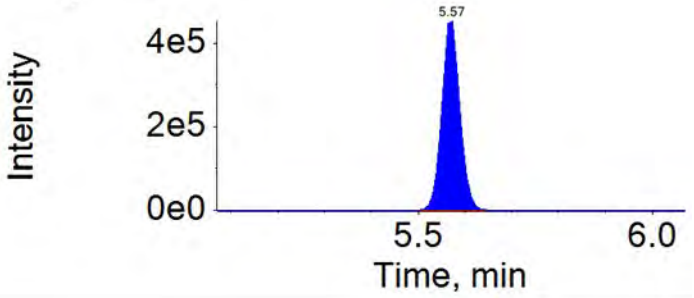
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



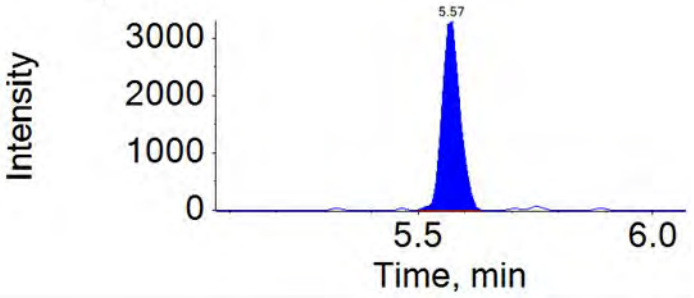
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

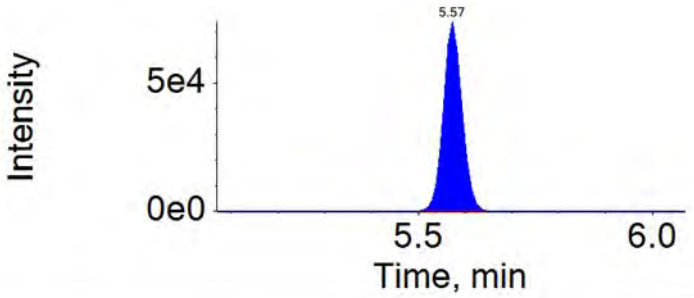
Component: PFDA
Primary Mass: 513.0 / 469.0



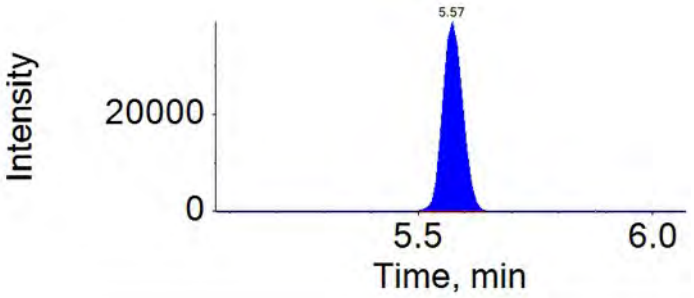
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



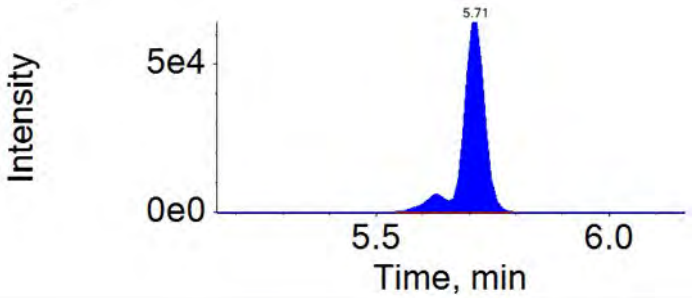
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



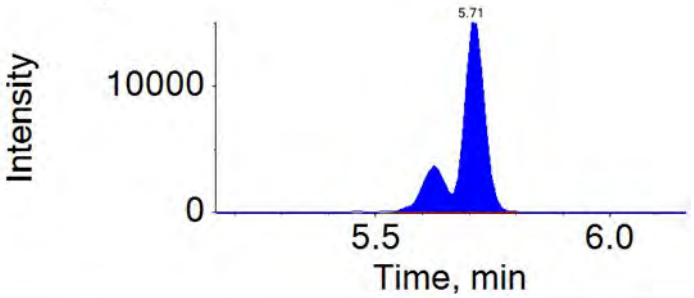
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



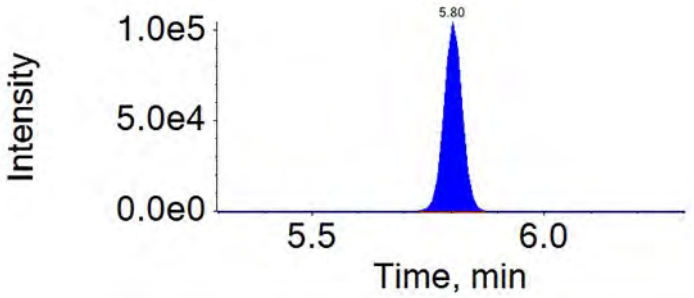
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



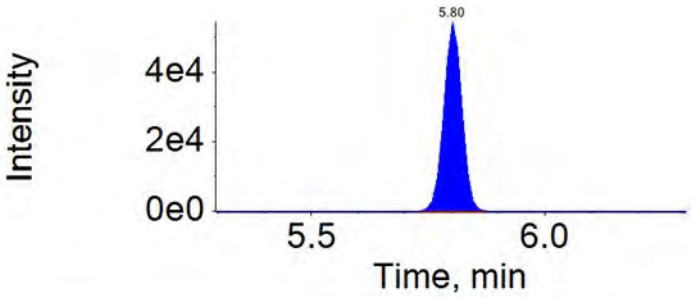
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



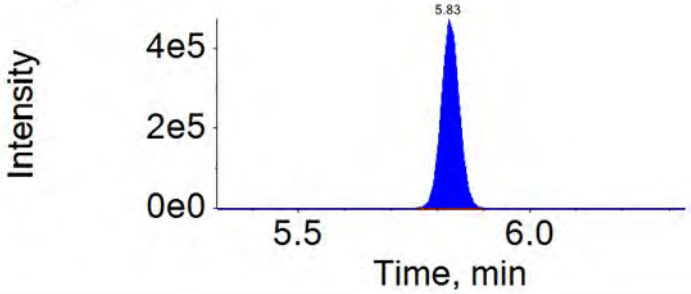
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



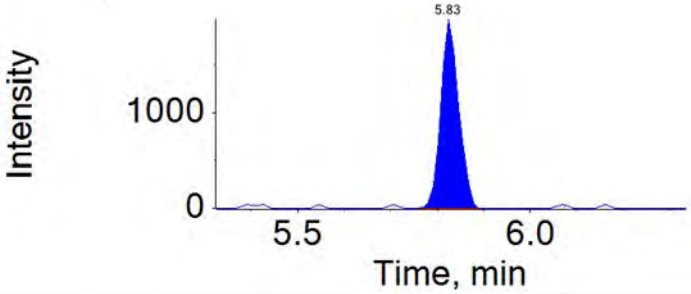
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

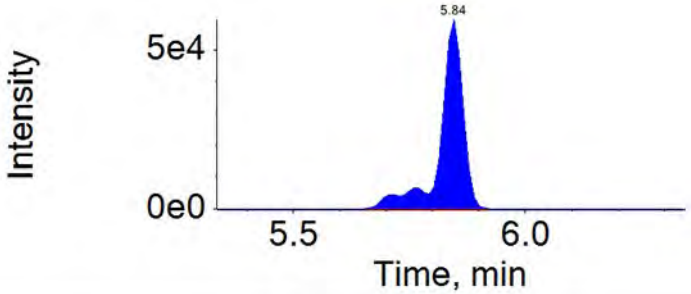
Component: PFUnDA
Primary Mass: 563.0 / 519.0



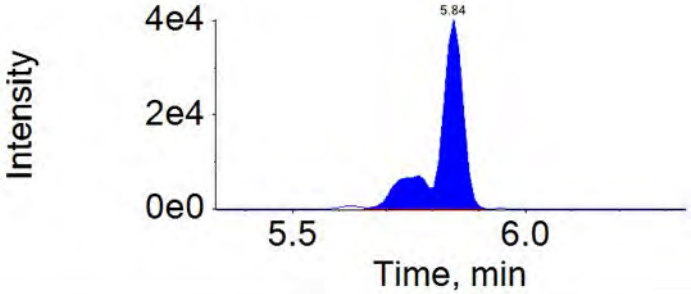
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



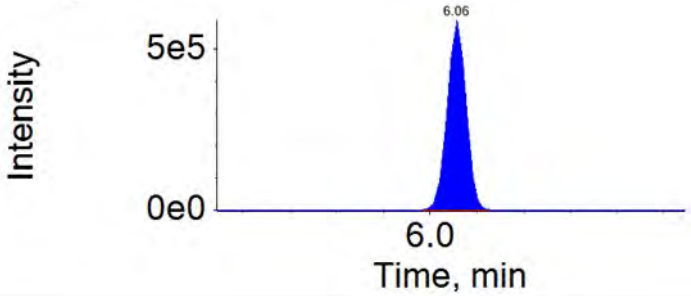
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



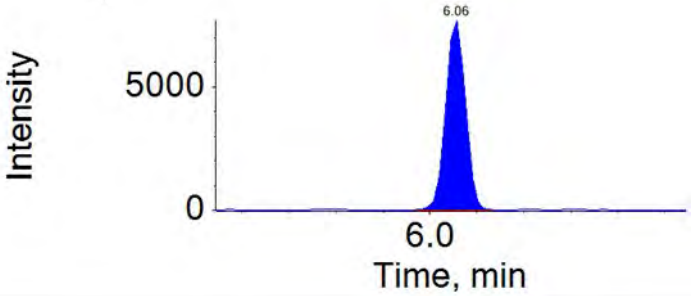
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



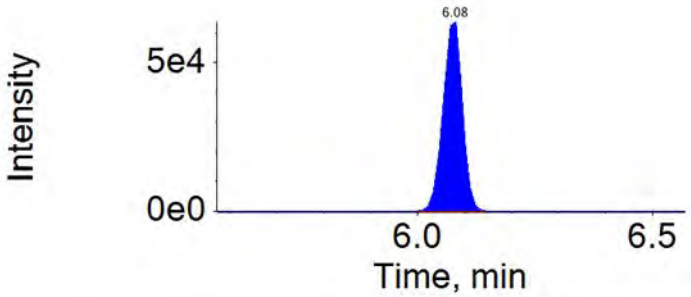
Component: PFDoDA
Primary Mass: 613.0 / 569.0



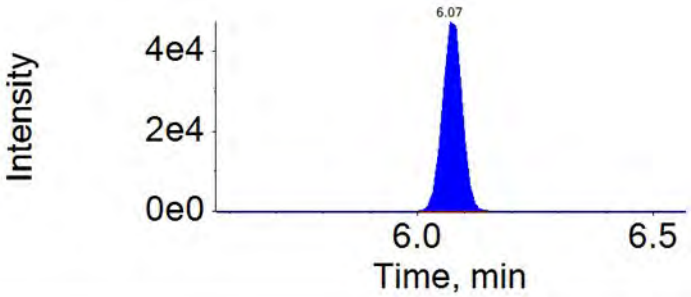
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



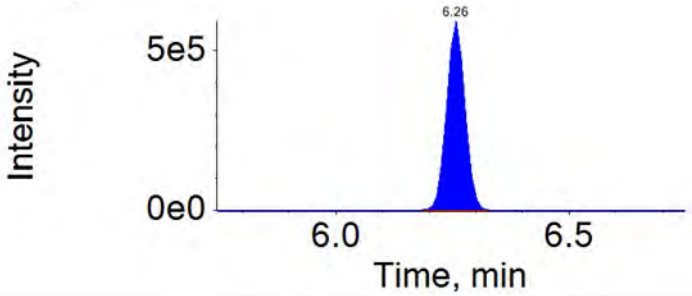
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



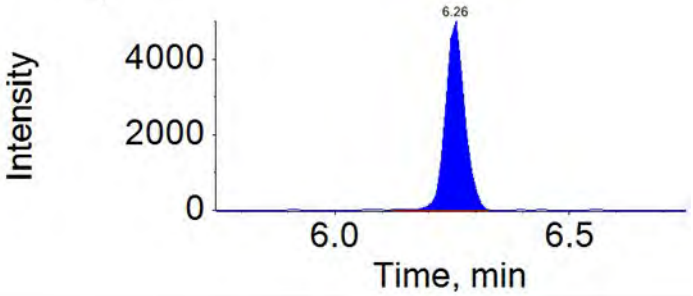
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



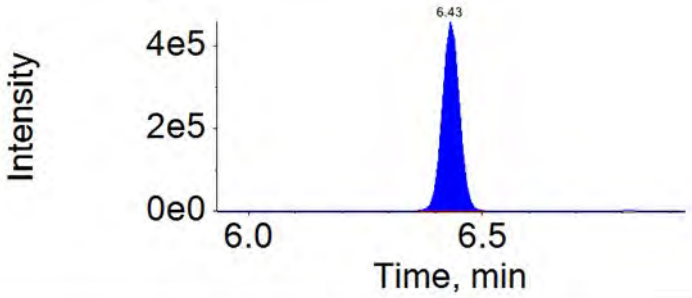
Component: PFTrDA
Primary Mass: 663.0 / 619.0



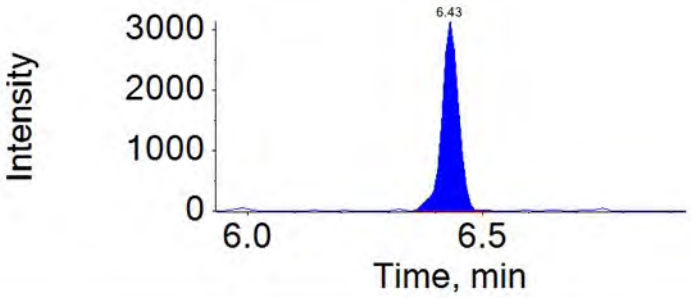
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



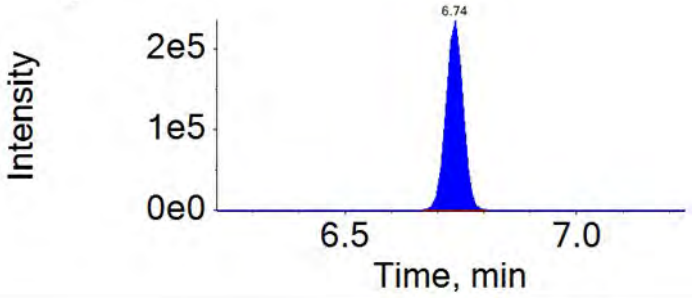
Component: PFTeDA
Primary Mass: 713.0 / 669.0



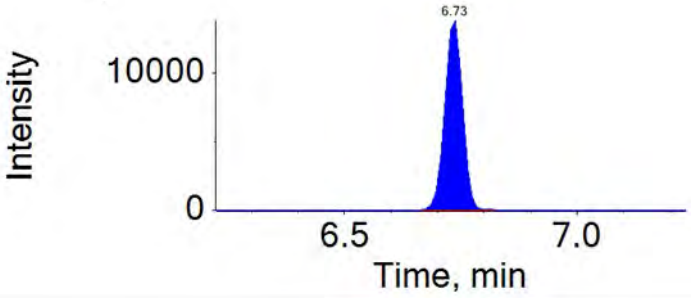
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



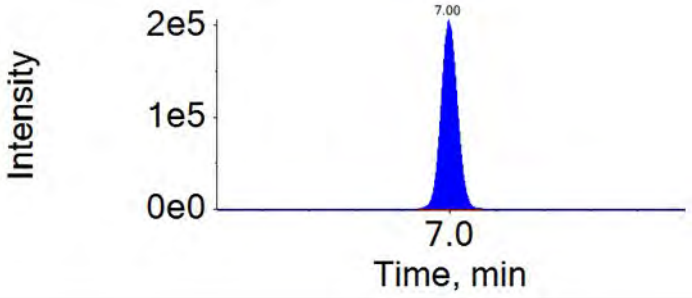
Component: PFHxDA
Primary Mass: 813.0 / 769.0



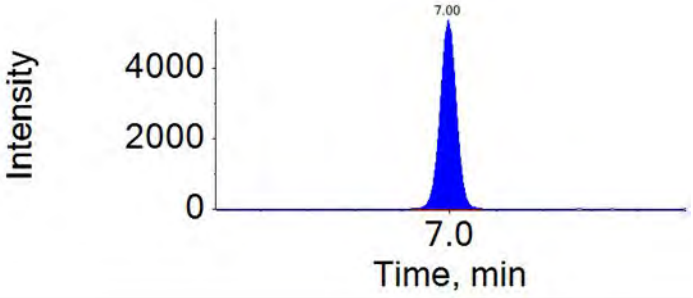
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL5			**Data File:**		18NOV28DCAL-10.wiff
Sample ID:	CALBRN51833B			**Acquis Date:**		2018-11-28T14:18:16
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	7			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	857159.8	887248.9	-3	50	
13C2-PFOA	5.0	516457.2	498501.6	4	50	
13C4-PFOS	4.8	287732.6	283214.2	2	50	
13C2-PFDA	5.0	460232.7	441790.6	4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	951695.0	13C3-PFBA	857159.8	1.110	5.000	4.954	99	70-130	
E13C5-PFPeA	900153.4	13C3-PFBA	857159.8	1.050	5.000	4.904	98	70-130	
E13C3-PFBS	424059.2	13C3-PFBA	857159.8	0.495	4.650	4.720	102	70-130	
E13C2-4:2-FTS	67423.0	13C2-PFOA	516457.2	0.131	4.670	4.499	96	70-130	
E13C5-PFHxA	704953.5	13C2-PFOA	516457.2	1.365	5.000	5.014	100	70-130	
E13C3-PFHxS	309184.7	13C2-PFOA	516457.2	0.599	4.730	4.692	99	70-130	
E13C4-PFHpA	556455.9	13C2-PFOA	516457.2	1.077	5.000	4.951	99	70-130	
E13C2-6:2-FTS	58122.8	13C2-PFOA	516457.2	0.113	4.750	4.711	99	70-130	
E13C8-PFOA	911756.1	13C2-PFOA	516457.2	1.765	5.000	4.859	97	70-130	
E13C8-PFOS	299574.5	13C4-PFOS	287732.6	1.041	4.780	4.700	98	70-130	
E13C9-PFNA	630201.5	13C4-PFOS	287732.6	2.190	5.000	4.811	96	70-130	
E13C6-PFDA	833462.2	13C2-PFDA	460232.7	1.811	5.000	5.106	102	70-130	
E13C2-8:2-FTS	46142.4	13C2-PFDA	460232.7	0.100	4.790	4.309	90	70-130	
E13C8-PFOSA	596189.5	13C2-PFDA	460232.7	1.295	5.000	4.753	95	70-130	
Ed3-NMeFOSAA	172574.2	13C2-PFDA	460232.7	0.375	5.000	4.761	95	70-130	
E13C7-PFUnDA	539842.9	13C2-PFDA	460232.7	1.173	5.000	4.957	99	70-130	
Ed5-NEtFOSAA	124785.1	13C2-PFDA	460232.7	0.271	5.000	4.830	97	70-130	
E13C2-PFDoDA	1133027.9	13C2-PFDA	460232.7	2.462	5.000	5.173	103	70-130	
Ed7-NMePFOSAE	247663.8	13C2-PFDA	460232.7	0.538	5.000	4.651	93	70-130	
Ed3-NMePFOSA	83129.0	13C2-PFDA	460232.7	0.181	5.000	4.888	98	70-130	
Ed9-NEtPFOSAE	220689.9	13C2-PFDA	460232.7	0.480	5.000	4.861	97	70-130	
Ed5-NEtPFOSA	66384.7	13C2-PFDA	460232.7	0.144	5.000	5.012	100	70-130	
E13C2-PFTeDA	786107.5	13C2-PFDA	460232.7	1.708	5.000	4.726	95	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

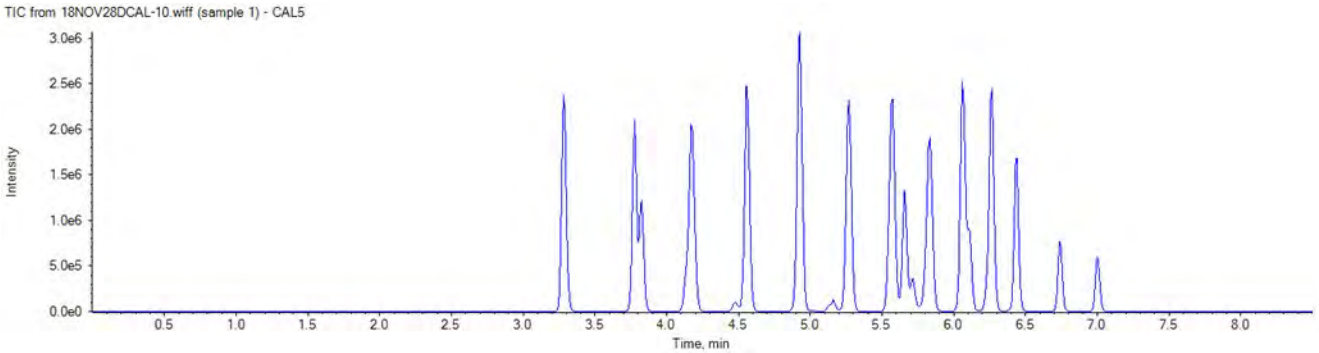
Analyte Quantitation Peak Table

Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-10.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.28	1.000	3627061.5		A	13C4-PFBA	3.28	951695.0	3.811	20.892
PFPeA	3.78	1.000	3696889.3		A	13C5-PFPeA	3.78	900153.4	4.107	20.152
PFBS	3.82	1.000	1542881.7		A	13C3-PFBS	3.83	424059.2	3.638	17.661
4:2-FTS	4.14	1.000	498650.7		A	13C2-4:2-FTS	4.14	67423.0	7.396	19.798
PFHxA	4.17	1.000	3464657.3		A	13C5-PFHxA	4.17	704953.5	4.915	19.728
PFPeS	4.19	1.100	809728.0		A	13C3-PFBS	3.83	424059.2	1.909	19.314
PFHpA	4.56	1.000	3592806.2		A	13C4-PFHpA	4.56	556455.9	6.457	19.926
PFHxS	4.56	1.000	1191482.7		M	13C3-PFHxS	4.56	309184.7	3.854	18.044
6:2-FTS	4.92	1.000	426727.7		A	13C2-6:2-FTS	4.92	58122.8	7.342	19.156
PFHpS	4.92	1.080	1171216.6		A	13C3-PFHxS	4.56	309184.7	3.788	18.906
PFOA	4.93	1.000	3601538.3		A	13C8-PFOA	4.93	911756.1	3.950	20.411
PFOS	5.26	1.000	1305020.5		M	13C8-PFOS	5.26	299574.5	4.356	18.273
PFNA	5.27	1.000	3536255.1		A	13C9-PFNA	5.27	630201.5	5.611	21.504
PFNS	5.55	1.060	909879.2		A	13C8-PFOS	5.26	299574.5	3.037	19.177
PFDA	5.57	1.000	3072749.0		A	13C6-PFDA	5.57	833462.2	3.687	20.868
8:2-FTS	5.58	1.000	478390.1		A	13C2-8:2-FTS	5.58	46142.4	10.368	19.551
PFOSA	5.66	1.000	2392584.6		A	13C8-PFOSA	5.66	596189.5	4.013	20.329
NMeFOSAA	5.71	1.000	557354.6		M	d3-NMeFOSAA	5.71	172574.2	3.230	20.602
PFDS	5.81	1.100	737231.9		A	13C8-PFOS	5.26	299574.5	2.461	19.512
PFUnDA	5.83	1.000	3163283.8		A	13C7-PFUnDA	5.83	539842.9	5.860	20.945
NEtFOSAA	5.85	1.000	512792.4		M	d5-NEtFOSAA	5.85	124785.1	4.109	20.014
PFDoDA	6.06	1.000	4161895.9		A	13C2-PFDoDA	6.06	1133027.9	3.673	20.121
10:2-FTS	6.08	1.090	480384.1		A	13C2-8:2-FTS	5.58	46142.4	10.411	22.957
NMePFOSAE	6.11	1.000	1240182.1		A	d7-NMePFOSAE	6.10	247663.8	5.008	21.073
NMePFOSA	6.12	1.000	322671.1		A	d3-NMePFOSA	6.11	83129.0	3.882	20.577
PFDoS	6.23	1.190	390444.7		A	13C8-PFOS	5.26	299574.5	1.303	18.718
NEtPFOSAE	6.27	1.000	1338584.5		A	d9-NEtPFOSAE	6.26	220689.9	6.065	21.818
NEtPFOSA	6.28	1.000	293215.8		A	d5-NEtPFOSA	6.27	66384.7	4.417	19.796
PFTrDA	6.26	1.030	3743763.6		A	13C2-PFDoDA	6.06	1133027.9	3.304	19.916
PFTeDA	6.44	1.000	2897106.2		A	13C2-PFTeDA	6.44	786107.5	3.685	20.882
PFHxDA	6.74	1.050	1551331.1		A	13C2-PFTeDA	6.44	786107.5	1.973	22.560
PFODA	7.00	1.090	1272897.4		A	13C2-PFTeDA	6.44	786107.5	1.619	21.571

Total Ion Chromatogram

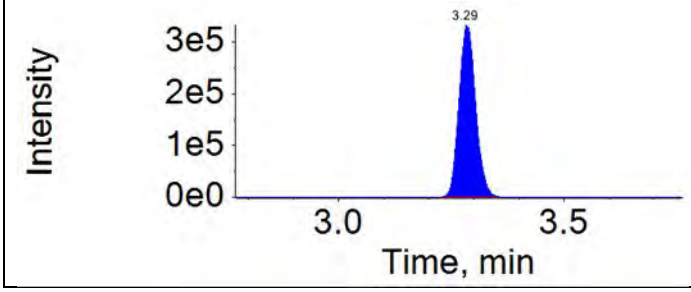


APPROVED
By MCD at 5:00 pm, 11/28/18

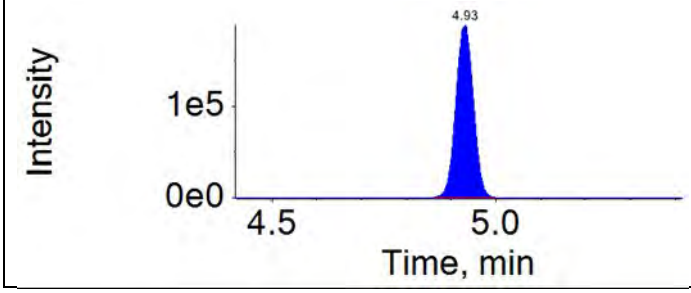
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

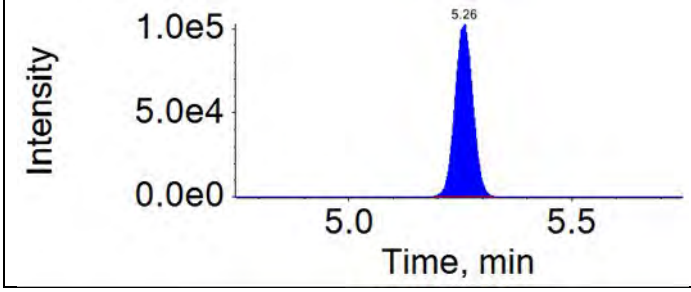
Injection Standard: 13C3-PFBA
216.0 / 172.0



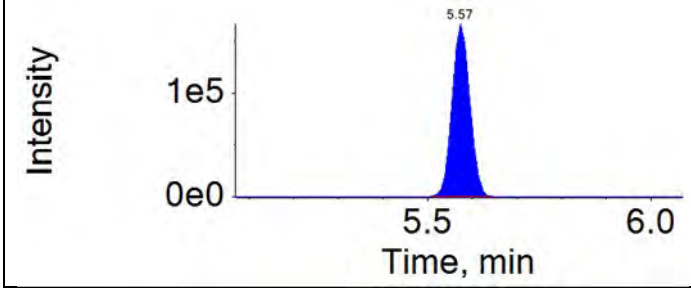
Injection Standard: 13C2-PFOA
415.0 / 370.0



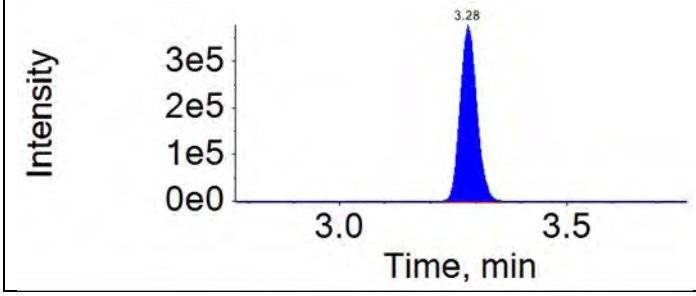
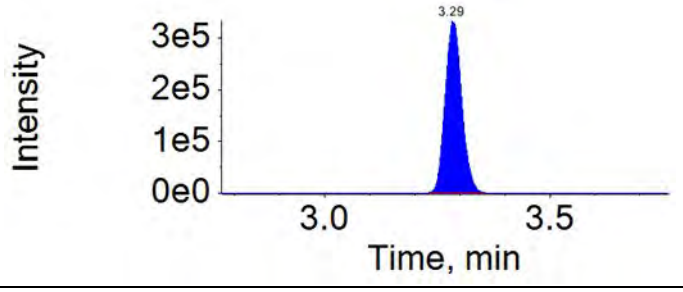
Injection Standard: 13C4-PFOS
503.0 / 80.0

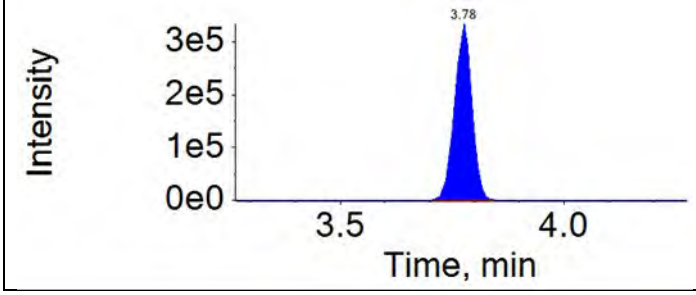
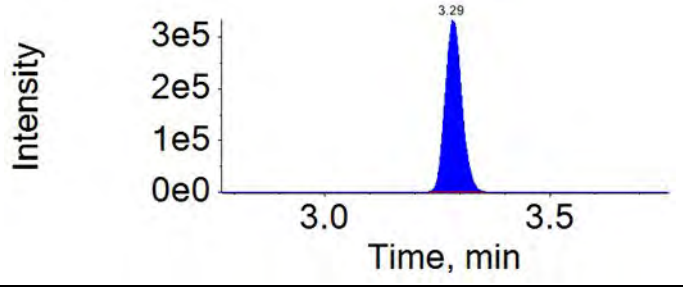


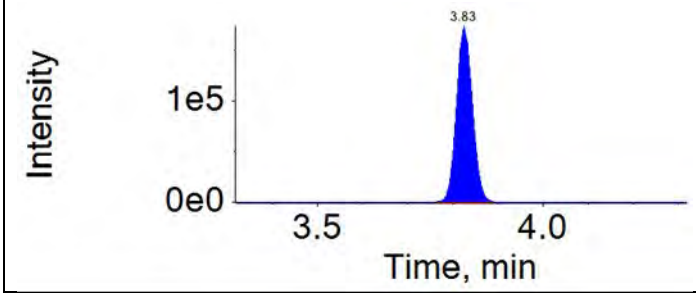
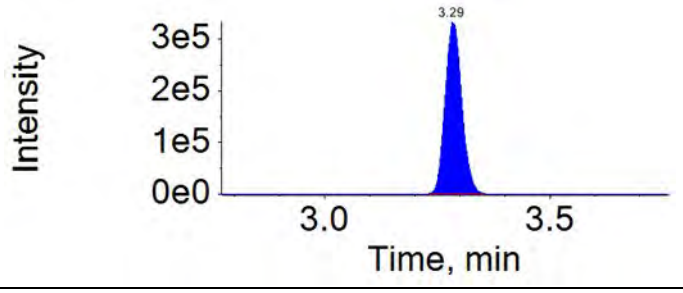
Injection Standard: 13C2-PFDA
515.0 / 470.0

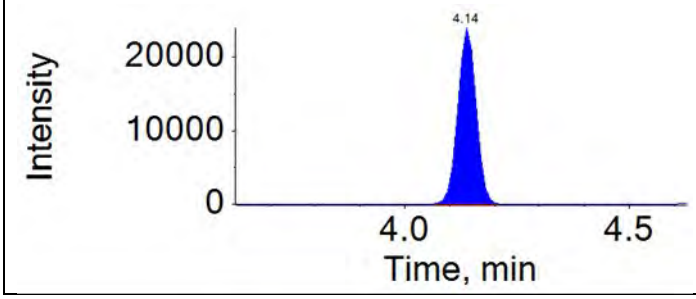
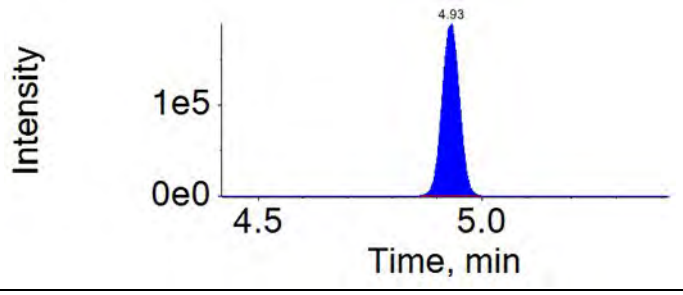


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

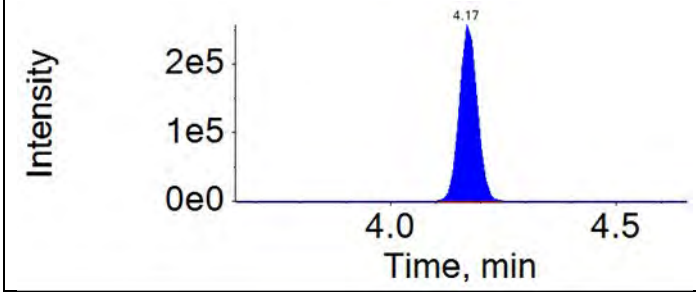
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

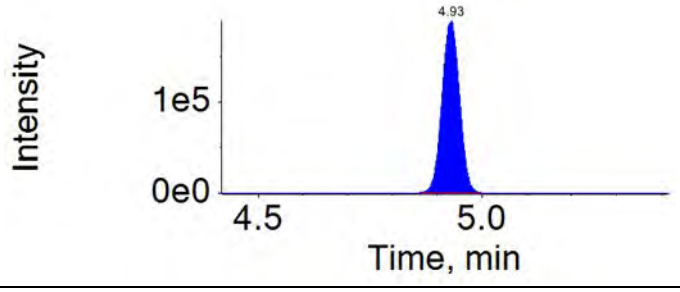
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

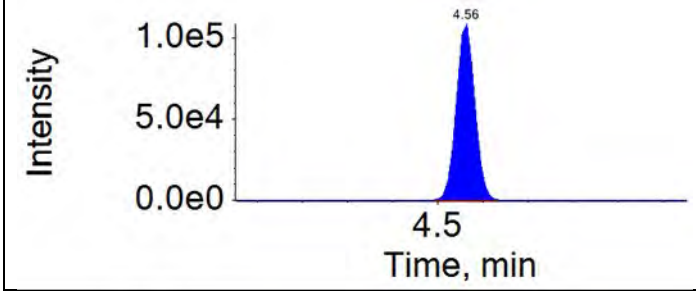
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

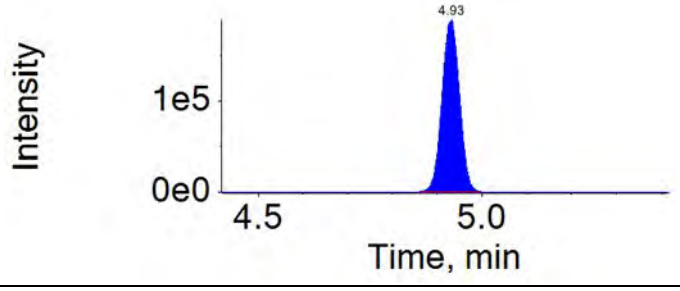
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



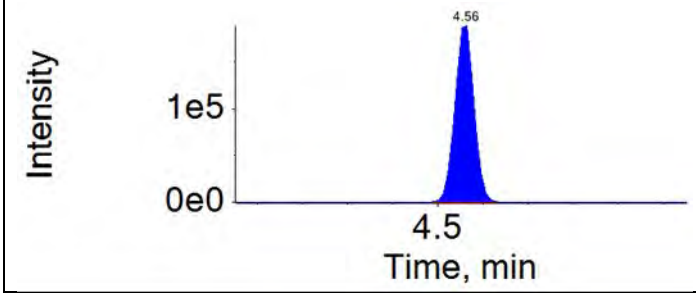


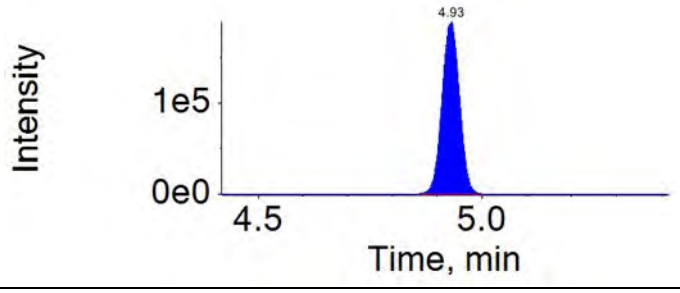
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



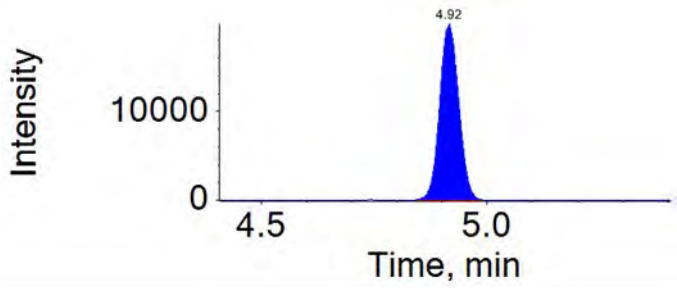


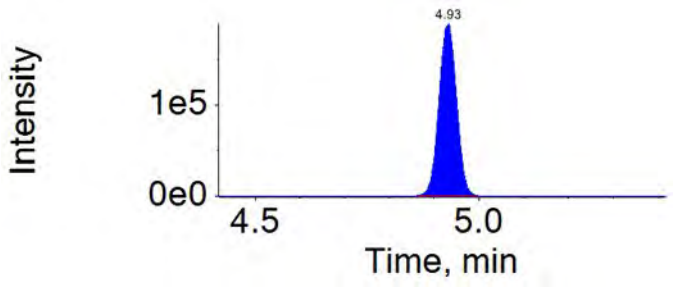
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



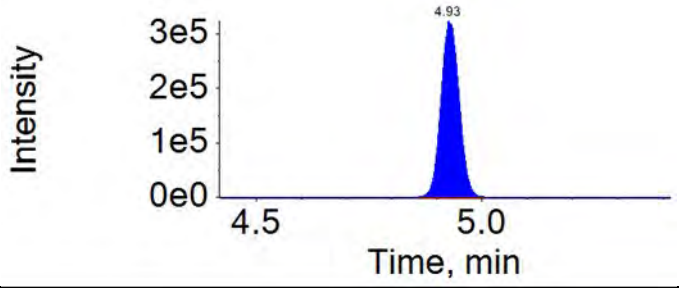


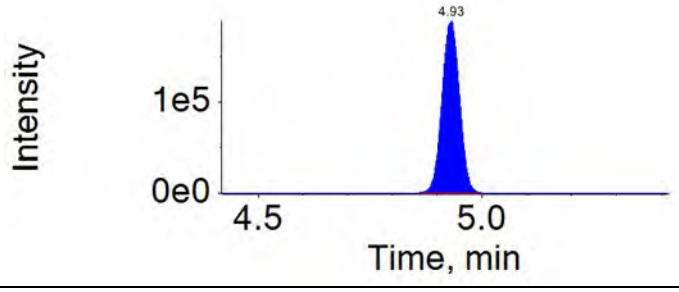
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

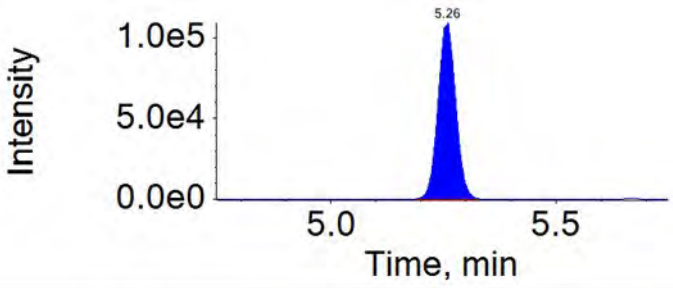
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

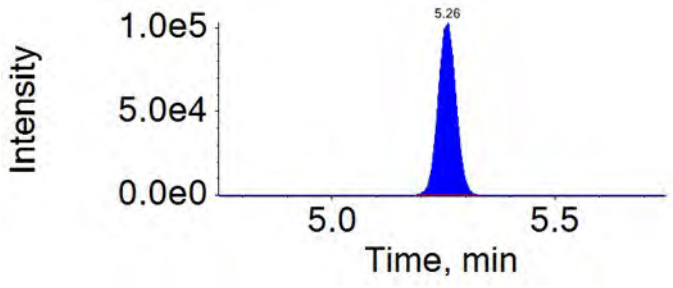
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



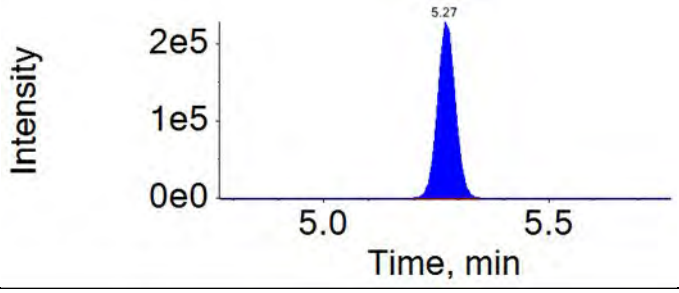


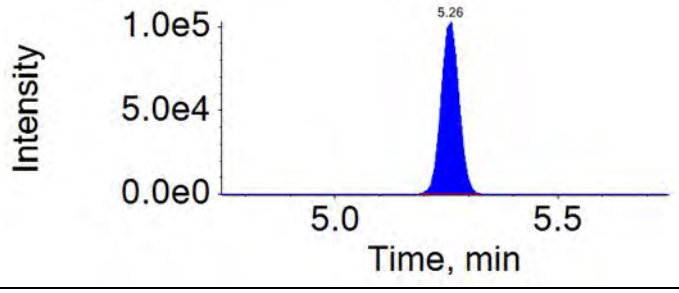
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



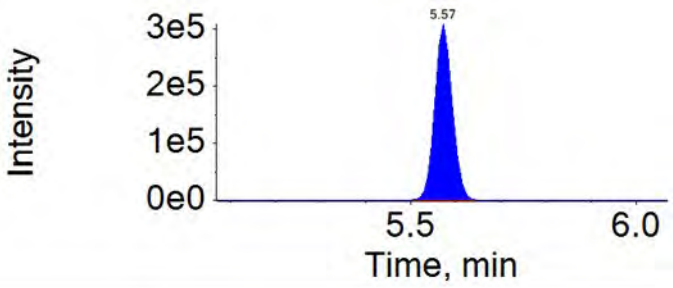


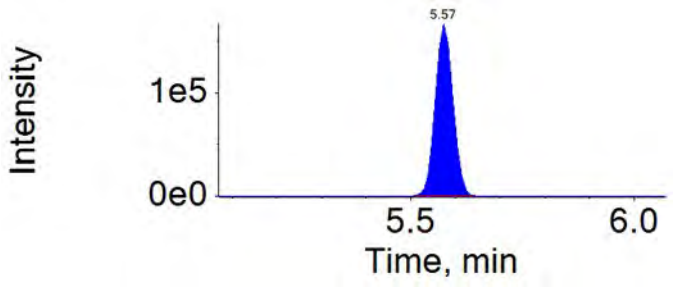
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0



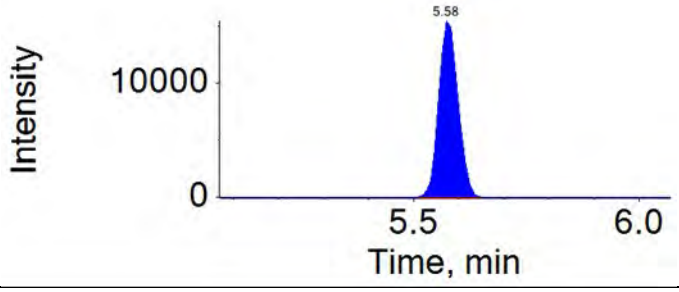


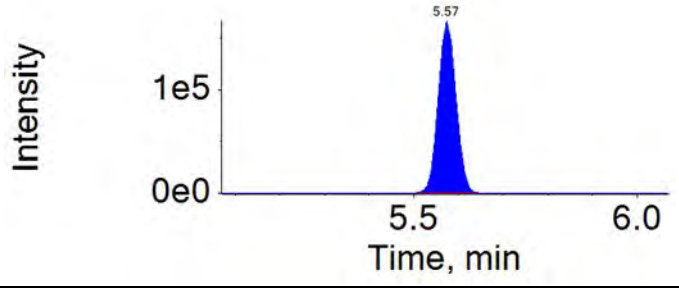
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

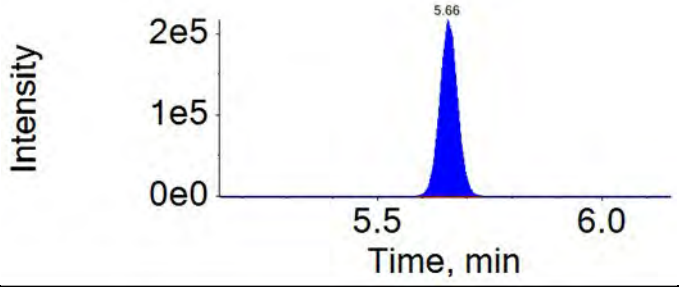
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

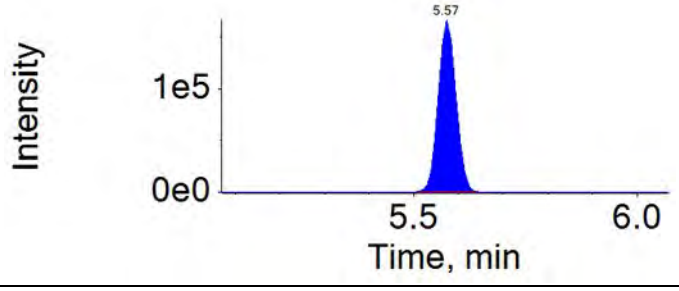
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



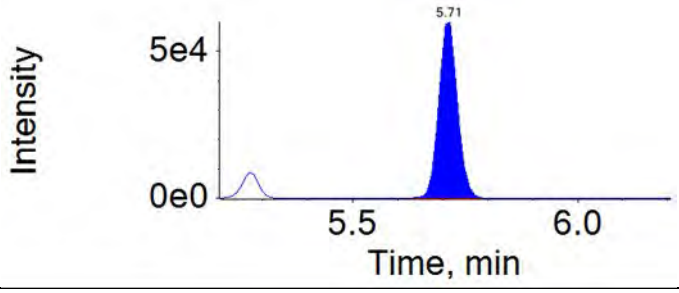


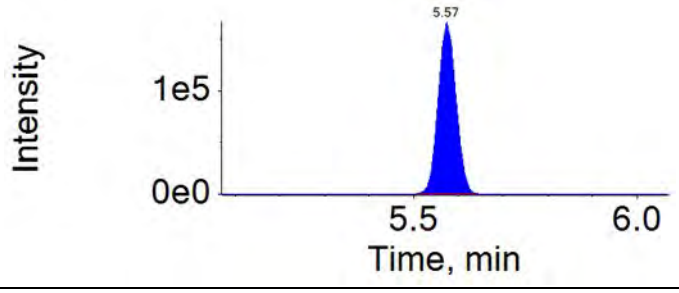
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



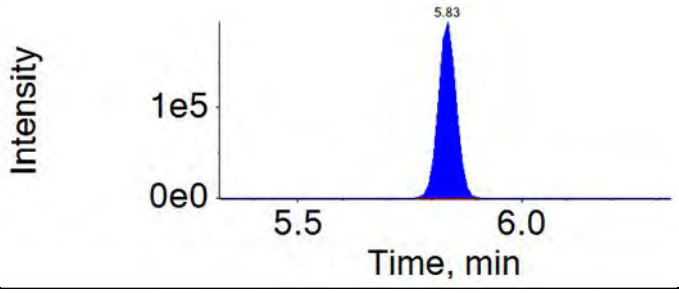


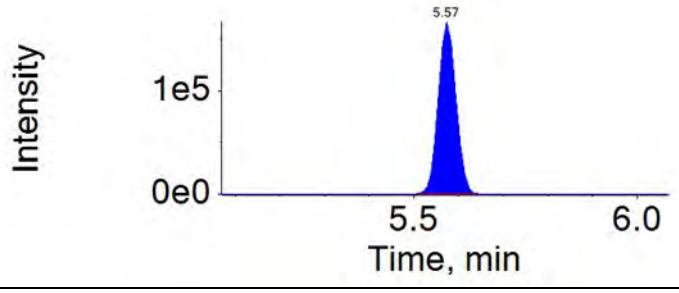
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



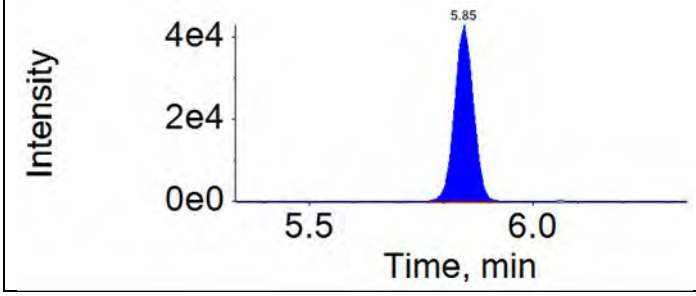


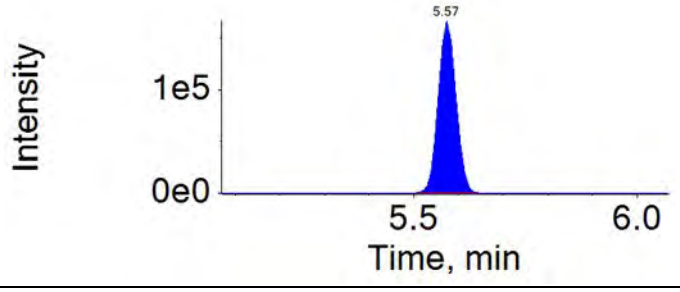
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

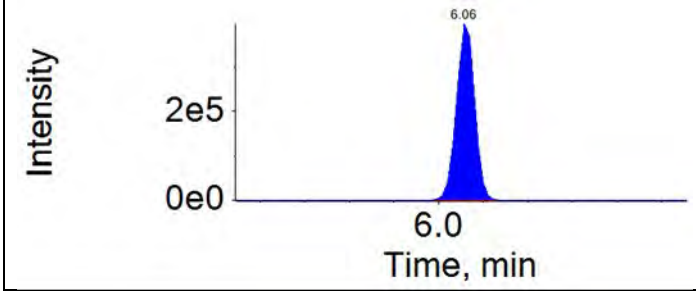
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

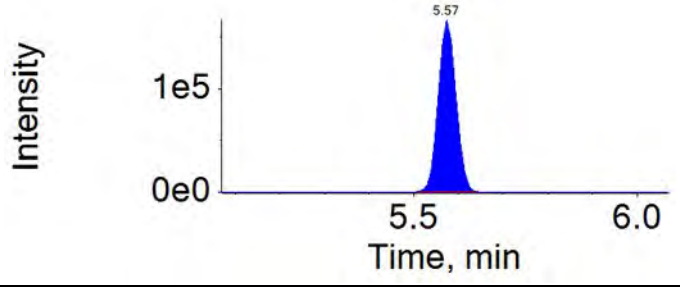
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



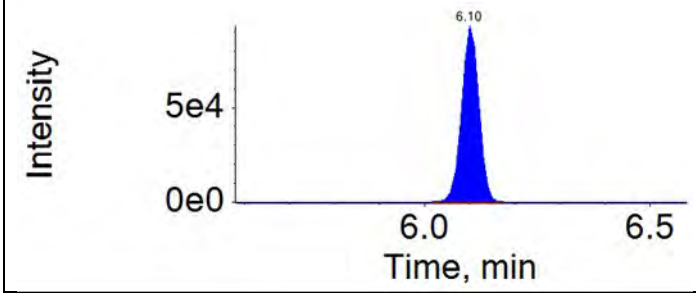


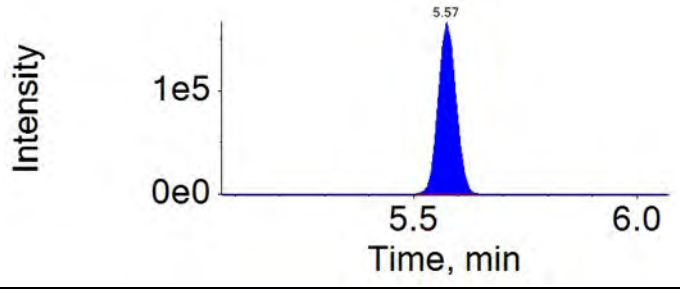
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



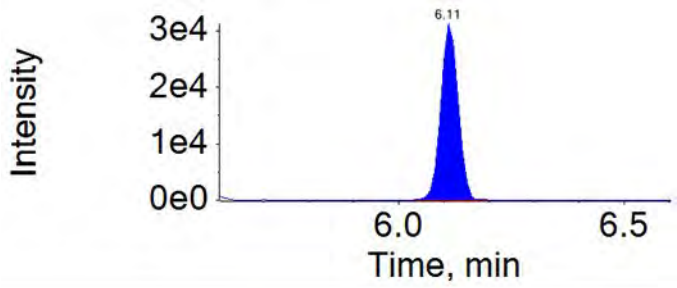


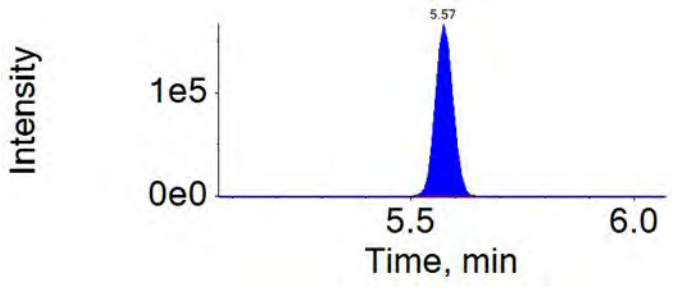
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





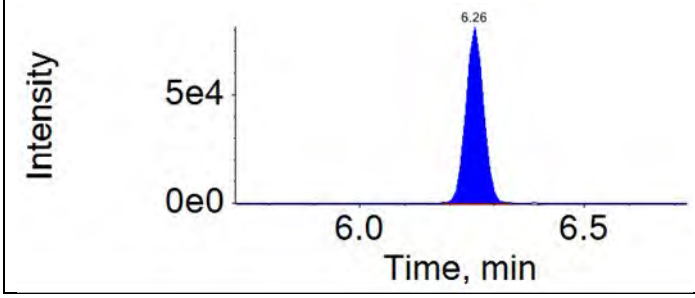
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

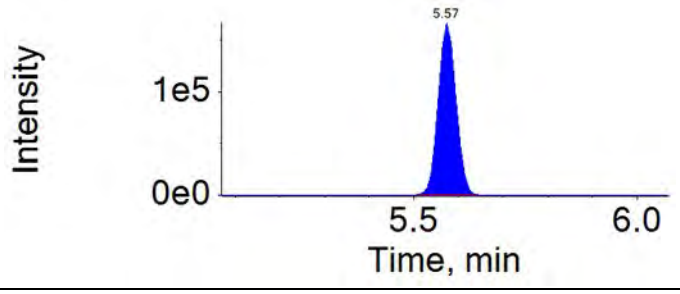




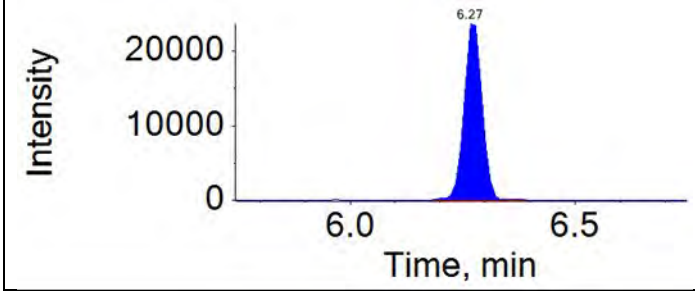
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

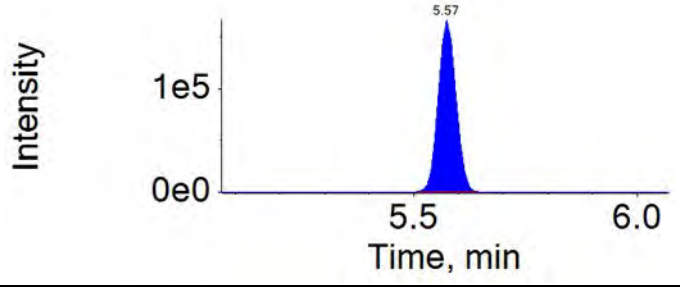
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



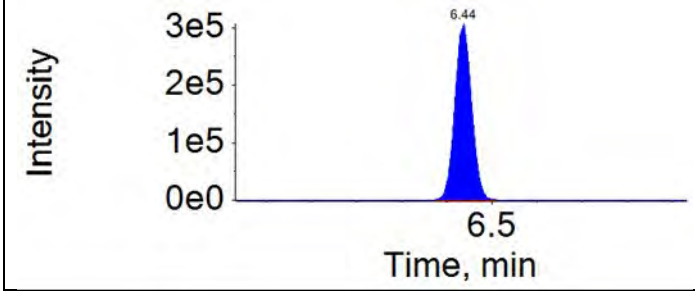


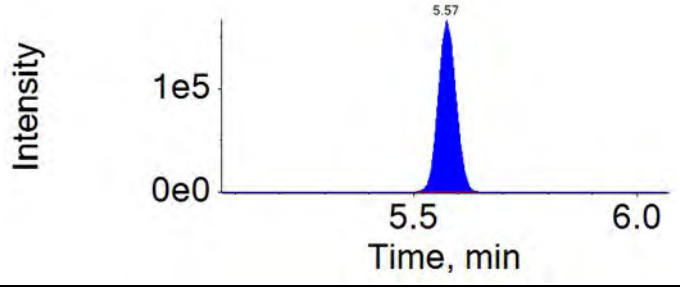
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



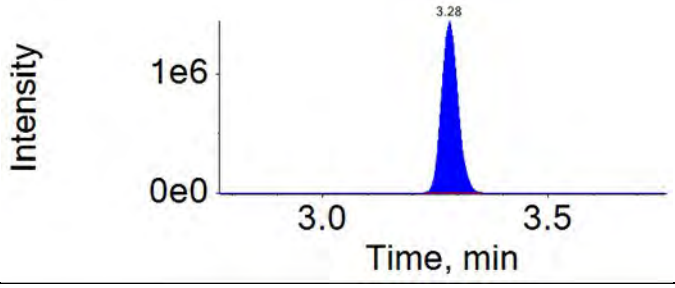


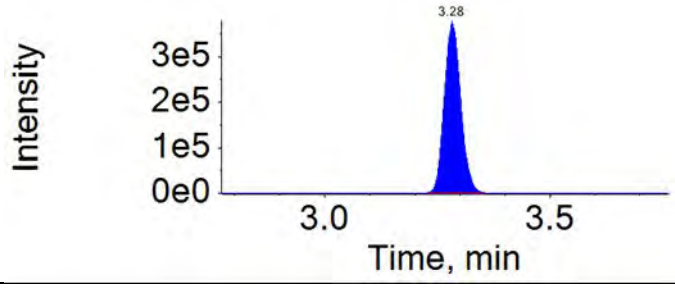
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

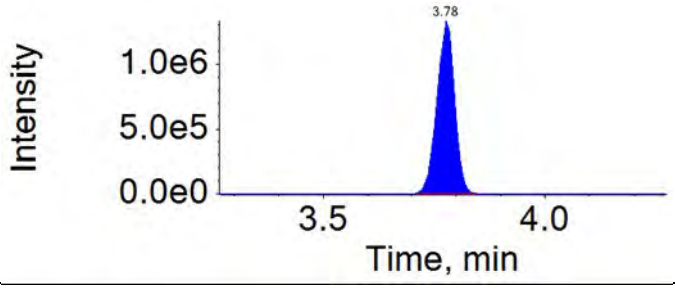
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

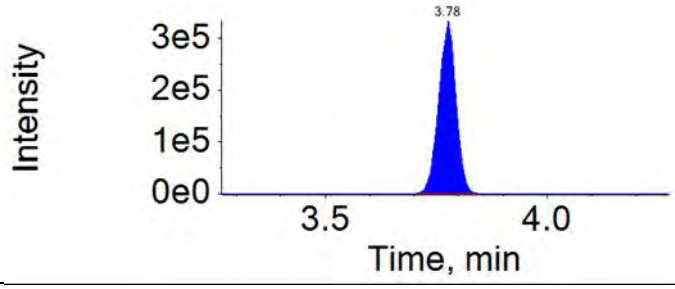
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



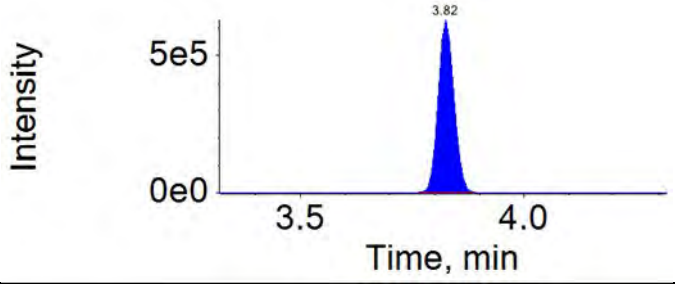


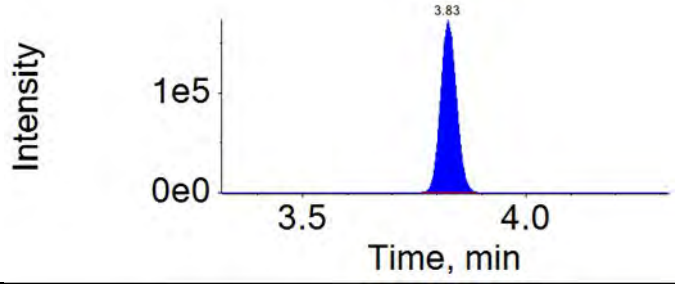
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



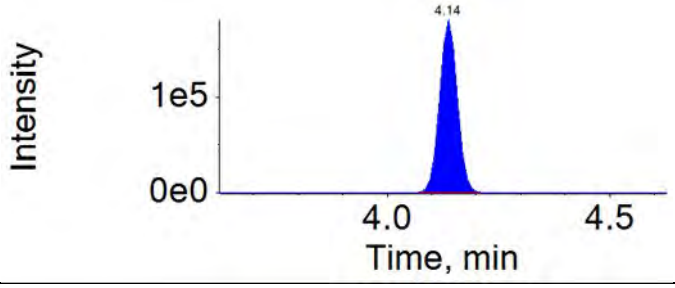


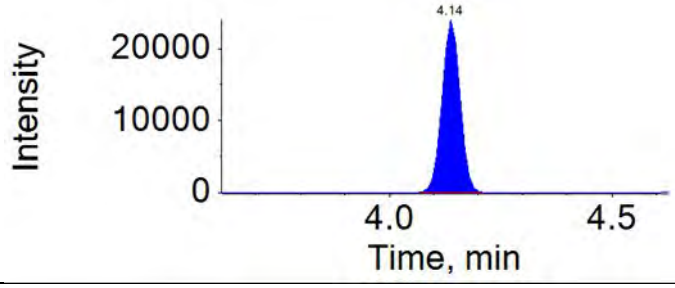
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



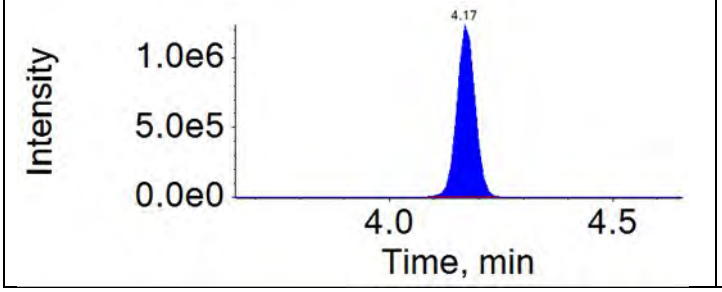


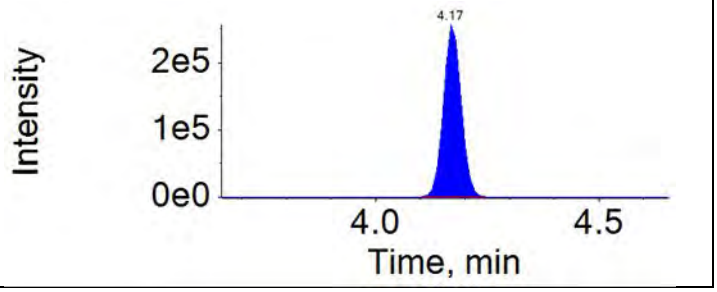
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

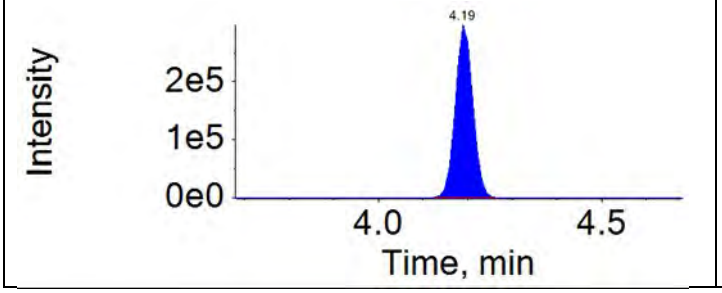
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

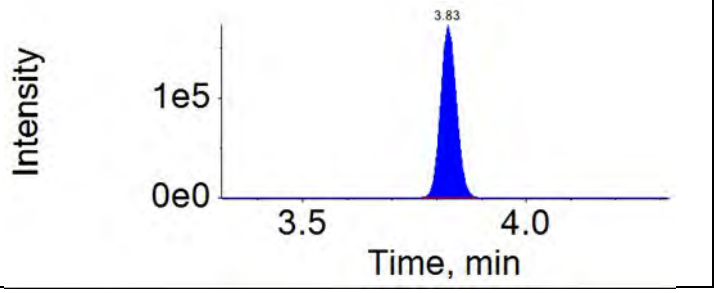
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



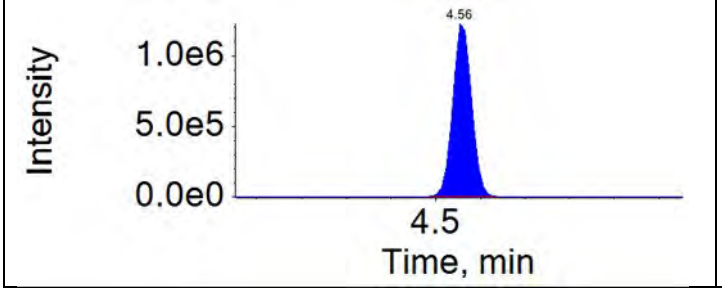


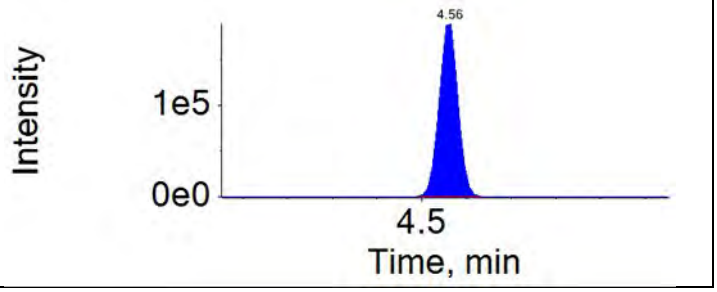
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



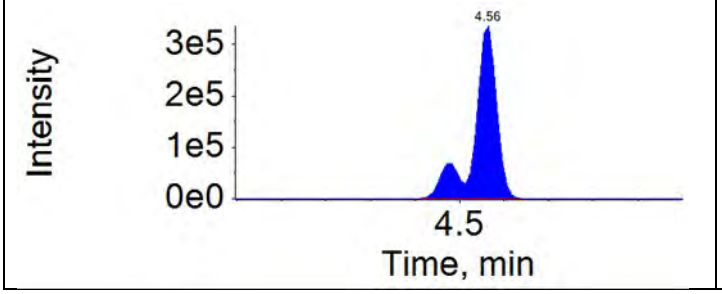


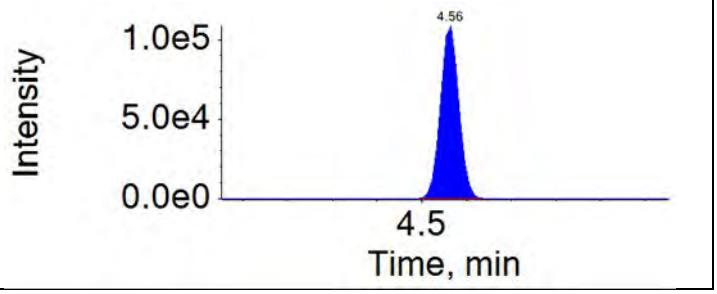
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

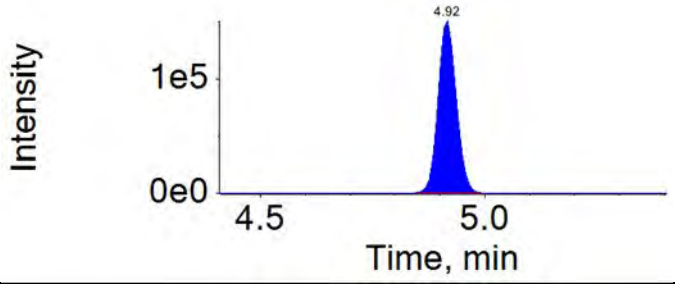
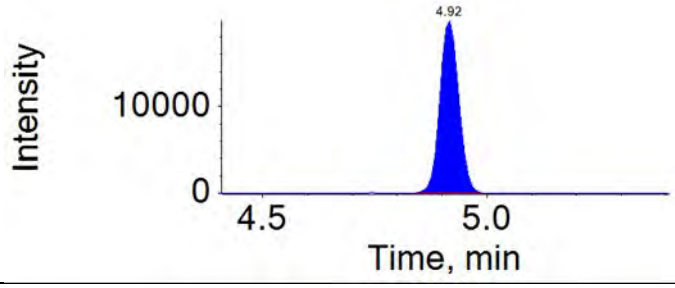


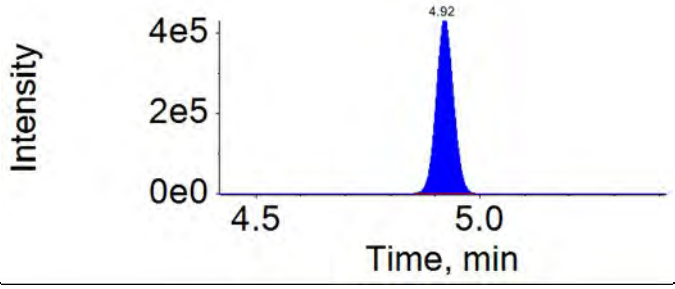
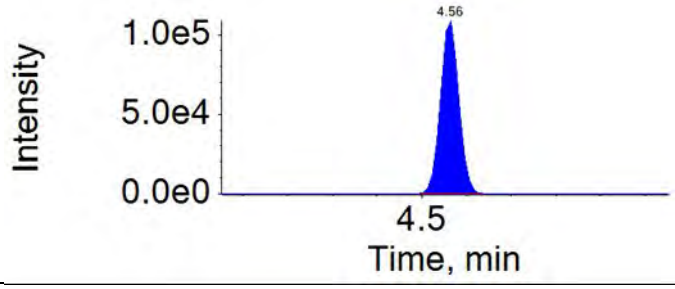


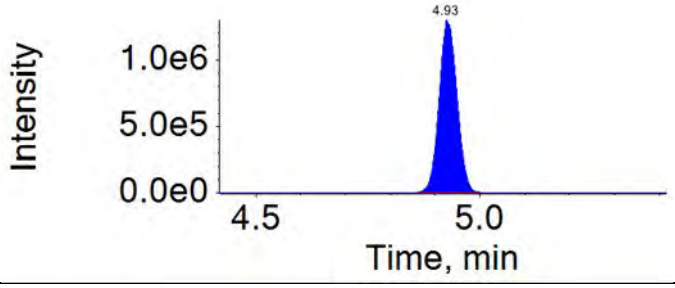
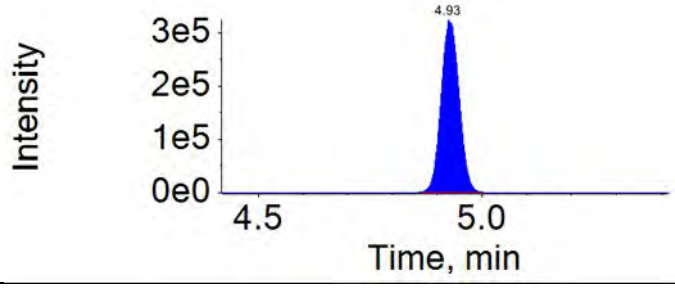
APPROVED
By MCD at 5:00 pm, 11/28/18

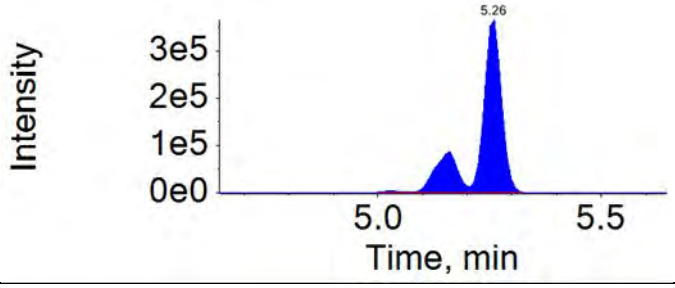
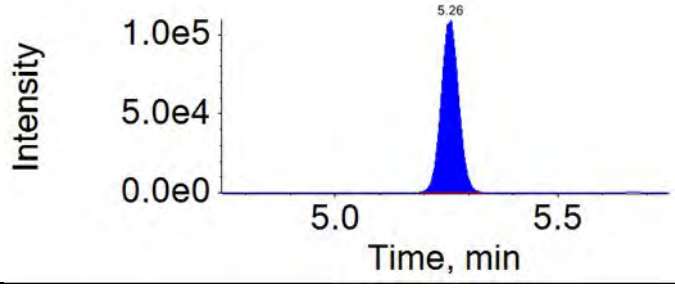
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

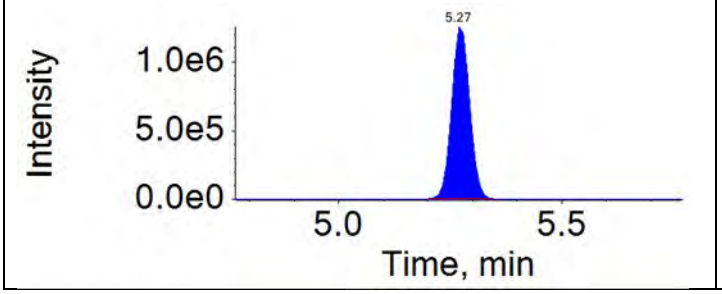
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

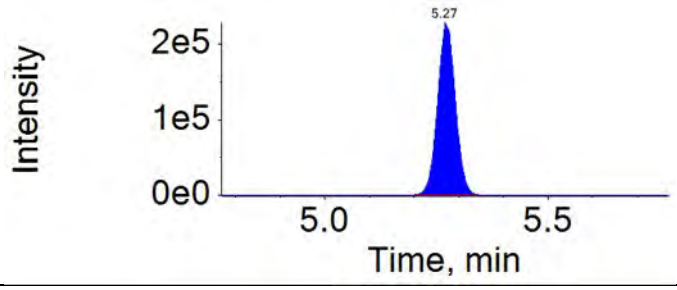
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

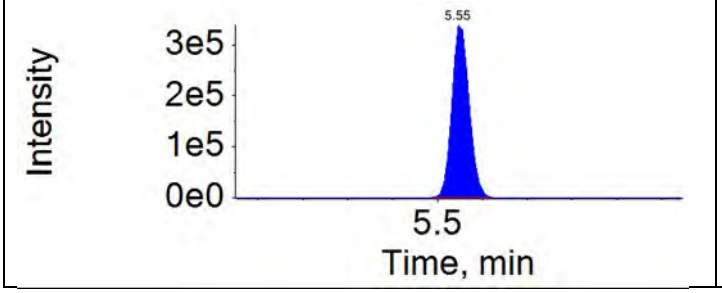
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

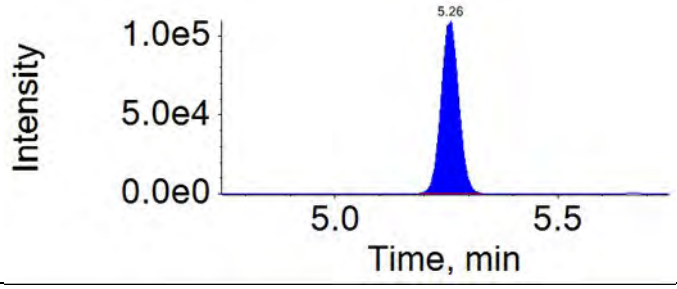
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



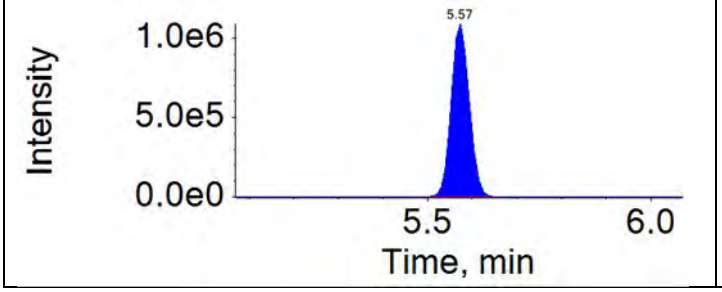


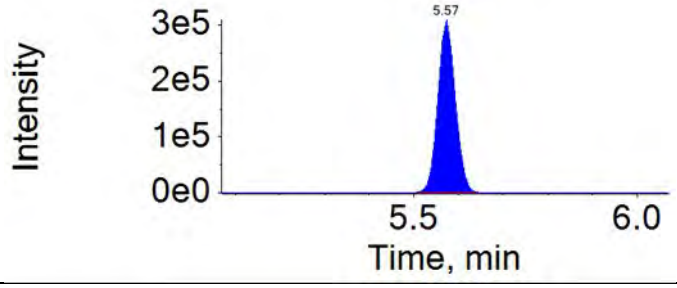
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



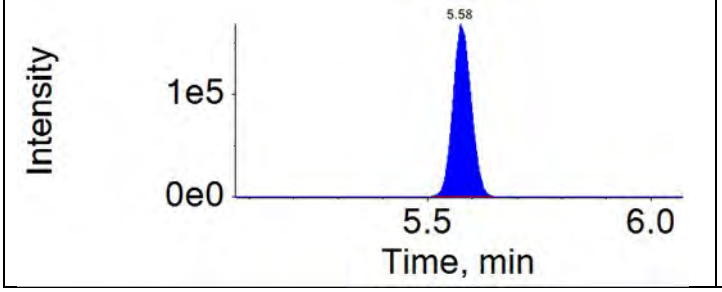


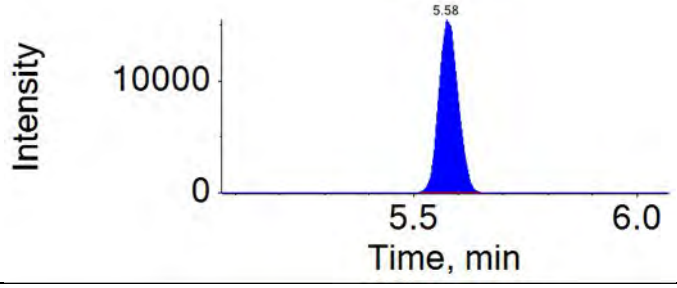
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



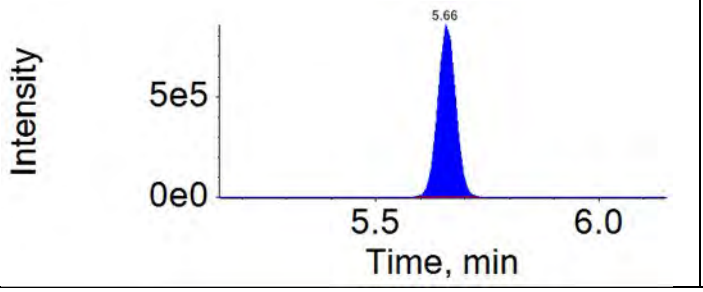


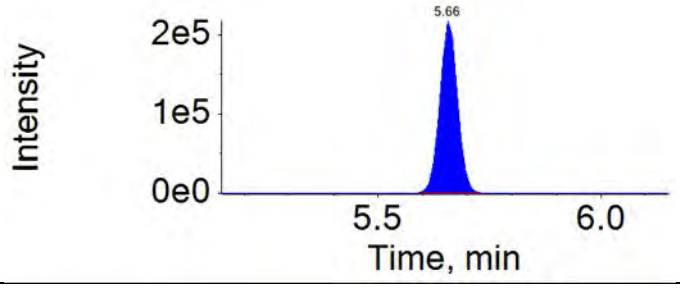
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

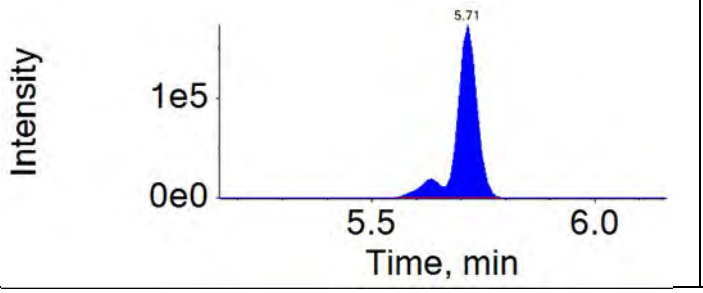
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

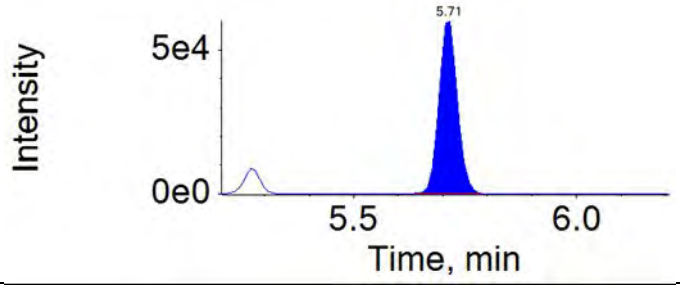
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



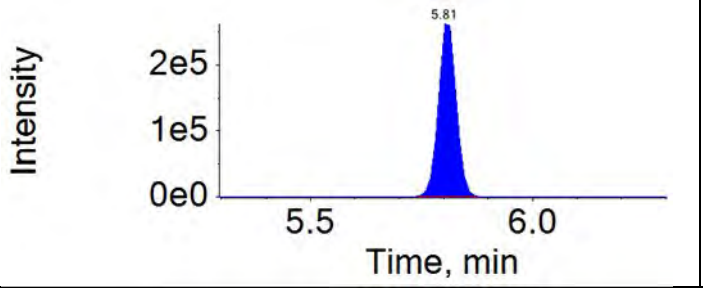


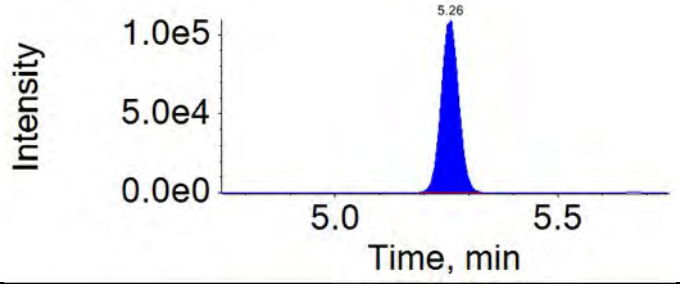
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



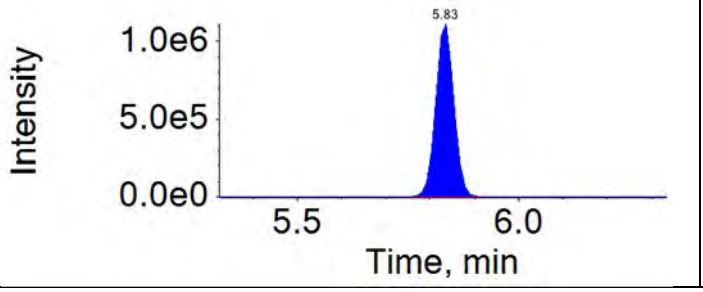


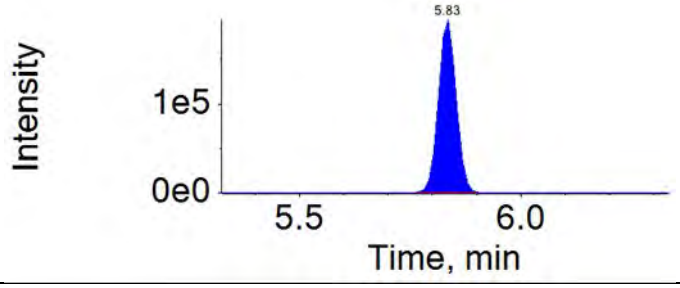
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



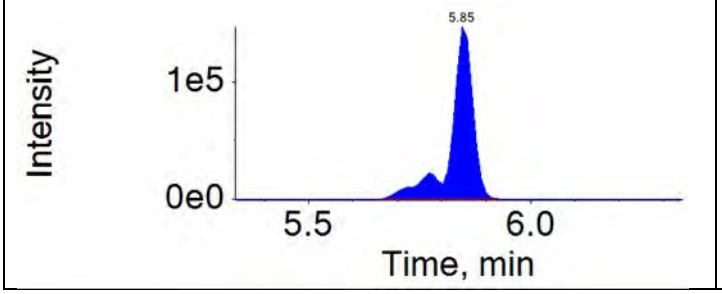


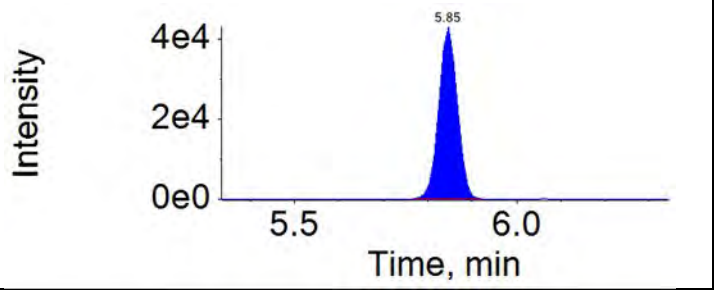
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

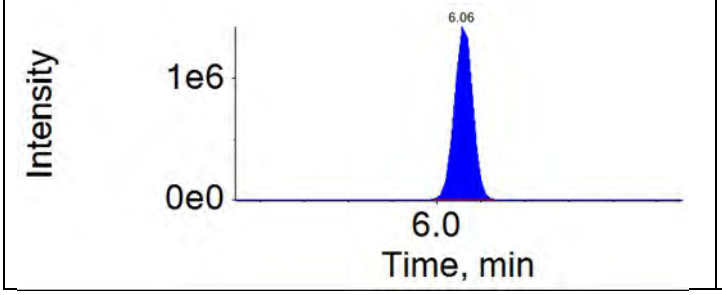
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

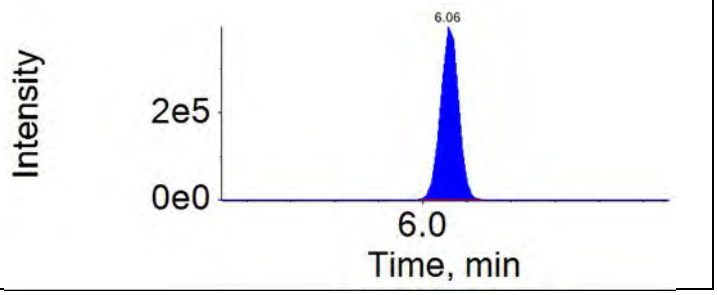
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



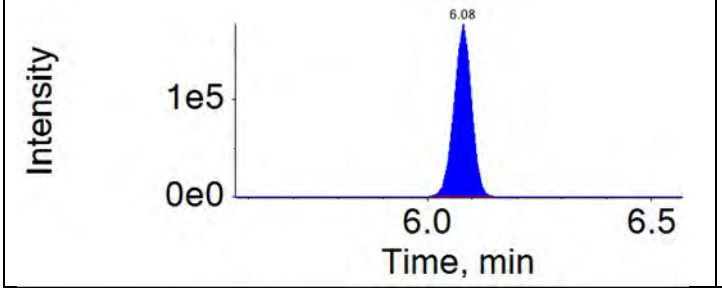


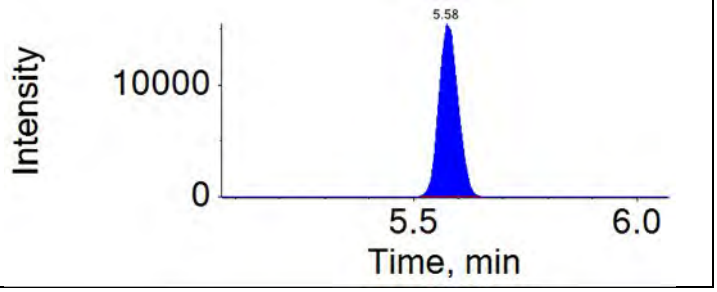
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



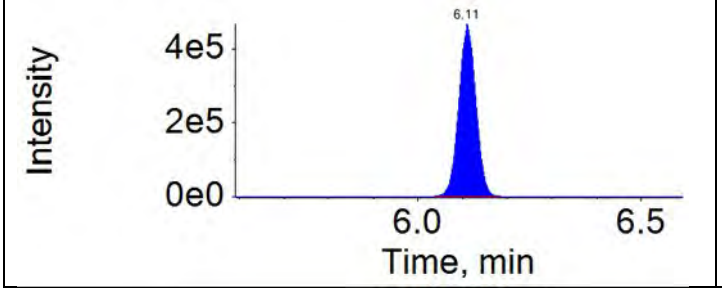


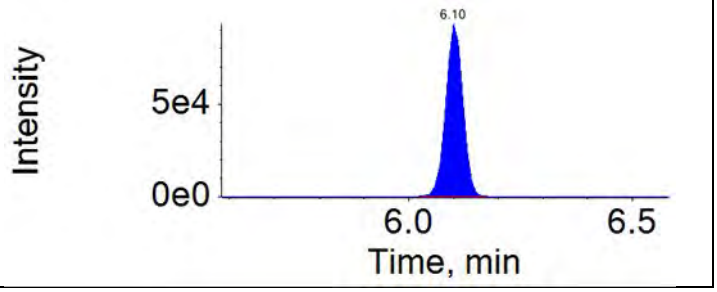
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



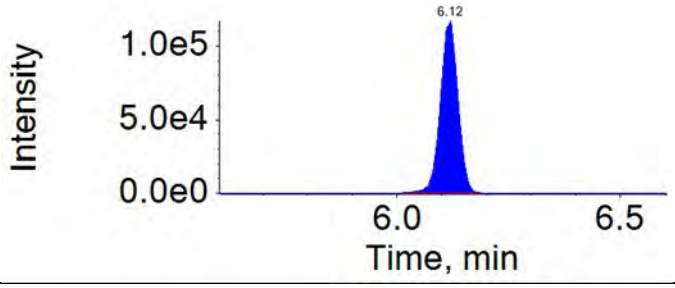


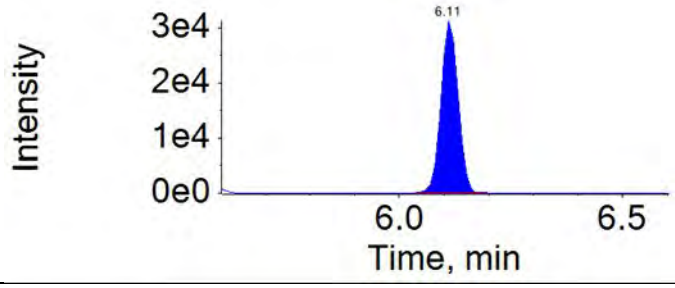
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

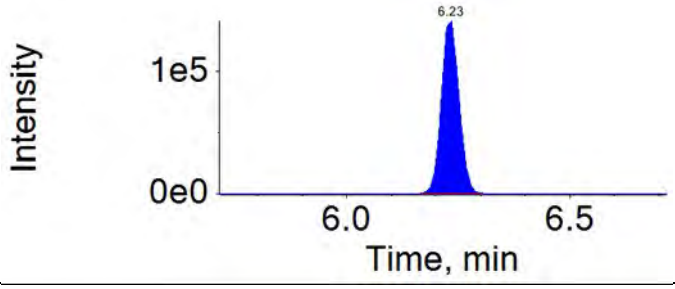
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

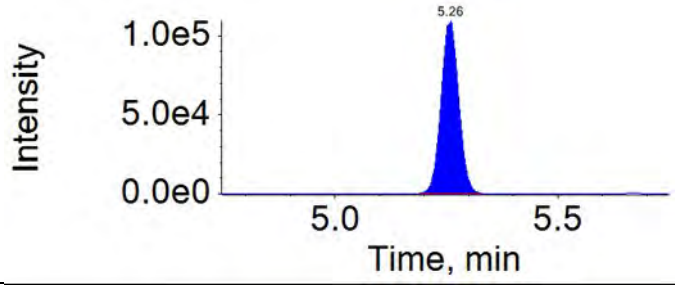
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



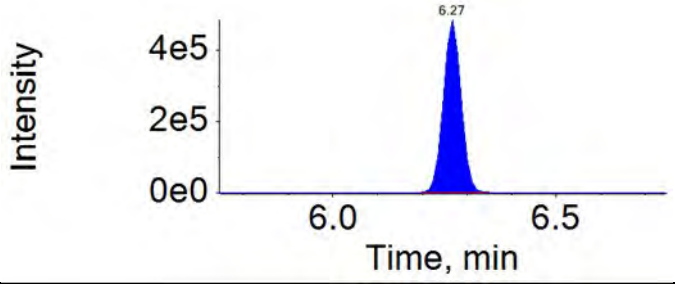


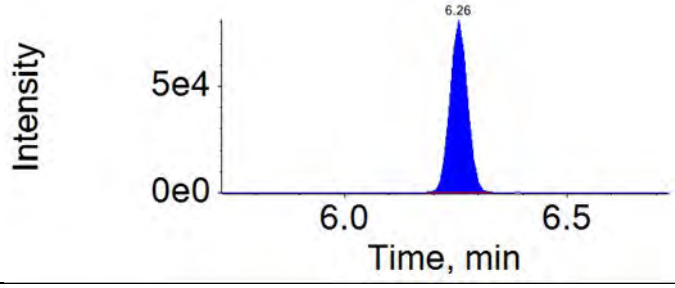
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



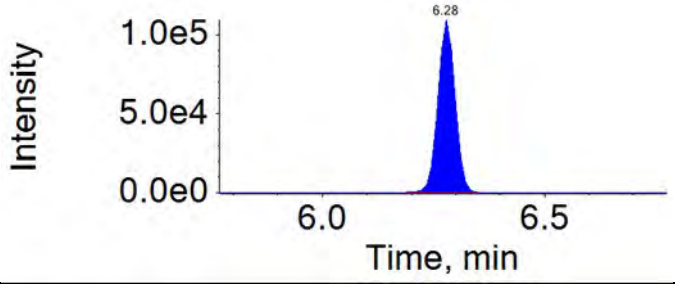


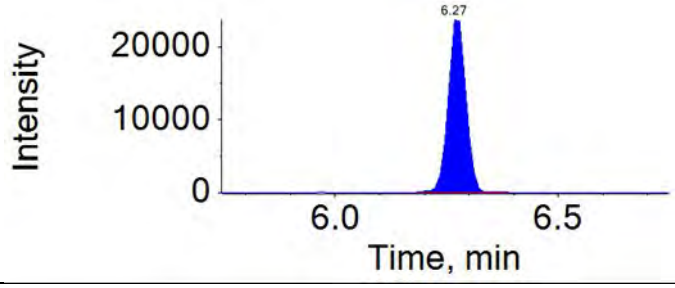
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





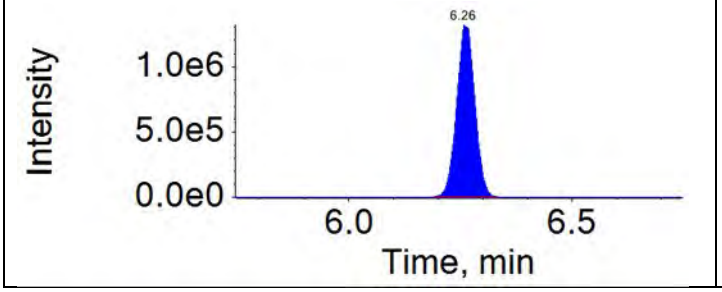
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

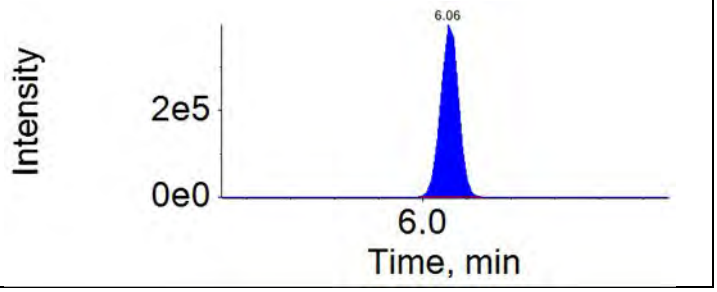




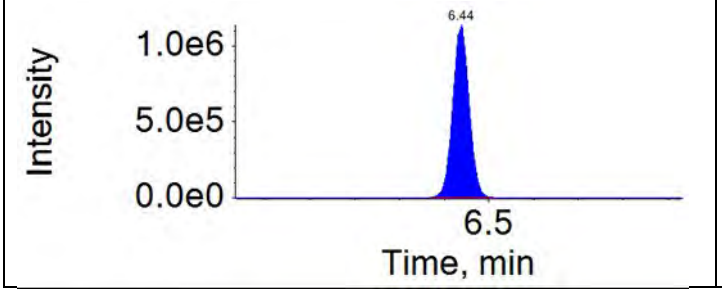
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

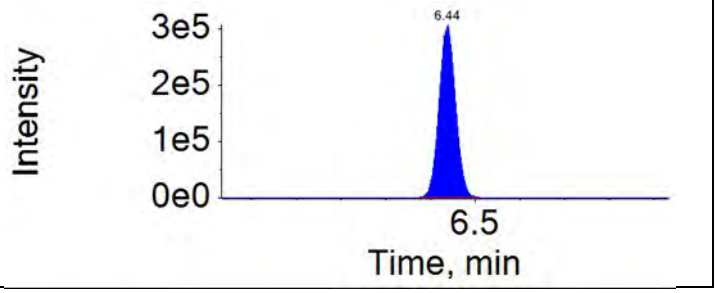
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



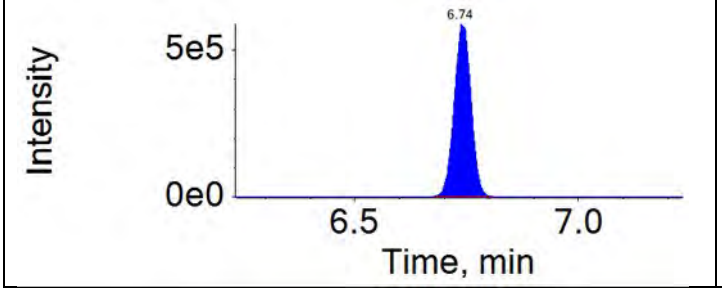


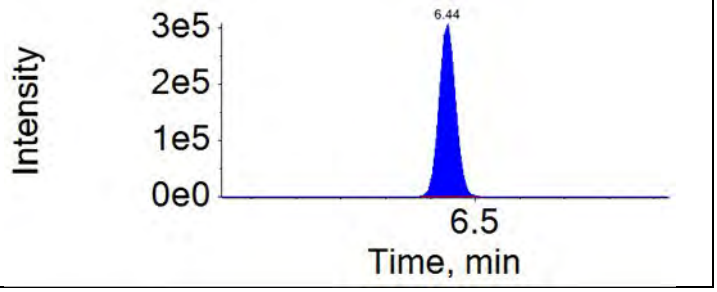
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



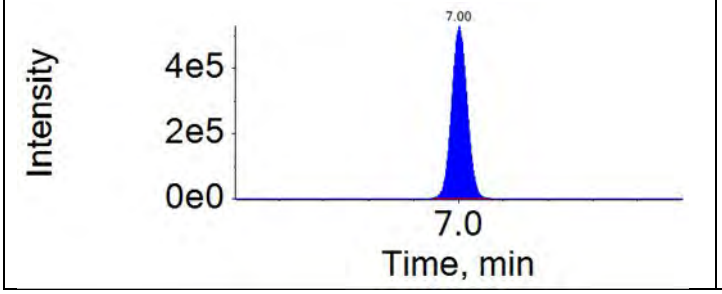


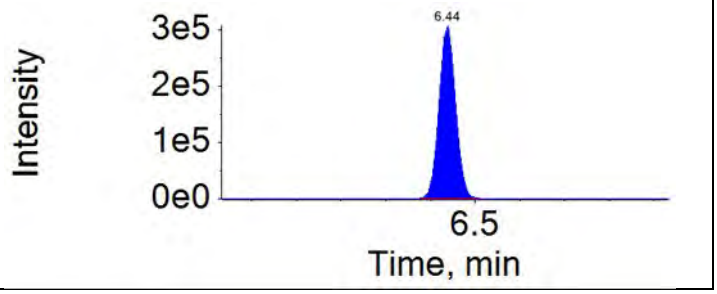
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



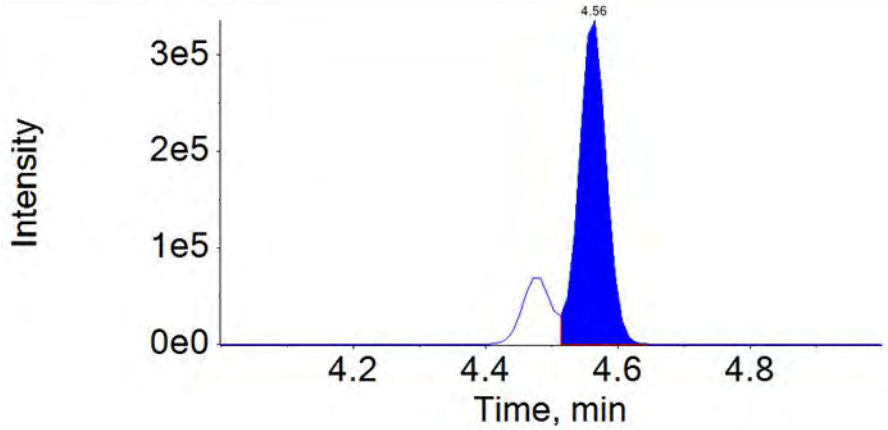


APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

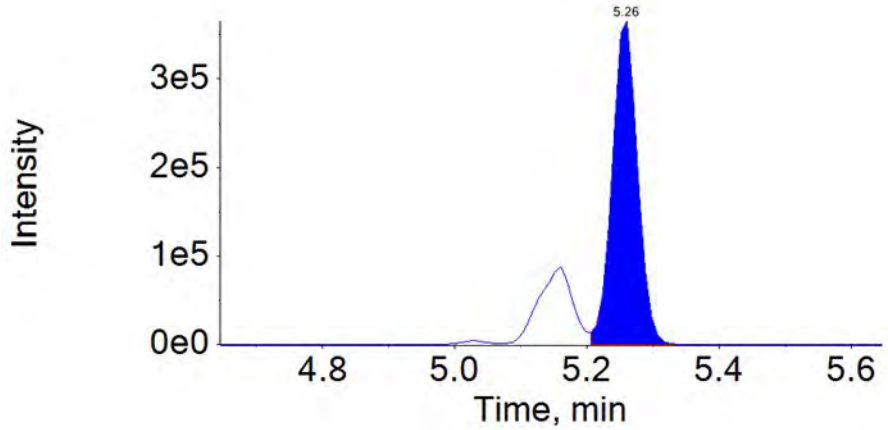
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.56
Peak Area:
976399.82
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



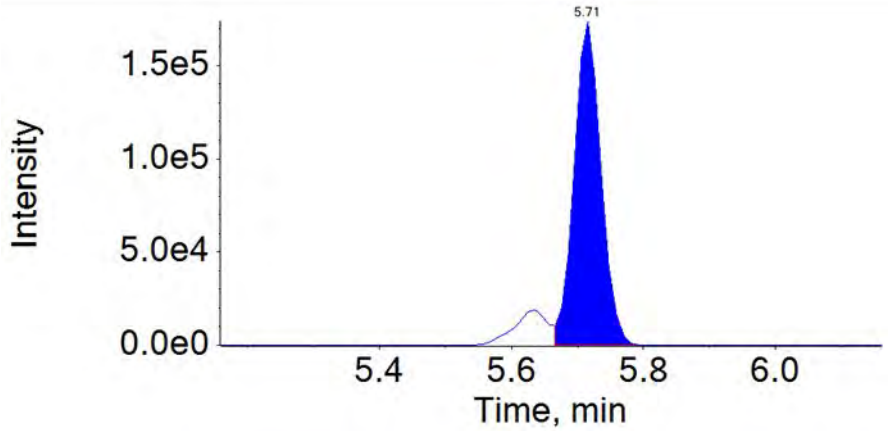
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.26
Peak Area:
977368.32
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
489906.15
Mass Range:
570.0 / 419.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



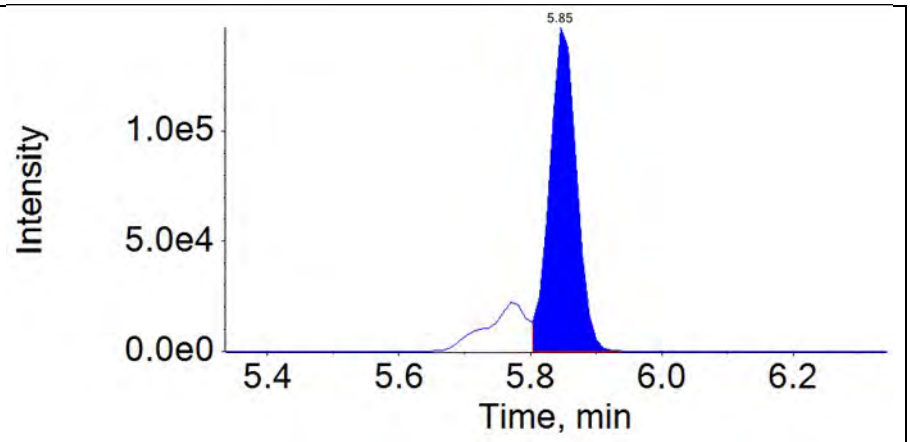
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

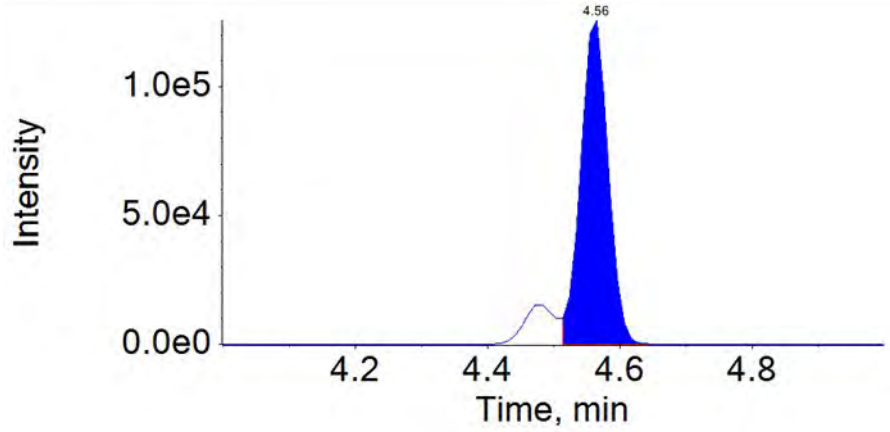
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.85
Peak Area:
417736.88
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



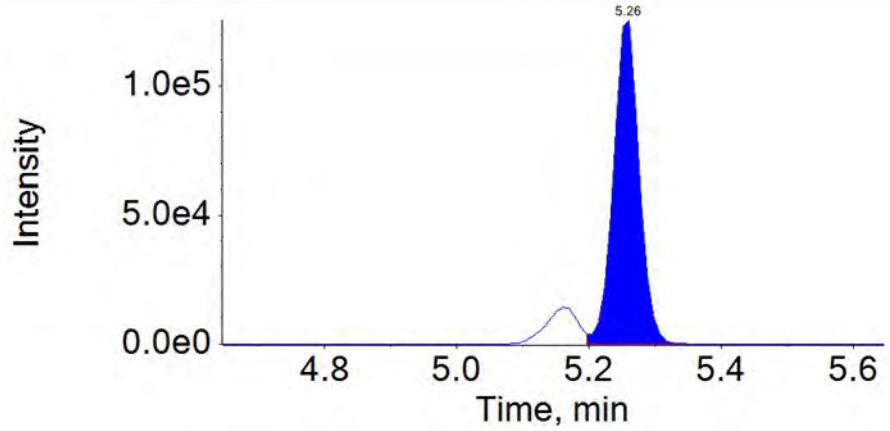
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.56
Peak Area:
364661.03
Mass Range:
399.0 / 99.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.26
Peak Area:
341158.00
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



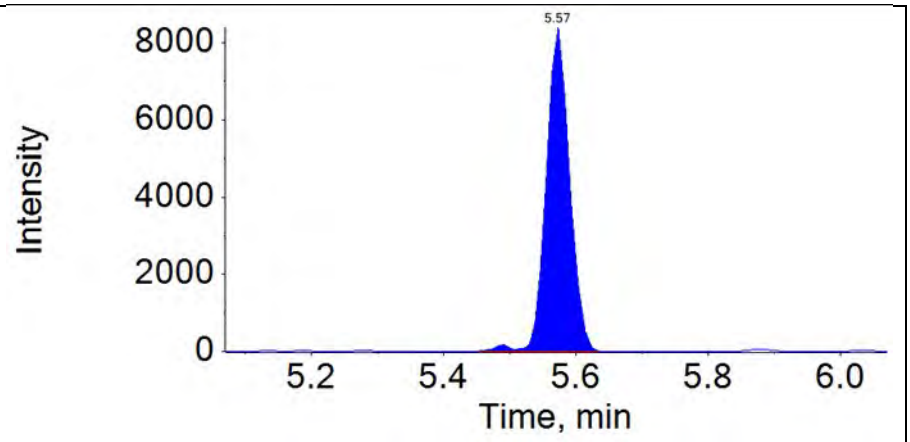
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

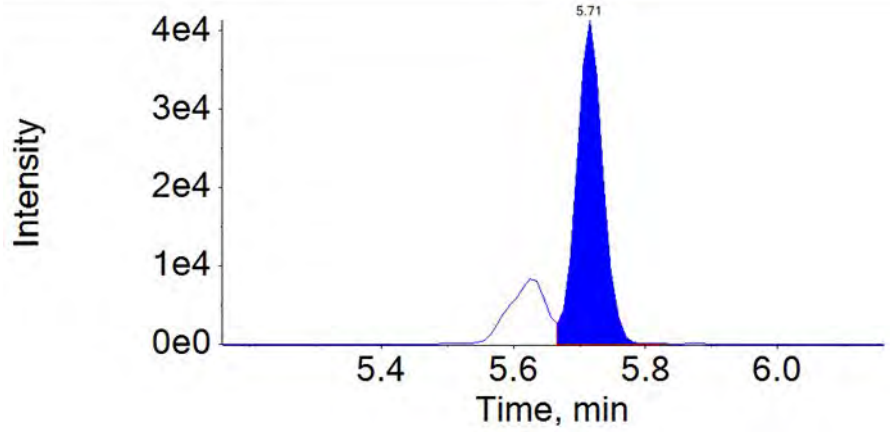
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDA_2
RT (min.):
5.57
Peak Area:
20732.67
Mass Range:
513.0 / 169.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



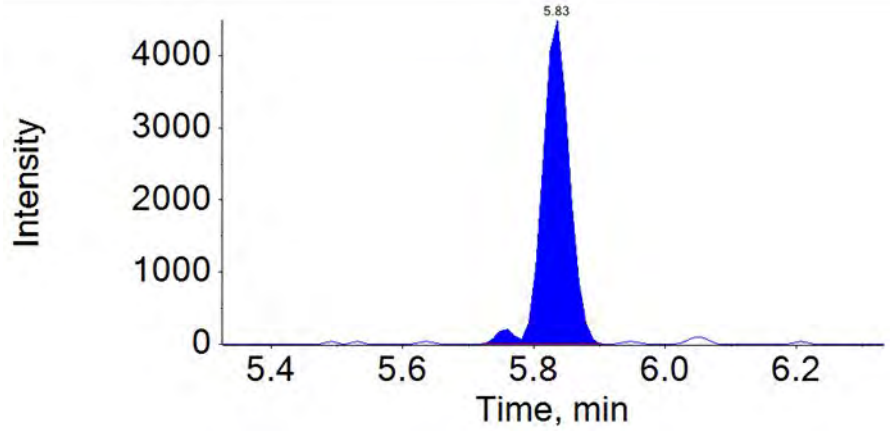
Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.71
Peak Area:
113720.56
Mass Range:
570.0 / 483.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

Component Name:
PFUnDA_2
RT (min.):
5.83
Peak Area:
12880.94
Mass Range:
563.0 / 169.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

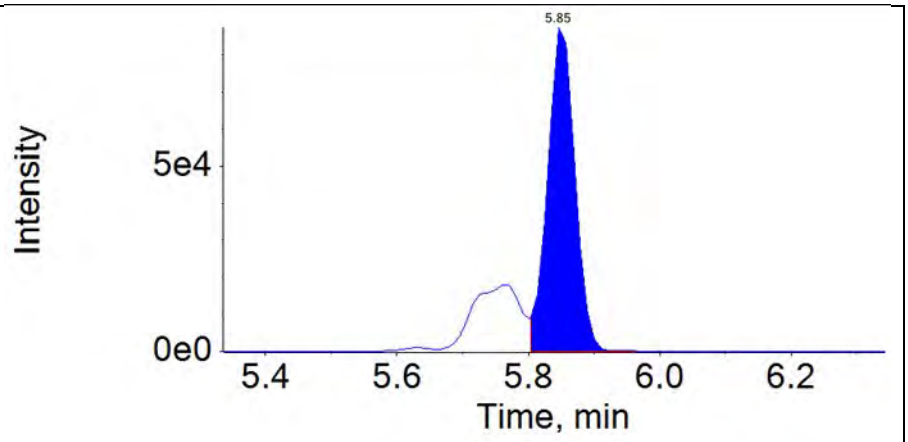
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.85
Peak Area:
253789.74
Mass Range:
584.0 / 526.0
File Name:
18NOV28DCAL-10.wiff
Sample Name:
CAL5



Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Ion Ratio Report

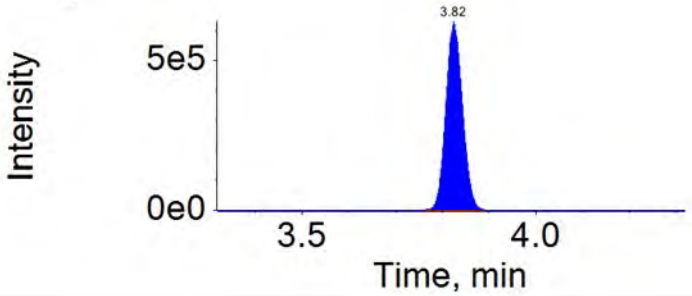
Sample Name: CAL5 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-10.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	1542881.65	A	0.3655	0.3660			
PFBS_2	3.82	1.00	564738.60	A	0.3655	0.3660	0	50	
4:2-FTS	4.14	1.00	498650.67	A	0.6383	0.6282			
4:2-FTS_2	4.14	1.00	313233.41	A	0.6383	0.6282	-2	50	
PFHxA	4.17	1.00	3464657.28	A	0.0103	0.0109			
PFHxA_2	4.17	1.00	37840.59	A	0.0103	0.0109	6	50	
PFPeS	4.19	1.10	809727.98	A	0.4976	0.4890			
PFPeS_2	4.19	1.10	395964.11	A	0.4976	0.4890	-2	50	
PFHpA	4.56	1.00	3592806.18	A	0.0557	0.0523			
PFHpA_2	4.56	1.00	187766.14	A	0.0557	0.0523	-6	50	
PFHxS	4.56	1.00	1191482.72	M	0.3693	0.3492			
PFHxS_2	4.56	1.00	416064.44	M	0.3693	0.3492	-5	50	
6:2-FTS	4.92	1.00	426727.66	A	0.6625	0.6532			
6:2-FTS_2	4.92	1.00	278752.30	A	0.6625	0.6532	-1	50	
PFHpS	4.92	1.08	1171216.60	A	0.3915	0.3965			
PFHpS_2	4.92	1.08	464342.40	A	0.3915	0.3965	1	50	
PFOA	4.93	1.00	3601538.31	A	0.0573	0.0569			
PFOA_2	4.93	1.00	205017.31	A	0.0573	0.0569	-1	50	
PFOS	5.26	1.00	1305020.45	M	0.2960	0.2984			
PFOS_2	5.26	1.00	389398.22	M	0.2960	0.2984	1	50	
PFNA	5.27	1.00	3536255.08	A	0.0201	0.0194			
PFNA_2	5.27	1.00	68777.91	A	0.0201	0.0194	-3	50	
PFNS	5.55	1.06	909879.21	A	0.4794	0.4787			
PFNS_2	5.55	1.06	435583.86	A	0.4794	0.4787	0	50	
PFDA	5.57	1.00	3072749.00	A	0.0075	0.0067			
PFDA_2	5.57	1.00	20445.65	M	0.0075	0.0067	-11	50	
8:2-FTS	5.58	1.00	478390.07	A	0.5380	0.5702			
8:2-FTS_2	5.58	1.00	272796.88	A	0.5380	0.5702	6	50	
NMeFOSAA	5.71	1.00	557354.59	M	0.2305	0.2631			
NMeFOSAA_2	5.71	1.00	146652.83	M	0.2305	0.2631	14	50	
PFDS	5.81	1.10	737231.87	A	0.5356	0.4610			
PFDS_2	5.81	1.10	339890.15	A	0.5356	0.4610	-14	50	
PFUnDA	5.83	1.00	3163283.79	A	0.0038	0.0039			
PFUnDA_2	5.83	1.00	12485.39	M	0.0038	0.0039	4	50	
NEtFOSAA	5.85	1.00	512792.42	M	0.7356	0.6745			
NEtFOSAA_2	5.85	1.00	345864.54	M	0.7356	0.6745	-8	50	
PFDoDA	6.06	1.00	4161895.87	A	0.0130	0.0126			
PFDoDA_2	6.06	1.00	52575.90	A	0.0130	0.0126	-3	50	
10:2-FTS	6.08	1.09	480384.06	A	0.6989	0.7284			
10:2-FTS_2	6.08	1.09	349903.28	A	0.6989	0.7284	4	50	
PFTrDA	6.26	1.03	3743763.62	A	0.0090	0.0080			
PFTrDA_2	6.26	1.03	30122.74	A	0.0090	0.0080	-11	50	
PFTeDA	6.44	1.00	2897106.24	A	0.0056	0.0061			
PFTeDA_2	6.44	1.00	17720.47	A	0.0056	0.0061	9	50	
PFHxDA	6.74	1.05	1551331.12	A	0.0646	0.0623			
PFHxDA_2	6.74	1.05	96698.01	A	0.0646	0.0623	-3	50	
PFODA	7.00	1.09	1272897.40	A	0.0264	0.0256			
PFODA_2	7.00	1.09	32592.46	A	0.0264	0.0256	-3	50	

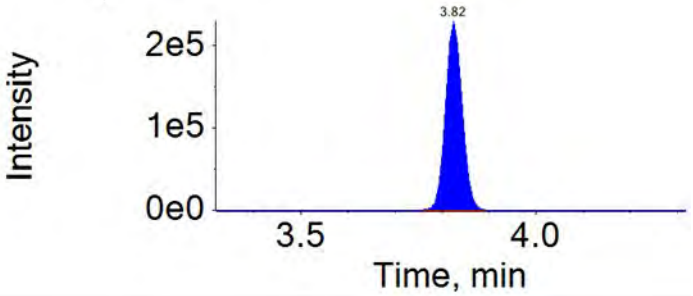
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

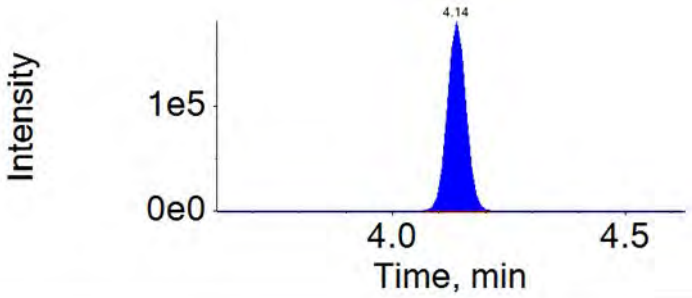
Component: PFBS
Primary Mass: 299.0 / 80.0



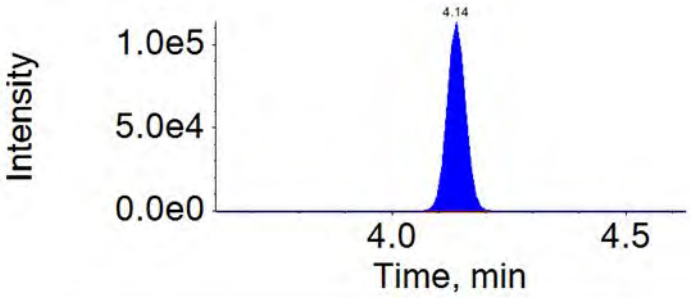
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



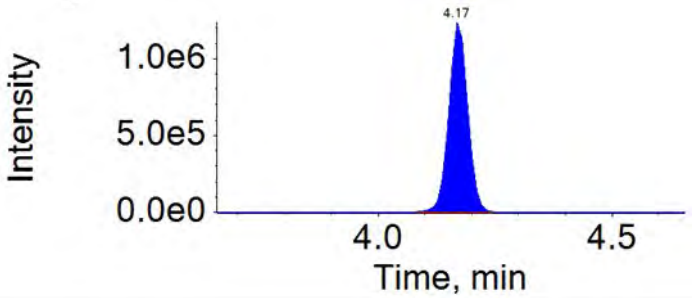
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



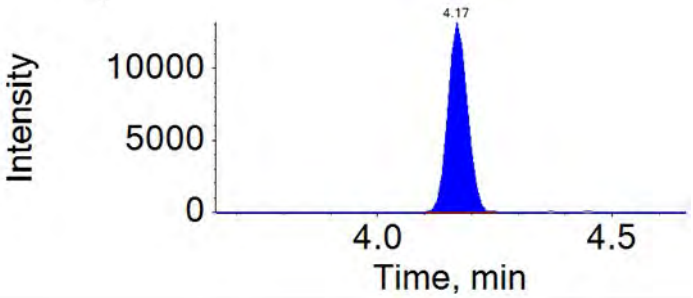
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



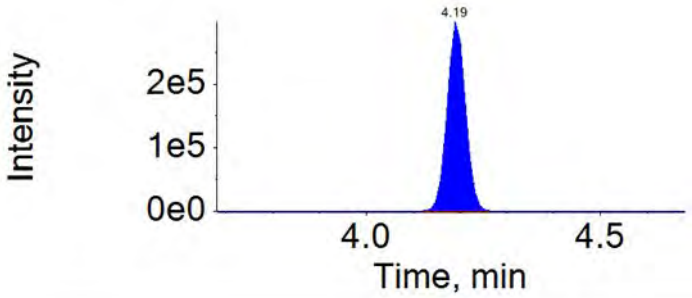
Component: PFHxA
Primary Mass: 313.0 / 269.0



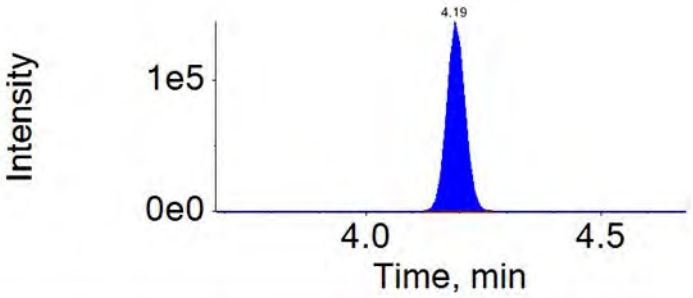
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



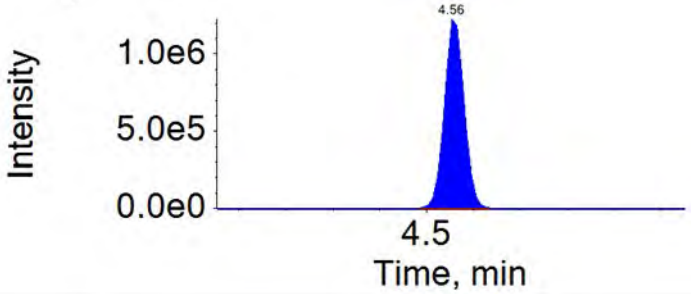
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



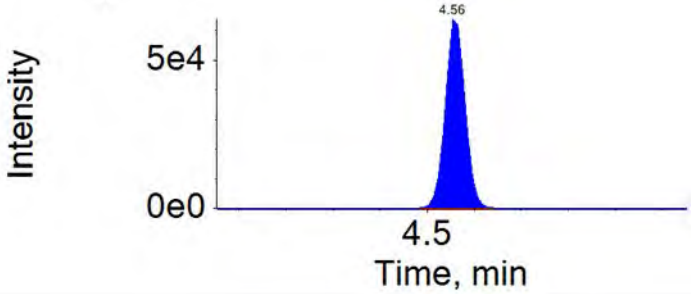
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

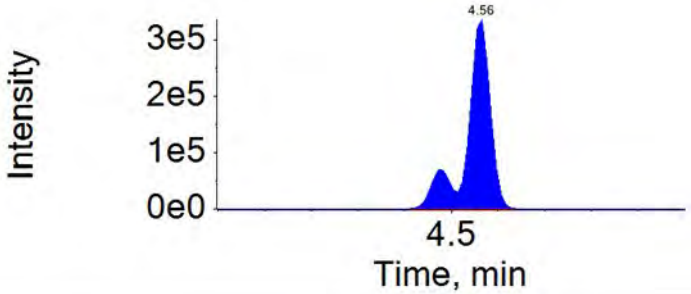
Component: PFHpA
Primary Mass: 363.0 / 319.0



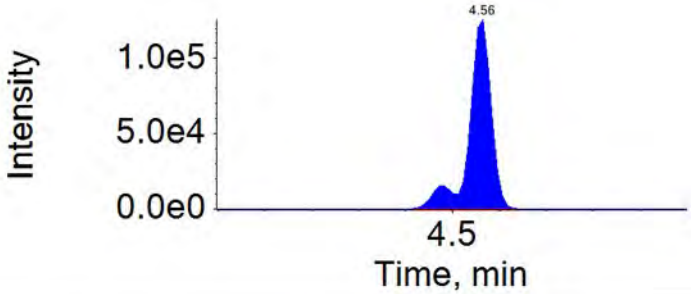
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



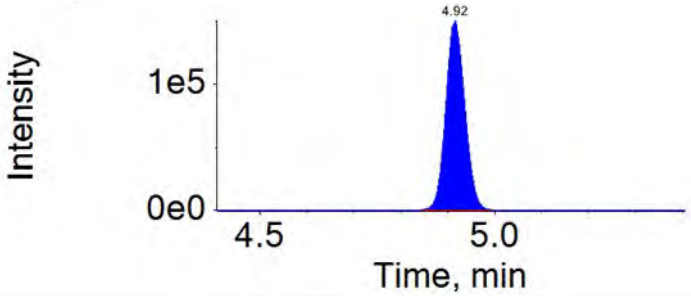
Component: PFHxS
Primary Mass: 399.0 / 80.0



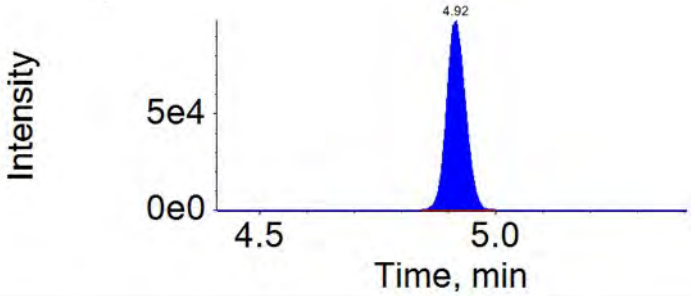
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



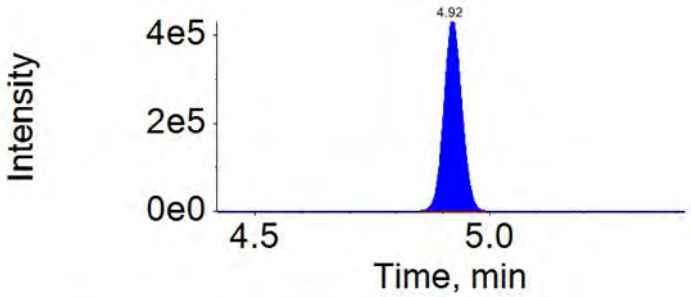
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



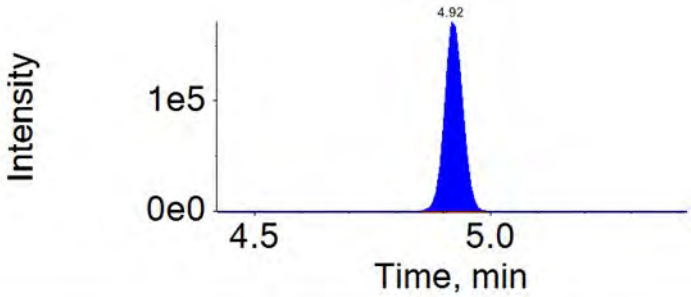
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



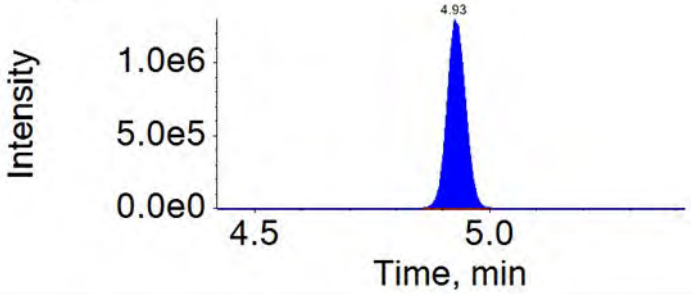
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



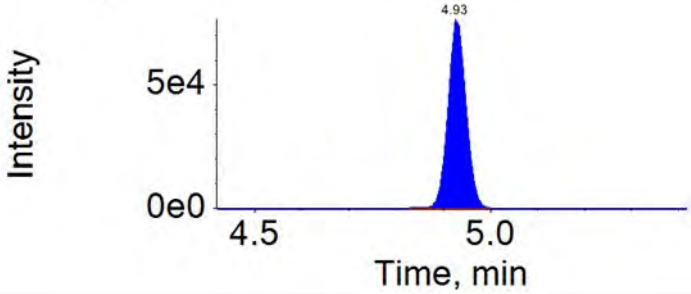
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

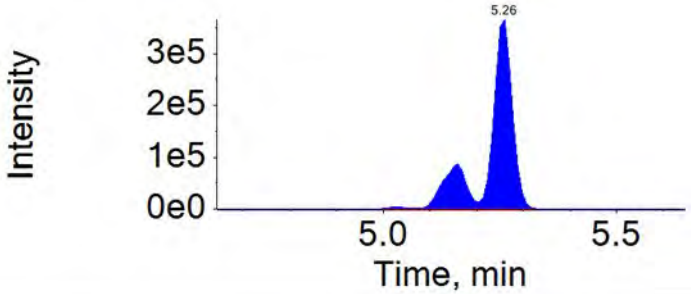
Component: PFOA
Primary Mass: 413.0 / 369.0



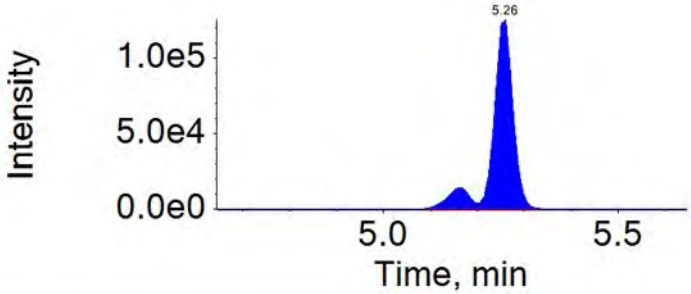
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



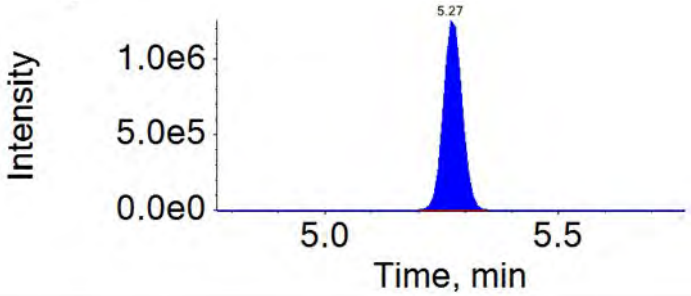
Component: PFOS
Primary Mass: 499.0 / 80.0



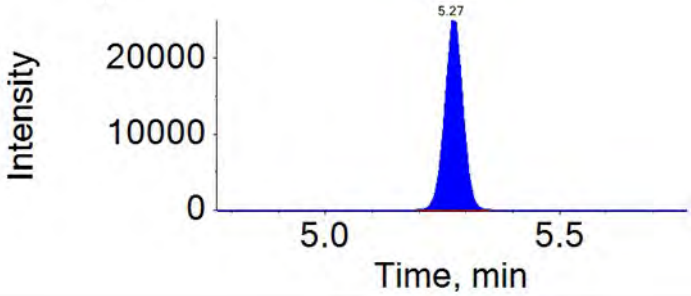
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



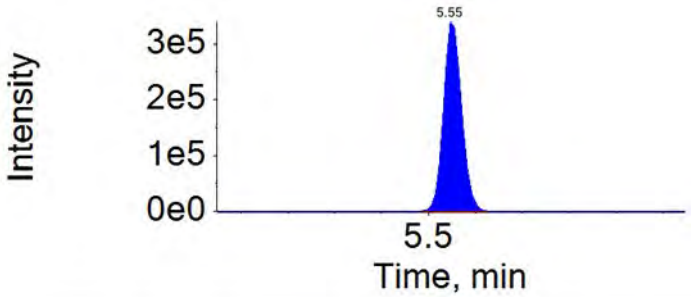
Component: PFNA
Primary Mass: 463.0 / 419.0



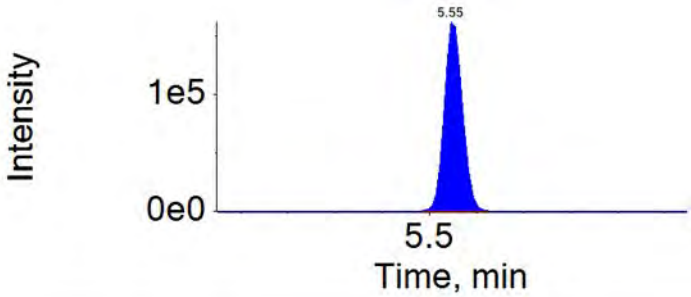
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



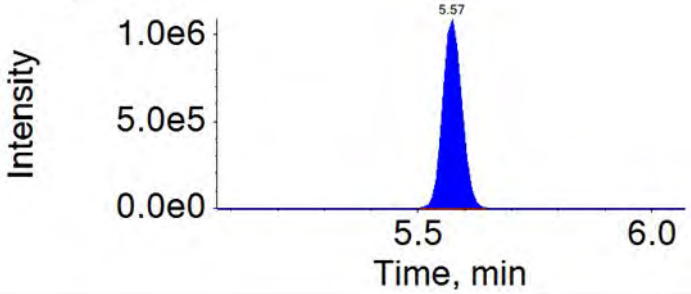
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



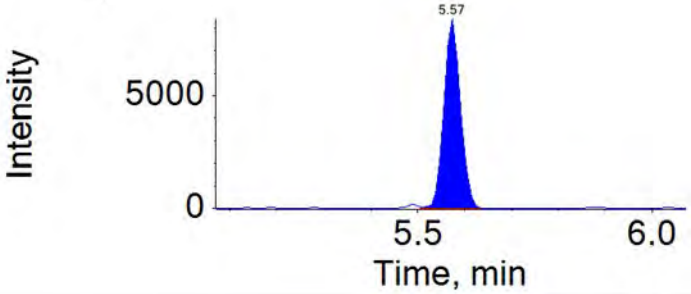
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

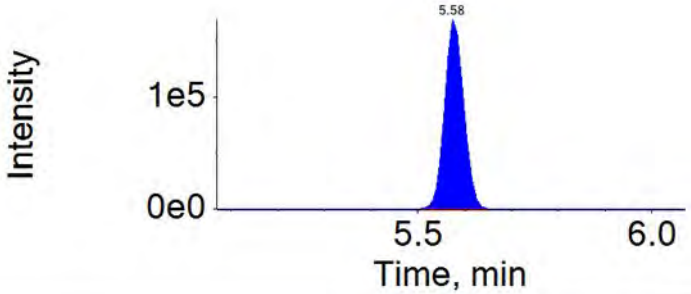
Component: PFDA
Primary Mass: 513.0 / 469.0



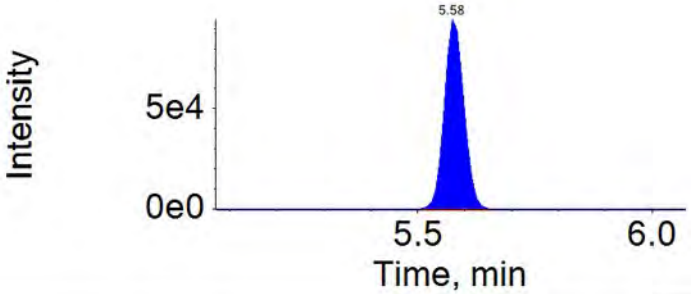
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



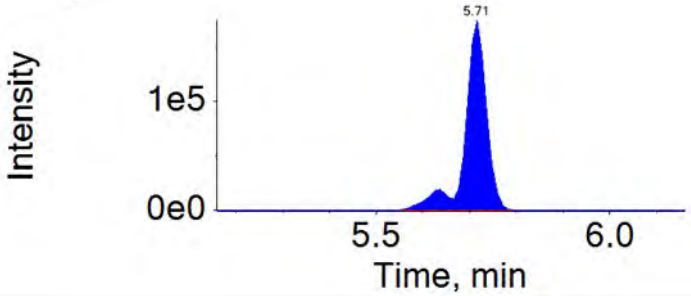
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



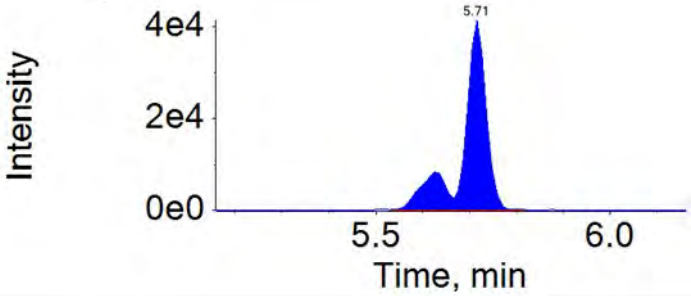
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



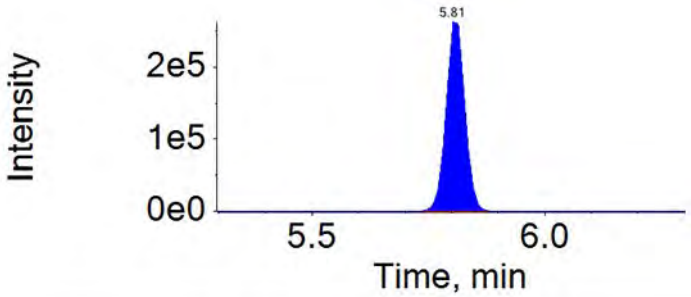
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



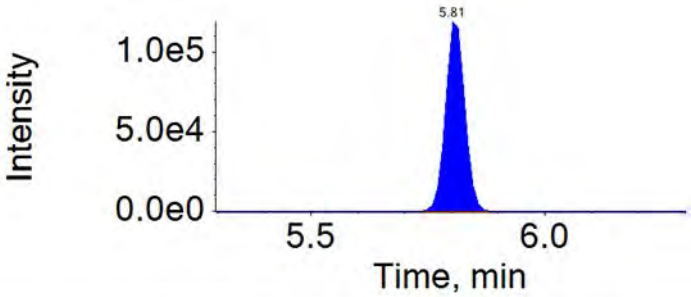
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



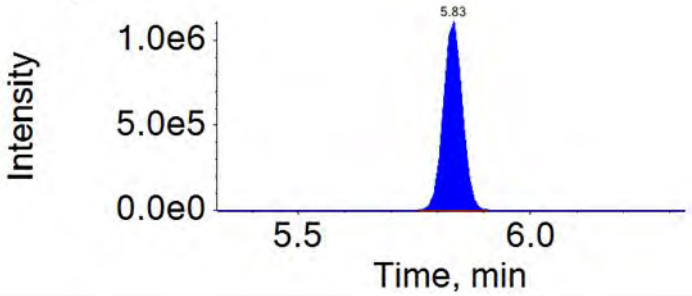
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



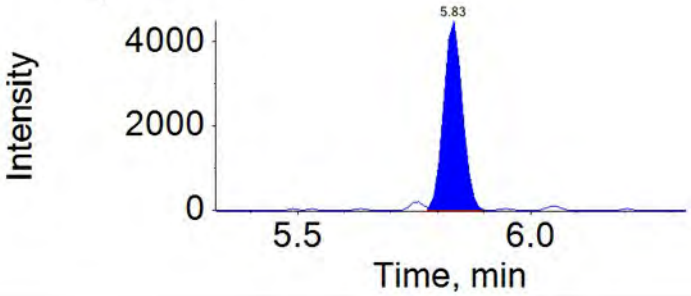
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

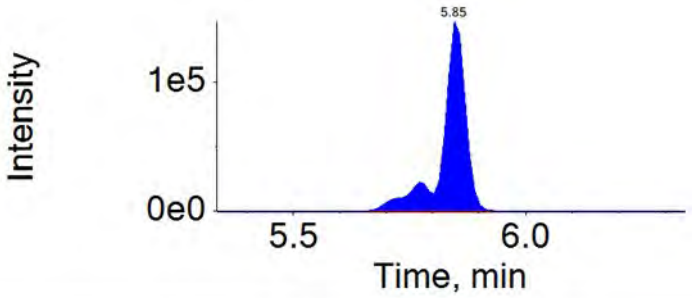
Component: PFUnDA
Primary Mass: 563.0 / 519.0



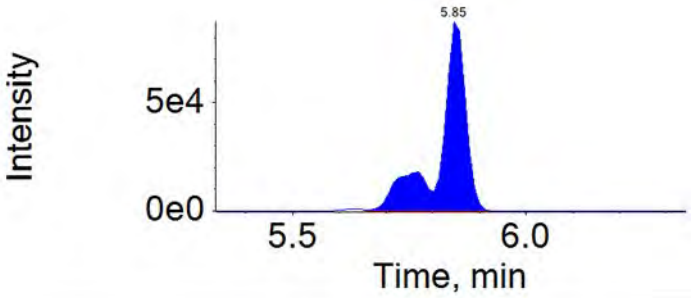
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



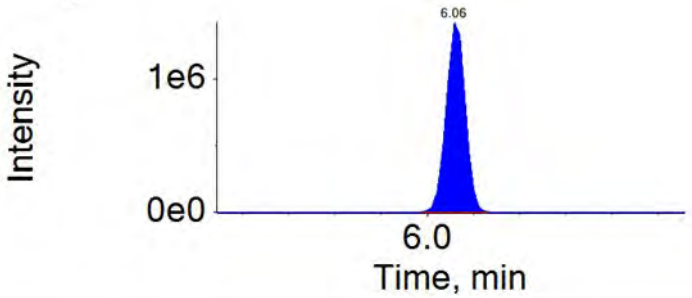
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



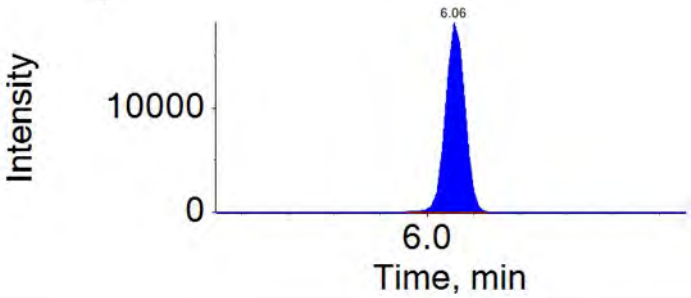
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



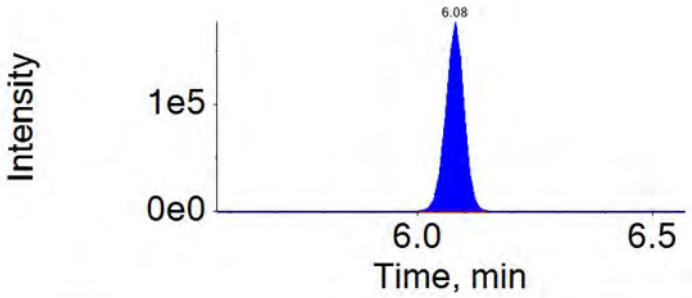
Component: PFDoDA
Primary Mass: 613.0 / 569.0



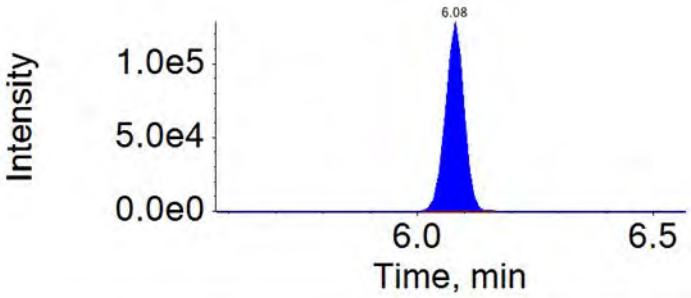
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



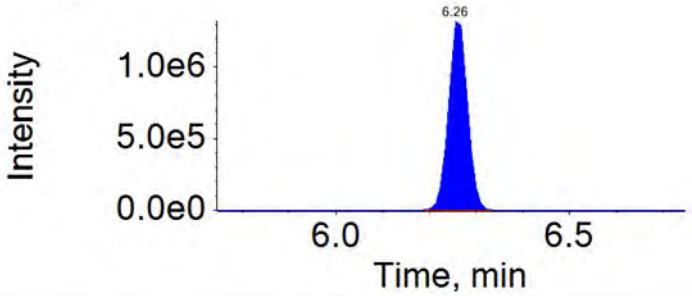
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



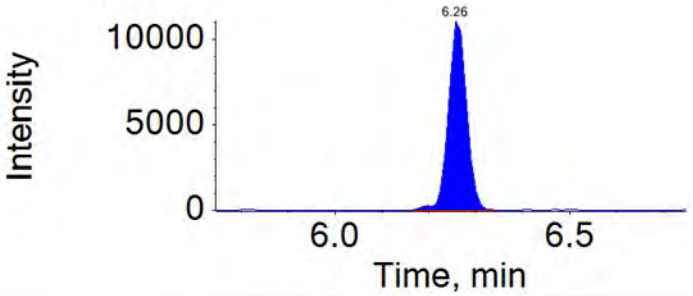
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



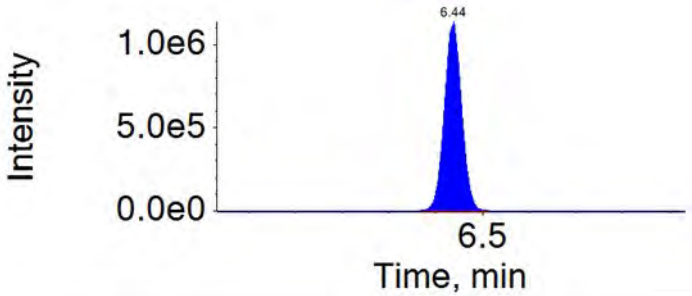
Component: PFTrDA
Primary Mass: 663.0 / 619.0



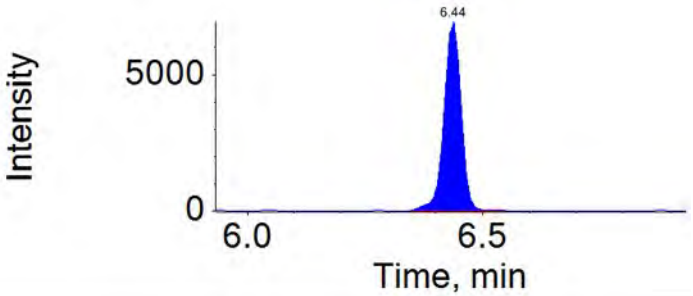
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



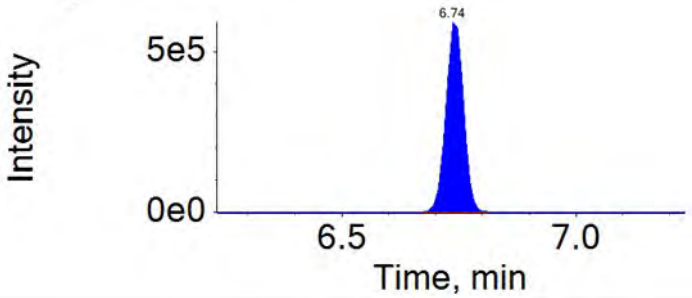
Component: PFTeDA
Primary Mass: 713.0 / 669.0



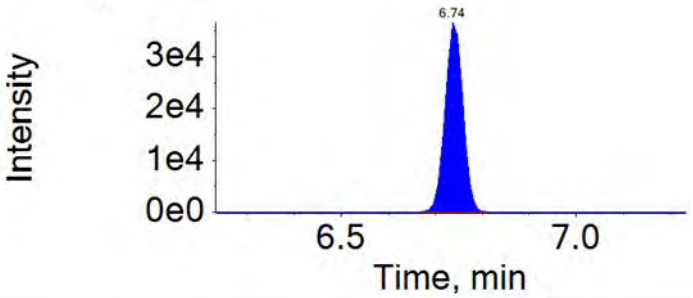
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



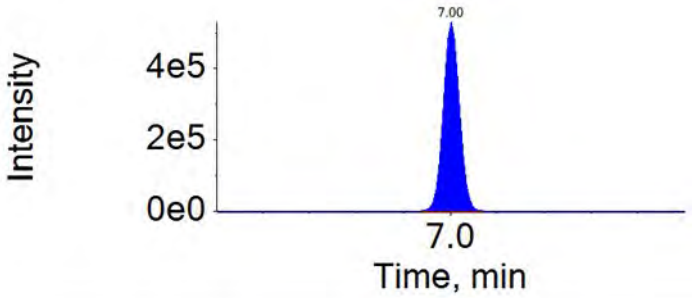
Component: PFHxDA
Primary Mass: 813.0 / 769.0



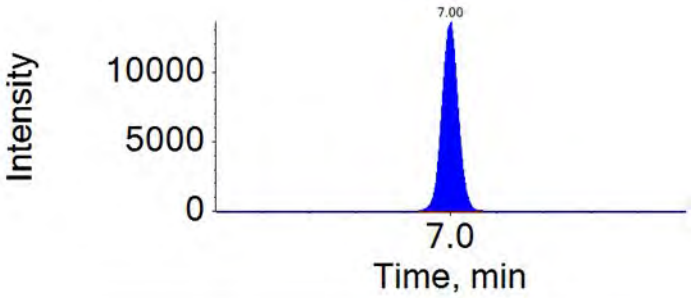
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL6			**Data File:**		18NOV28DCAL-11.wiff
Sample ID:	CALBRN61833B			**Acquis Date:**		2018-11-28T14:27:16
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	8			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	793955.0	887248.9	-11	50	
13C2-PFOA	5.0	499608.5	498501.6	0	50	
13C4-PFOS	4.8	264408.9	283214.2	-7	50	
13C2-PFDA	5.0	419913.2	441790.6	-5	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	897566.7	13C3-PFBA	793955.0	1.131	5.000	5.044	101	70-130	
E13C5-PFPeA	872922.6	13C3-PFBA	793955.0	1.099	5.000	5.134	103	70-130	
E13C3-PFBS	398441.3	13C3-PFBA	793955.0	0.502	4.650	4.788	103	70-130	
E13C2-4:2-FTS	65255.4	13C2-PFOA	499608.5	0.131	4.670	4.501	96	70-130	
E13C5-PFHxA	675219.8	13C2-PFOA	499608.5	1.351	5.000	4.964	99	70-130	
E13C3-PFHxS	279894.6	13C2-PFOA	499608.5	0.560	4.730	4.391	93	70-130	
E13C4-PFHpA	555281.5	13C2-PFOA	499608.5	1.111	5.000	5.107	102	70-130	
E13C2-6:2-FTS	48807.6	13C2-PFOA	499608.5	0.098	4.750	4.089	86	70-130	
E13C8-PFOA	843522.3	13C2-PFOA	499608.5	1.688	5.000	4.647	93	70-130	
E13C8-PFOS	279204.4	13C4-PFOS	264408.9	1.056	4.780	4.767	100	70-130	
E13C9-PFNA	624202.7	13C4-PFOS	264408.9	2.361	5.000	5.185	104	70-130	
E13C6-PFDA	758832.8	13C2-PFDA	419913.2	1.807	5.000	5.095	102	70-130	
E13C2-8:2-FTS	44487.5	13C2-PFDA	419913.2	0.106	4.790	4.553	95	70-130	
E13C8-PFOSA	565326.0	13C2-PFDA	419913.2	1.346	5.000	4.940	99	70-130	
Ed3-NMeFOSAA	161673.3	13C2-PFDA	419913.2	0.385	5.000	4.888	98	70-130	
E13C7-PFUnDA	474122.1	13C2-PFDA	419913.2	1.129	5.000	4.772	95	70-130	
Ed5-NEtFOSAA	117934.2	13C2-PFDA	419913.2	0.281	5.000	5.004	100	70-130	
E13C2-PFDoDA	980215.4	13C2-PFDA	419913.2	2.334	5.000	4.905	98	70-130	
Ed7-NMePFOSAE	248871.1	13C2-PFDA	419913.2	0.593	5.000	5.122	102	70-130	
Ed3-NMePFOSA	81949.3	13C2-PFDA	419913.2	0.195	5.000	5.282	106	70-130	
Ed9-NEtPFOSAE	222924.1	13C2-PFDA	419913.2	0.531	5.000	5.382	108	70-130	
Ed5-NEtPFOSA	59705.8	13C2-PFDA	419913.2	0.142	5.000	4.941	99	70-130	
E13C2-PFTeDA	789168.4	13C2-PFDA	419913.2	1.879	5.000	5.200	104	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

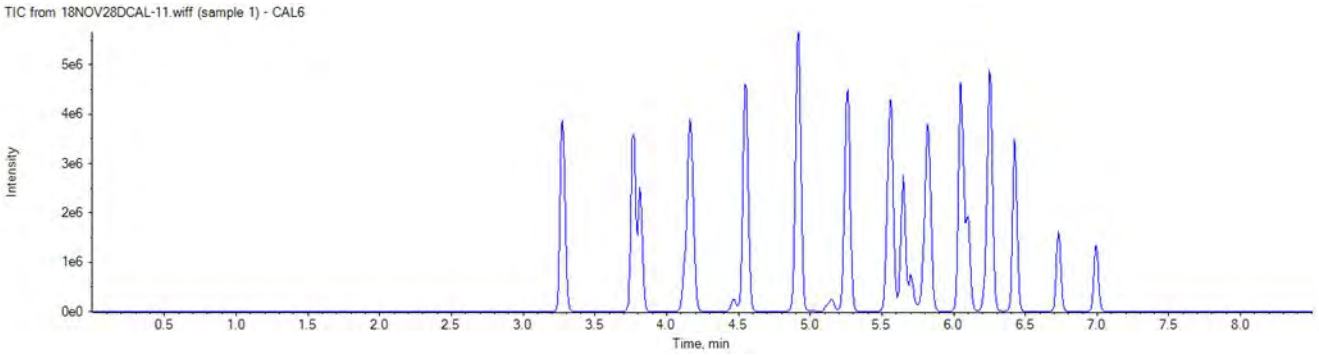
Analyte Quantitation Peak Table

Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-11.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	7996964.8		A	13C4-PFBA	3.27	897566.7	8.910	48.841
PFPeA	3.77	1.000	7873655.4		A	13C5-PFPeA	3.77	872922.6	9.020	44.258
PFBS	3.82	1.000	3600470.8		A	13C3-PFBS	3.82	398441.3	9.036	43.864
4:2-FTS	4.13	1.000	1148569.2		A	13C2-4:2-FTS	4.13	65255.4	17.601	47.117
PFHxA	4.16	1.000	7468739.1		A	13C5-PFHxA	4.16	675219.8	11.061	44.400
PFPeS	4.18	1.100	1793808.0		A	13C3-PFBS	3.82	398441.3	4.502	45.538
PFHpA	4.55	1.000	7873271.2		A	13C4-PFHpA	4.55	555281.5	14.179	43.759
PFHxS	4.55	1.000	2625950.9		M	13C3-PFHxS	4.55	279894.6	9.382	43.929
6:2-FTS	4.90	1.000	859948.6		A	13C2-6:2-FTS	4.91	48807.6	17.619	45.972
PFHpS	4.91	1.080	2686833.3		A	13C3-PFHxS	4.55	279894.6	9.599	47.909
PFOA	4.92	1.000	8012665.3		A	13C8-PFOA	4.92	843522.3	9.499	49.084
PFOS	5.25	1.000	3026664.5		M	13C8-PFOS	5.25	279204.4	10.840	45.472
PFNA	5.26	1.000	7843086.9		A	13C9-PFNA	5.26	624202.7	12.565	48.151
PFNS	5.54	1.060	2116661.5		A	13C8-PFOS	5.25	279204.4	7.581	47.867
PFDA	5.56	1.000	6551370.5		A	13C6-PFDA	5.56	758832.8	8.633	48.868
8:2-FTS	5.57	1.000	938590.1		A	13C2-8:2-FTS	5.57	44487.5	21.098	39.786
PFOSA	5.65	1.000	5541493.1		A	13C8-PFOSA	5.65	565326.0	9.802	49.655
NMeFOSAA	5.70	1.000	1292829.8		A	d3-NMeFOSAA	5.70	161673.3	7.997	51.010
PFDS	5.80	1.100	1665920.2		A	13C8-PFOS	5.25	279204.4	5.967	47.309
PFUnDA	5.82	1.000	6885622.6		A	13C7-PFUnDA	5.82	474122.1	14.523	51.912
NEtFOSAA	5.84	1.000	1214766.4		M	d5-NEtFOSAA	5.83	117934.2	10.300	50.166
PFDoDA	6.05	1.000	8865844.7		A	13C2-PFDoDA	6.05	980215.4	9.045	49.545
10:2-FTS	6.07	1.090	972346.9		A	13C2-8:2-FTS	5.57	44487.5	21.857	48.197
NMePFOSAE	6.10	1.000	3059430.5		A	d7-NMePFOSAE	6.09	248871.1	12.293	51.733
NMePFOSA	6.11	1.000	768521.6		A	d3-NMePFOSA	6.10	81949.3	9.378	49.716
PFDoS	6.22	1.190	900508.4		A	13C8-PFOS	5.25	279204.4	3.225	46.320
NEtPFOSAE	6.26	1.000	3104174.6		A	d9-NEtPFOSAE	6.24	222924.1	13.925	50.088
NEtPFOSA	6.27	1.000	698744.6		A	d5-NEtPFOSA	6.26	59705.8	11.703	52.452
PFTrDA	6.25	1.030	7958673.4		A	13C2-PFDoDA	6.05	980215.4	8.119	48.938
PFTeDA	6.43	1.000	6793735.3		A	13C2-PFTeDA	6.43	789168.4	8.609	48.777
PFHxDA	6.73	1.050	3402004.5		A	13C2-PFTeDA	6.43	789168.4	4.311	49.281
PFODA	6.99	1.090	2942000.1		A	13C2-PFTeDA	6.43	789168.4	3.728	49.663

Total Ion Chromatogram

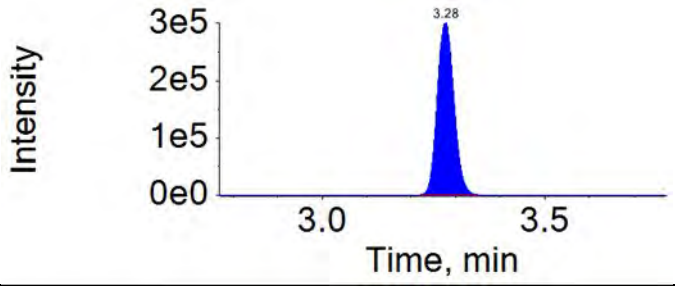


APPROVED
By MCD at 5:00 pm, 11/28/18

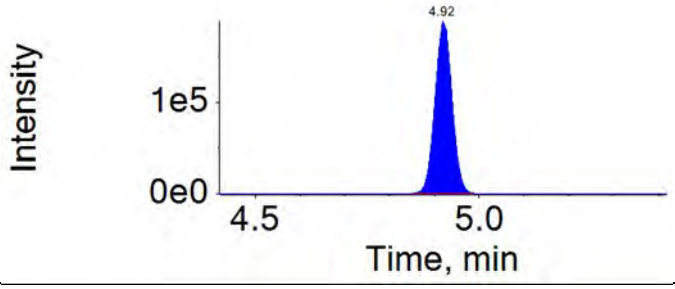
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

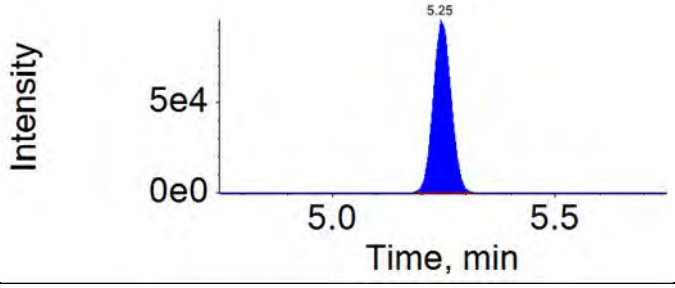
Injection Standard: 13C3-PFBA
216.0 / 172.0



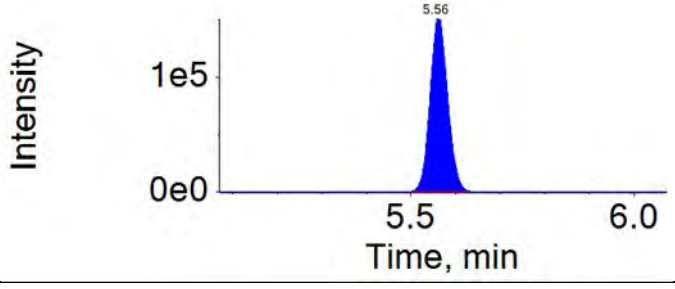
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



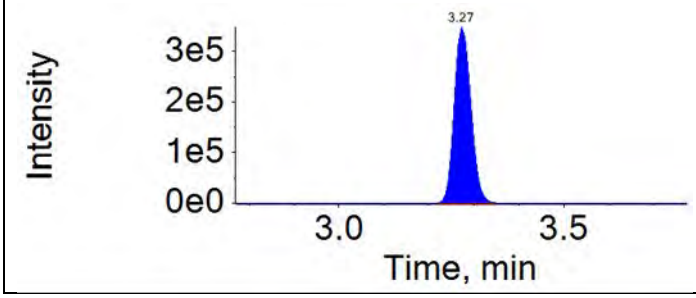
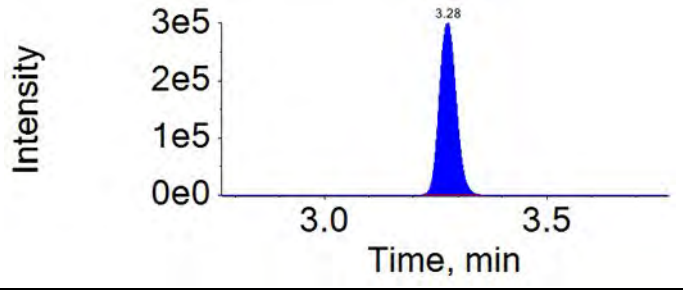
Injection Standard: 13C2-PFDA
515.0 / 470.0

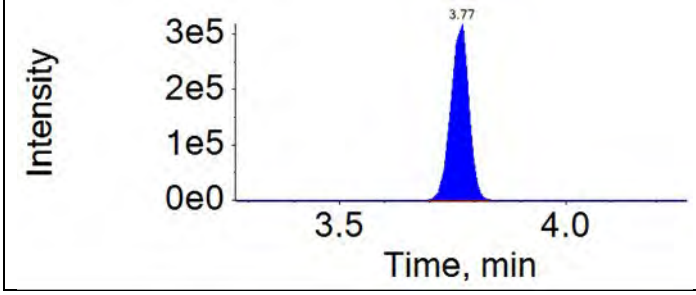
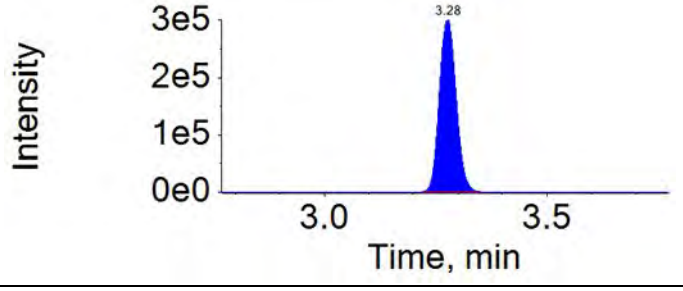


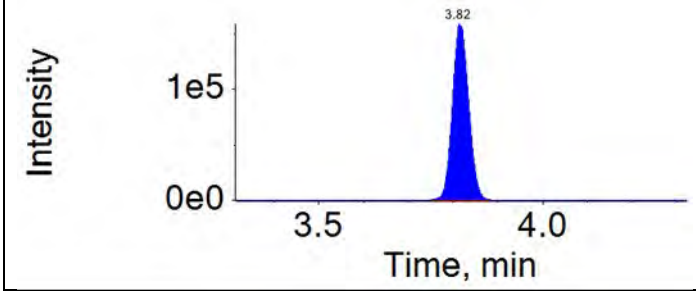
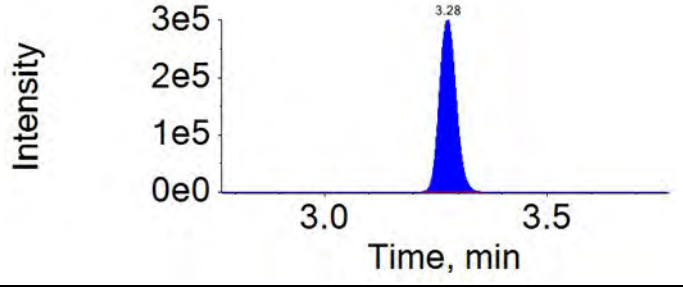
APPROVED
By MCD at 5:00 pm, 11/28/18

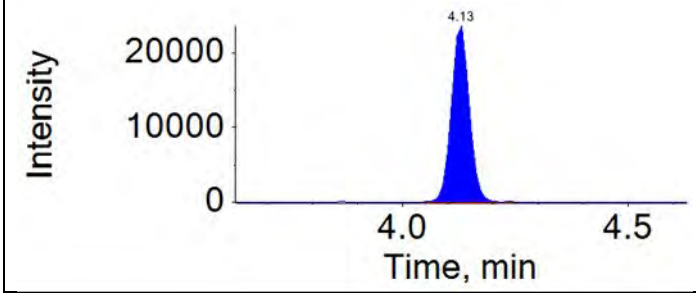
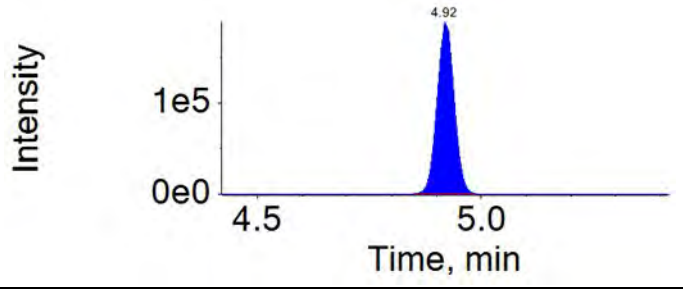
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

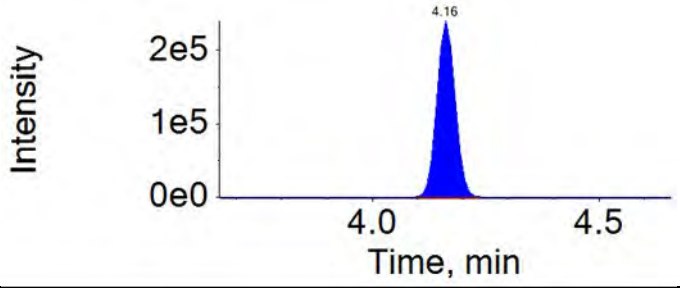
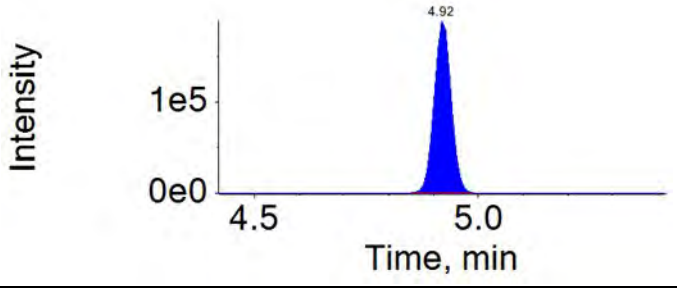
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

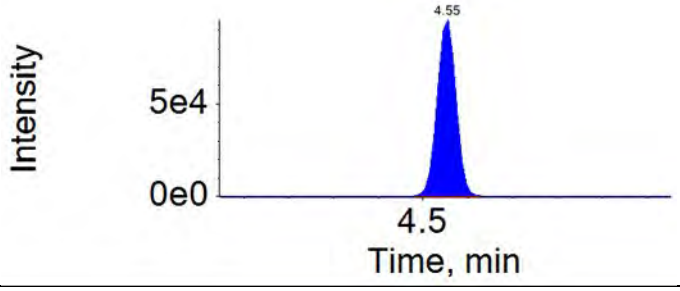
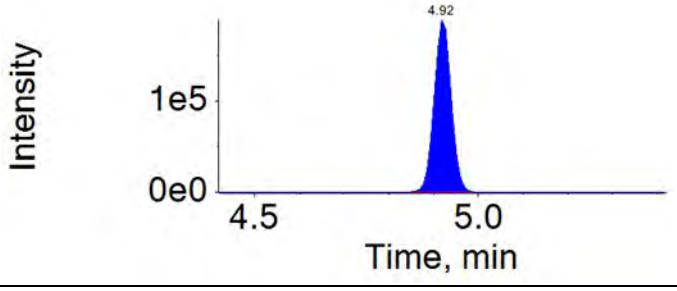
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

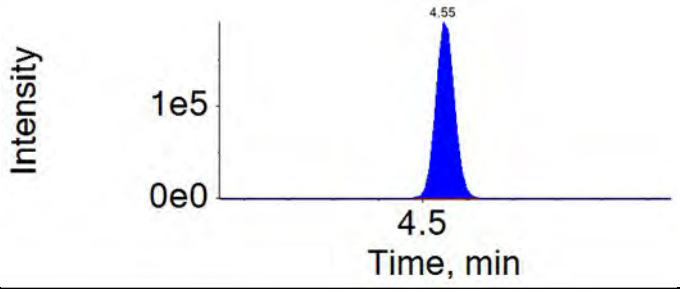
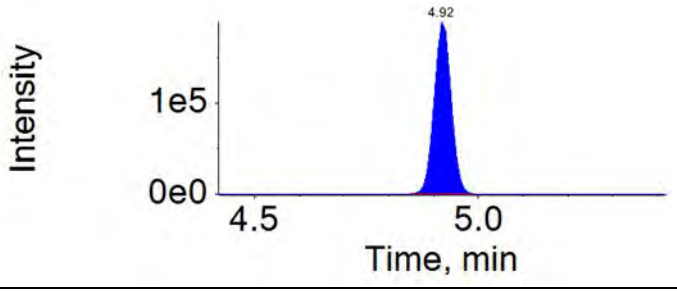
APPROVED
By MCD at 5:00 pm, 11/28/18

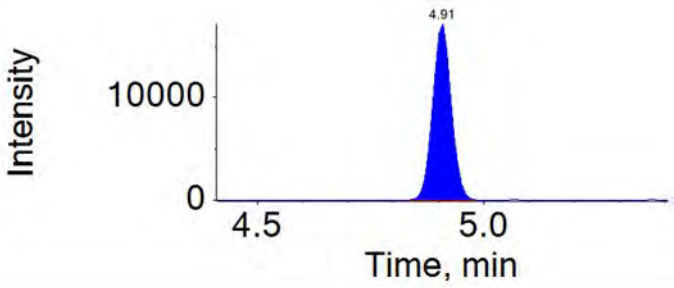
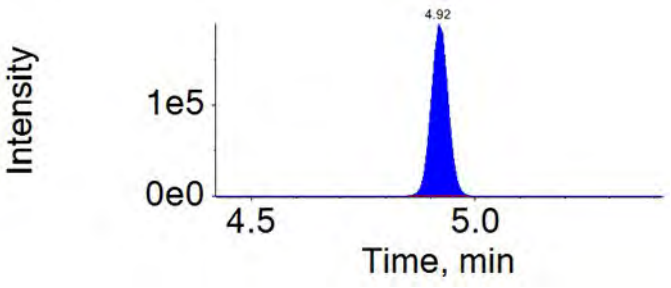
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

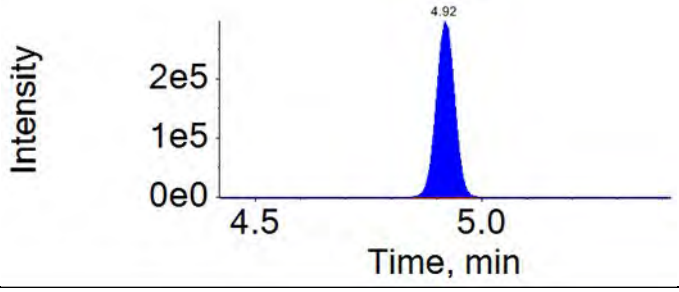
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

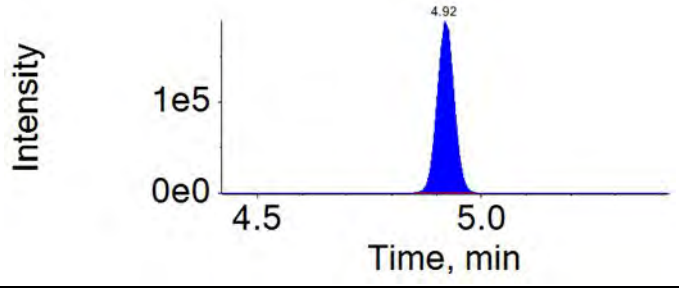
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

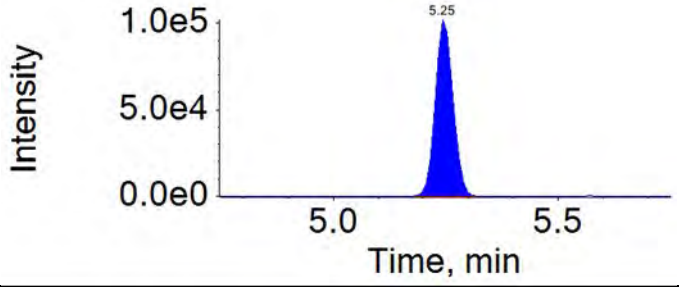
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

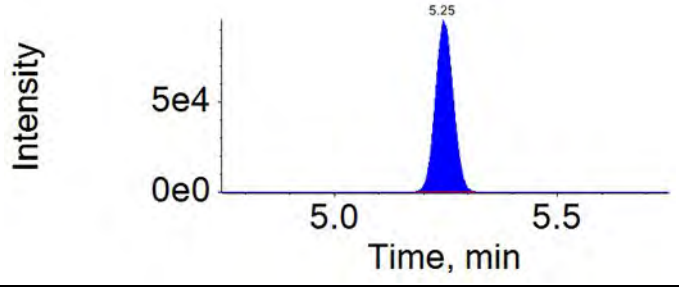
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



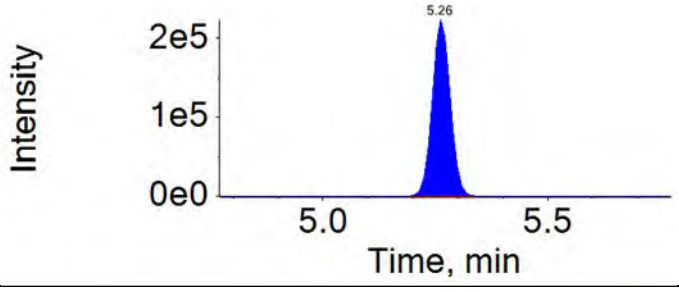


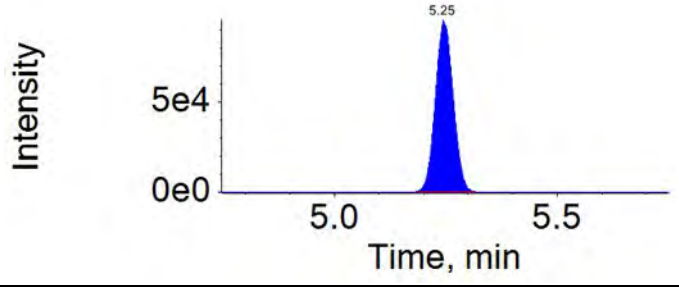
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



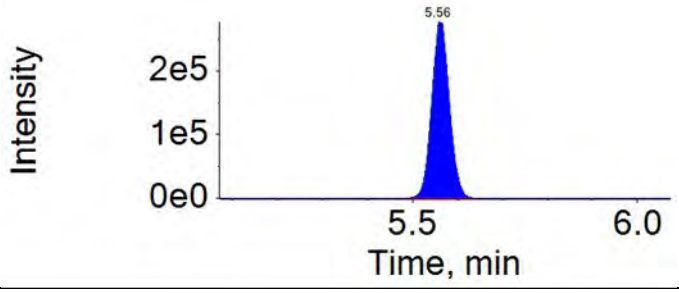


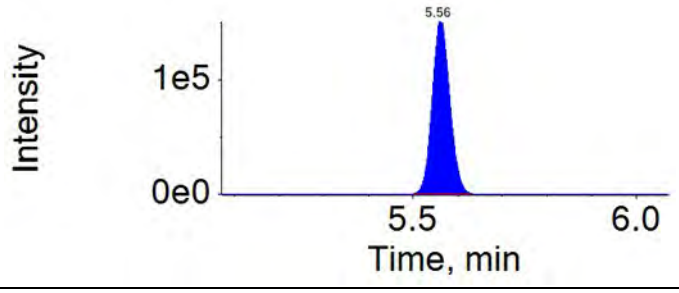
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0



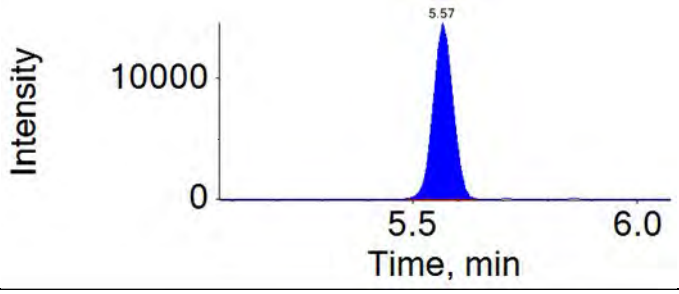


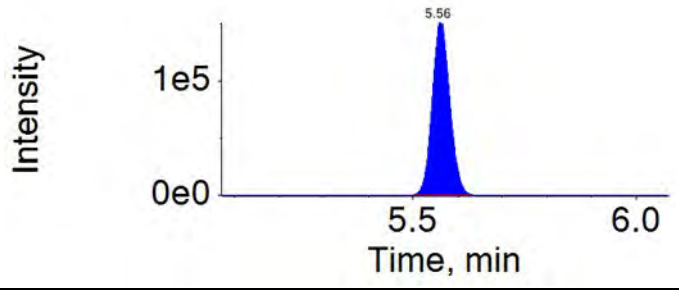
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

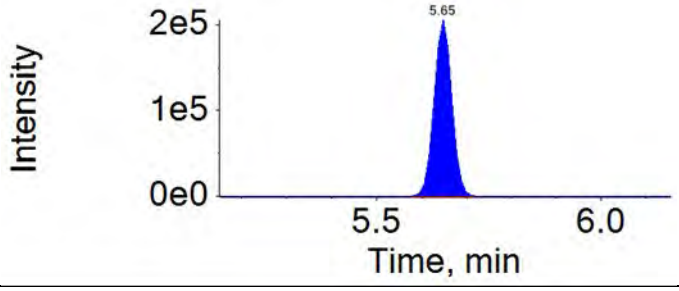
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

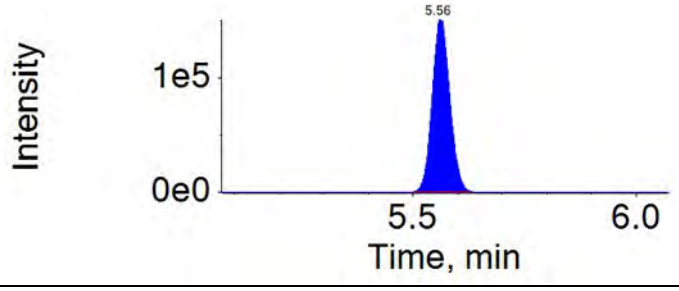
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



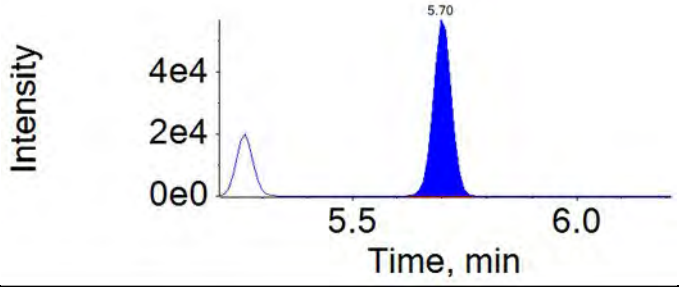


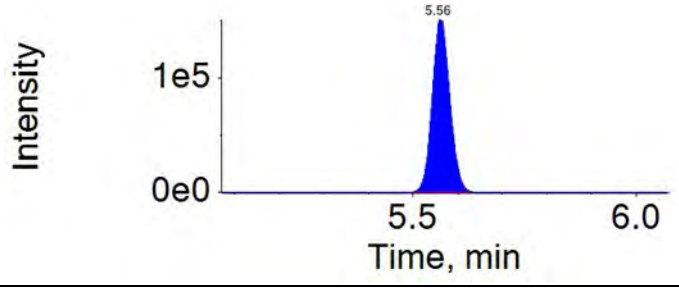
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



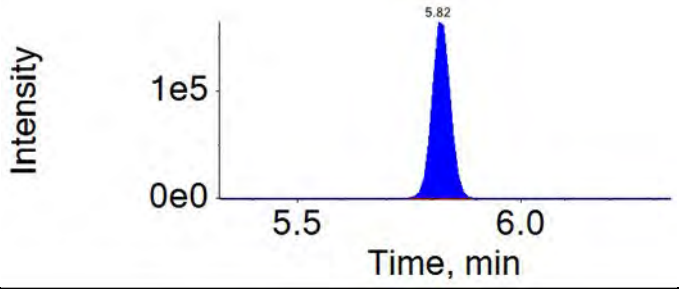


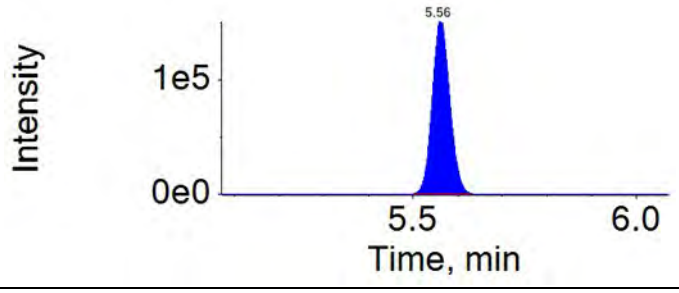
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



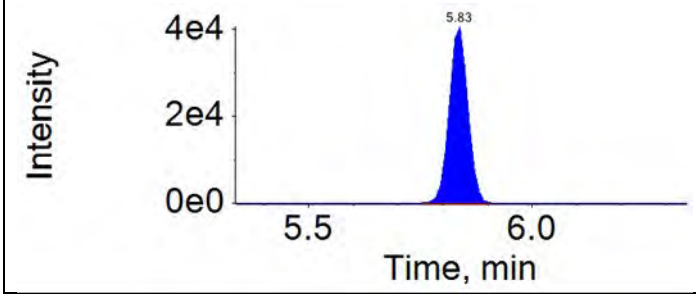


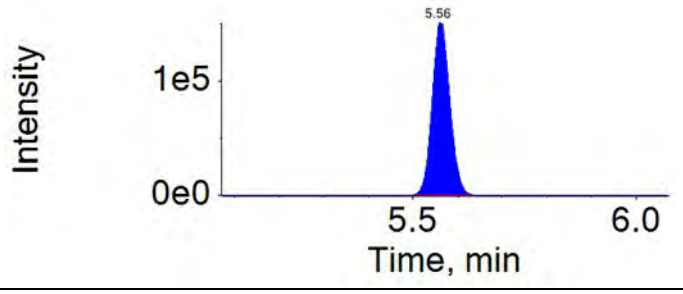
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

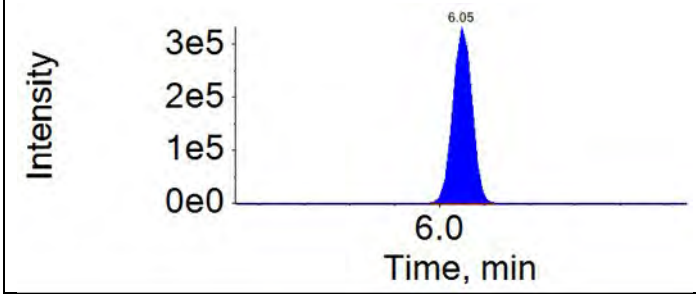
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

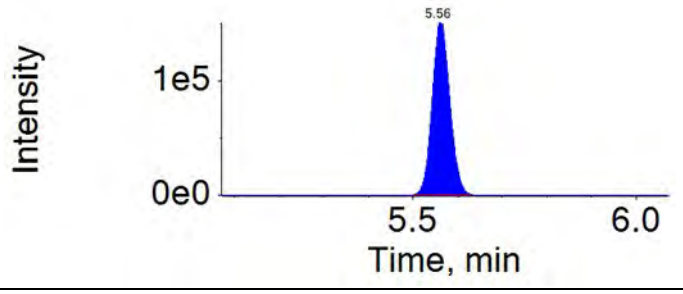
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



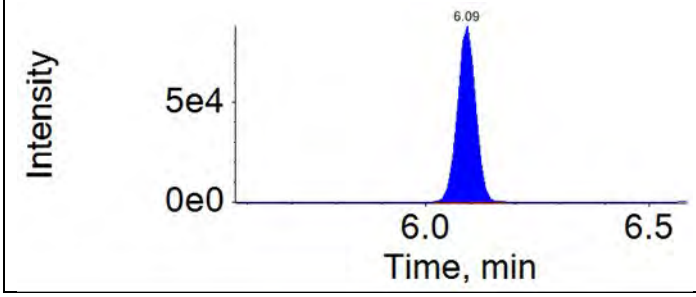


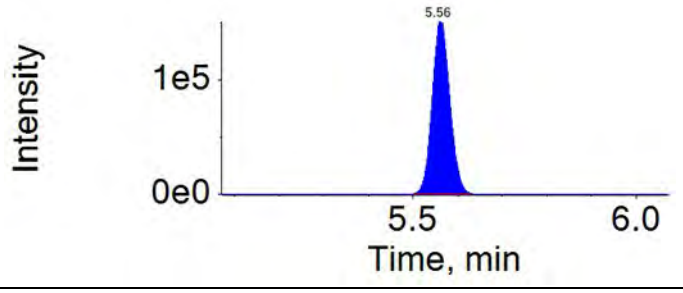
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



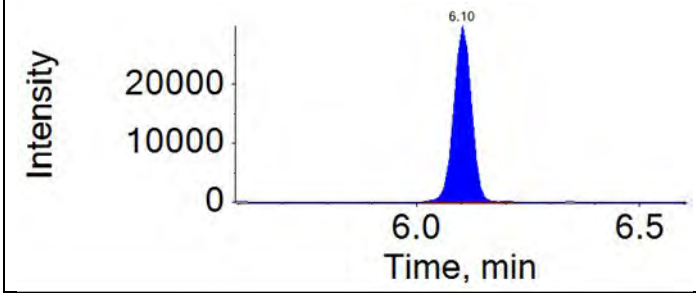


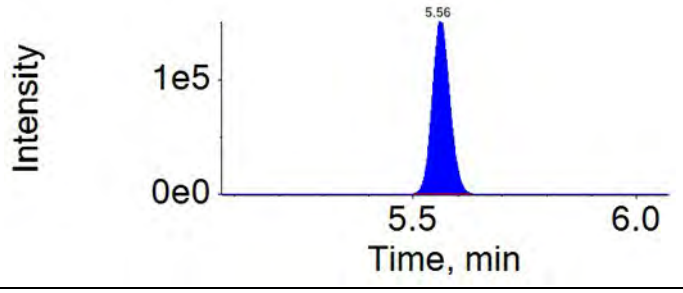
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





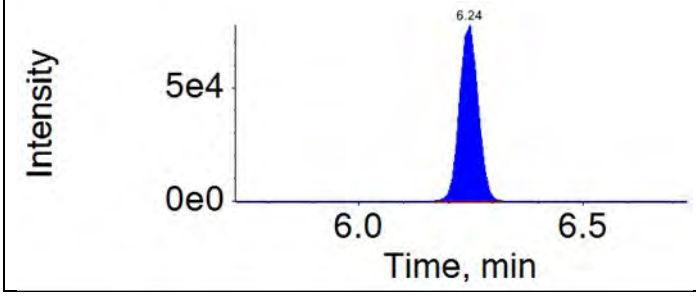
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

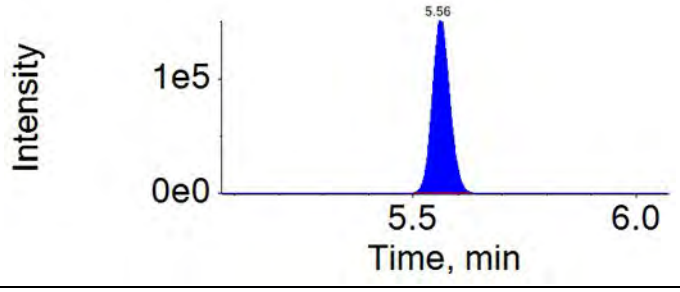




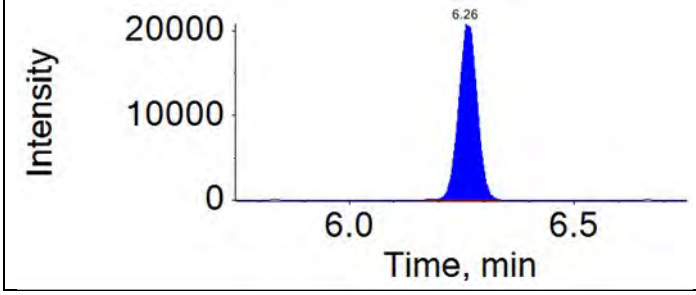
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

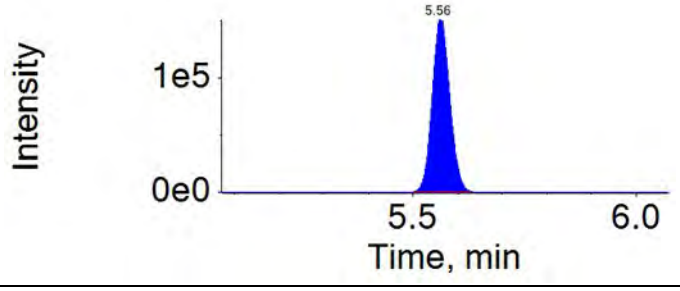
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



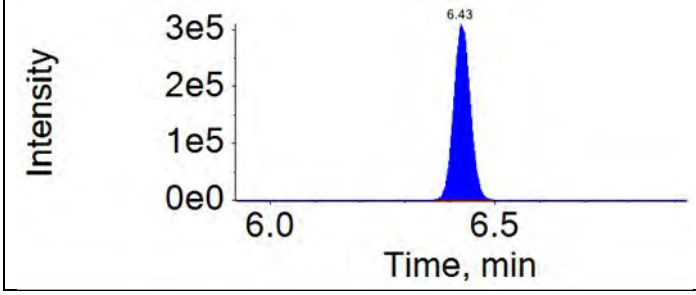


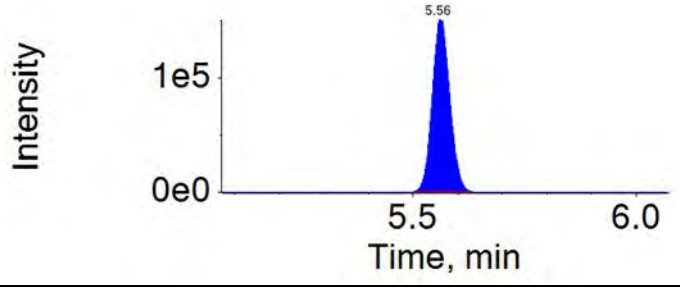
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



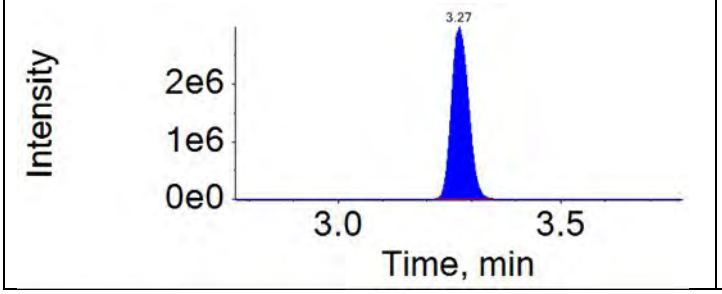


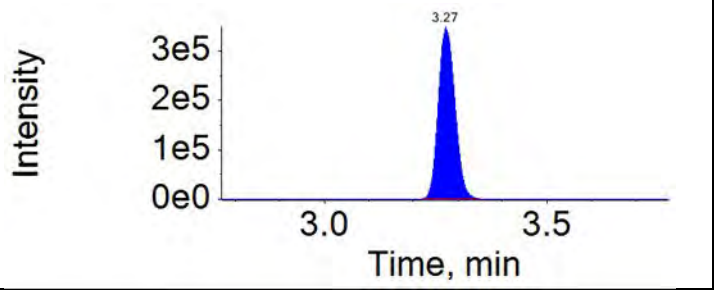
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

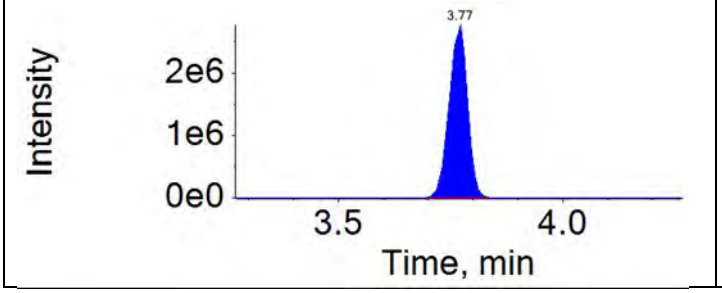
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

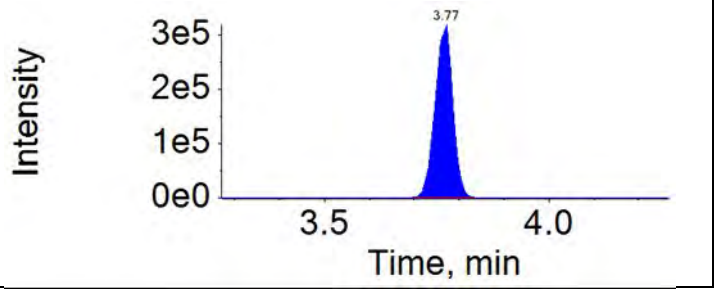
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



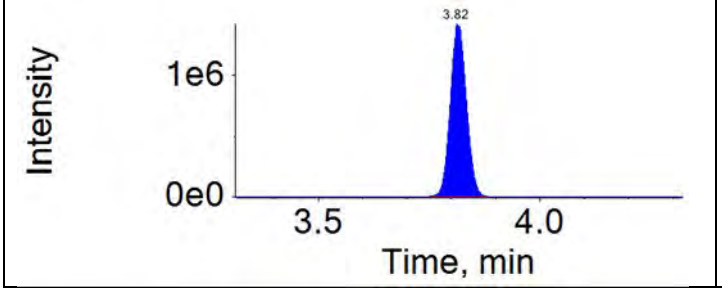


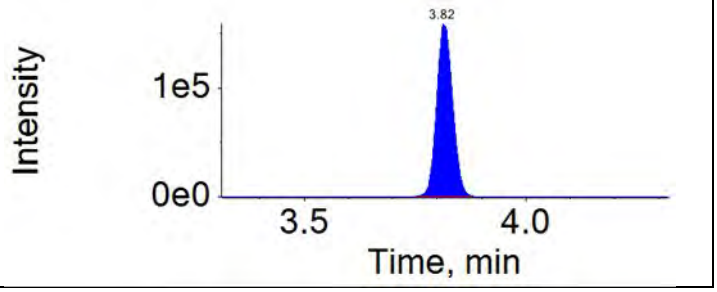
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



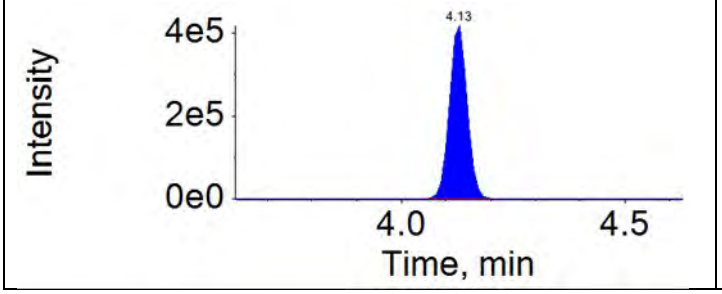


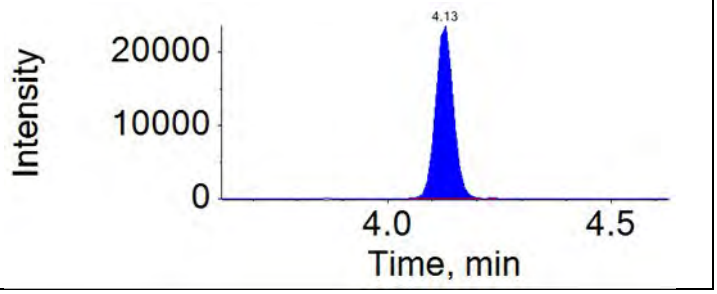
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



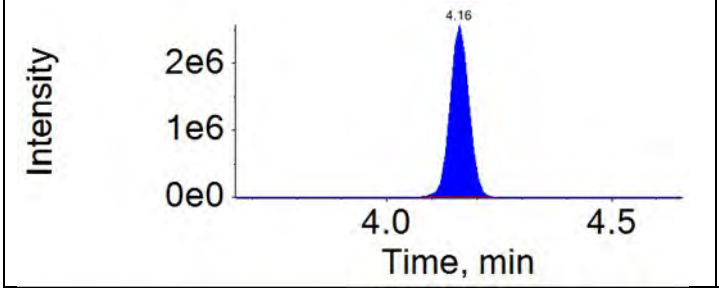


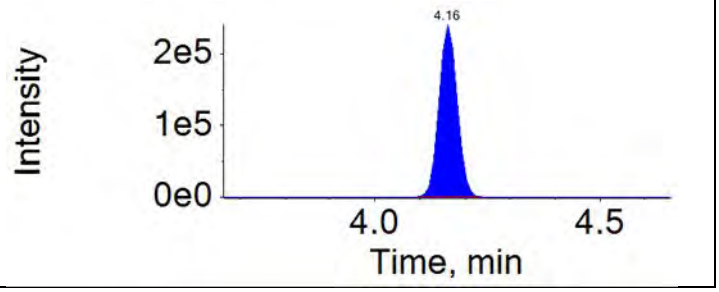
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

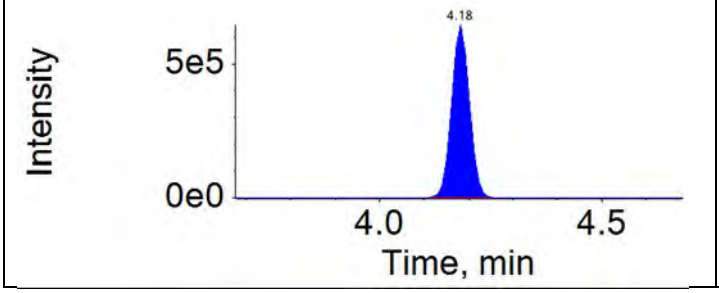
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

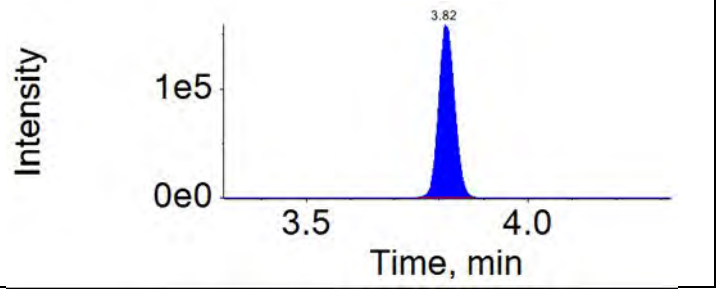
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



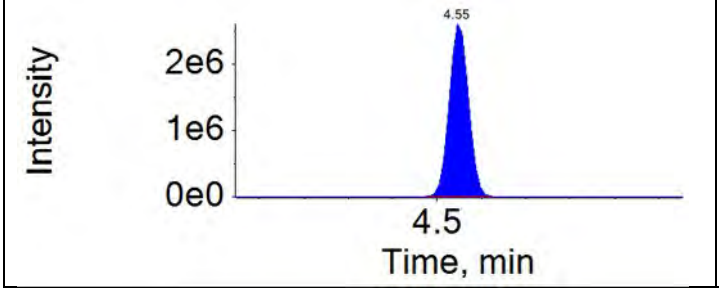


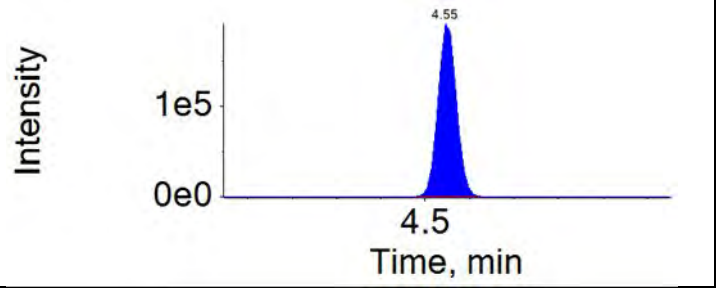
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



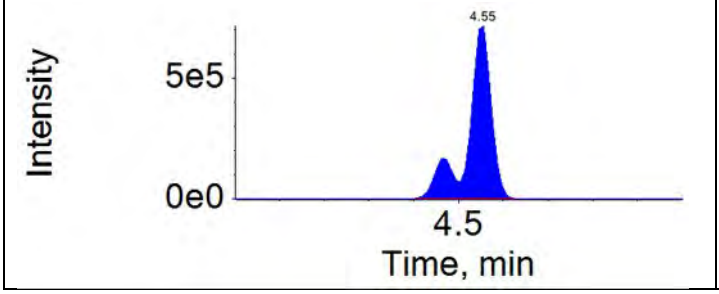


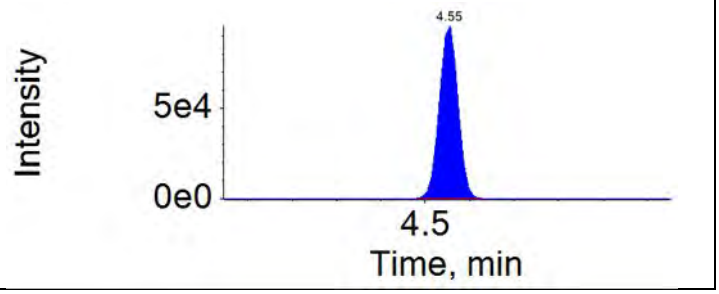
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

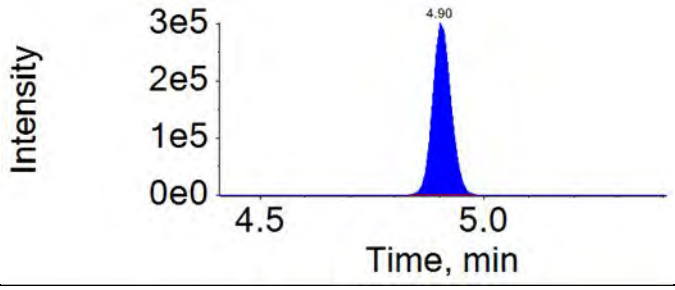
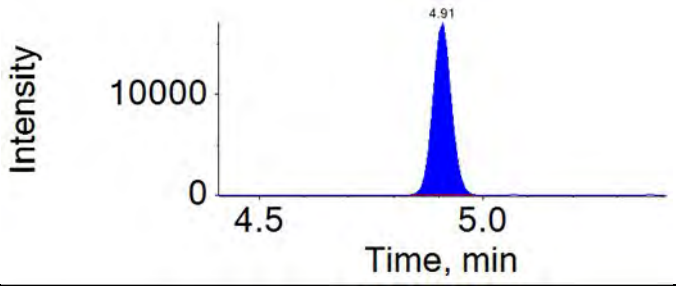


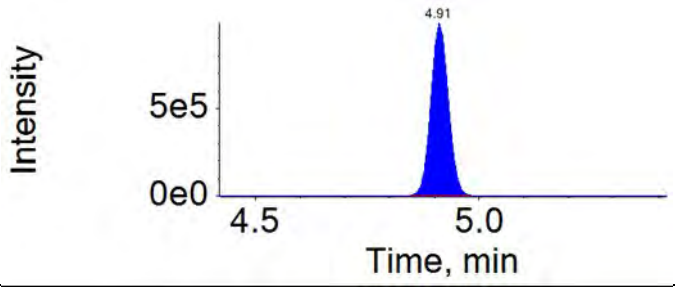
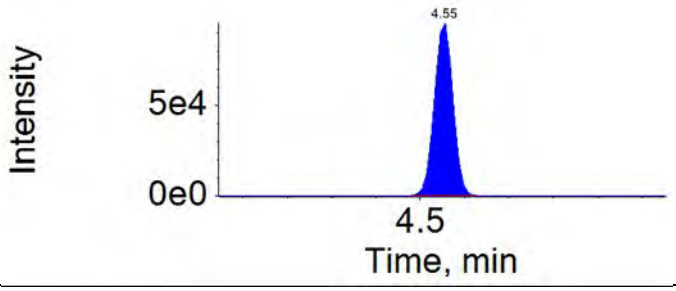


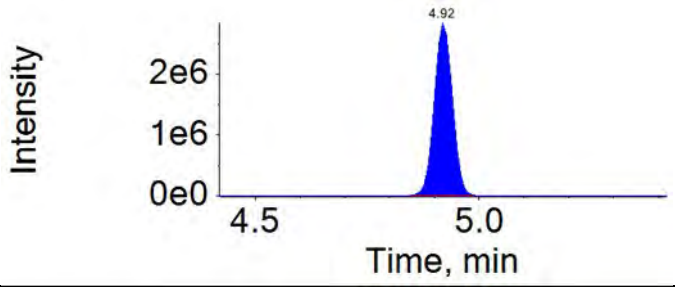
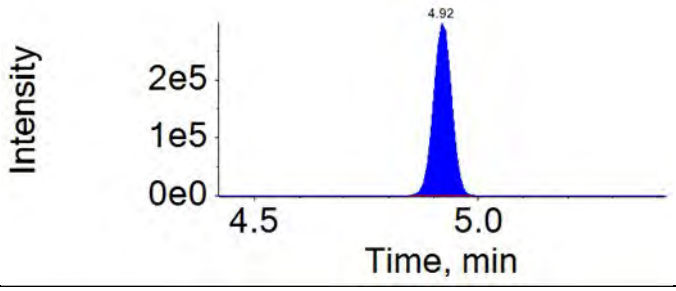
APPROVED
By MCD at 5:00 pm, 11/28/18

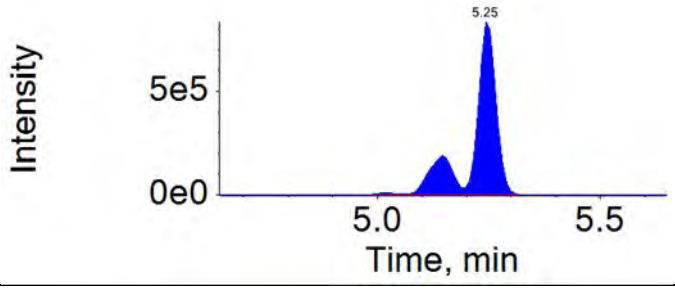
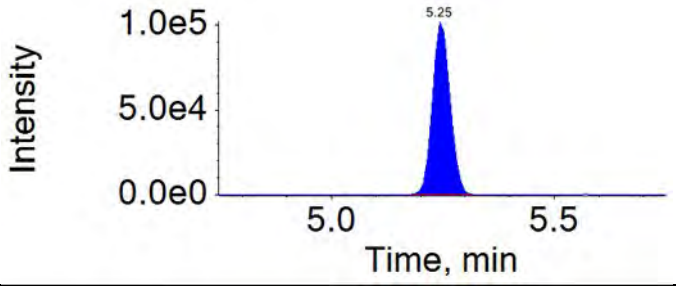
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

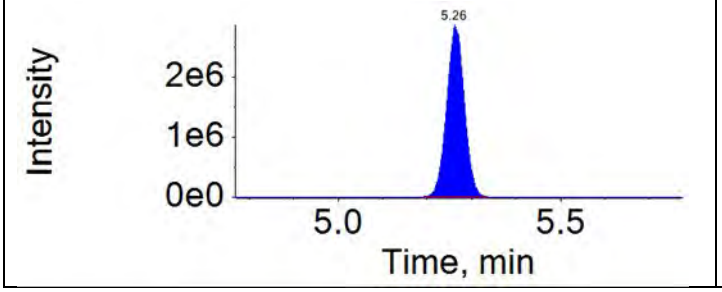
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

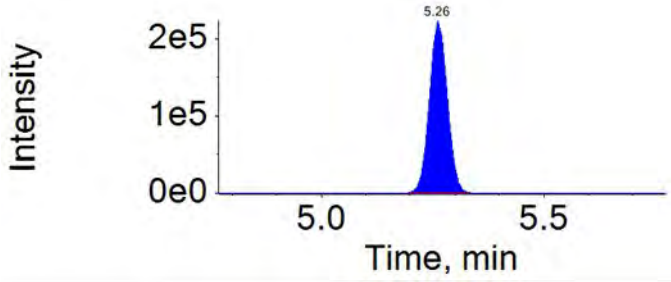
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

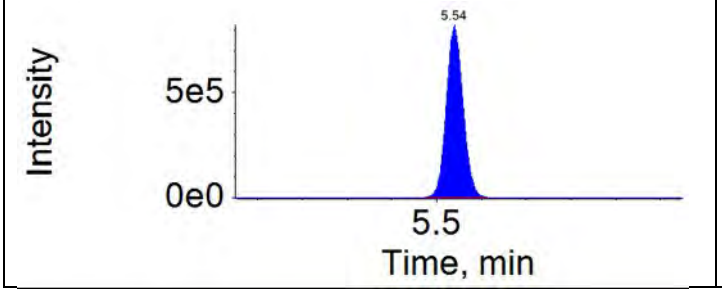
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

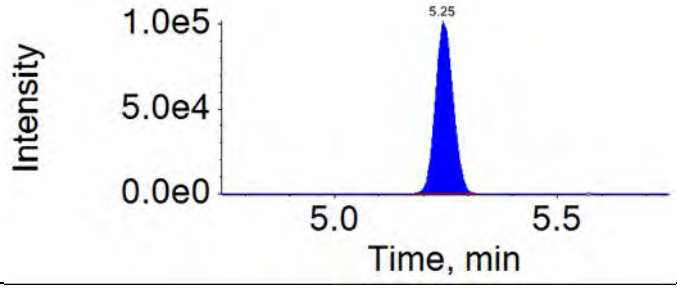
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



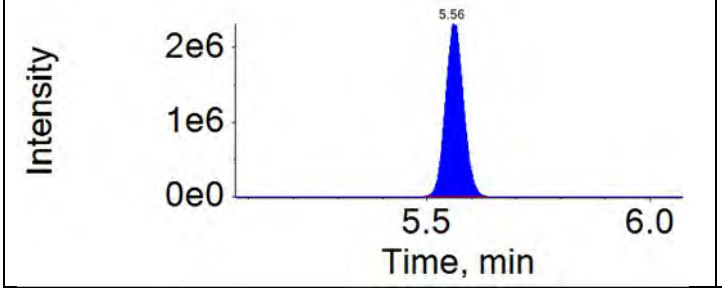


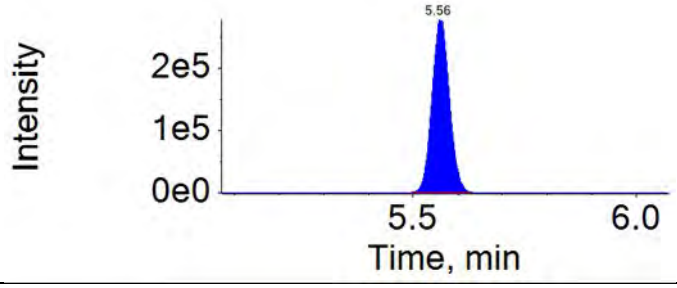
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



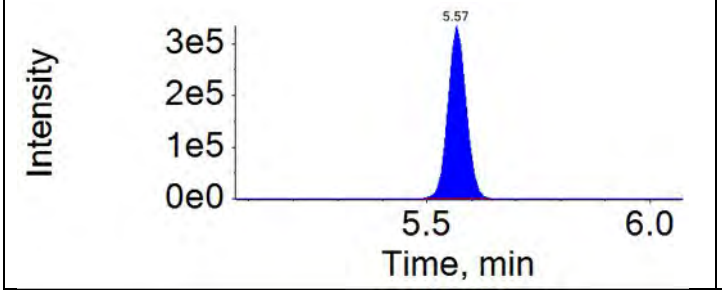


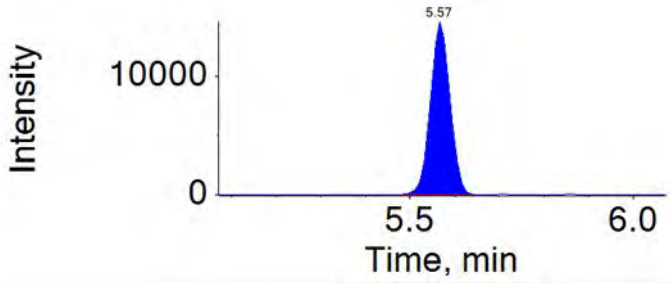
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



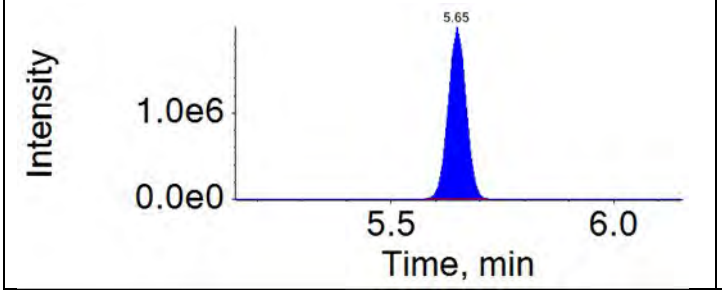


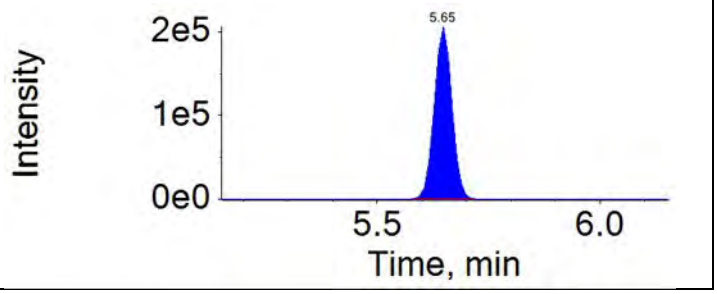
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

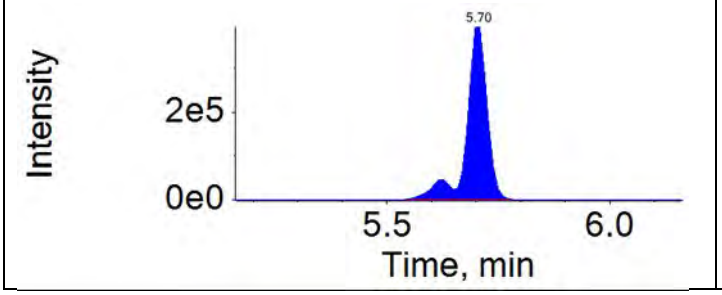
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

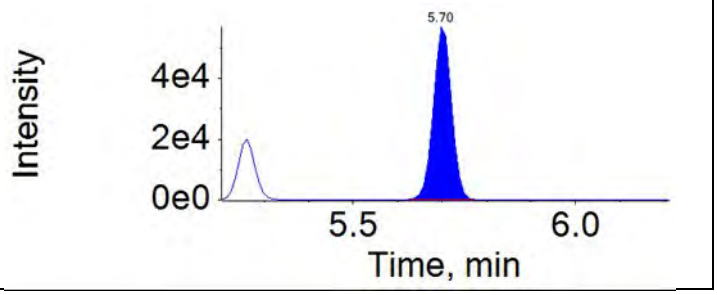
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



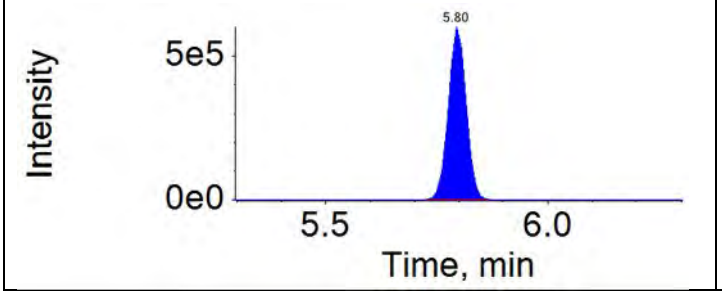


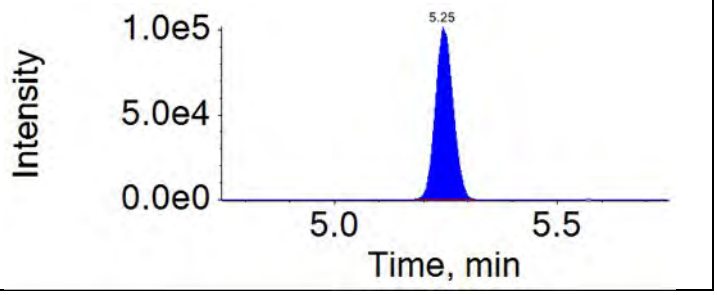
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



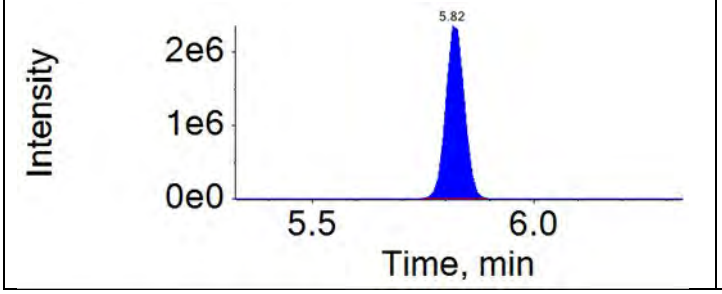


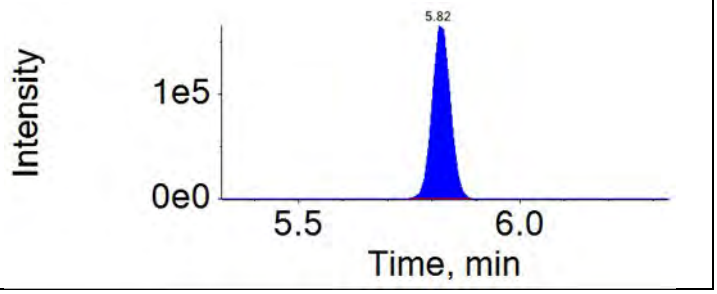
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



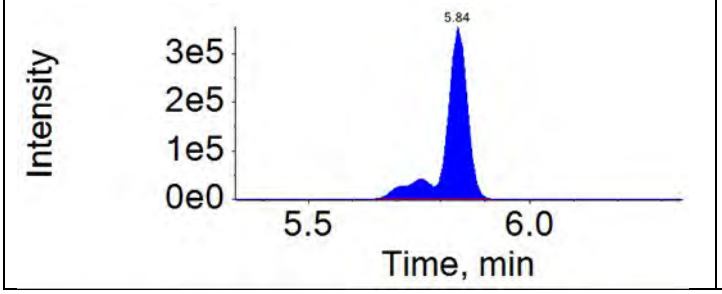


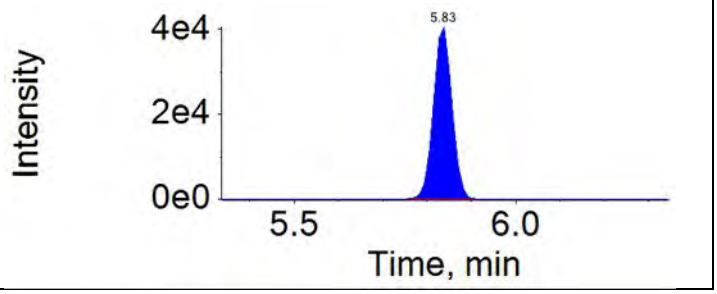
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

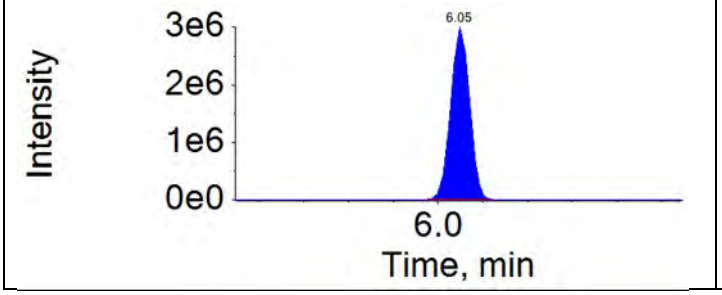
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

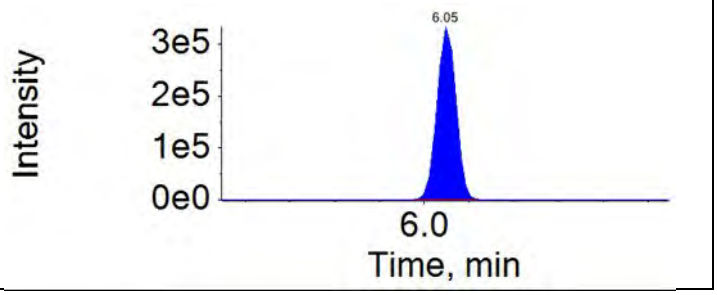
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



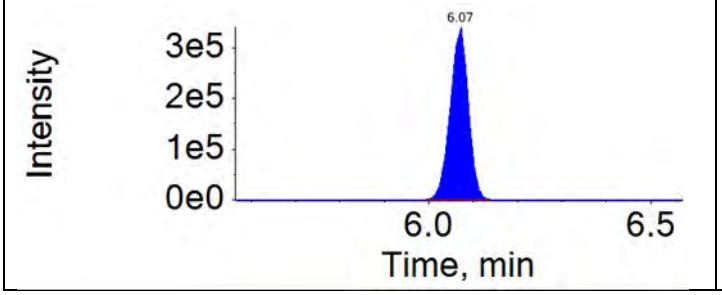


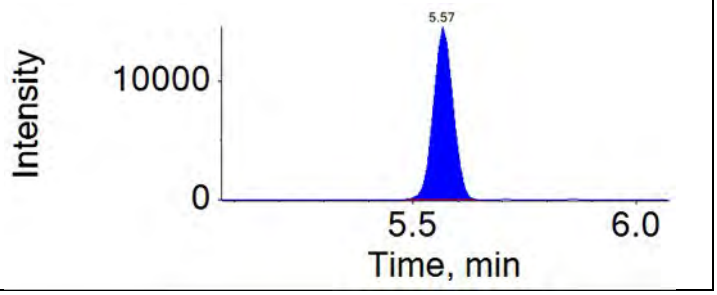
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



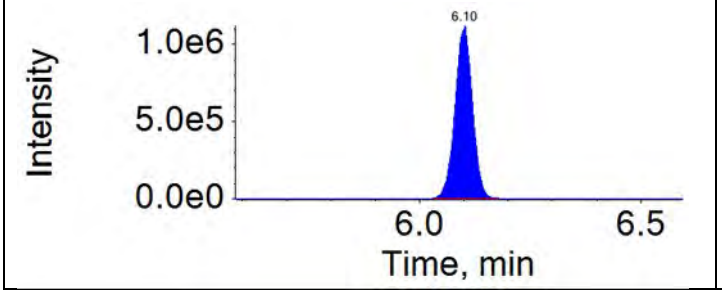


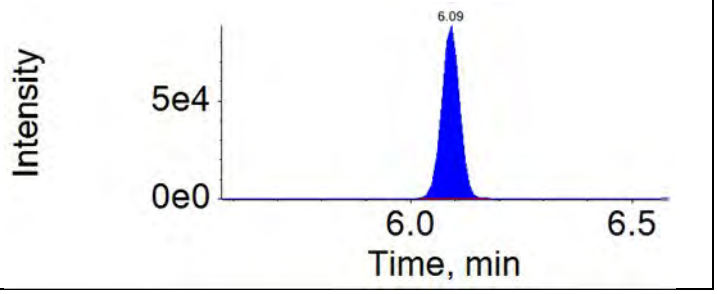
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



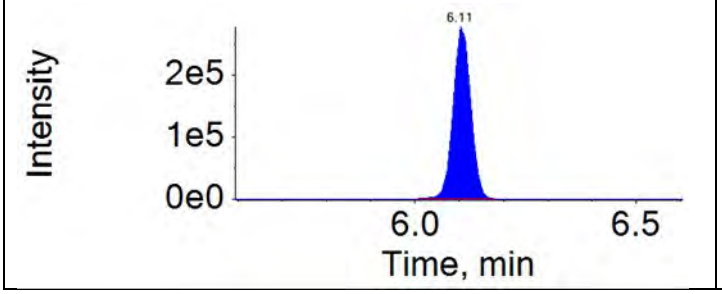


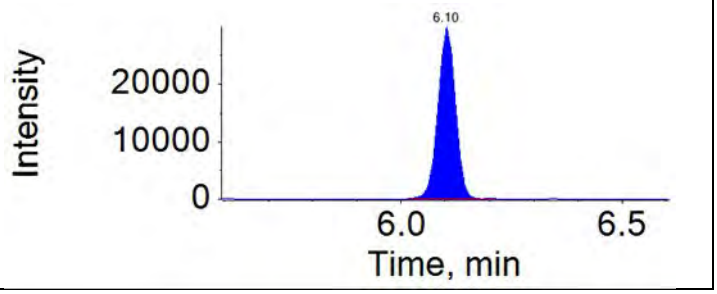
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

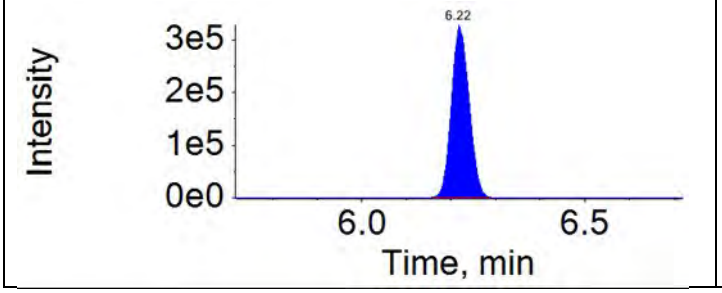
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

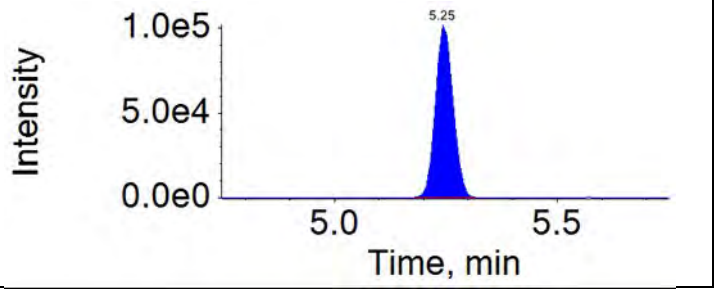
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



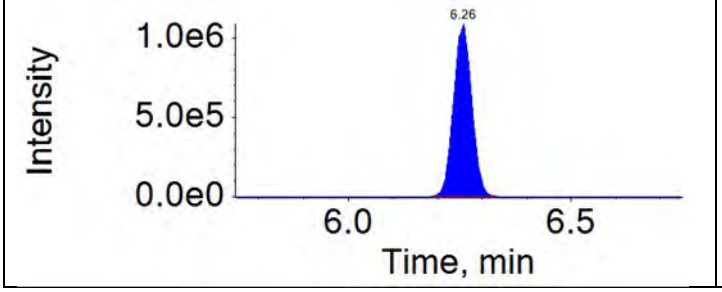


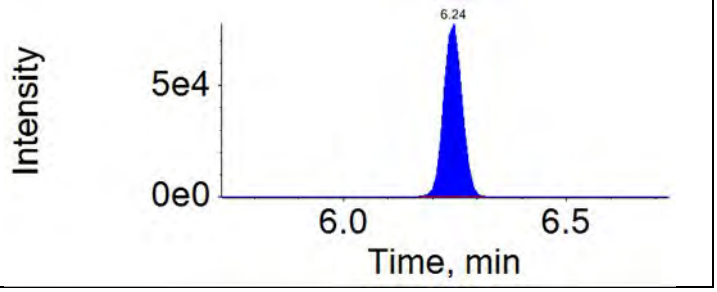
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



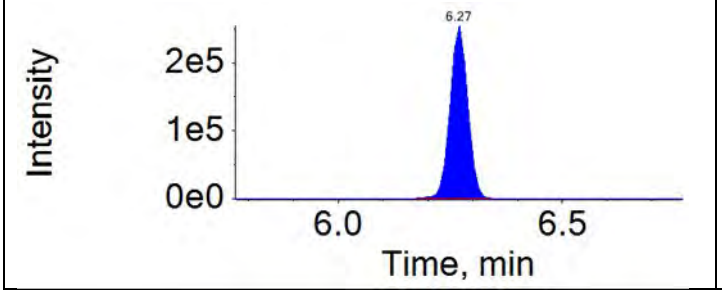


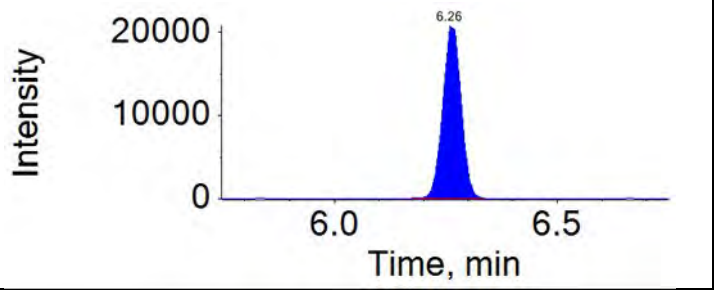
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



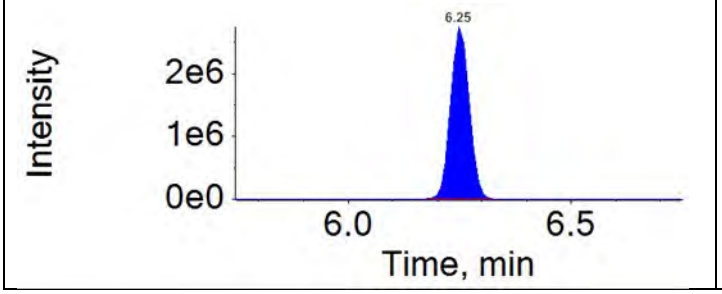


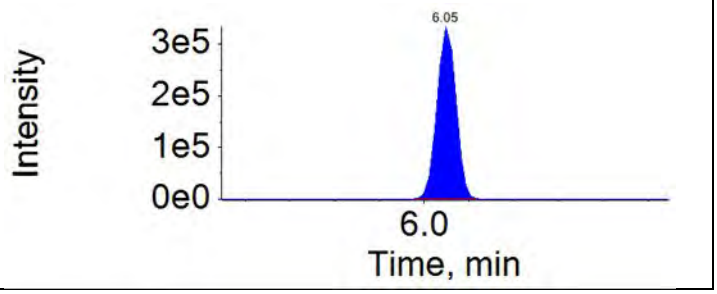
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

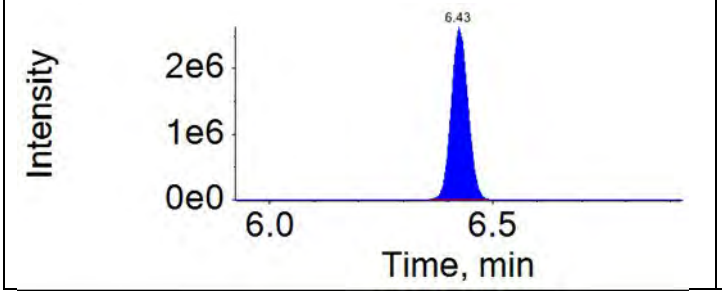
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

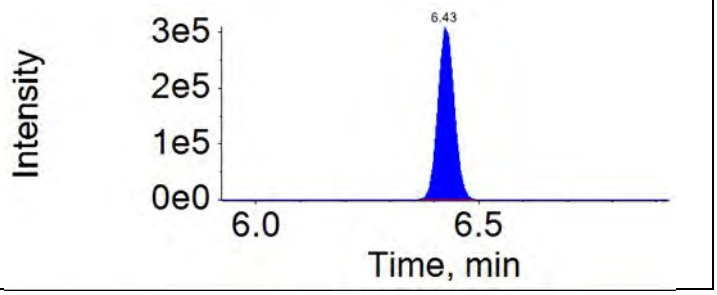
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



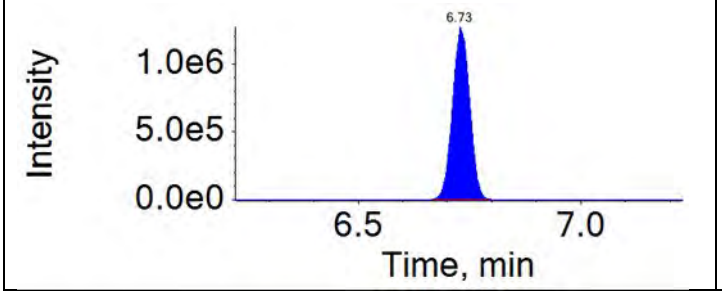


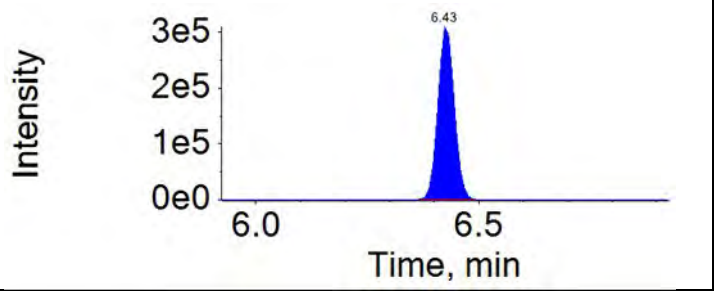
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



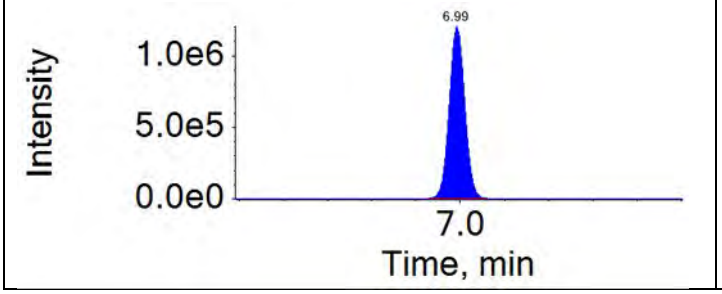


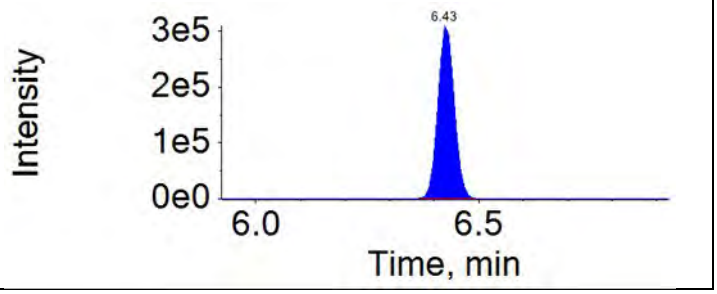
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



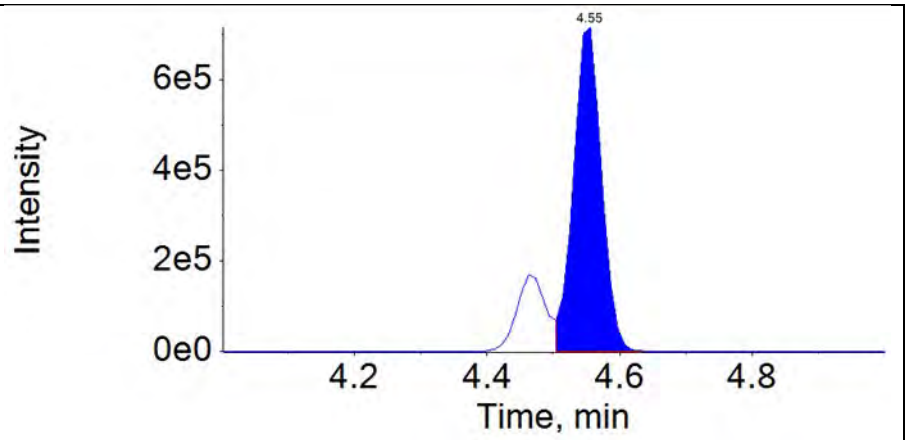


APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

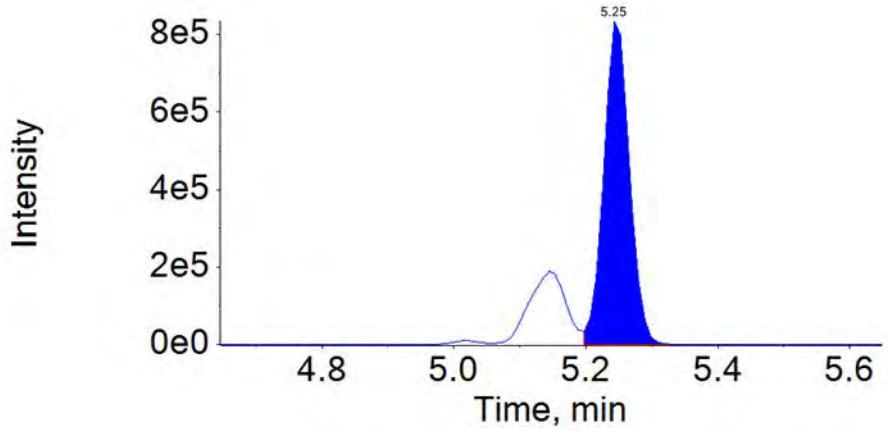
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
2110073.26
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-11.wiff
Sample Name:
CAL6



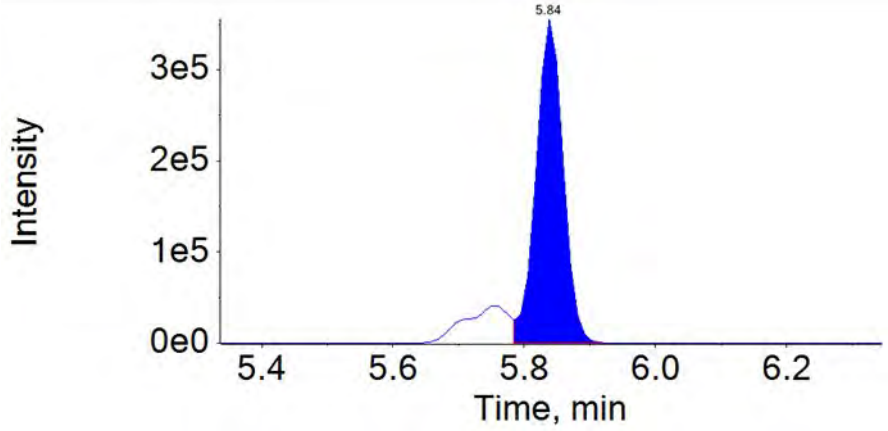
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
2264157.02
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-11.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.84
Peak Area:
1021470.64
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-11.wiff
Sample Name:
CAL6



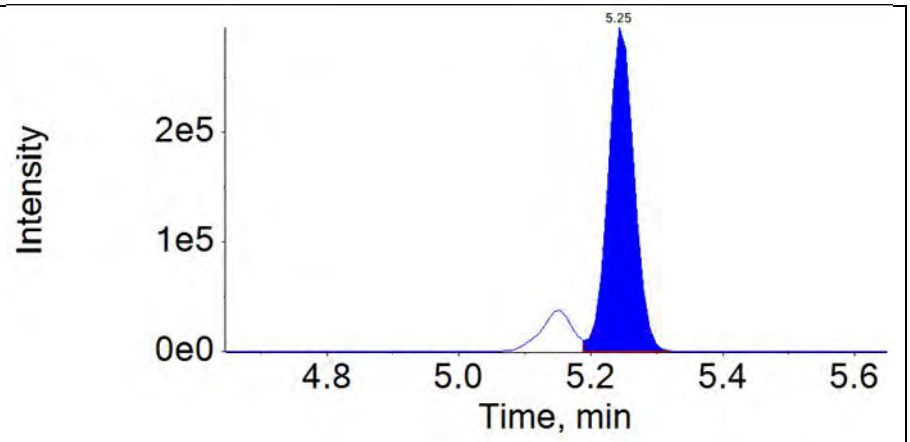
Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

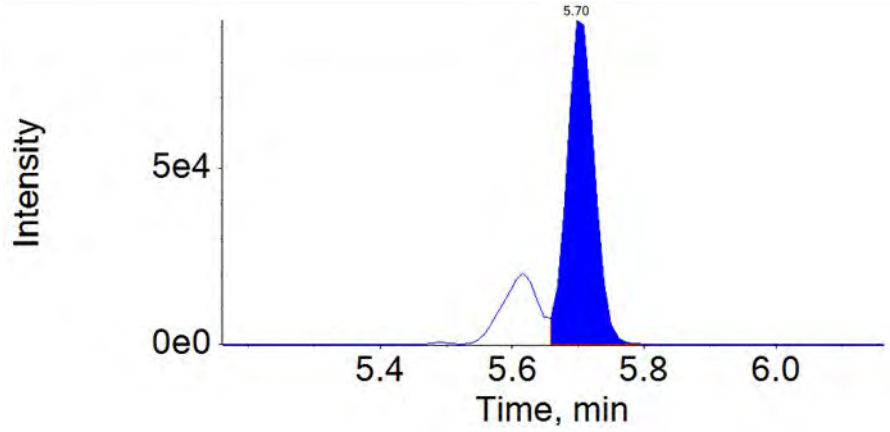
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
810528.26
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-11.wiff
Sample Name:
CAL6



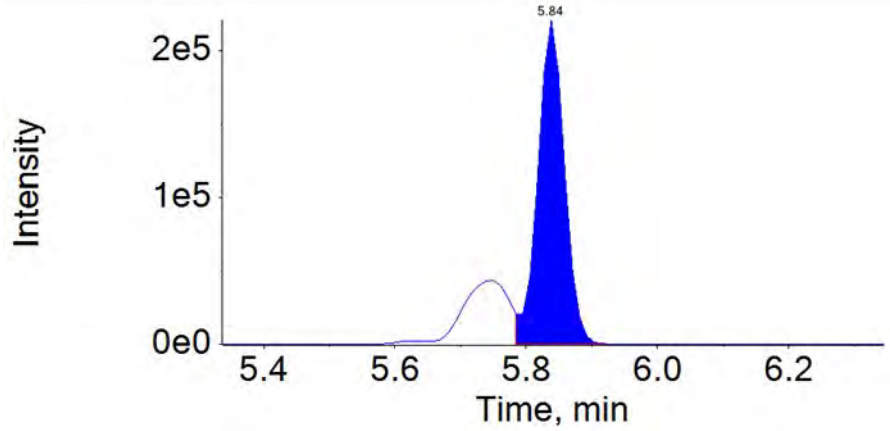
Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
267798.15
Mass Range:
570.0 / 483.0
File Name:
18NOV28DCAL-11.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.84
Peak Area:
625806.77
Mass Range:
584.0 / 526.0
File Name:
18NOV28DCAL-11.wiff
Sample Name:
CAL6



Integration Comment: incorrect integration

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Ion Ratio Report

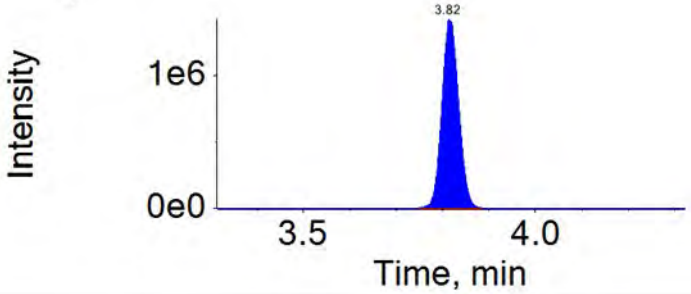
Sample Name: CAL6 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-11.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	3600470.83	A	0.3655	0.3566			
PFBS_2	3.82	1.00	1284104.34	A	0.3655	0.3566	-2	50	
4:2-FTS	4.13	1.00	1148569.18	A	0.6383	0.6279			
4:2-FTS_2	4.13	1.00	721221.12	A	0.6383	0.6279	-2	50	
PFHxA	4.16	1.00	7468739.11	A	0.0103	0.0117			
PFHxA_2	4.16	1.00	87256.25	A	0.0103	0.0117	13	50	
PFPeS	4.18	1.10	1793808.03	A	0.4976	0.5229			
PFPeS_2	4.18	1.10	937895.85	A	0.4976	0.5229	5	50	
PFHpA	4.55	1.00	7873271.20	A	0.0557	0.0567			
PFHpA_2	4.55	1.00	446309.31	A	0.0557	0.0567	2	50	
PFHxS	4.55	1.00	2625950.90	M	0.3693	0.3570			
PFHxS_2	4.55	1.00	937577.08	A	0.3693	0.3570	-3	50	
6:2-FTS	4.90	1.00	859948.62	A	0.6625	0.6492			
6:2-FTS_2	4.90	1.00	558302.88	A	0.6625	0.6492	-2	50	
PFHpS	4.91	1.08	2686833.27	A	0.3915	0.4117			
PFHpS_2	4.91	1.08	1106038.20	A	0.3915	0.4117	5	50	
PFOA	4.92	1.00	8012665.34	A	0.0573	0.0550			
PFOA_2	4.92	1.00	440521.78	A	0.0573	0.0550	-4	50	
PFOS	5.25	1.00	3026664.45	M	0.2960	0.3091			
PFOS_2	5.25	1.00	935561.90	M	0.2960	0.3091	4	50	
PFNA	5.26	1.00	7843086.90	A	0.0201	0.0194			
PFNA_2	5.26	1.00	152065.57	A	0.0201	0.0194	-3	50	
PFNS	5.54	1.06	2116661.52	A	0.4794	0.4605			
PFNS_2	5.54	1.06	974696.88	A	0.4794	0.4605	-4	50	
PFDA	5.56	1.00	6551370.45	A	0.0075	0.0069			
PFDA_2	5.56	1.00	45516.35	A	0.0075	0.0069	-7	50	
8:2-FTS	5.57	1.00	938590.07	A	0.5380	0.5988			
8:2-FTS_2	5.57	1.00	561991.71	A	0.5380	0.5988	11	50	
NMeFOSAA	5.70	1.00	1292829.79	A	0.2305	0.2668			
NMeFOSAA_2	5.70	1.00	344955.19	M	0.2305	0.2668	16	50	
PFDS	5.80	1.10	1665920.17	A	0.5356	0.4889			
PFDS_2	5.80	1.10	814397.56	A	0.5356	0.4889	-9	50	
PFUnDA	5.82	1.00	6885622.64	A	0.0038	0.0040			
PFUnDA_2	5.82	1.00	27237.03	A	0.0038	0.0040	4	50	
NEtFOSAA	5.84	1.00	1214766.38	M	0.7356	0.6821			
NEtFOSAA_2	5.84	1.00	828574.74	M	0.7356	0.6821	-7	50	
PFDoDA	6.05	1.00	8865844.73	A	0.0130	0.0133			
PFDoDA_2	6.05	1.00	118287.14	A	0.0130	0.0133	2	50	
10:2-FTS	6.07	1.09	972346.85	A	0.6989	0.7475			
10:2-FTS_2	6.07	1.09	726827.33	A	0.6989	0.7475	7	50	
PFTrDA	6.25	1.03	7958673.38	A	0.0090	0.0094			
PFTrDA_2	6.25	1.03	74438.34	A	0.0090	0.0094	4	50	
PFTeDA	6.43	1.00	6793735.34	A	0.0056	0.0064			
PFTeDA_2	6.43	1.00	43469.69	A	0.0056	0.0064	14	50	
PFHxDA	6.73	1.05	3402004.45	A	0.0646	0.0655			
PFHxDA_2	6.73	1.05	222711.21	A	0.0646	0.0655	1	50	
PFODA	6.99	1.09	2942000.06	A	0.0264	0.0267			
PFODA_2	6.99	1.09	78596.75	A	0.0264	0.0267	1	50	

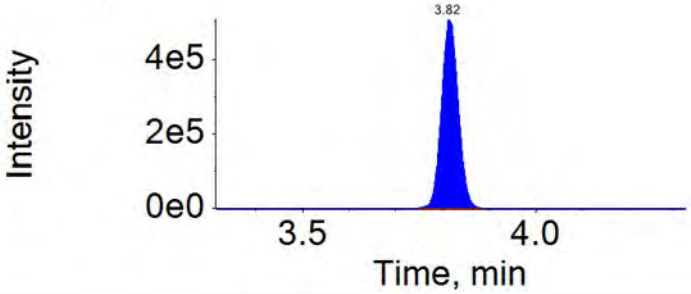
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

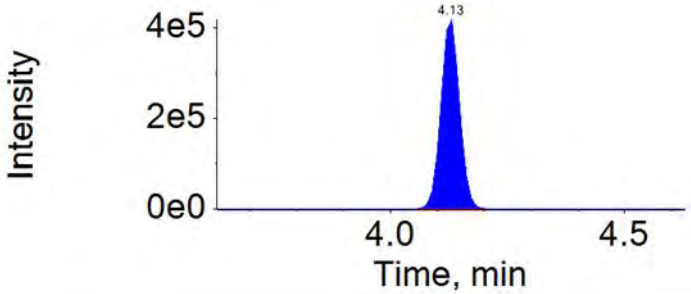
Component: PFBS
Primary Mass: 299.0 / 80.0



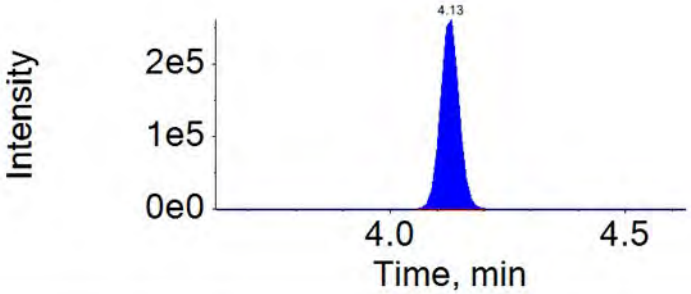
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



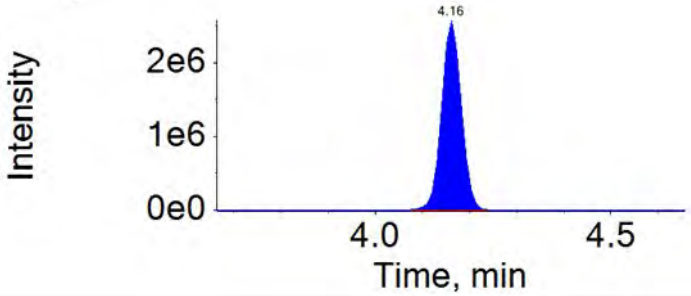
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



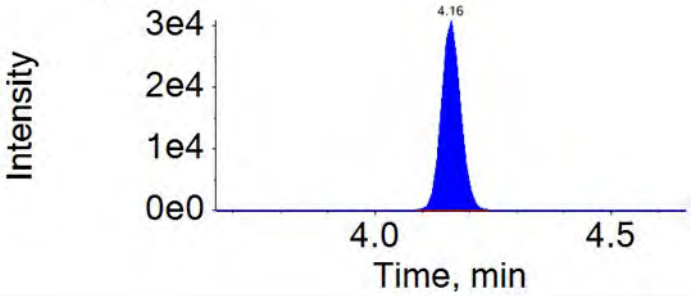
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



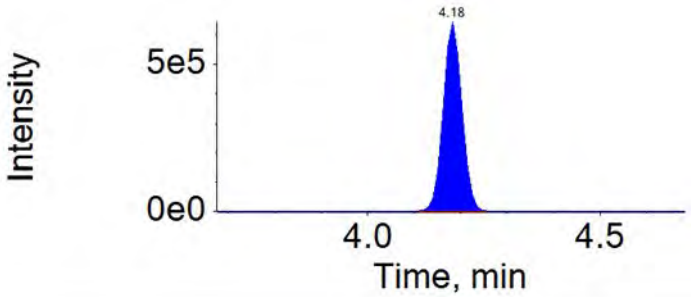
Component: PFHxA
Primary Mass: 313.0 / 269.0



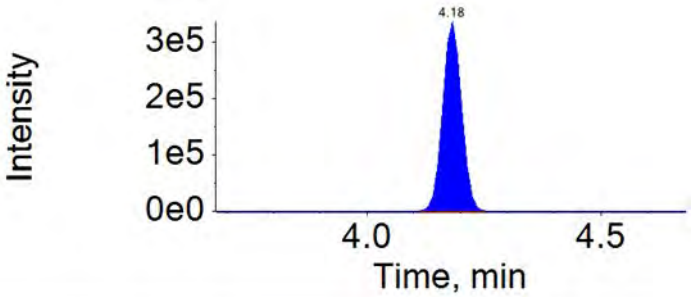
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



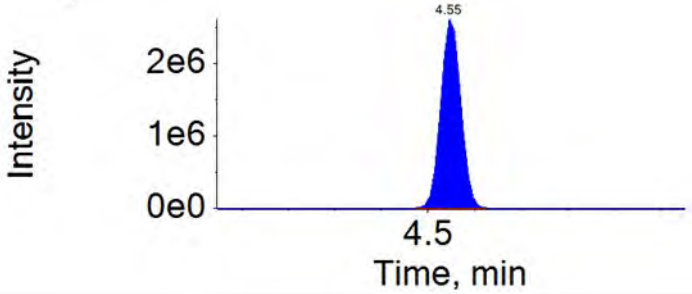
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



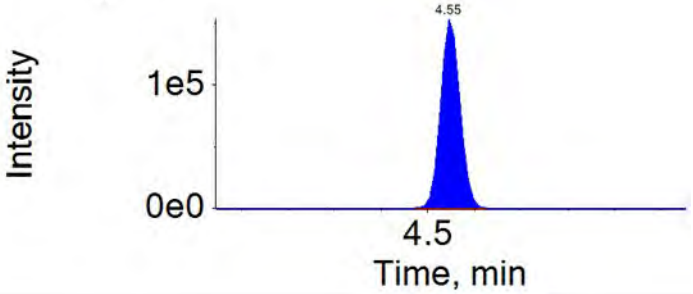
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

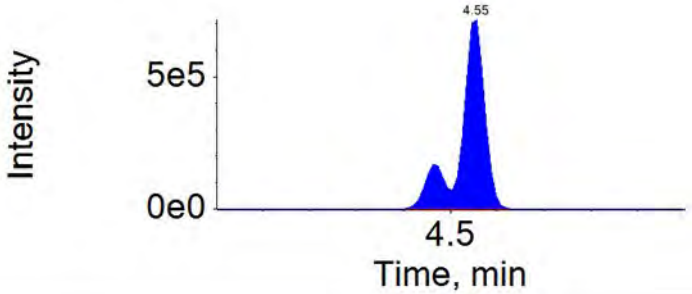
Component: PFHpA
Primary Mass: 363.0 / 319.0



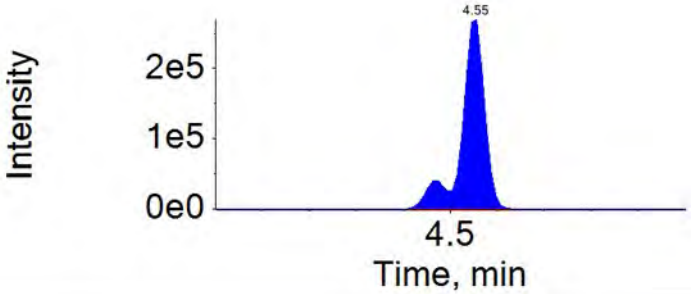
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



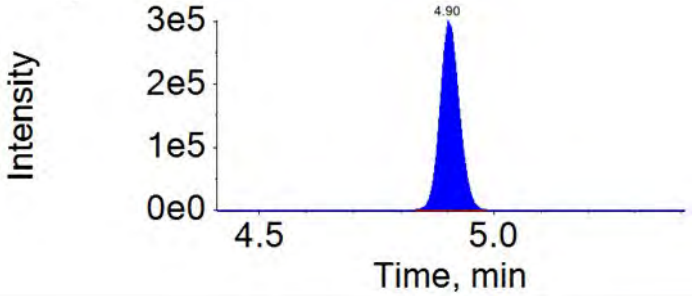
Component: PFHxS
Primary Mass: 399.0 / 80.0



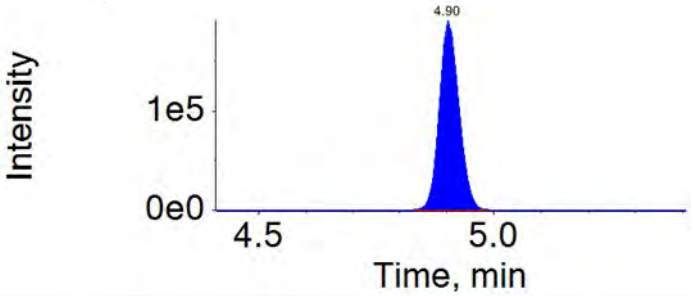
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



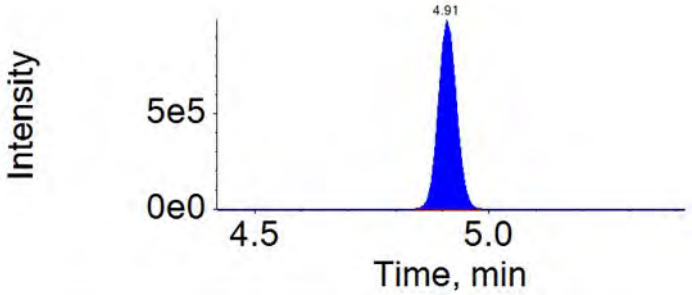
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



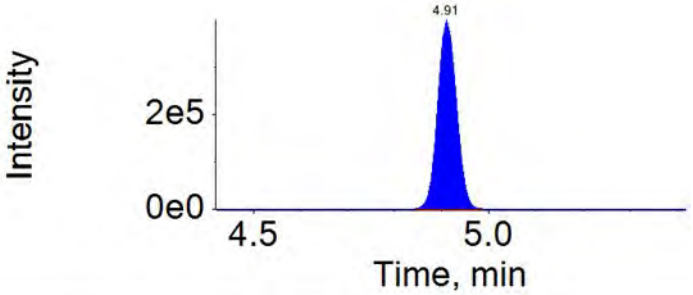
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



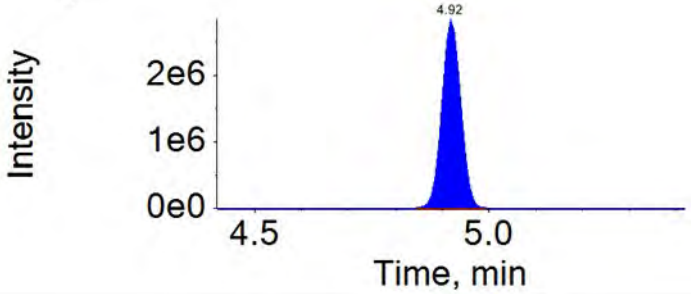
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



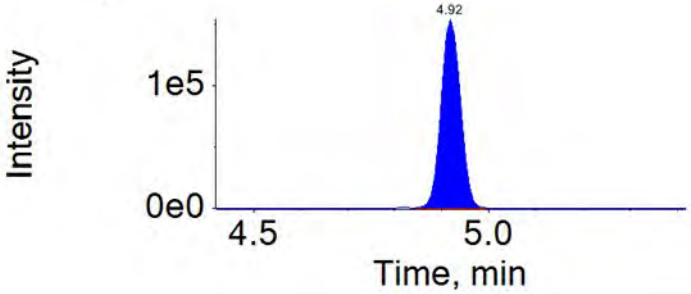
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

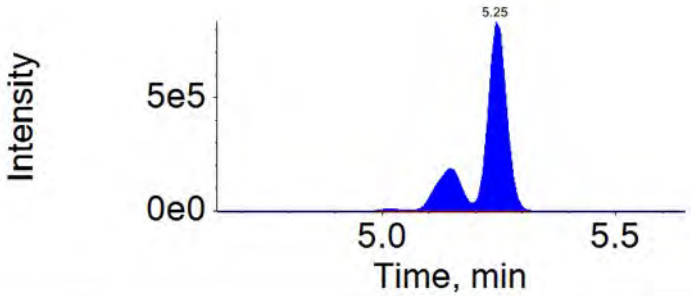
Component: PFOA
Primary Mass: 413.0 / 369.0



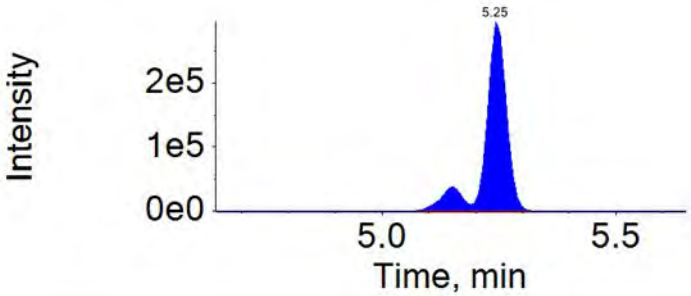
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



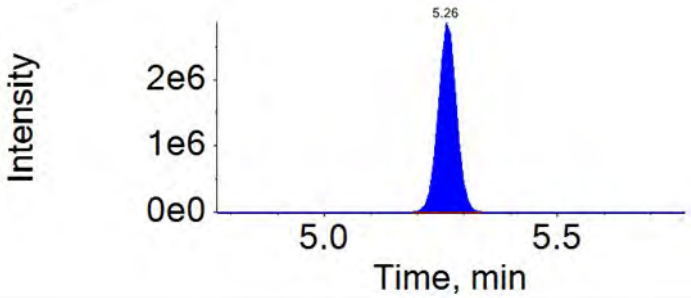
Component: PFOS
Primary Mass: 499.0 / 80.0



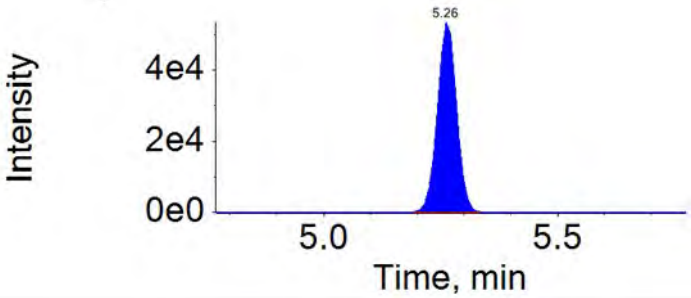
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



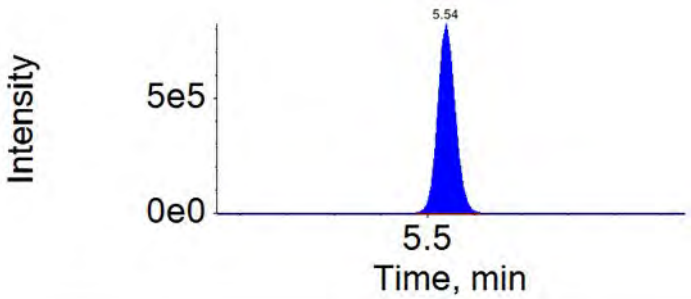
Component: PFNA
Primary Mass: 463.0 / 419.0



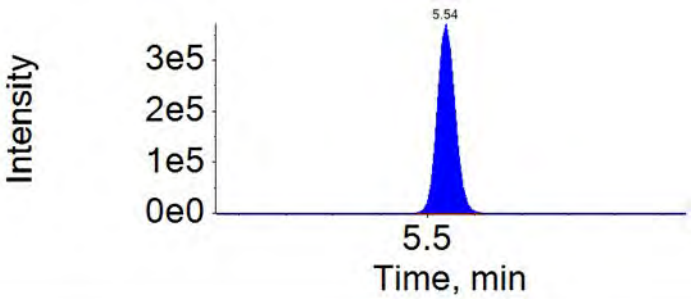
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



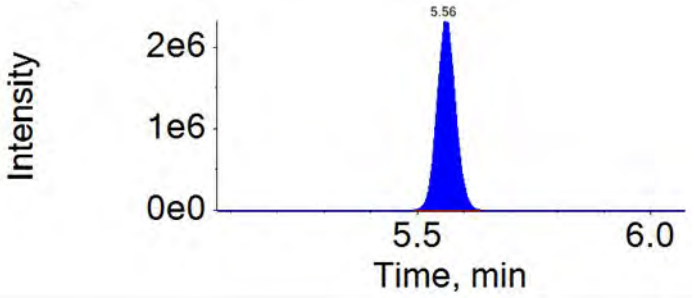
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



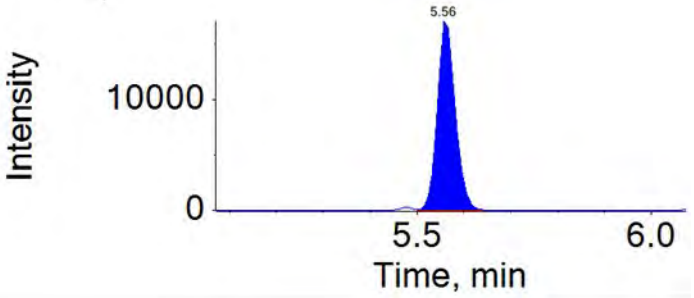
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

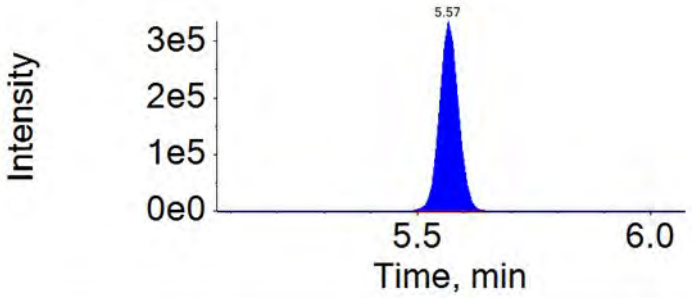
Component: PFDA
Primary Mass: 513.0 / 469.0



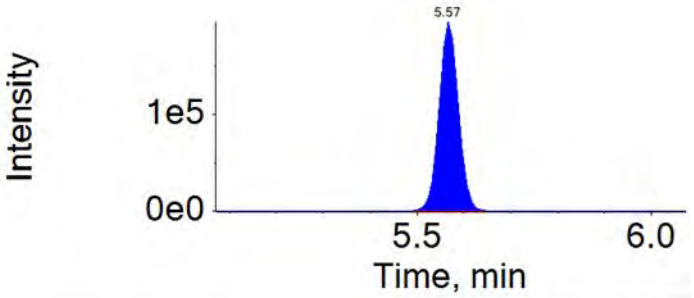
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



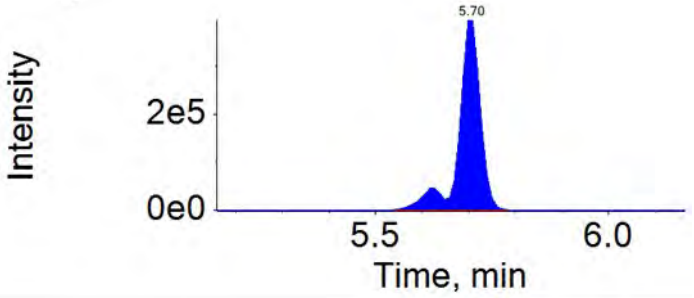
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



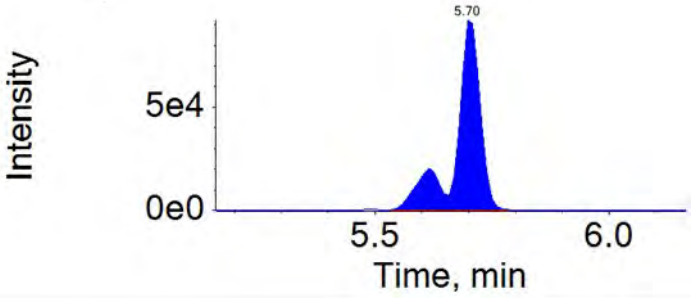
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



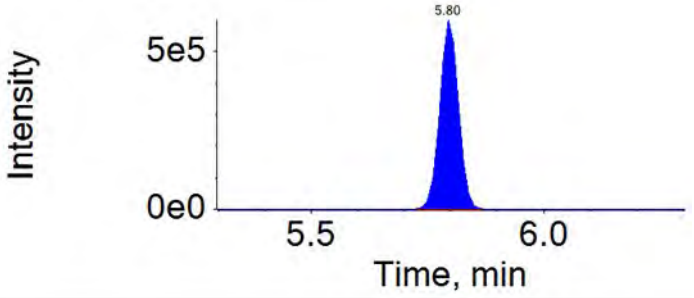
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



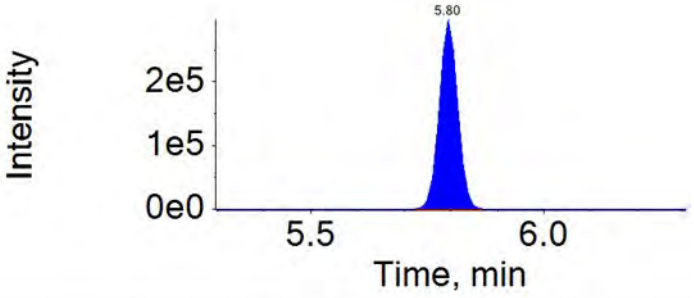
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



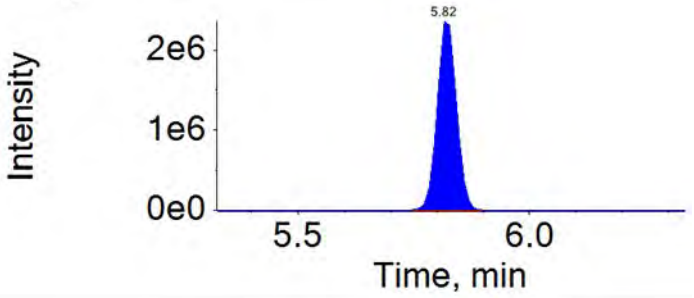
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



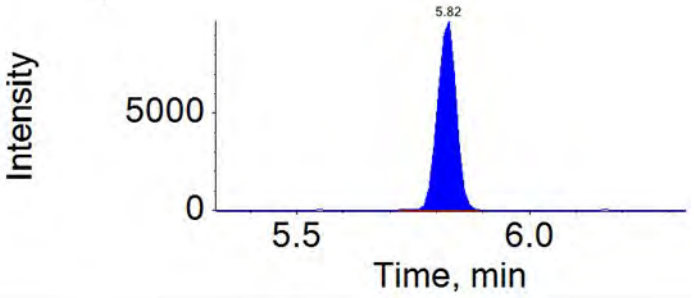
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

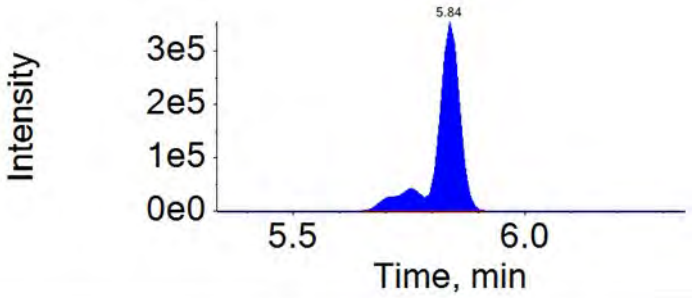
Component: PFUnDA
Primary Mass: 563.0 / 519.0



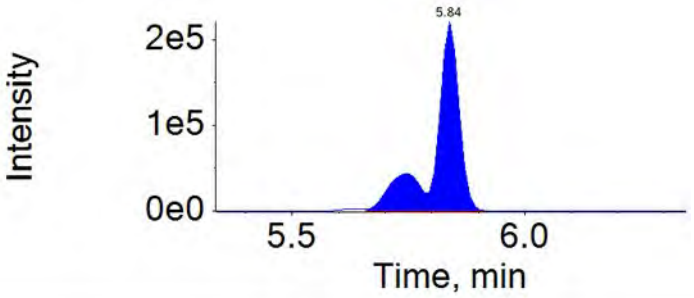
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



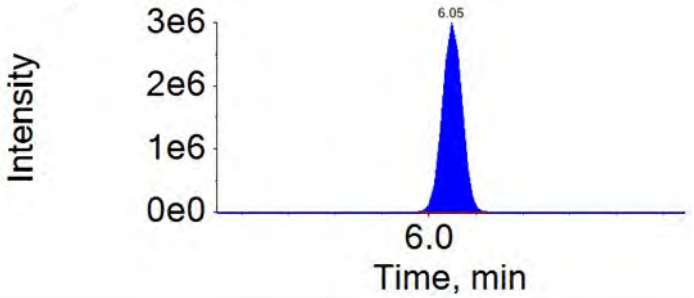
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



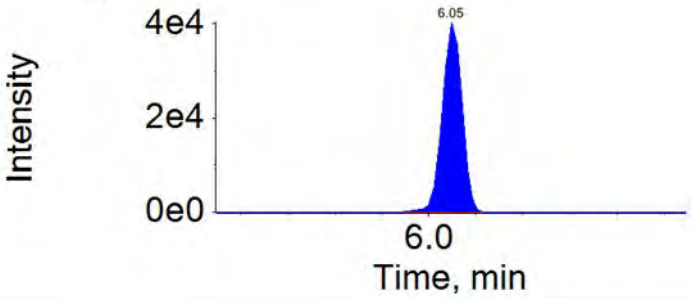
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



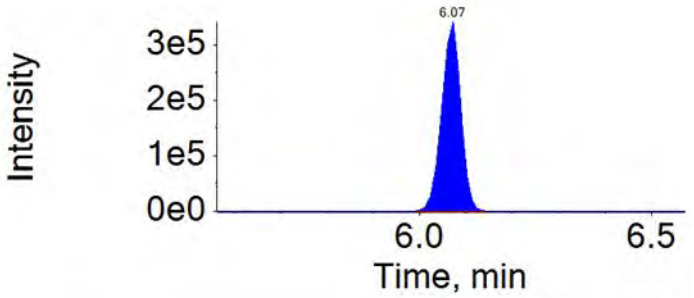
Component: PFDoDA
Primary Mass: 613.0 / 569.0



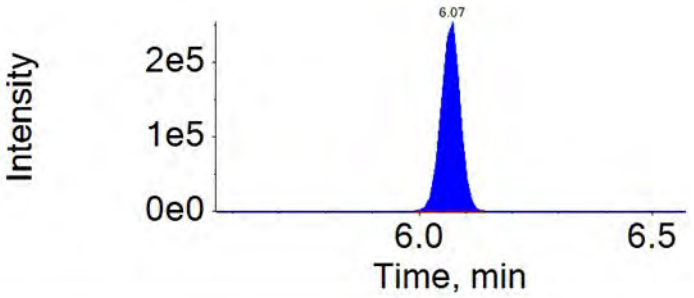
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



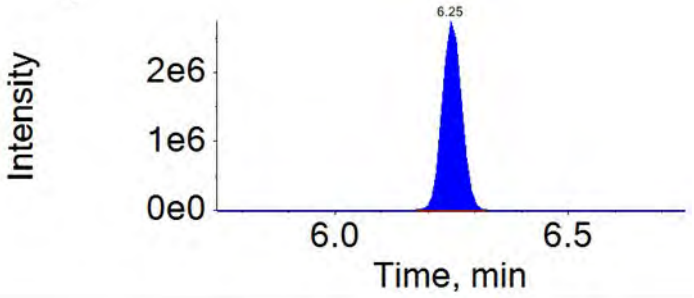
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



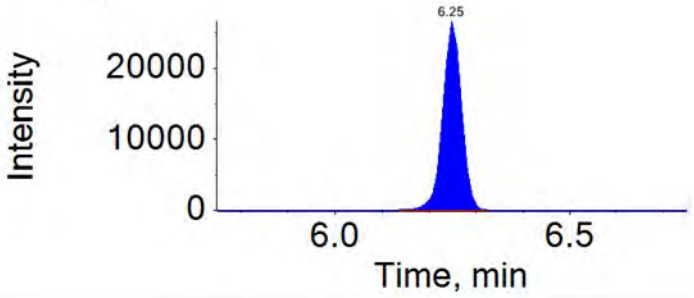
APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

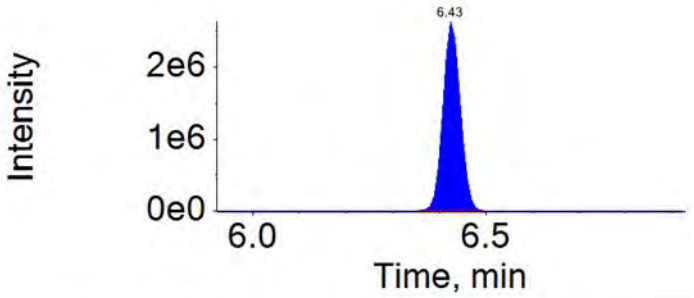
Component: PFTrDA
Primary Mass: 663.0 / 619.0



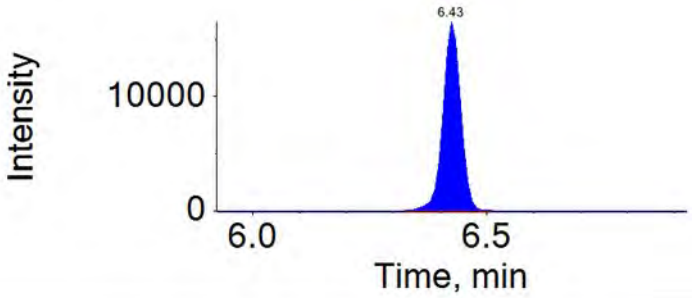
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



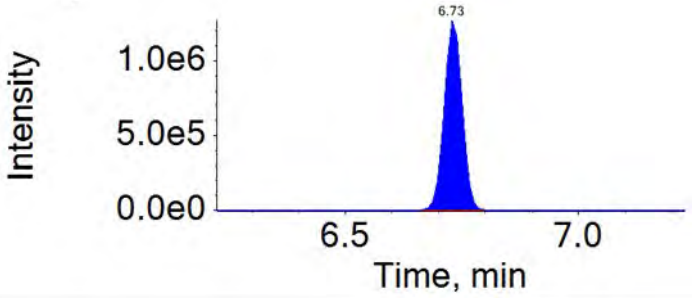
Component: PFTeDA
Primary Mass: 713.0 / 669.0



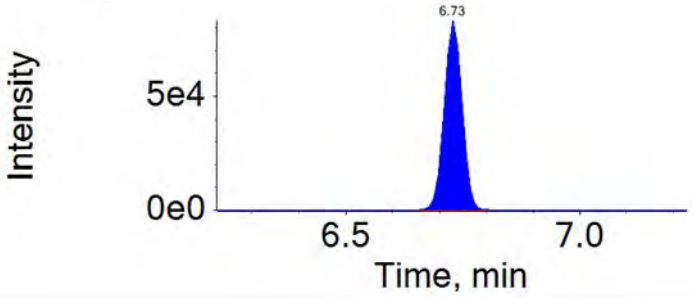
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



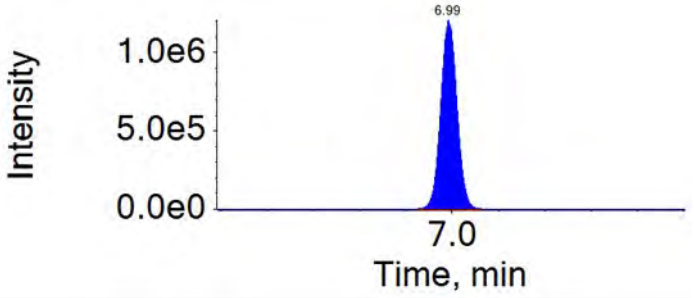
Component: PFHxDA
Primary Mass: 813.0 / 769.0



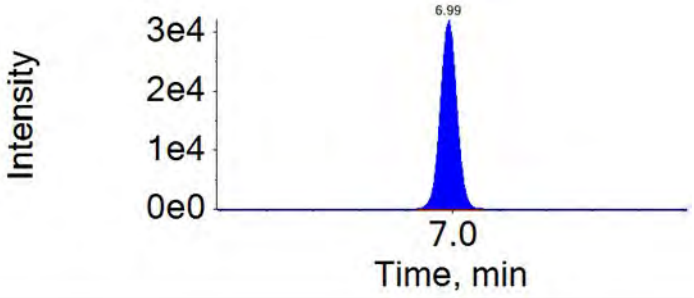
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CAL7			**Data File:**		18NOV28DCAL-12.wiff
Sample ID:	CALBRN71833B			**Acquis Date:**		2018-11-28T14:36:16
Sample Type:	Standard			**Instrument:**		LM27631
Vial Position:	9			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	717475.7	887248.9	-19	50	
13C2-PFOA	5.0	482796.5	498501.6	-3	50	
13C4-PFOS	4.8	242045.2	283214.2	-15	50	
13C2-PFDA	5.0	405455.0	441790.6	-8	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	803704.8	13C3-PFBA	717475.7	1.120	5.000	4.998	100	70-130	
E13C5-PFPeA	781113.8	13C3-PFBA	717475.7	1.089	5.000	5.084	102	70-130	
E13C3-PFBS	352994.8	13C3-PFBA	717475.7	0.492	4.650	4.694	101	70-130	
E13C2-4:2-FTS	62236.8	13C2-PFOA	482796.5	0.129	4.670	4.442	95	70-130	
E13C5-PFHxA	625449.8	13C2-PFOA	482796.5	1.295	5.000	4.758	95	70-130	
E13C3-PFHxS	239327.4	13C2-PFOA	482796.5	0.496	4.730	3.885	82	70-130	
E13C4-PFHpA	544866.9	13C2-PFOA	482796.5	1.129	5.000	5.186	104	70-130	
E13C2-6:2-FTS	43678.3	13C2-PFOA	482796.5	0.090	4.750	3.787	80	70-130	
E13C8-PFOA	745616.3	13C2-PFOA	482796.5	1.544	5.000	4.251	85	70-130	
E13C8-PFOS	250004.2	13C4-PFOS	242045.2	1.033	4.780	4.663	98	70-130	
E13C9-PFNA	562206.9	13C4-PFOS	242045.2	2.323	5.000	5.102	102	70-130	
E13C6-PFDA	645932.5	13C2-PFDA	405455.0	1.593	5.000	4.492	90	70-130	
E13C2-8:2-FTS	41093.1	13C2-PFDA	405455.0	0.101	4.790	4.356	91	70-130	
E13C8-PFOSA	555500.5	13C2-PFDA	405455.0	1.370	5.000	5.027	101	70-130	
Ed3-NMeFOSAA	156760.9	13C2-PFDA	405455.0	0.387	5.000	4.909	98	70-130	
E13C7-PFUnDA	416723.9	13C2-PFDA	405455.0	1.028	5.000	4.344	87	70-130	
Ed5-NEtFOSAA	102891.6	13C2-PFDA	405455.0	0.254	5.000	4.521	90	70-130	
E13C2-PFDoDA	852235.6	13C2-PFDA	405455.0	2.102	5.000	4.416	88	70-130	
Ed7-NMePFOSAE	250467.6	13C2-PFDA	405455.0	0.618	5.000	5.339	107	70-130	
Ed3-NMePFOSA	79780.2	13C2-PFDA	405455.0	0.197	5.000	5.325	107	70-130	
Ed9-NEtPFOSAE	216042.0	13C2-PFDA	405455.0	0.533	5.000	5.402	108	70-130	
Ed5-NEtPFOSA	59209.1	13C2-PFDA	405455.0	0.146	5.000	5.074	101	70-130	
E13C2-PFTeDA	717297.7	13C2-PFDA	405455.0	1.769	5.000	4.895	98	70-130	

APPROVED
By MCD at 5:00 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

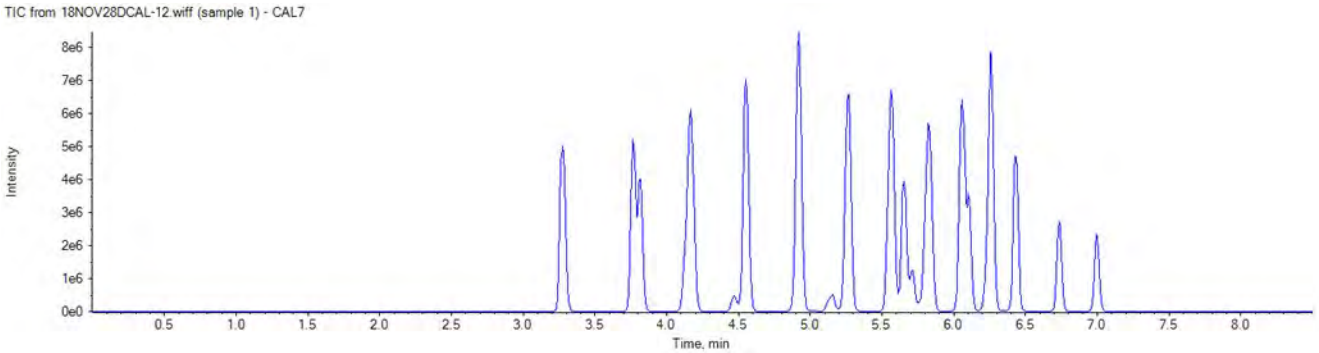
Analyte Quantitation Peak Table

Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-12.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	12734942.7		A	13C4-PFBA	3.27	803704.8	15.845	86.862
PFPeA	3.77	1.000	12611040.3		A	13C5-PFPeA	3.77	781113.8	16.145	79.219
PFBS	3.82	1.000	6468971.4		A	13C3-PFBS	3.82	352994.8	18.326	88.956
4:2-FTS	4.13	1.000	2126148.2		A	13C2-4:2-FTS	4.13	62236.8	34.162	91.451
PFHxA	4.16	1.000	12530843.0		A	13C5-PFHxA	4.16	625449.8	20.035	80.421
PFPeS	4.18	1.100	3295381.6		A	13C3-PFBS	3.82	352994.8	9.335	94.429
PFHpA	4.55	1.000	12619701.7		A	13C4-PFHpA	4.55	544866.9	23.161	71.480
PFHxS	4.55	1.000	4797026.8		M	13C3-PFHxS	4.56	239327.4	20.044	93.850
6:2-FTS	4.91	1.000	1464447.0		A	13C2-6:2-FTS	4.91	43678.3	33.528	87.481
PFHpS	4.91	1.080	4562639.6		A	13C3-PFHxS	4.56	239327.4	19.064	95.147
PFOA	4.92	1.000	12900182.7		A	13C8-PFOA	4.92	745616.3	17.301	89.401
PFOS	5.25	1.000	5620329.0		M	13C8-PFOS	5.25	250004.2	22.481	94.301
PFNA	5.27	1.000	12939629.1		A	13C9-PFNA	5.27	562206.9	23.016	88.201
PFNS	5.54	1.060	3804945.2		A	13C8-PFOS	5.25	250004.2	15.220	96.096
PFDA	5.57	1.000	11371047.0		A	13C6-PFDA	5.57	645932.5	17.604	99.643
8:2-FTS	5.57	1.000	1620286.0		A	13C2-8:2-FTS	5.57	41093.1	39.430	74.355
PFOSA	5.65	1.000	9792009.5		A	13C8-PFOSA	5.65	555500.5	17.627	89.294
NMeFOSAA	5.71	1.000	2414874.8		M	d3-NMeFOSAA	5.71	156760.9	15.405	98.267
PFDS	5.80	1.110	3061543.5		A	13C8-PFOS	5.25	250004.2	12.246	97.096
PFUnDA	5.83	1.000	11254483.8		A	13C7-PFUnDA	5.83	416723.9	27.007	96.536
NEtFOSAA	5.85	1.000	2127663.4		A	d5-NEtFOSAA	5.84	102891.6	20.679	100.712
PFDoDA	6.06	1.000	14195839.1		A	13C2-PFDoDA	6.06	852235.6	16.657	91.243
10:2-FTS	6.08	1.090	1718827.3		A	13C2-8:2-FTS	5.57	41093.1	41.828	92.235
NMePFOSAE	6.11	1.000	5772837.2		A	d7-NMePFOSAE	6.10	250467.6	23.048	96.993
NMePFOSA	6.11	1.000	1500056.3		A	d3-NMePFOSA	6.11	79780.2	18.802	99.677
PFDoS	6.22	1.190	1735049.5		A	13C8-PFOS	5.25	250004.2	6.940	99.670
NEtPFOSAE	6.26	1.000	5826370.7		A	d9-NEtPFOSAE	6.25	216042.0	26.969	97.008
NEtPFOSA	6.27	1.000	1290814.8		A	d5-NEtPFOSA	6.27	59209.1	21.801	97.709
PFTrDA	6.26	1.030	12329126.1		A	13C2-PFDoDA	6.06	852235.6	14.467	87.197
PFTeDA	6.43	1.000	11258874.1		A	13C2-PFTeDA	6.43	717297.7	15.696	88.936
PFHxDA	6.73	1.050	6113985.2		A	13C2-PFTeDA	6.43	717297.7	8.524	97.440
PFODA	7.00	1.090	5309889.9		A	13C2-PFTeDA	6.43	717297.7	7.403	98.616

Total Ion Chromatogram

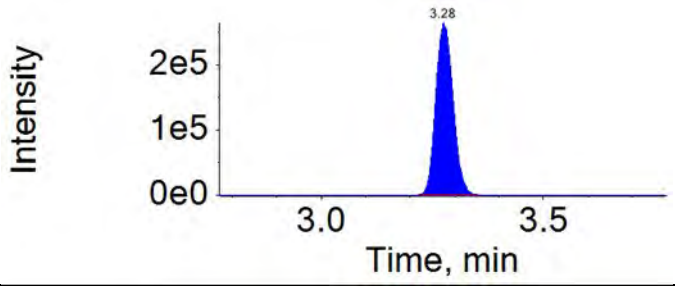


APPROVED
By MCD at 5:00 pm, 11/28/18

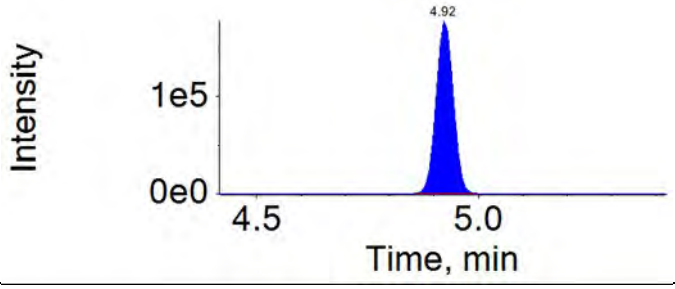
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

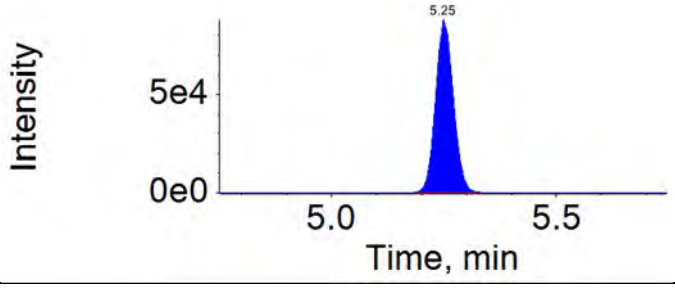
Injection Standard: 13C3-PFBA
216.0 / 172.0



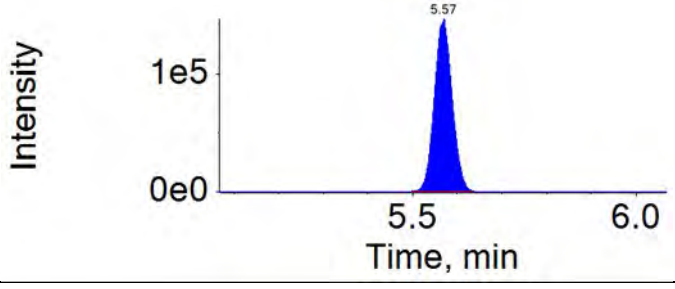
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

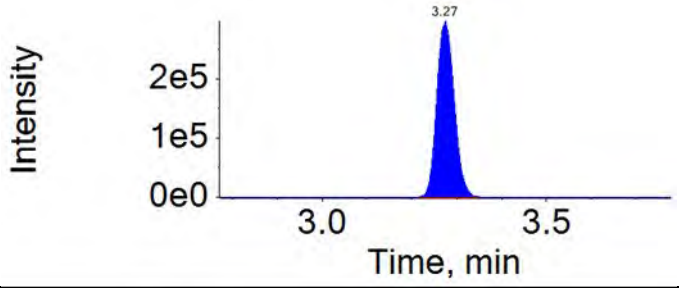


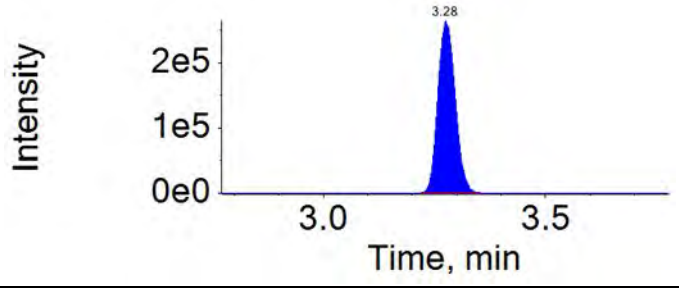
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

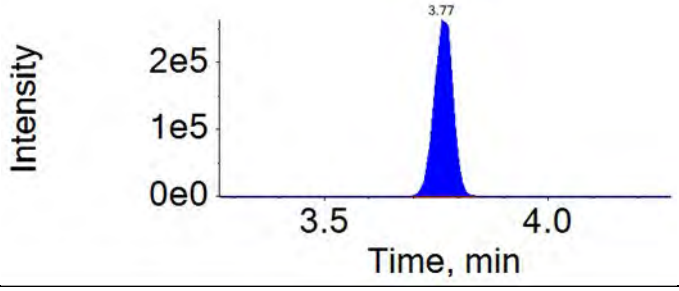
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

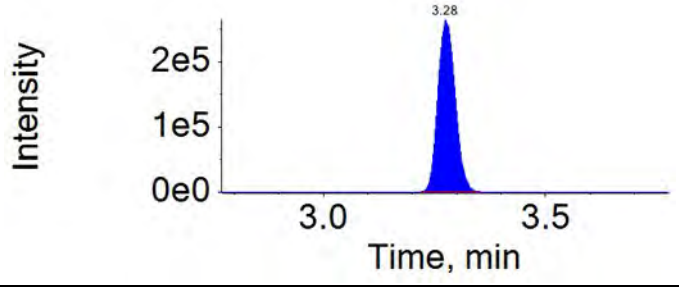
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



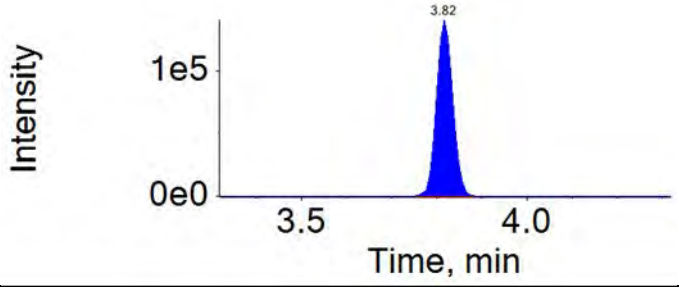


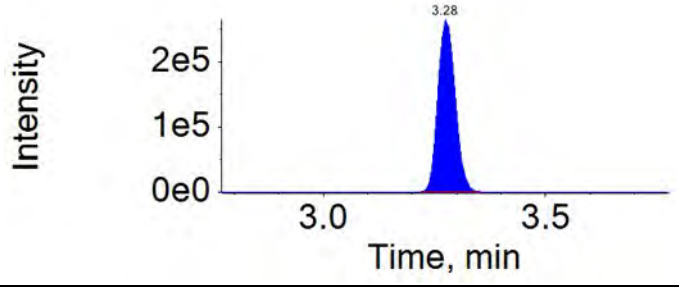
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



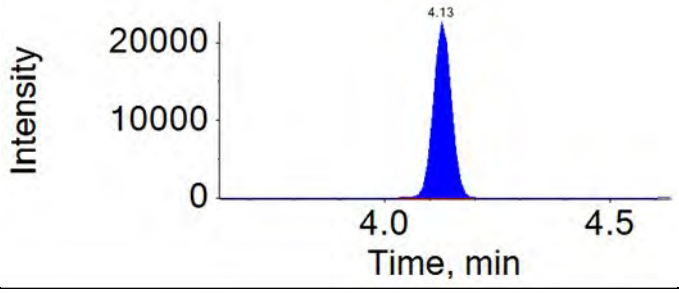


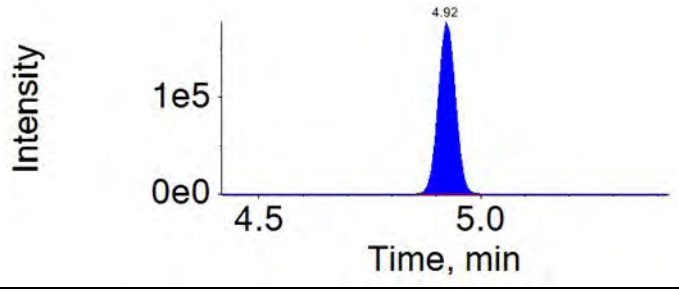
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



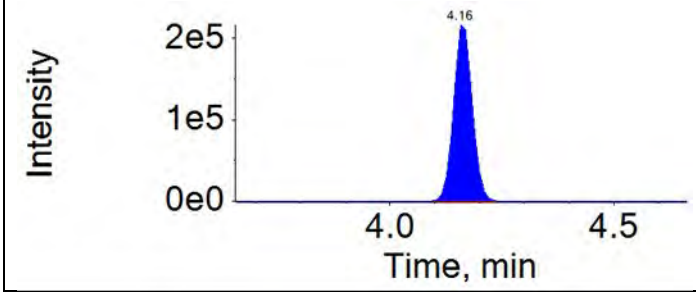


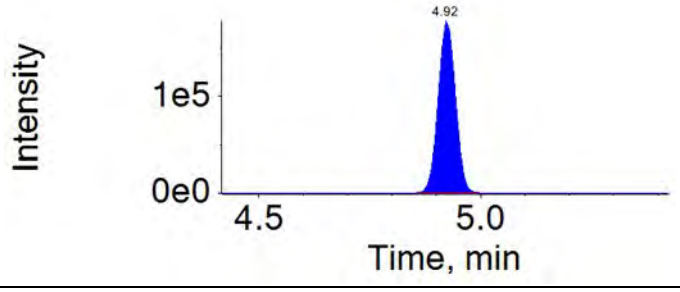
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

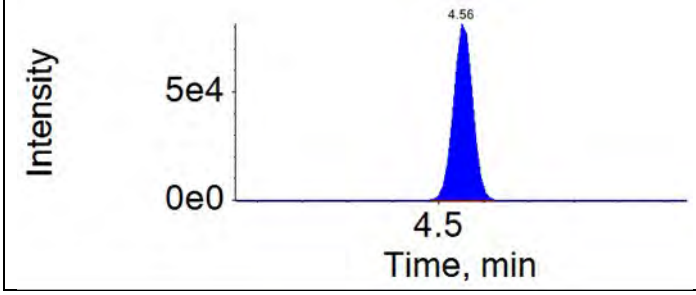
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

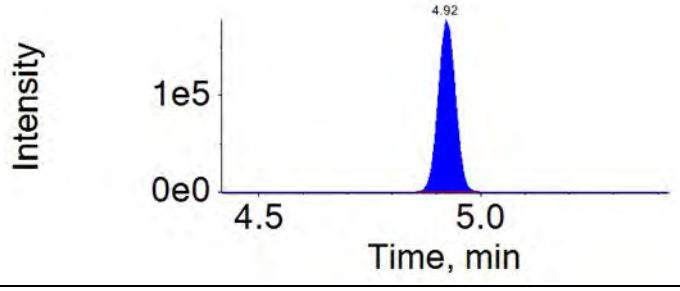
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



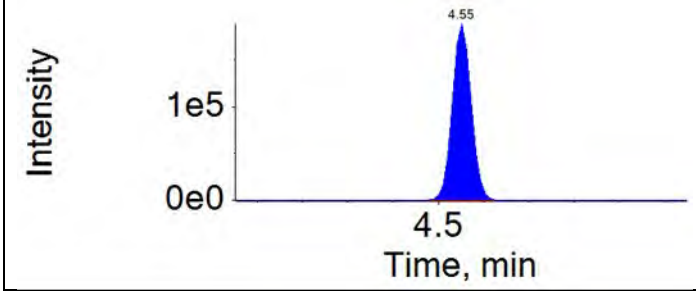


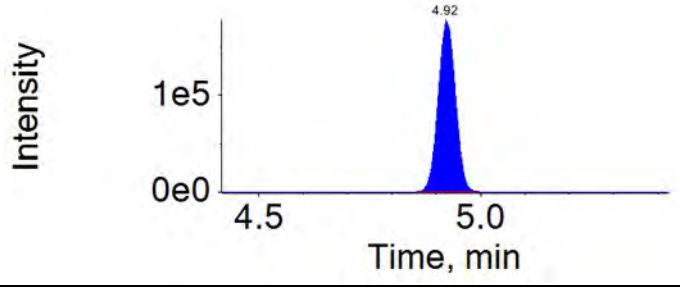
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



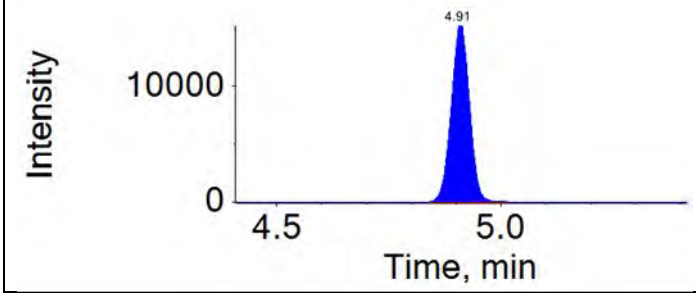


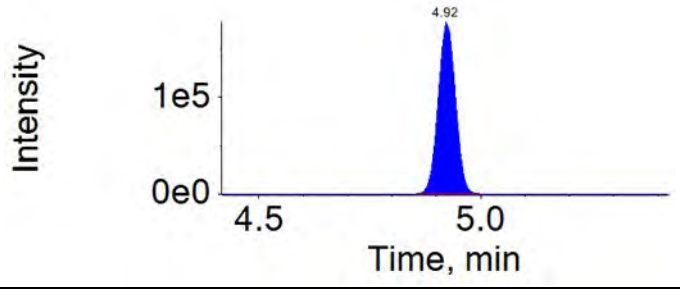
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

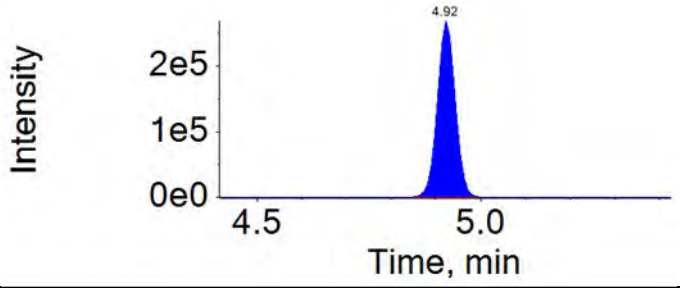
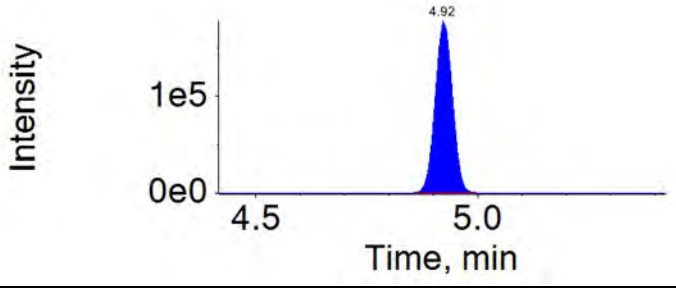


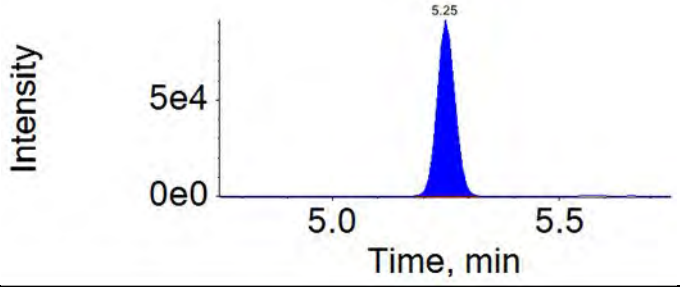
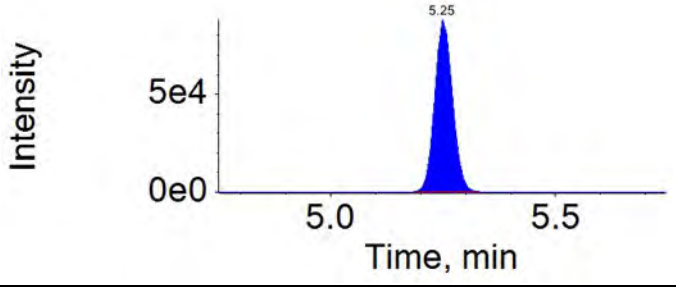


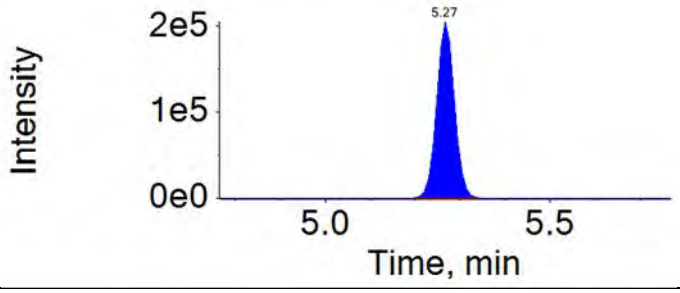
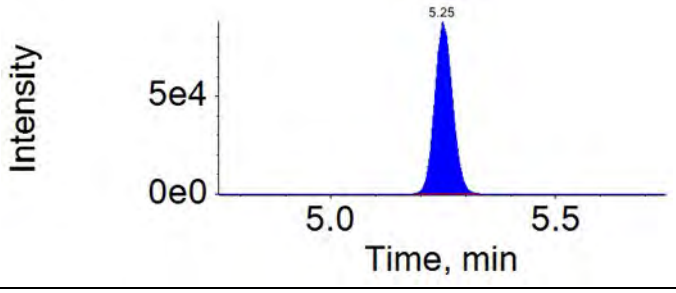
APPROVED
By MCD at 5:01 pm, 11/28/18

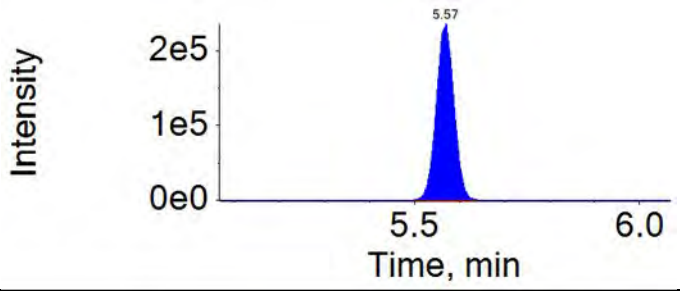
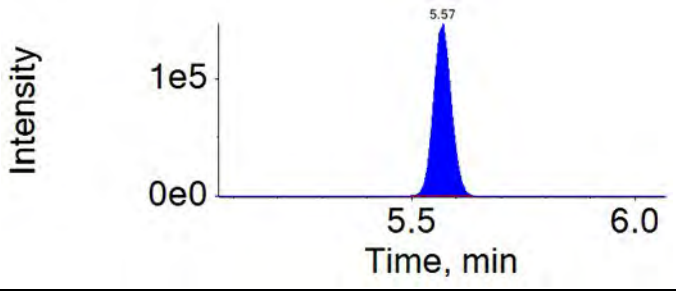
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

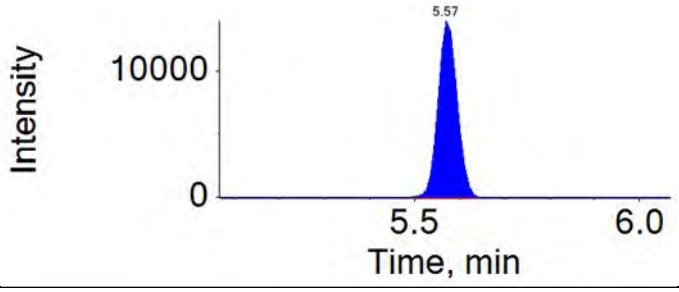
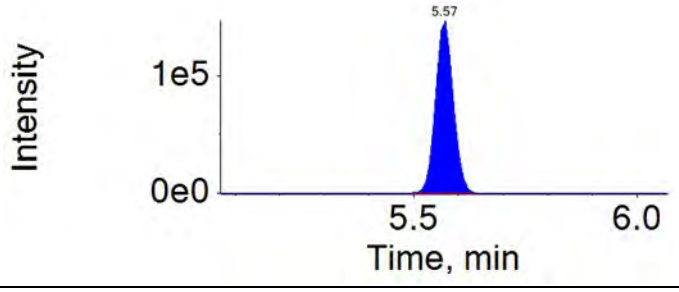
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

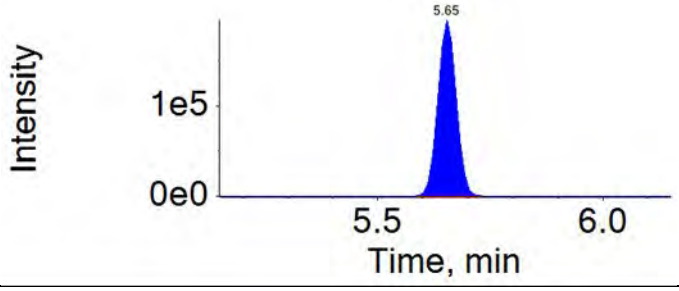
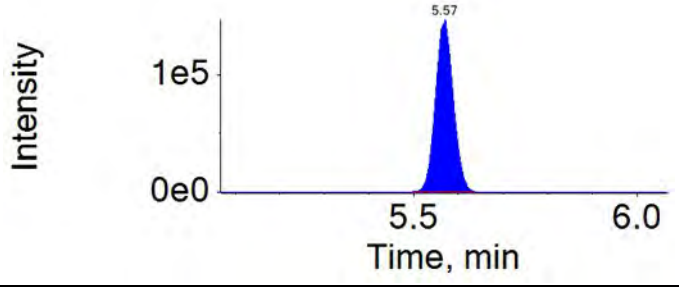
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

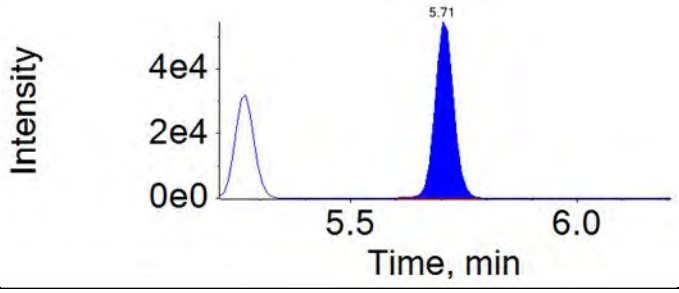
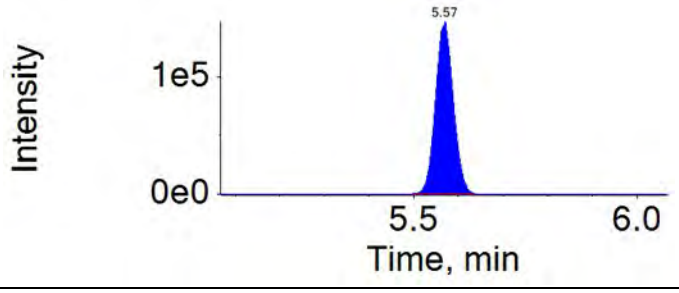
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

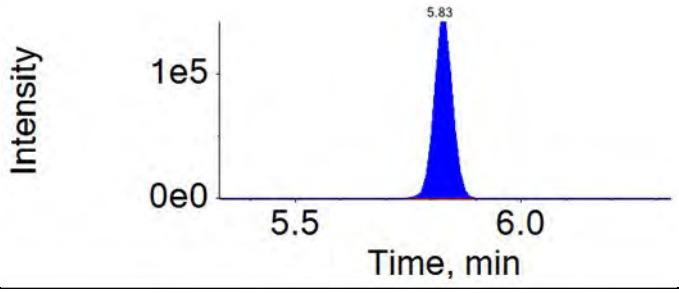
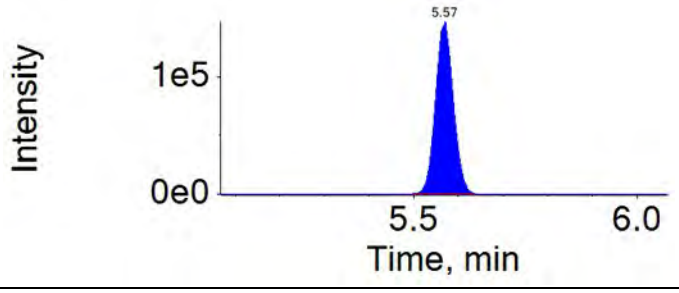
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

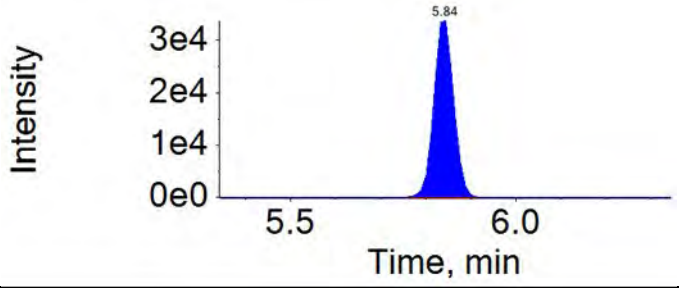
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

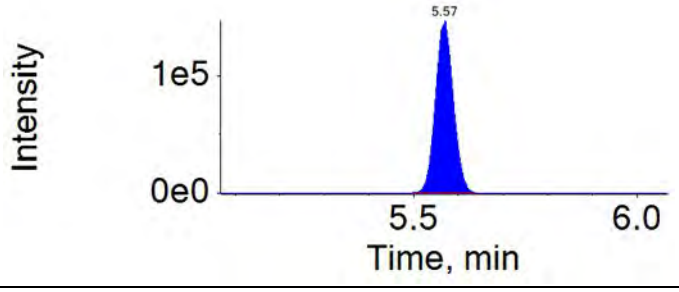
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

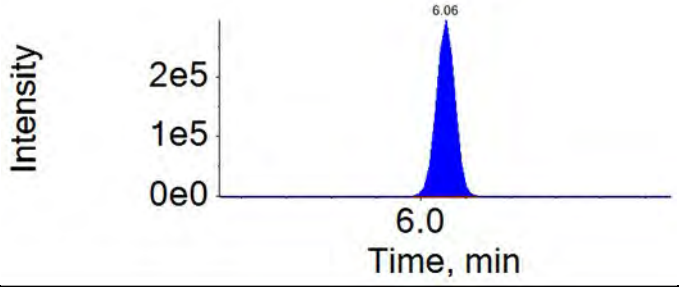
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

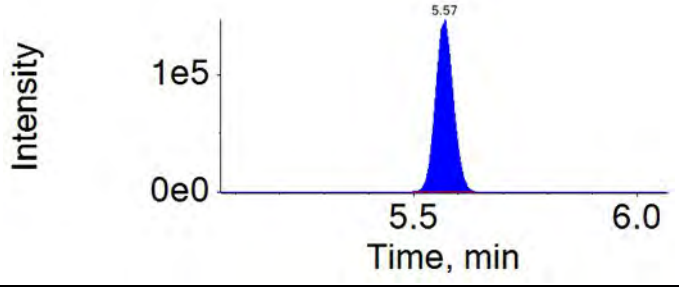
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



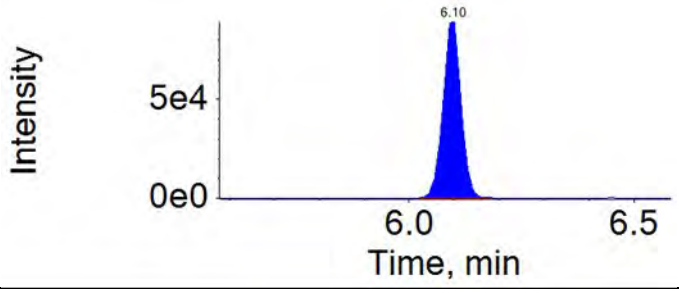


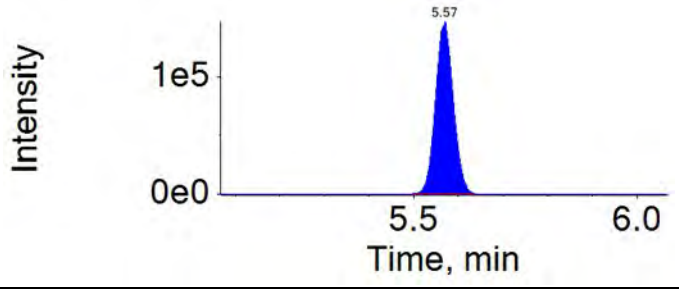
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



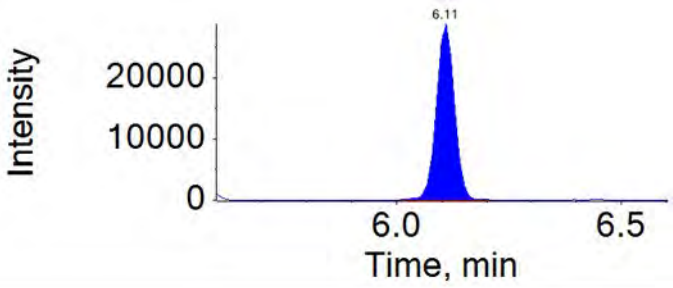


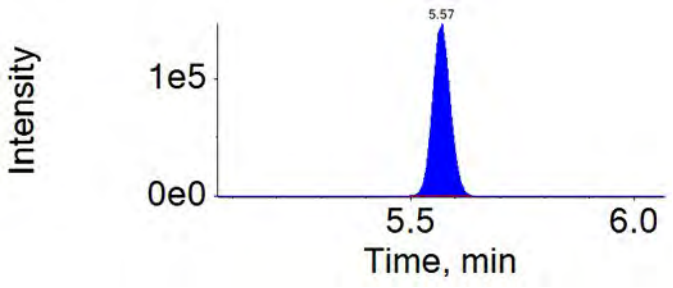
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



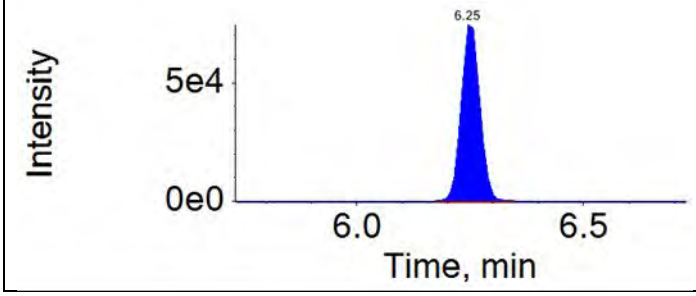


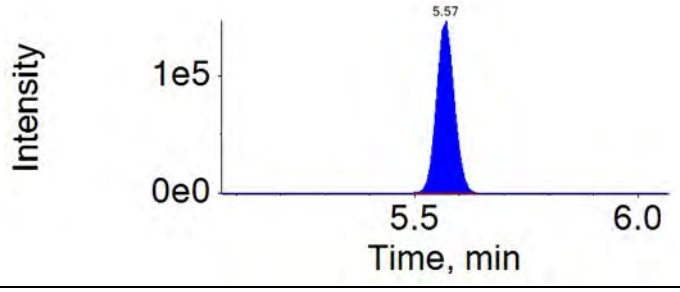
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

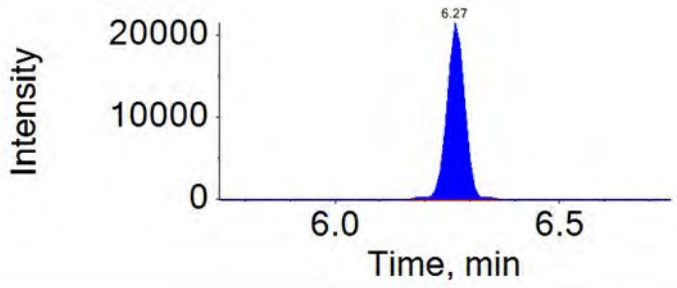
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

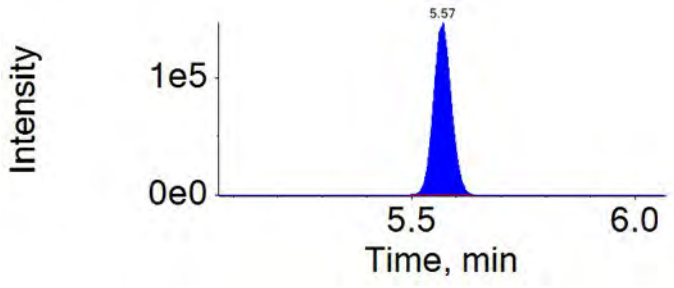
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



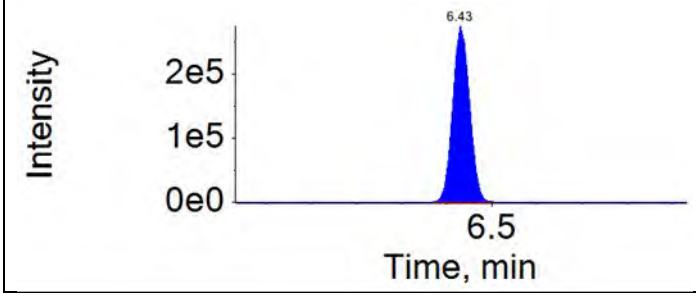


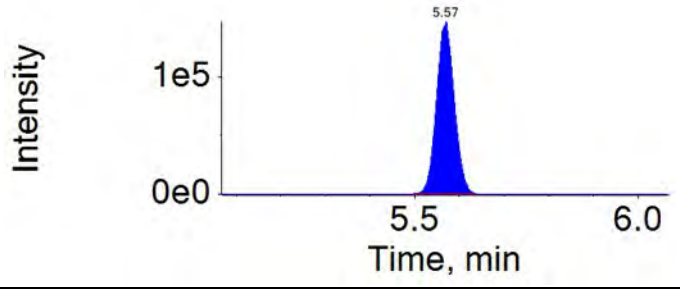
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



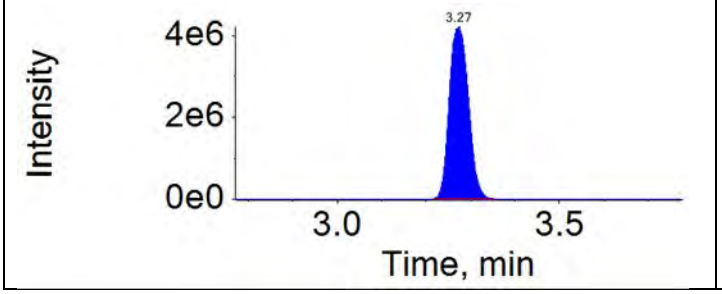


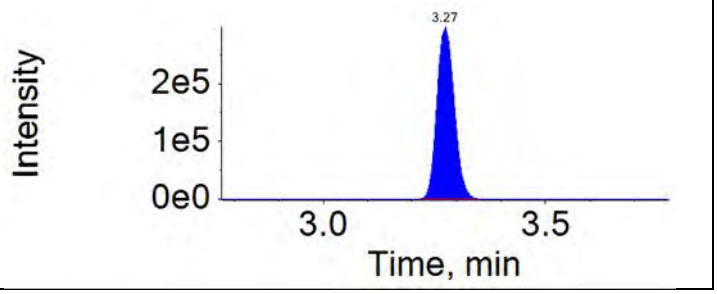
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

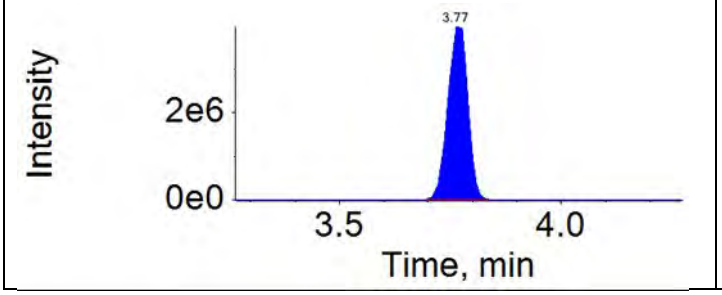
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

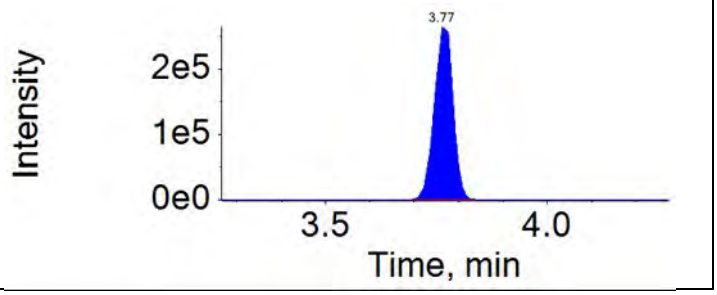
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



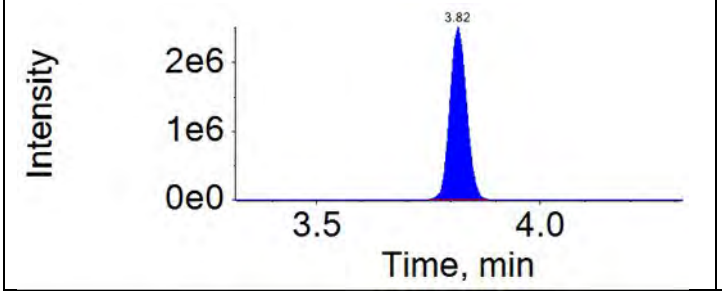


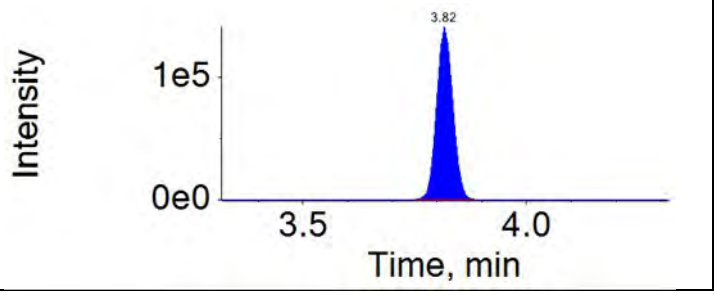
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



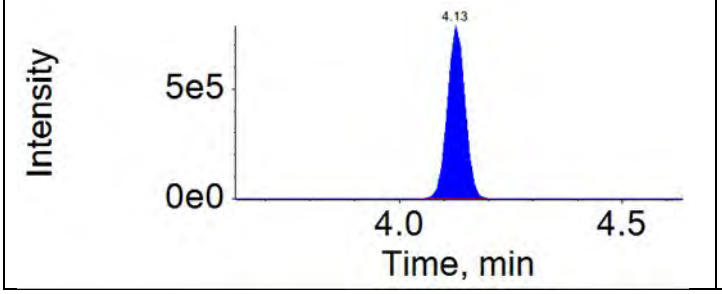


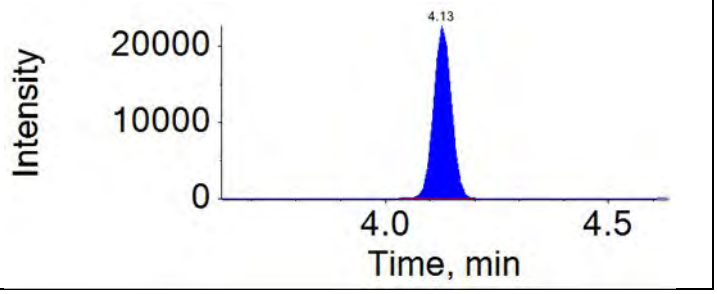
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



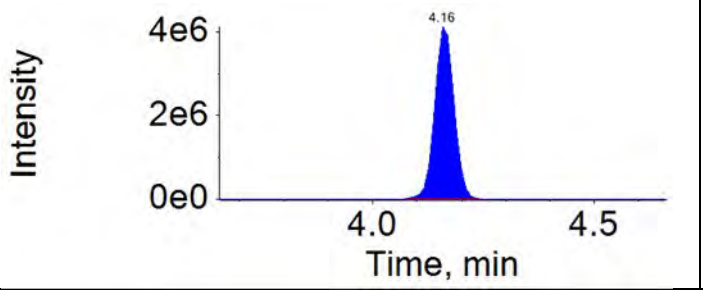


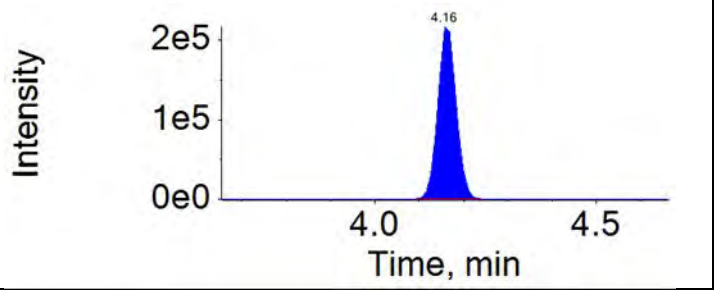
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

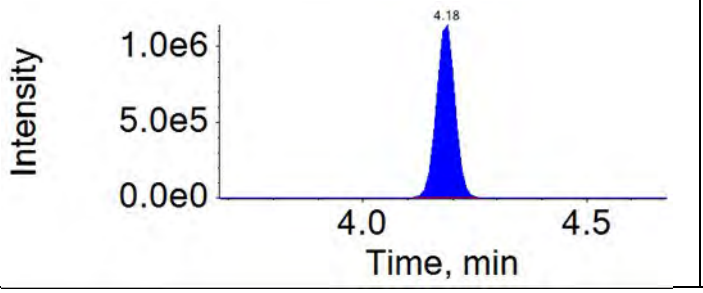
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

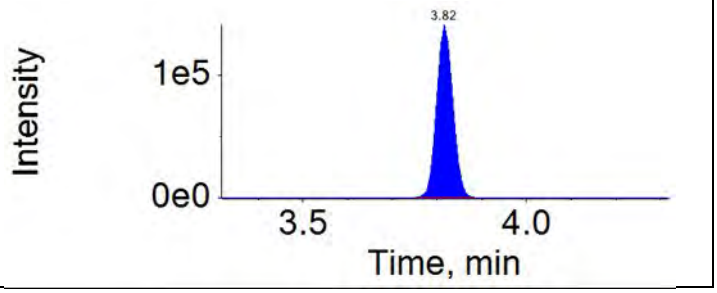
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



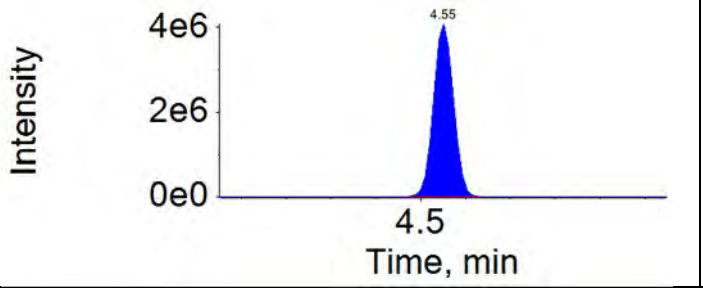


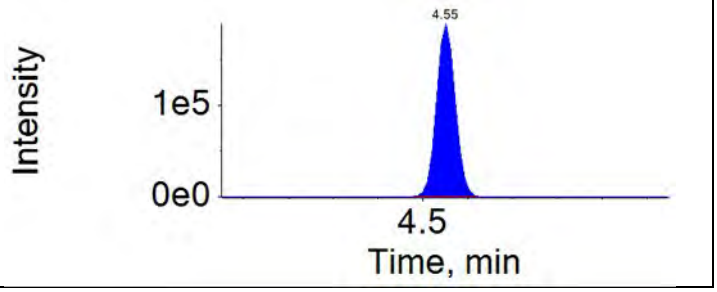
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



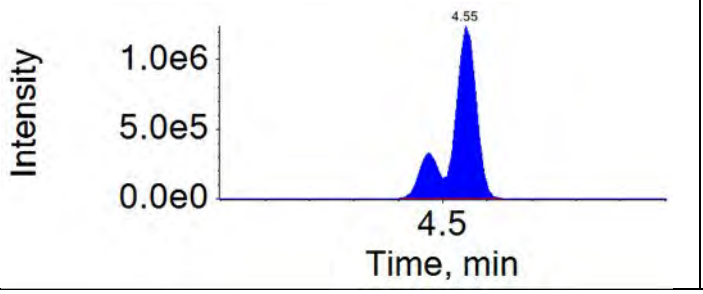


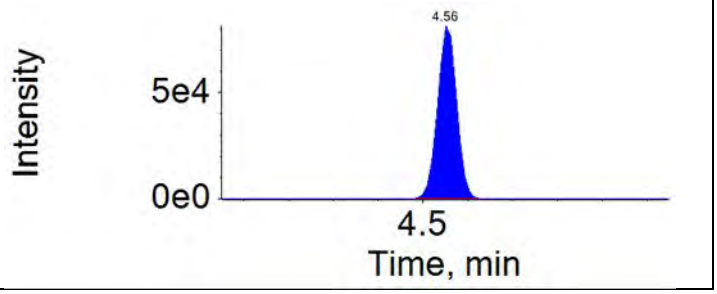
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

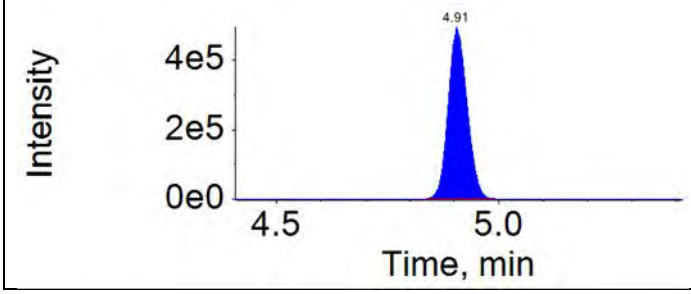
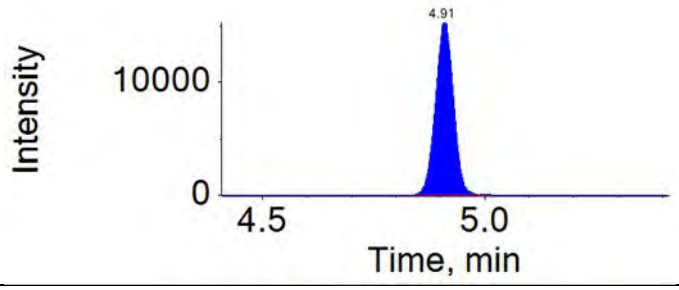


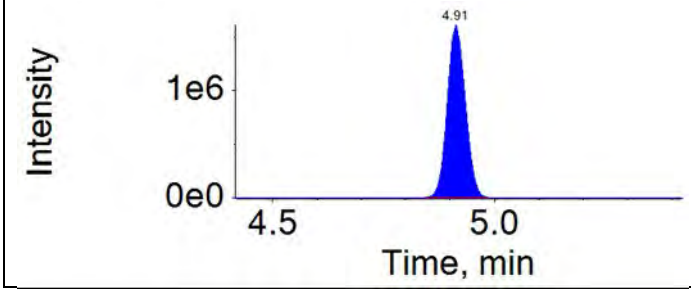
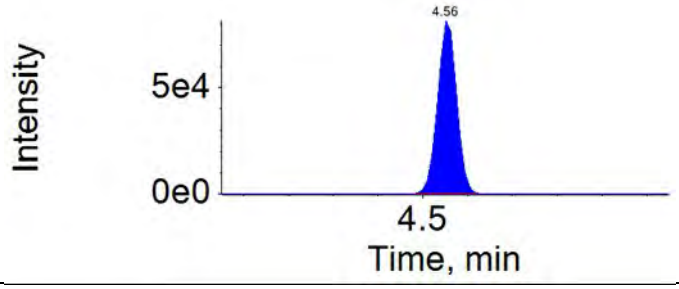


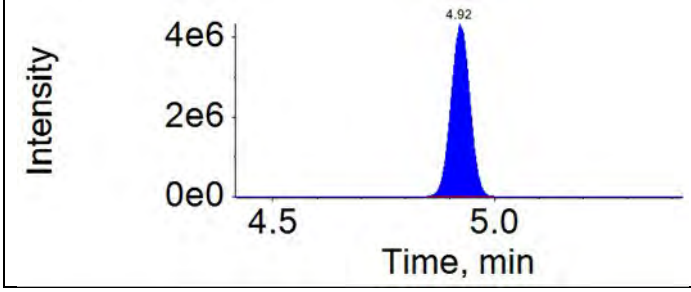
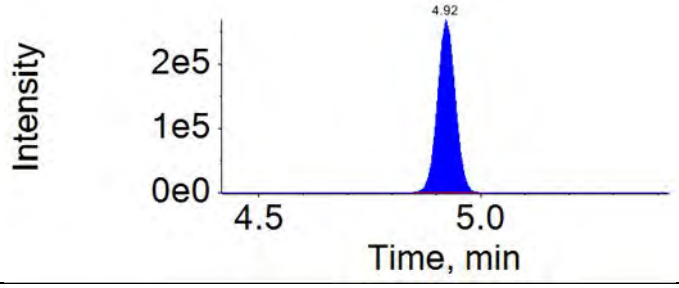
APPROVED
By MCD at 5:01 pm, 11/28/18

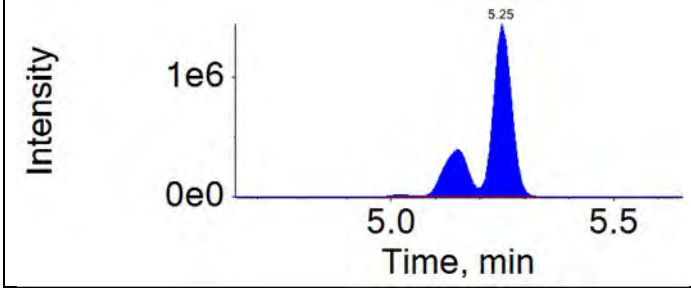
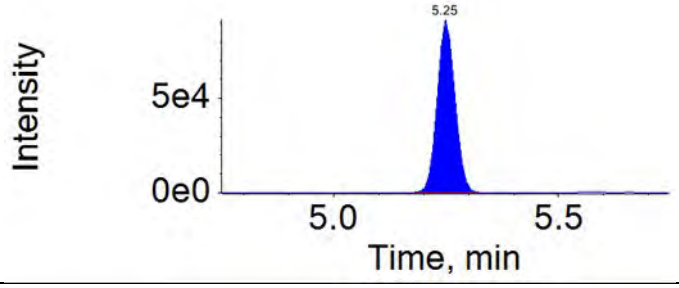
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

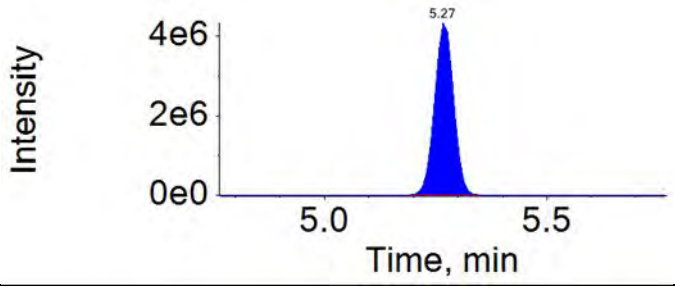
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

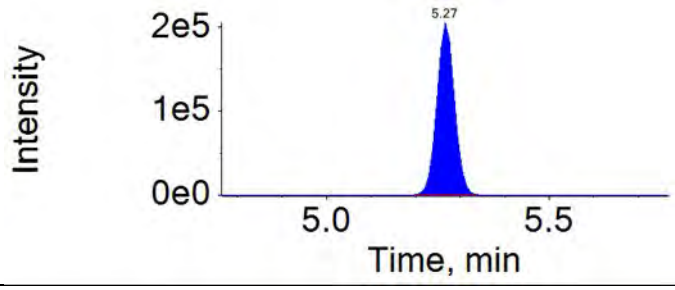
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

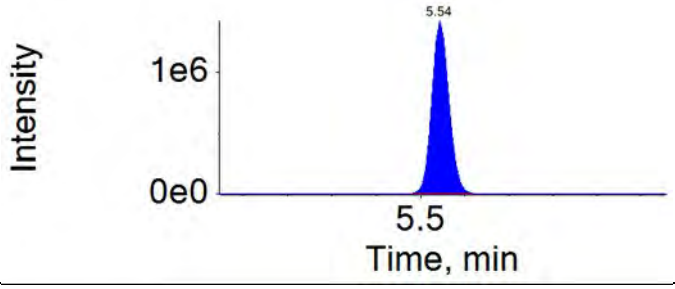
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

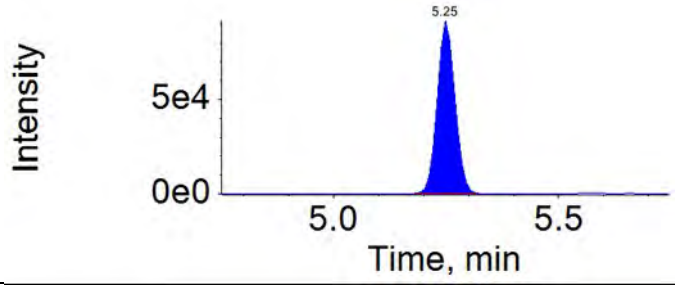
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



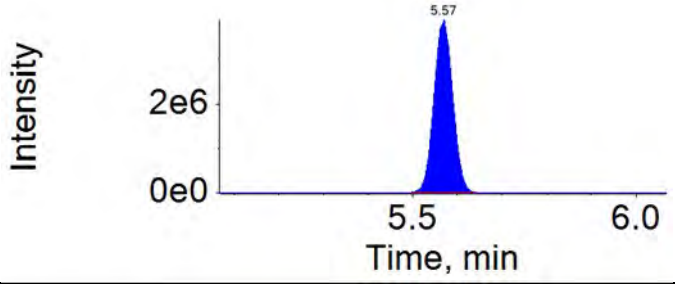


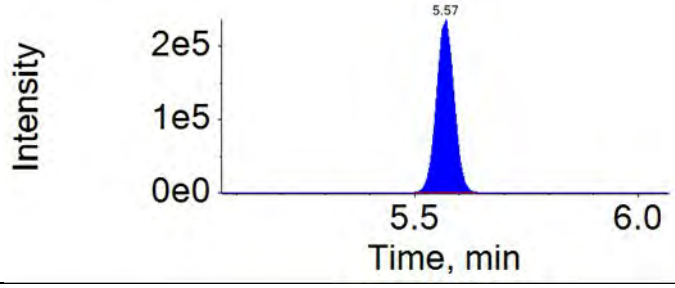
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



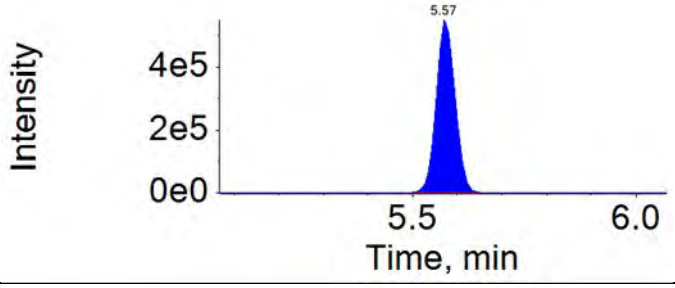


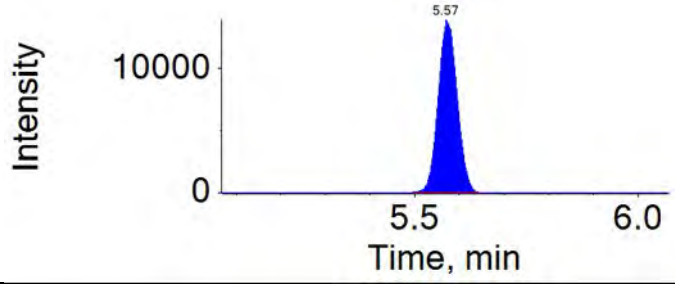
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



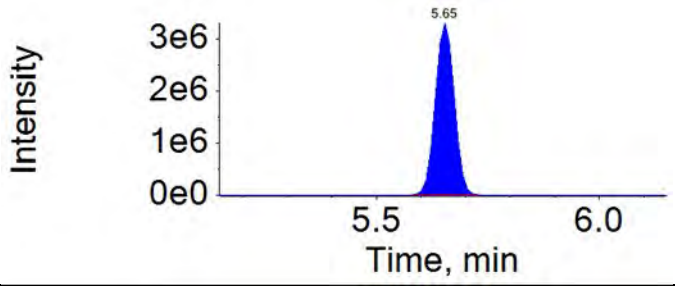


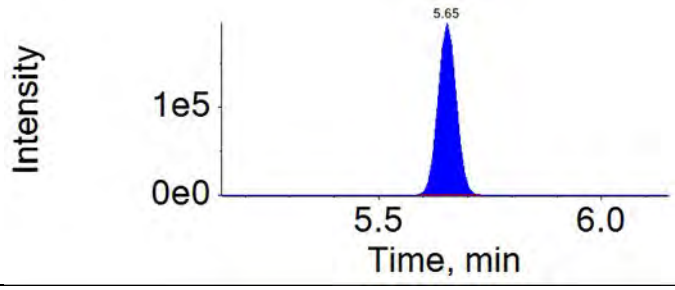
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

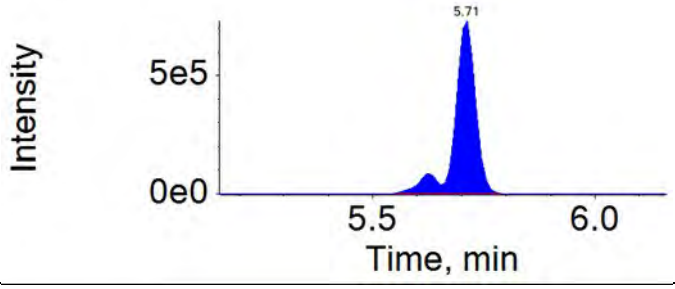
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

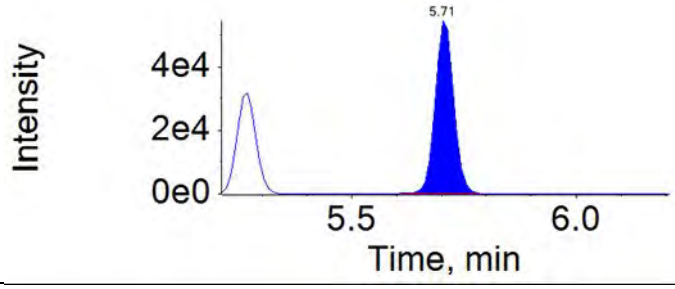
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



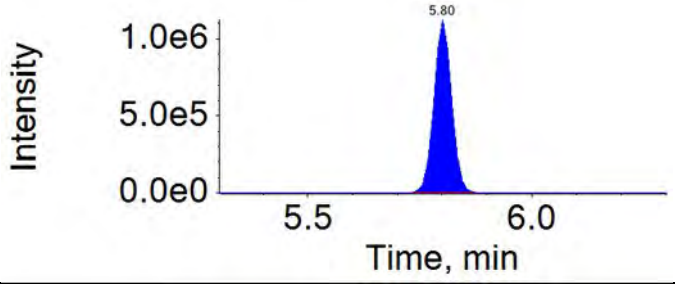


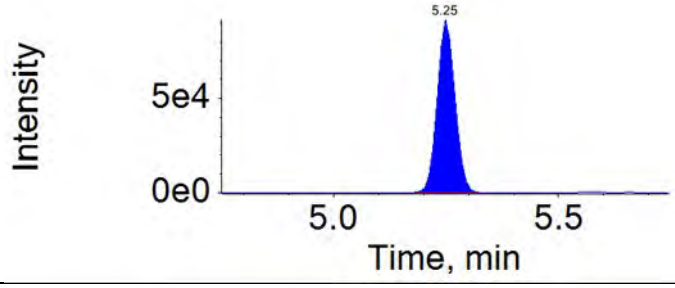
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



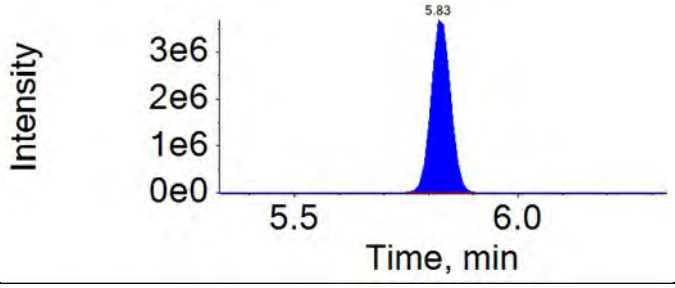


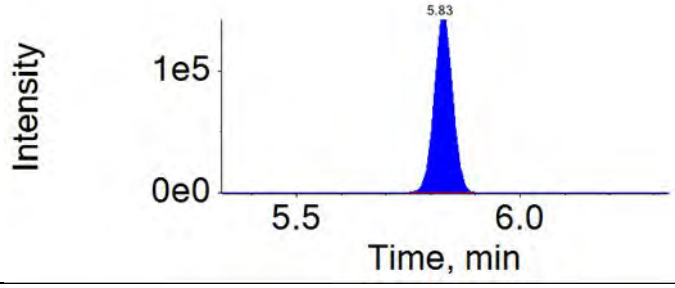
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



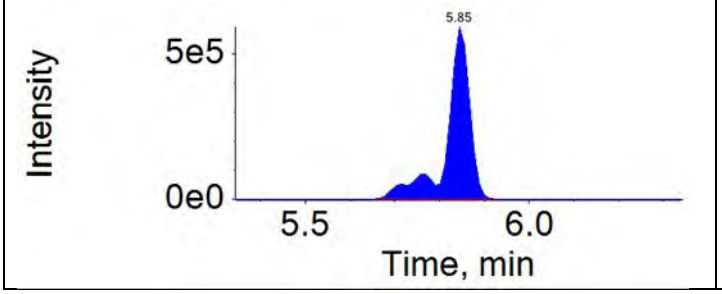


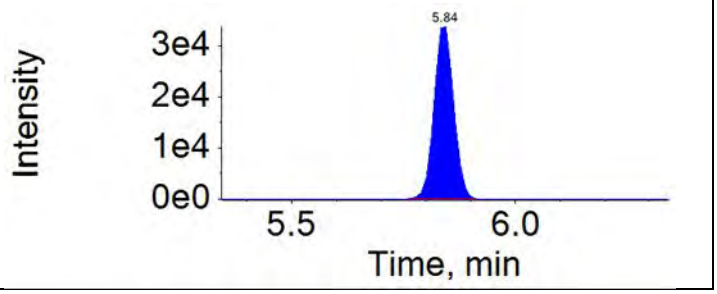
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

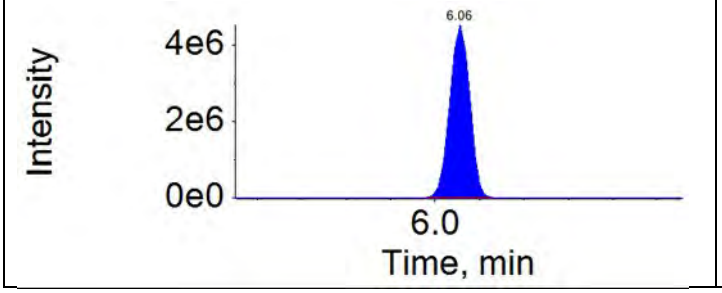
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

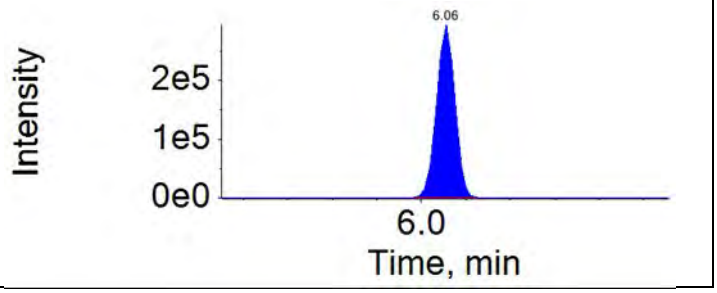
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



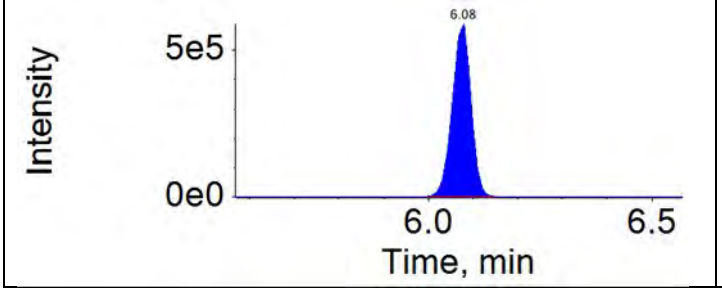


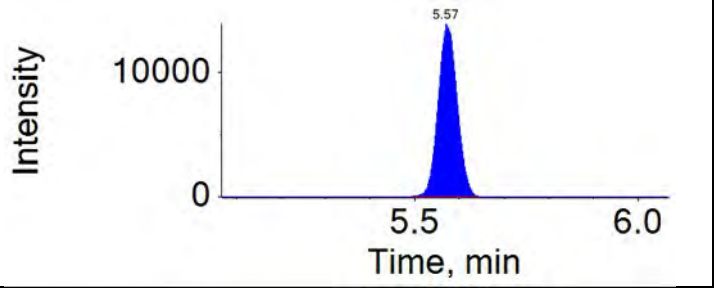
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



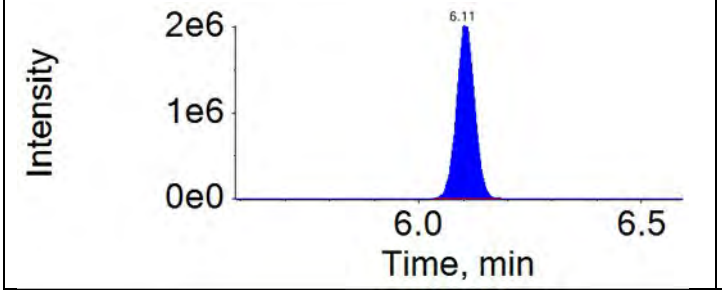


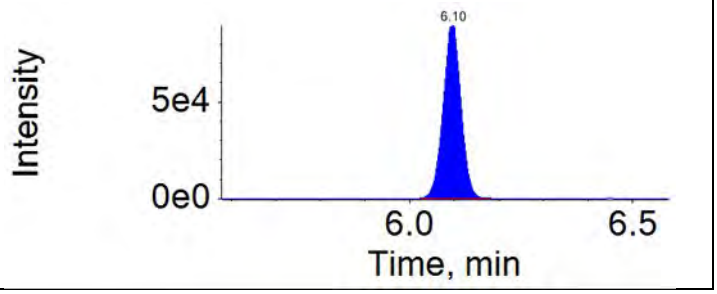
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



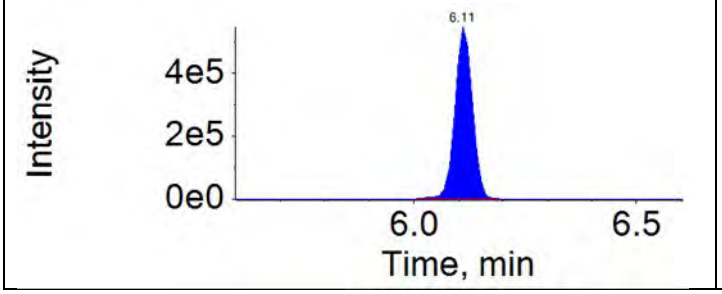


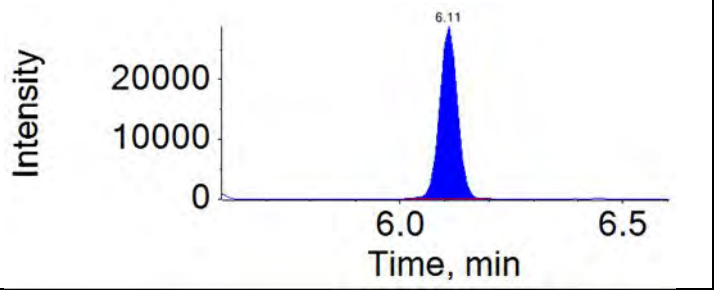
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

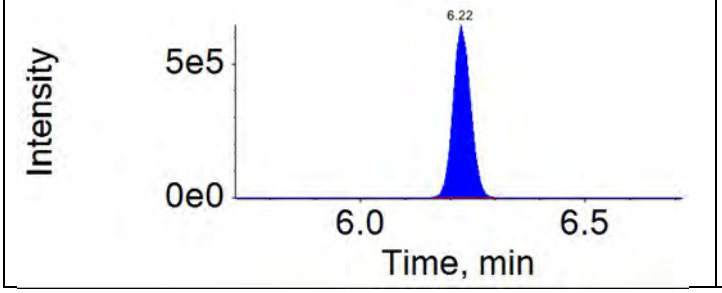
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

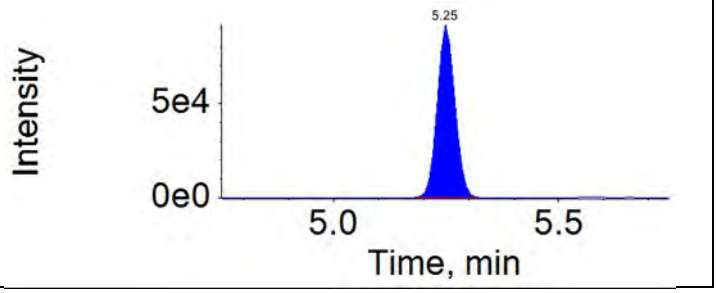
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



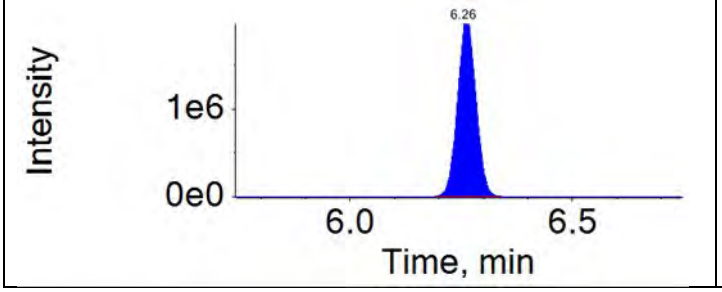


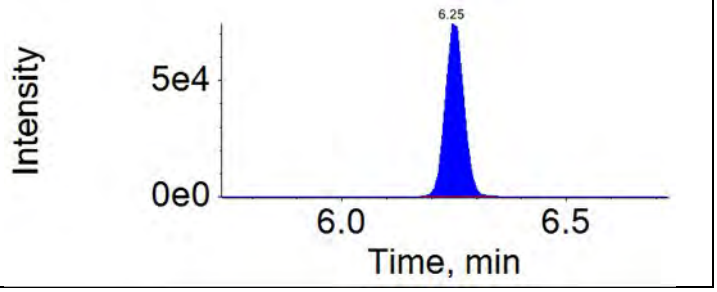
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



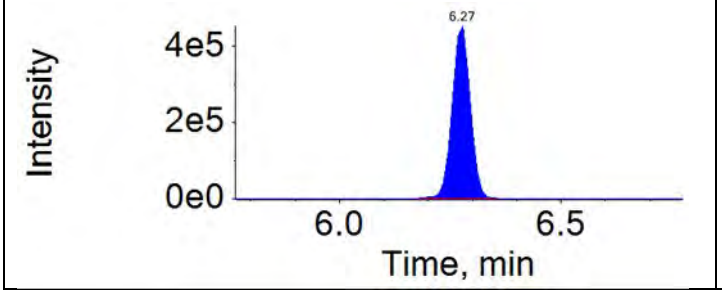


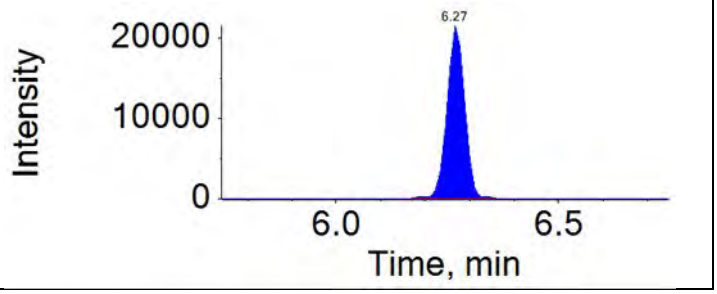
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



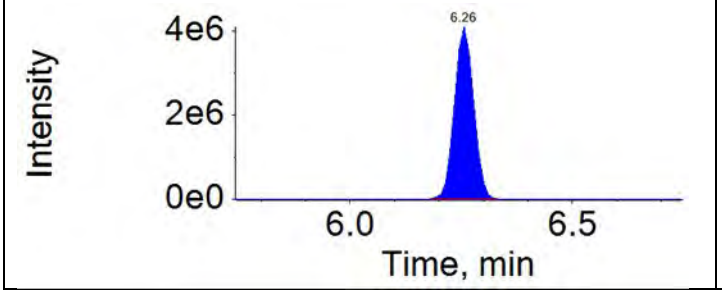


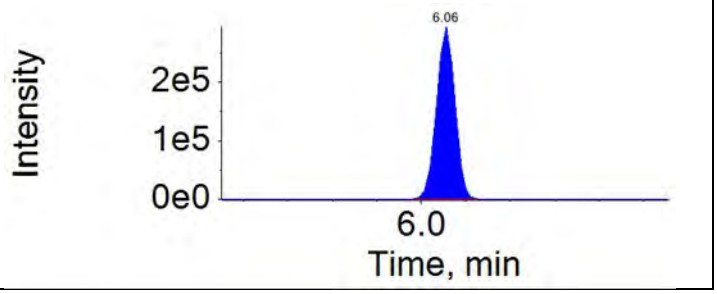
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

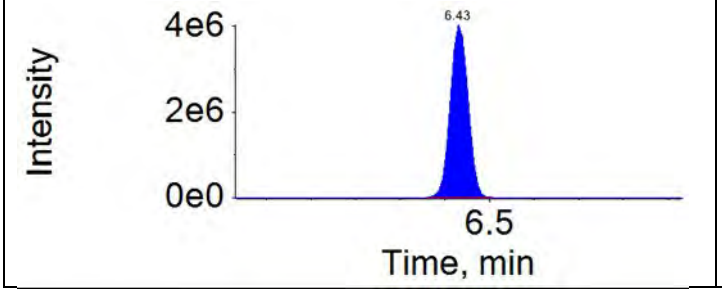
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

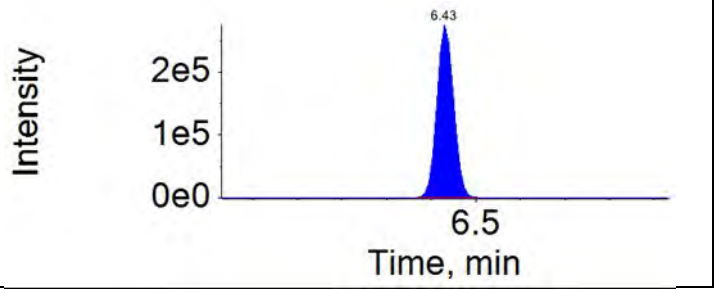
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



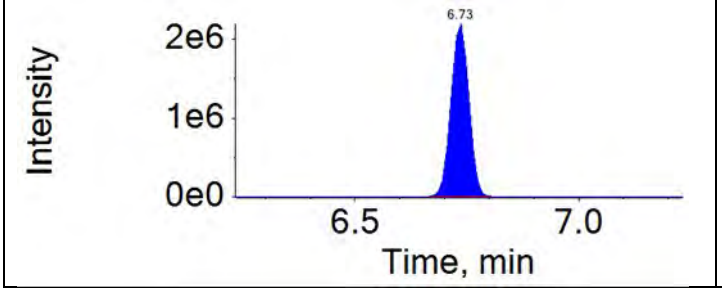


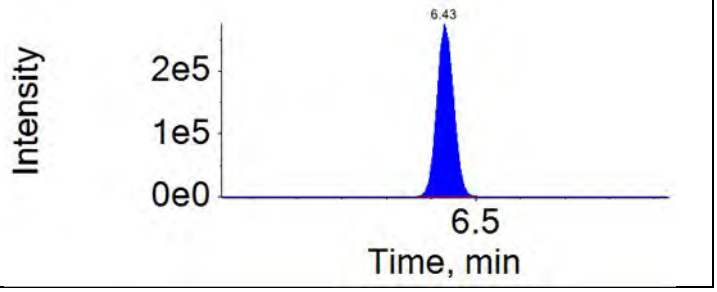
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



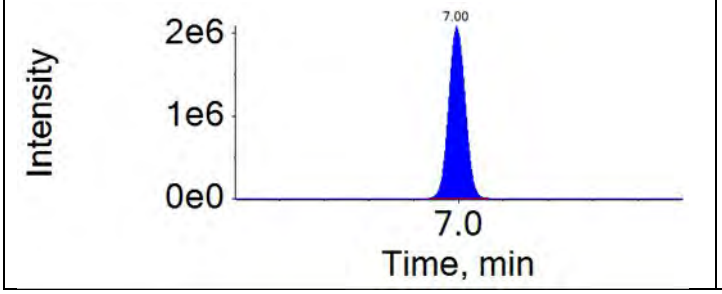


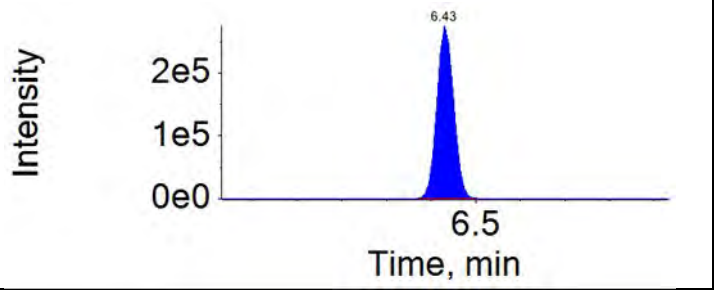
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



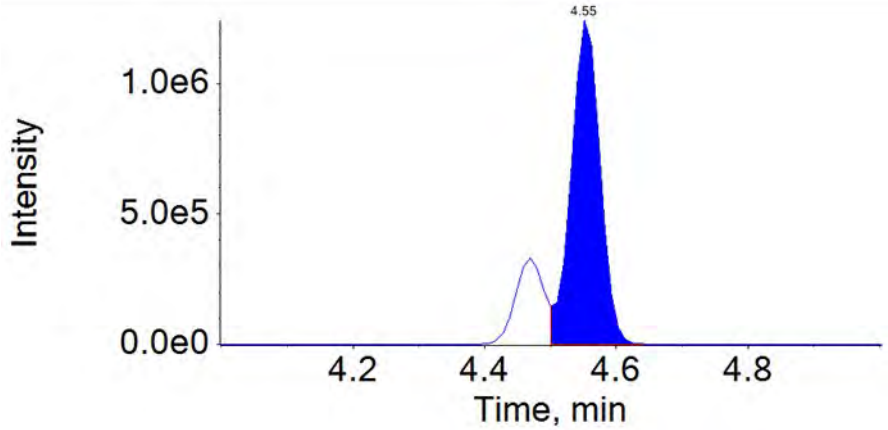


APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

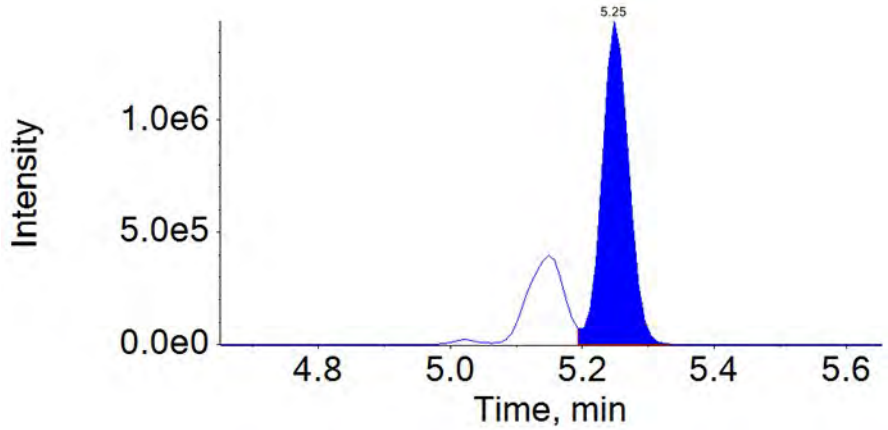
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
3819927.07
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-12.wiff
Sample Name:
CAL7



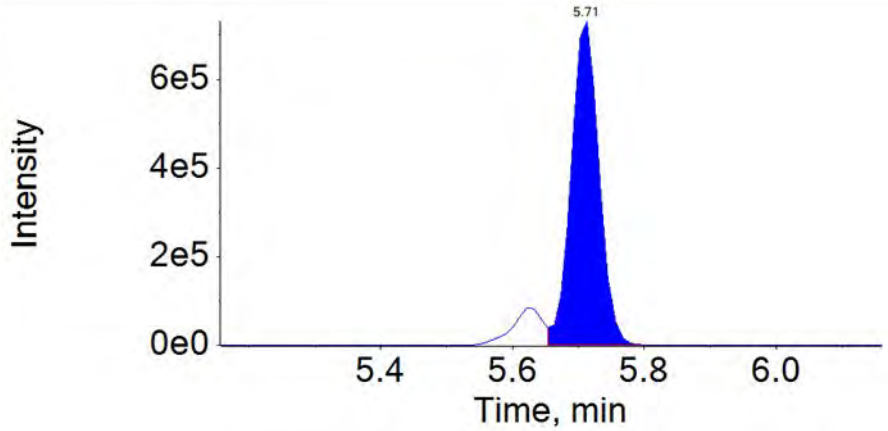
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
4044104.57
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-12.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.71
Peak Area:
2148433.90
Mass Range:
570.0 / 419.0
File Name:
18NOV28DCAL-12.wiff
Sample Name:
CAL7

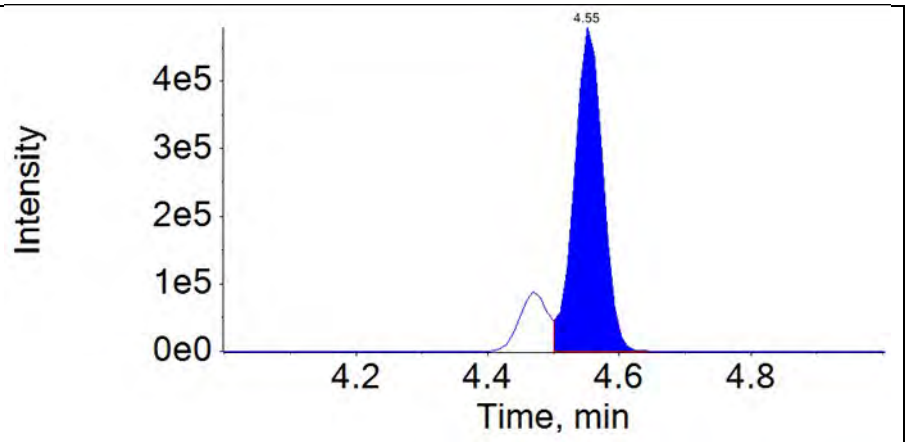


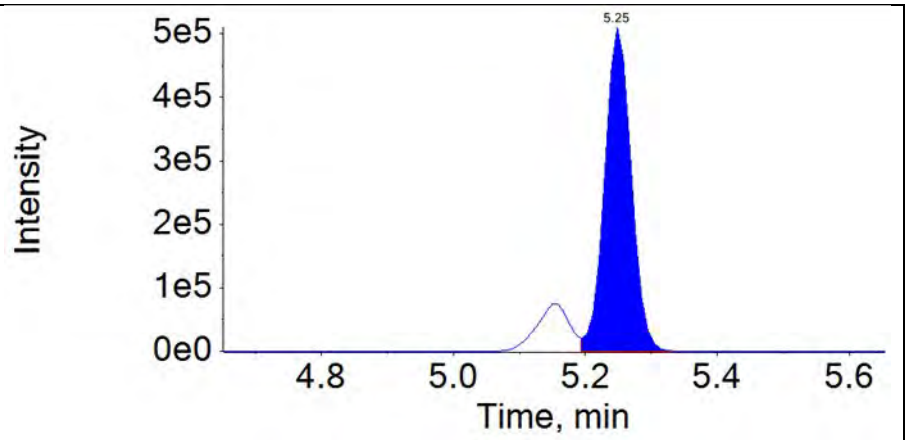
Integration Comment: incorrect integration

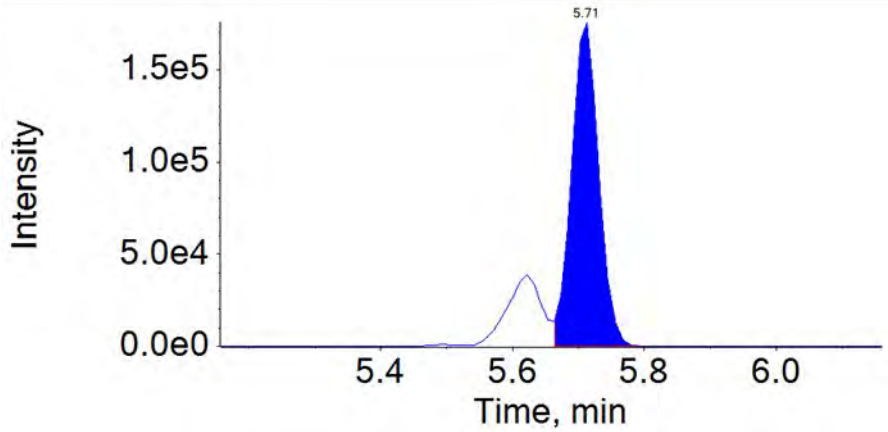
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHxS_2 **RT (min.):** 4.55 **Peak Area:** 1444685.25 **Mass Range:** 399.0 / 99.0 **File Name:** 18NOV28DCAL-12.wiff **Sample Name:** CAL7	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.25 **Peak Area:** 1428771.10 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV28DCAL-12.wiff **Sample Name:** CAL7	 **Integration Comment:** incorrect integration

Component Name: NMeFOSAA_2 **RT (min.):** 5.71 **Peak Area:** 503982.25 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV28DCAL-12.wiff **Sample Name:** CAL7	 **Integration Comment:** incorrect integration

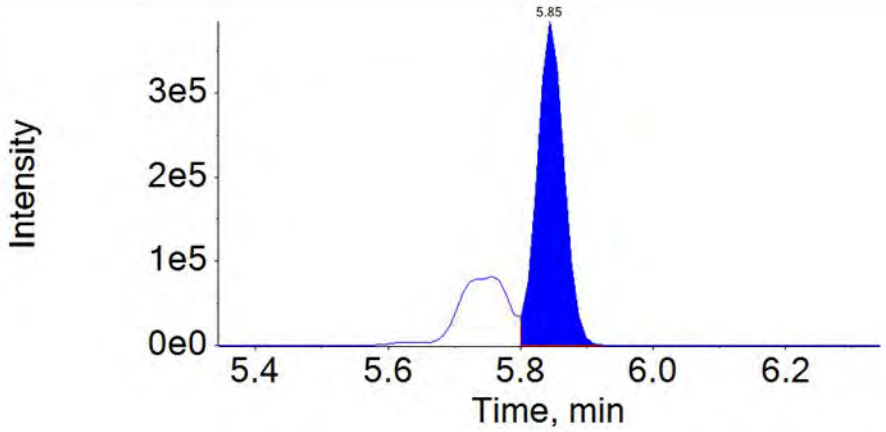
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA_2
RT (min.):
5.85
Peak Area:
1078966.66
Mass Range:
584.0 / 526.0
File Name:
18NOV28DCAL-12.wiff
Sample Name:
CAL7



Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Ion Ratio Report

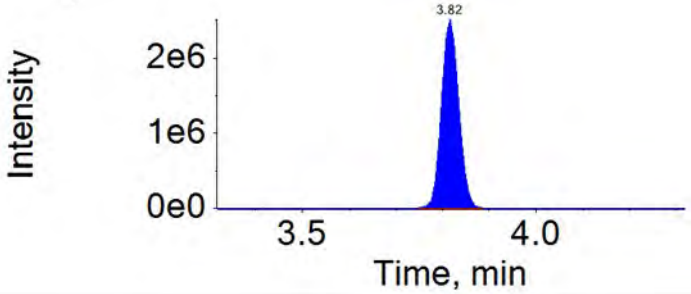
Sample Name: CAL7 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-12.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	6468971.36	A	0.3655	0.3712			
PFBS_2	3.82	1.00	2401069.30	A	0.3655	0.3712	2	50	
4:2-FTS	4.13	1.00	2126148.19	A	0.6383	0.6227			
4:2-FTS_2	4.13	1.00	1323869.93	A	0.6383	0.6227	-2	50	
PFHxA	4.16	1.00	12530842.98	A	0.0103	0.0129			
PFHxA_2	4.16	1.00	161470.85	A	0.0103	0.0129	25	50	
PFPeS	4.18	1.10	3295381.64	A	0.4976	0.5155			
PFPeS_2	4.18	1.10	1698903.95	A	0.4976	0.5155	4	50	
PFHpA	4.55	1.00	12619701.65	A	0.0557	0.0605			
PFHpA_2	4.55	1.00	763765.05	A	0.0557	0.0605	9	50	
PFHxS	4.55	1.00	4797026.75	M	0.3693	0.3544			
PFHxS_2	4.55	1.00	1700170.72	M	0.3693	0.3544	-4	50	
6:2-FTS	4.91	1.00	1464447.02	A	0.6625	0.6198			
6:2-FTS_2	4.91	1.00	907687.80	A	0.6625	0.6198	-6	50	
PFHpS	4.91	1.08	4562639.61	A	0.3915	0.4054			
PFHpS_2	4.91	1.08	1849493.91	A	0.3915	0.4054	4	50	
PFOA	4.92	1.00	12900182.71	A	0.0573	0.0647			
PFOA_2	4.92	1.00	835020.05	A	0.0573	0.0647	13	50	
PFOS	5.25	1.00	5620328.96	M	0.2960	0.3007			
PFOS_2	5.25	1.00	1690188.73	M	0.2960	0.3007	2	50	
PFNA	5.27	1.00	12939629.11	A	0.0201	0.0225			
PFNA_2	5.27	1.00	291130.29	A	0.0201	0.0225	12	50	
PFNS	5.54	1.06	3804945.18	A	0.4794	0.4635			
PFNS_2	5.54	1.06	1763659.34	A	0.4794	0.4635	-3	50	
PFDA	5.57	1.00	11371046.97	A	0.0075	0.0075			
PFDA_2	5.57	1.00	85605.85	A	0.0075	0.0075	1	50	
8:2-FTS	5.57	1.00	1620286.00	A	0.5380	0.5778			
8:2-FTS_2	5.57	1.00	936181.88	A	0.5380	0.5778	7	50	
NMeFOSAA	5.71	1.00	2414874.82	M	0.2305	0.2675			
NMeFOSAA_2	5.71	1.00	645922.89	M	0.2305	0.2675	16	50	
PFDS	5.80	1.11	3061543.49	A	0.5356	0.4828			
PFDS_2	5.80	1.11	1477981.79	A	0.5356	0.4828	-10	50	
PFUnDA	5.83	1.00	11254483.78	A	0.0038	0.0041			
PFUnDA_2	5.83	1.00	46090.29	A	0.0038	0.0041	8	50	
NEtFOSAA	5.85	1.00	2127663.38	A	0.7356	0.7070			
NEtFOSAA_2	5.85	1.00	1504160.93	M	0.7356	0.7070	-4	50	
PFDoDA	6.06	1.00	14195839.12	A	0.0130	0.0161			
PFDoDA_2	6.05	1.00	228700.97	A	0.0130	0.0161	24	50	
10:2-FTS	6.08	1.09	1718827.31	A	0.6989	0.7147			
10:2-FTS_2	6.08	1.09	1228426.74	A	0.6989	0.7147	2	50	
PFTrDA	6.26	1.03	12329126.07	A	0.0090	0.0102			
PFTrDA_2	6.26	1.03	125163.76	A	0.0090	0.0102	13	50	
PFTeDA	6.43	1.00	11258874.06	A	0.0056	0.0072			
PFTeDA_2	6.43	1.00	81360.66	A	0.0056	0.0072	29	50	
PFHxDA	6.73	1.05	6113985.15	A	0.0646	0.0666			
PFHxDA_2	6.73	1.05	406918.04	A	0.0646	0.0666	3	50	
PFODA	7.00	1.09	5309889.90	A	0.0264	0.0282			
PFODA_2	6.99	1.09	149760.81	A	0.0264	0.0282	7	50	

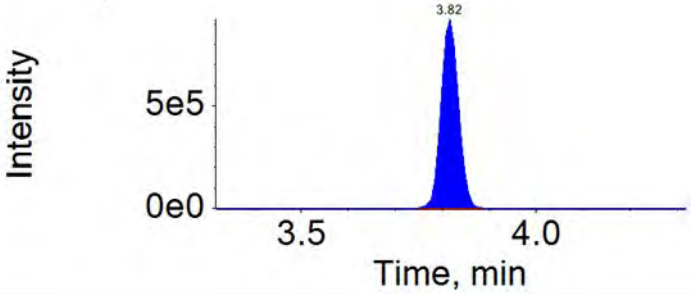
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

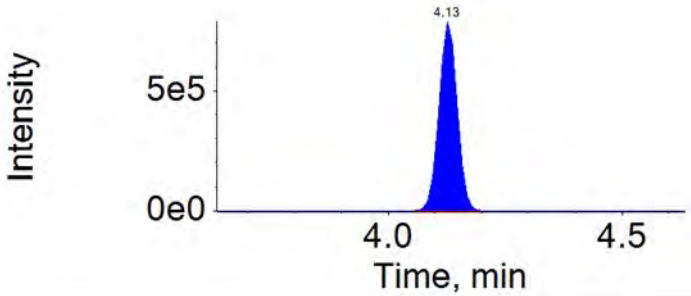
Component: PFBS
Primary Mass: 299.0 / 80.0



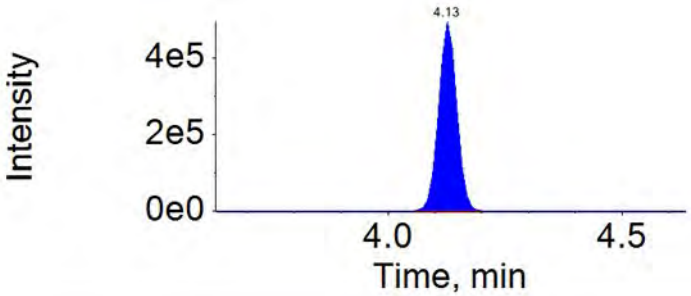
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



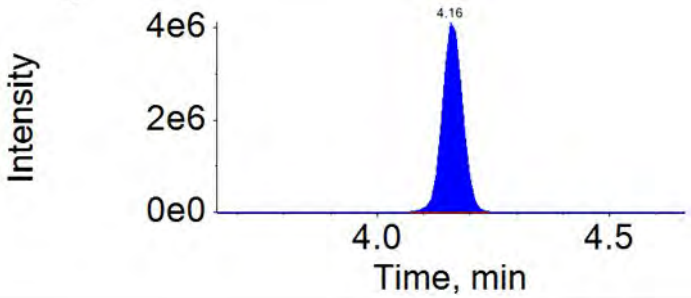
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



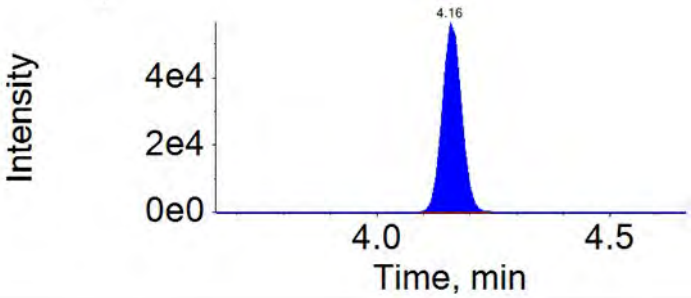
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



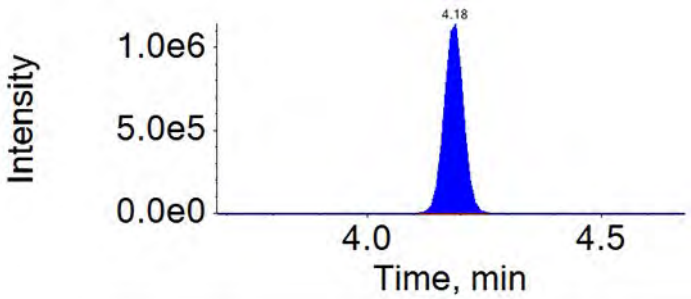
Component: PFHxA
Primary Mass: 313.0 / 269.0



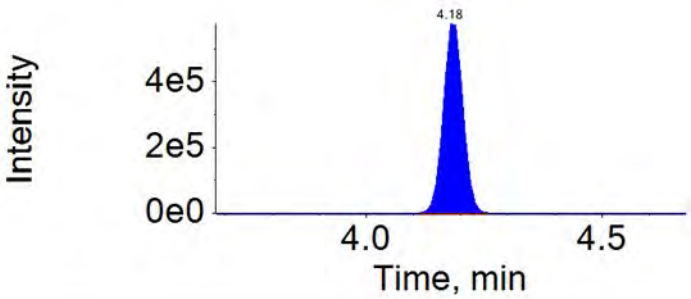
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
By MCD at 5:01 pm, 11/28/18

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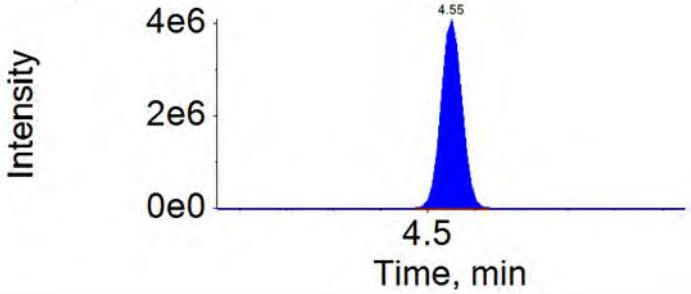
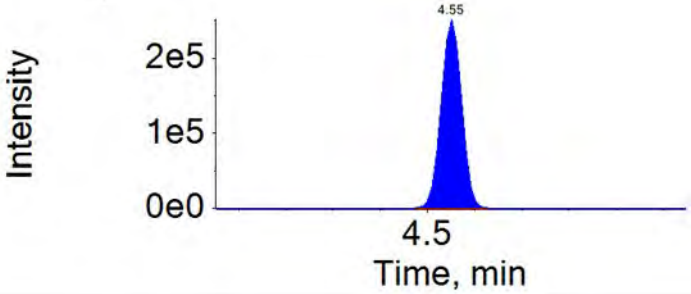
By HMK at 12:22 pm, 11/29/18

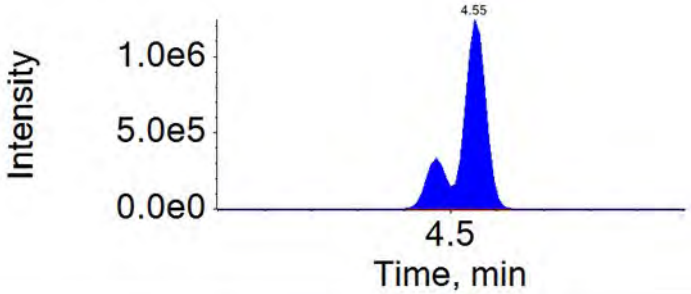
Component: PFHpA
Primary Mass: 363.0 / 319.0



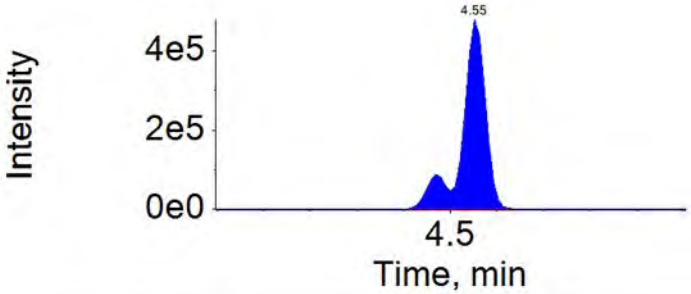
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



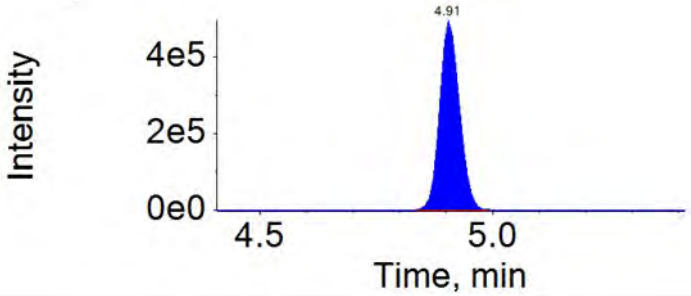
Component: PFHxS
Primary Mass: 399.0 / 80.0



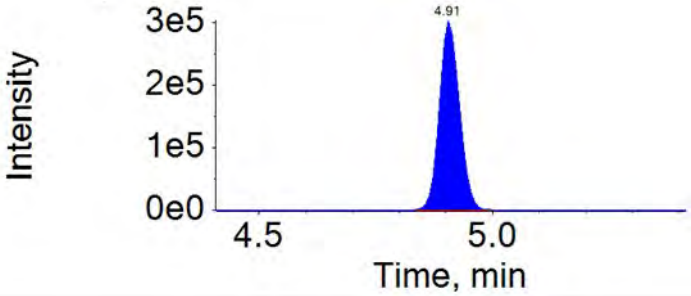
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



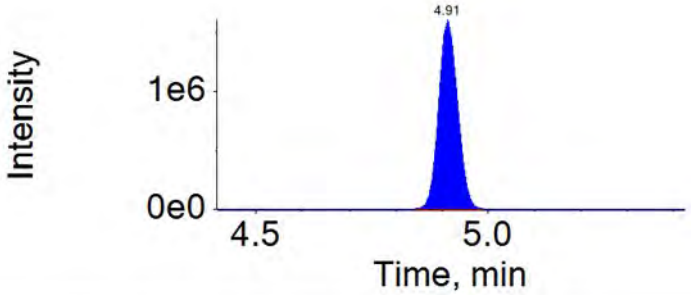
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



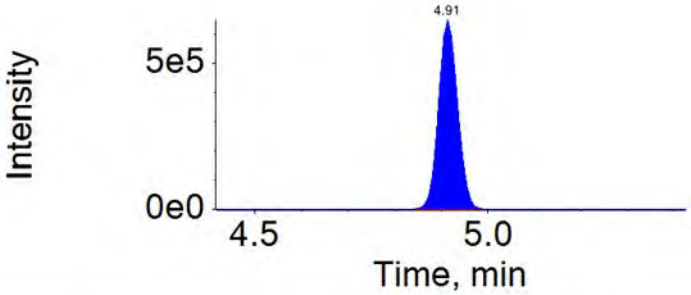
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



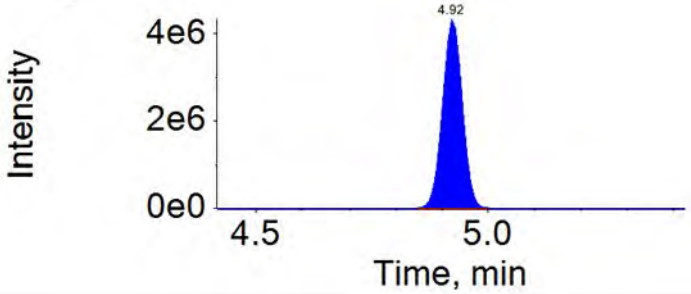
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



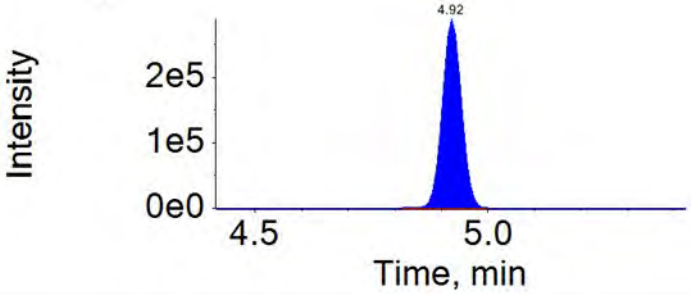
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

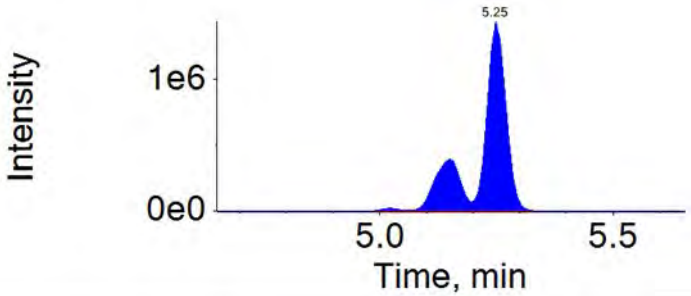
Component: PFOA
Primary Mass: 413.0 / 369.0



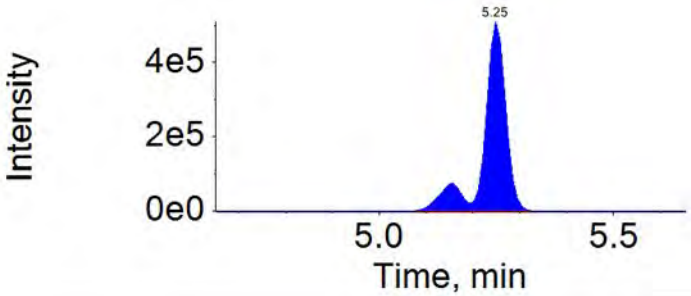
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



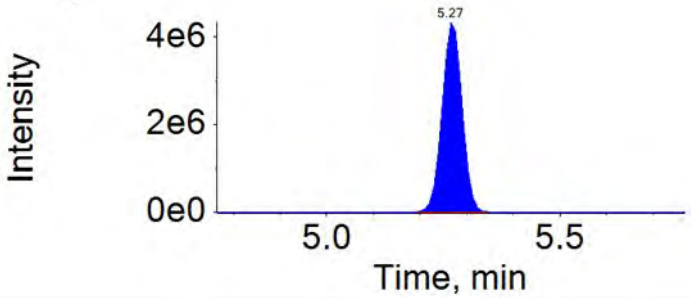
Component: PFOS
Primary Mass: 499.0 / 80.0



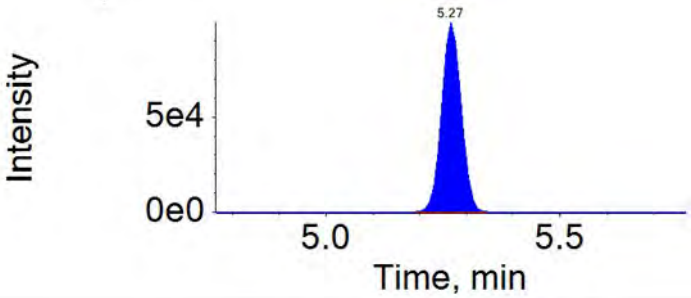
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



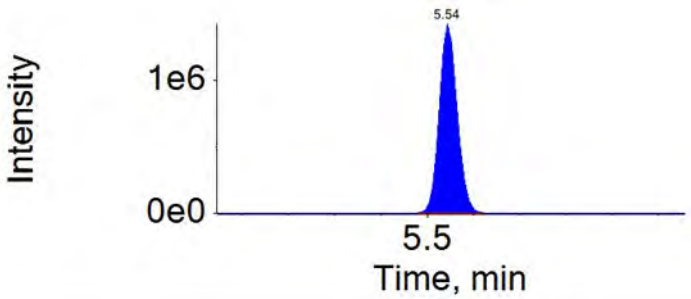
Component: PFNA
Primary Mass: 463.0 / 419.0



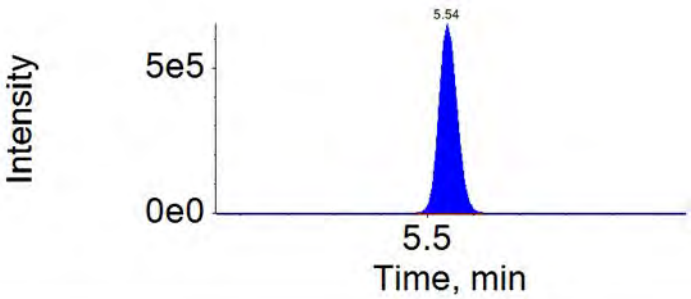
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



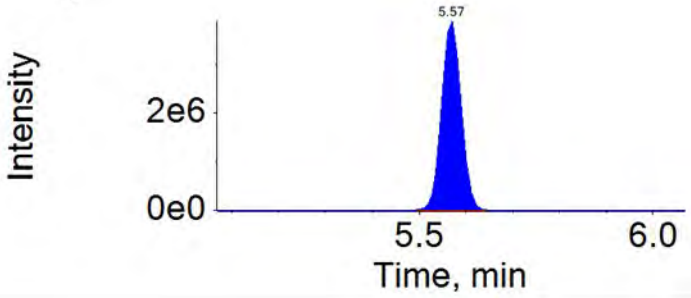
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



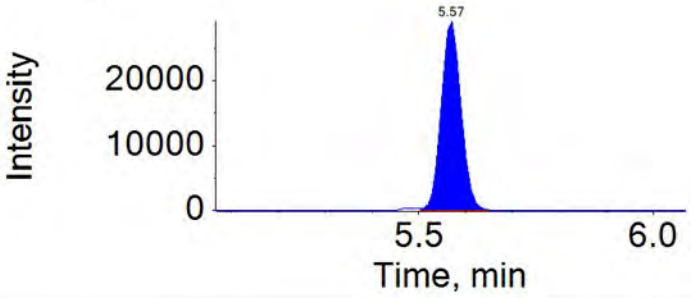
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

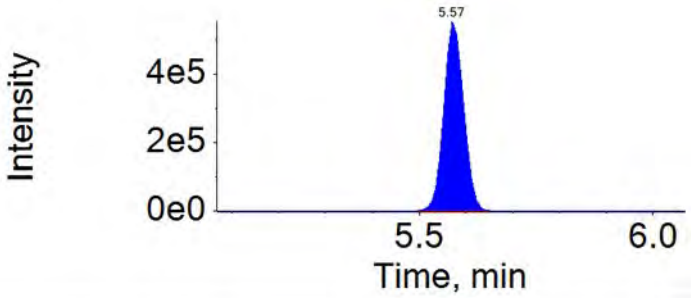
Component: PFDA
Primary Mass: 513.0 / 469.0



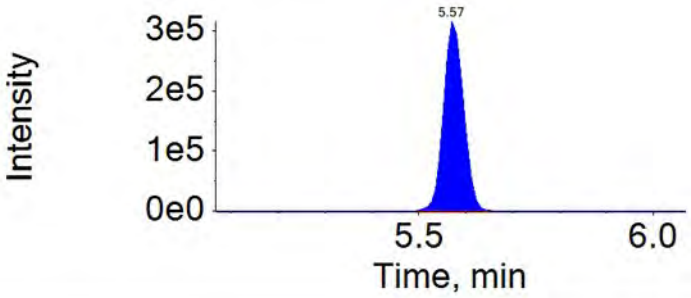
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



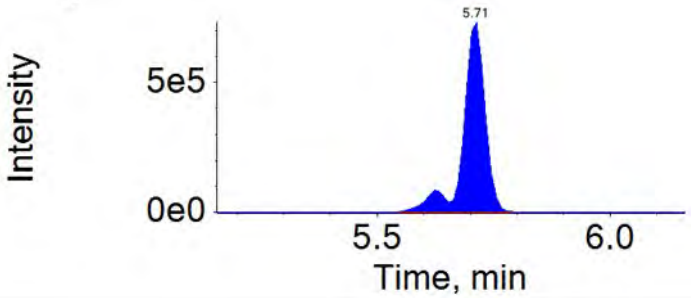
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



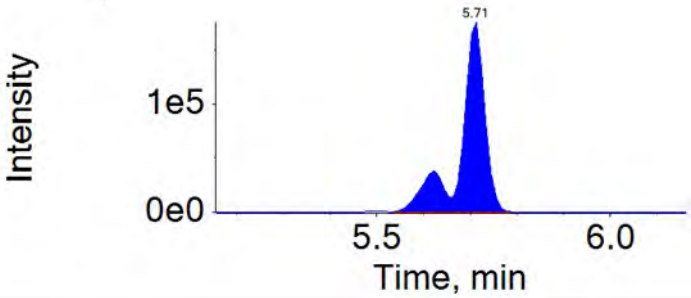
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



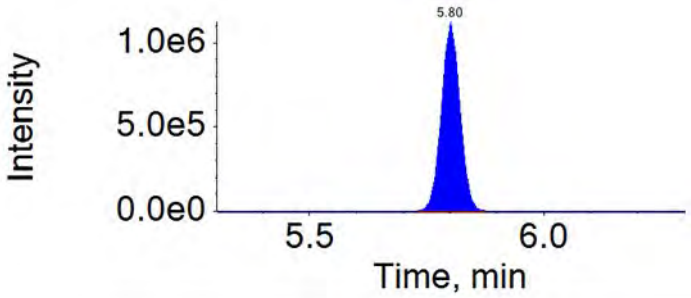
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



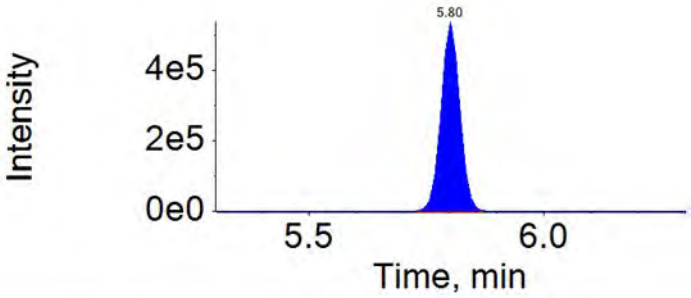
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



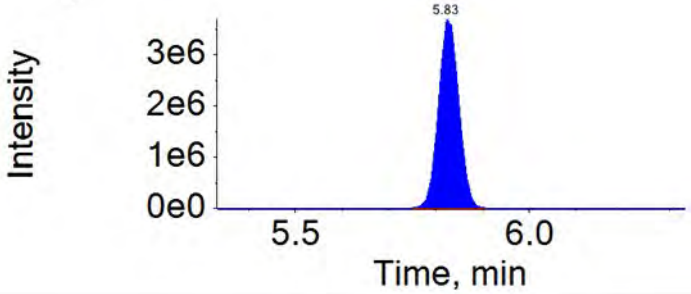
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



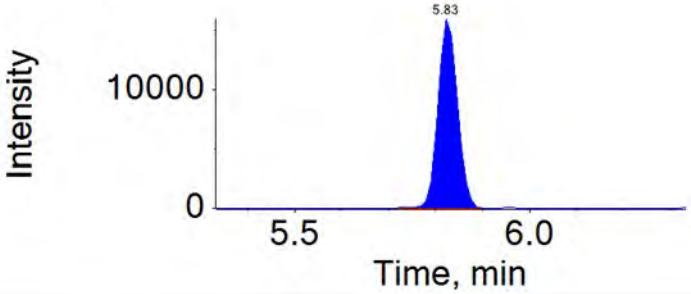
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

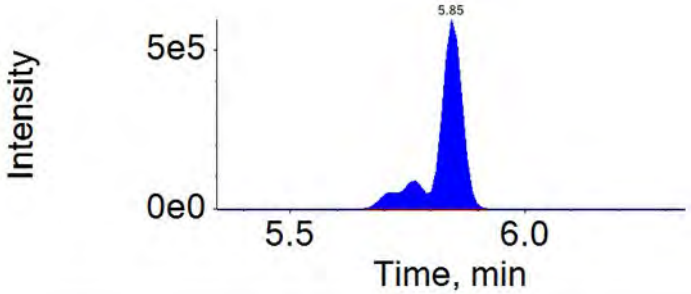
Component: PFUnDA
Primary Mass: 563.0 / 519.0



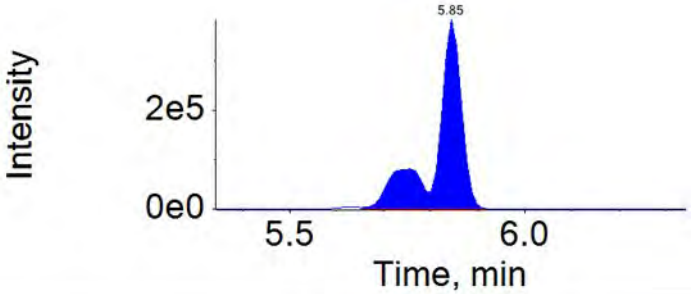
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



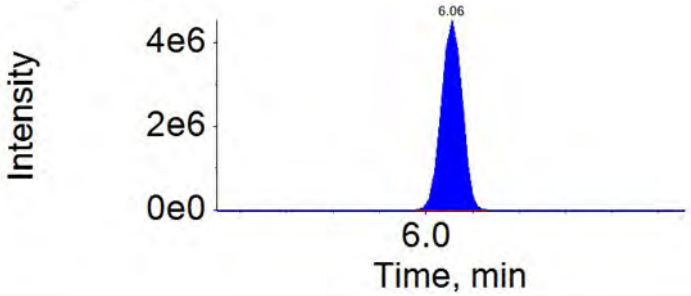
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



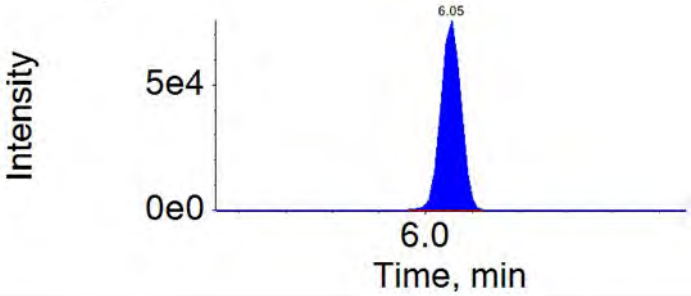
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



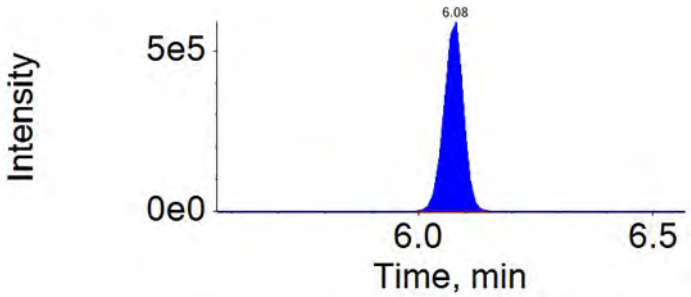
Component: PFDoDA
Primary Mass: 613.0 / 569.0



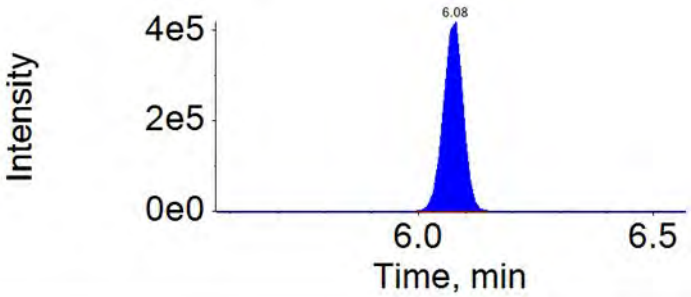
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



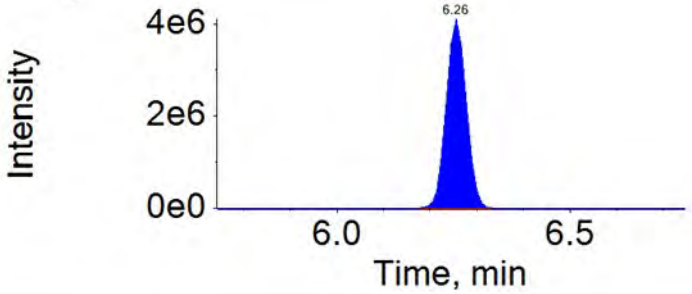
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



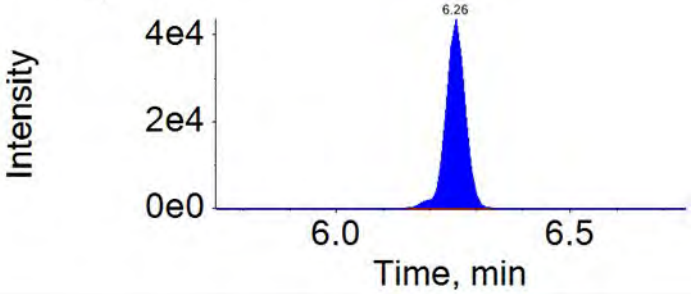
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



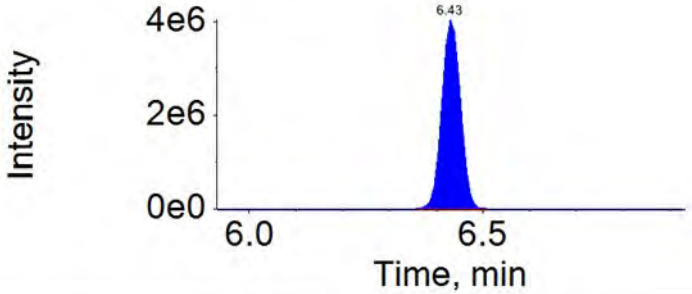
Component: PFTrDA
Primary Mass: 663.0 / 619.0



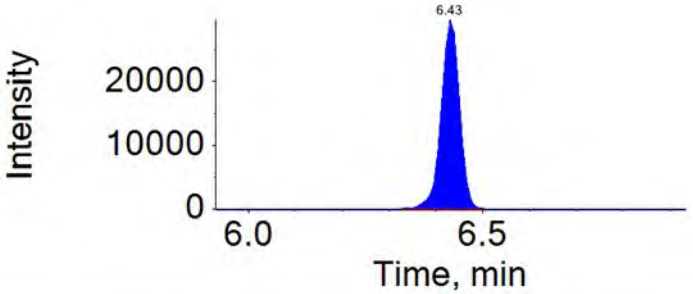
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



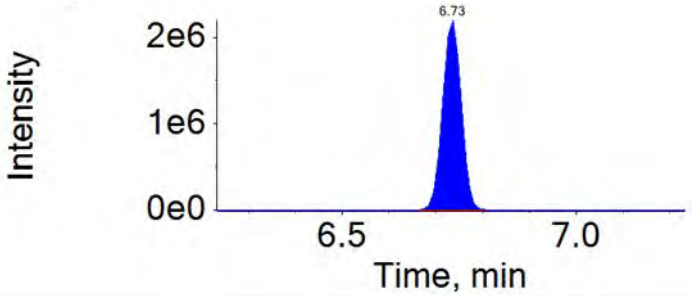
Component: PFTeDA
Primary Mass: 713.0 / 669.0



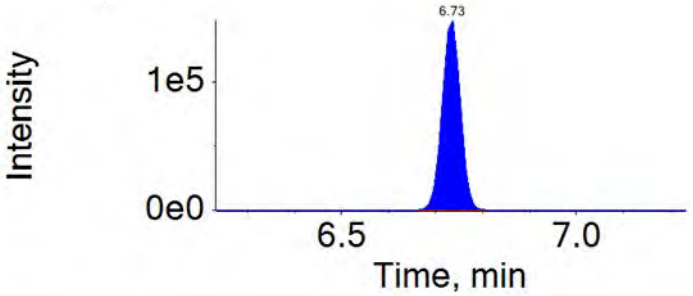
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



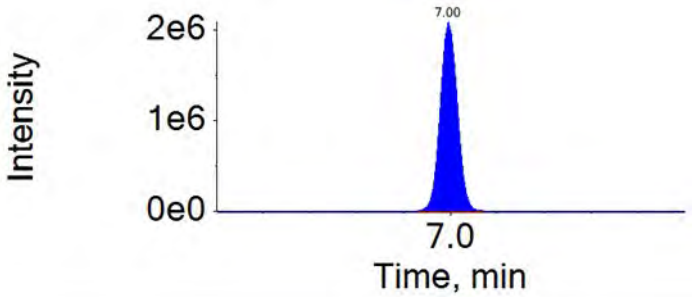
Component: PFHxDA
Primary Mass: 813.0 / 769.0



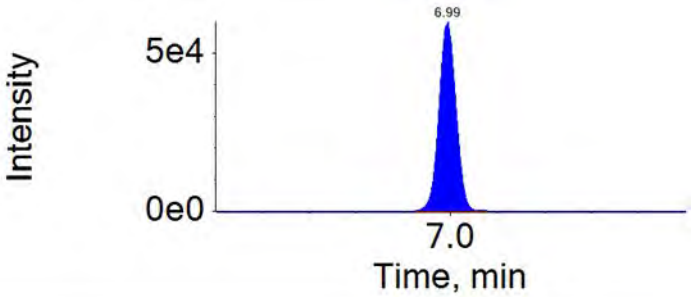
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV28DCAL-13.wiff
Sample ID:	methanol			**Acquis Date:**		11/28/2018 2:45:19 PM
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		JPT12262
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1143174.3	887248.9	29	50	
13C2-PFOA	5.0	661239.2	498501.6	33	50	
13C4-PFOS	4.8	389955.6	283214.2	38	50	
13C2-PFDA	5.0	588197.1	441790.6	33	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1266298.2	13C3-PFBA	1143174.3	1.108	5.000	4.942	99	70-130	
E13C5-PFPeA	1221656.2	13C3-PFBA	1143174.3	1.069	5.000	4.990	100	70-130	
E13C3-PFBS	546183.1	13C3-PFBA	1143174.3	0.478	4.650	4.558	98	70-130	
E13C2-4:2-FTS	92907.1	13C2-PFOA	661239.2	0.141	4.670	4.842	104	70-130	
E13C5-PFHxA	881698.8	13C2-PFOA	661239.2	1.333	5.000	4.898	98	70-130	
E13C3-PFHxS	397088.3	13C2-PFOA	661239.2	0.601	4.730	4.707	100	70-130	
E13C4-PFHpA	684654.8	13C2-PFOA	661239.2	1.035	5.000	4.758	95	70-130	
E13C2-6:2-FTS	90195.6	13C2-PFOA	661239.2	0.136	4.750	5.710	120	70-130	
E13C8-PFOA	1243060.3	13C2-PFOA	661239.2	1.880	5.000	5.174	103	70-130	
E13C8-PFOS	389085.3	13C4-PFOS	389955.6	0.998	4.780	4.504	94	70-130	
E13C9-PFNA	823058.9	13C4-PFOS	389955.6	2.111	5.000	4.636	93	70-130	
E13C6-PFDA	1069720.1	13C2-PFDA	588197.1	1.819	5.000	5.128	103	70-130	
E13C2-8:2-FTS	97960.5	13C2-PFDA	588197.1	0.167	4.790	7.158	149	70-130	OOS
E13C8-PFOSA	873157.2	13C2-PFDA	588197.1	1.484	5.000	5.447	109	70-130	
Ed3-NMeFOSAA	242996.3	13C2-PFDA	588197.1	0.413	5.000	5.245	105	70-130	
E13C7-PFUnDA	700966.1	13C2-PFDA	588197.1	1.192	5.000	5.037	101	70-130	
Ed5-NEtFOSAA	159876.3	13C2-PFDA	588197.1	0.272	5.000	4.842	97	70-130	
E13C2-PFDoDA	1371772.4	13C2-PFDA	588197.1	2.332	5.000	4.900	98	70-130	
Ed7-NMePFOSAE	354362.2	13C2-PFDA	588197.1	0.602	5.000	5.207	104	70-130	
Ed3-NMePFOSA	104834.4	13C2-PFDA	588197.1	0.178	5.000	4.824	96	70-130	
Ed9-NEtPFOSAE	319017.0	13C2-PFDA	588197.1	0.542	5.000	5.499	110	70-130	
Ed5-NEtPFOSA	85061.1	13C2-PFDA	588197.1	0.145	5.000	5.025	100	70-130	
E13C2-PFTeDA	1062806.7	13C2-PFDA	588197.1	1.807	5.000	5.000	100	70-130	

APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

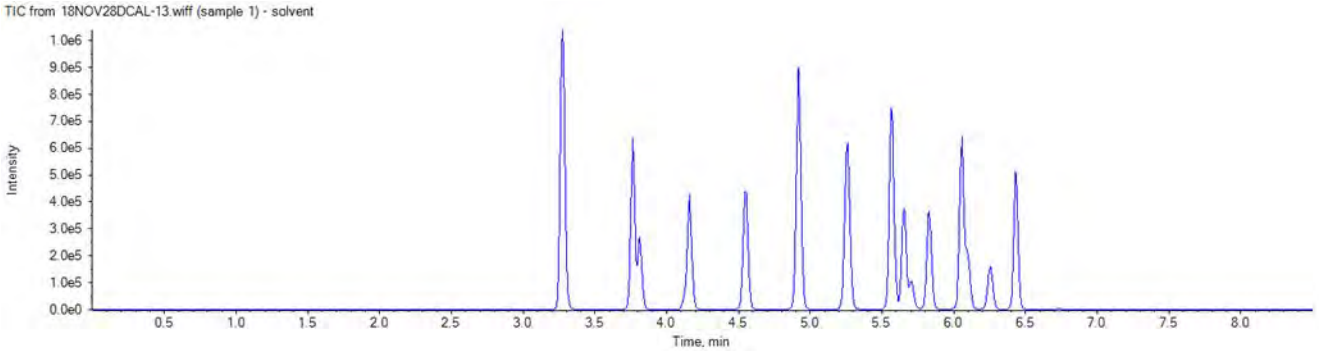
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-13.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	1266298.2	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	1221656.2	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	546183.1	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	92907.1	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	881698.8	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	546183.1	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	684654.8	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	397088.3	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.91	90195.6	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	397088.3	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.92	1243060.3	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.25	389085.3	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.27	823058.9	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	389085.3	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.57	1069720.1	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	97960.5	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	873157.2	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.71	242996.3	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.25	389085.3	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.83	700966.1	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.84	159876.3	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	1371772.4	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	97960.5	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.10	354362.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.11	104834.4	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	389085.3	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	319017.0	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.27	85061.1	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.06	1371772.4	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	1062806.7	N/A	
PFHxDA	6.74	1.050	6327.1		A	13C2-PFTeDA	6.43	1062806.7	0.006	0.068
PFODA	7.00	1.090	3886.6		A	13C2-PFTeDA	6.43	1062806.7	0.004	0.049

Total Ion Chromatogram

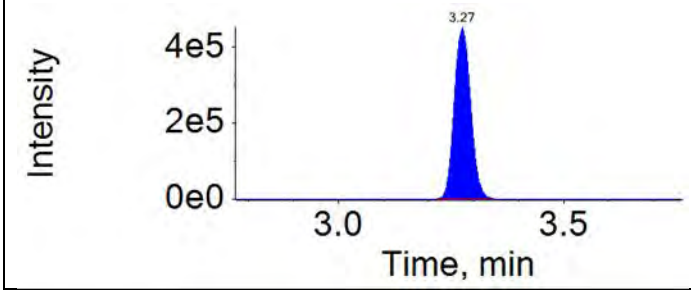


APPROVED
By JPT at 1:11 pm, 11/29/18

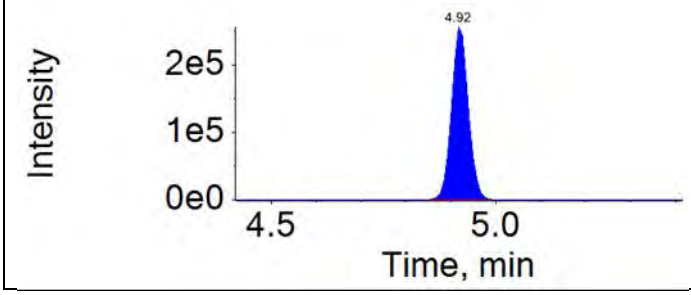
REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

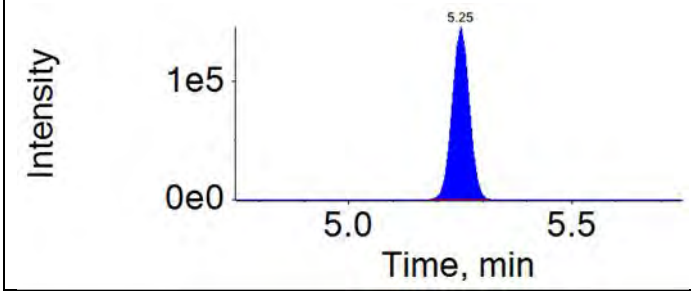
Injection Standard: 13C3-PFBA
216.0 / 172.0



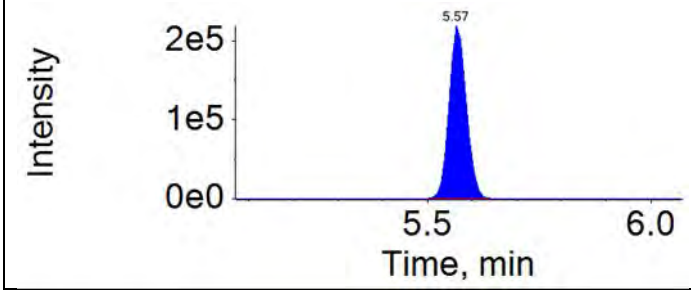
Injection Standard: 13C2-PFOA
415.0 / 370.0



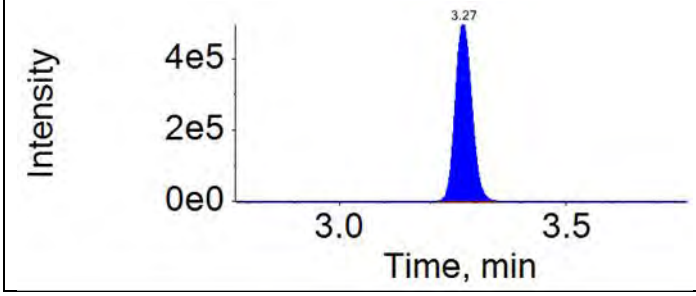
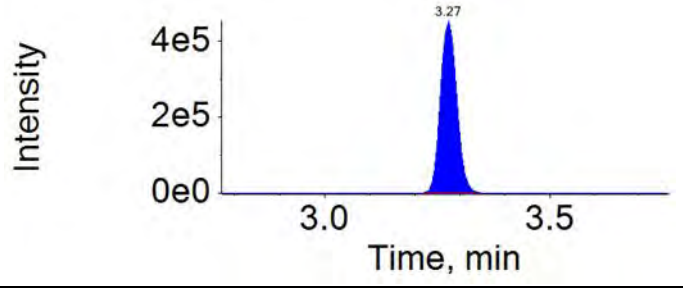
Injection Standard: 13C4-PFOS
503.0 / 80.0

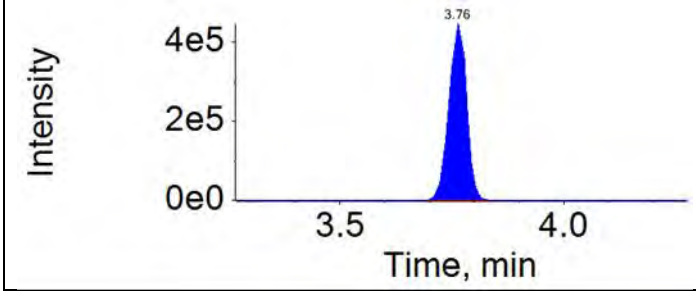
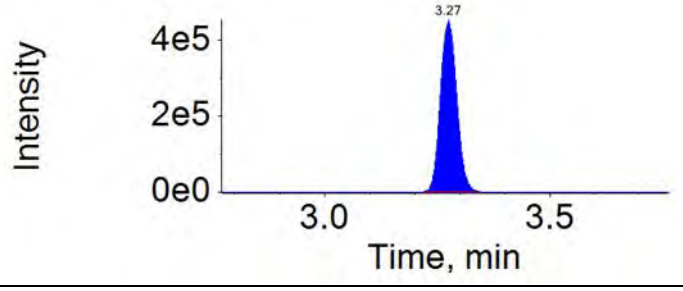


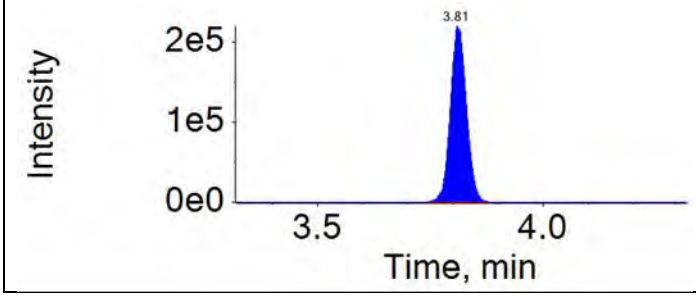
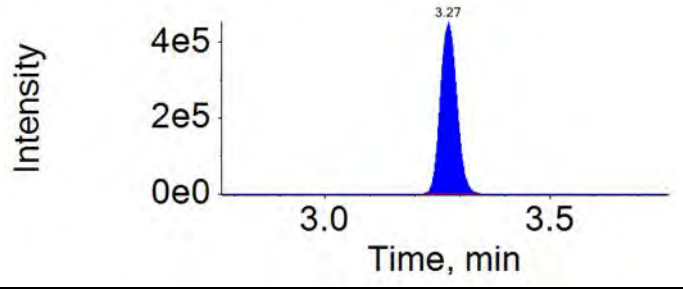
Injection Standard: 13C2-PFDA
515.0 / 470.0

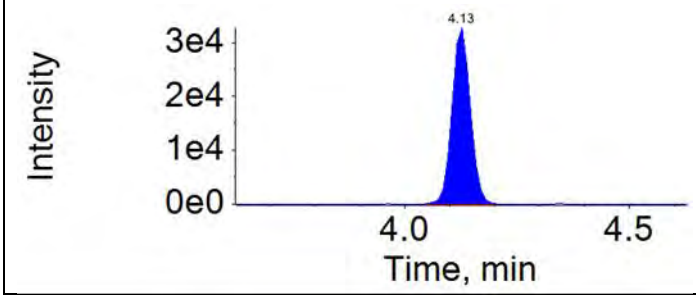
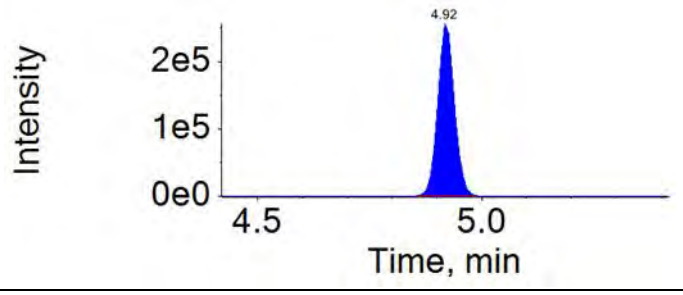


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

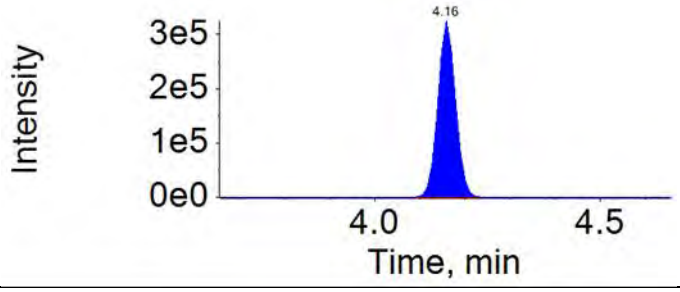
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

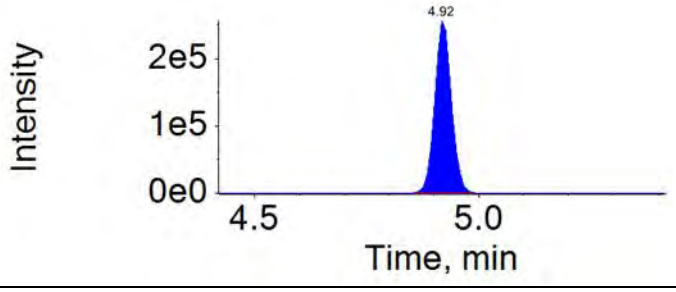
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

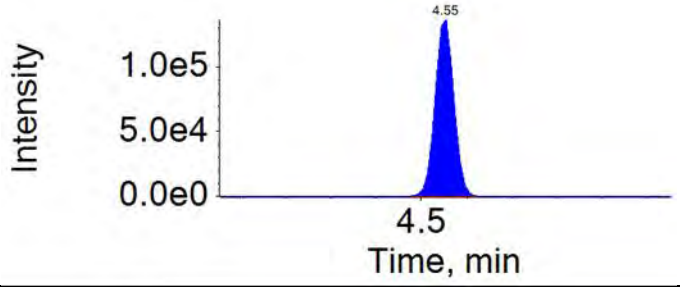
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

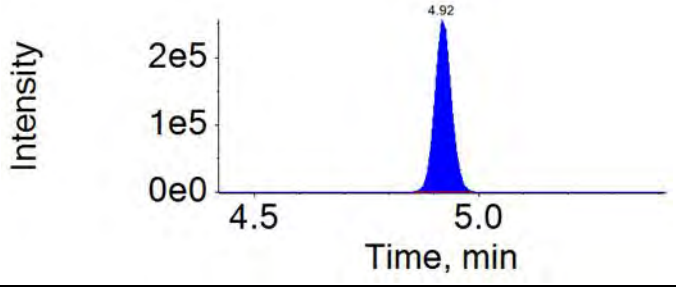
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



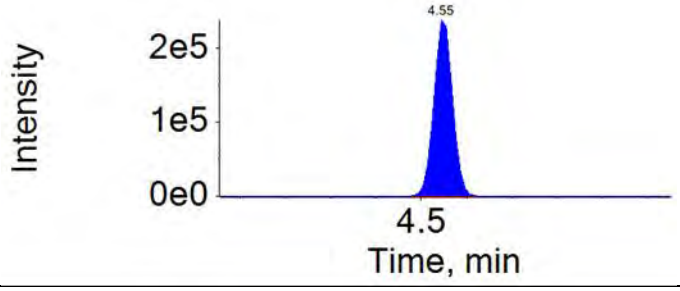


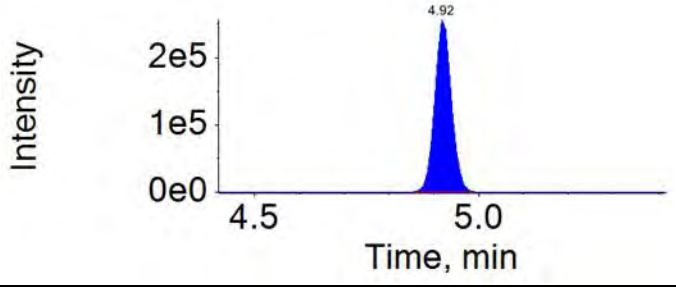
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



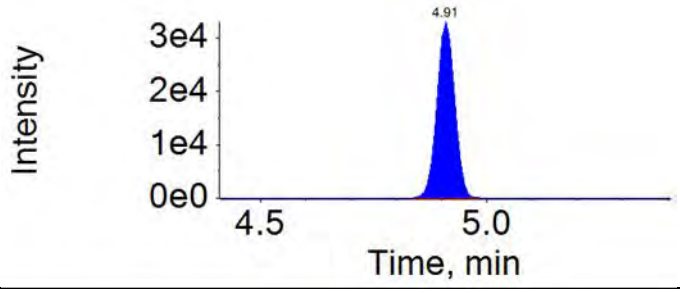


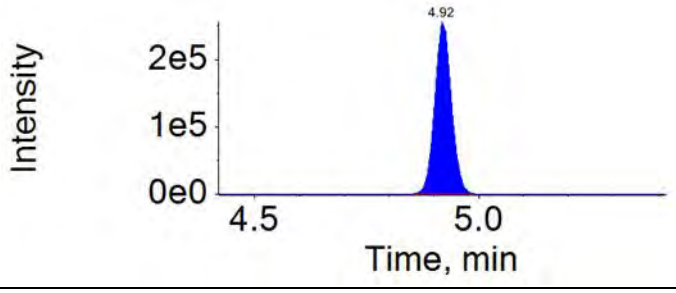
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



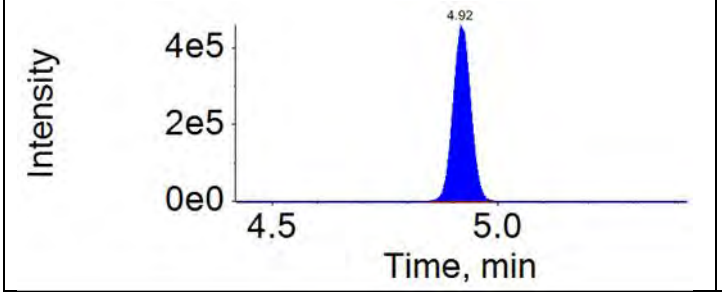


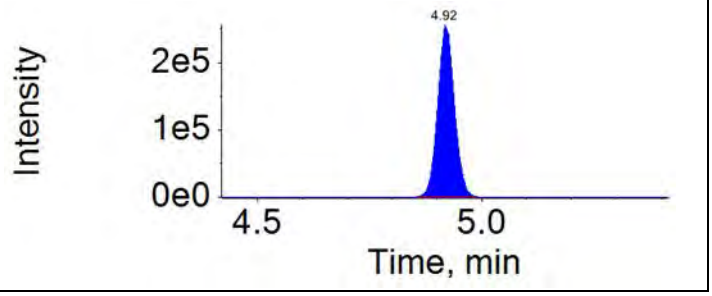
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

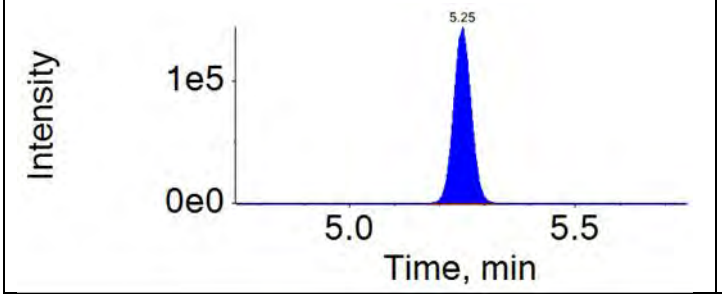
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

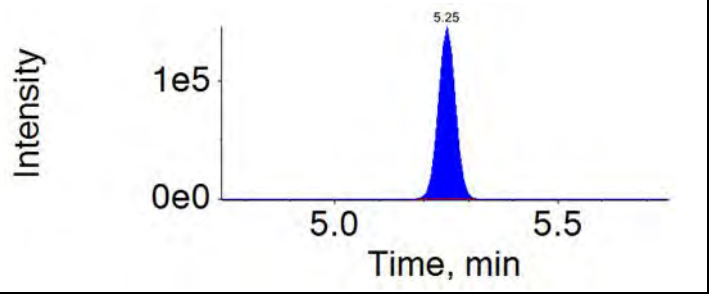
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



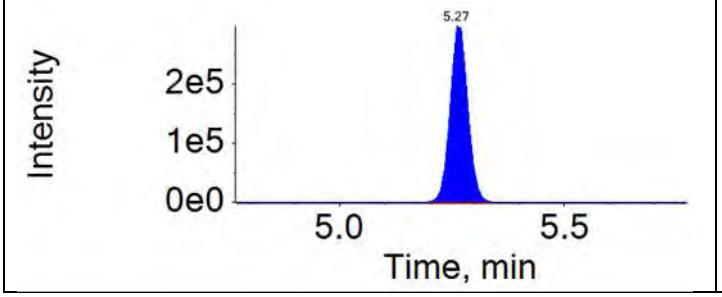


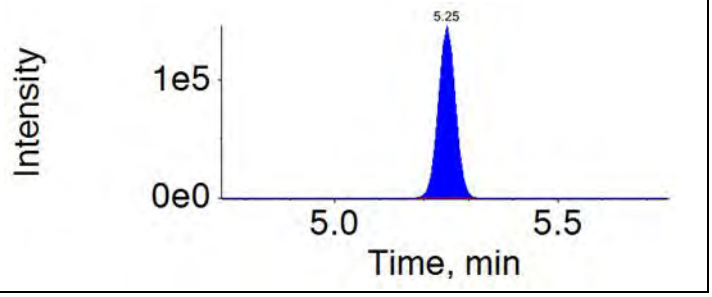
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



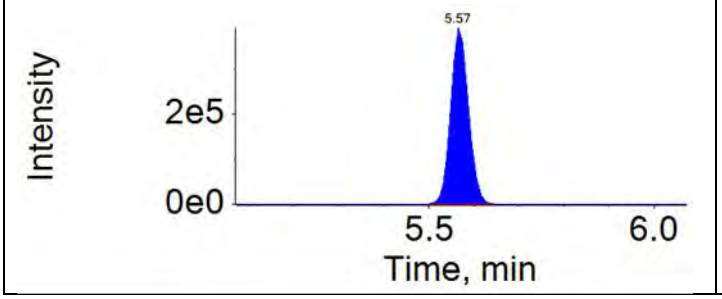


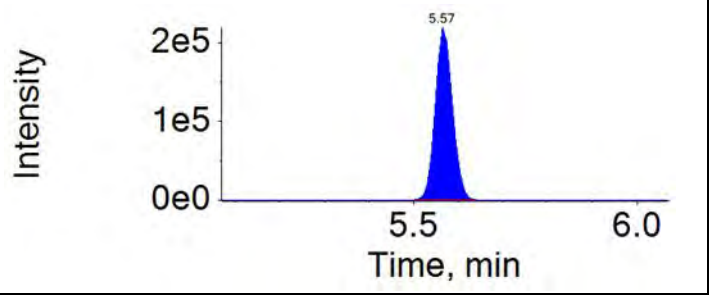
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

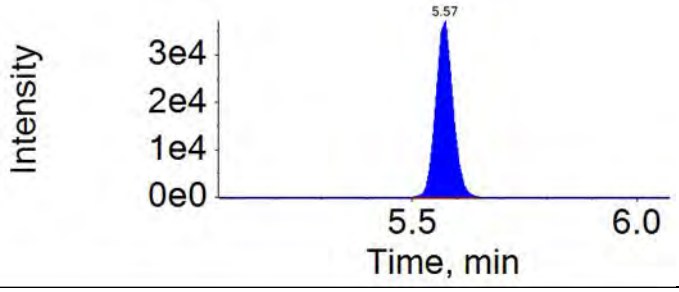
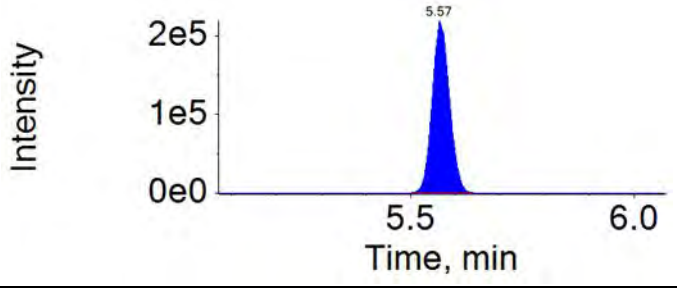


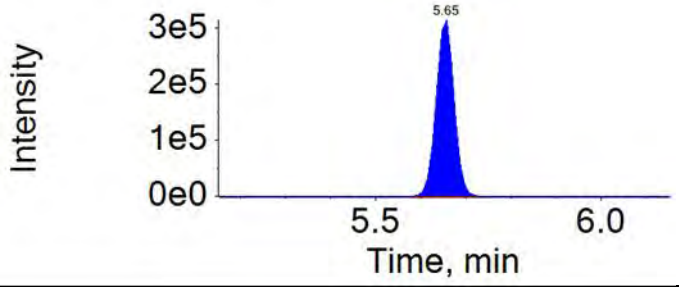
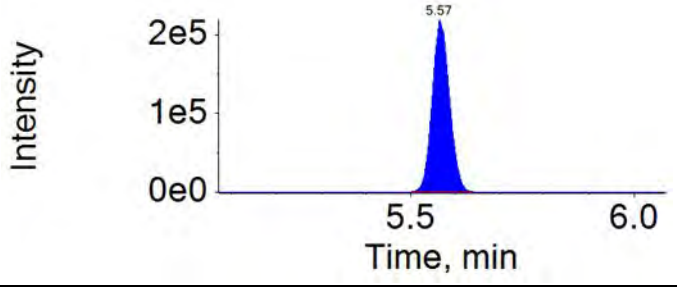


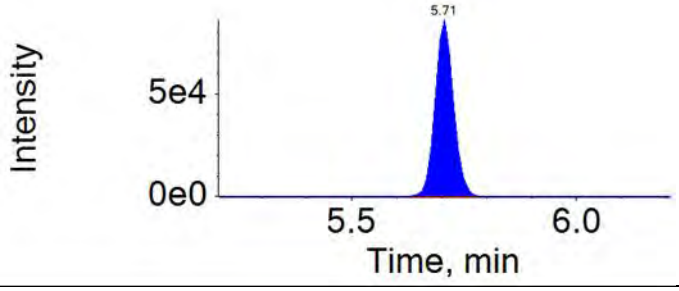
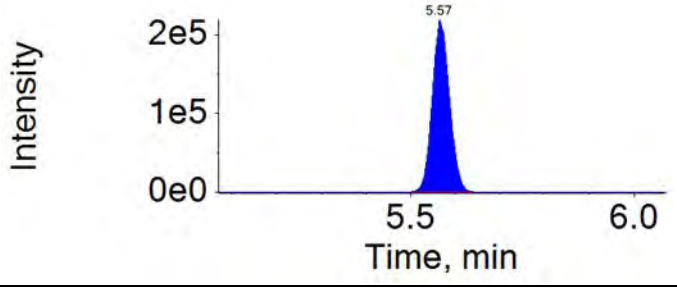
APPROVED
By JPT at 1:11 pm, 11/29/18

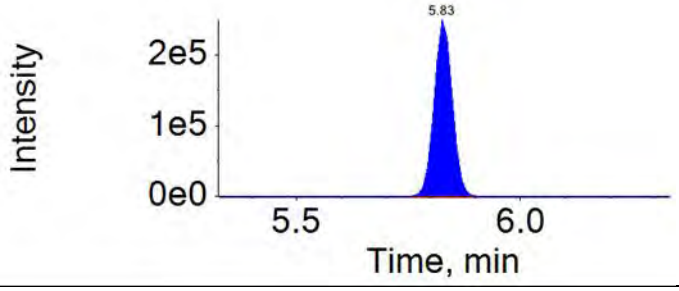
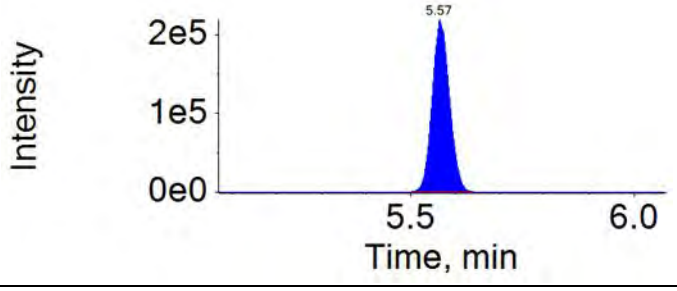
REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

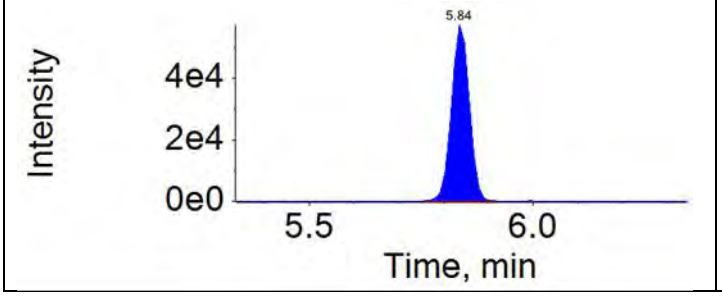
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

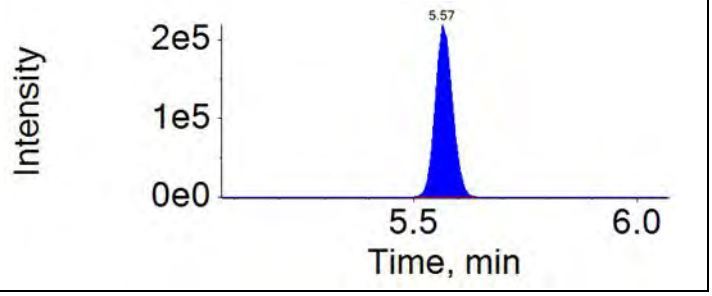
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

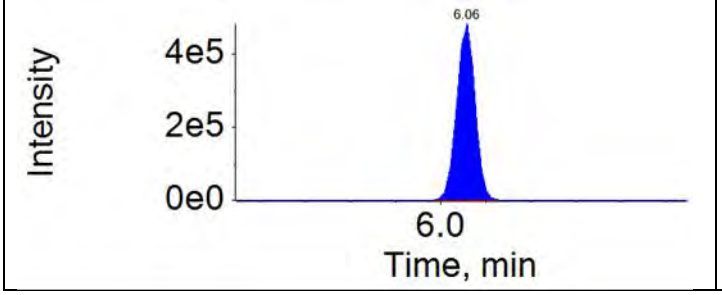
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

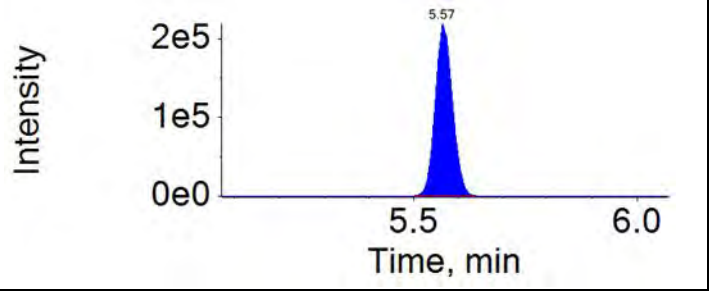
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



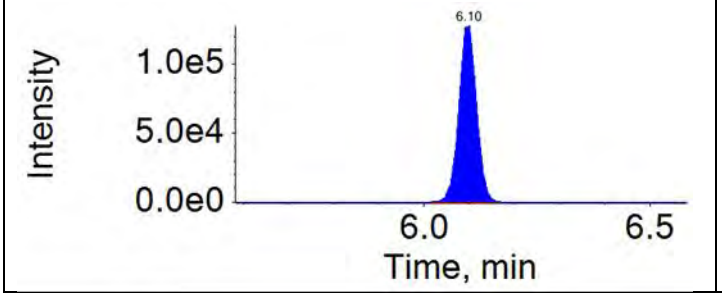


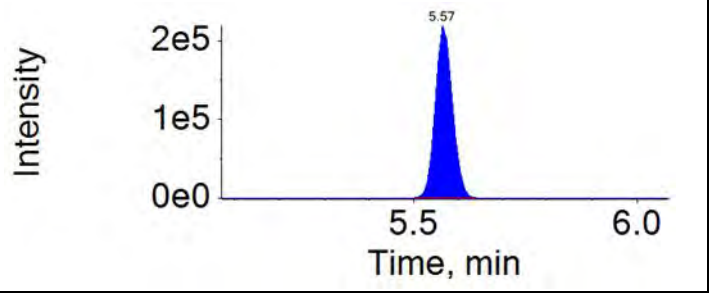
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



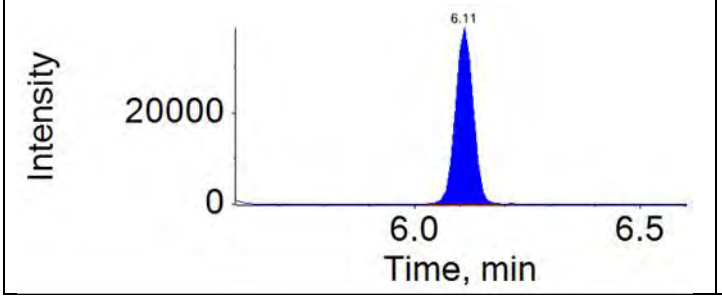


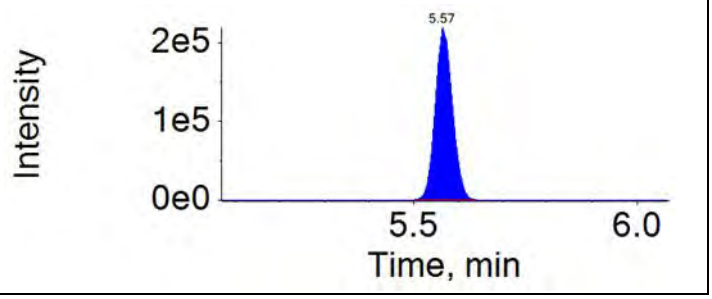
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



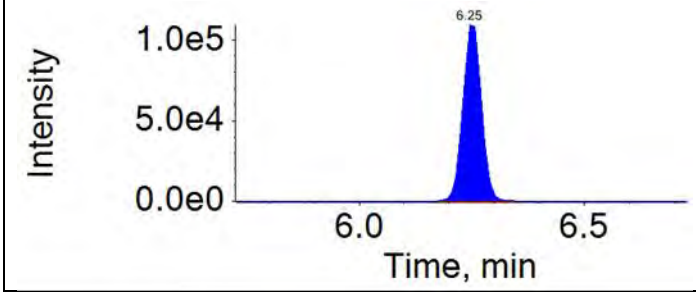


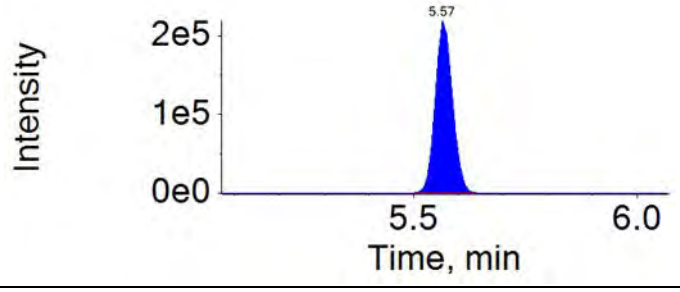
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

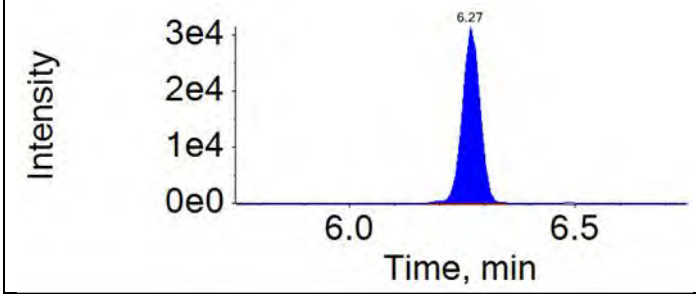
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

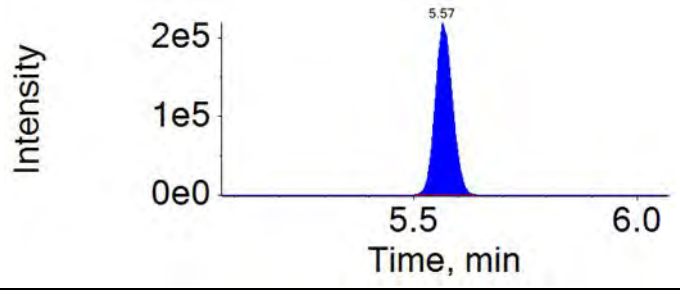
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



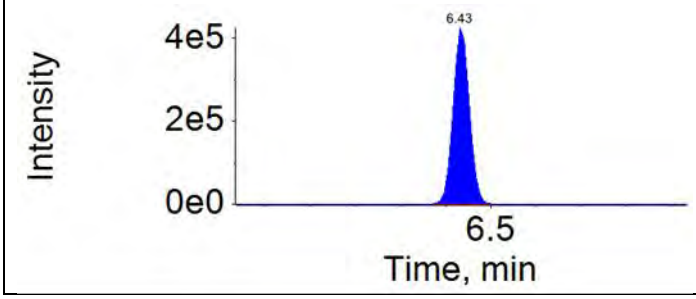


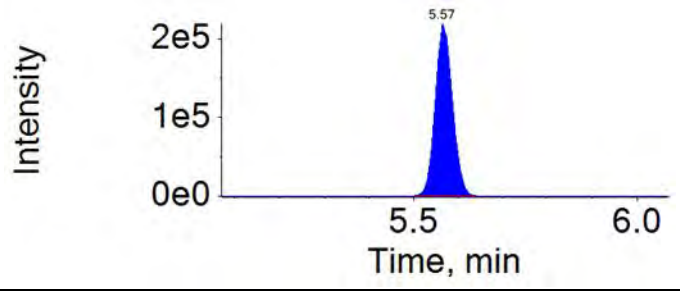
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





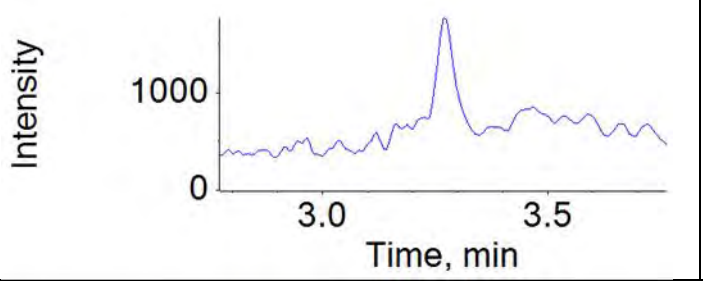
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

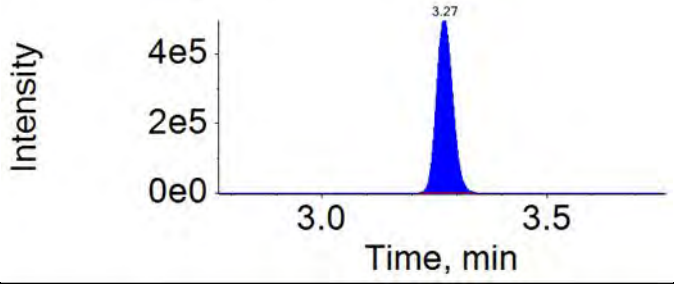




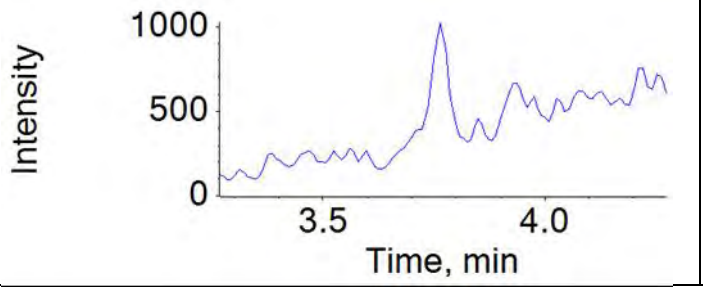
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

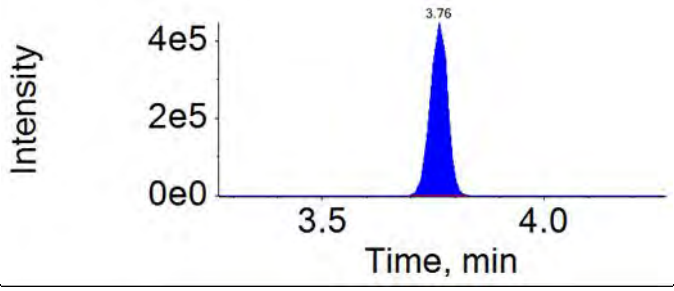
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



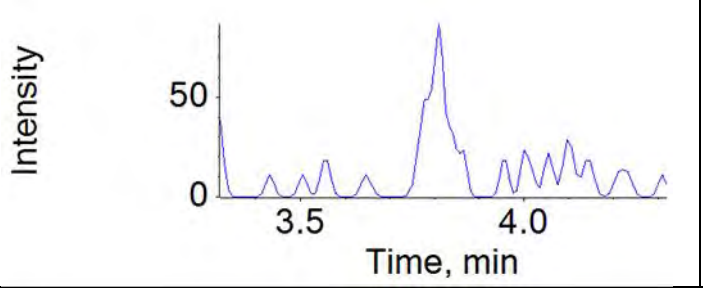


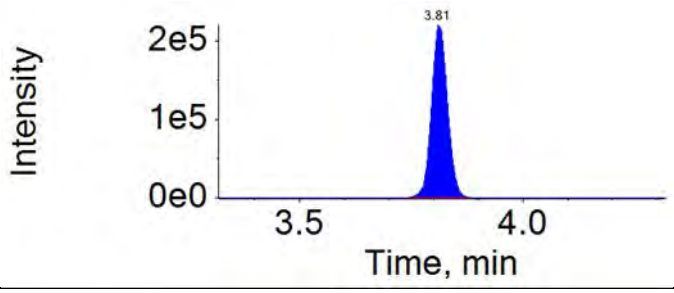
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



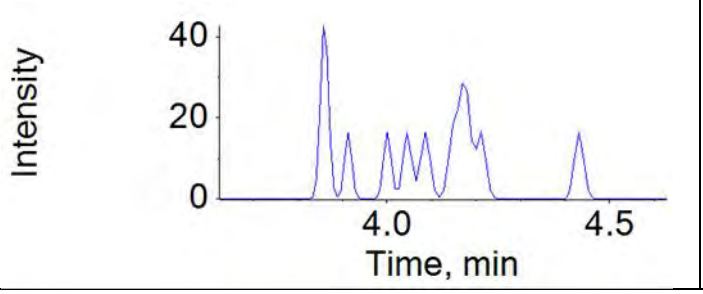


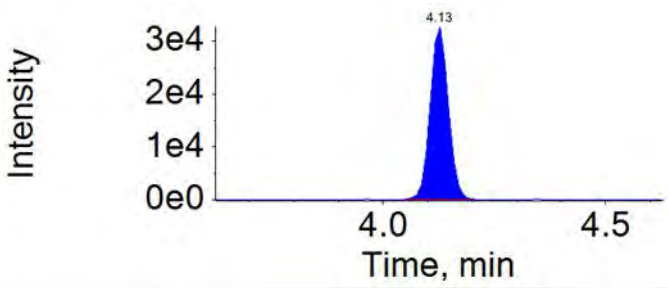
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



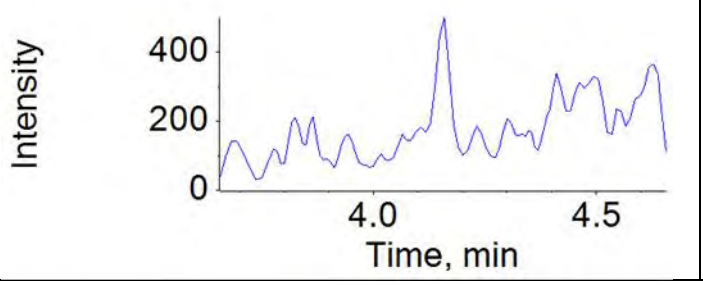


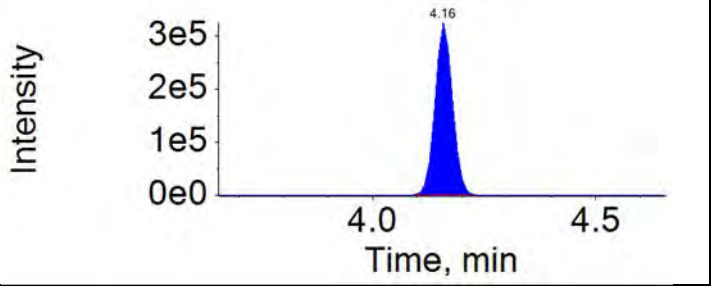
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

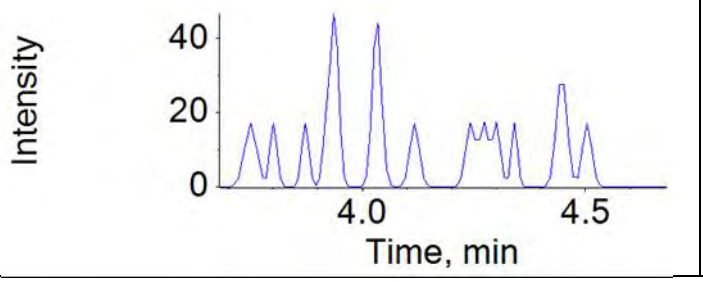
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

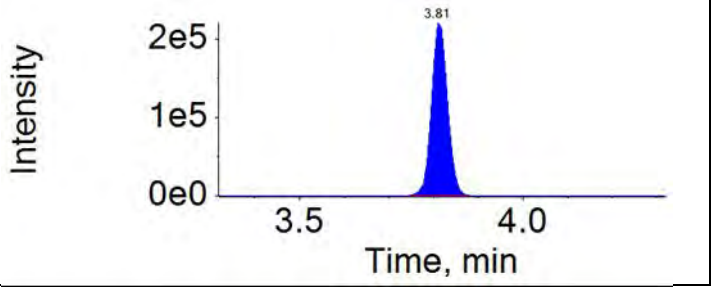
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



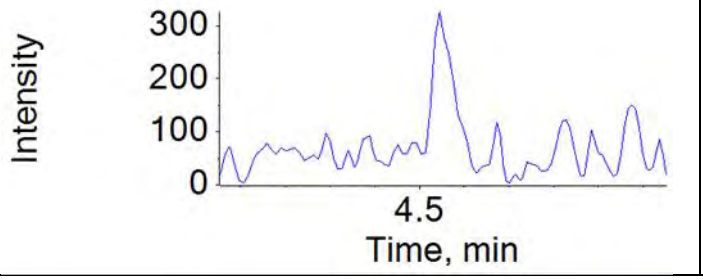


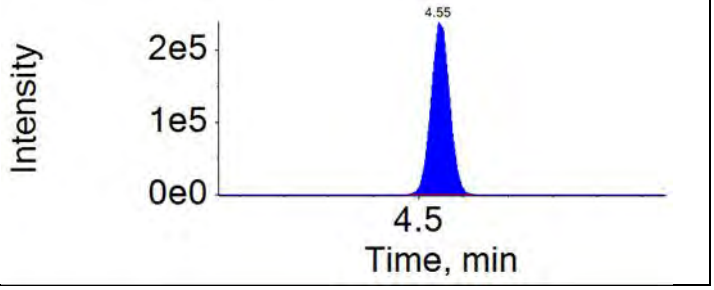
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



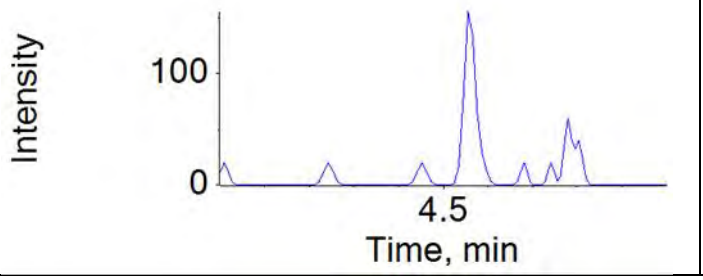


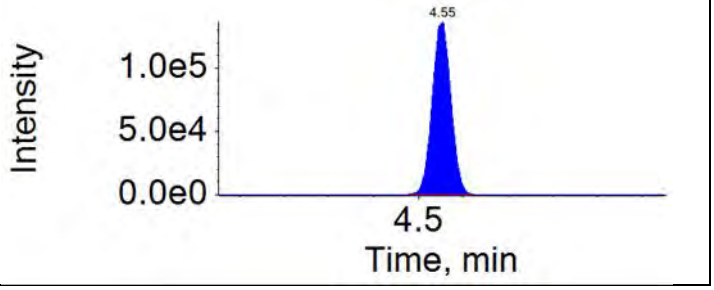
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



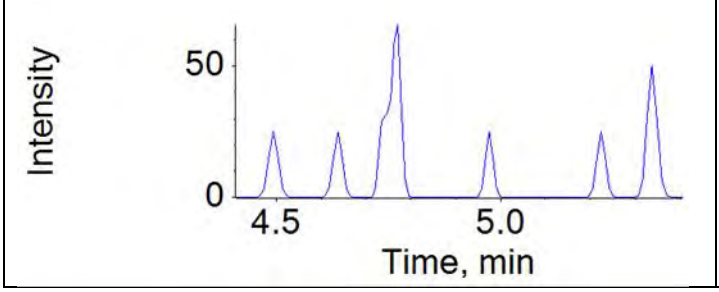


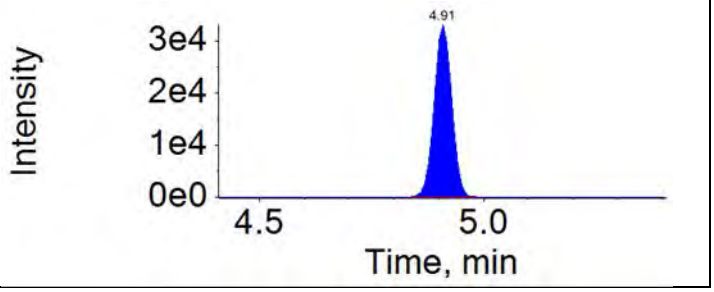
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

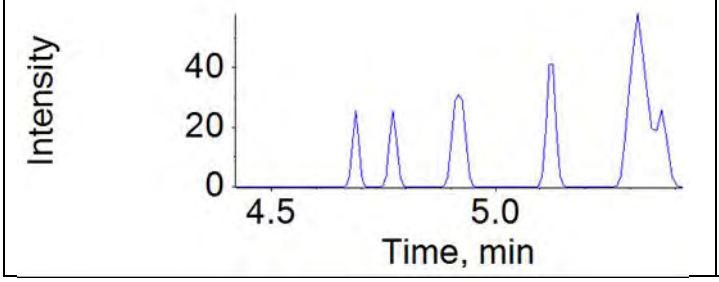
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

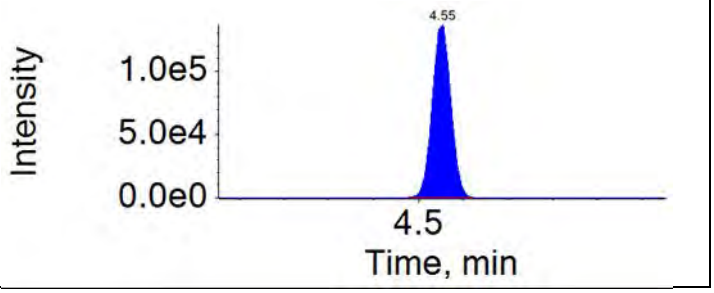
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



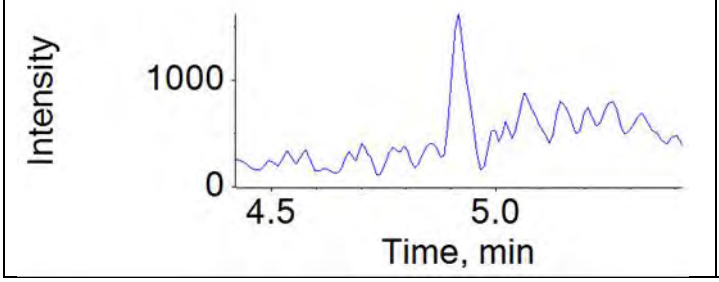


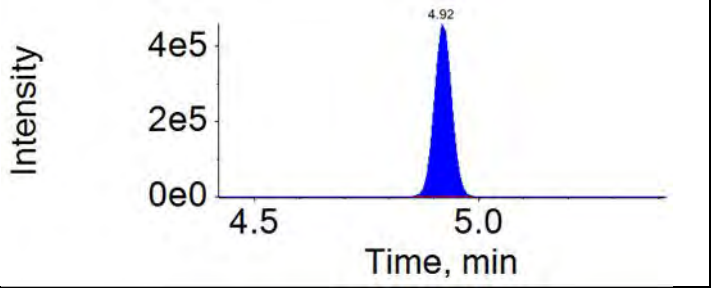
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



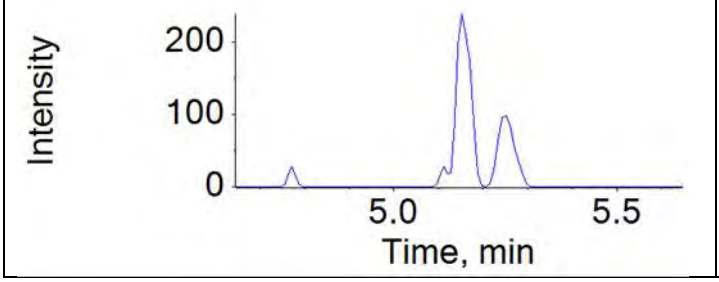


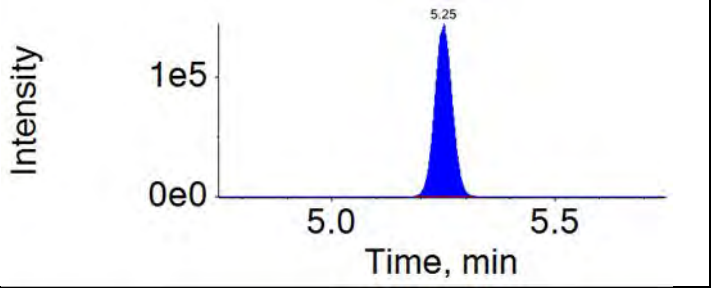
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



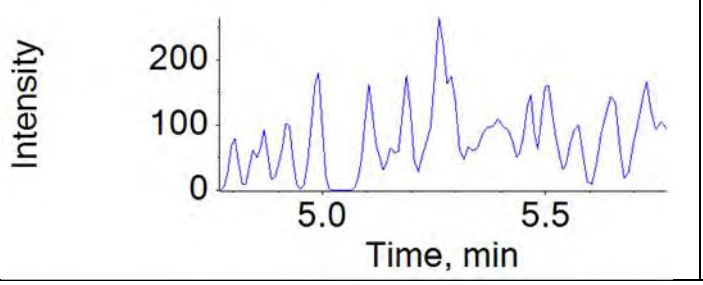


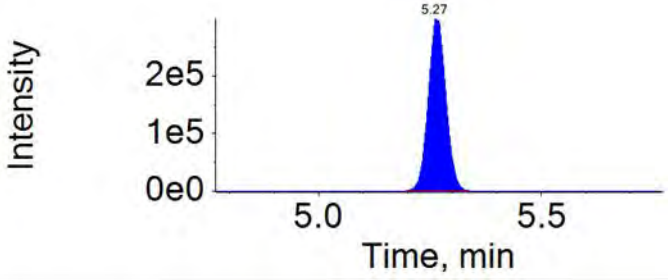
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

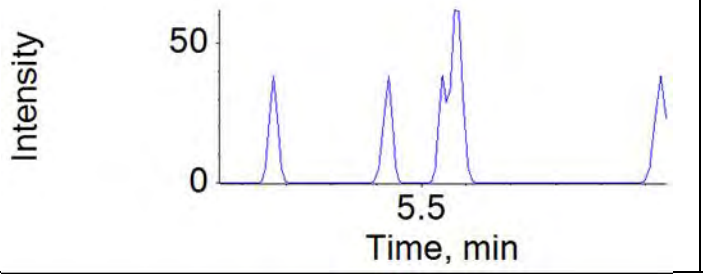
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

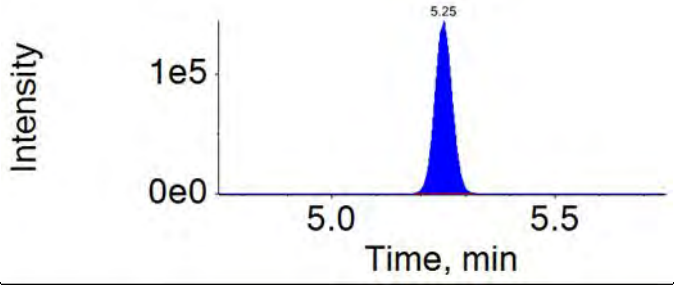
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



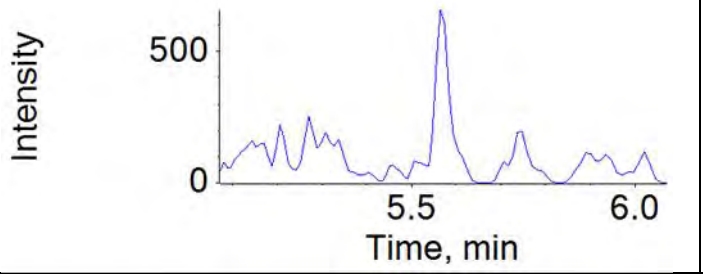


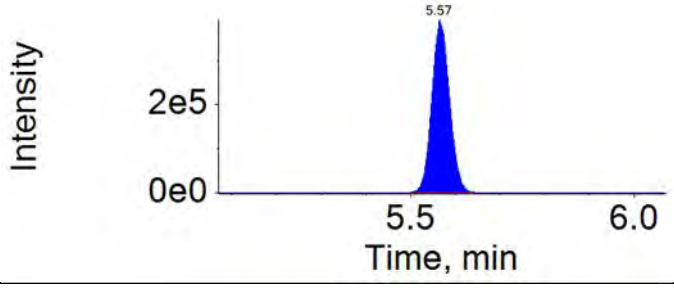
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



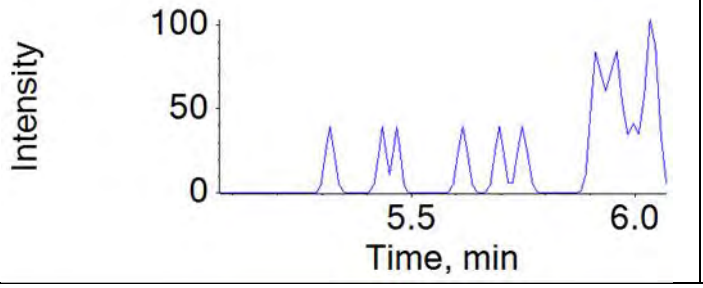


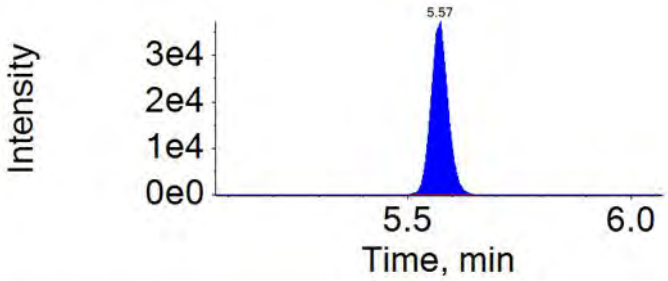
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



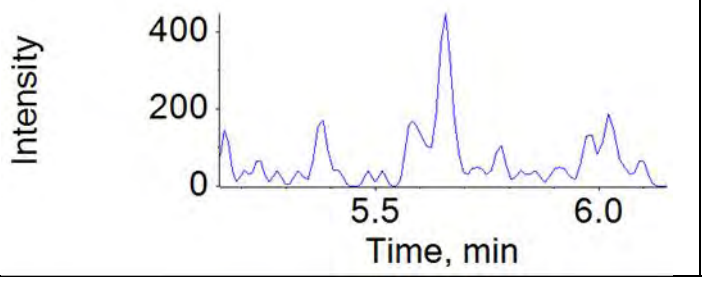


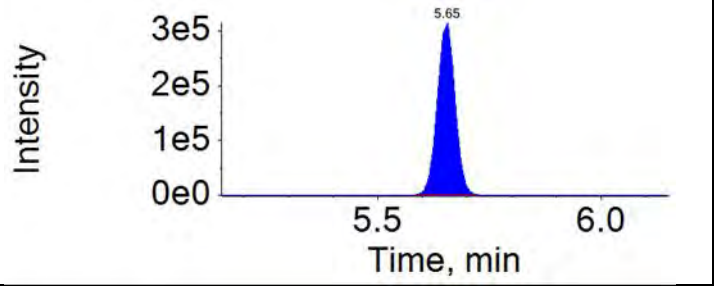
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

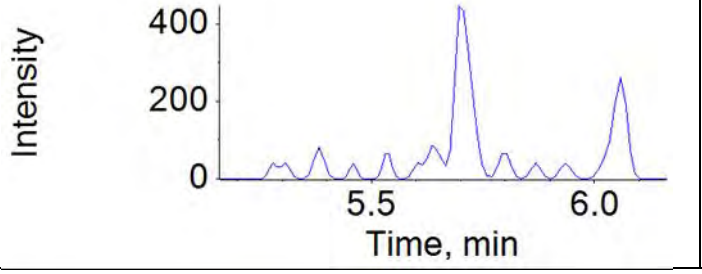
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

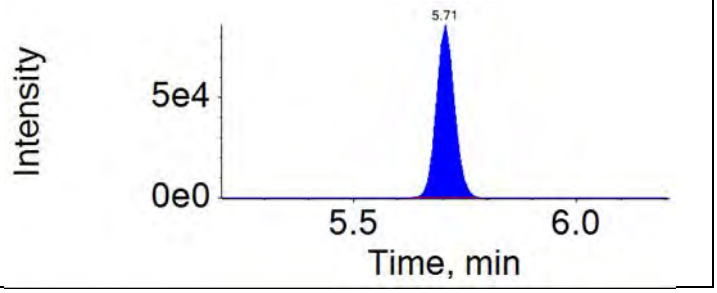
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



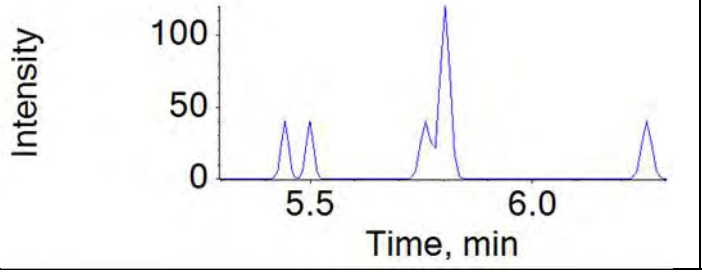


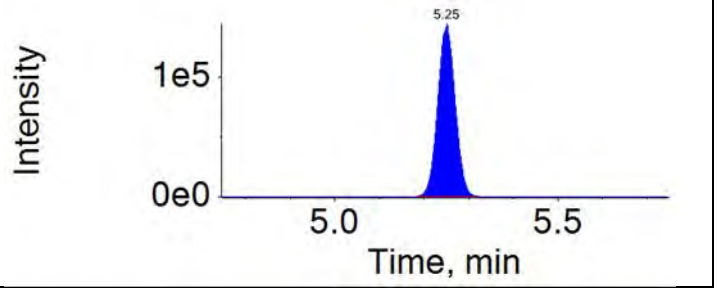
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



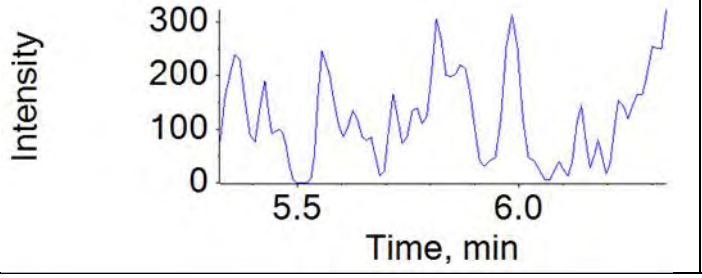


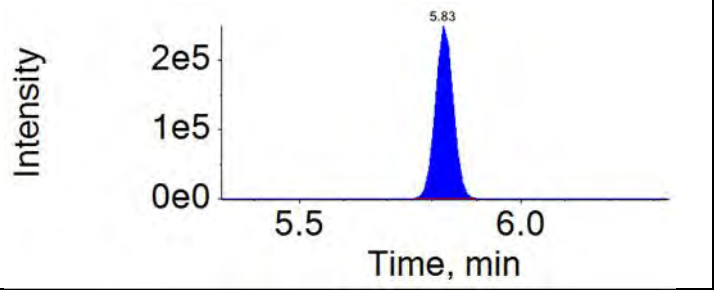
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



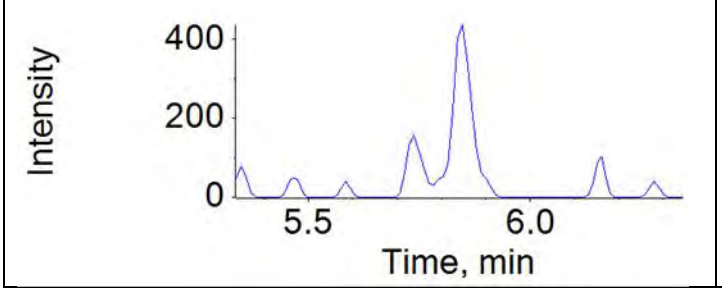


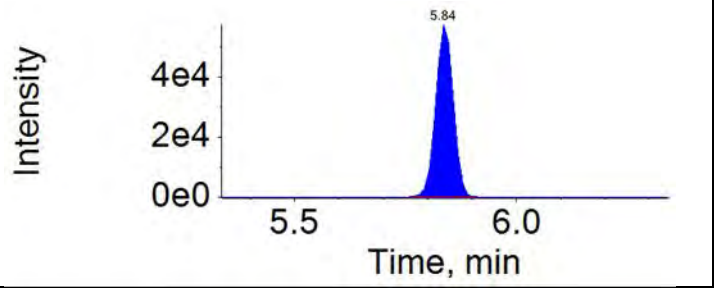
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

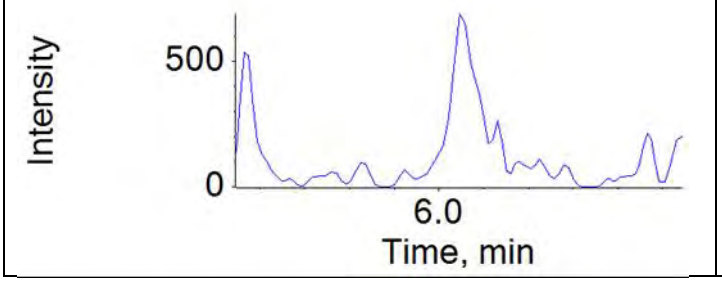
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

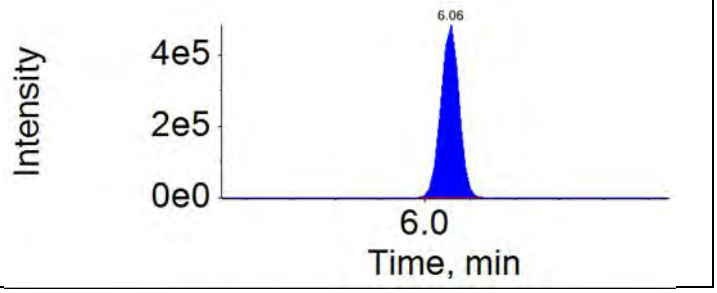
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



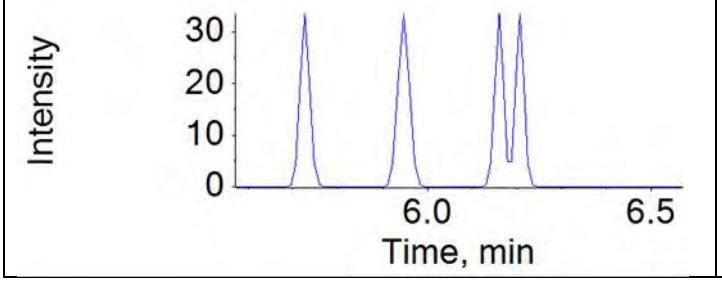


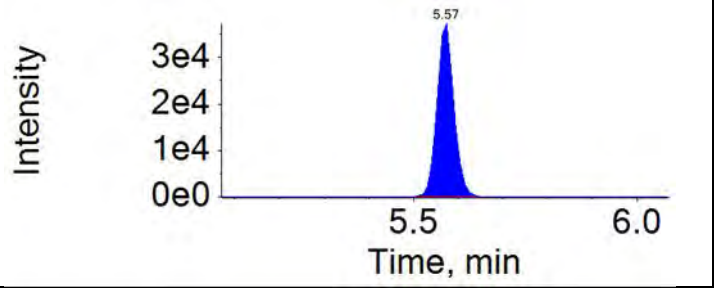
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



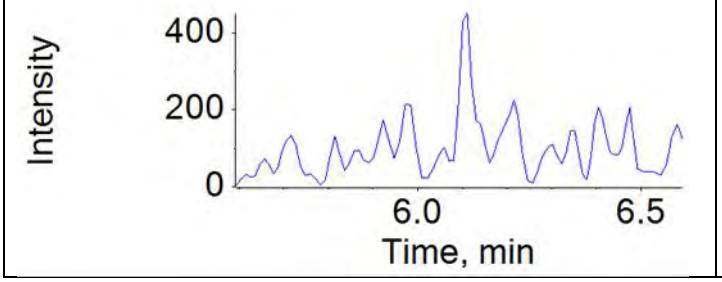


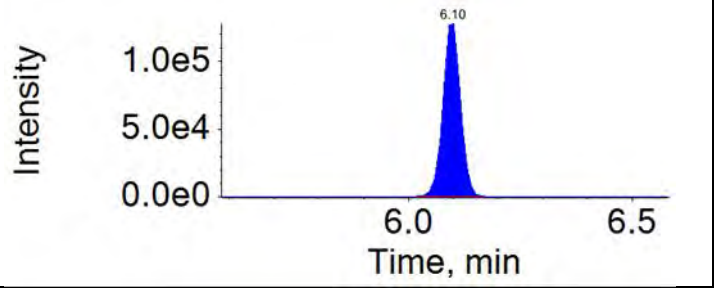
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



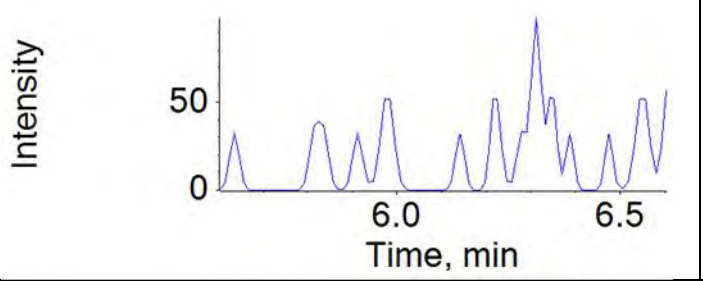


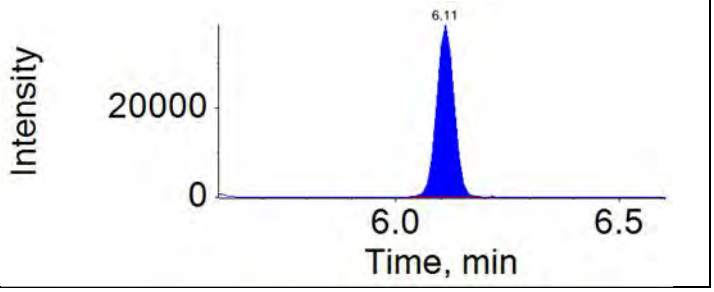
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

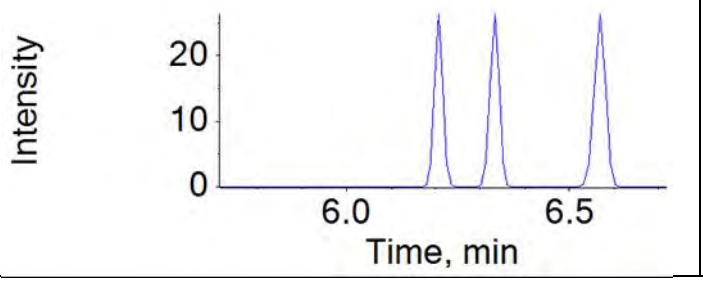
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

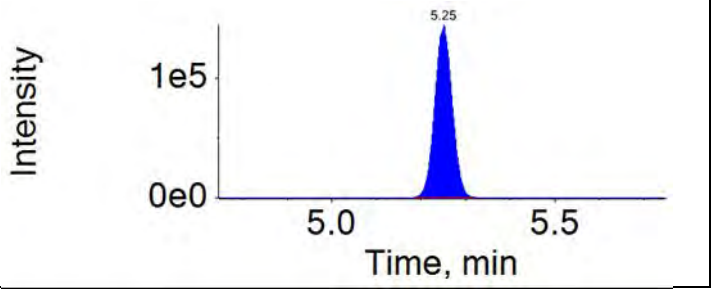
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



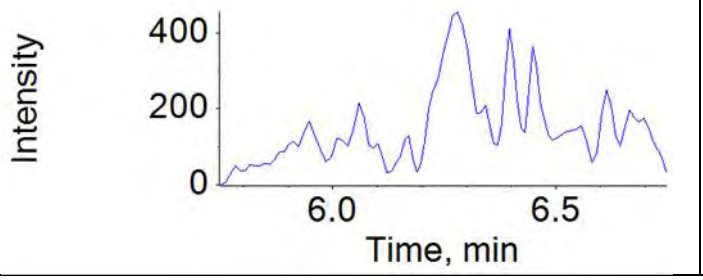


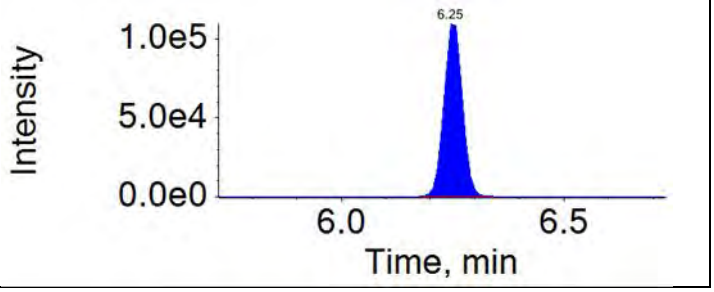
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



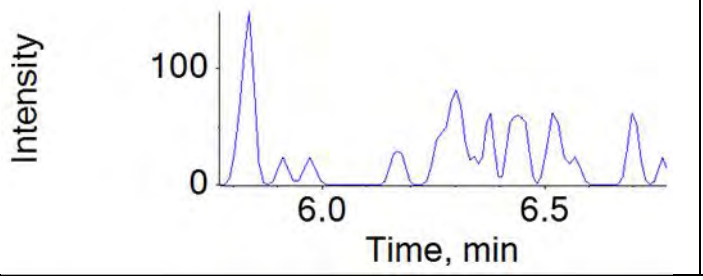


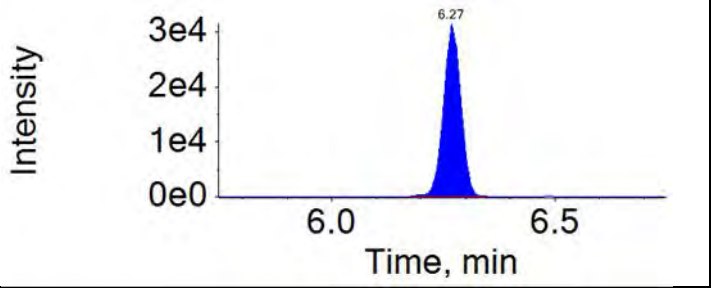
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





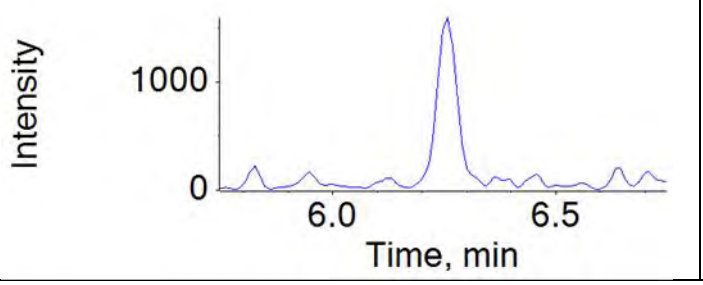
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

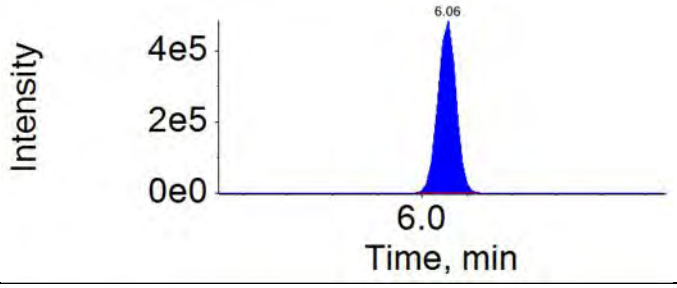




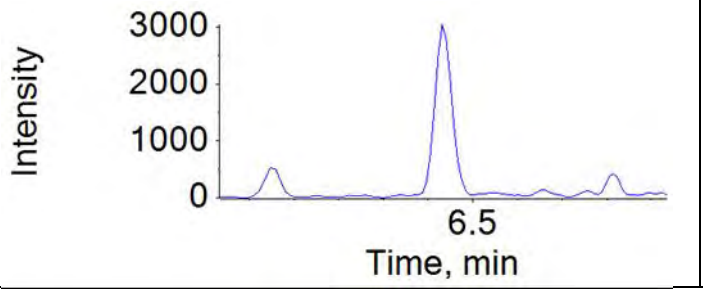
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/29/2018 1:05:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

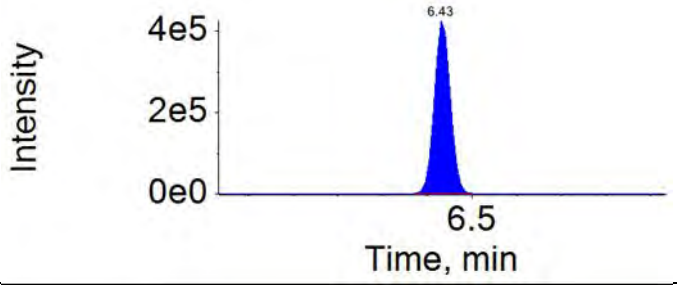
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



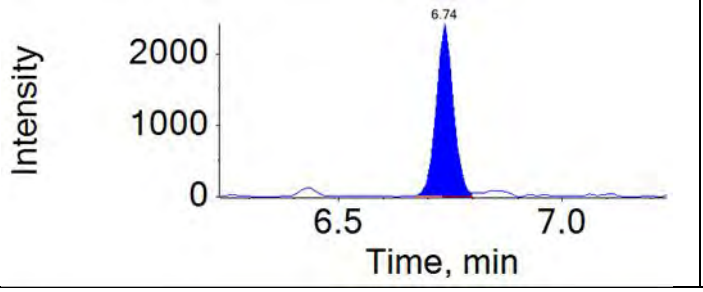


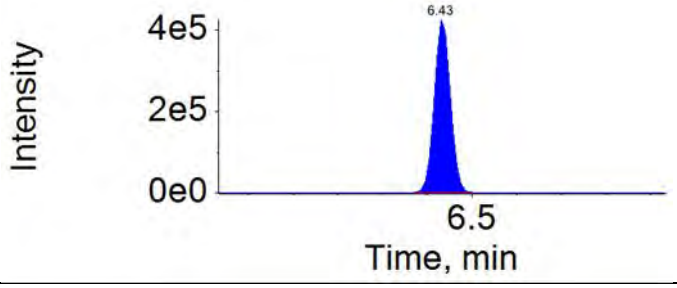
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



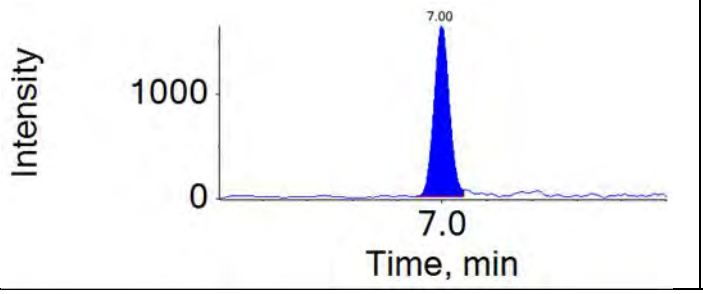


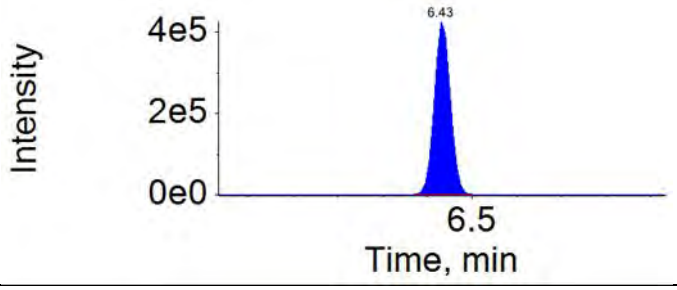
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





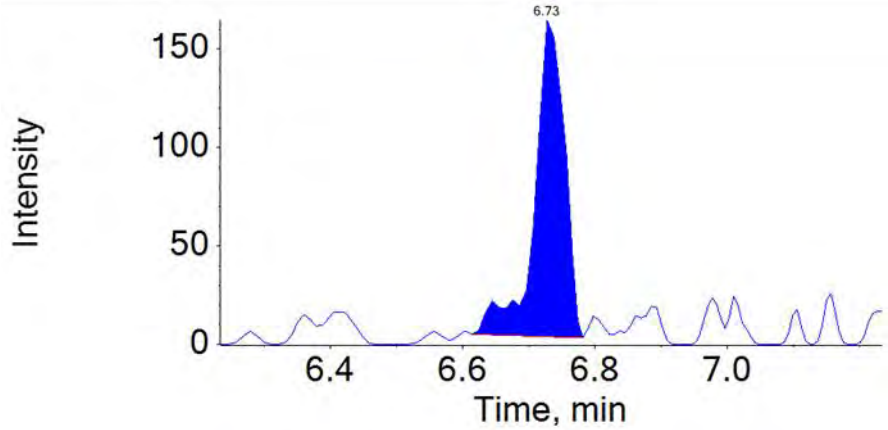
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/29/2018 1:05:58 PM

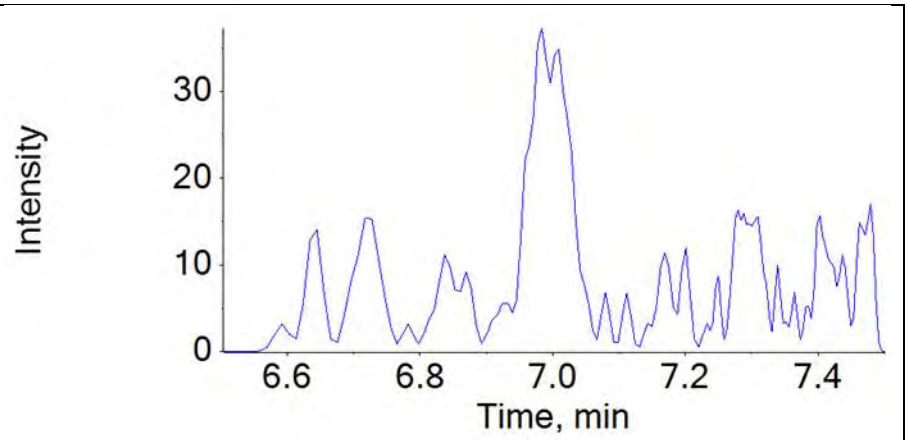
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxDA_2
RT (min.):
6.73
Peak Area:
511.31
Mass Range:
813.0 / 169.0
File Name:
18NOV28DCAL-13.wiff
Sample Name:
Instrument Blank



Integration Comment: incorrect integration

Component Name:
PFODA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
913.0 / 169.0
File Name:
18NOV28DCAL-13.wiff
Sample Name:
Instrument Blank



Integration Comment: incorrect integration

APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/29/2018 1:05:58 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

Ion Ratio Report

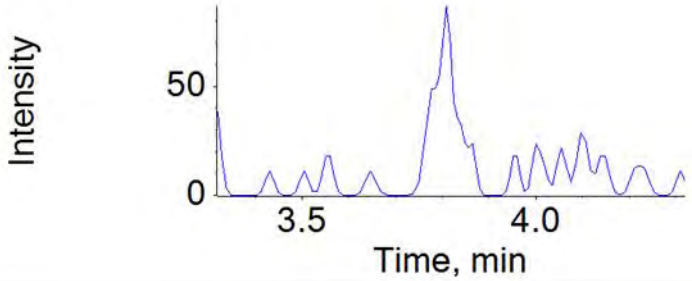
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-13.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	6.25	1.03	266.70	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	6.74	1.05	6327.14	A	N/A	1.0000			
PFHxDA_2	6.73	1.05	465.21	M	N/A	0.0735	13	50	
PFODA	7.00	1.09	3886.61	A	N/A	1.0000			
PFODA_2	6.99	1.09	153.16	M	N/A	0.0394	47	50	

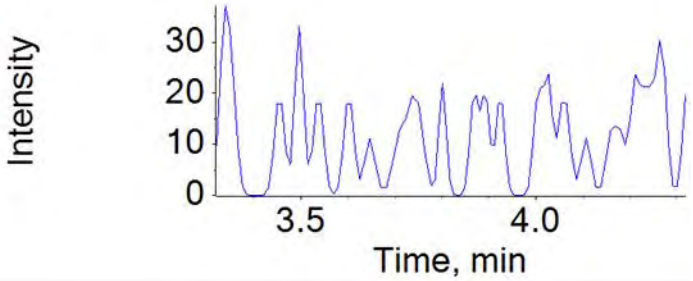
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

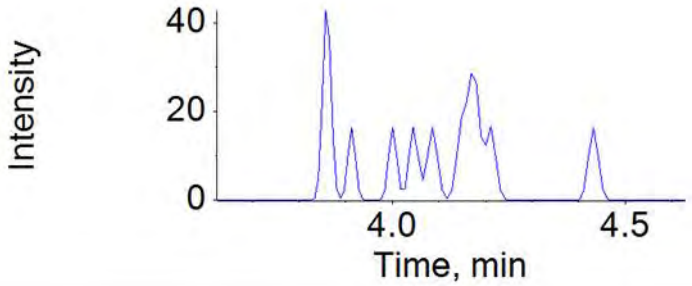
Component: PFBS
Primary Mass: 299.0 / 80.0



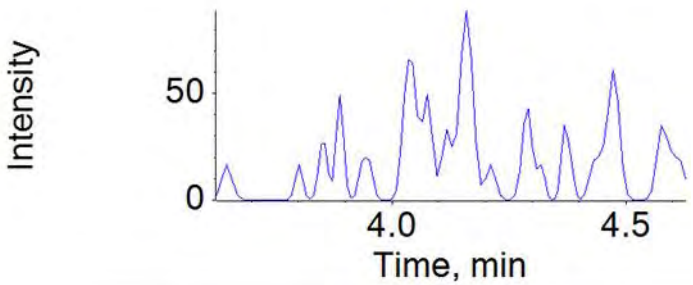
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



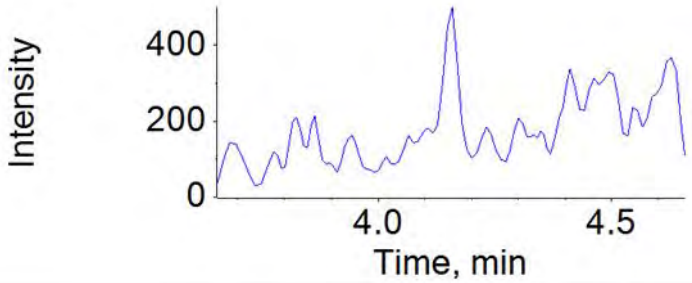
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



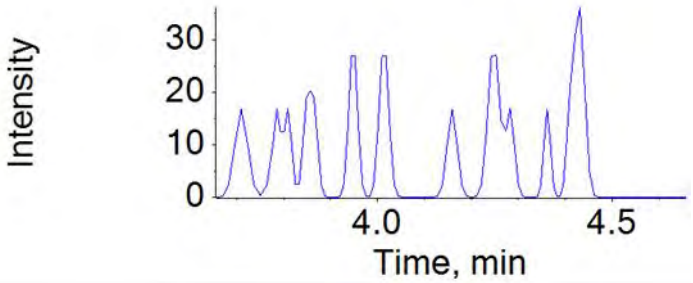
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



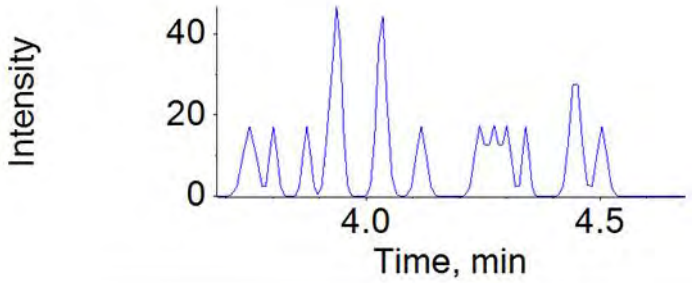
Component: PFHxA
Primary Mass: 313.0 / 269.0



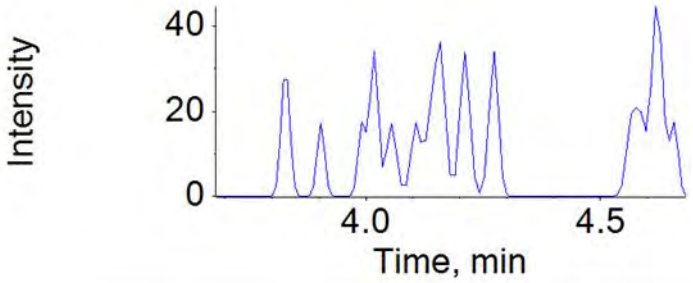
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



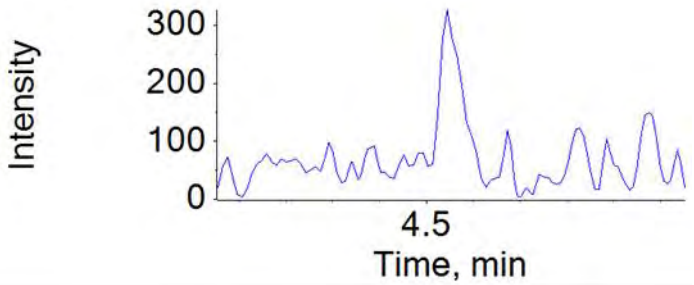
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



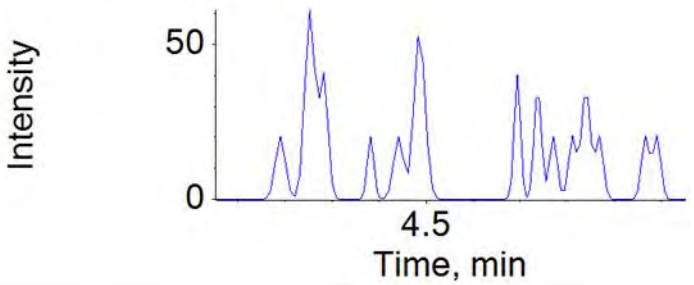
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

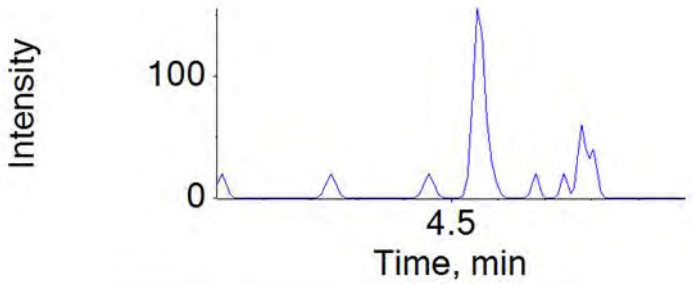
Component: PFHpA
Primary Mass: 363.0 / 319.0



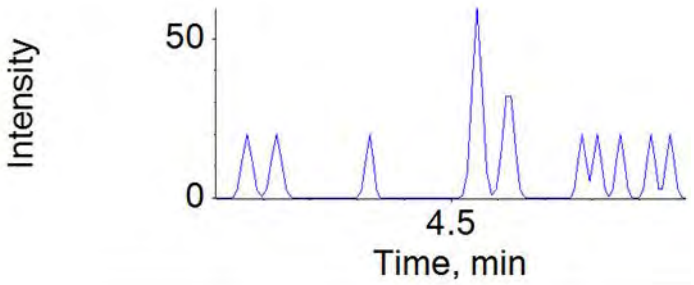
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



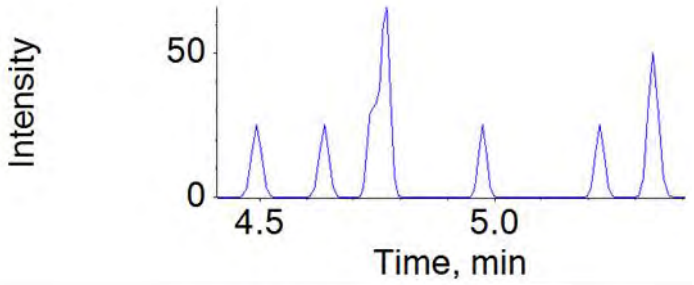
Component: PFHxS
Primary Mass: 399.0 / 80.0



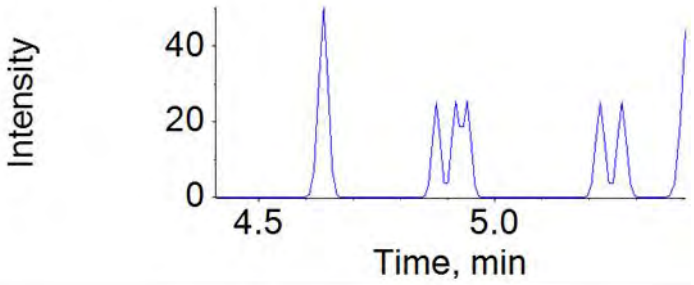
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



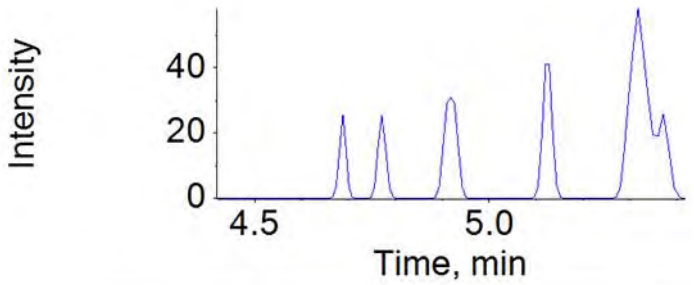
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



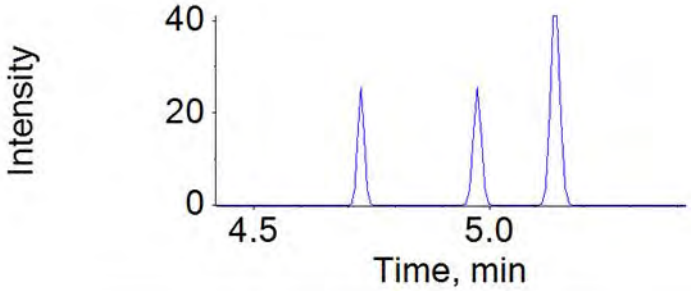
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



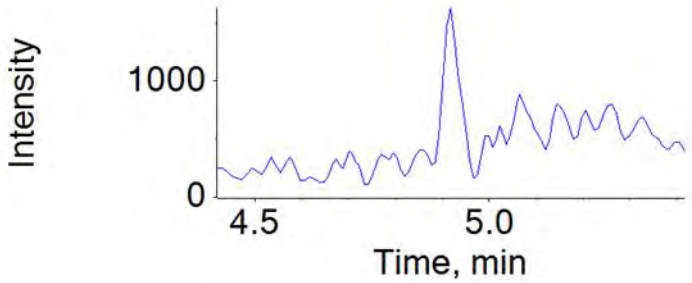
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



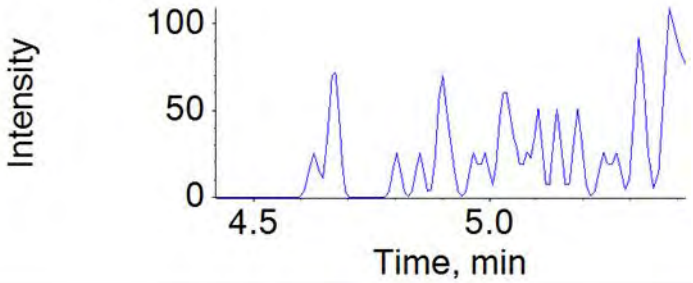
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

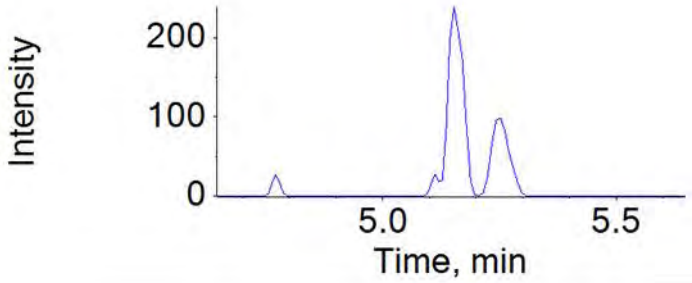
Component: PFOA
Primary Mass: 413.0 / 369.0



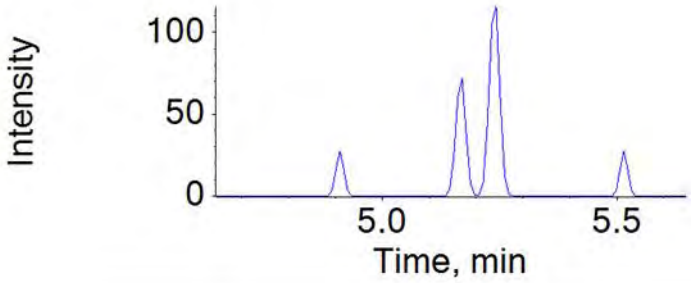
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



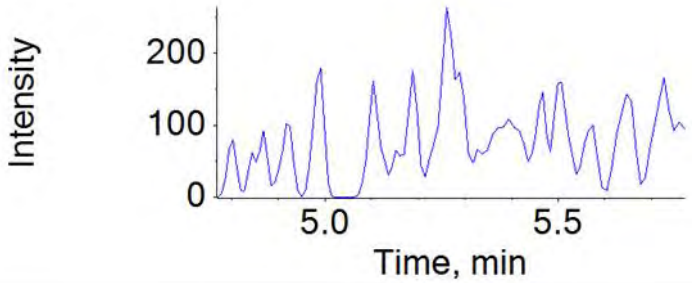
Component: PFOS
Primary Mass: 499.0 / 80.0



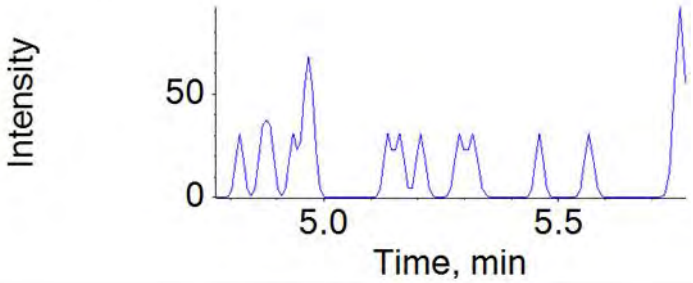
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



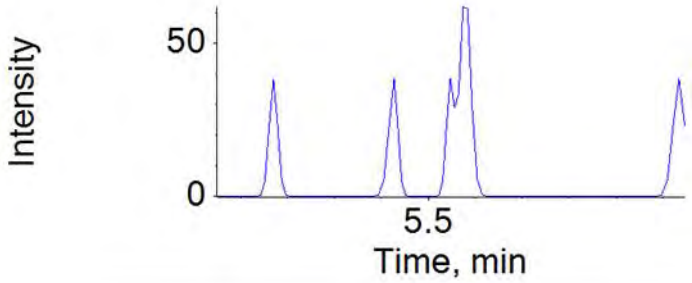
Component: PFNA
Primary Mass: 463.0 / 419.0



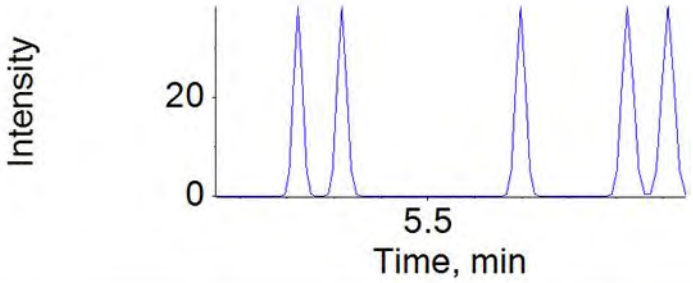
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



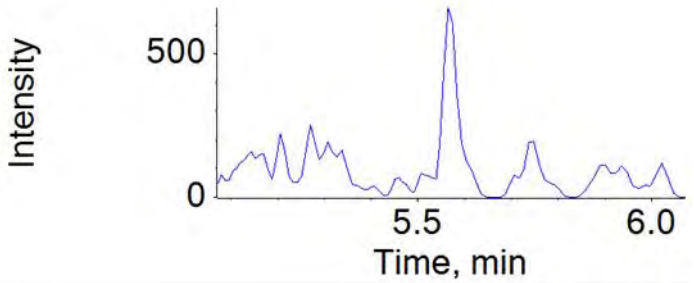
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



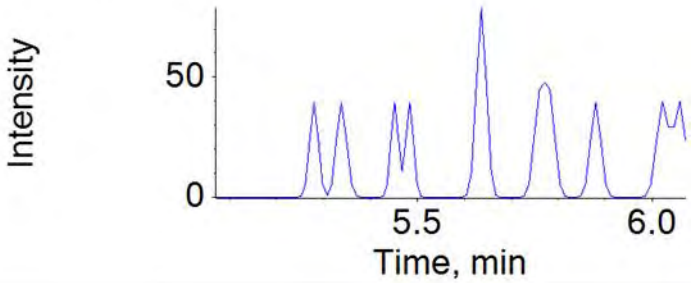
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

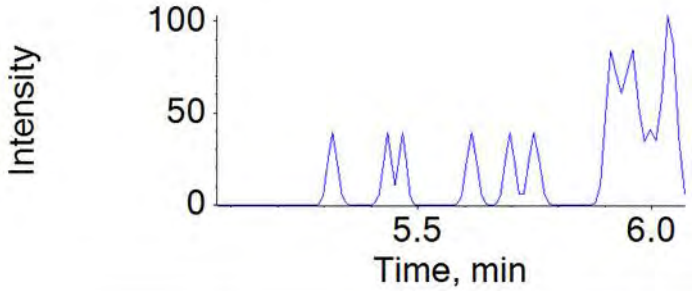
Component: PFDA
Primary Mass: 513.0 / 469.0



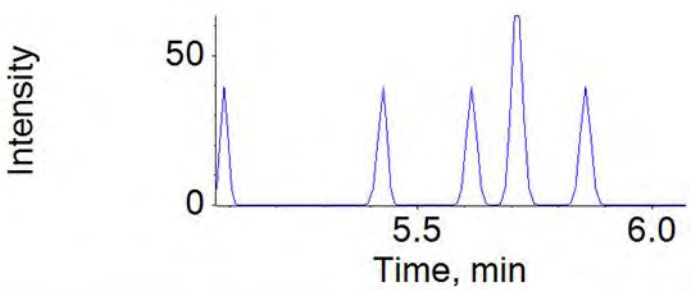
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



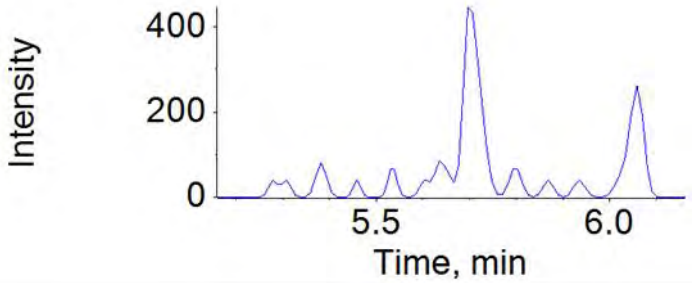
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



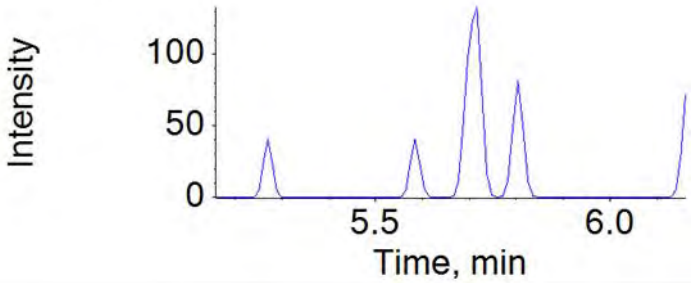
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



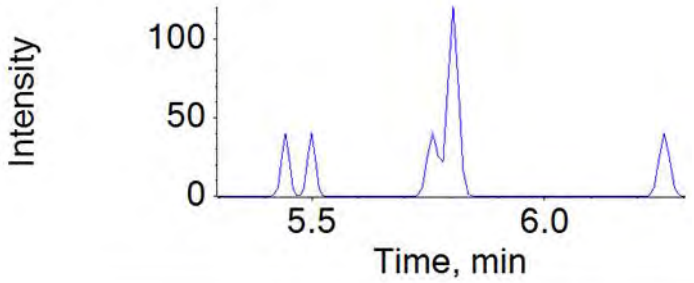
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



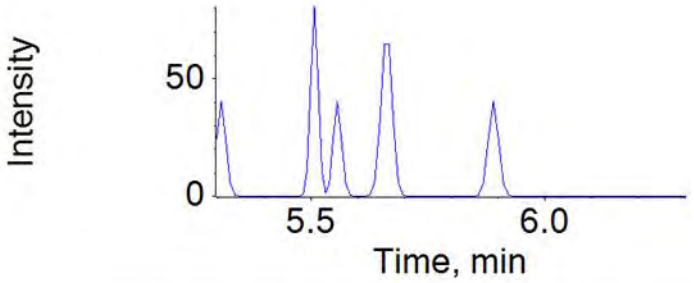
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



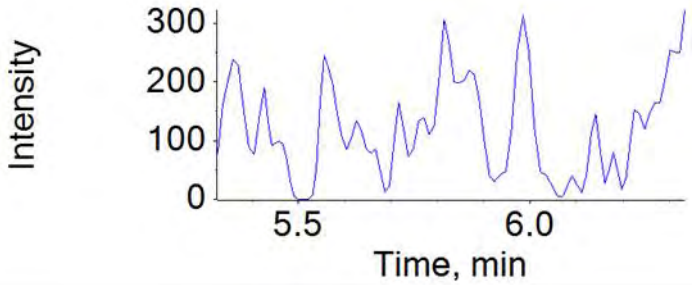
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



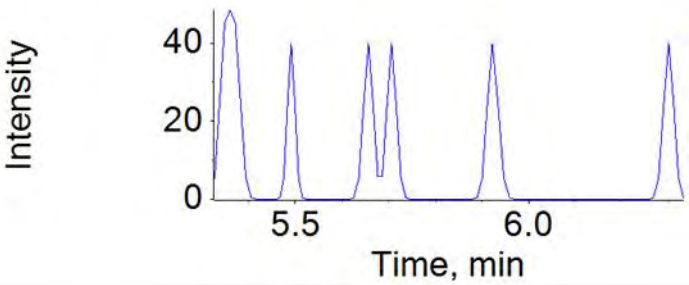
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

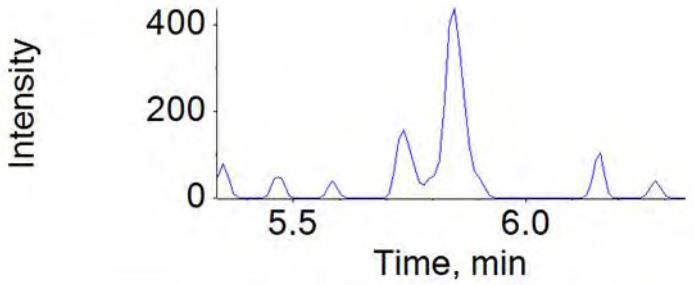
Component: PFUnDA
Primary Mass: 563.0 / 519.0



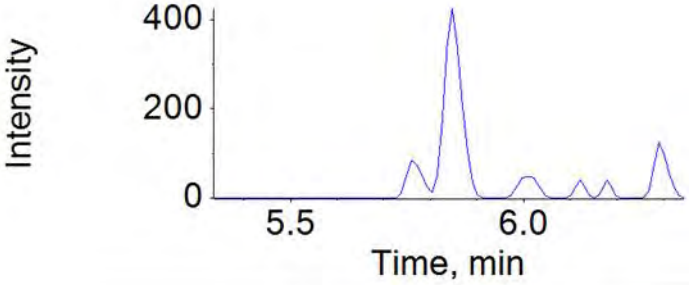
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



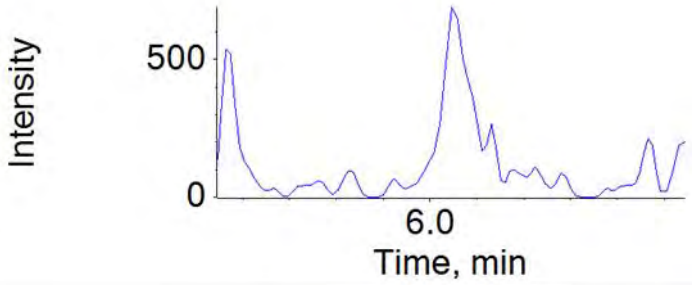
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



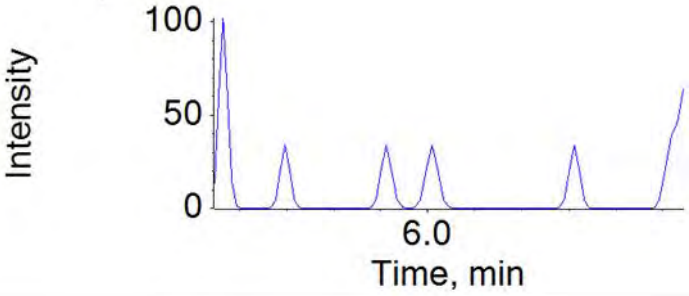
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



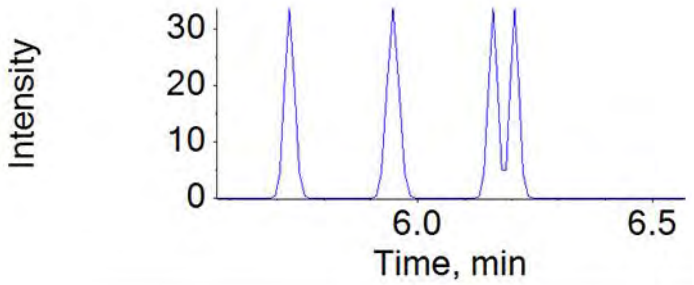
Component: PFDoDA
Primary Mass: 613.0 / 569.0



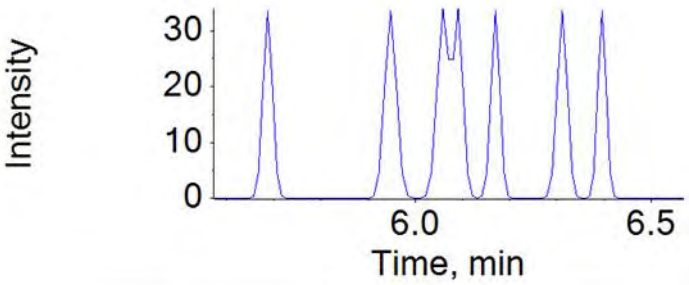
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



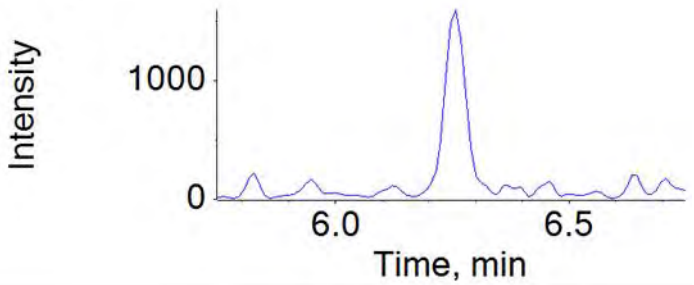
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



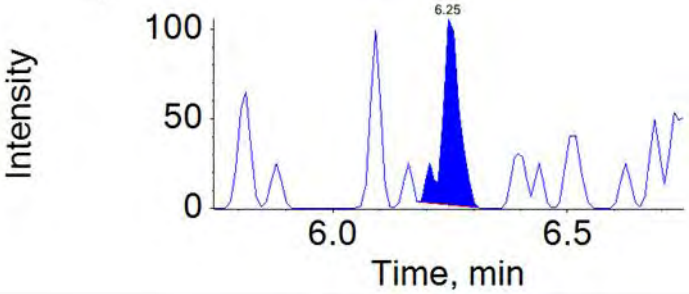
APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

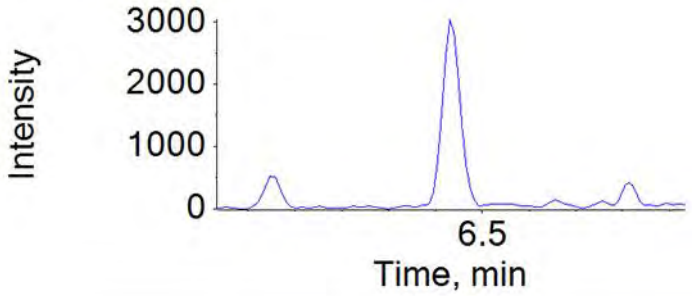
Component: PFTrDA
Primary Mass: 663.0 / 619.0



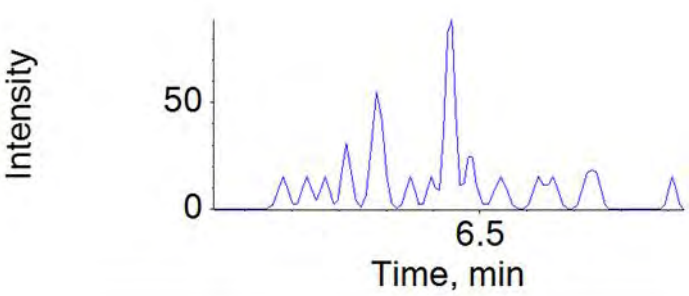
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



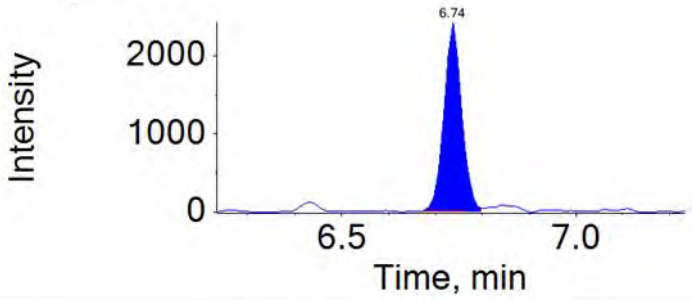
Component: PFTeDA
Primary Mass: 713.0 / 669.0



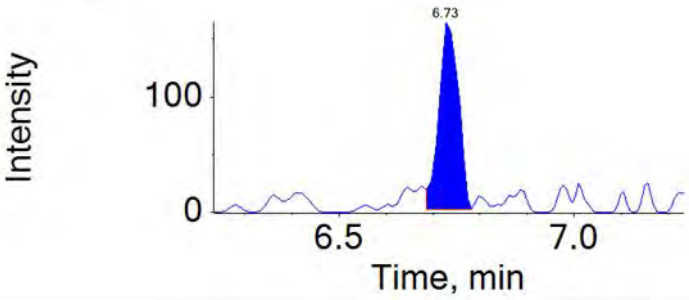
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



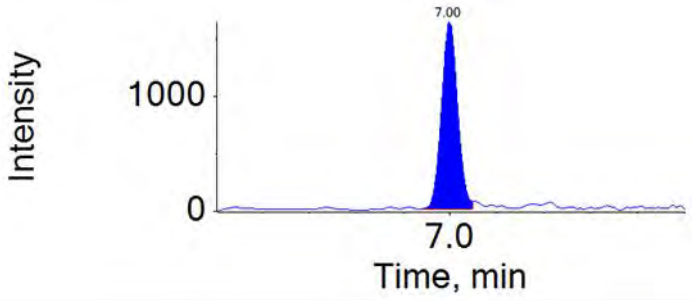
Component: PFHxDA
Primary Mass: 813.0 / 769.0



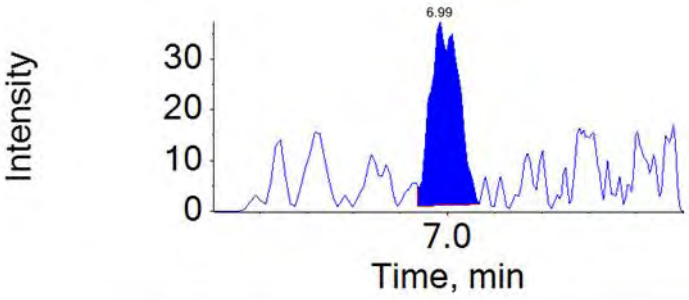
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By JPT at 1:11 pm, 11/29/18

REVIEWED
By HMK at 1:17 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	MDL			**Data File:**		18NOV28DCAL-05.wiff
Sample ID:	MDLMODX1833F			**Acquis Date:**		2018-11-28T13:33:07
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	2			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1202955.4	887248.9	36	50	
13C2-PFOA	5.0	664292.2	498501.6	33	50	
13C4-PFOS	4.8	375981.9	283214.2	33	50	
13C2-PFDA	5.0	580456.5	441790.6	31	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1367472.9	13C3-PFBA	1202955.4	1.137	5.000	5.072	101	70-130	
E13C5-PFPeA	1239583.2	13C3-PFBA	1202955.4	1.030	5.000	4.812	96	70-130	
E13C3-PFBS	565097.8	13C3-PFBA	1202955.4	0.470	4.650	4.482	96	70-130	
E13C2-4:2-FTS	91419.7	13C2-PFOA	664292.2	0.138	4.670	4.743	102	70-130	
E13C5-PFHxA	909464.7	13C2-PFOA	664292.2	1.369	5.000	5.029	101	70-130	
E13C3-PFHxS	412697.5	13C2-PFOA	664292.2	0.621	4.730	4.869	103	70-130	
E13C4-PFHpA	736898.5	13C2-PFOA	664292.2	1.109	5.000	5.097	102	70-130	
E13C2-6:2-FTS	78325.6	13C2-PFOA	664292.2	0.118	4.750	4.936	104	70-130	
E13C8-PFOA	1322963.7	13C2-PFOA	664292.2	1.992	5.000	5.482	110	70-130	
E13C8-PFOS	393817.9	13C4-PFOS	375981.9	1.047	4.780	4.728	99	70-130	
E13C9-PFNA	850571.5	13C4-PFOS	375981.9	2.262	5.000	4.969	99	70-130	
E13C6-PFDA	1044197.2	13C2-PFDA	580456.5	1.799	5.000	5.072	101	70-130	
E13C2-8:2-FTS	65872.4	13C2-PFDA	580456.5	0.113	4.790	4.877	102	70-130	
E13C8-PFOSA	757176.1	13C2-PFDA	580456.5	1.304	5.000	4.786	96	70-130	
Ed3-NMeFOSAA	233869.6	13C2-PFDA	580456.5	0.403	5.000	5.116	102	70-130	
E13C7-PFUnDA	717824.6	13C2-PFDA	580456.5	1.237	5.000	5.227	105	70-130	
Ed5-NEtFOSAA	174037.9	13C2-PFDA	580456.5	0.300	5.000	5.342	107	70-130	
E13C2-PFDoDA	1443367.4	13C2-PFDA	580456.5	2.487	5.000	5.225	104	70-130	
Ed7-NMePFOSAE	318648.0	13C2-PFDA	580456.5	0.549	5.000	4.744	95	70-130	
Ed3-NMePFOSA	103103.2	13C2-PFDA	580456.5	0.178	5.000	4.807	96	70-130	
Ed9-NEtPFOSAE	276598.5	13C2-PFDA	580456.5	0.477	5.000	4.831	97	70-130	
Ed5-NEtPFOSA	84232.4	13C2-PFDA	580456.5	0.145	5.000	5.042	101	70-130	
E13C2-PFTeDA	1044681.2	13C2-PFDA	580456.5	1.800	5.000	4.980	100	70-130	

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

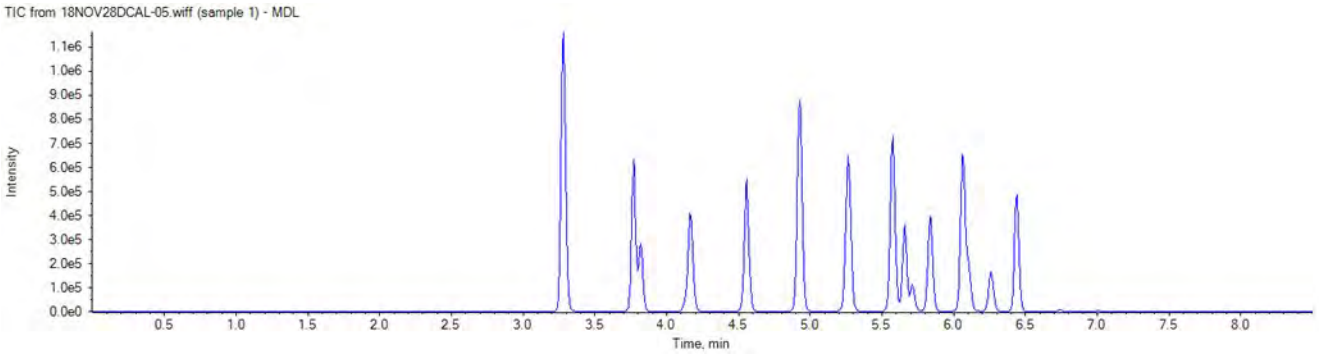
Analyte Quantitation Peak Table

Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-05.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.28	1.000	44840.3		A	13C4-PFBA	3.28	1367472.9	0.033	0.180
PFPeA	3.77	1.000	35372.3		A	13C5-PFPeA	3.77	1239583.2	0.029	0.140
PFBS	3.82	1.000	12605.1		A	13C3-PFBS	3.82	565097.8	0.022	0.108
4:2-FTS	4.13	1.000	2928.7		A	13C2-4:2-FTS	4.13	91419.7	0.032	0.086
PFHxA	4.17	1.000	32436.1		A	13C5-PFHxA	4.17	909464.7	0.036	0.143
PFPeS	4.19	1.100	5200.8		A	13C3-PFBS	3.82	565097.8	0.009	0.093
PFHpA	4.56	1.000	34134.5		A	13C4-PFHpA	4.56	736898.5	0.046	0.143
PFHxS	4.56	1.000	11072.6		A	13C3-PFHxS	4.56	412697.5	0.027	0.126
6:2-FTS	4.91	1.000	4195.7		A	13C2-6:2-FTS	4.91	78325.6	0.054	0.140
PFHpS	4.92	1.080	10674.9		A	13C3-PFHxS	4.56	412697.5	0.026	0.129
PFOA	4.93	1.000	35831.5		A	13C8-PFOA	4.93	1322963.7	0.027	0.140
PFOS	5.25	1.000	10490.3		A	13C8-PFOS	5.26	393817.9	0.027	0.112
PFNA	5.27	1.000	29535.3		A	13C9-PFNA	5.27	850571.5	0.035	0.133
PFNS	5.55	1.060	5896.9		A	13C8-PFOS	5.26	393817.9	0.015	0.095
PFDA	5.58	1.000	28044.3		A	13C6-PFDA	5.57	1044197.2	0.027	0.152
8:2-FTS	5.58	1.000	3464.6		A	13C2-8:2-FTS	5.58	65872.4	0.053	0.099
PFOSA	5.66	1.000	18214.8		A	13C8-PFOSA	5.66	757176.1	0.024	0.122
NMeFOSAA	5.71	1.000	6753.7		A	d3-NMeFOSAA	5.71	233869.6	0.029	0.184
PFDS	5.81	1.100	7418.0		A	13C8-PFOS	5.26	393817.9	0.019	0.149
PFUnDA	5.83	1.000	27644.3		A	13C7-PFUnDA	5.83	717824.6	0.039	0.138
NEtFOSAA	5.85	1.000	5734.3		M	d5-NEtFOSAA	5.84	174037.9	0.033	0.160
PFDoDA	6.06	1.000	38884.2		A	13C2-PFDoDA	6.06	1443367.4	0.027	0.148
10:2-FTS	6.08	1.090	3761.8		A	13C2-8:2-FTS	5.58	65872.4	0.057	0.126
NMePFOSAE	6.11	1.000	9196.7		A	d7-NMePFOSAE	6.10	318648.0	0.029	0.121
NMePFOSA	6.11	1.000	2590.4		A	d3-NMePFOSA	6.11	103103.2	0.025	0.133
PFDoS	6.24	1.190	2522.1		A	13C8-PFOS	5.26	393817.9	0.006	0.092
NEtPFOSAE	6.27	1.000	9043.7		A	d9-NEtPFOSAE	6.26	276598.5	0.033	0.118
NEtPFOSA	6.29	1.000	1641.5		A	d5-NEtPFOSA	6.27	84232.4	0.019	0.087
PFTrDA	6.26	1.030	35013.3		A	13C2-PFDoDA	6.06	1443367.4	0.024	0.146
PFTeDA	6.44	1.000	27817.6		A	13C2-PFTeDA	6.44	1044681.2	0.027	0.151
PFHxDA	6.74	1.050	13033.4		A	13C2-PFTeDA	6.44	1044681.2	0.012	0.143
PFODA	7.00	1.090	8671.1		A	13C2-PFTeDA	6.44	1044681.2	0.008	0.111

Total Ion Chromatogram

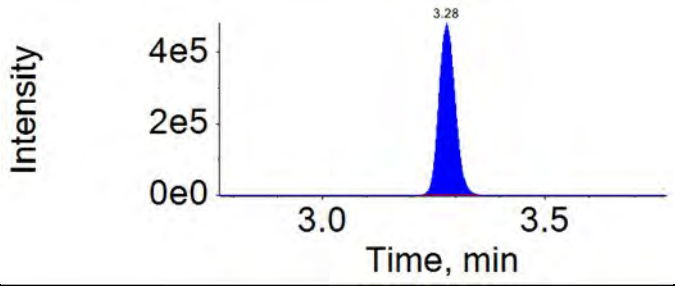


APPROVED
By MCD at 5:01 pm, 11/28/18

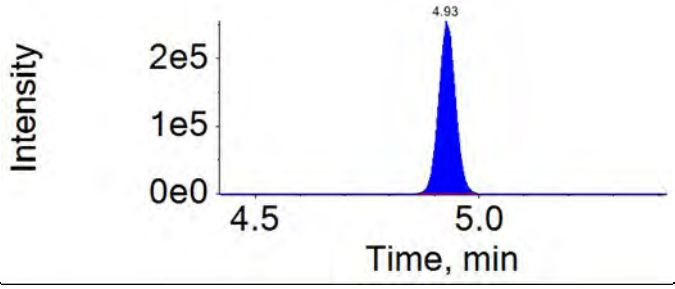
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

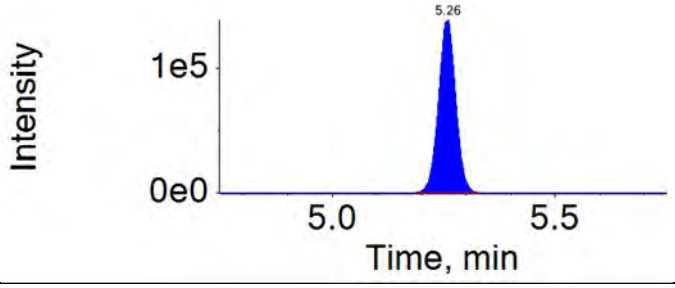
Injection Standard: 13C3-PFBA
216.0 / 172.0



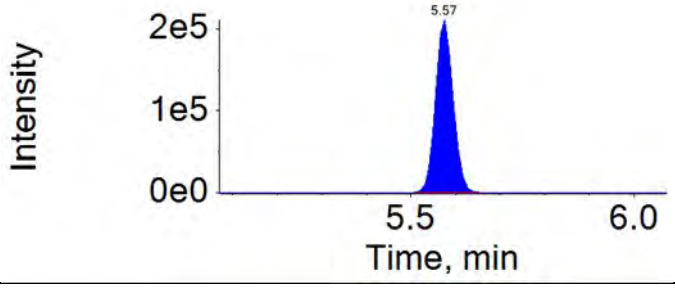
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

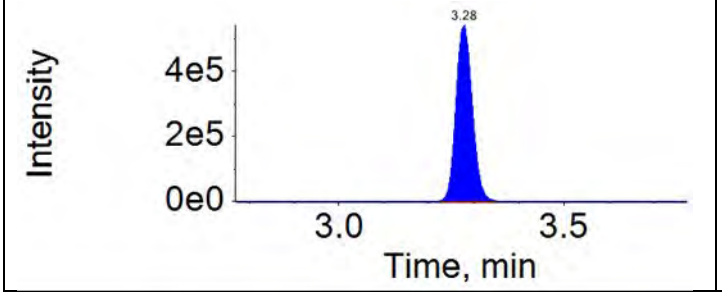


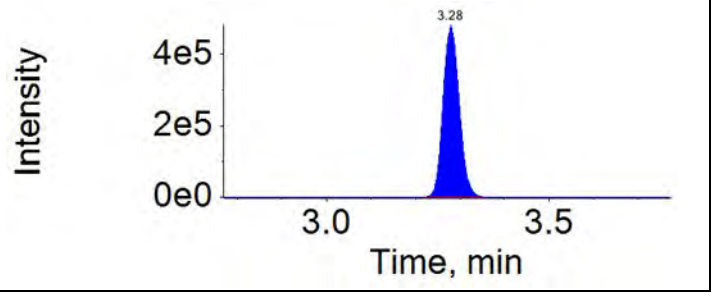
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

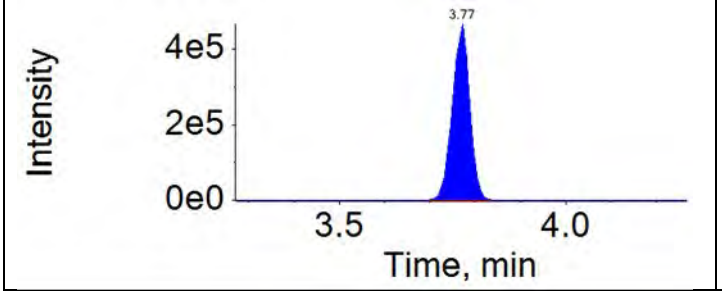
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

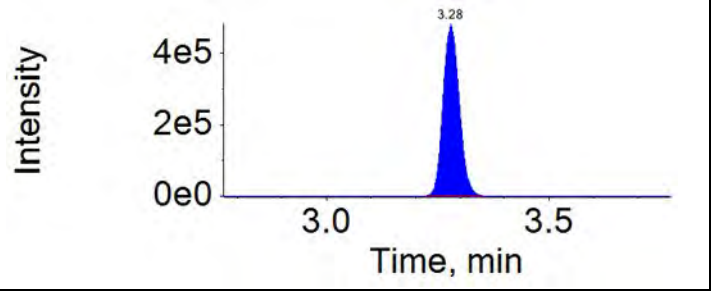
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



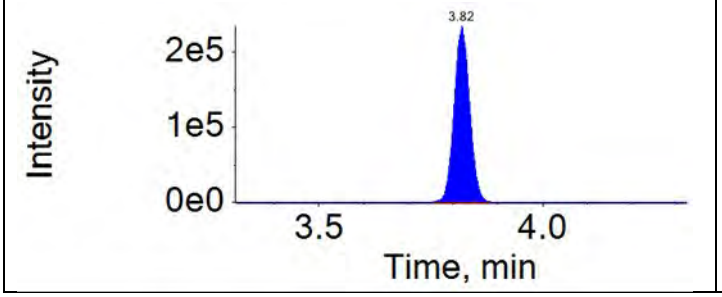


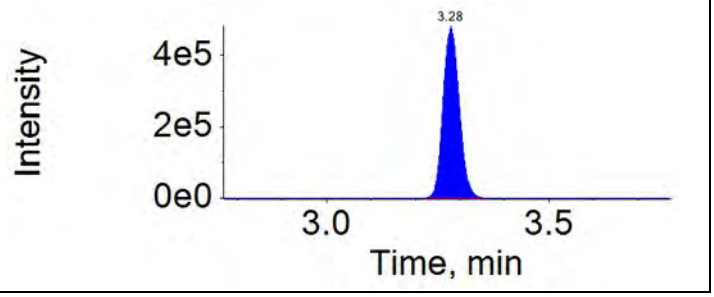
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



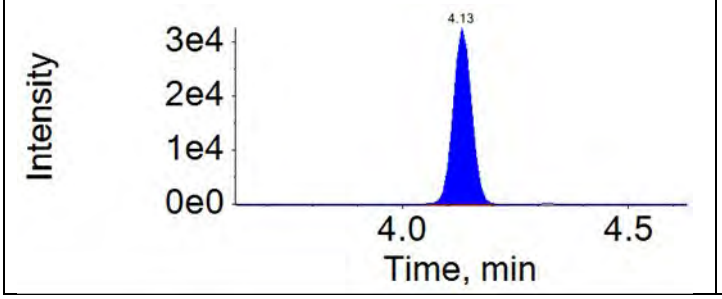


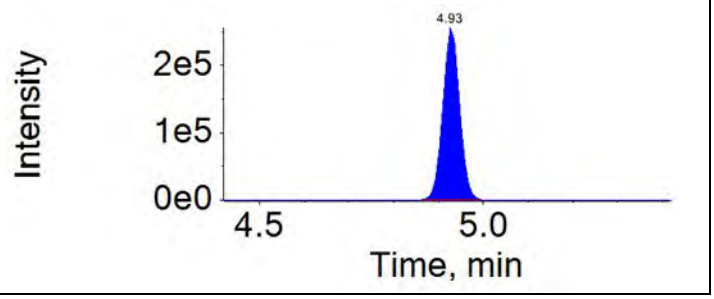
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

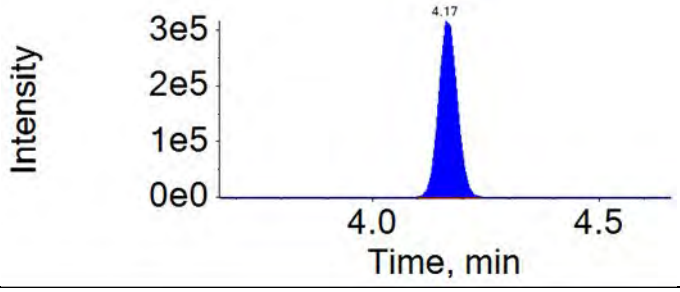
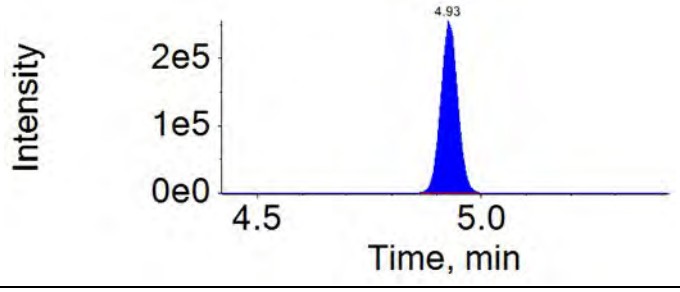


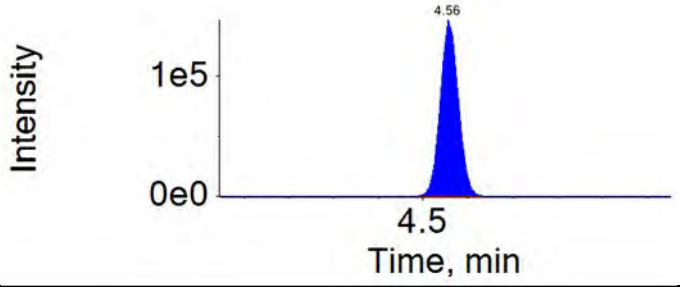
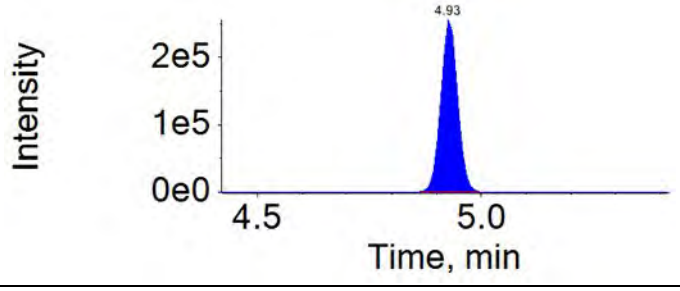


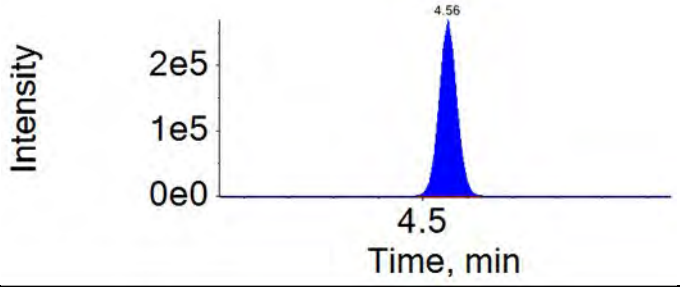
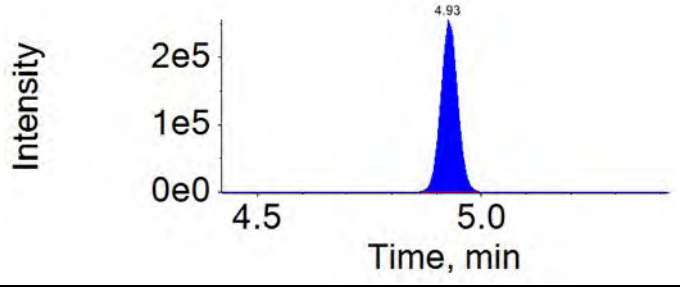
APPROVED
By MCD at 5:01 pm, 11/28/18

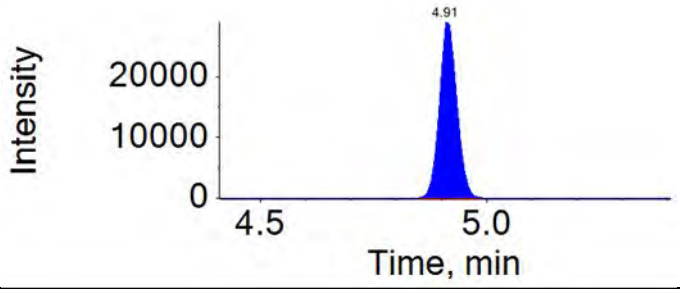
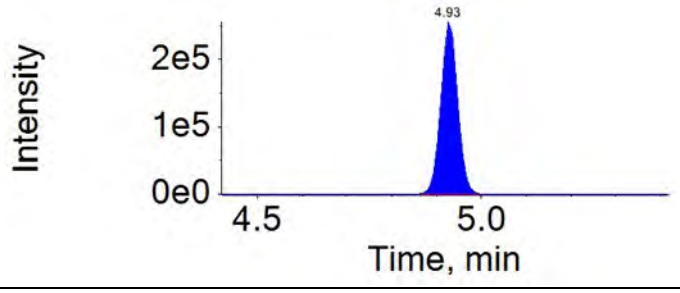
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

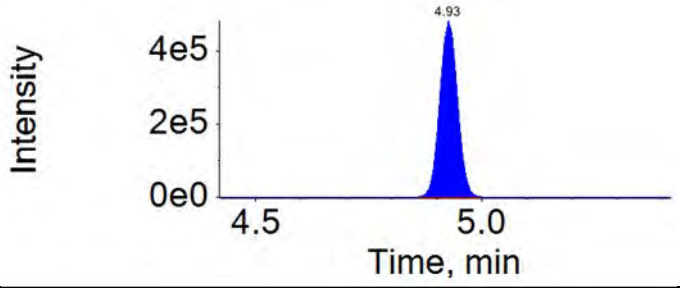
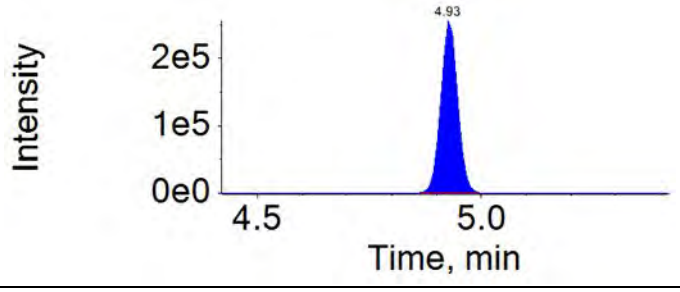
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

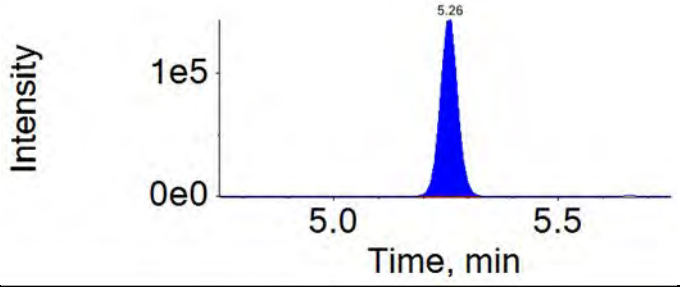
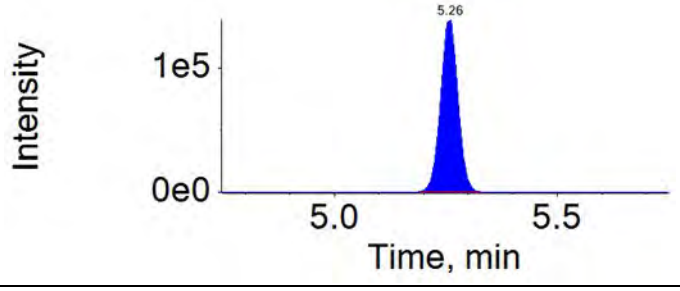
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

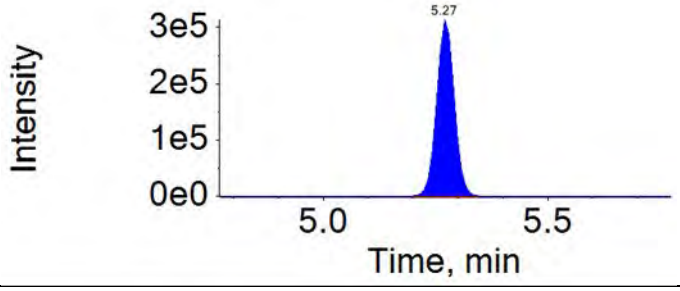
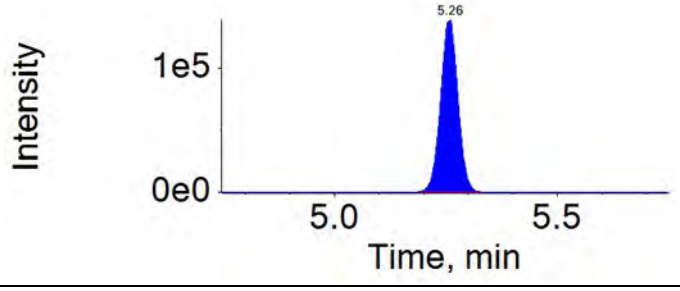
APPROVED
By MCD at 5:01 pm, 11/28/18

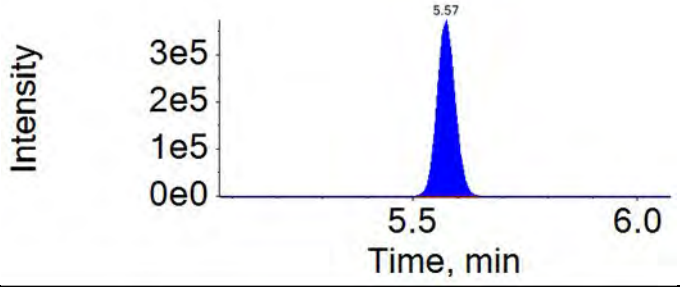
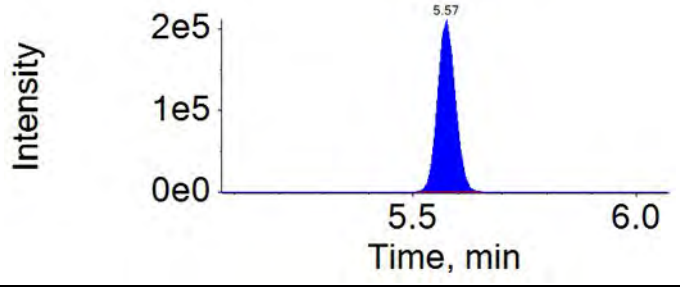
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

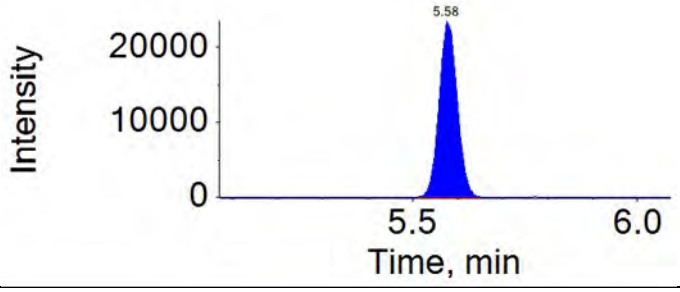
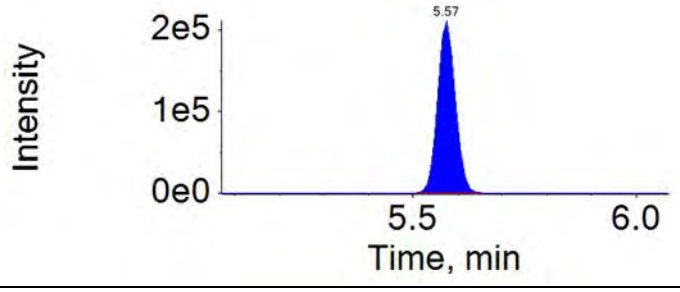
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

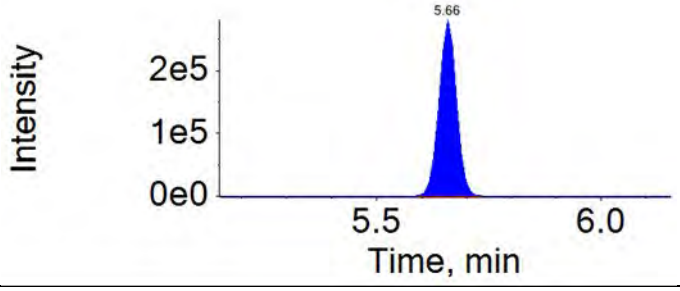
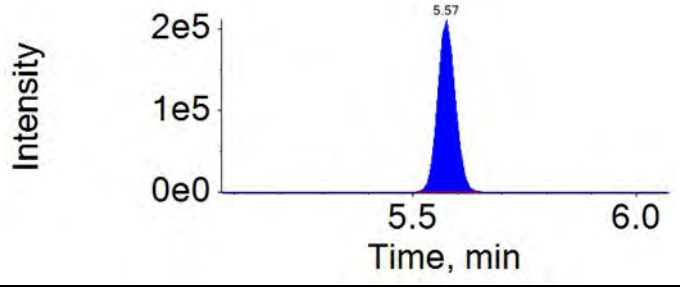
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

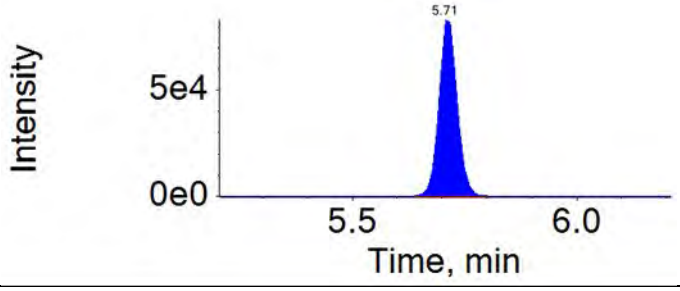
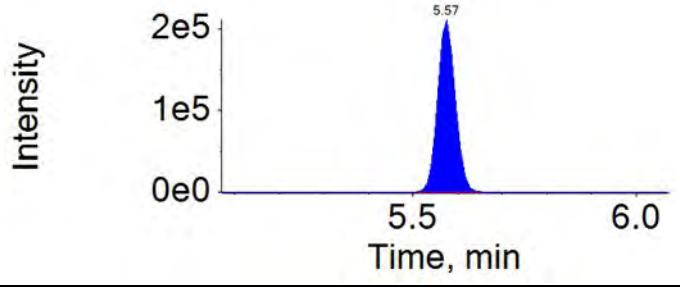
APPROVED
By MCD at 5:01 pm, 11/28/18

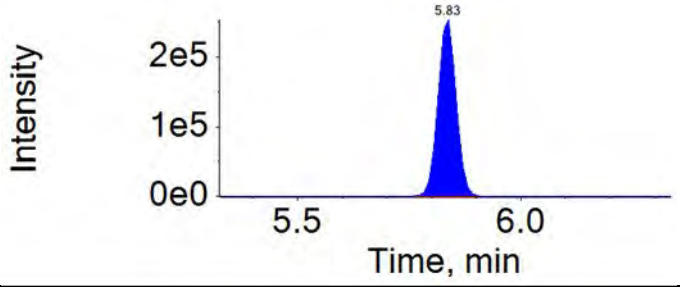
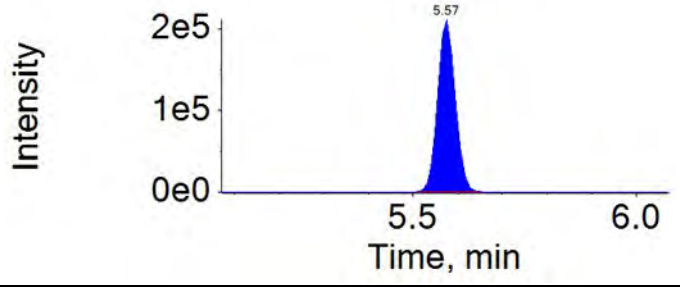
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

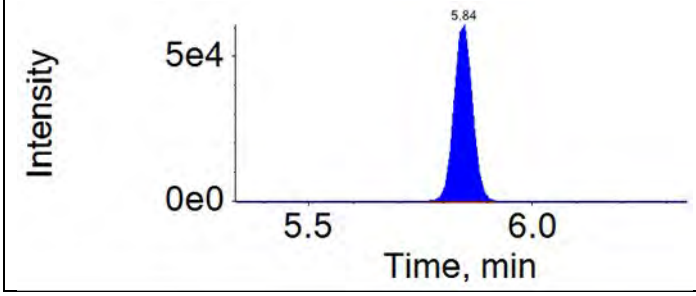
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

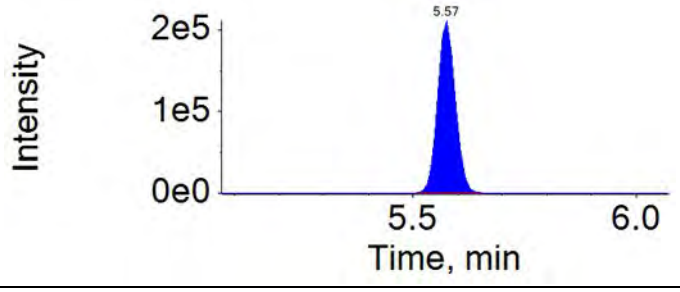
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

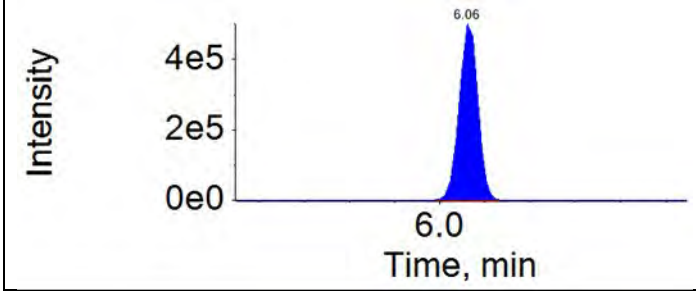
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

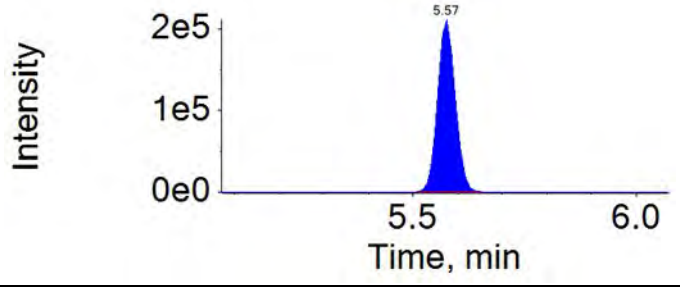
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



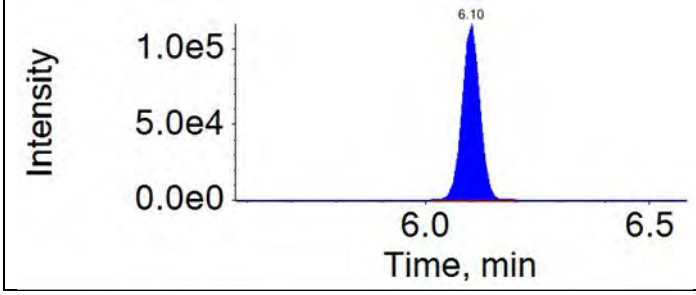


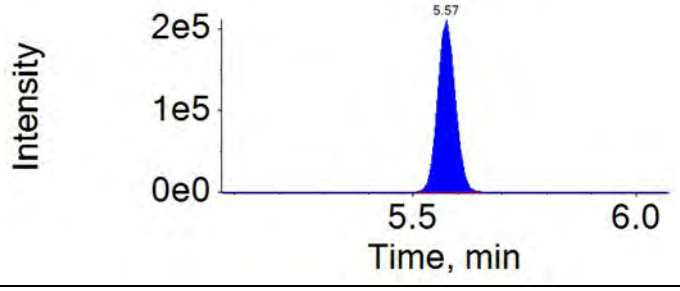
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



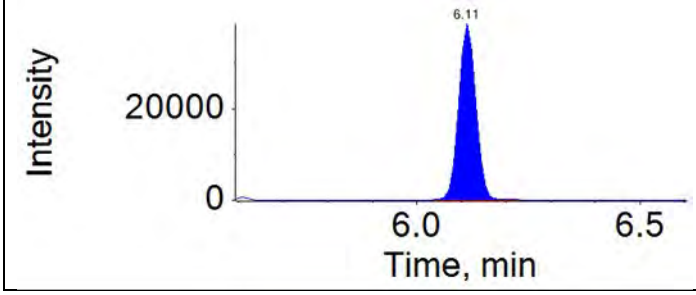


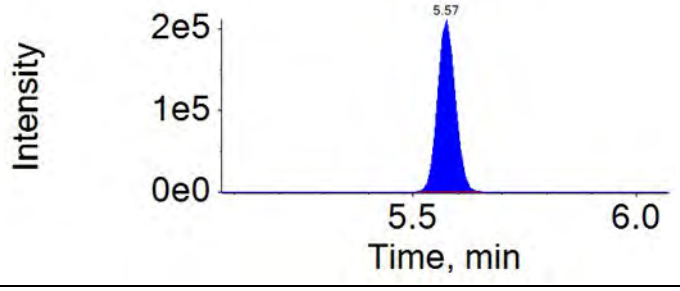
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



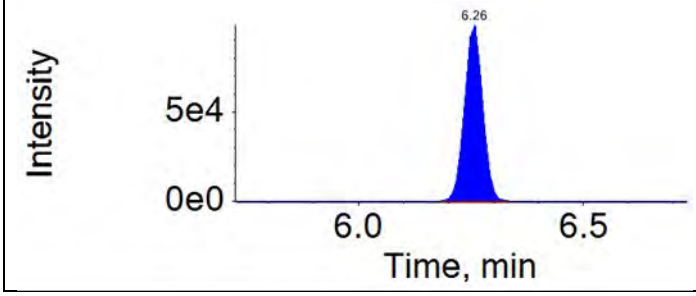


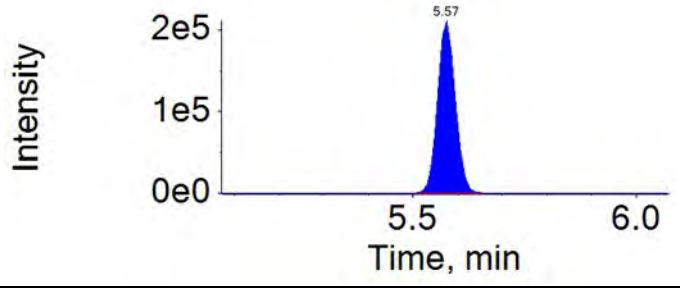
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

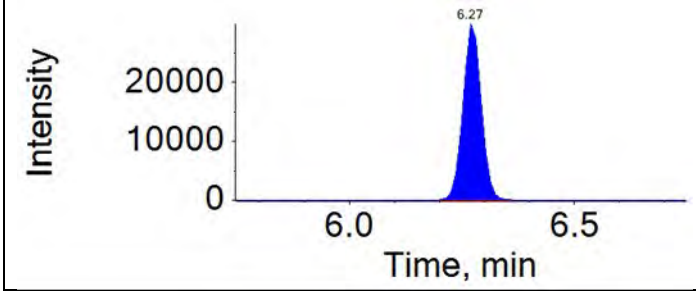
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

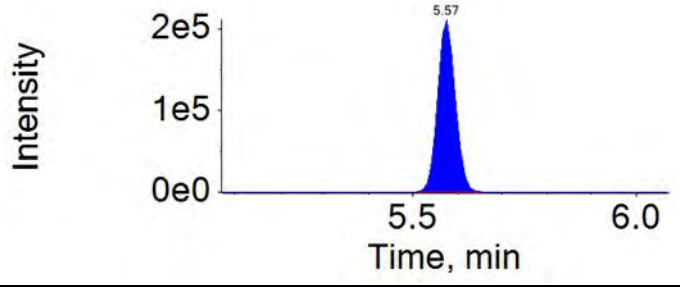
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



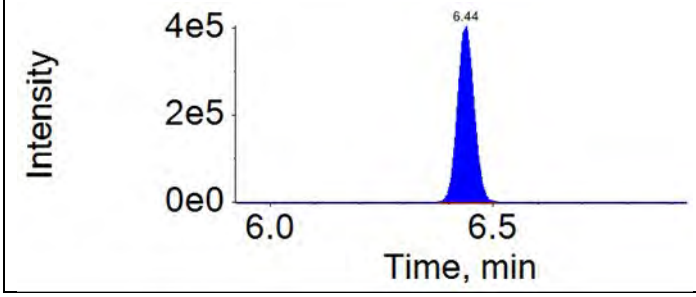


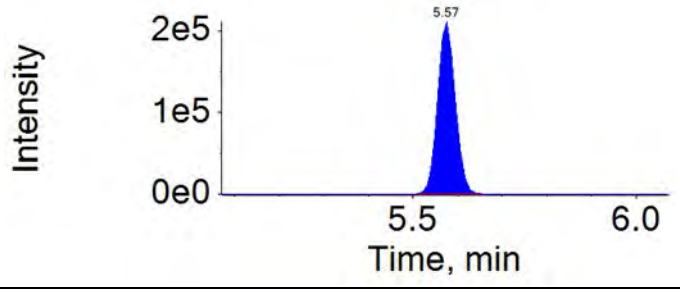
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



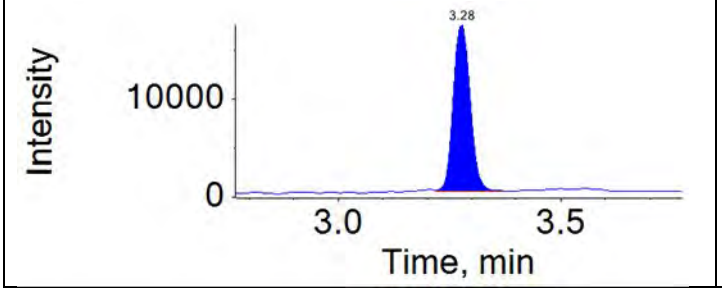


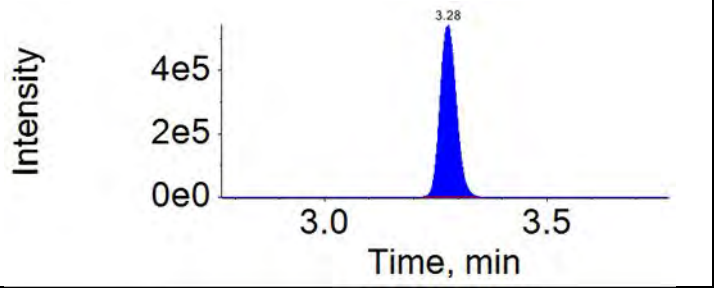
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

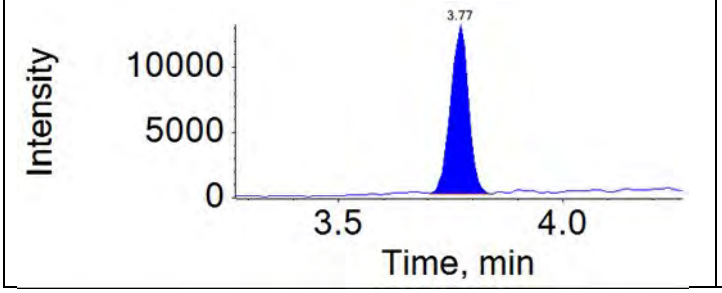
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

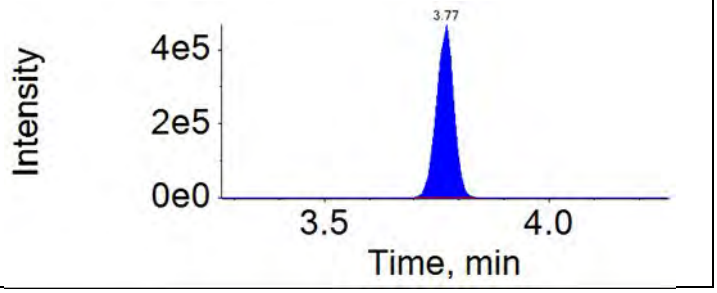
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



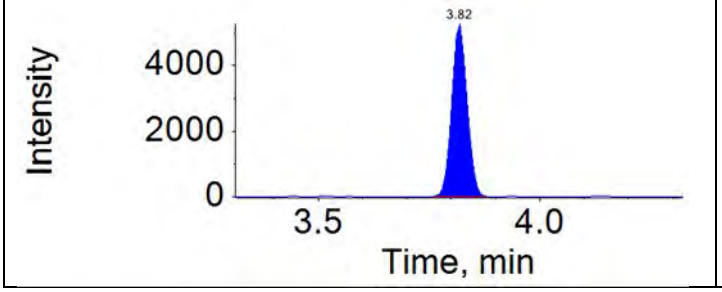


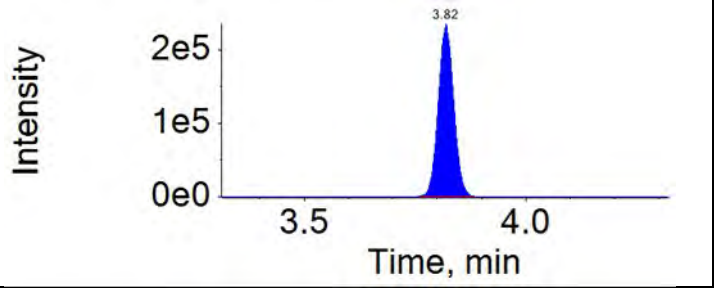
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



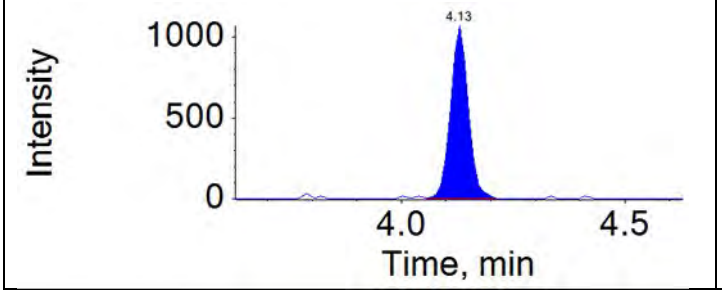


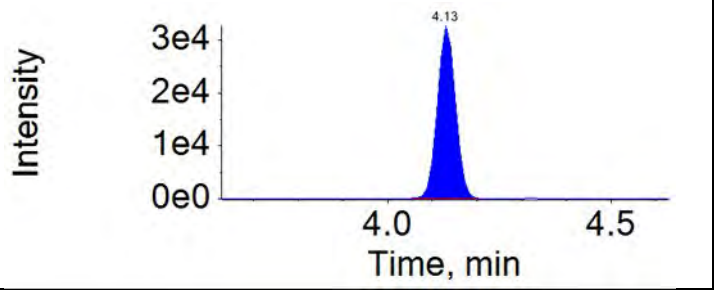
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



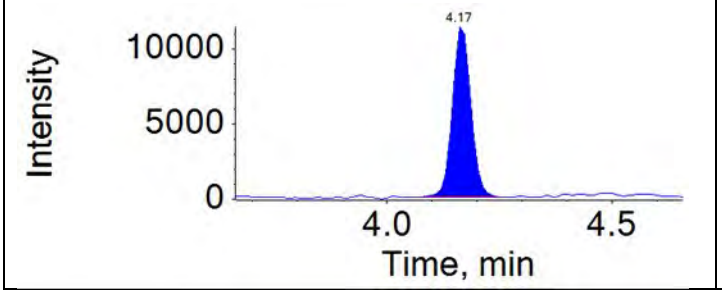


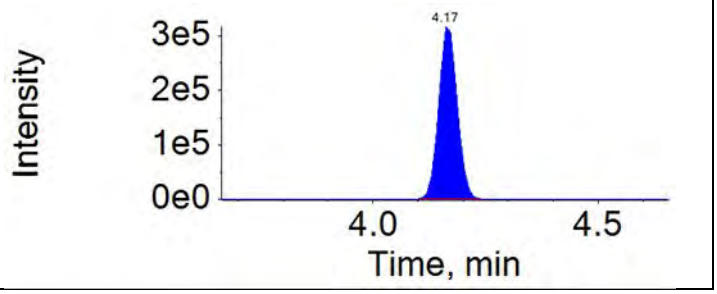
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

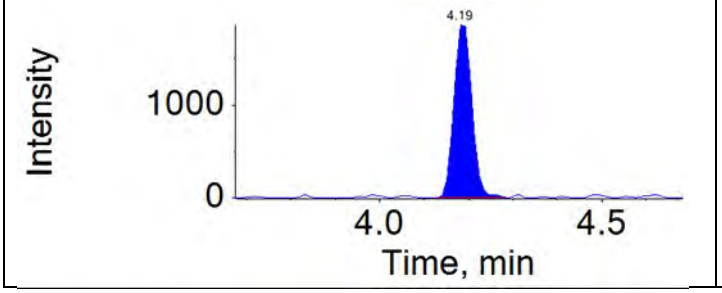
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

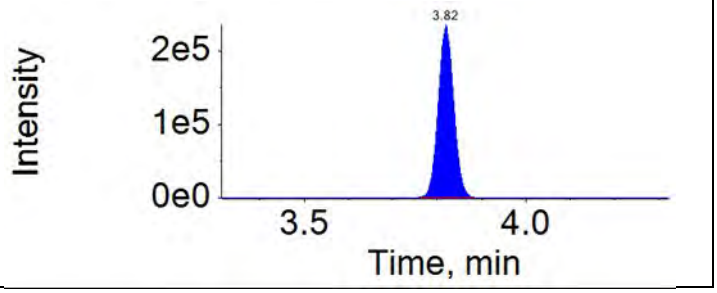
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



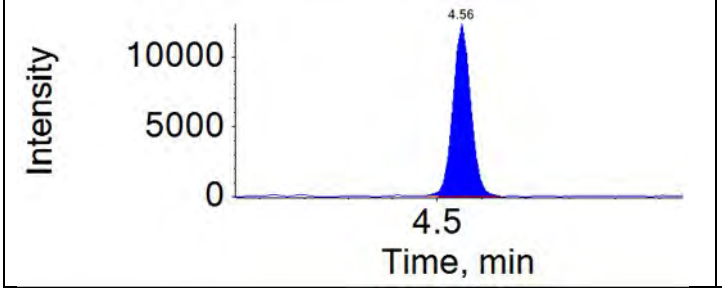


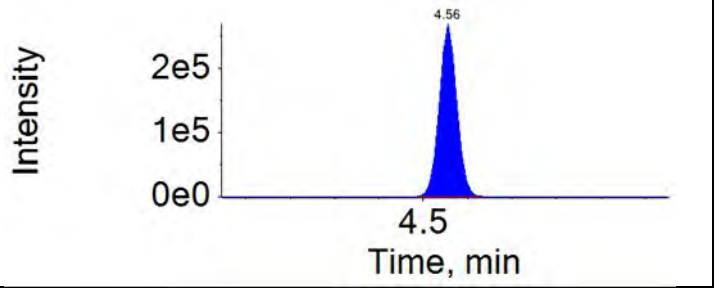
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



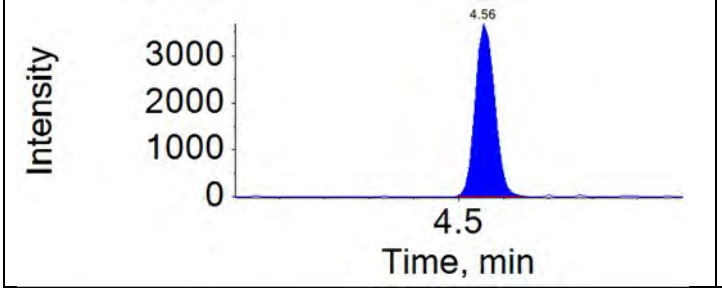


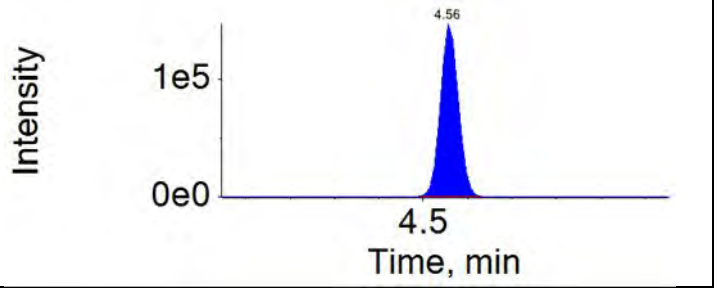
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

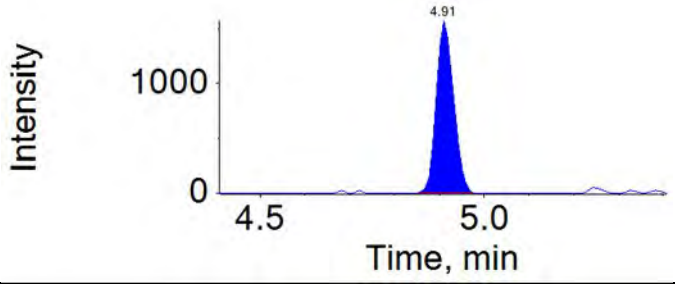
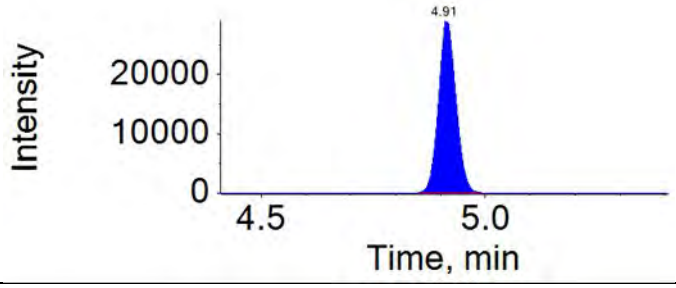


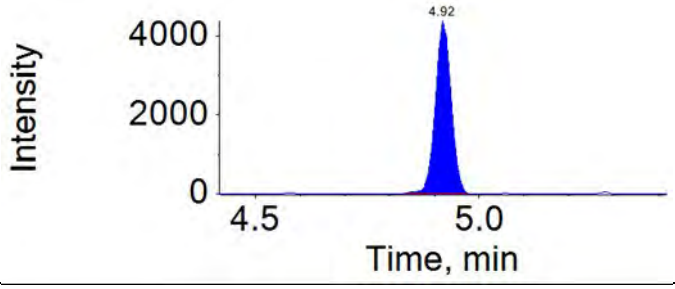
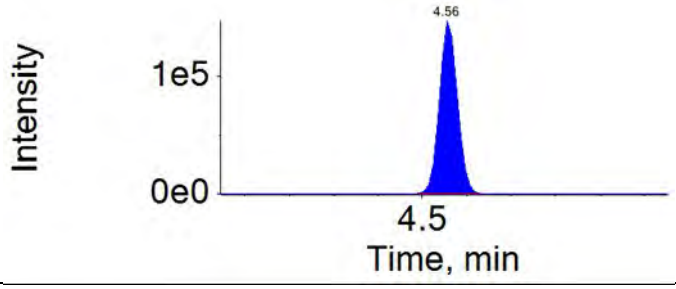


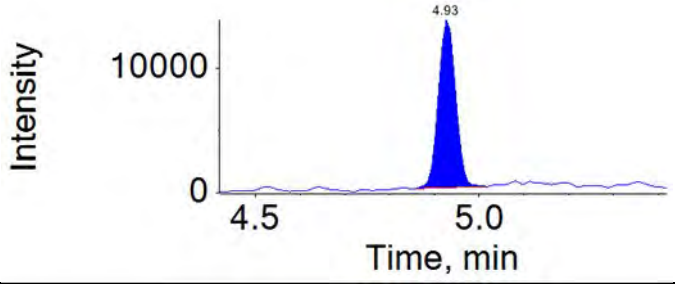
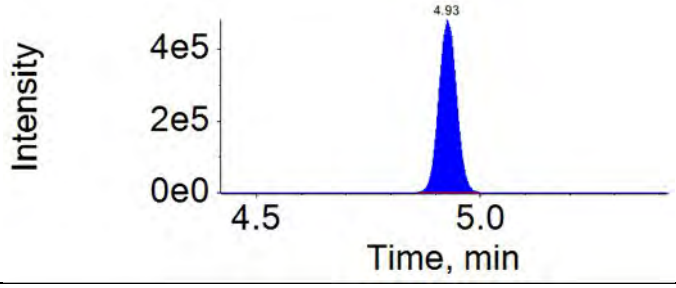
APPROVED
By MCD at 5:01 pm, 11/28/18

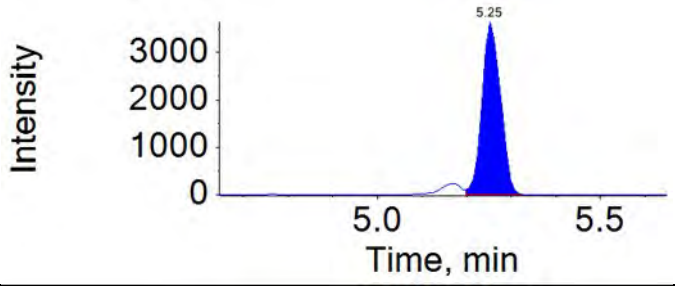
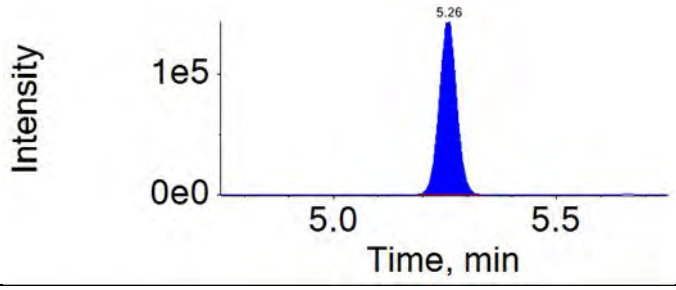
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

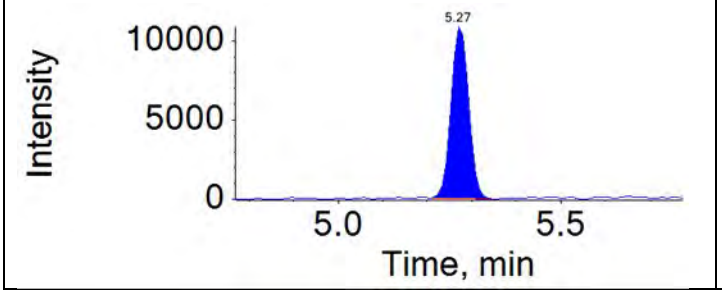
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

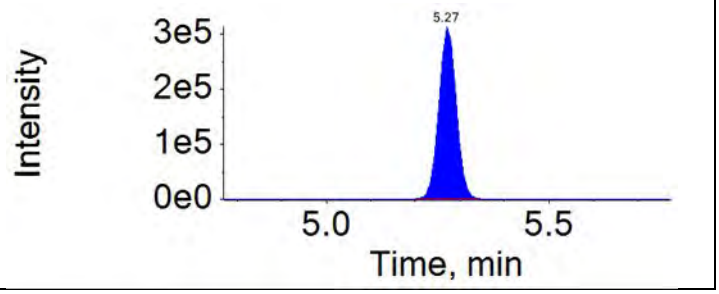
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

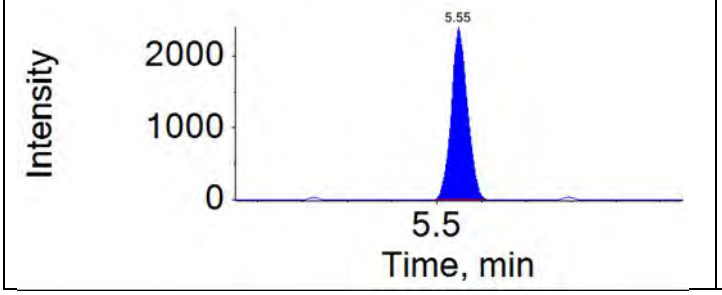
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

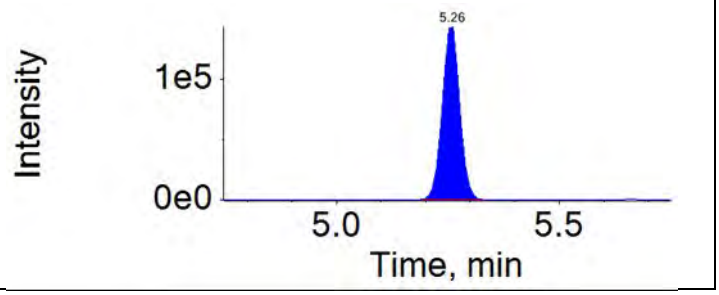
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



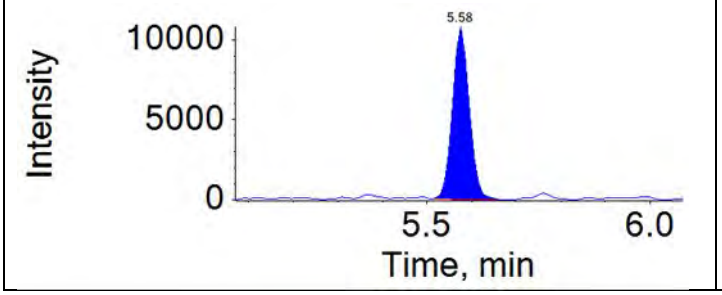


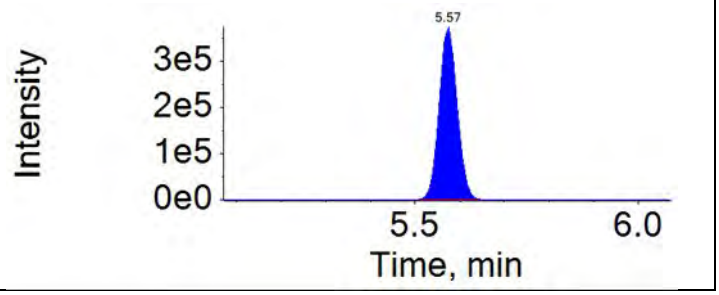
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



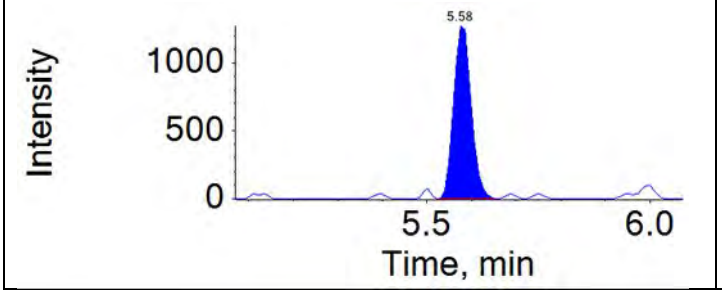


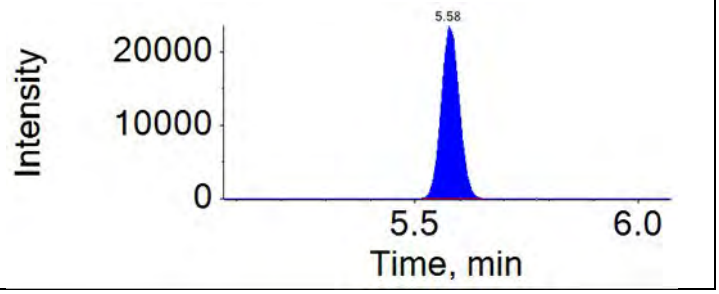
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



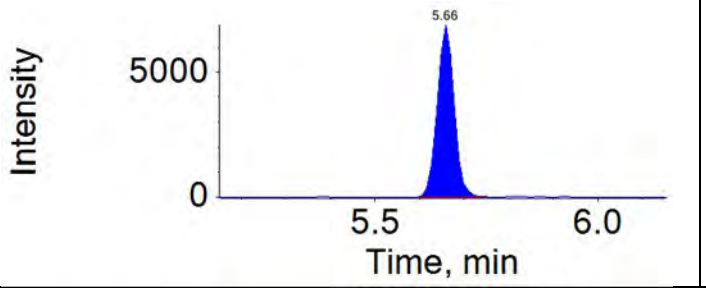


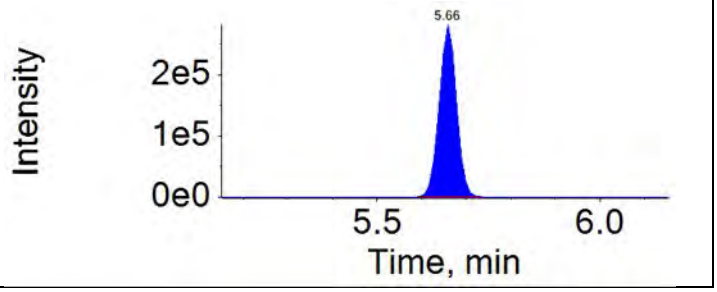
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

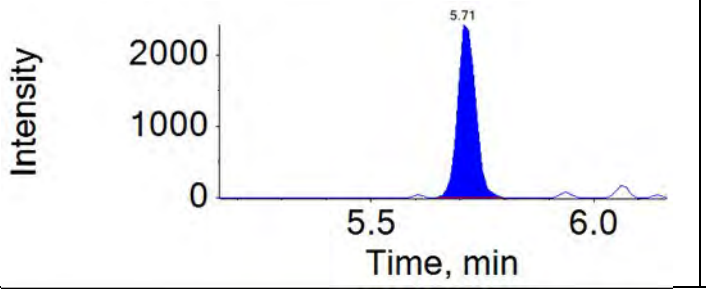
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

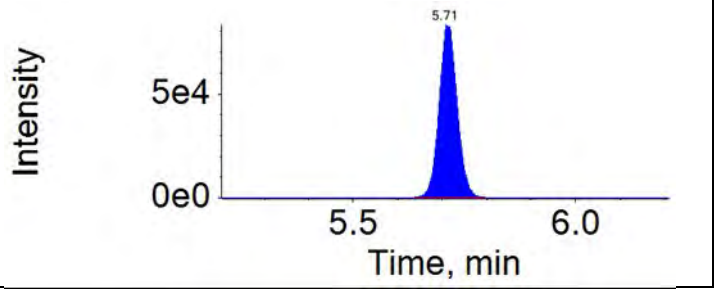
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



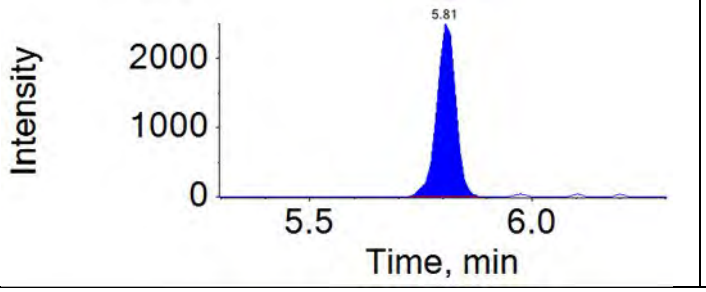


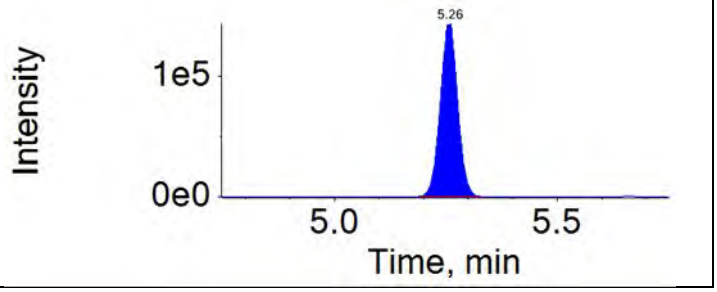
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



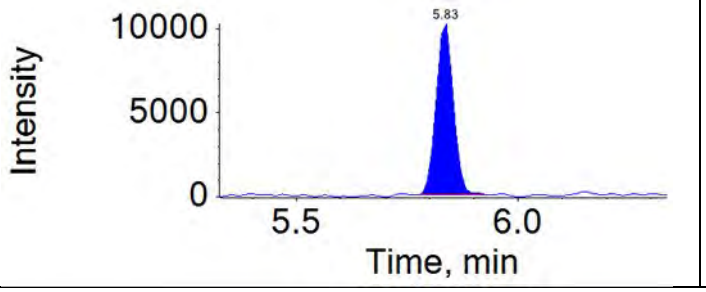


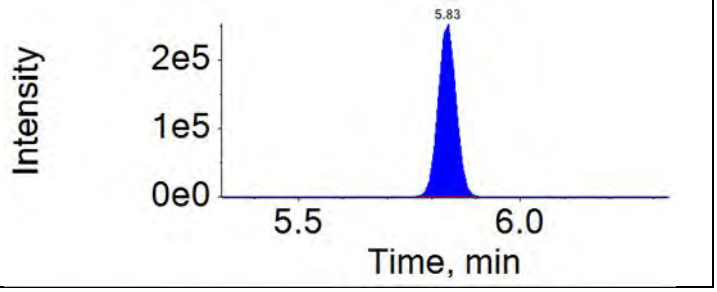
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



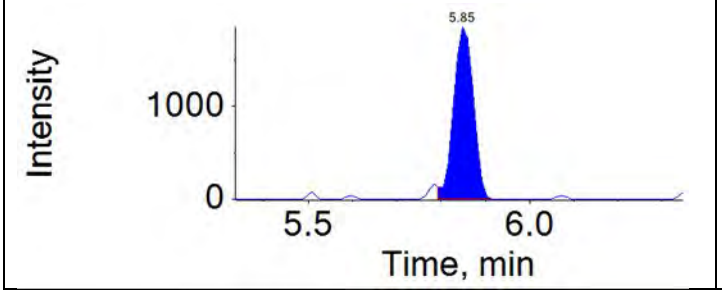


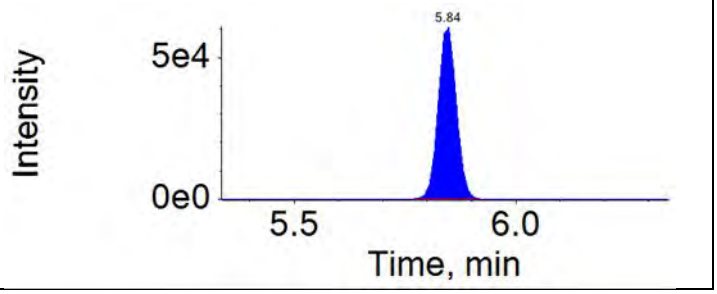
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

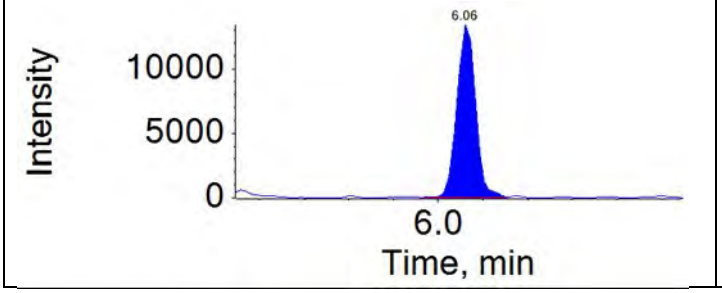
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

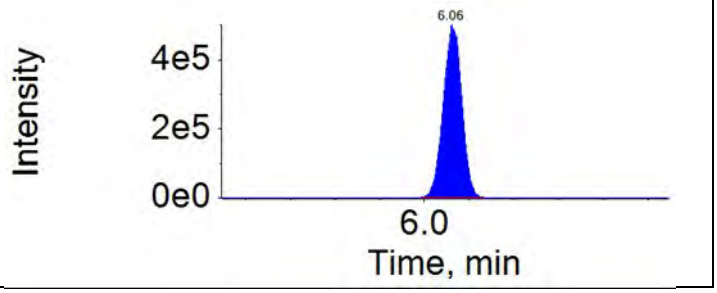
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



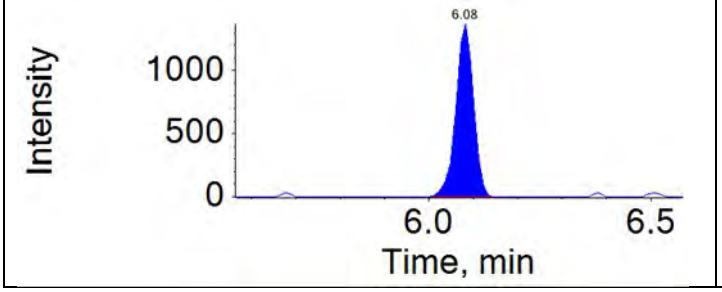


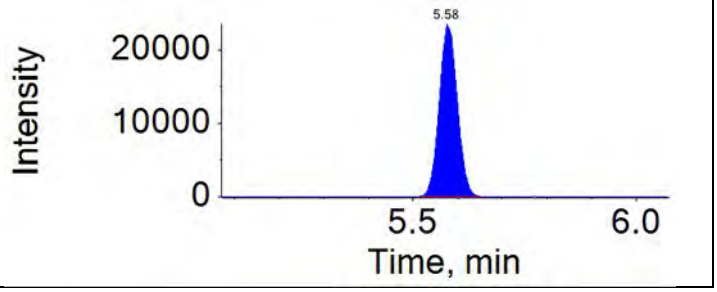
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



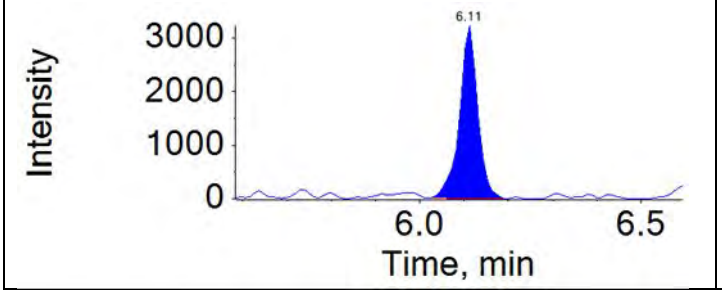


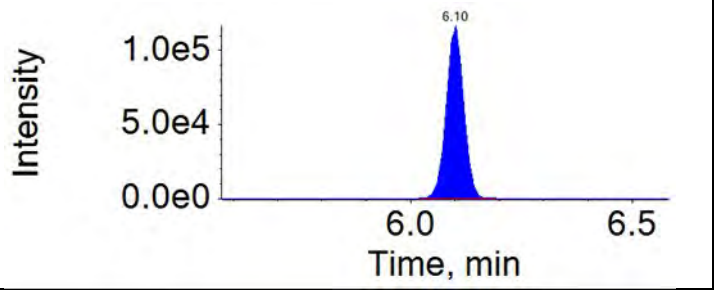
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



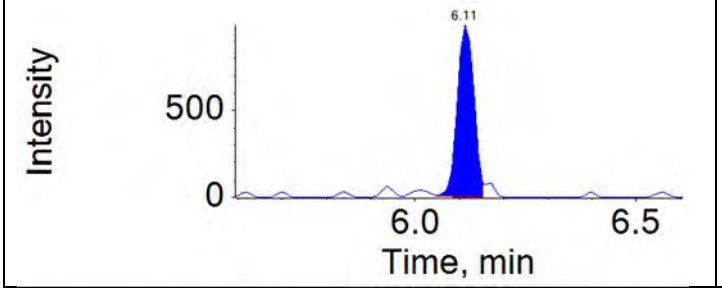


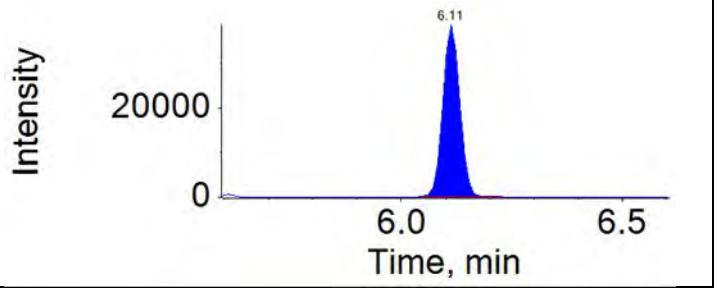
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

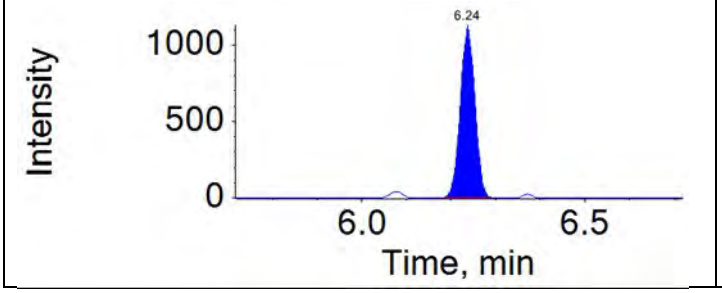
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

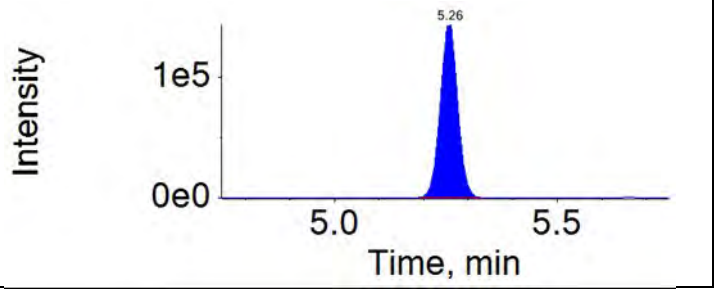
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



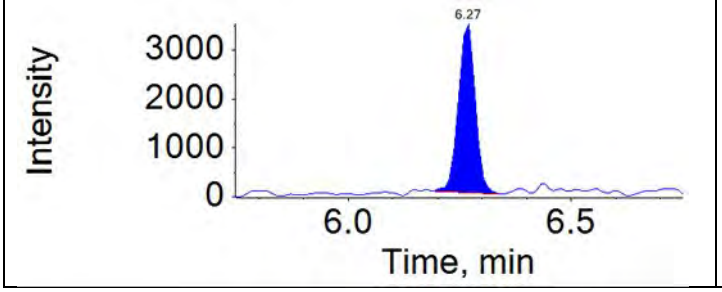


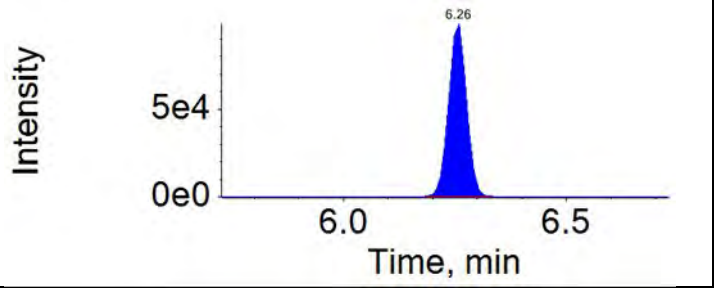
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



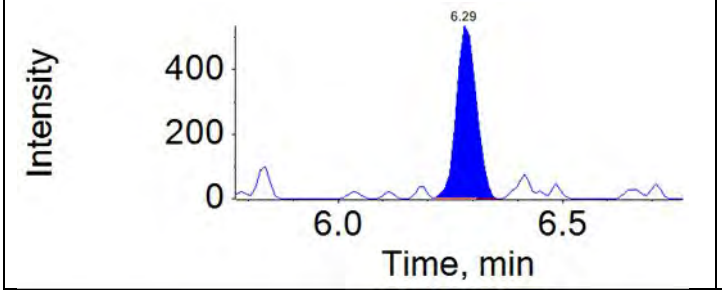


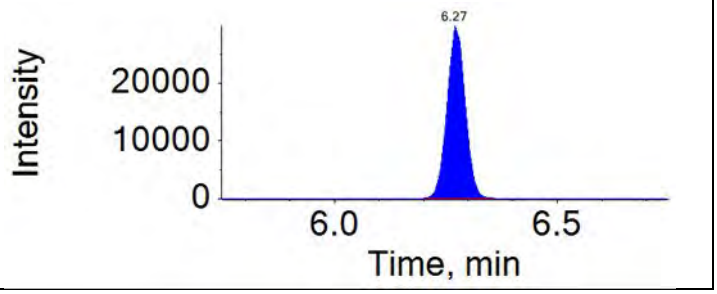
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





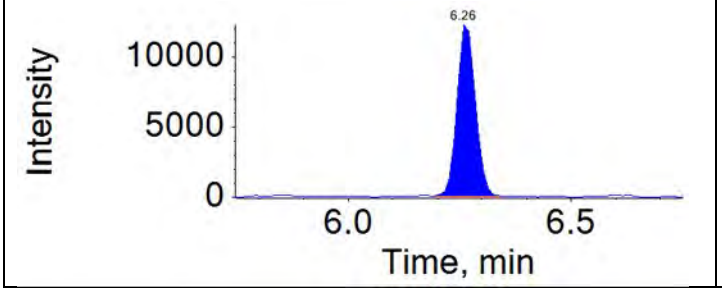
Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

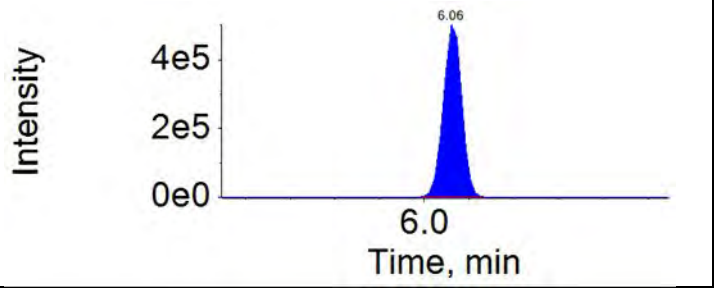




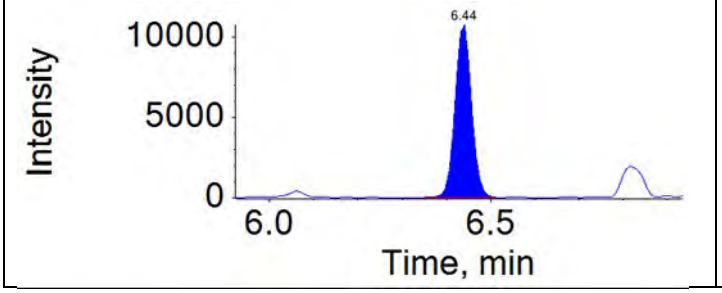
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

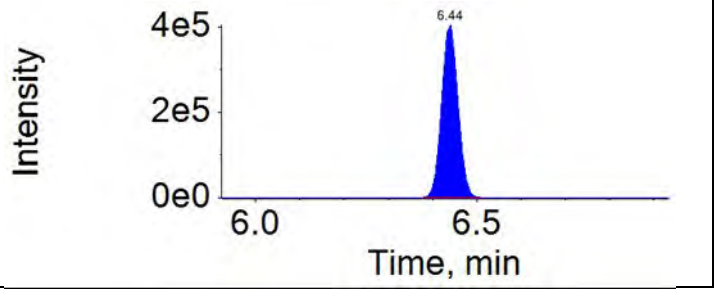
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



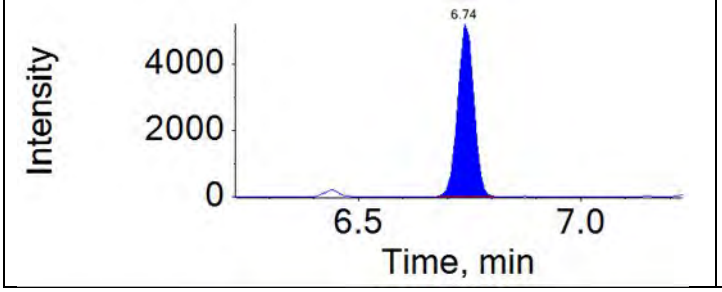


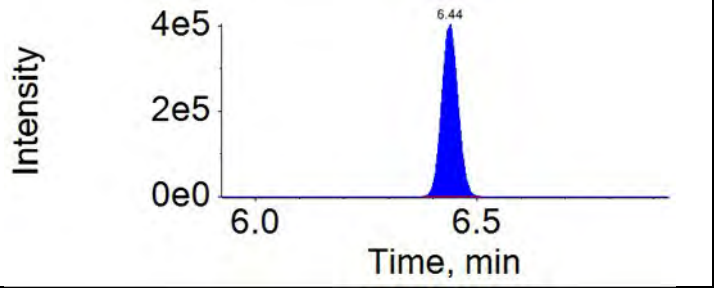
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



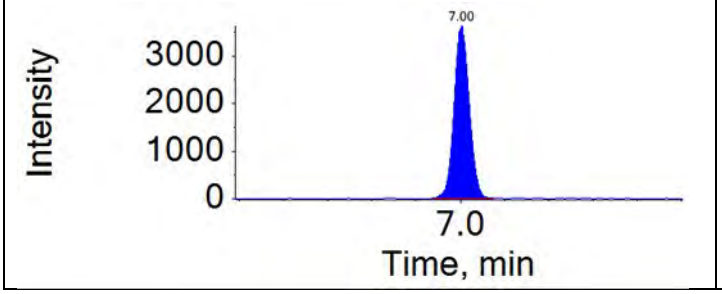


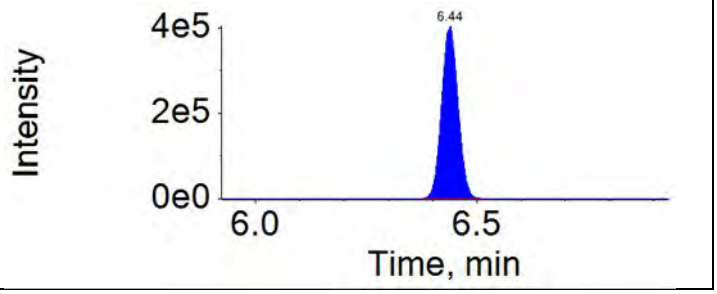
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



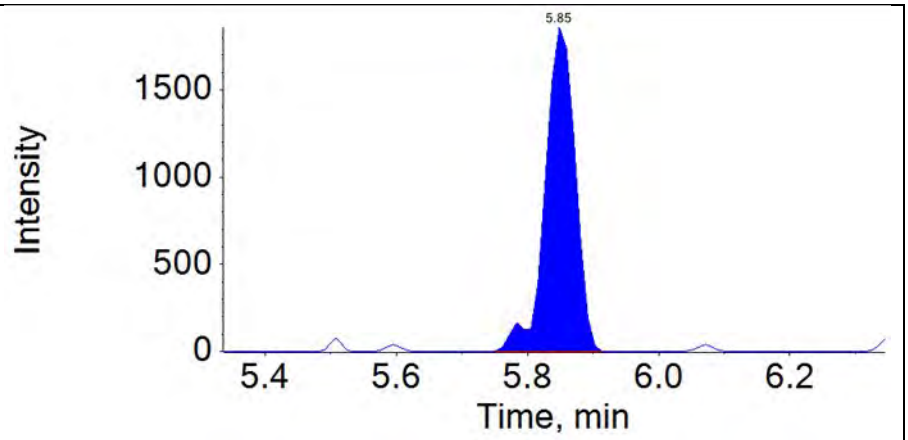


APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

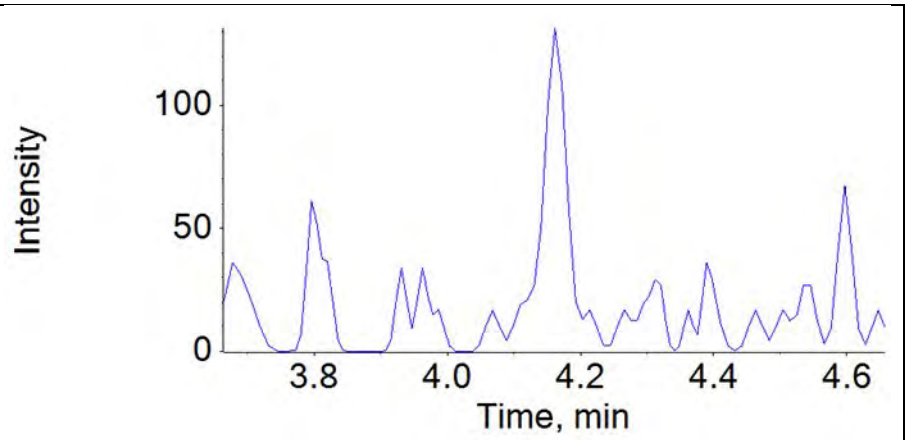
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.85
Peak Area:
5953.37
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-05.wiff
Sample Name:
MDL



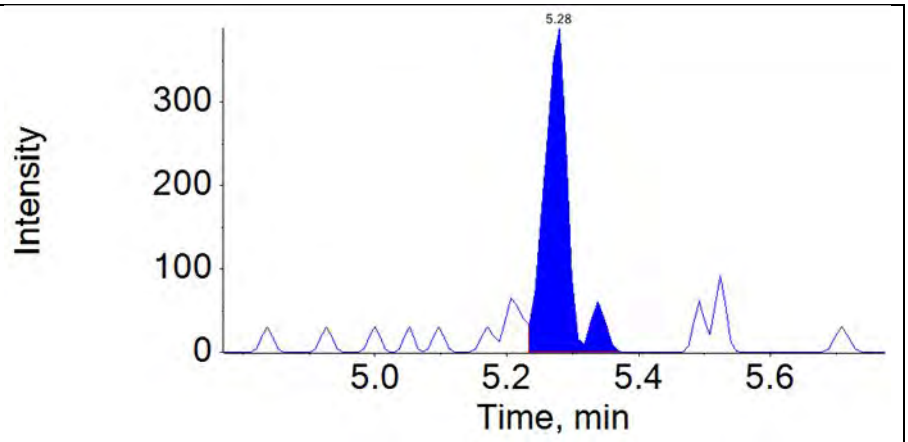
Integration Comment: incorrect integration

Component Name:
PFHxA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
313.0 / 119.0
File Name:
18NOV28DCAL-05.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFNA_2
RT (min.):
5.28
Peak Area:
991.88
Mass Range:
463.0 / 169.0
File Name:
18NOV28DCAL-05.wiff
Sample Name:
MDL



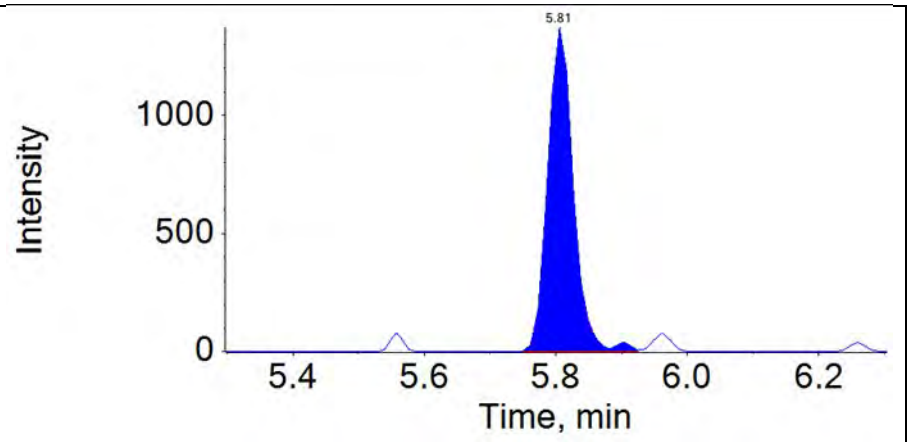
Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

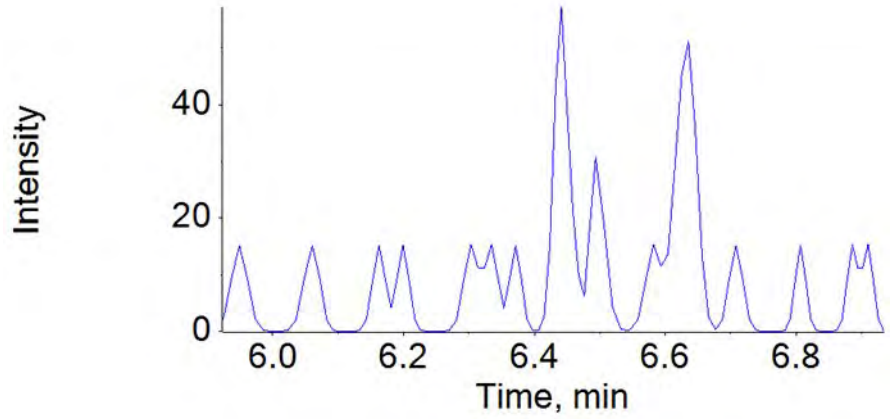
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDS_2
RT (min.):
5.81
Peak Area:
3733.02
Mass Range:
599.0 / 99.0
File Name:
18NOV28DCAL-05.wiff
Sample Name:
MDL



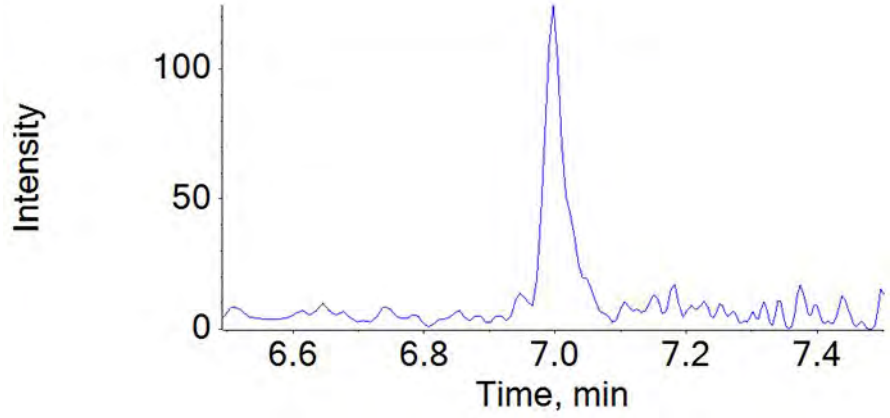
Integration Comment: incorrect integration

Component Name:
PFTeDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
713.0 / 169.0
File Name:
18NOV28DCAL-05.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

Component Name:
PFODA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
913.0 / 169.0
File Name:
18NOV28DCAL-05.wiff
Sample Name:
MDL



Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

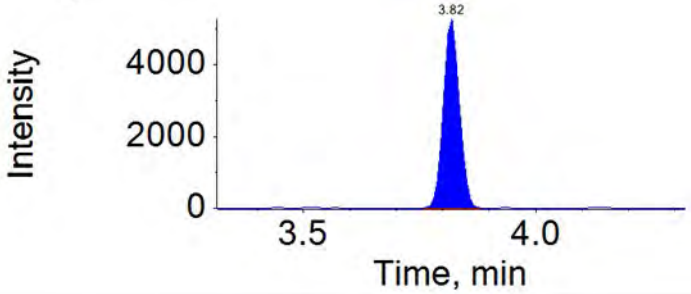
Sample Name: MDL **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-05.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	12605.11	A	0.3655	0.3999			
PFBS_2	3.82	1.00	5040.50	A	0.3655	0.3999	9	50	
4:2-FTS	4.13	1.00	2928.74	A	0.6383	0.8346			
4:2-FTS_2	4.14	1.00	2444.20	A	0.6383	0.8346	31	50	
PFHxA	4.17	1.00	32436.10	A	0.0103	0.0108			
PFHxA_2	4.16	1.00	351.77	M	0.0103	0.0108	5	50	
PFPeS	4.19	1.10	5200.81	A	0.4976	0.5489			
PFPeS_2	4.18	1.10	2854.76	A	0.4976	0.5489	10	50	
PFHpA	4.56	1.00	34134.49	A	0.0557	0.0423			
PFHpA_2	4.56	1.00	1443.47	A	0.0557	0.0423	-24	50	
PFHxS	4.56	1.00	11072.62	A	0.3693	0.3363			
PFHxS_2	4.56	1.00	3723.62	A	0.3693	0.3363	-9	50	
6:2-FTS	4.91	1.00	4195.71	A	0.6625	0.7204			
6:2-FTS_2	4.92	1.00	3022.50	A	0.6625	0.7204	9	50	
PFHpS	4.92	1.08	10674.87	A	0.3915	0.3919			
PFHpS_2	4.92	1.08	4183.13	A	0.3915	0.3919	0	50	
PFOA	4.93	1.00	35831.52	A	0.0573	0.0601			
PFOA_2	4.93	1.00	2154.33	A	0.0573	0.0601	5	50	
PFOS	5.25	1.00	10490.26	A	0.2960	0.3261			
PFOS_2	5.26	1.00	3420.70	A	0.2960	0.3261	10	50	
PFNA	5.27	1.00	29535.31	A	0.0201	0.0303			
PFNA_2	5.28	1.00	895.63	M	0.0201	0.0303	51	50	OOS
PFNS	5.55	1.06	5896.87	A	0.4794	0.3569			
PFNS_2	5.55	1.06	2104.41	A	0.4794	0.3569	-26	50	
PFDA	5.58	1.00	28044.30	A	0.0075	0.0083			
PFDA_2	5.59	1.00	233.51	A	0.0075	0.0083	11	50	
8:2-FTS	5.58	1.00	3464.55	A	0.5380	0.6552			
8:2-FTS_2	5.58	1.00	2270.14	A	0.5380	0.6552	22	50	
NMeFOSAA	5.71	1.00	6753.67	A	0.2305	0.2846			
NMeFOSAA_2	5.71	1.00	1921.86	A	0.2305	0.2846	23	50	
PFDS	5.81	1.10	7418.03	A	0.5356	0.4947			
PFDS_2	5.81	1.10	3669.44	M	0.5356	0.4947	-8	50	
PFUnDA	5.83	1.00	27644.34	A	0.0038	0.0094			
PFUnDA_2	5.84	1.00	259.49	A	0.0038	0.0094	147	50	OOS
NEtFOSAA	5.85	1.00	5734.33	M	0.7356	0.4625			
NEtFOSAA_2	5.85	1.00	2652.07	A	0.7356	0.4625	-37	50	
PFDoDA	6.06	1.00	38884.24	A	0.0130	0.0152			
PFDoDA_2	6.06	1.00	589.76	A	0.0130	0.0152	16	50	
10:2-FTS	6.08	1.09	3761.82	A	0.6989	0.6514			
10:2-FTS_2	6.08	1.09	2450.53	A	0.6989	0.6514	-7	50	
PFTrDA	6.26	1.03	35013.33	A	0.0090	0.0082			
PFTrDA_2	6.26	1.03	286.20	A	0.0090	0.0082	-9	50	
PFTeDA	6.44	1.00	27817.63	A	0.0056	0.0036			
PFTeDA_2	6.44	1.00	100.27	M	0.0056	0.0036	-36	50	
PFHxDA	6.74	1.05	13033.35	A	0.0646	0.0669			
PFHxDA_2	6.74	1.05	872.25	A	0.0646	0.0669	4	50	
PFODA	7.00	1.09	8671.11	A	0.0264	0.0329			
PFODA_2	7.00	1.09	285.12	M	0.0264	0.0329	24	50	

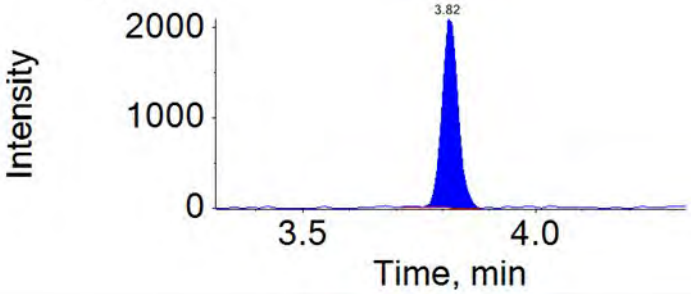
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

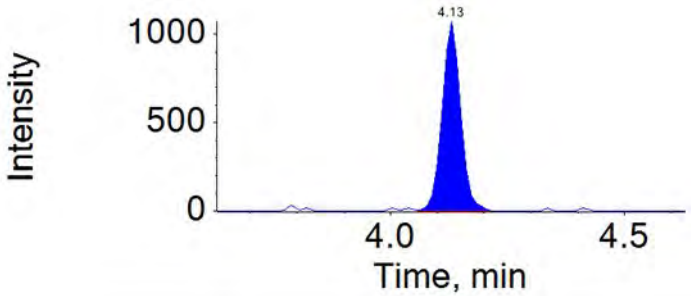
Component: PFBS
Primary Mass: 299.0 / 80.0



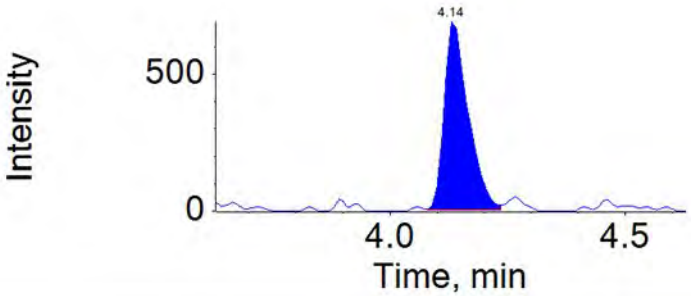
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



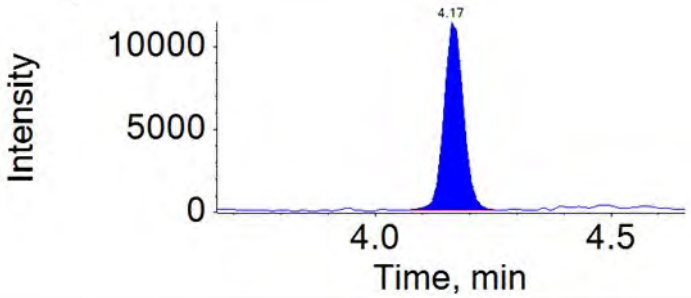
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



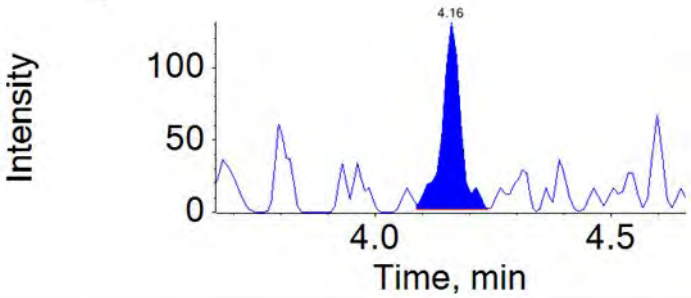
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



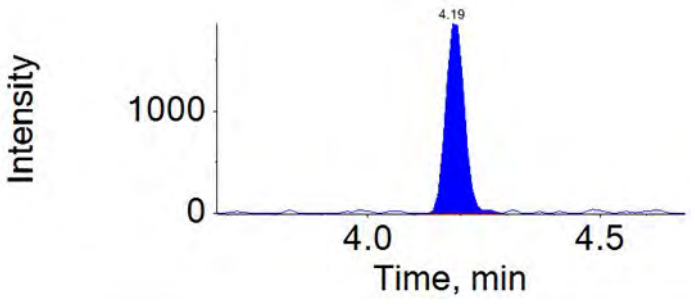
Component: PFHxA
Primary Mass: 313.0 / 269.0



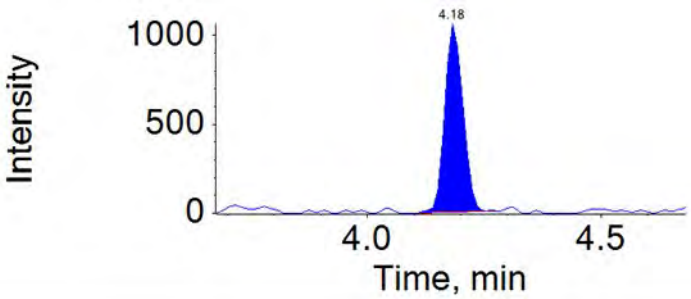
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



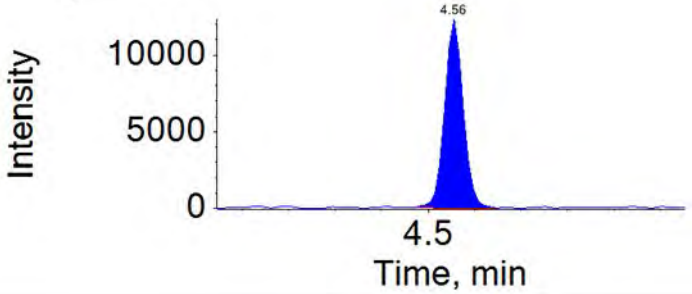
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



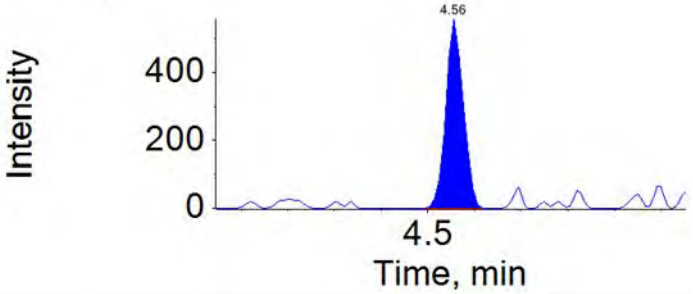
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

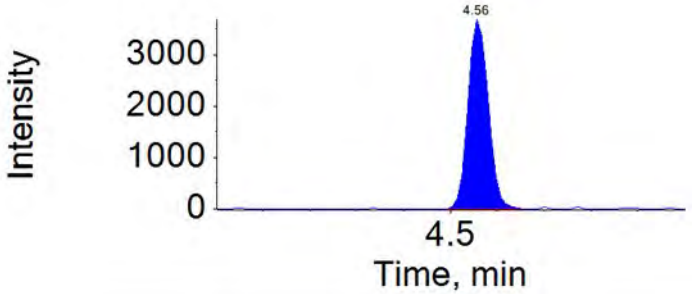
Component: PFHpA
Primary Mass: 363.0 / 319.0



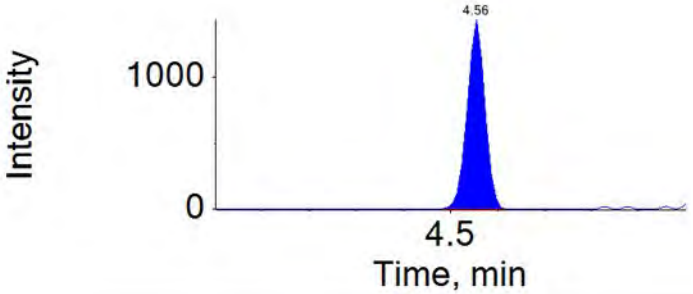
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



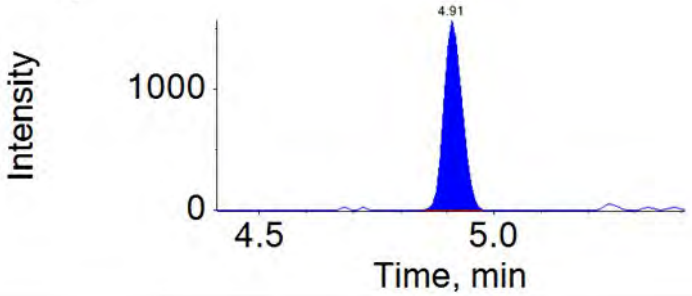
Component: PFHxS
Primary Mass: 399.0 / 80.0



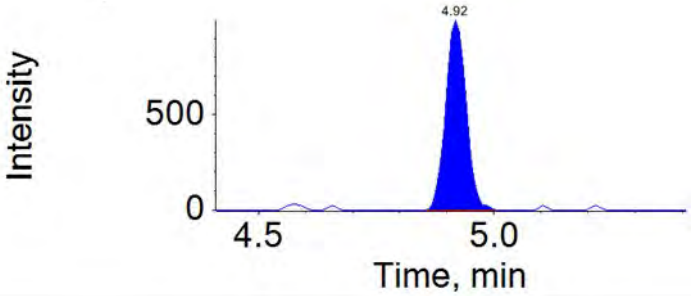
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



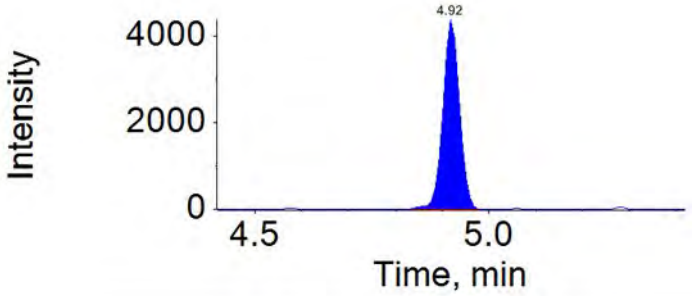
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



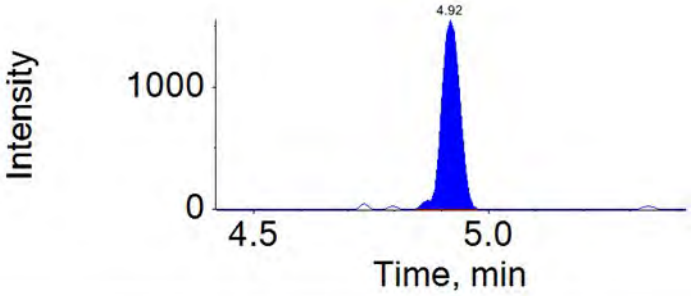
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



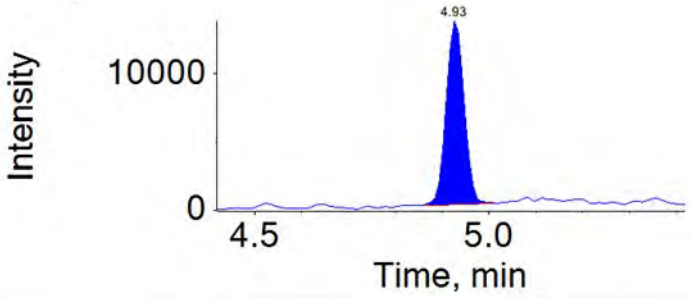
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



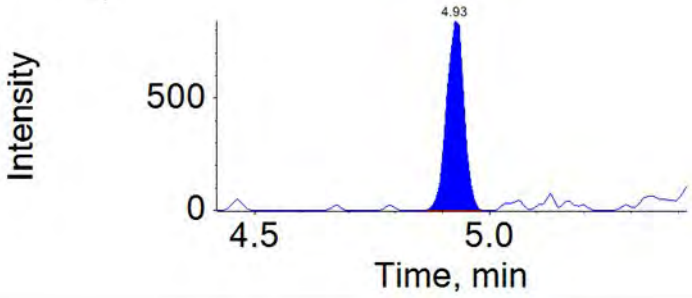
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

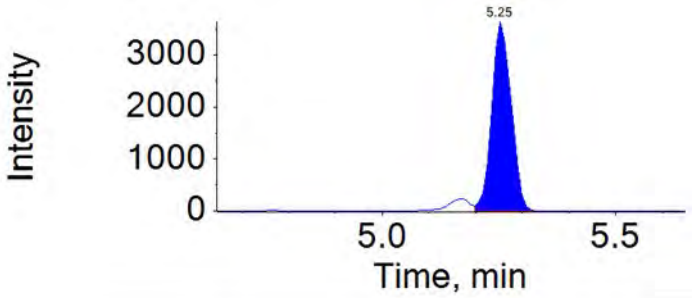
Component: PFOA
Primary Mass: 413.0 / 369.0



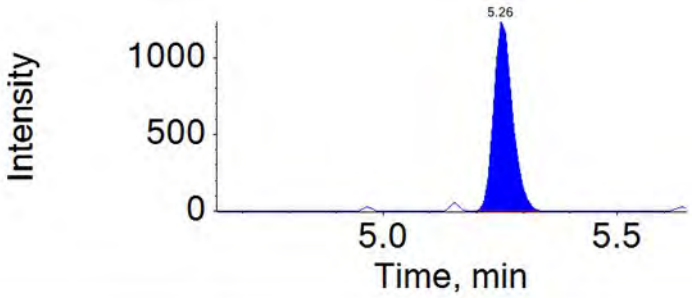
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



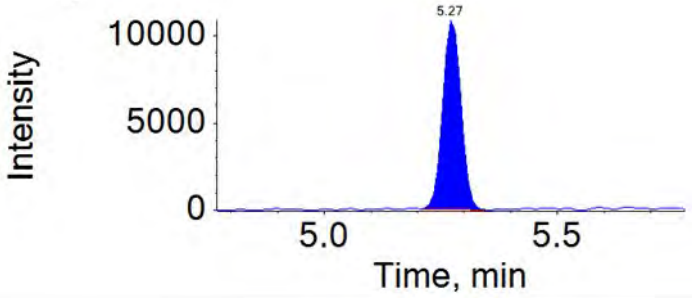
Component: PFOS
Primary Mass: 499.0 / 80.0



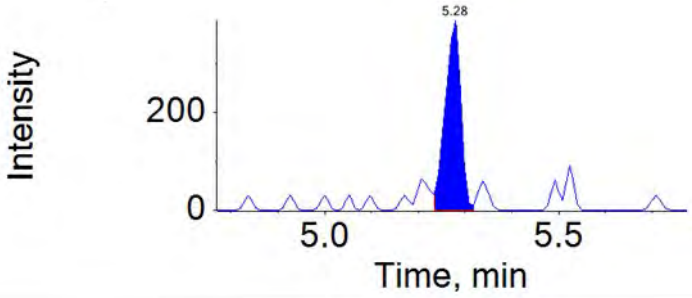
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



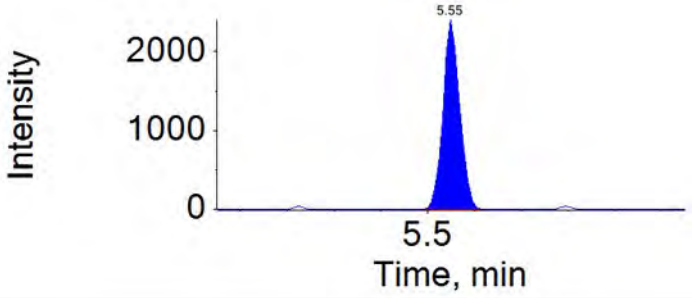
Component: PFNA
Primary Mass: 463.0 / 419.0



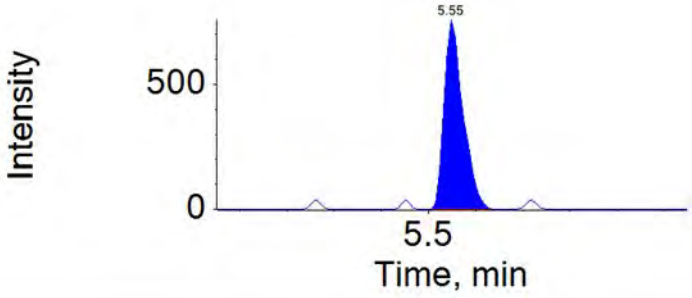
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



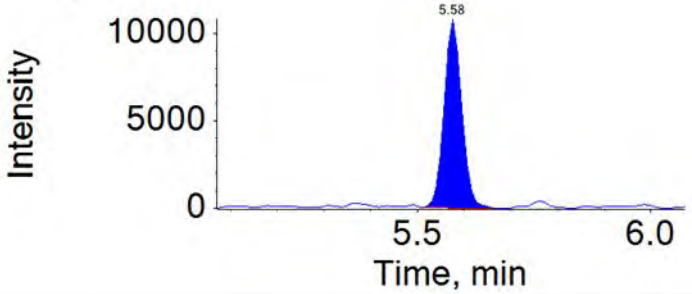
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



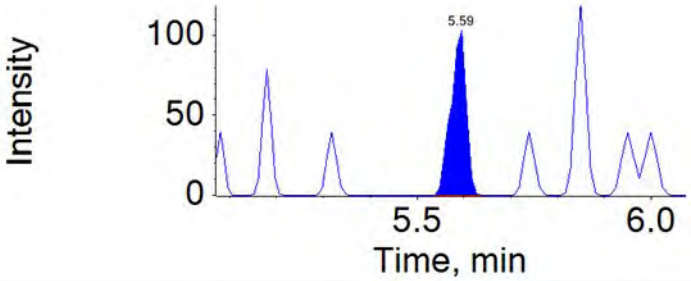
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

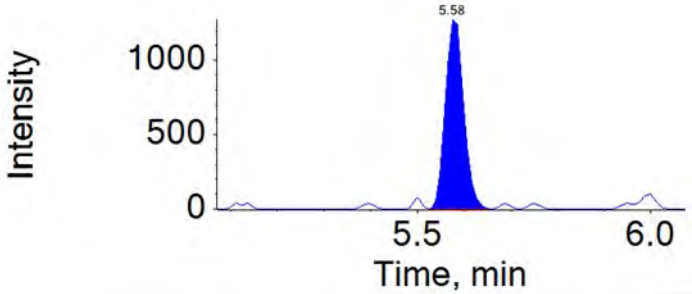
Component: PFDA
Primary Mass: 513.0 / 469.0



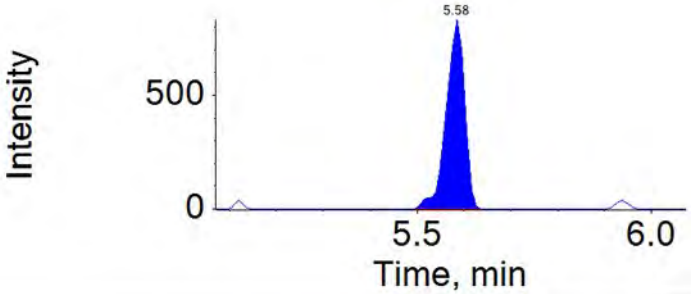
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



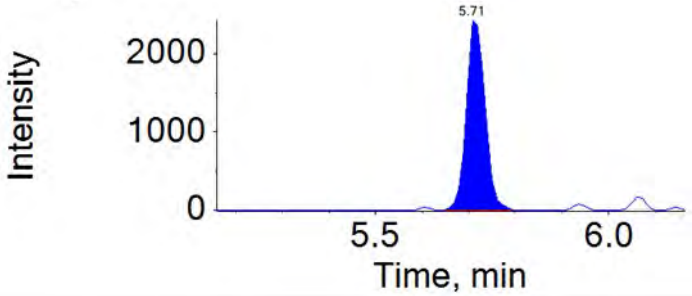
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



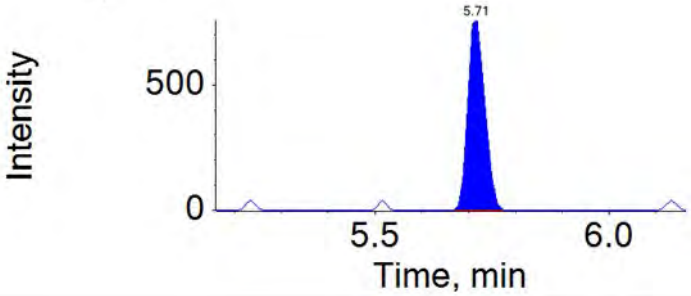
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



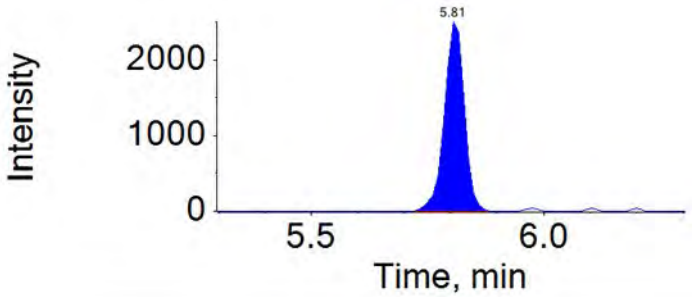
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



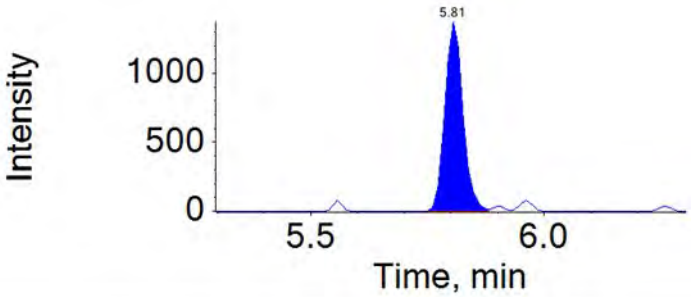
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



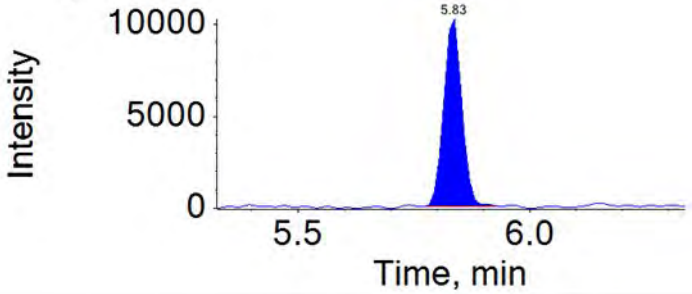
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



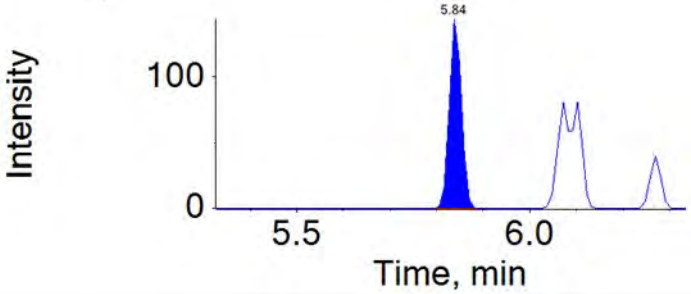
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

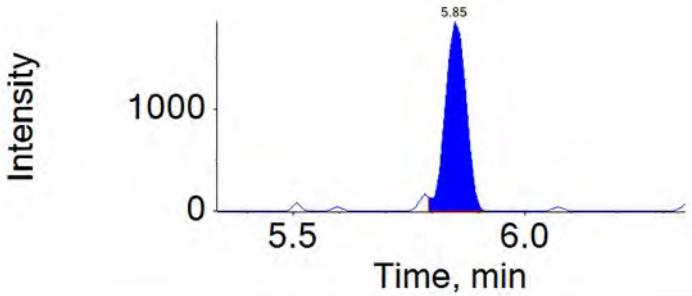
Component: PFUnDA
Primary Mass: 563.0 / 519.0



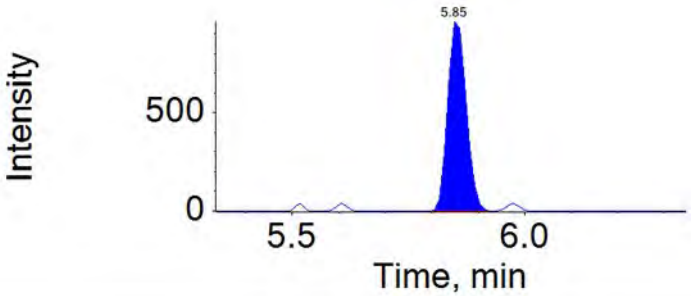
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



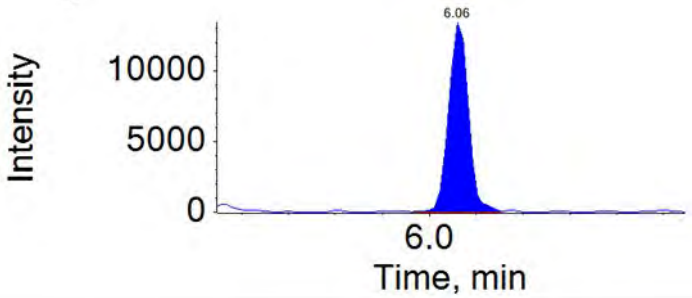
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



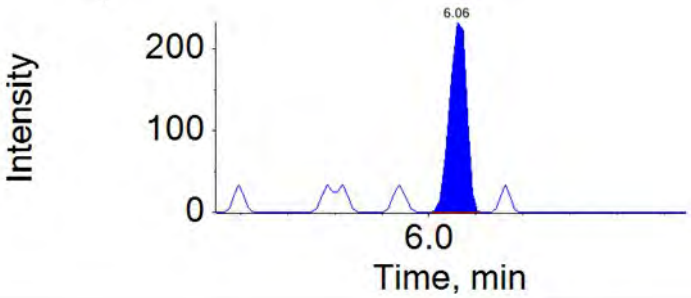
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



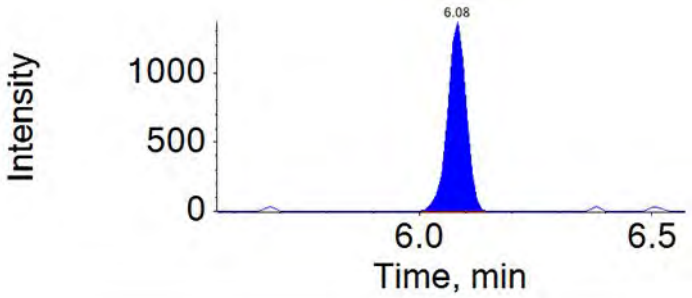
Component: PFDoDA
Primary Mass: 613.0 / 569.0



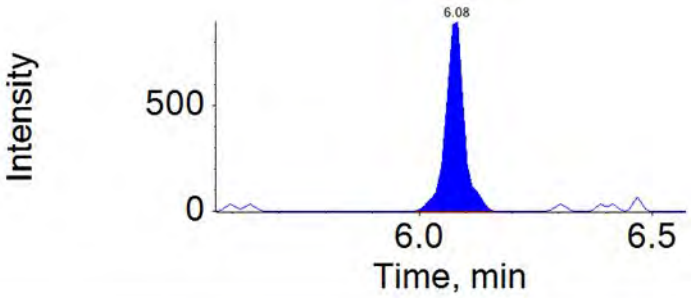
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



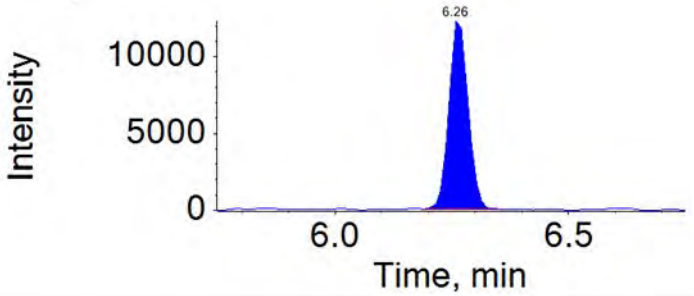
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



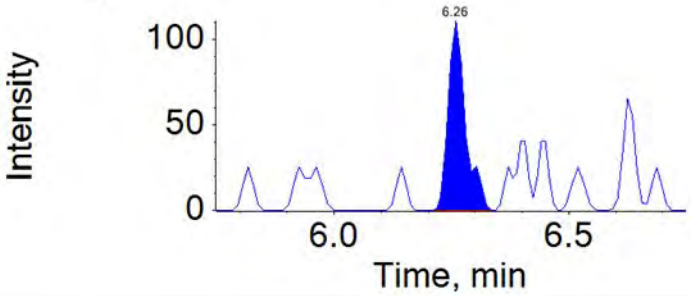
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

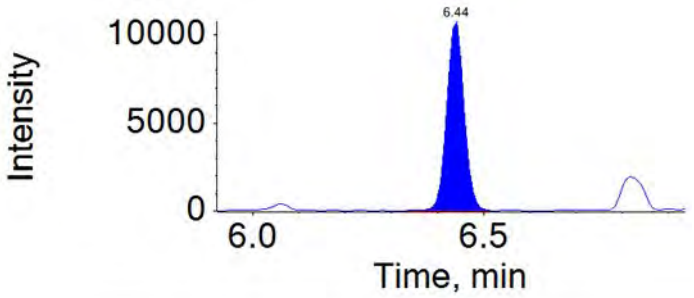
Component: PFTrDA
Primary Mass: 663.0 / 619.0



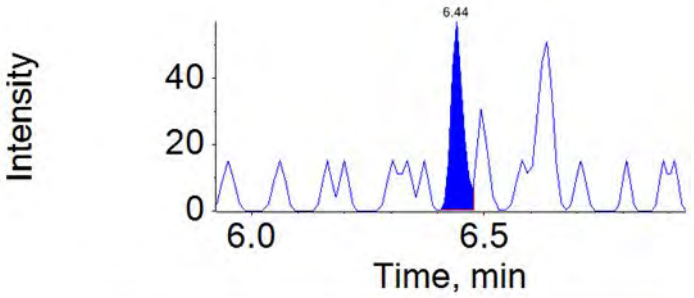
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



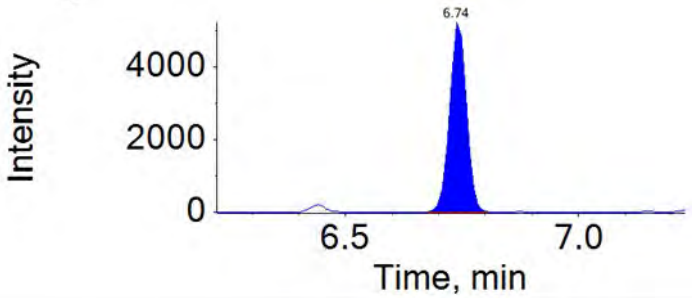
Component: PFTeDA
Primary Mass: 713.0 / 669.0



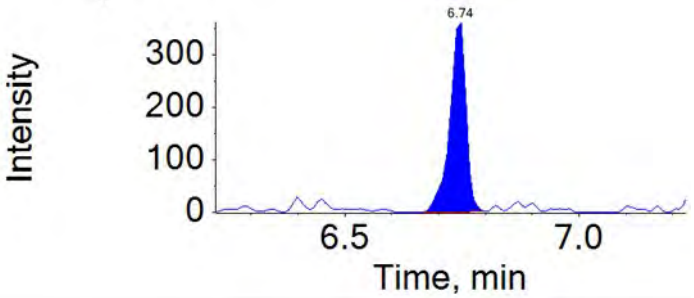
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



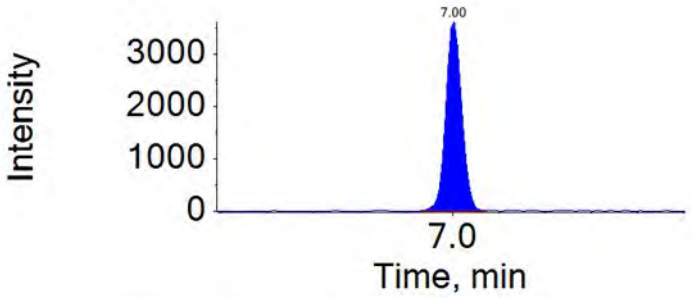
Component: PFHxDA
Primary Mass: 813.0 / 769.0



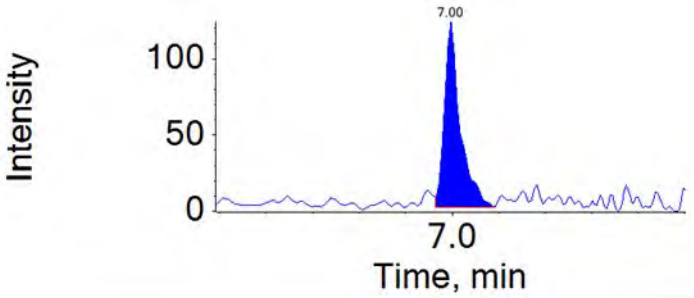
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	ICV			**Data File:**		18NOV28DCAL-14.wiff
Sample ID:	ICVMODX1833G			**Acquis Date:**		2018-11-28T14:54:22
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	10			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	909586.4	887248.9	3	50	
13C2-PFOA	5.0	531347.1	498501.6	7	50	
13C4-PFOS	4.8	296756.3	283214.2	5	50	
13C2-PFDA	5.0	468972.3	441790.6	6	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	992615.8	13C3-PFBA	909586.4	1.091	5.000	4.869	97	70-130	
E13C5-PFPeA	975580.9	13C3-PFBA	909586.4	1.073	5.000	5.008	100	70-130	
E13C3-PFBS	446011.0	13C3-PFBA	909586.4	0.490	4.650	4.678	101	70-130	
E13C2-4:2-FTS	68184.3	13C2-PFOA	531347.1	0.128	4.670	4.422	95	70-130	
E13C5-PFHxA	699371.3	13C2-PFOA	531347.1	1.316	5.000	4.834	97	70-130	
E13C3-PFHxS	317109.0	13C2-PFOA	531347.1	0.597	4.730	4.678	99	70-130	
E13C4-PFHpA	556403.1	13C2-PFOA	531347.1	1.047	5.000	4.812	96	70-130	
E13C2-6:2-FTS	63350.5	13C2-PFOA	531347.1	0.119	4.750	4.991	105	70-130	
E13C8-PFOA	1001731.4	13C2-PFOA	531347.1	1.885	5.000	5.189	104	70-130	
E13C8-PFOS	316117.1	13C4-PFOS	296756.3	1.065	4.780	4.809	101	70-130	
E13C9-PFNA	647064.1	13C4-PFOS	296756.3	2.180	5.000	4.789	96	70-130	
E13C6-PFDA	857032.9	13C2-PFDA	468972.3	1.827	5.000	5.153	103	70-130	
E13C2-8:2-FTS	51912.9	13C2-PFDA	468972.3	0.111	4.790	4.758	99	70-130	
E13C8-PFOSA	637370.7	13C2-PFDA	468972.3	1.359	5.000	4.987	100	70-130	
Ed3-NMeFOSAA	183040.0	13C2-PFDA	468972.3	0.390	5.000	4.956	99	70-130	
E13C7-PFUnDA	559327.4	13C2-PFDA	468972.3	1.193	5.000	5.041	101	70-130	
Ed5-NEtFOSAA	140840.0	13C2-PFDA	468972.3	0.300	5.000	5.350	107	70-130	
E13C2-PFDoDA	1134142.1	13C2-PFDA	468972.3	2.418	5.000	5.081	102	70-130	
Ed7-NMePFOSAE	262732.2	13C2-PFDA	468972.3	0.560	5.000	4.842	97	70-130	
Ed3-NMePFOSA	81059.5	13C2-PFDA	468972.3	0.173	5.000	4.678	94	70-130	
Ed9-NEtPFOSAE	227167.7	13C2-PFDA	468972.3	0.484	5.000	4.911	98	70-130	
Ed5-NEtPFOSA	67297.9	13C2-PFDA	468972.3	0.144	5.000	4.986	100	70-130	
E13C2-PFTeDA	820071.7	13C2-PFDA	468972.3	1.749	5.000	4.839	97	70-130	

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

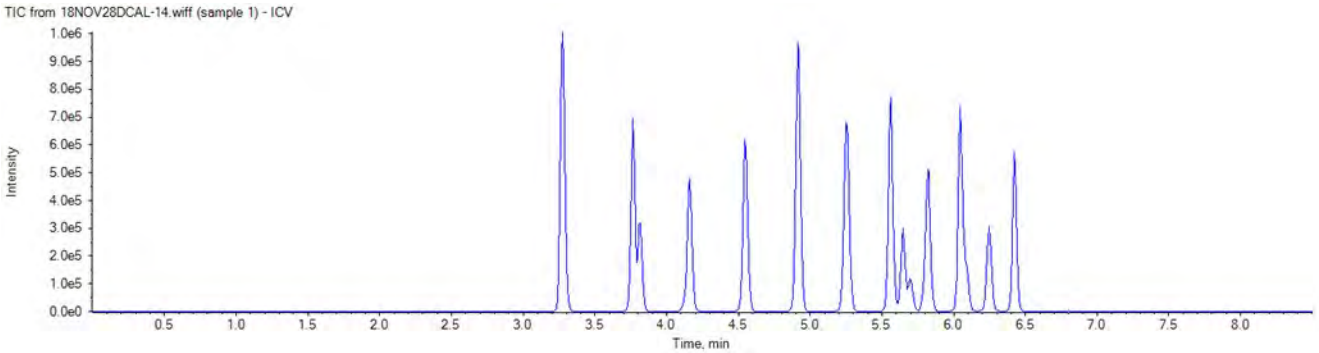
Analyte Quantitation Peak Table

Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-14.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	387187.0		A	13C4-PFBA	3.27	992615.8	0.390	2.138
PFPeA	3.77	1.000	377961.6		A	13C5-PFPeA	3.77	975580.9	0.387	1.901
PFBS	3.81	1.000	159425.0		A	13C3-PFBS	3.82	446011.0	0.357	1.735
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.13	68184.3	N/A	
PFHxA	4.16	1.000	369137.1		A	13C5-PFHxA	4.16	699371.3	0.528	2.119
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.82	446011.0	N/A	
PFHpA	4.55	1.000	373590.8		A	13C4-PFHpA	4.55	556403.1	0.671	2.072
PFHxS	4.55	1.000	125085.3		A	13C3-PFHxS	4.55	317109.0	0.394	1.847
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	63350.5	N/A	
PFHpS	4.91	1.080	131043.1		A	13C3-PFHxS	4.55	317109.0	0.413	2.062
PFOA	4.92	1.000	404358.9		A	13C8-PFOA	4.92	1001731.4	0.404	2.086
PFOS	5.25	1.000	122334.6		A	13C8-PFOS	5.25	316117.1	0.387	1.623
PFNA	5.26	1.000	351872.0		A	13C9-PFNA	5.26	647064.1	0.544	2.084
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.25	316117.1	N/A	
PFDA	5.56	1.000	325191.9		A	13C6-PFDA	5.56	857032.9	0.379	2.148
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	51912.9	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	637370.7	N/A	
NMeFOSAA	5.70	1.000	74168.8		A	d3-NMeFOSAA	5.70	183040.0	0.405	2.585
PFDS	5.79	1.100	72374.3		A	13C8-PFOS	5.25	316117.1	0.229	1.815
PFUnDA	5.82	1.000	354099.8		A	13C7-PFUnDA	5.82	559327.4	0.633	2.263
NEtFOSAA	5.83	1.000	57368.0		A	d5-NEtFOSAA	5.83	140840.0	0.407	1.984
PFDoDA	6.05	1.000	427818.9		A	13C2-PFDoDA	6.05	1134142.1	0.377	2.066
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	51912.9	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	262732.2	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	81059.5	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.25	316117.1	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	227167.7	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	67297.9	N/A	
PFTrDA	6.25	1.030	416758.4		A	13C2-PFDoDA	6.05	1134142.1	0.367	2.215
PFTeDA	6.42	1.000	312632.1		A	13C2-PFTeDA	6.42	820071.7	0.381	2.160
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	820071.7	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	820071.7	N/A	

Total Ion Chromatogram

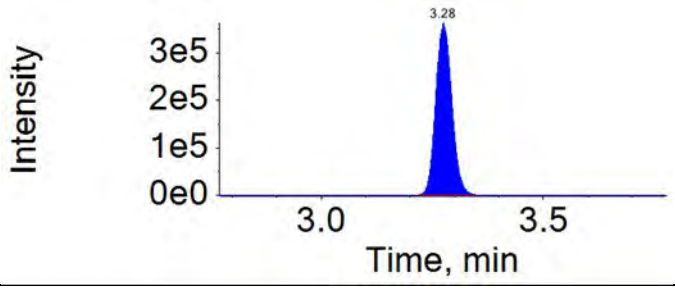


APPROVED
By MCD at 5:01 pm, 11/28/18

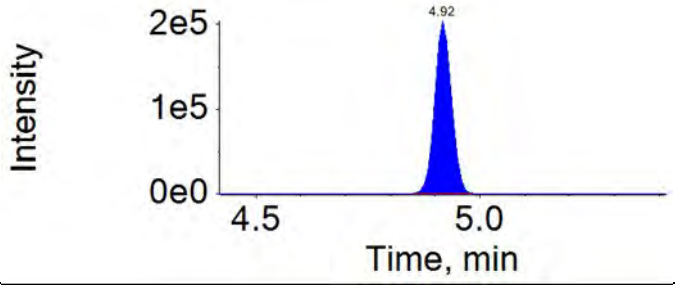
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

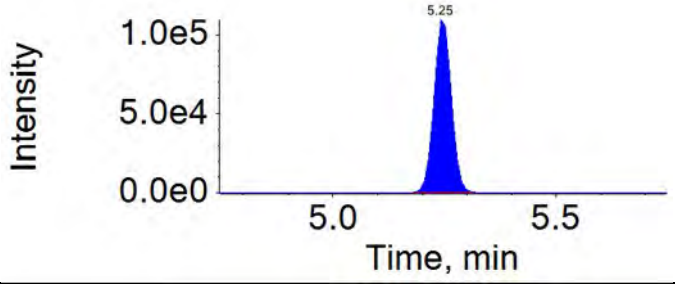
Injection Standard: 13C3-PFBA
216.0 / 172.0



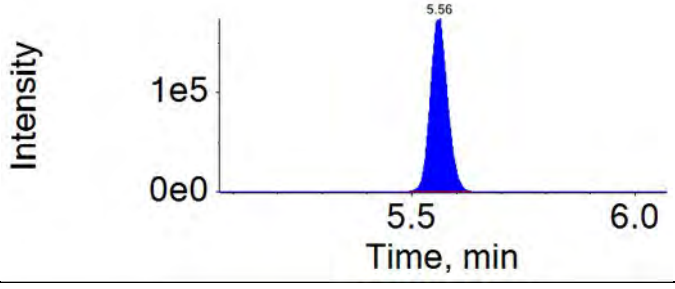
Injection Standard: 13C2-PFOA
415.0 / 370.0



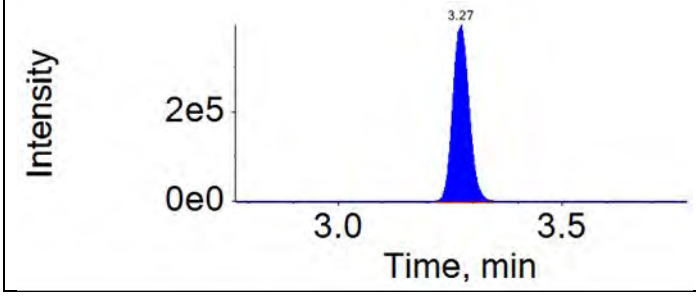
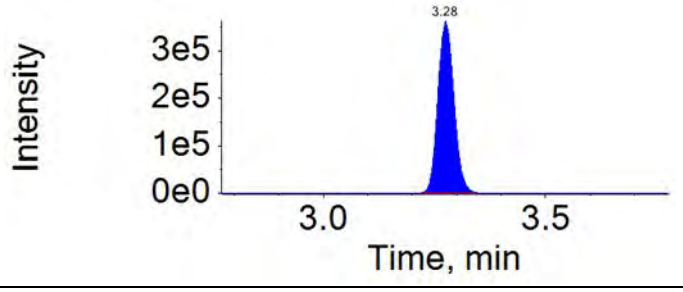
Injection Standard: 13C4-PFOS
503.0 / 80.0

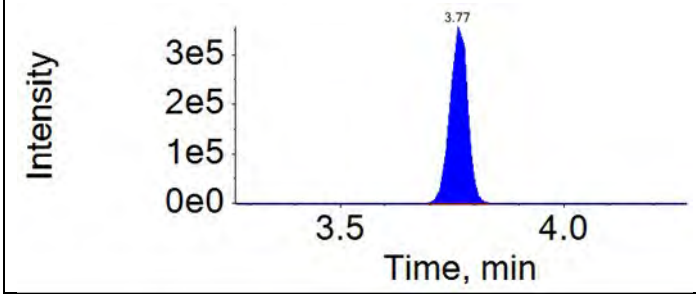
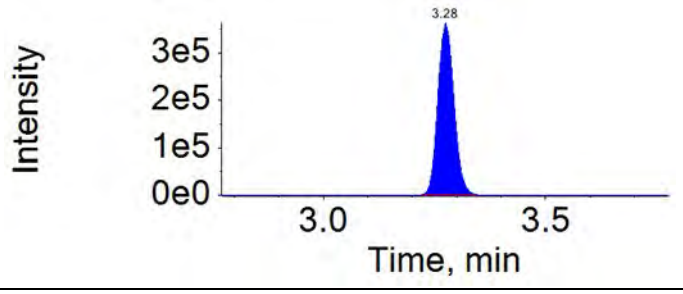


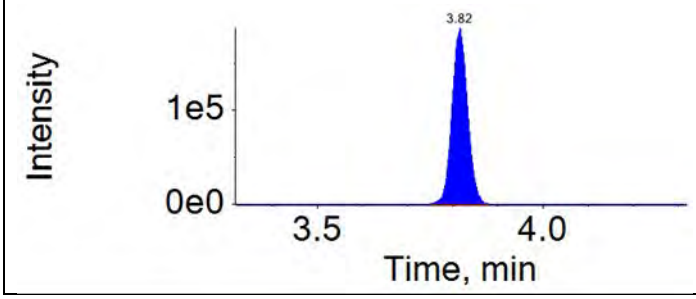
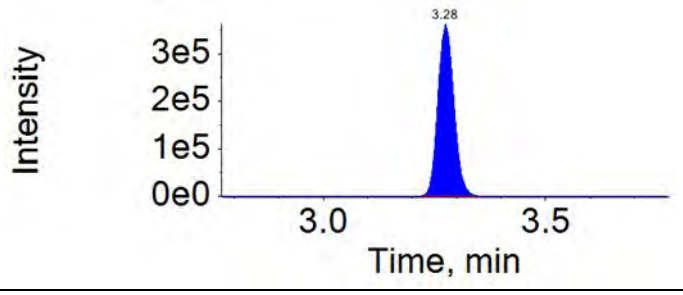
Injection Standard: 13C2-PFDA
515.0 / 470.0

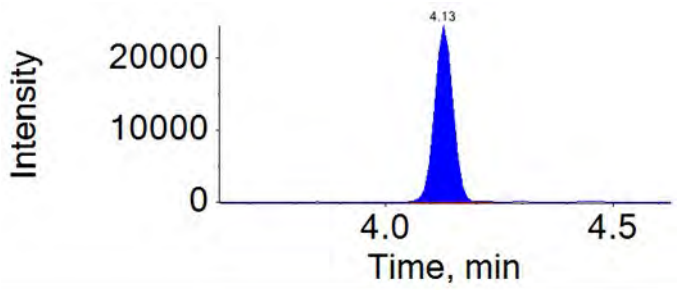
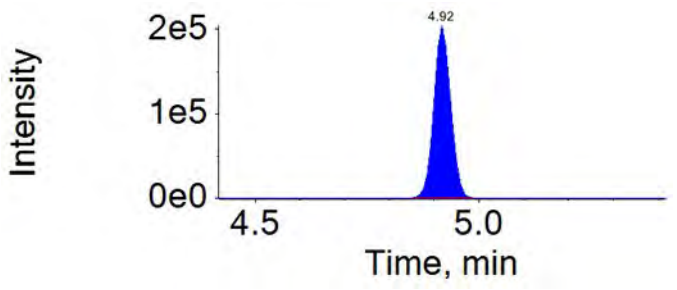


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

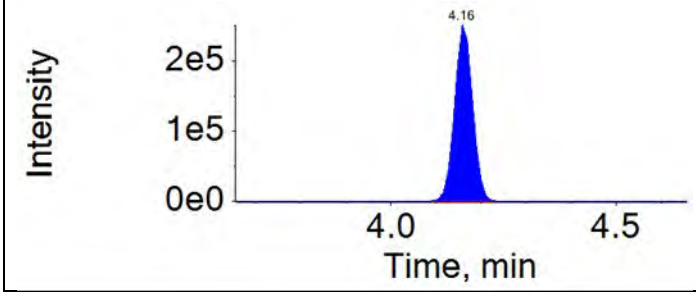
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

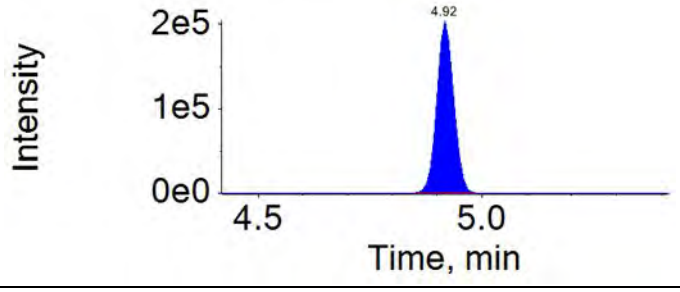
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

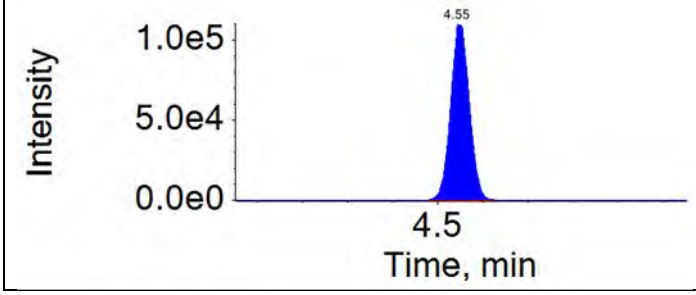
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

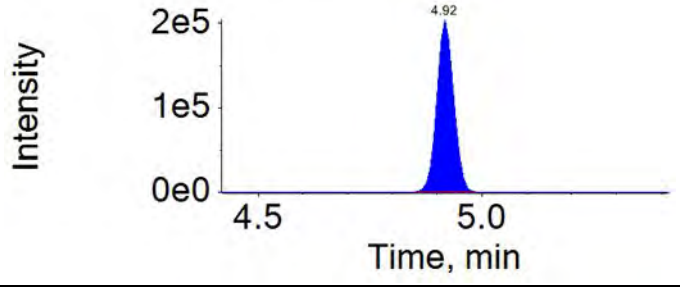
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



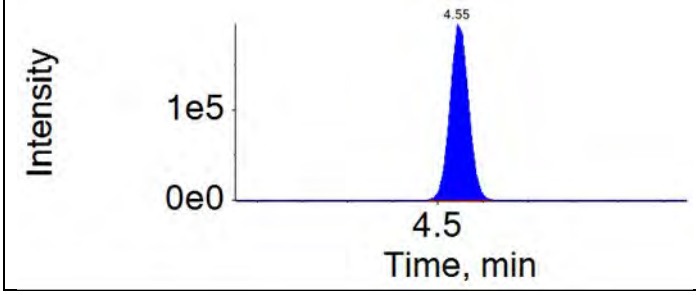


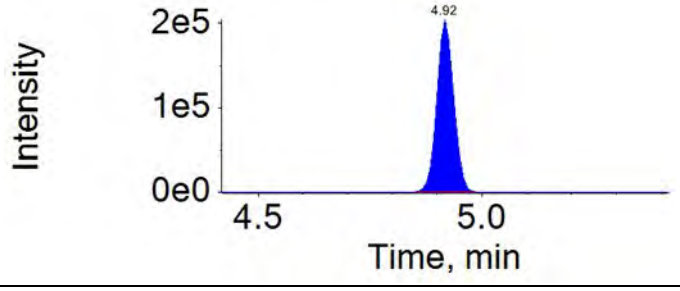
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



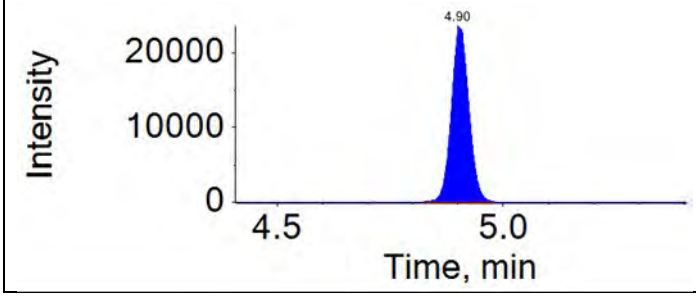


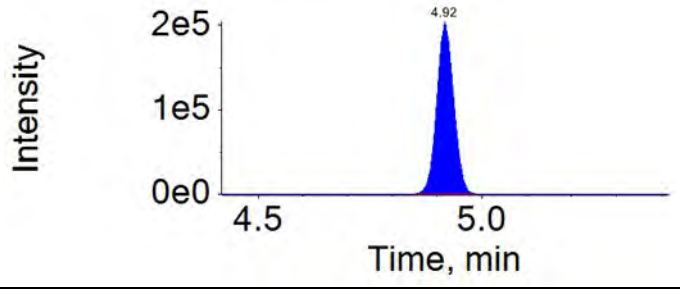
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0



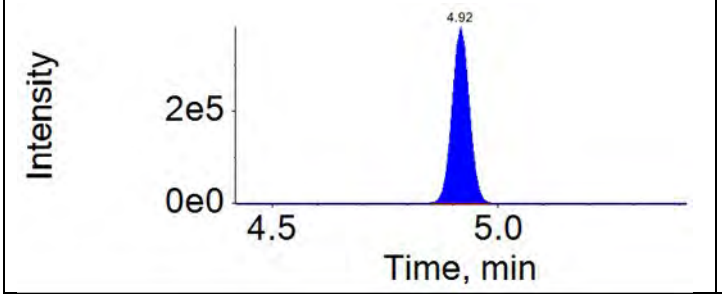


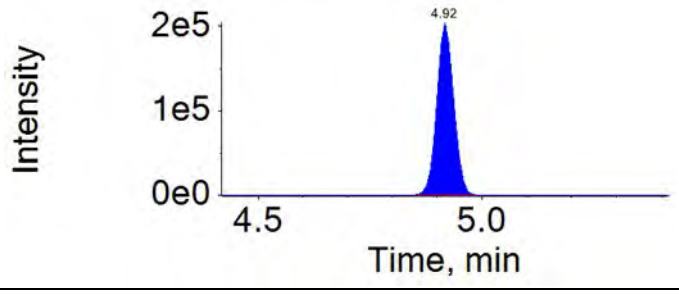
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

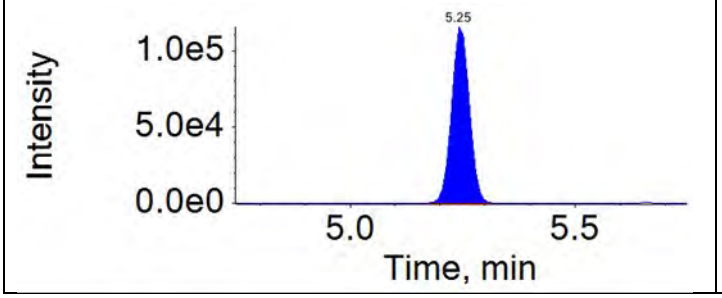
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

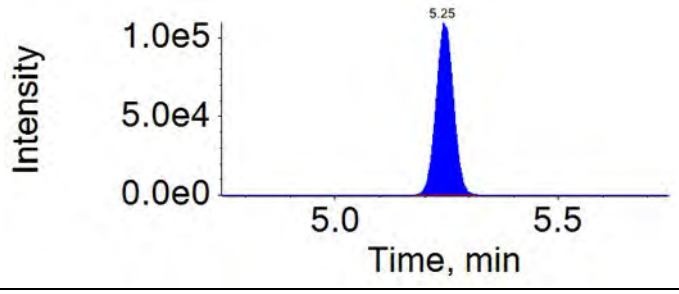
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0



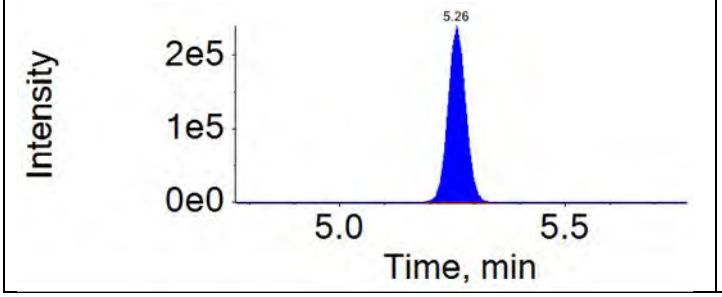


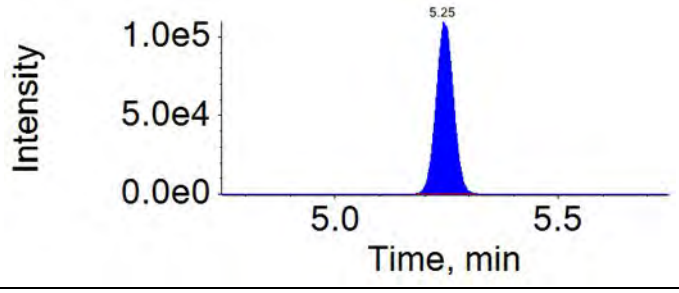
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0



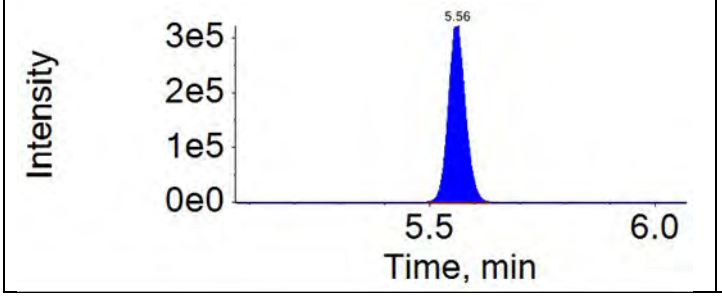


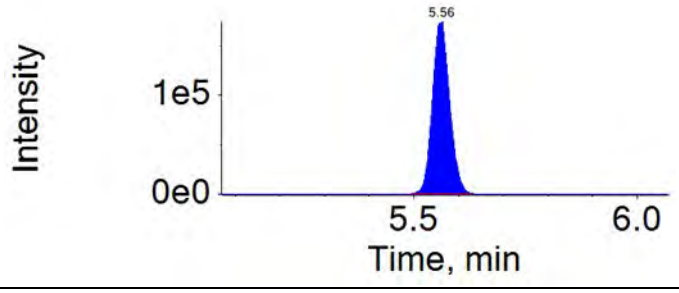
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0





Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0

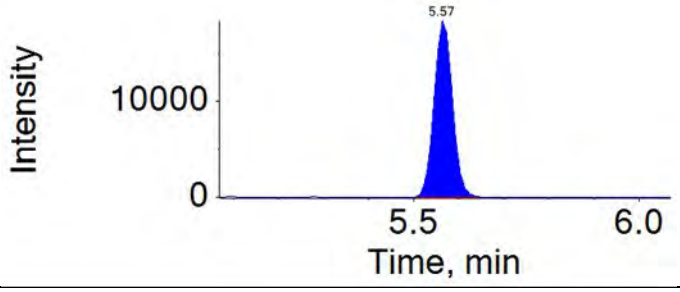
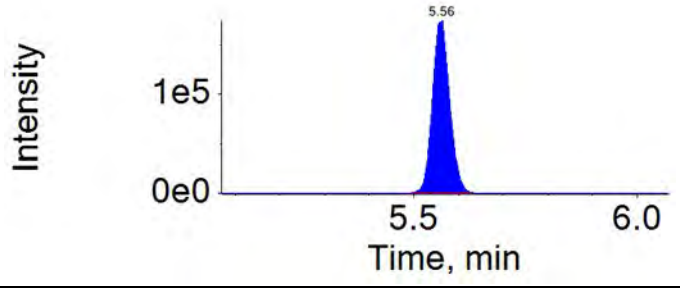


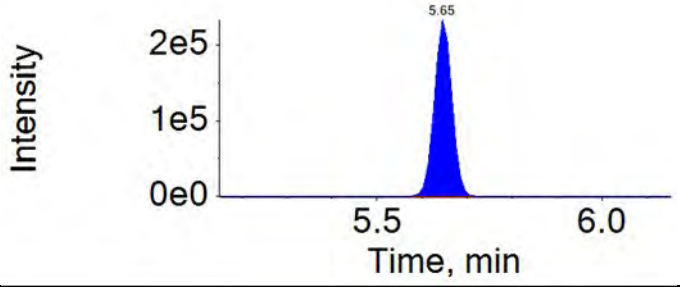
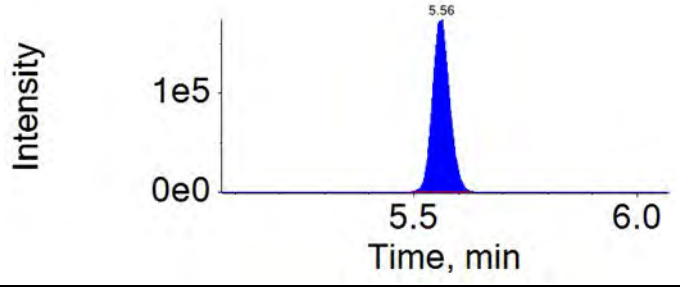


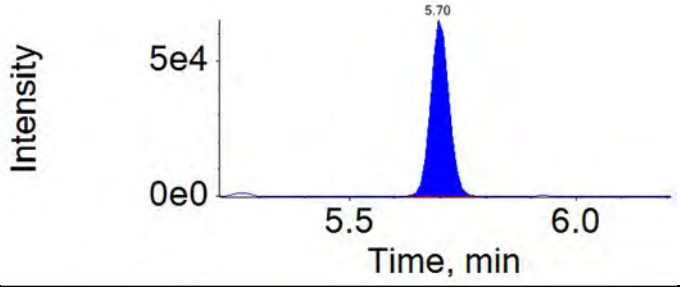
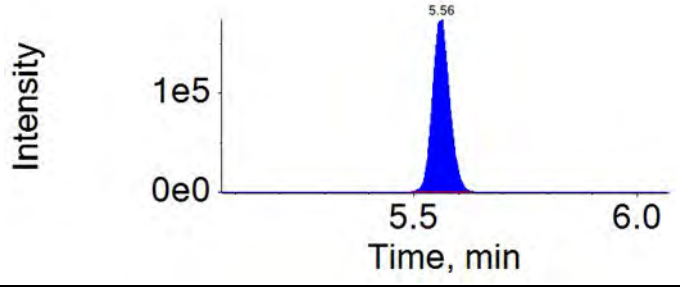
APPROVED
By MCD at 5:01 pm, 11/28/18

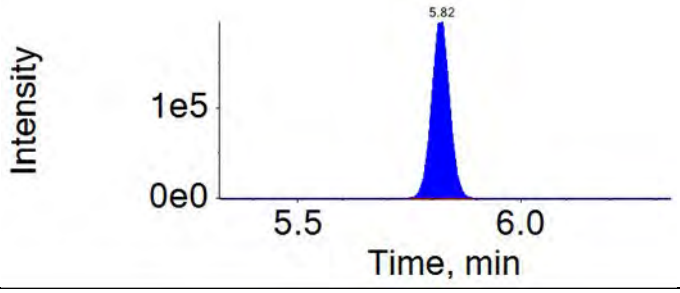
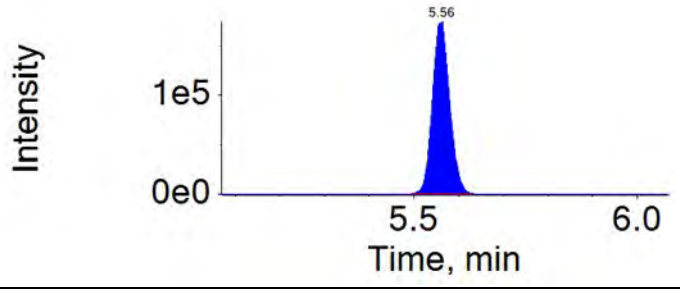
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

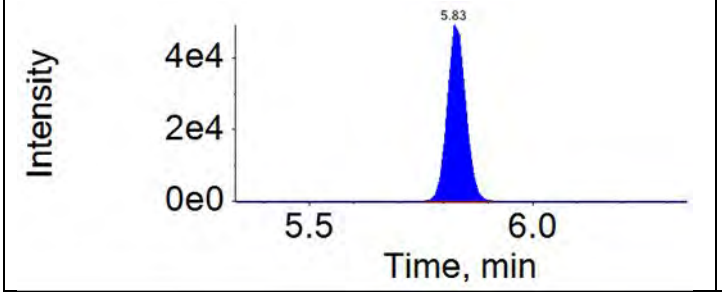
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

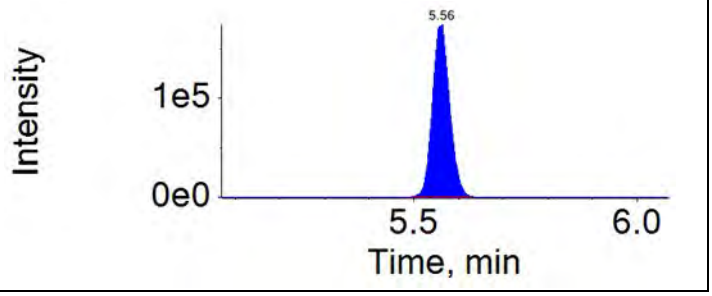
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

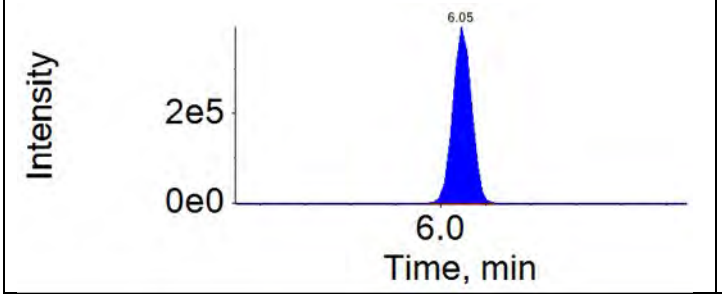
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

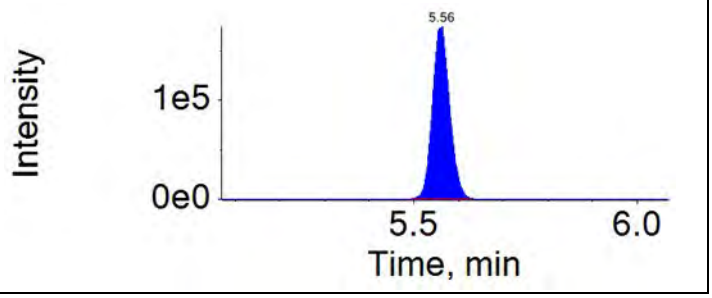
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



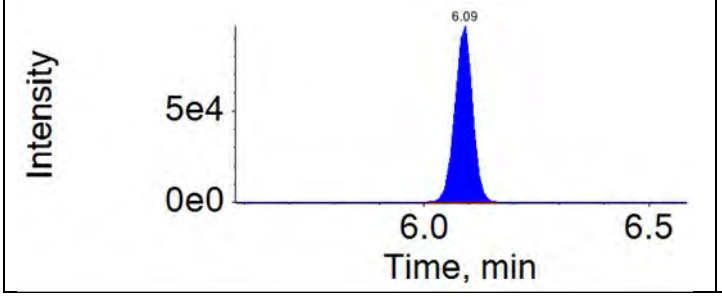


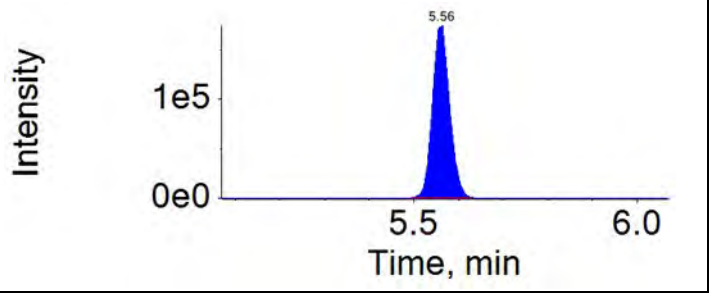
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



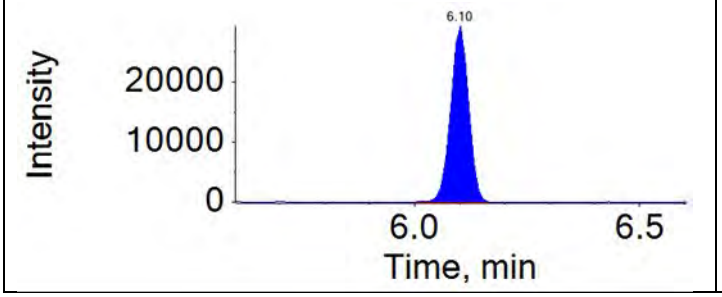


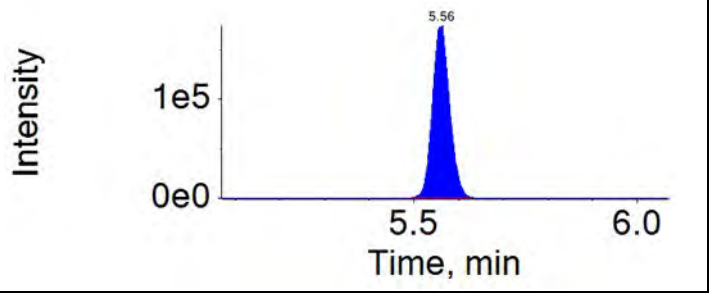
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



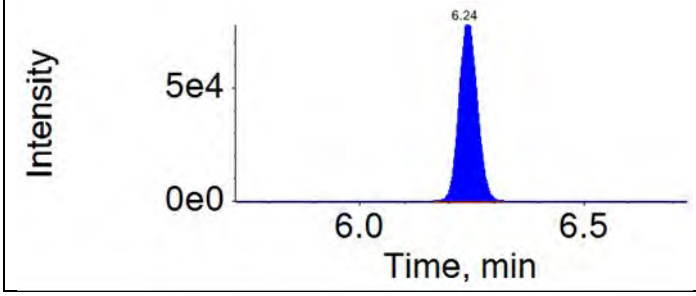


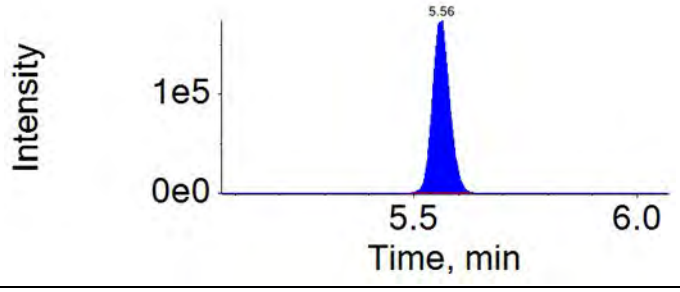
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

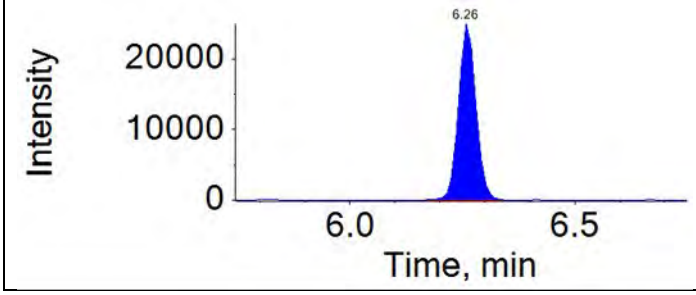
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

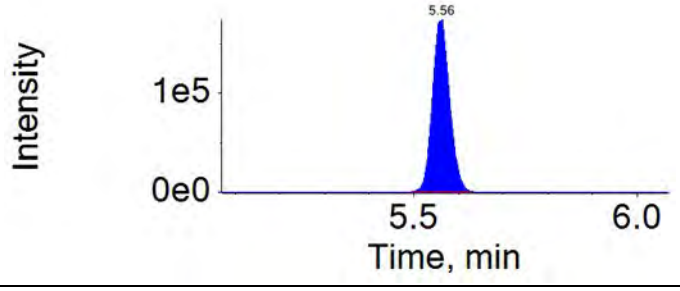
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



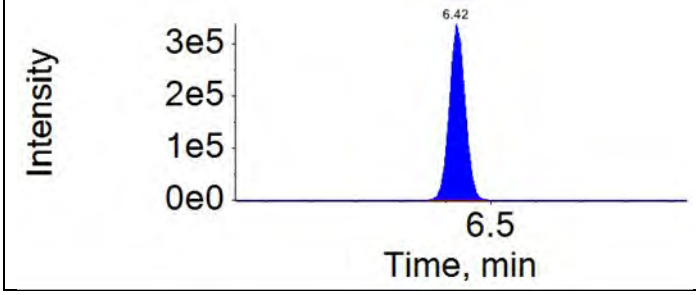


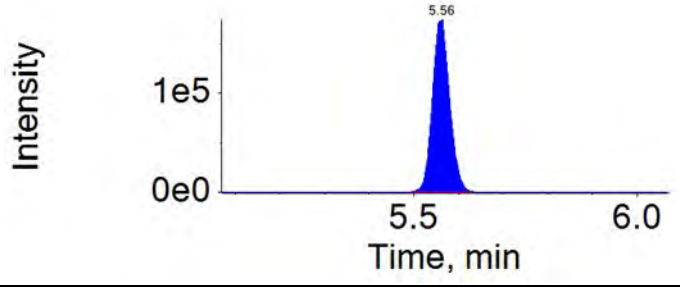
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



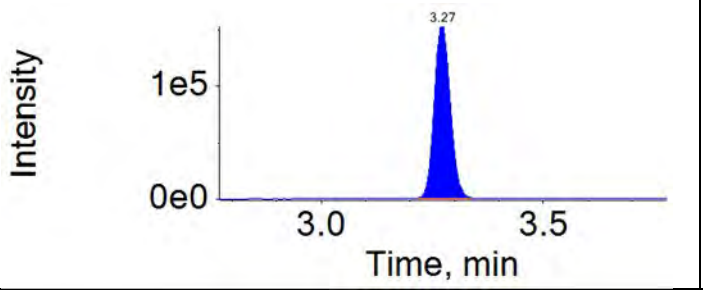


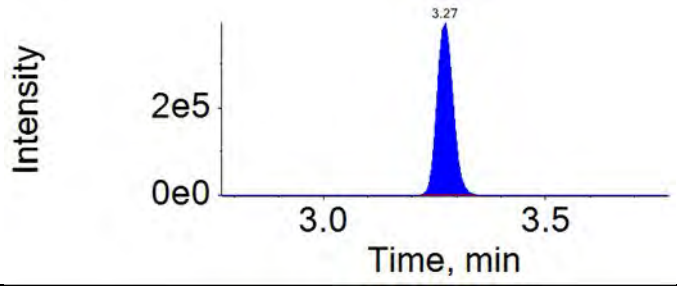
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

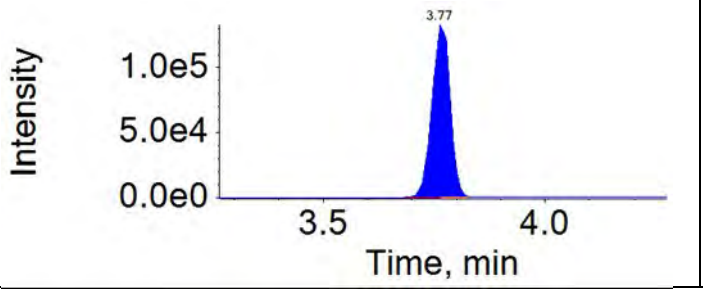
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

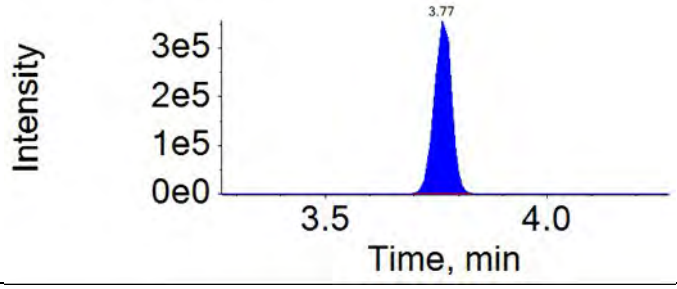
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



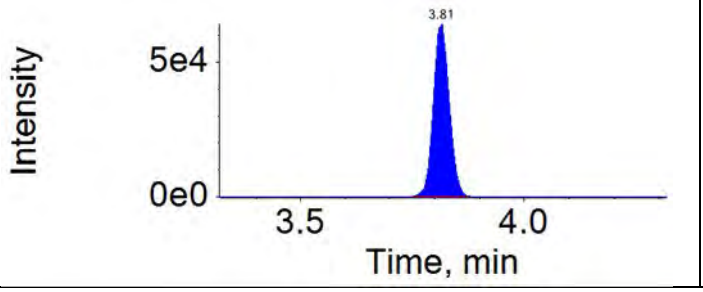


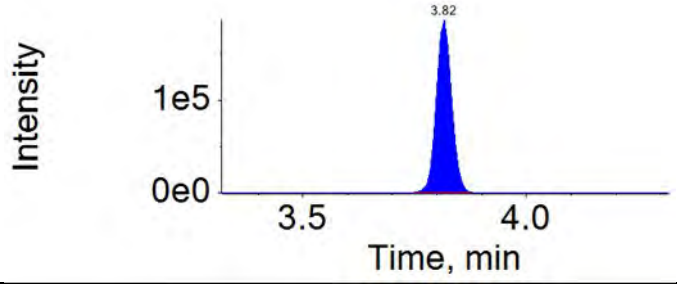
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



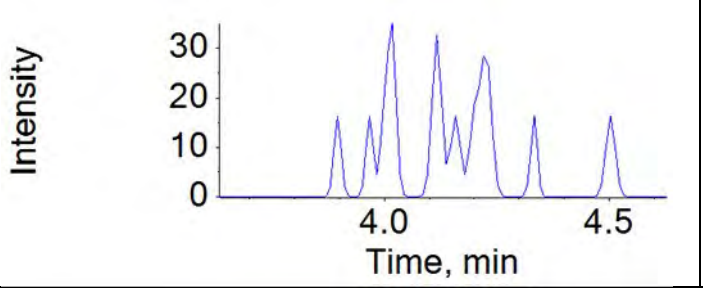


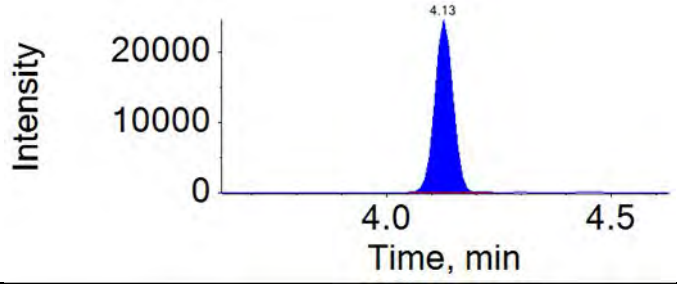
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



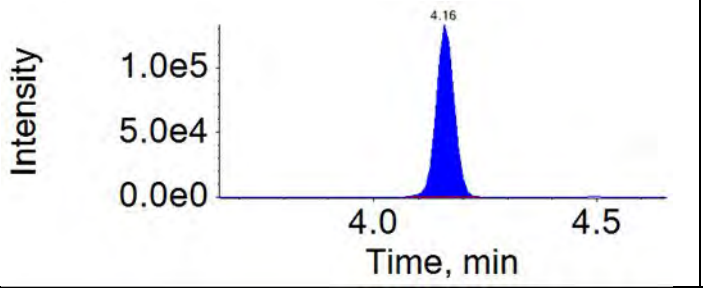


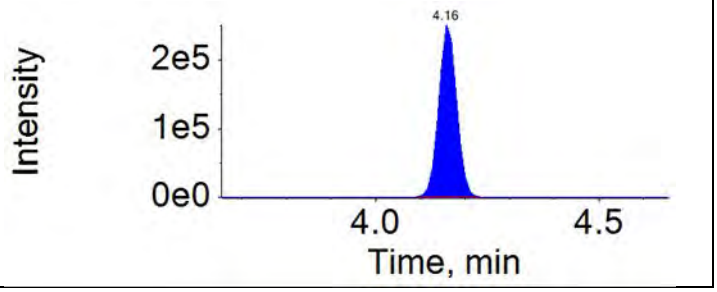
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

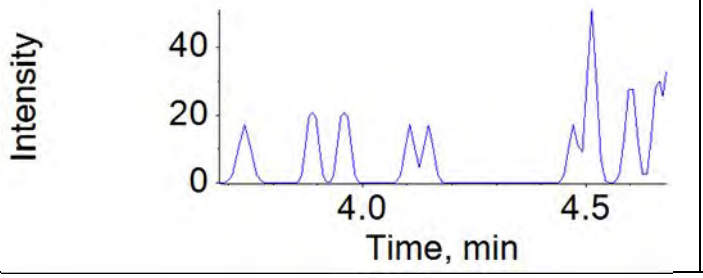
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

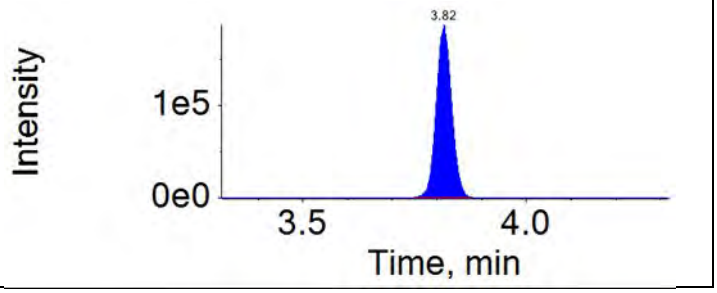
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



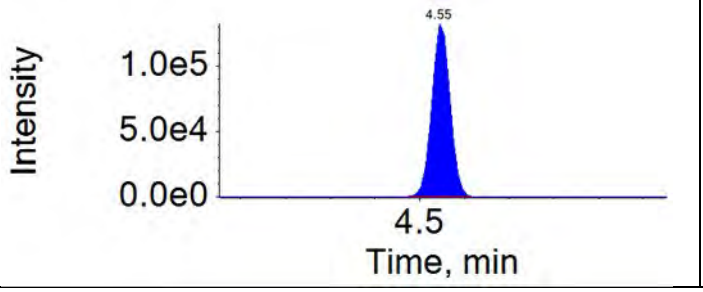


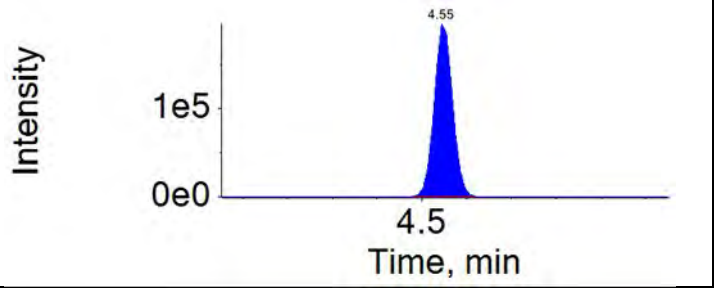
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



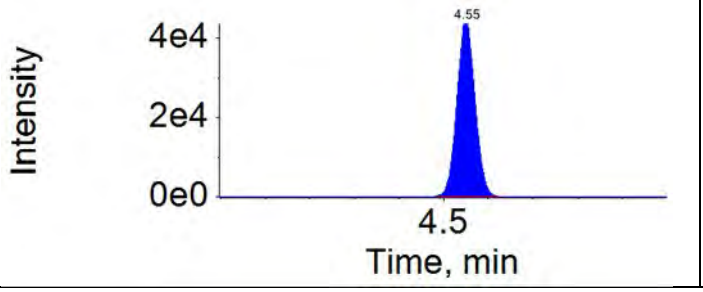


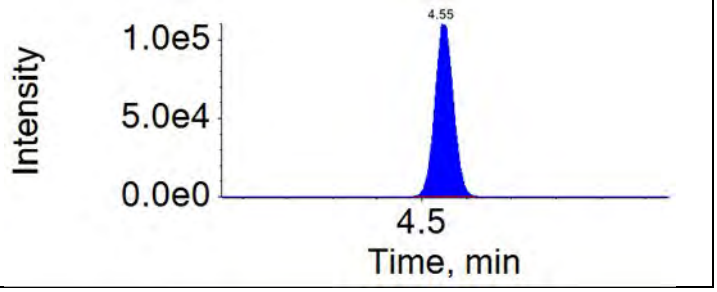
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

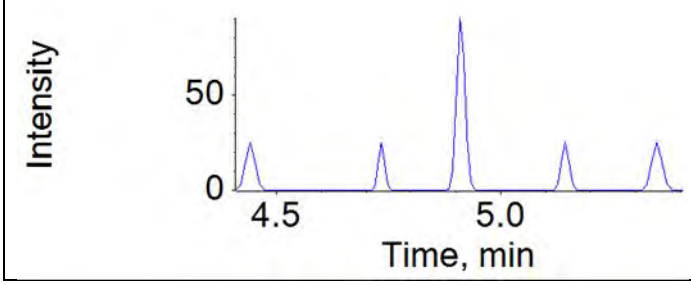
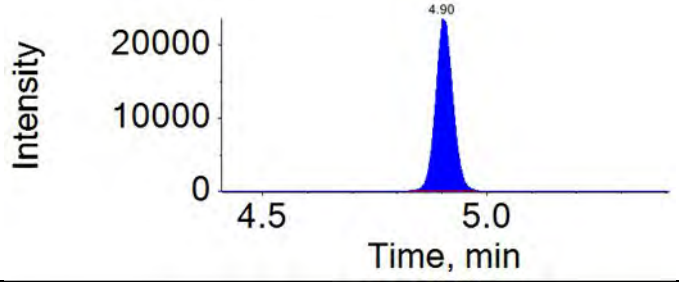


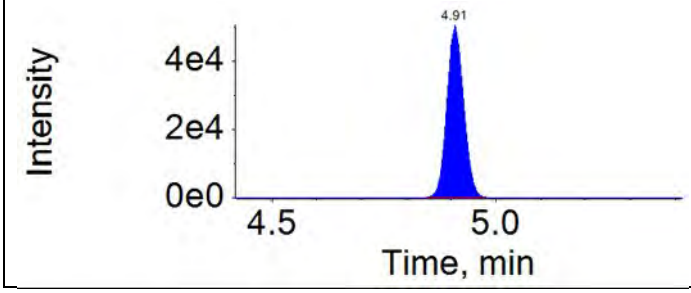
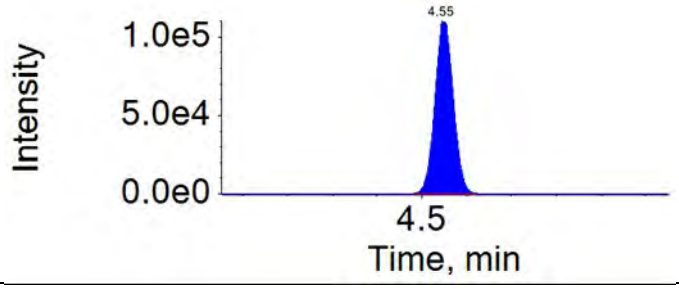


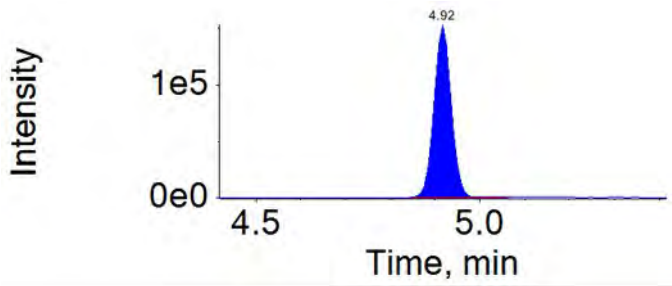
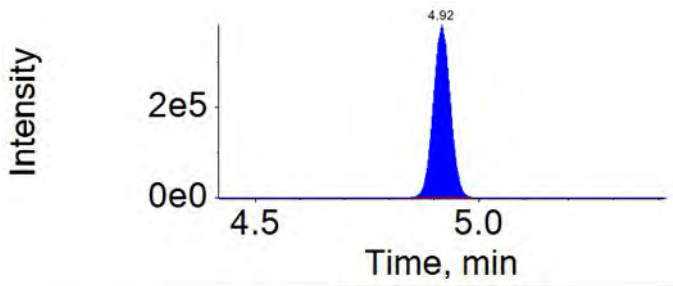
APPROVED
By MCD at 5:01 pm, 11/28/18

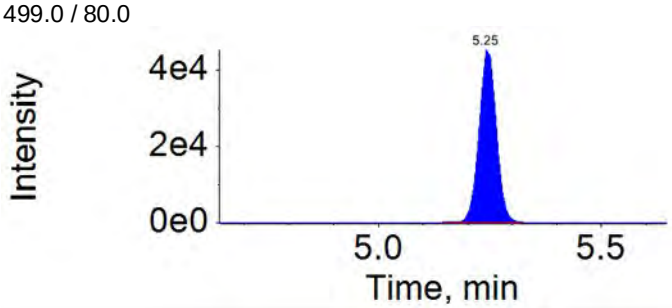
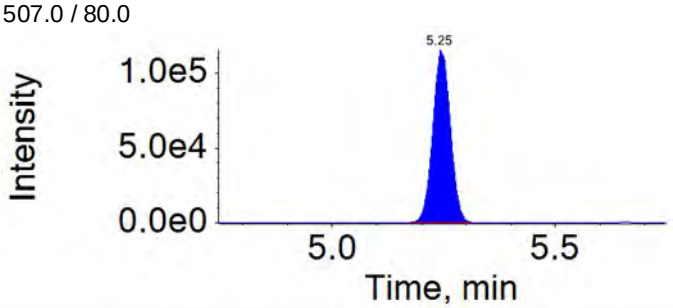
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

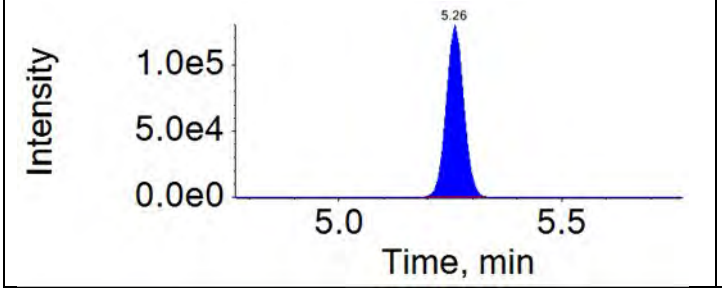
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

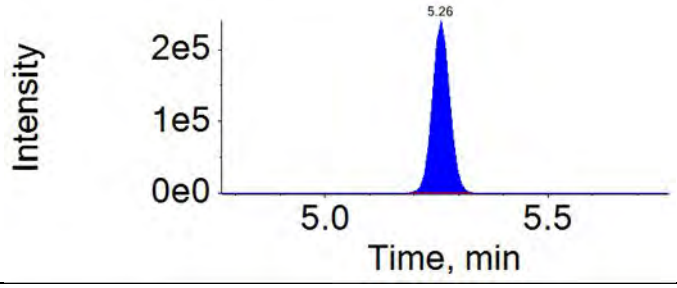
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

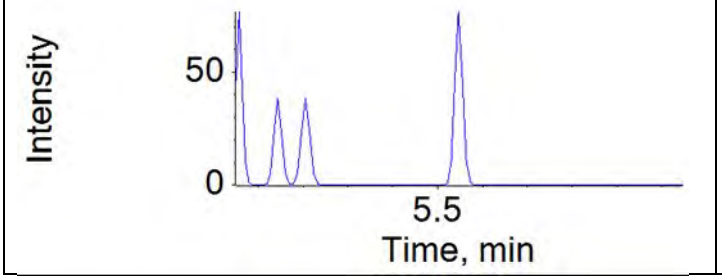
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

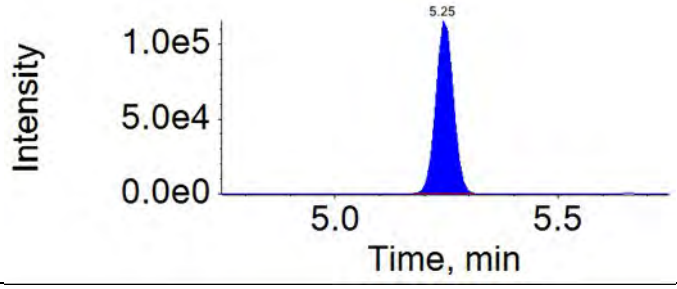
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



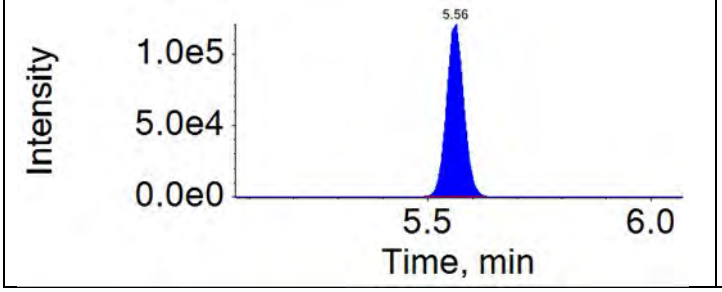


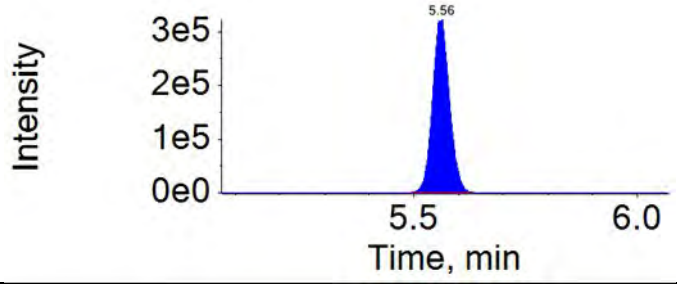
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



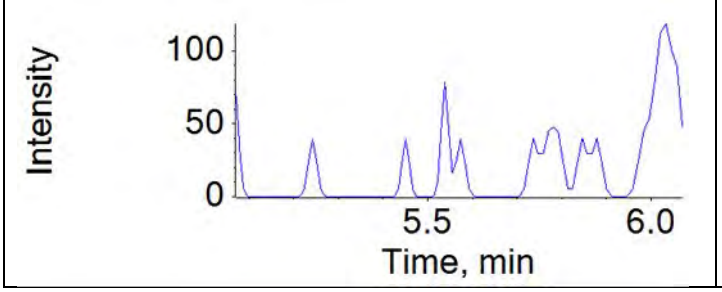


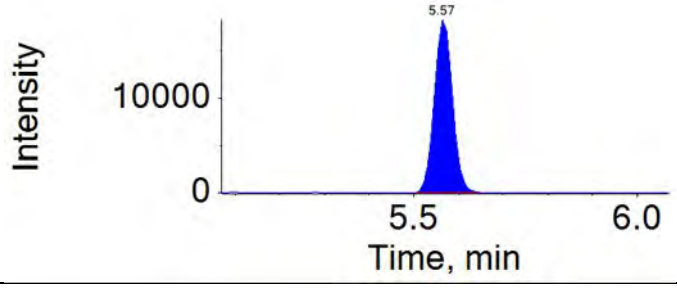
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



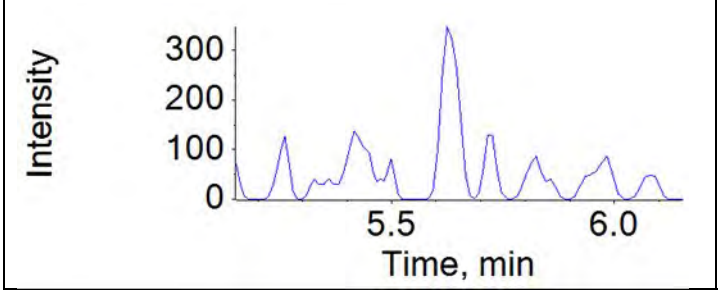


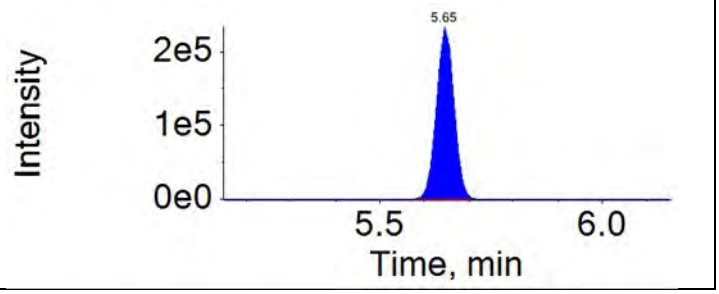
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

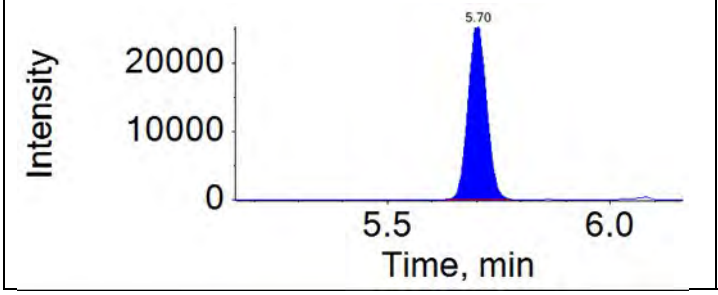
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

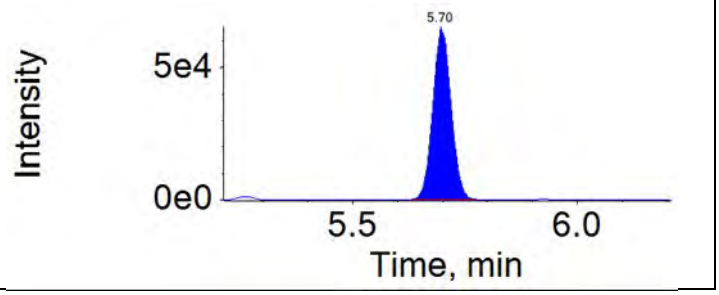
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



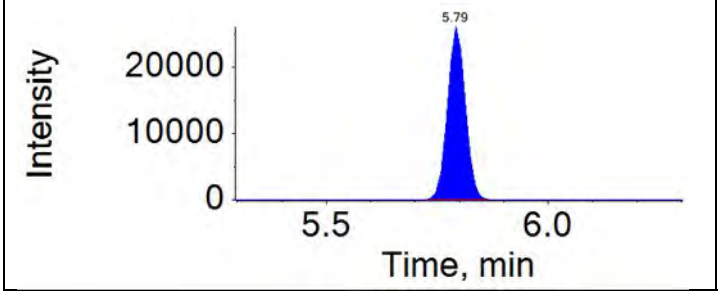


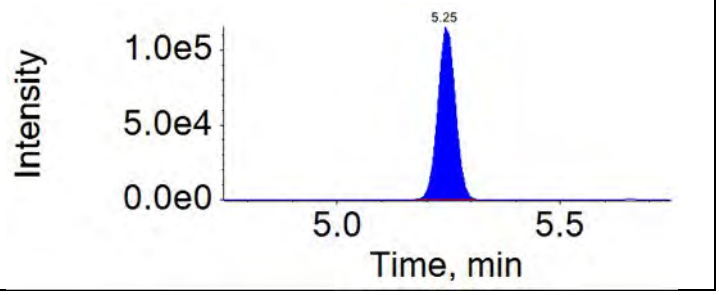
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



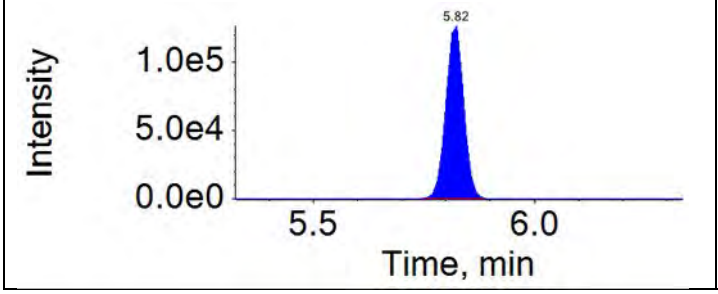


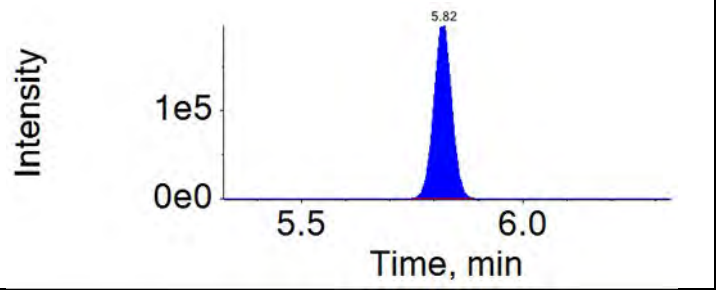
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



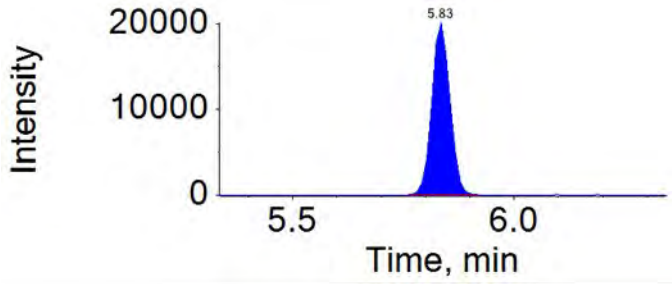


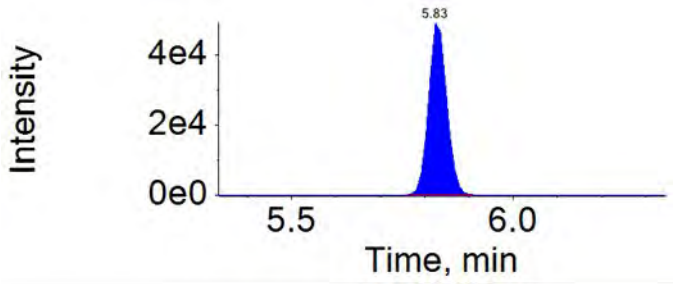
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

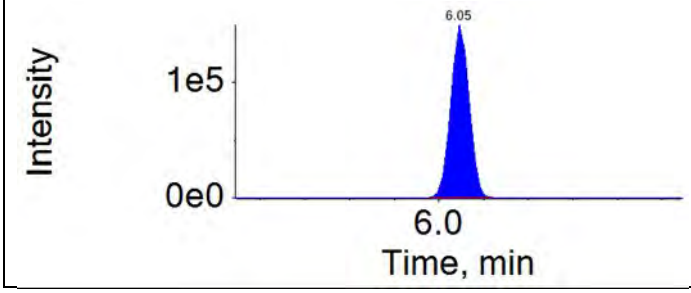
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

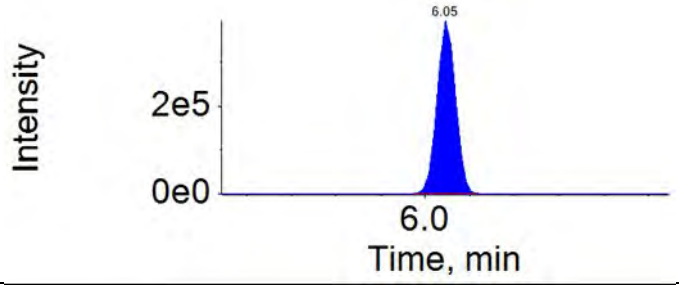
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



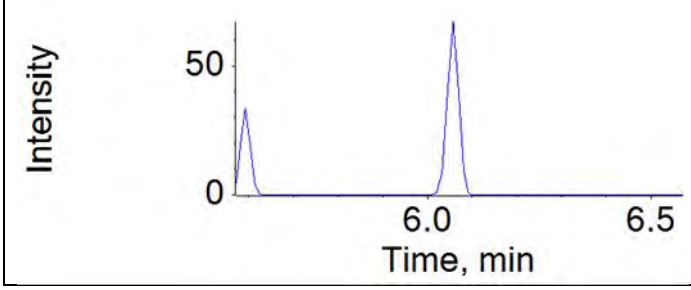


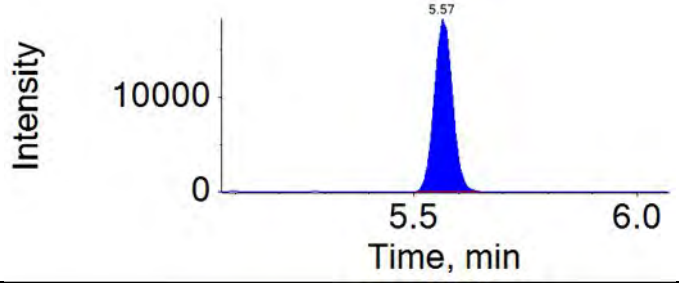
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



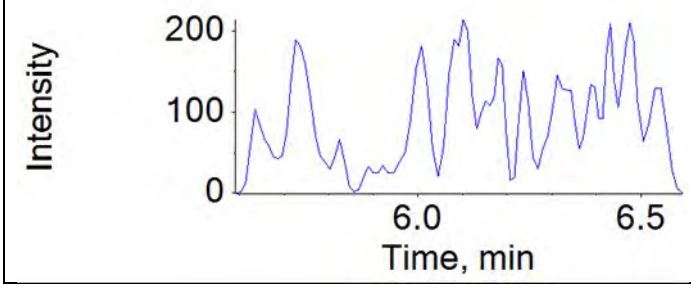


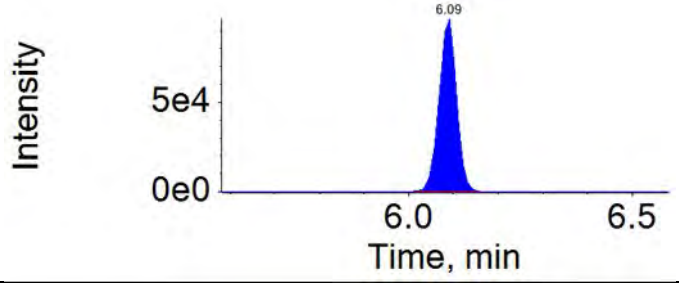
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



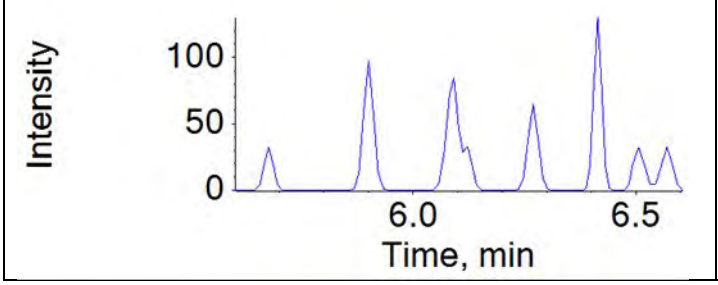


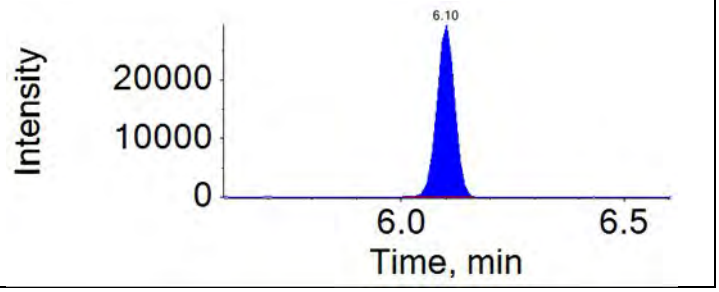
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

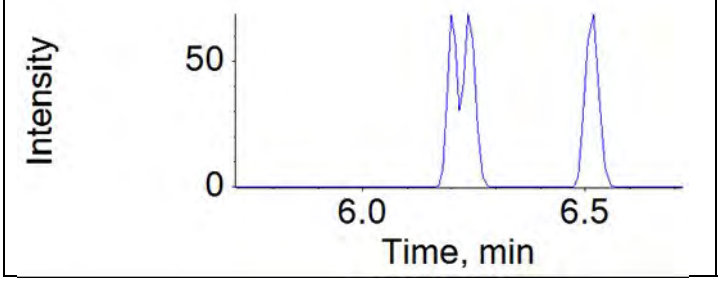
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

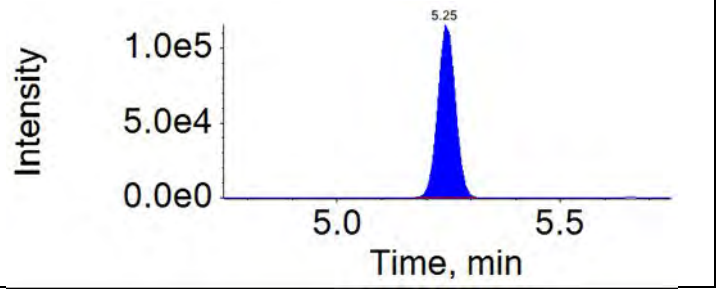
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



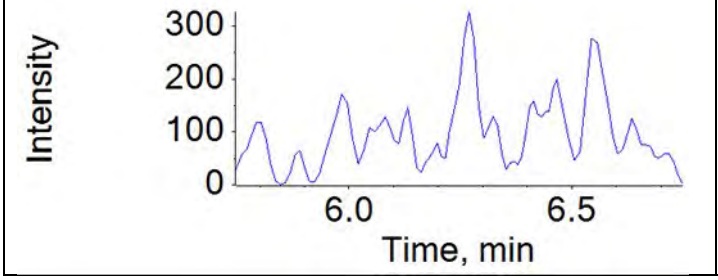


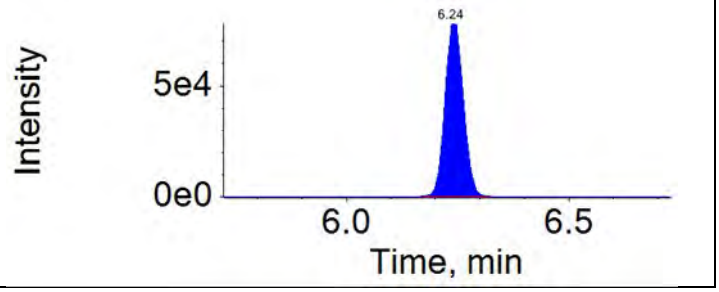
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



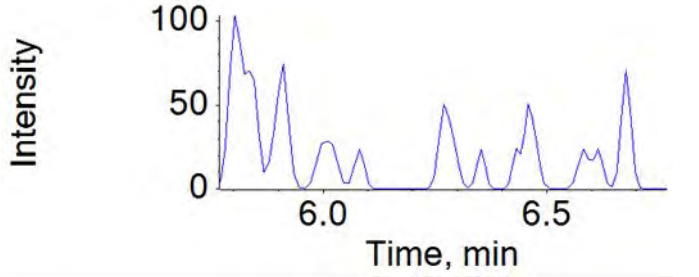


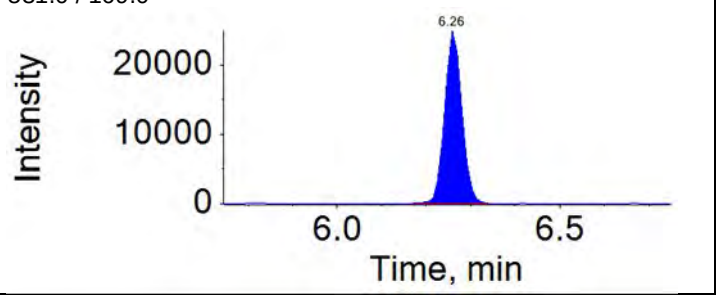
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



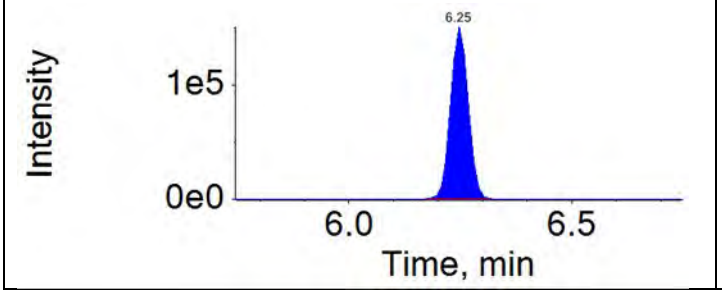


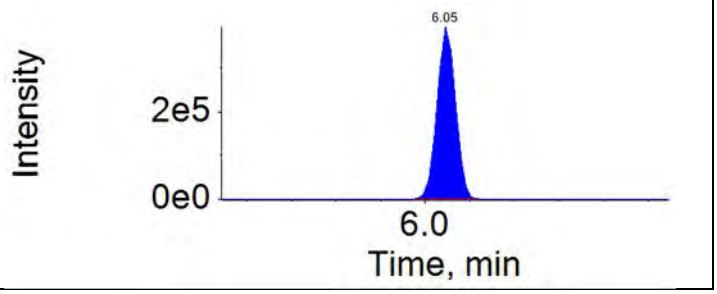
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

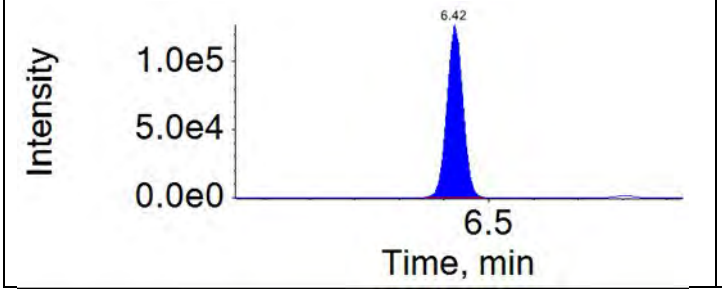
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

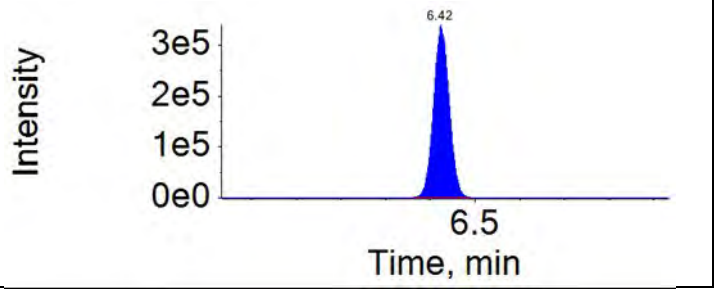
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



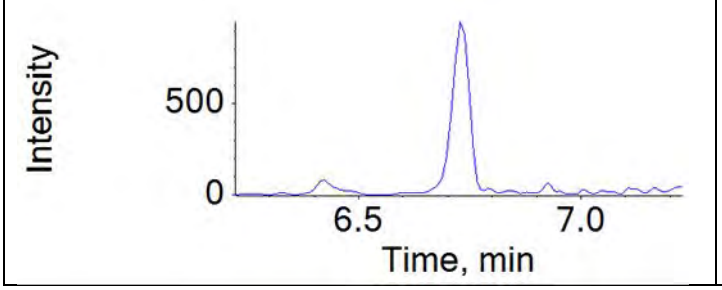


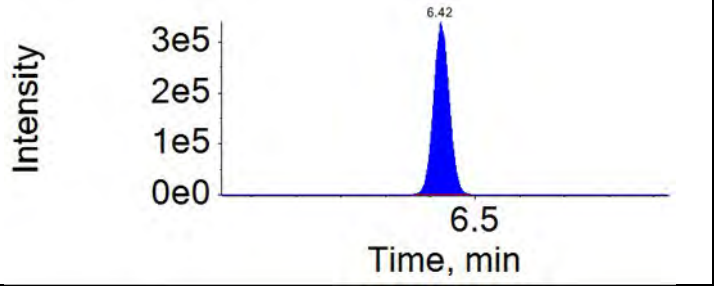
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



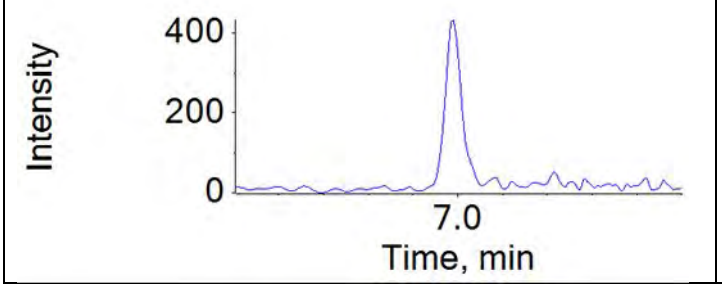


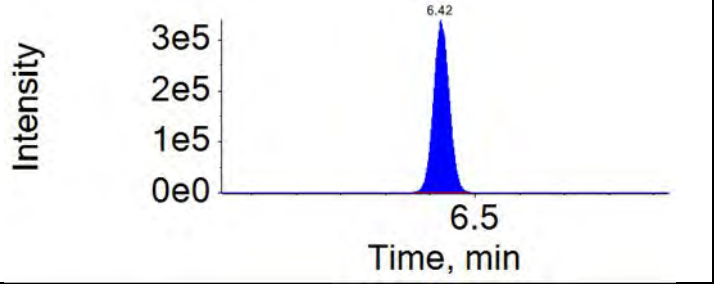
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



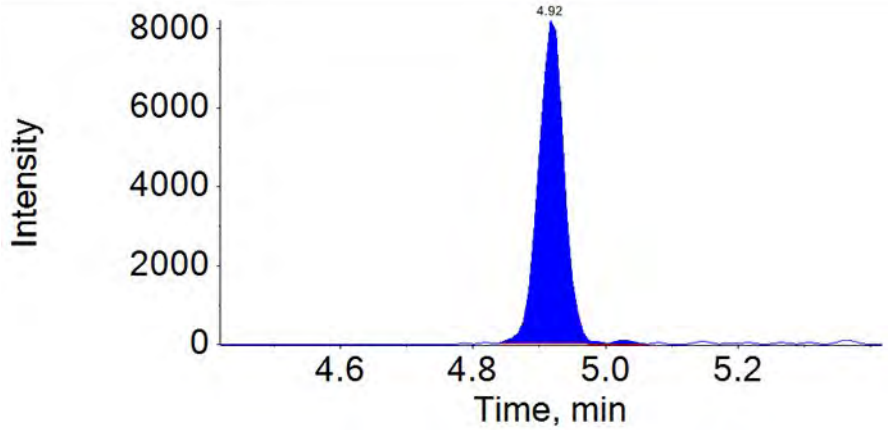


APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

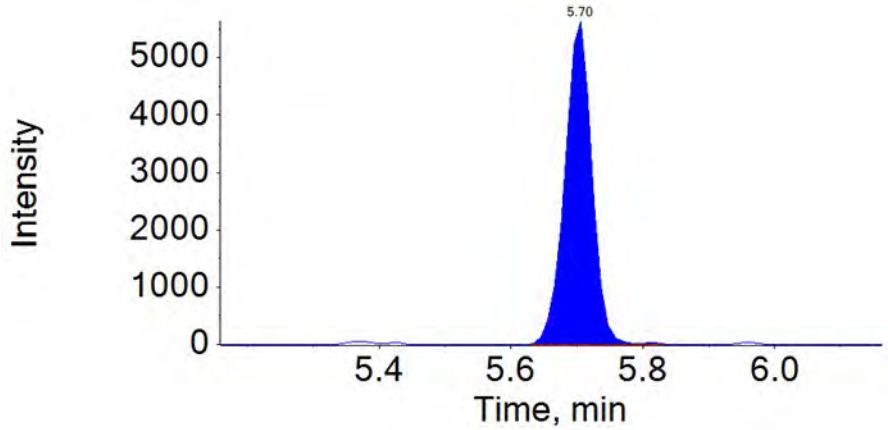
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
22382.92
Mass Range:
413.0 / 169.0
File Name:
18NOV28DCAL-14.wiff
Sample Name:
ICV



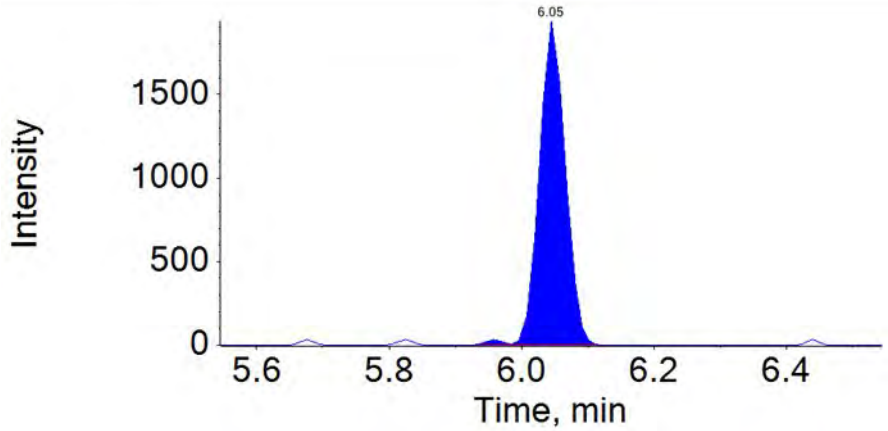
Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
16150.62
Mass Range:
570.0 / 483.0
File Name:
18NOV28DCAL-14.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

Component Name:
PFDoDA_2
RT (min.):
6.05
Peak Area:
5326.50
Mass Range:
613.0 / 169.0
File Name:
18NOV28DCAL-14.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

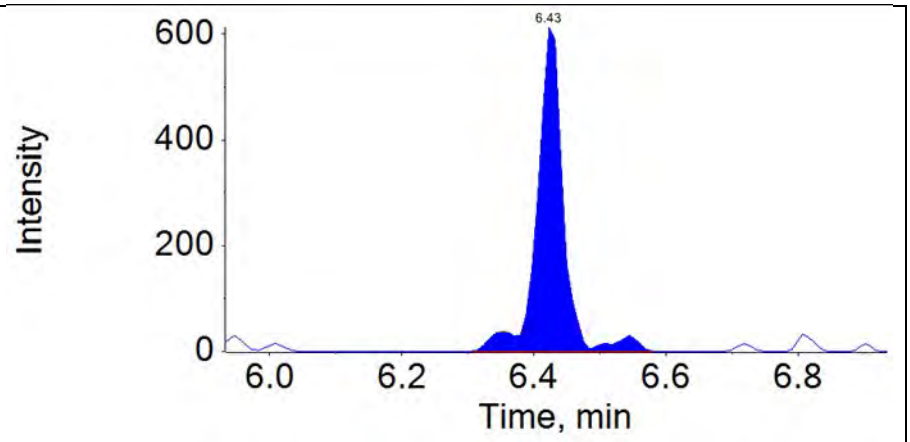
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTeDA_2
RT (min.):
6.43
Peak Area:
1717.33
Mass Range:
713.0 / 169.0
File Name:
18NOV28DCAL-14.wiff
Sample Name:
ICV



Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Ion Ratio Report

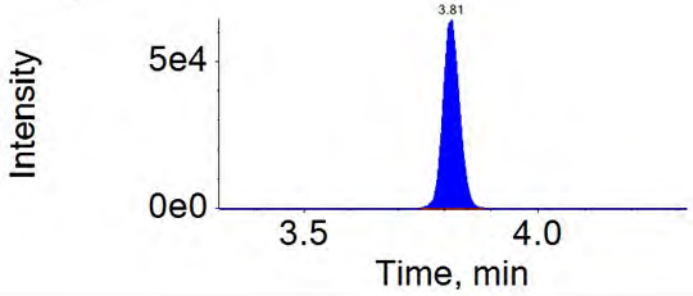
Sample Name: ICV **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-14.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	159425.00	A	0.3655	0.3680			
PFBS_2	3.81	1.00	58661.72	A	0.3655	0.3680	1	50	
4:2-FTS	N/A	N/A	N/A	A	0.6383	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6383	N/A		50	
PFHxA	4.16	1.00	369137.13	A	0.0103	0.0099			
PFHxA_2	4.16	1.00	3663.34	A	0.0103	0.0099	-4	50	
PFPeS	N/A	N/A	N/A	A	0.4976	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.4976	N/A		50	
PFHpA	4.55	1.00	373590.76	A	0.0557	0.0494			
PFHpA_2	4.55	1.00	18441.26	A	0.0557	0.0494	-11	50	
PFHxS	4.55	1.00	125085.30	A	0.3693	0.3301			
PFHxS_2	4.55	1.00	41284.52	A	0.3693	0.3301	-11	50	
6:2-FTS	N/A	N/A	N/A	A	0.6625	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6625	N/A		50	
PFHpS	4.91	1.08	131043.06	A	0.3915	0.4021			
PFHpS_2	4.91	1.08	52690.55	A	0.3915	0.4021	3	50	
PFOA	4.92	1.00	404358.94	A	0.0573	0.0549			
PFOA_2	4.92	1.00	22197.92	M	0.0573	0.0549	-4	50	
PFOS	5.25	1.00	122334.56	A	0.2960	0.3345			
PFOS_2	5.24	1.00	40919.91	A	0.2960	0.3345	13	50	
PFNA	5.26	1.00	351872.00	A	0.0201	0.0188			
PFNA_2	5.26	1.00	6604.00	A	0.0201	0.0188	-7	50	
PFNS	N/A	N/A	N/A	A	0.4794	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4794	N/A		50	
PFDA	5.56	1.00	325191.94	A	0.0075	0.0060			
PFDA_2	5.56	1.00	1956.43	A	0.0075	0.0060	-20	50	
8:2-FTS	N/A	N/A	N/A	A	0.5380	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.5380	N/A		50	
NMeFOSAA	5.70	1.00	74168.76	A	0.2305	0.2169			
NMeFOSAA_2	5.70	1.00	16085.31	M	0.2305	0.2169	-6	50	
PFDS	5.79	1.10	72374.27	A	0.5356	0.5380			
PFDS_2	5.79	1.10	38937.76	A	0.5356	0.5380	0	50	
PFUnDA	5.82	1.00	354099.76	A	0.0038	0.0057			
PFUnDA_2	5.82	1.00	2015.46	A	0.0038	0.0057	50	50	
NEtFOSAA	5.83	1.00	57367.95	A	0.7356	0.5930			
NEtFOSAA_2	5.83	1.00	34017.14	A	0.7356	0.5930	-19	50	
PFDoDA	6.05	1.00	427818.87	A	0.0130	0.0123			
PFDoDA_2	6.05	1.00	5265.10	M	0.0130	0.0123	-6	50	
10:2-FTS	N/A	N/A	N/A	A	0.6989	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.6989	N/A		50	
PFTrDA	6.25	1.03	416758.36	A	0.0090	0.0086			
PFTrDA_2	6.25	1.03	3581.21	A	0.0090	0.0086	-5	50	
PFTeDA	6.42	1.00	312632.12	A	0.0056	0.0049			
PFTeDA_2	6.43	1.00	1543.65	M	0.0056	0.0049	-12	50	
PFHxDA	N/A	N/A	N/A	A	0.0646	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0646	N/A		50	
PFODA	N/A	N/A	N/A	A	0.0264	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0264	N/A		50	

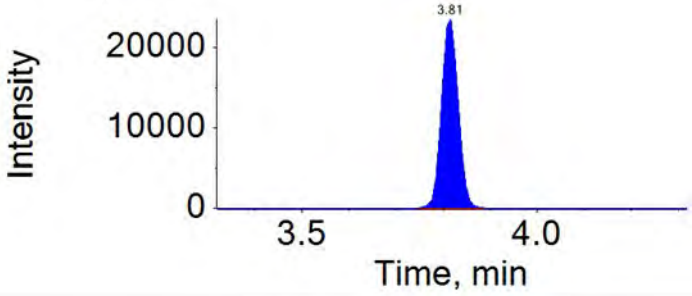
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

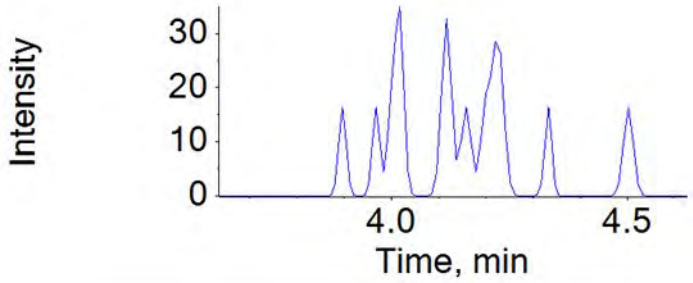
Component: PFBS
Primary Mass: 299.0 / 80.0



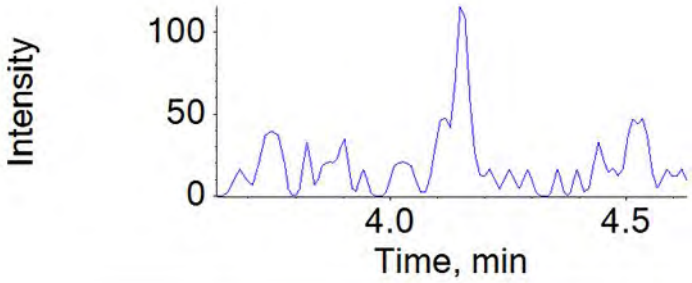
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



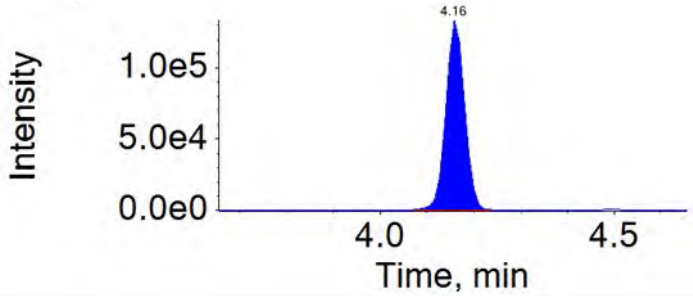
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



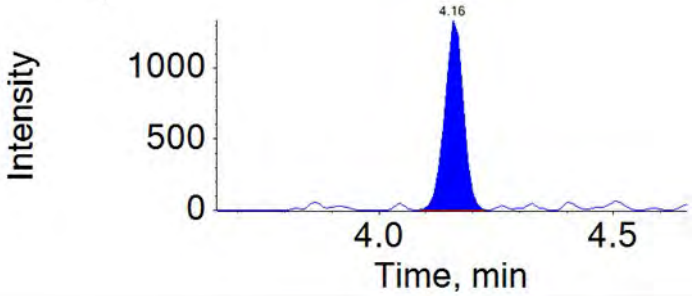
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



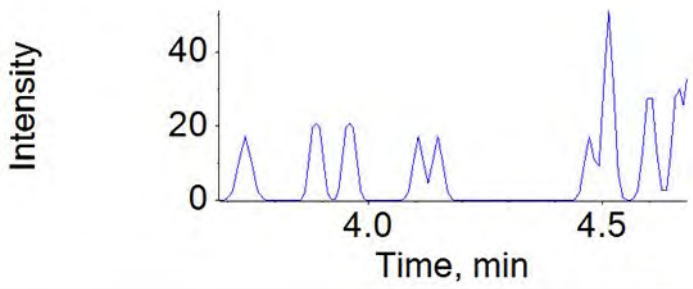
Component: PFHxA
Primary Mass: 313.0 / 269.0



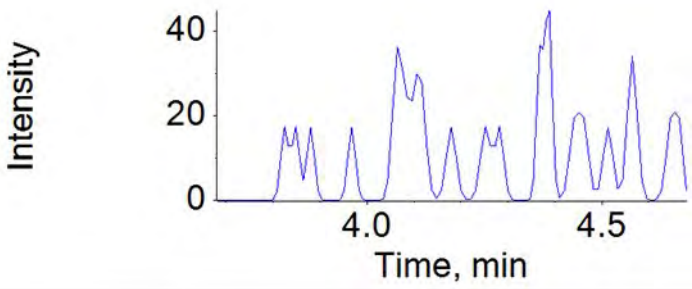
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



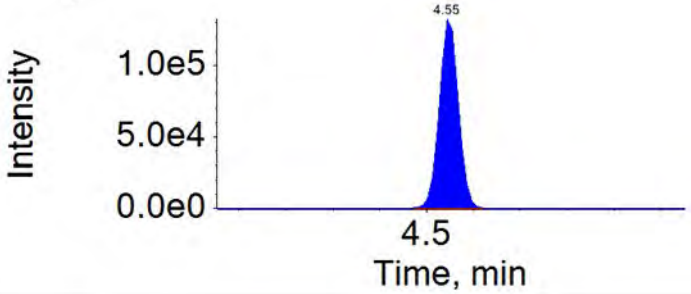
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



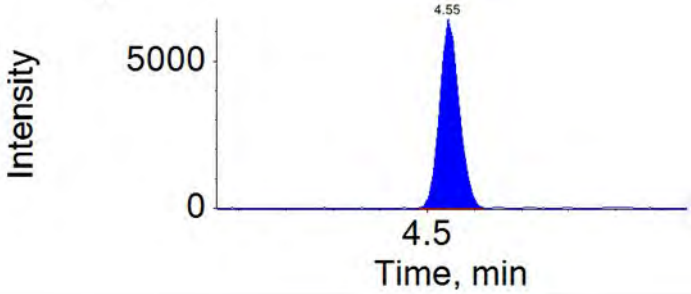
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

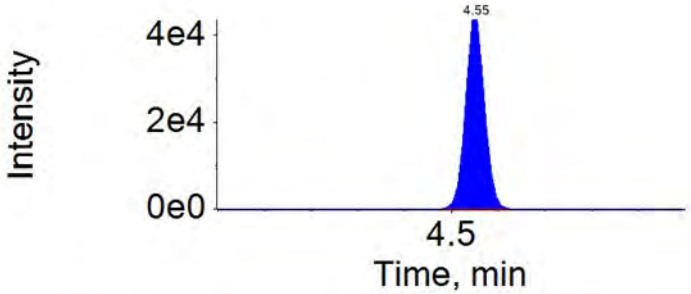
Component: PFHpA
Primary Mass: 363.0 / 319.0



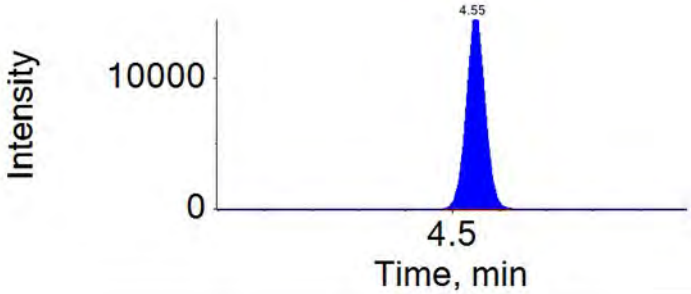
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



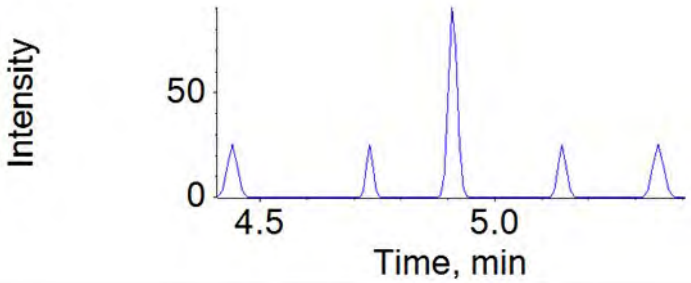
Component: PFHxS
Primary Mass: 399.0 / 80.0



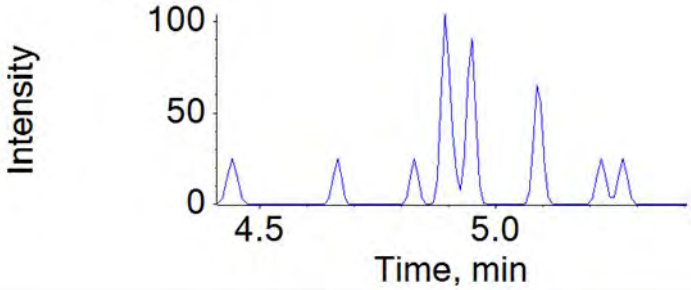
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



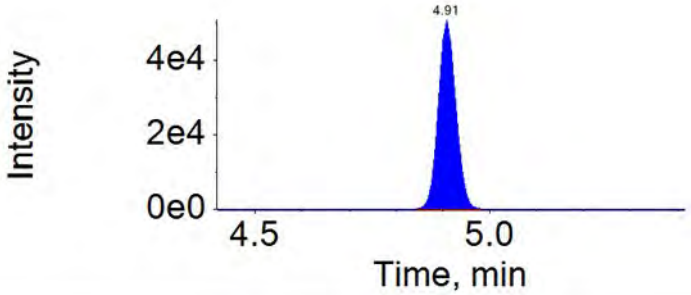
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



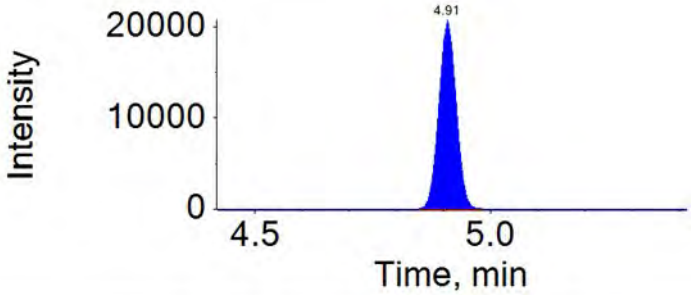
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



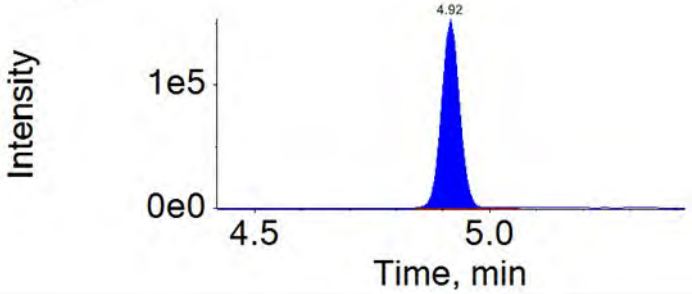
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



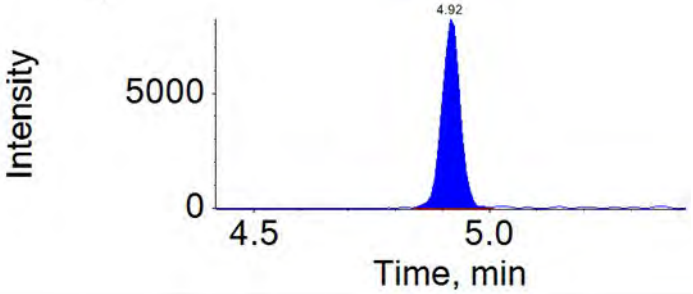
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

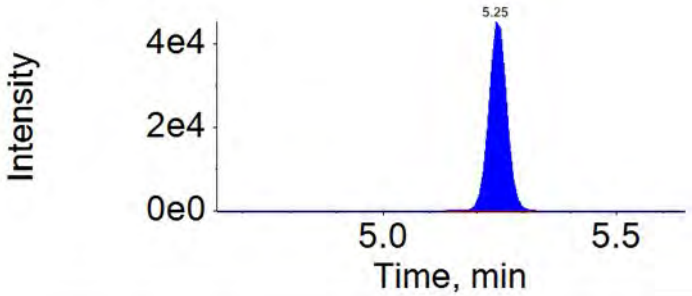
Component: PFOA
Primary Mass: 413.0 / 369.0



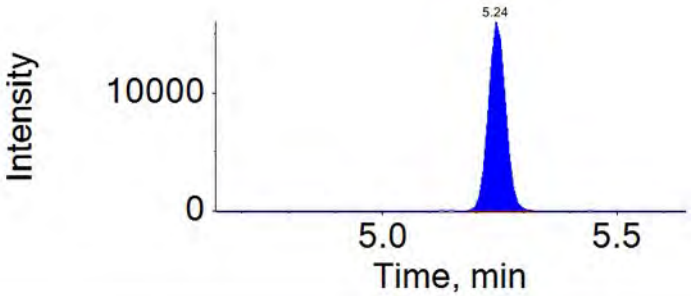
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



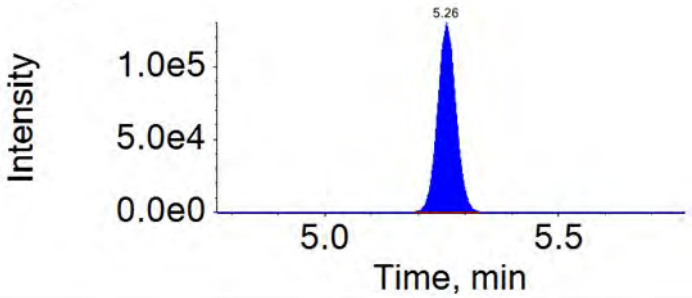
Component: PFOS
Primary Mass: 499.0 / 80.0



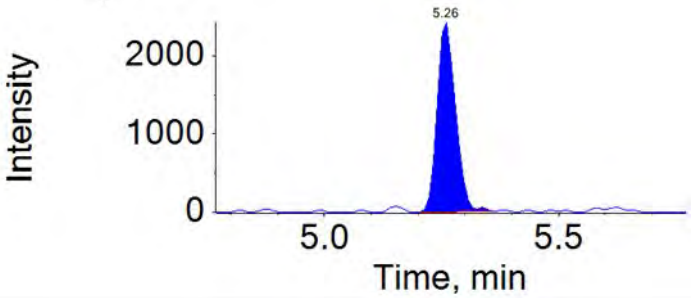
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



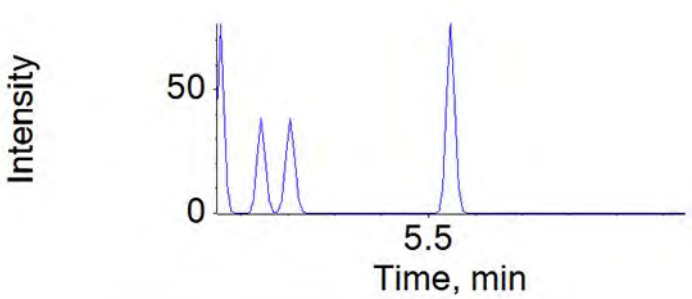
Component: PFNA
Primary Mass: 463.0 / 419.0



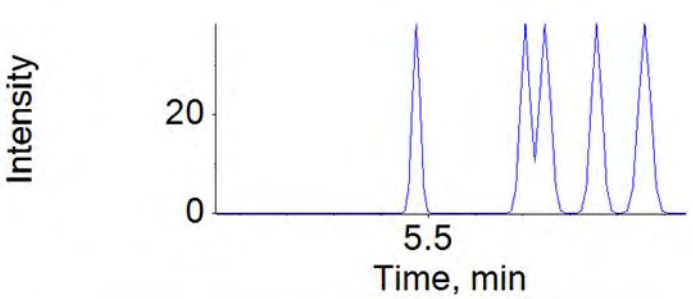
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



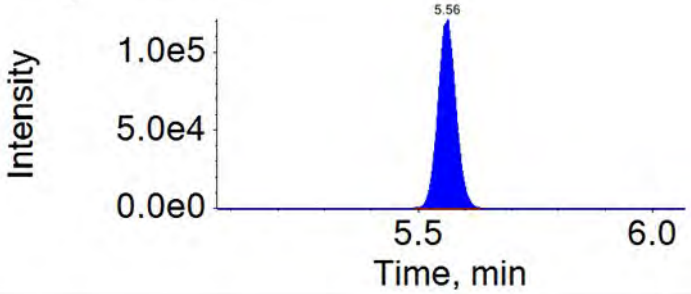
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



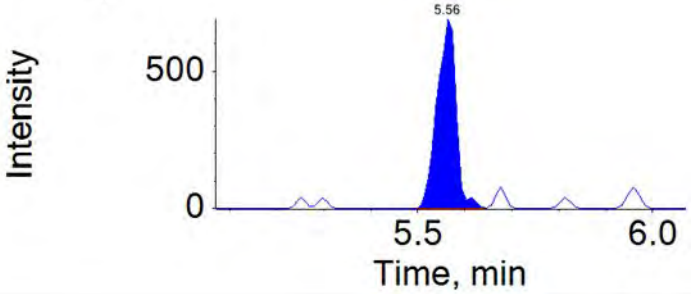
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

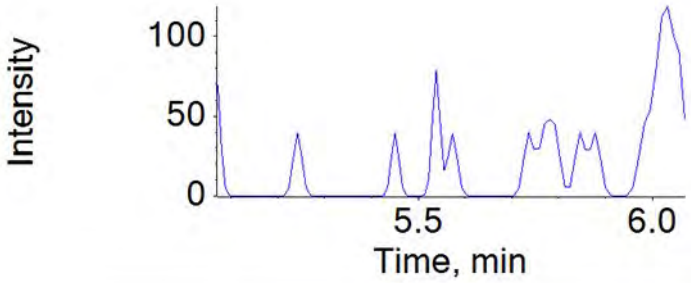
Component: PFDA
Primary Mass: 513.0 / 469.0



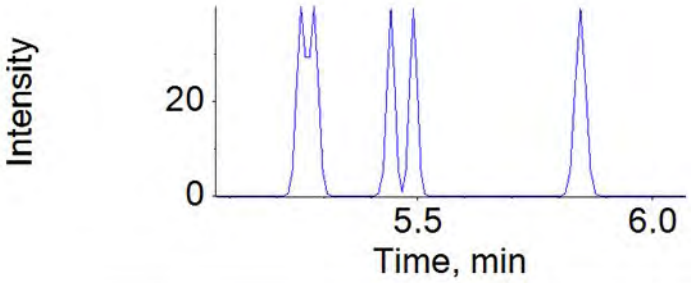
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



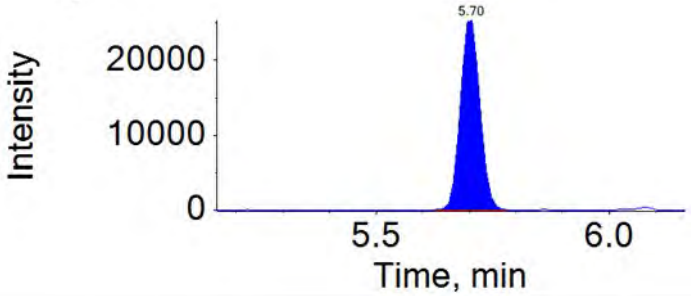
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



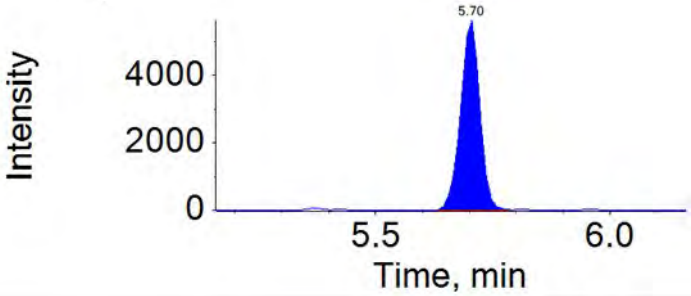
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



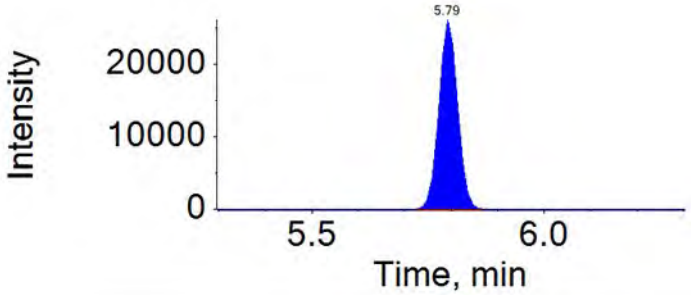
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



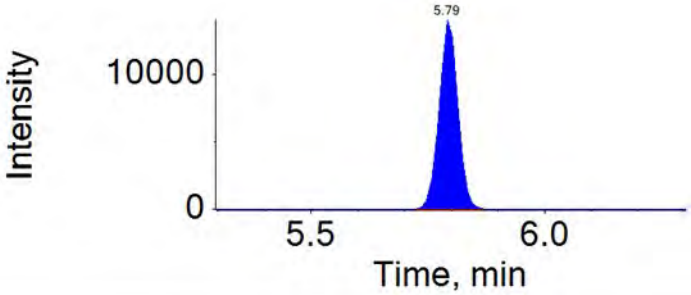
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



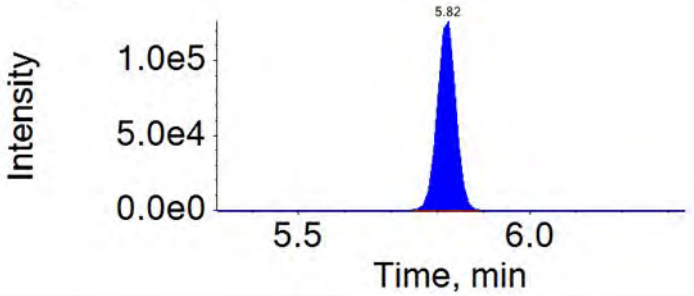
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



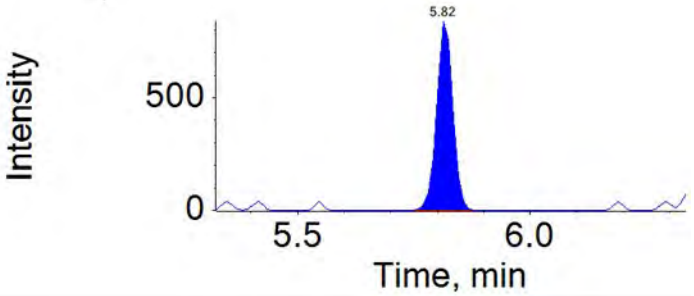
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

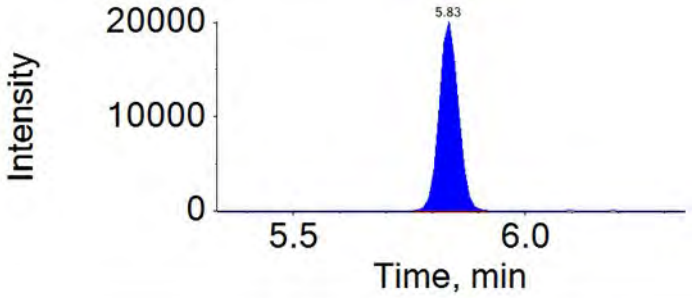
Component: PFUnDA
Primary Mass: 563.0 / 519.0



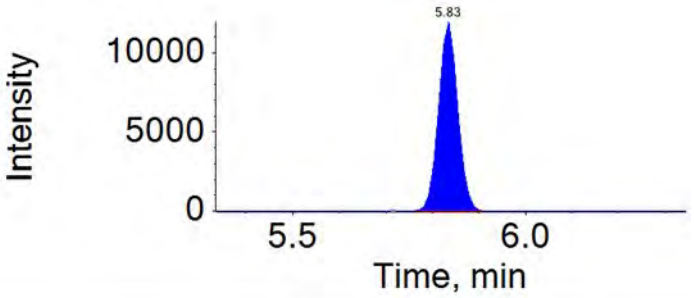
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



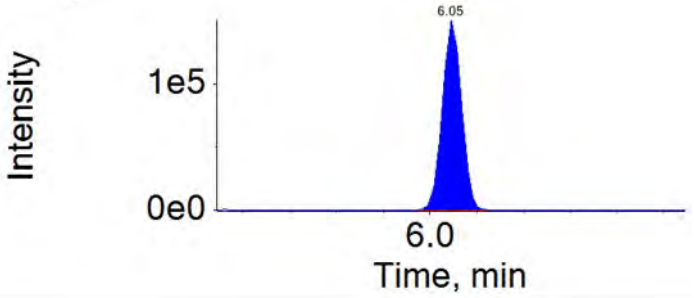
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



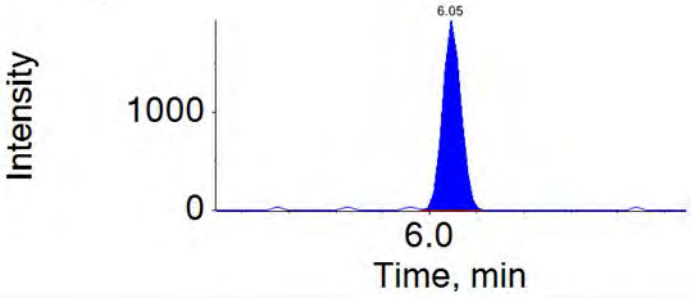
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



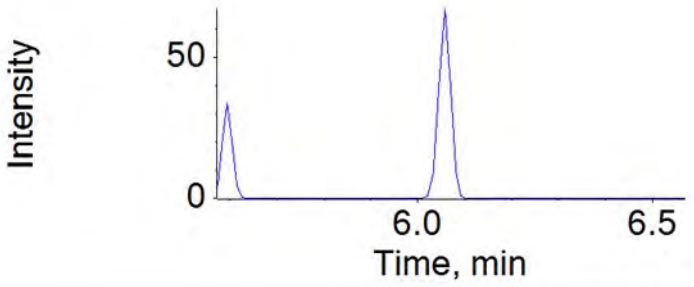
Component: PFDoDA
Primary Mass: 613.0 / 569.0



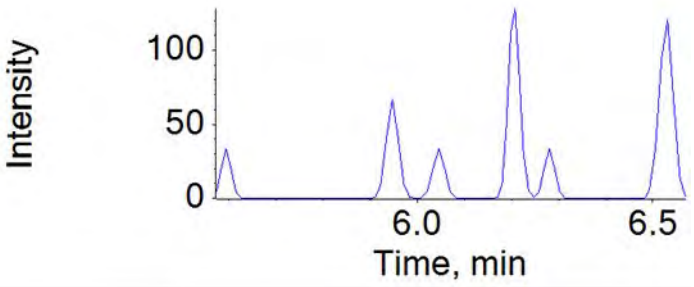
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



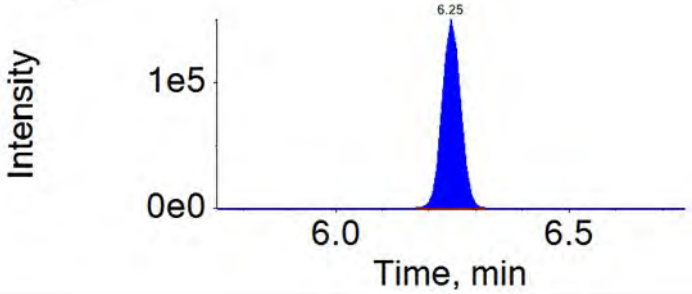
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



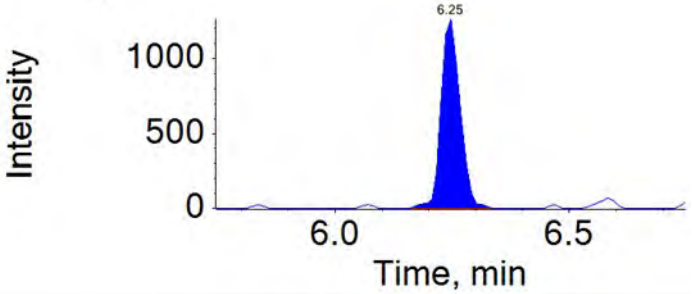
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



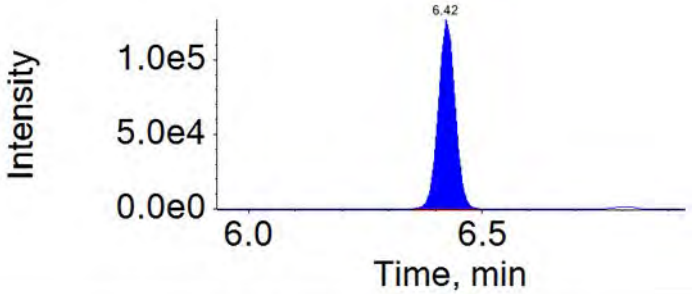
Component: PFTrDA
Primary Mass: 663.0 / 619.0



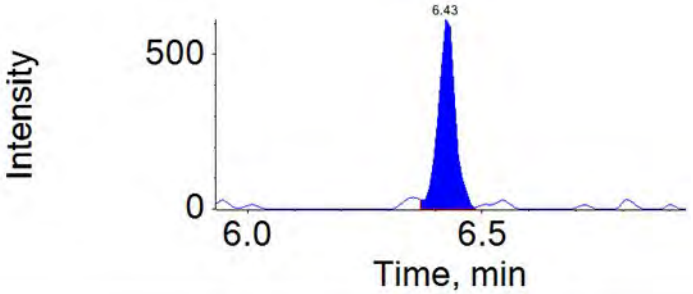
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



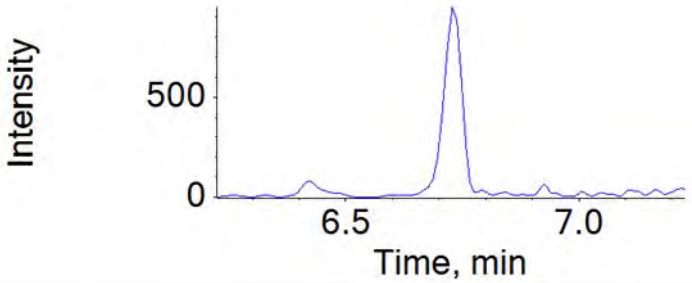
Component: PFTeDA
Primary Mass: 713.0 / 669.0



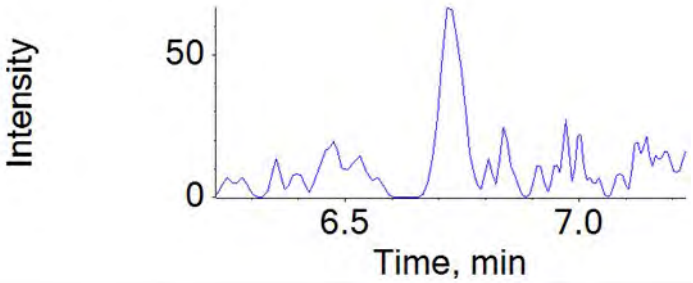
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



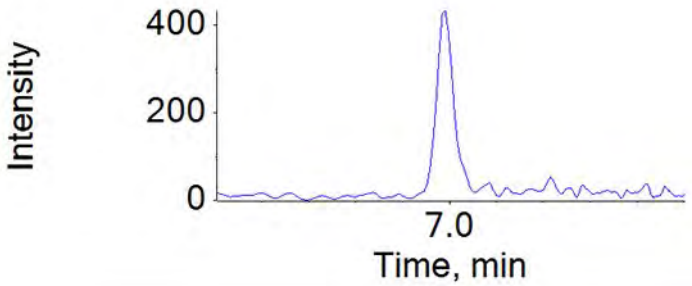
Component: PFHxDA
Primary Mass: 813.0 / 769.0



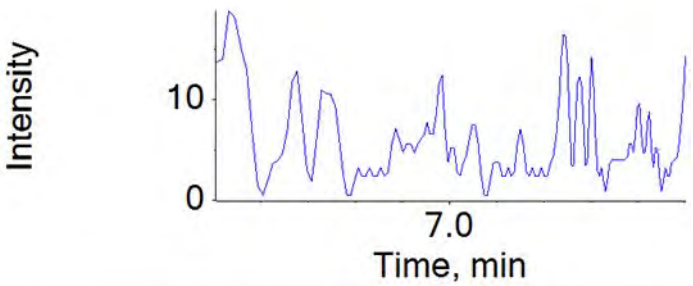
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	L+B CAL3			**Data File:**		18NOV28DCAL-15.wiff
Sample ID:	LBMODX1833D			**Acquis Date:**		2018-11-28T15:03:22
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	11			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	930482.9	887248.9	5	50	
13C2-PFOA	5.0	516348.2	498501.6	4	50	
13C4-PFOS	4.8	310677.0	283214.2	10	50	
13C2-PFDA	5.0	460288.7	441790.6	4	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	996867.5	13C3-PFBA	930482.9	1.071	5.000	4.780	96	70-130	
E13C5-PFPeA	927870.7	13C3-PFBA	930482.9	0.997	5.000	4.656	93	70-130	
E13C3-PFBS	427409.8	13C3-PFBA	930482.9	0.459	4.650	4.382	94	70-130	
E13C2-4:2-FTS	73743.1	13C2-PFOA	516348.2	0.143	4.670	4.922	105	70-130	
E13C5-PFHxA	699105.0	13C2-PFOA	516348.2	1.354	5.000	4.973	99	70-130	
E13C3-PFHxS	324075.2	13C2-PFOA	516348.2	0.628	4.730	4.919	104	70-130	
E13C4-PFHpA	547668.0	13C2-PFOA	516348.2	1.061	5.000	4.874	97	70-130	
E13C2-6:2-FTS	63429.0	13C2-PFOA	516348.2	0.123	4.750	5.142	108	70-130	
E13C8-PFOA	997292.2	13C2-PFOA	516348.2	1.931	5.000	5.316	106	70-130	
E13C8-PFOS	308064.9	13C4-PFOS	310677.0	0.992	4.780	4.476	94	70-130	
E13C9-PFNA	770381.1	13C4-PFOS	310677.0	2.480	5.000	5.446	109	70-130	
E13C6-PFDA	853597.3	13C2-PFDA	460288.7	1.854	5.000	5.229	105	70-130	
E13C2-8:2-FTS	52606.6	13C2-PFDA	460288.7	0.114	4.790	4.912	103	70-130	
E13C8-PFOSA	636488.8	13C2-PFDA	460288.7	1.383	5.000	5.074	101	70-130	
Ed3-NMeFOSAA	186039.9	13C2-PFDA	460288.7	0.404	5.000	5.132	103	70-130	
E13C7-PFUnDA	573935.8	13C2-PFDA	460288.7	1.247	5.000	5.270	105	70-130	
Ed5-NEtFOSAA	145277.9	13C2-PFDA	460288.7	0.316	5.000	5.623	112	70-130	
E13C2-PFDoDA	1114419.1	13C2-PFDA	460288.7	2.421	5.000	5.087	102	70-130	
Ed7-NMePFOSAE	278546.0	13C2-PFDA	460288.7	0.605	5.000	5.230	105	70-130	
Ed3-NMePFOSA	90664.8	13C2-PFDA	460288.7	0.197	5.000	5.331	107	70-130	
Ed9-NEtPFOSAE	233109.2	13C2-PFDA	460288.7	0.506	5.000	5.134	103	70-130	
Ed5-NEtPFOSA	69689.3	13C2-PFDA	460288.7	0.151	5.000	5.261	105	70-130	
E13C2-PFTeDA	859635.9	13C2-PFDA	460288.7	1.868	5.000	5.168	103	70-130	

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

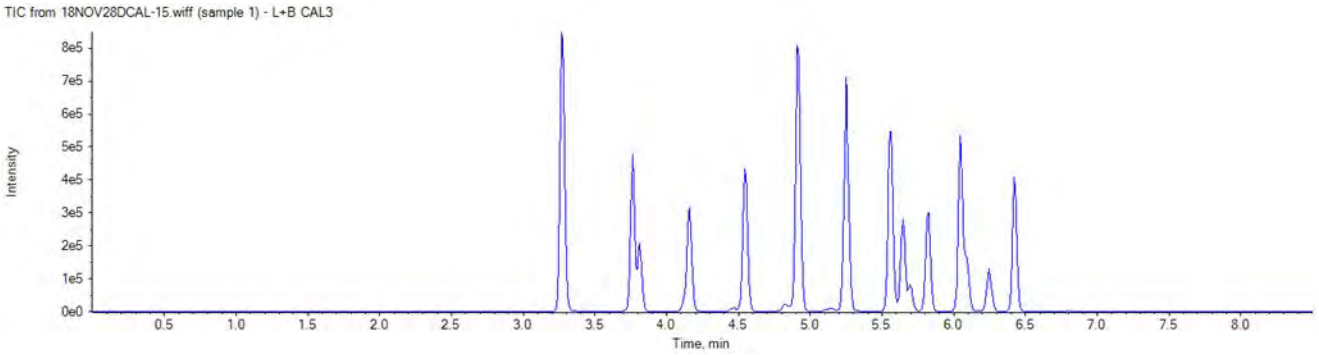
Analyte Quantitation Peak Table

Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-15.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	996867.5	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	927870.7	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	427409.8	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	73743.1	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	699105.0	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	427409.8	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.55	547668.0	N/A	
PFHxS	4.55	1.000	130205.7		M	13C3-PFHxS	4.55	324075.2	0.402	1.881
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	63429.0	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	324075.2	N/A	
PFOA	4.92	1.000	363985.2		M	13C8-PFOA	4.91	997292.2	0.365	1.886
PFOS	5.25	1.000	124397.3		M	13C8-PFOS	5.24	308064.9	0.404	1.694
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	770381.1	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	308064.9	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	853597.3	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	52606.6	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	636488.8	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	186039.9	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	308064.9	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	573935.8	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	145277.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	1114419.1	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	52606.6	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.09	278546.0	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.10	90664.8	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	308064.9	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.24	233109.2	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.26	69689.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	1114419.1	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	859635.9	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	859635.9	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	859635.9	N/A	

Total Ion Chromatogram

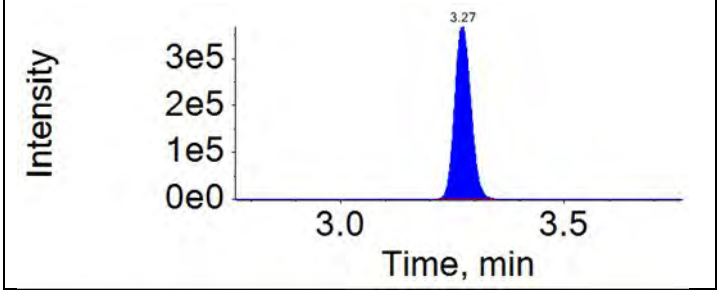


APPROVED
By MCD at 5:01 pm, 11/28/18

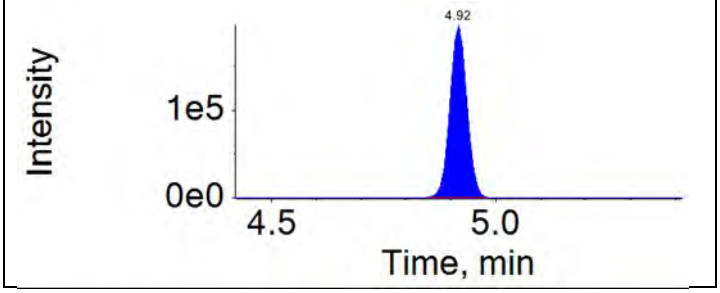
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

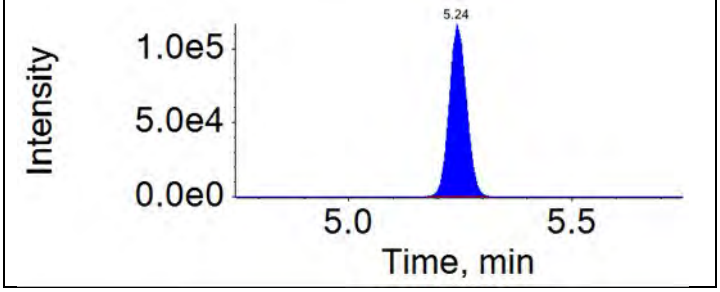
Injection Standard: 13C3-PFBA
216.0 / 172.0



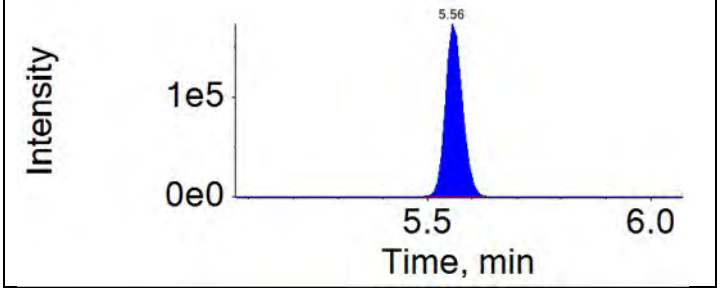
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

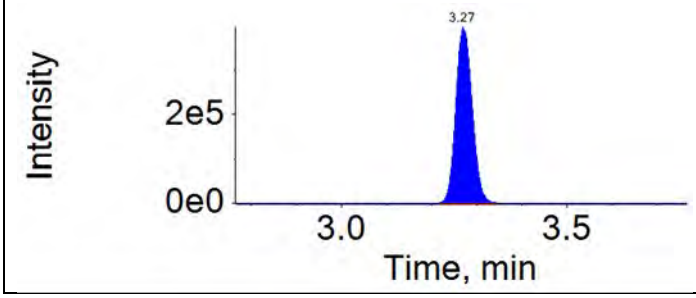


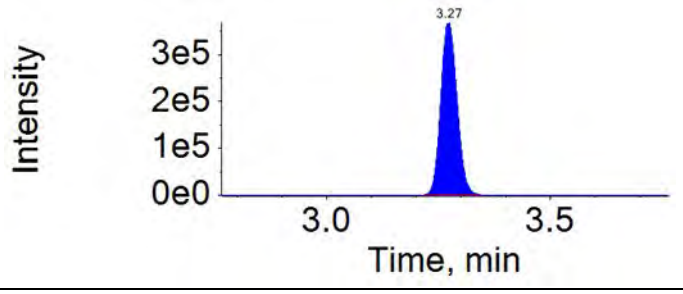
Injection Standard: 13C2-PFDA
515.0 / 470.0



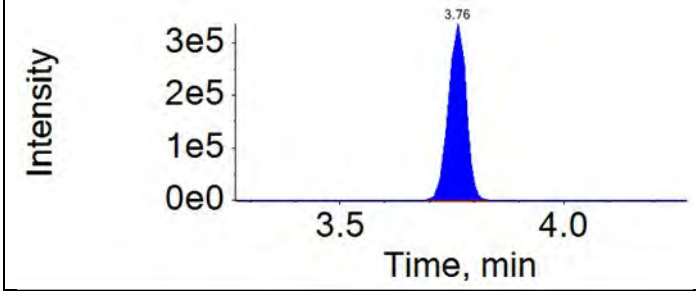
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

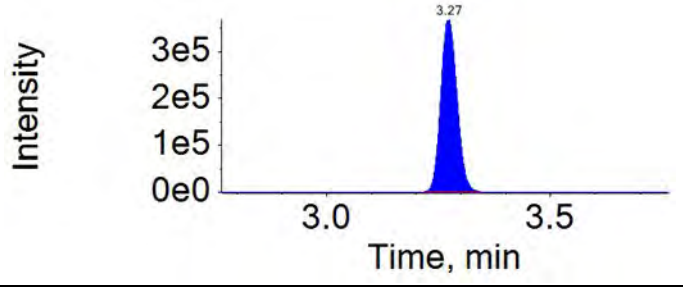
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



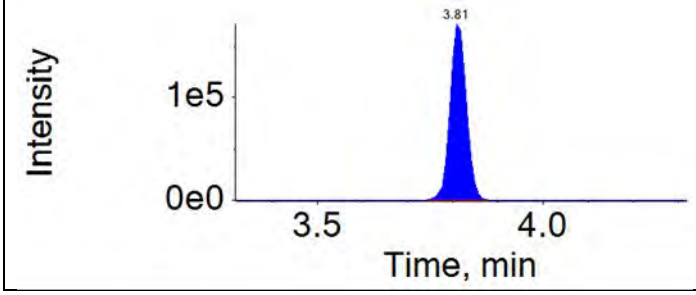


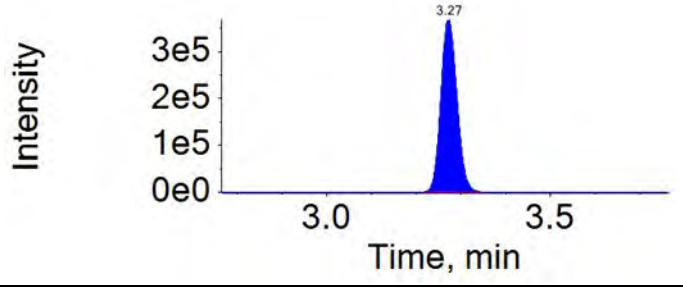
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



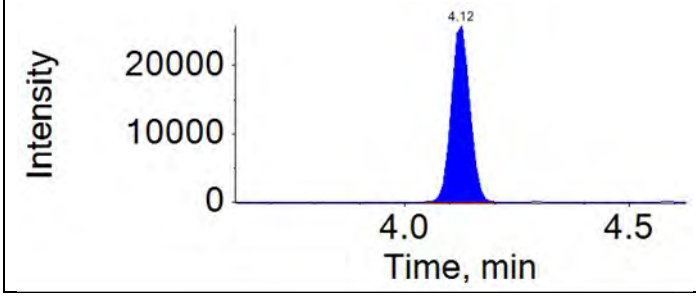


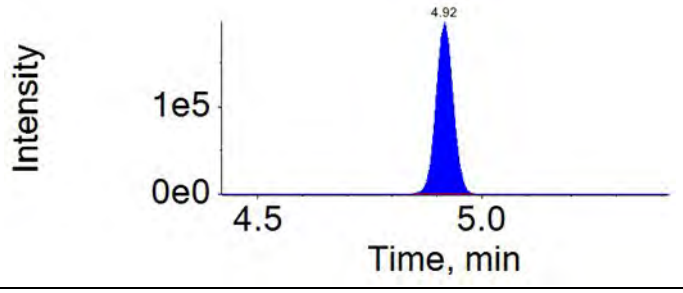
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



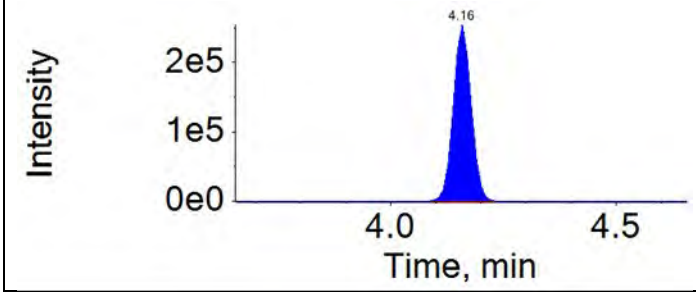


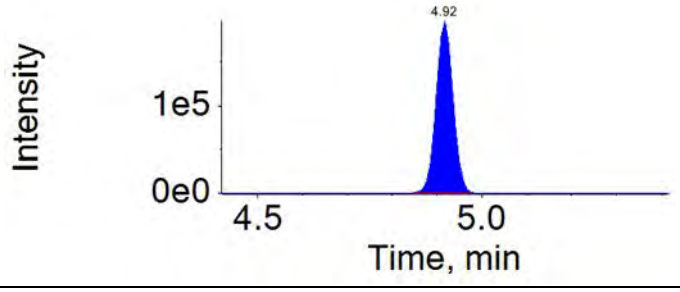
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

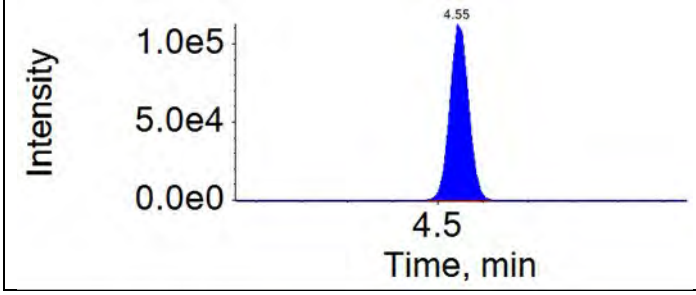
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

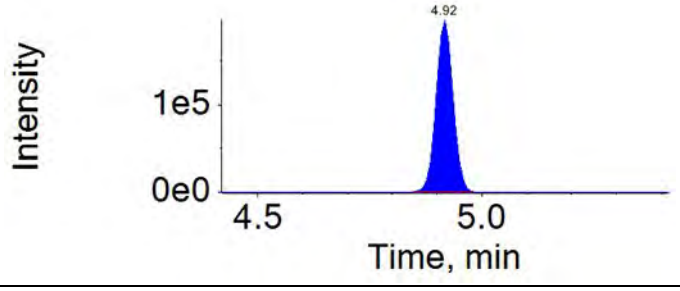
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



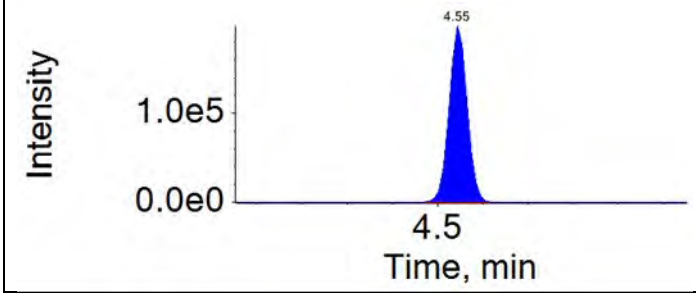


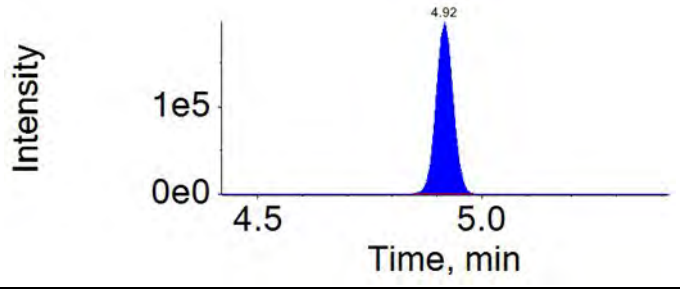
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



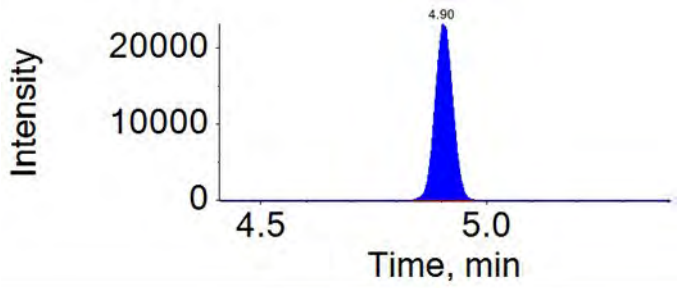


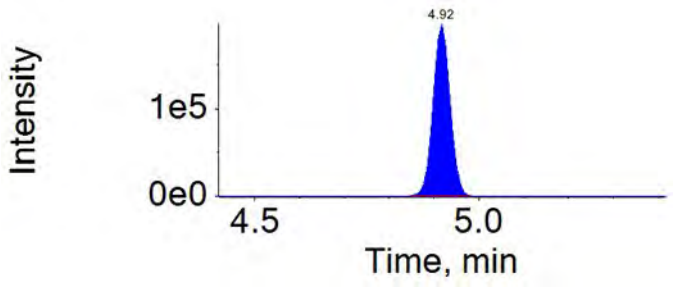
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

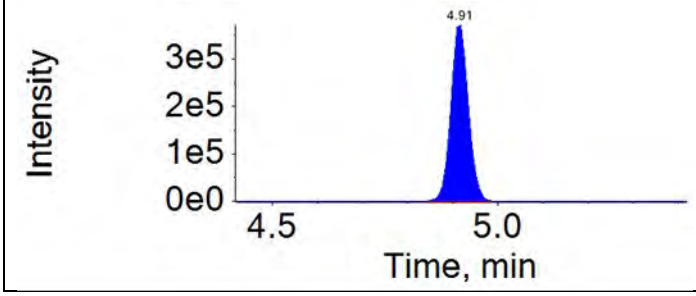
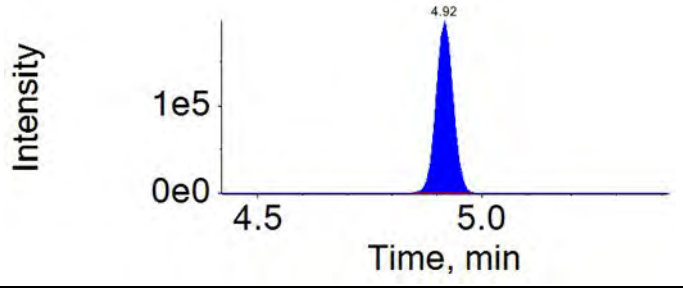


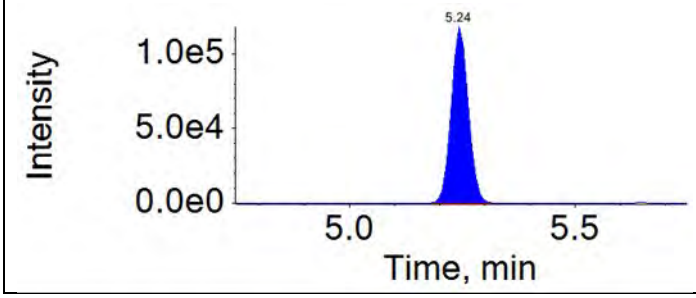
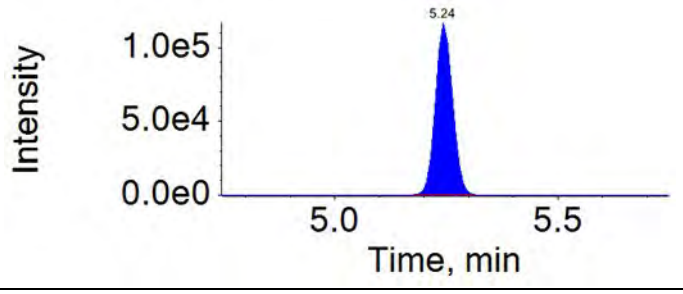


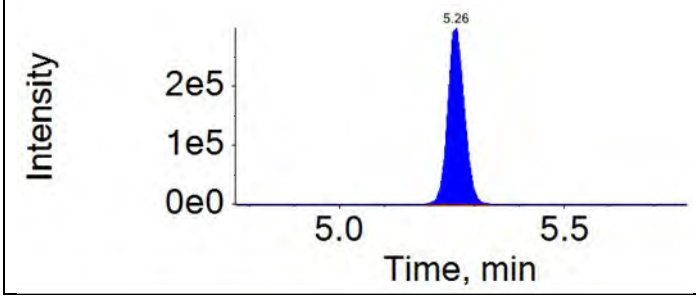
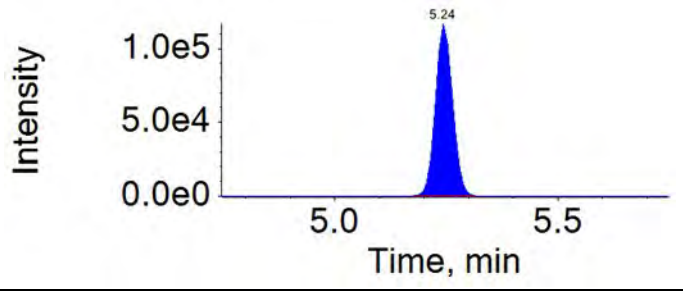
APPROVED
By MCD at 5:01 pm, 11/28/18

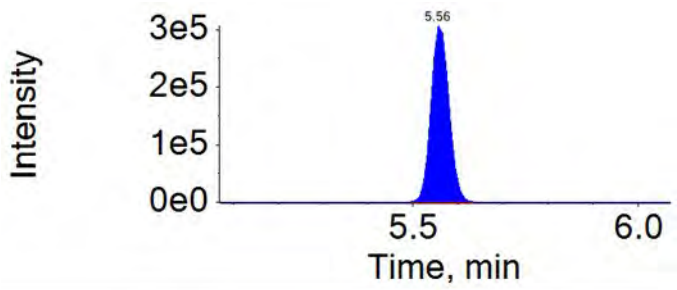
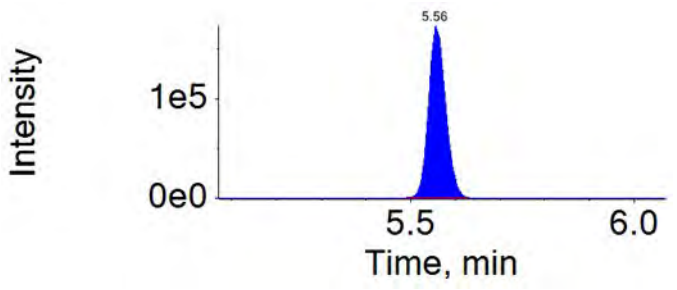
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

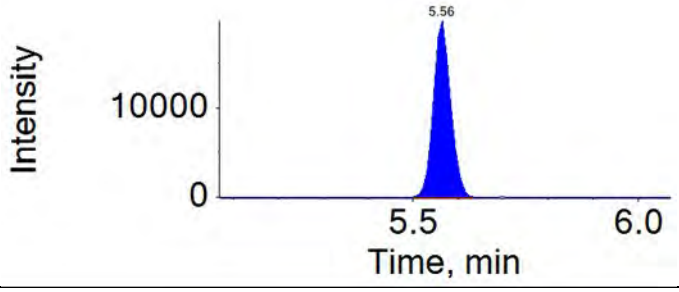
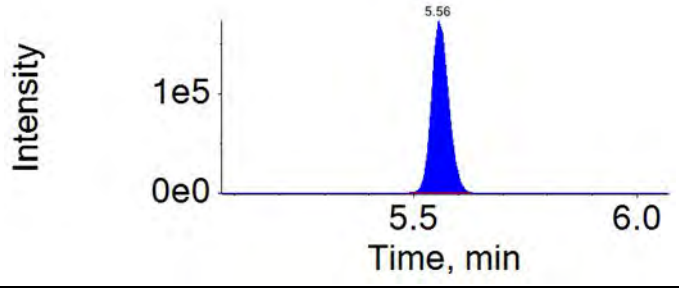
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

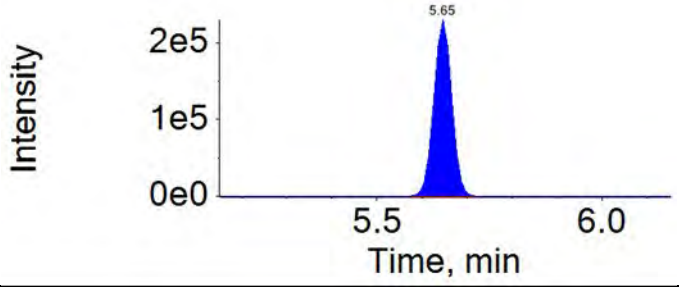
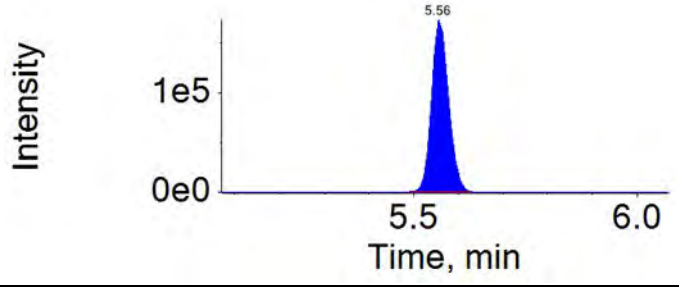
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

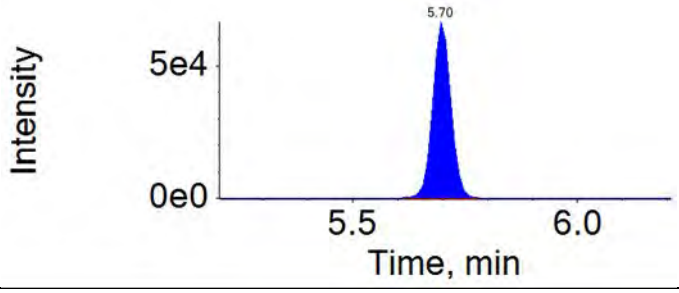
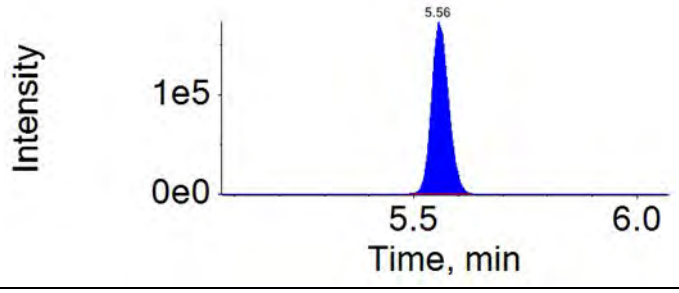
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

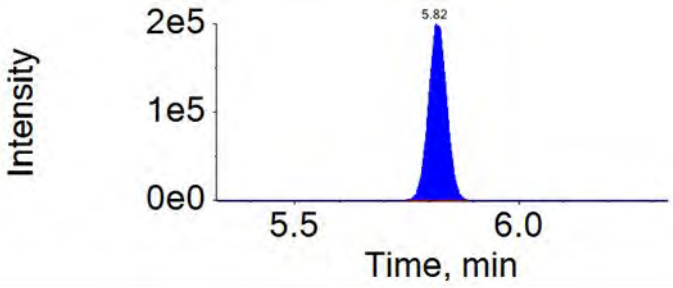
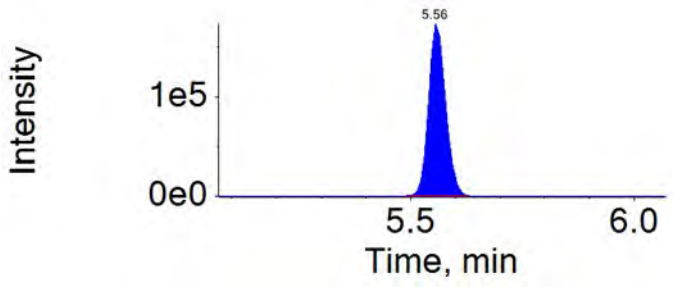
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

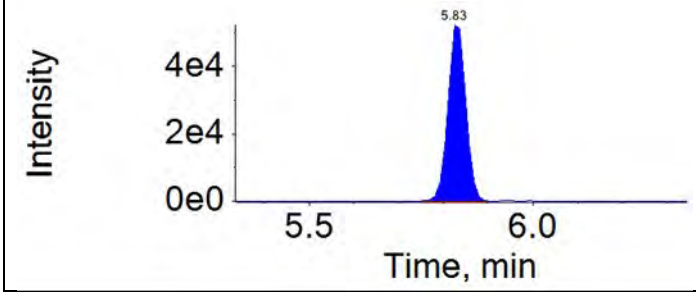
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

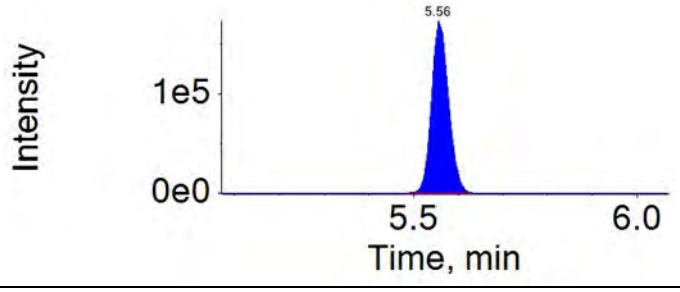
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

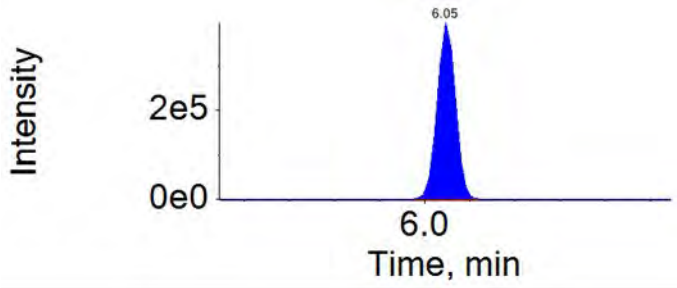
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

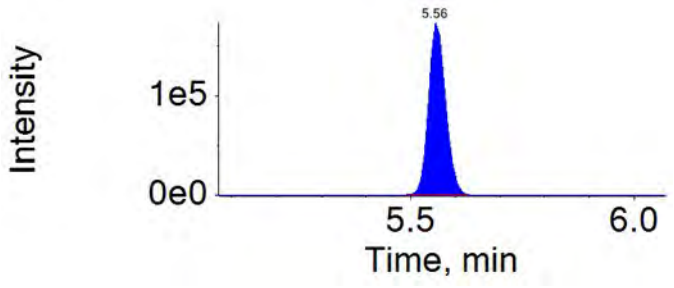
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



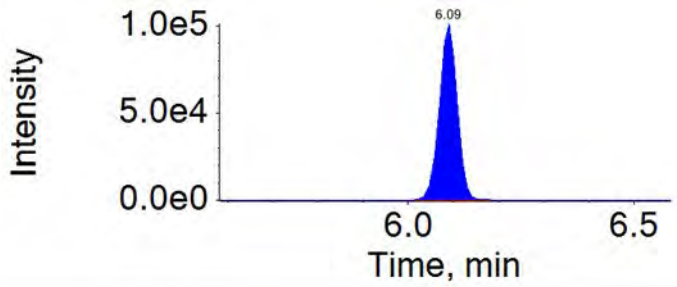


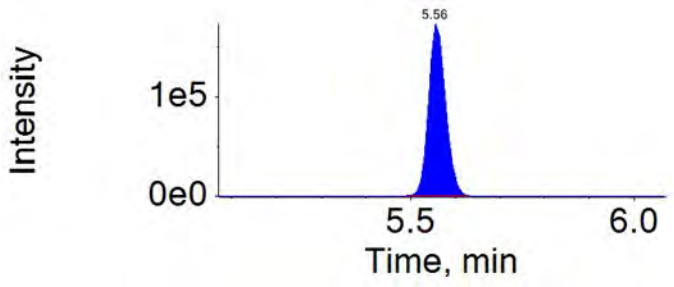
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



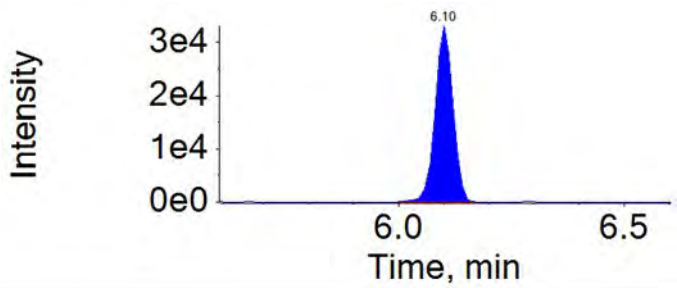


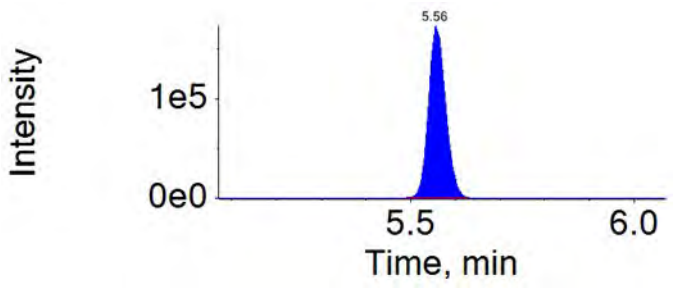
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



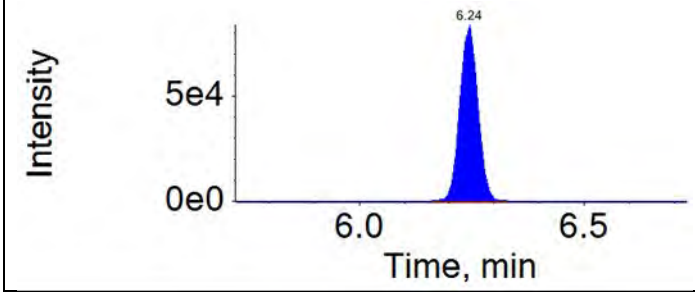


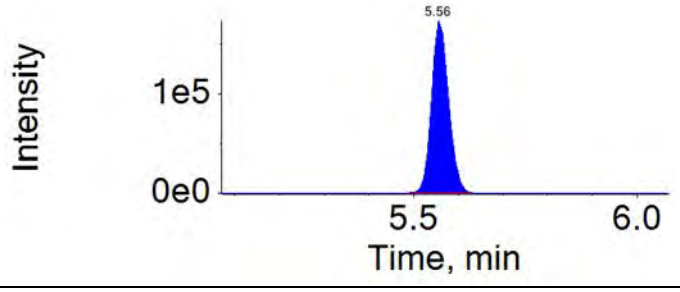
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

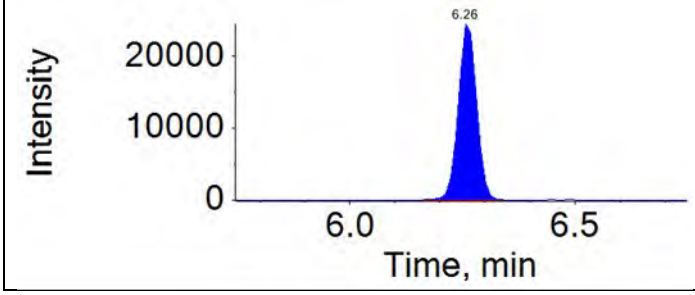
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

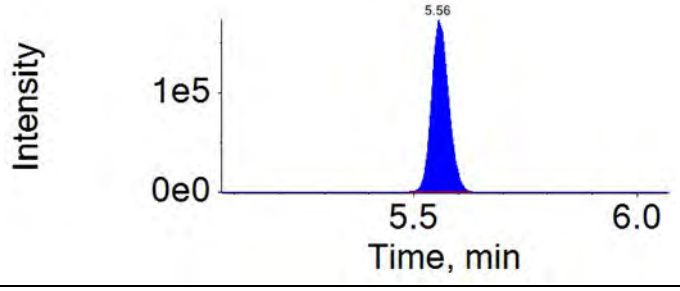
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



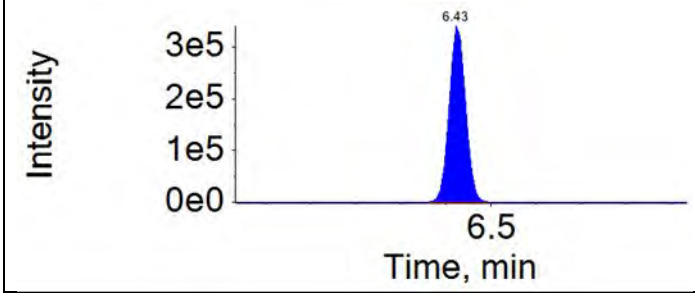


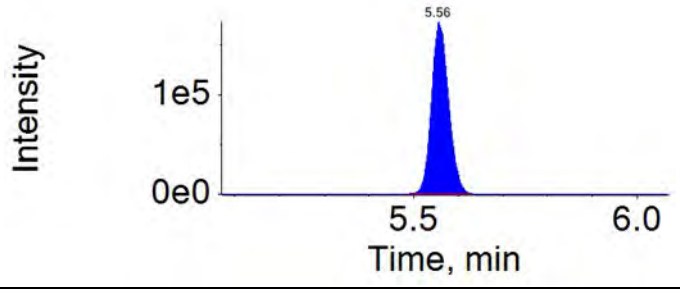
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



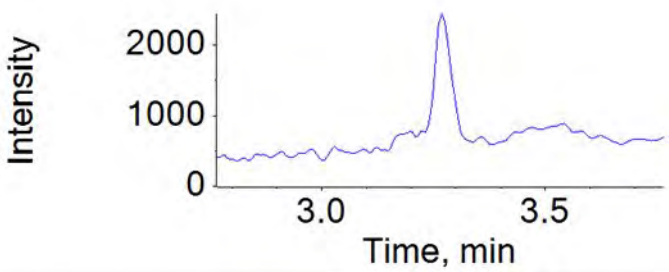


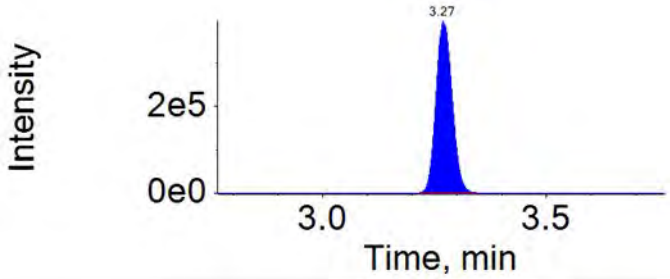
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

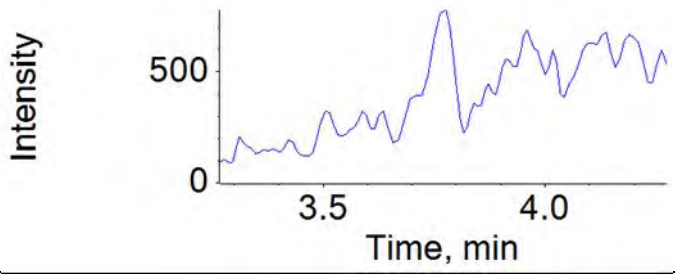
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

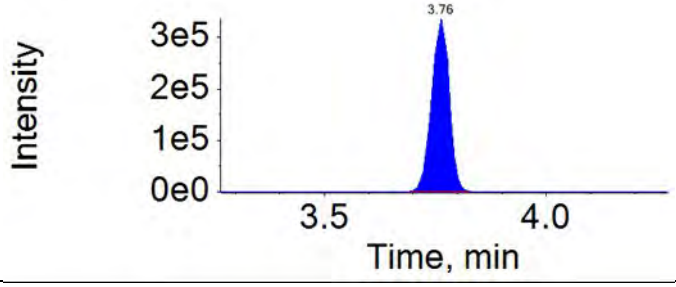
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



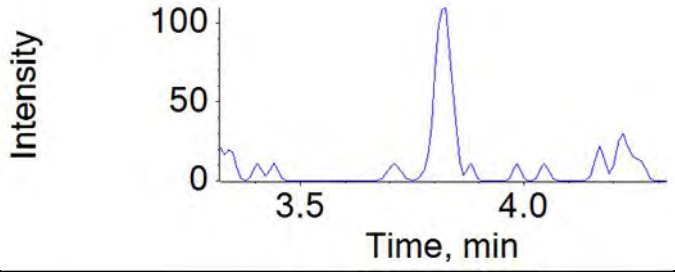


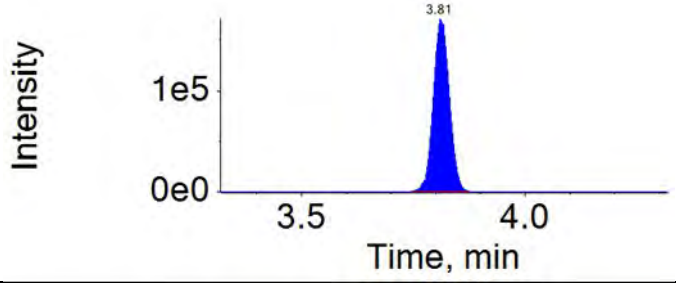
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



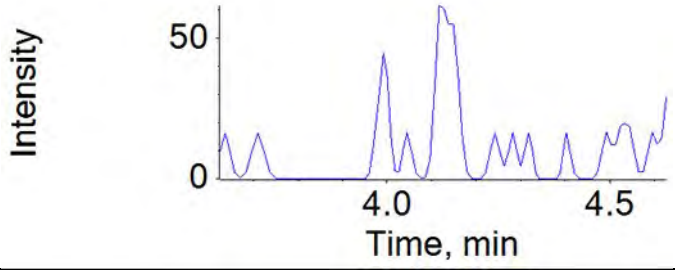


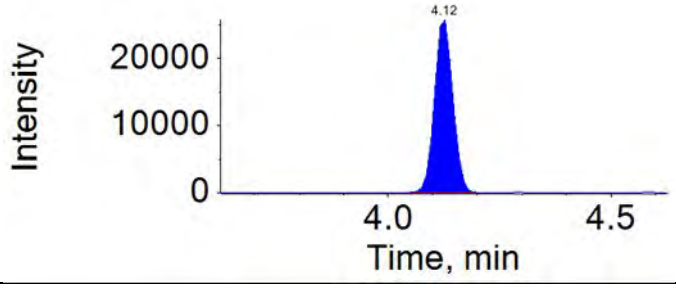
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



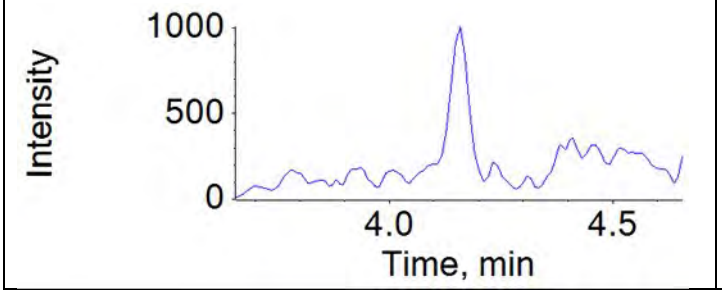


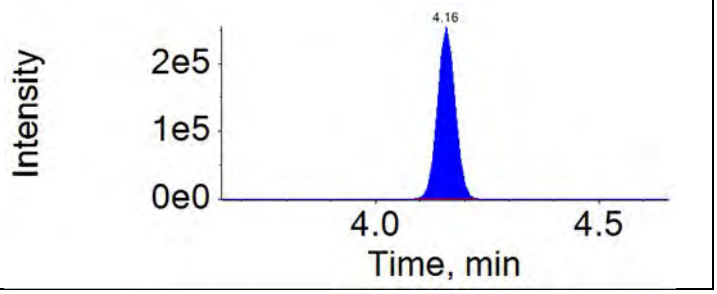
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

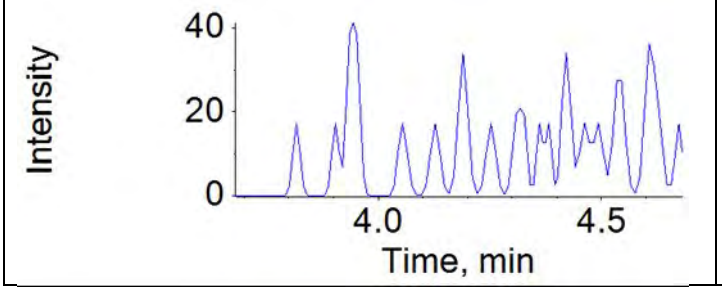
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

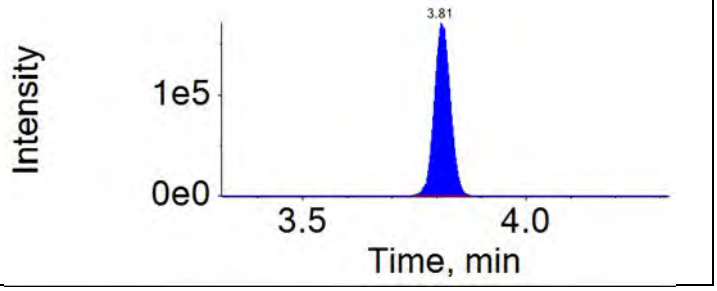
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



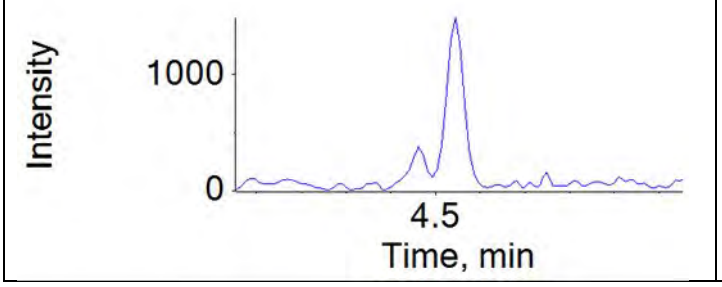


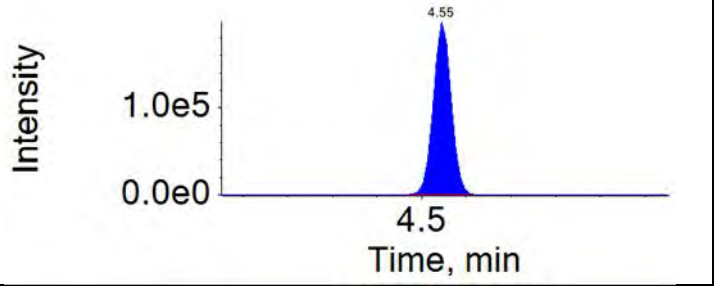
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



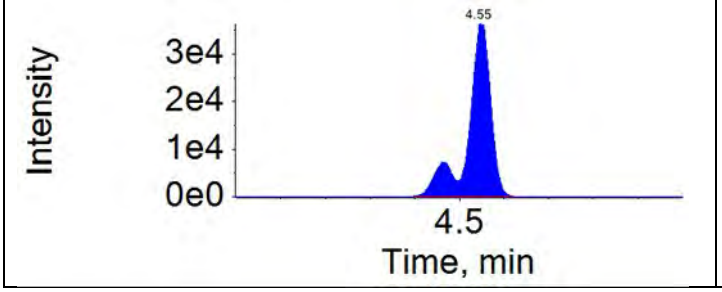


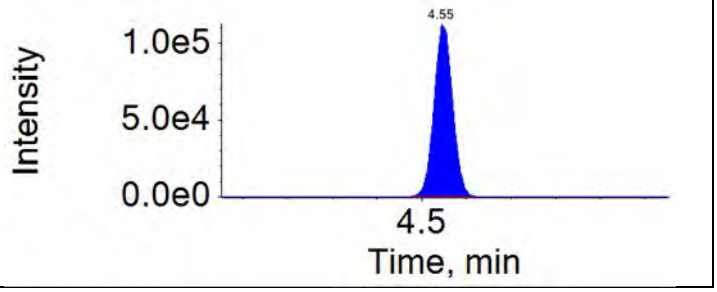
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



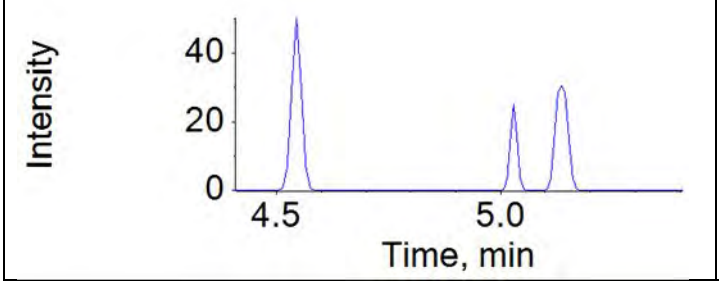


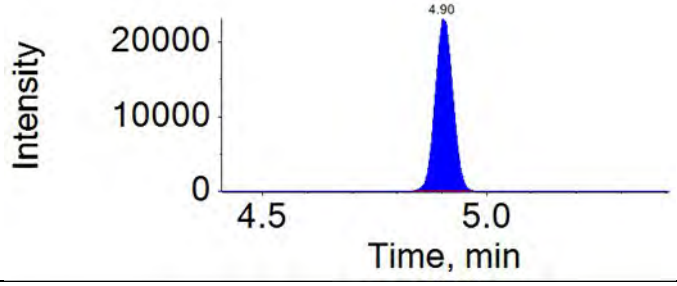
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

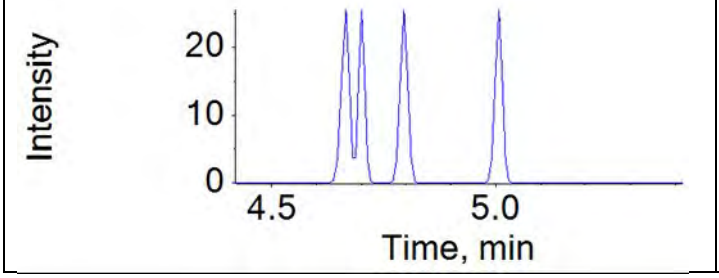
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

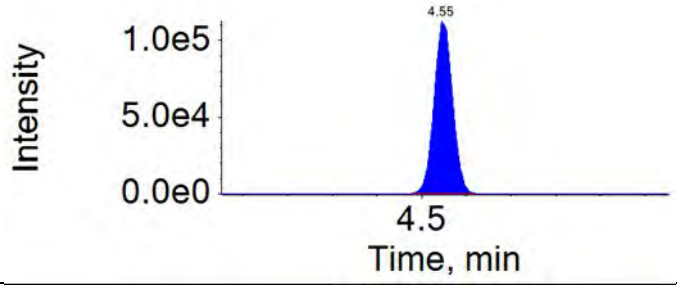
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



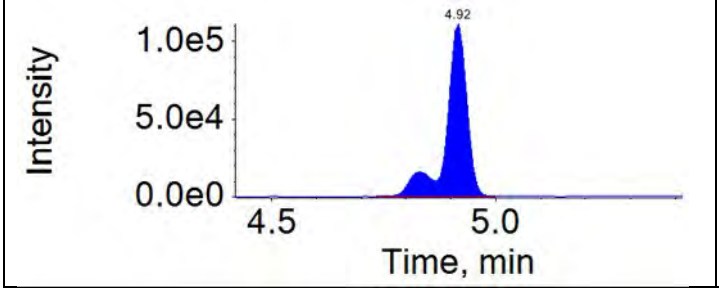


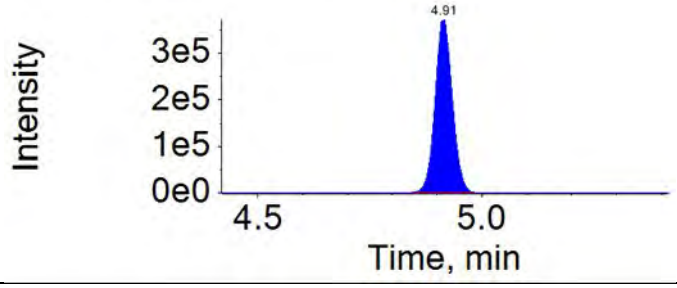
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



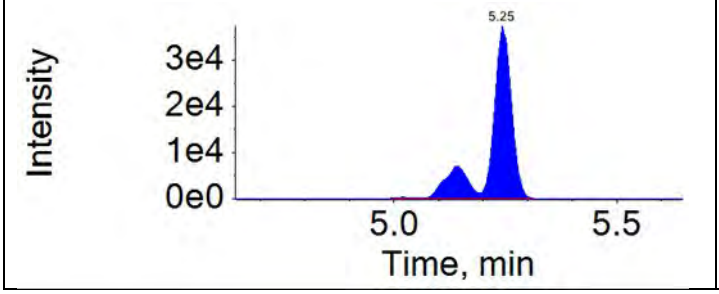


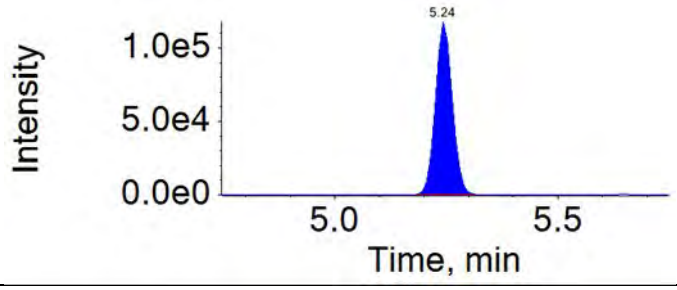
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



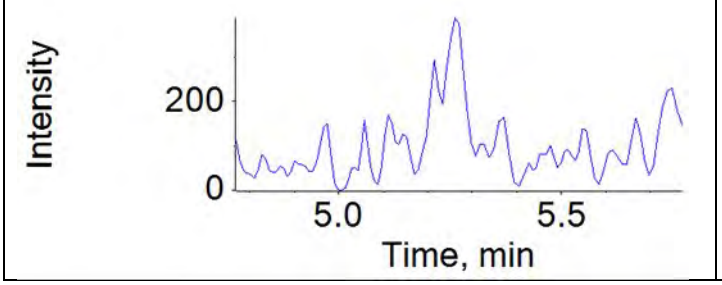


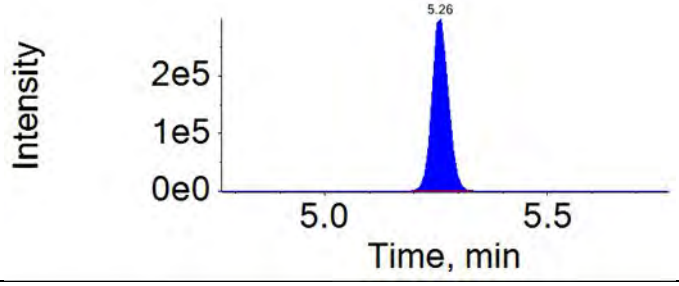
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

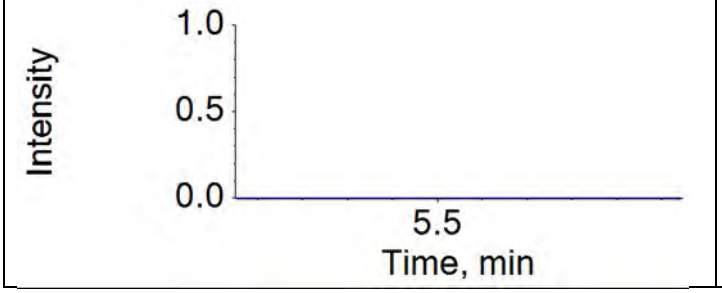
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

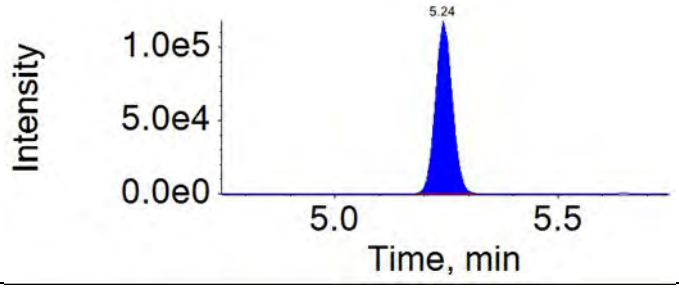
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



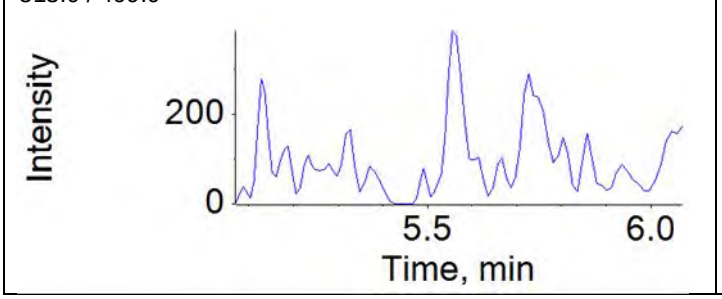


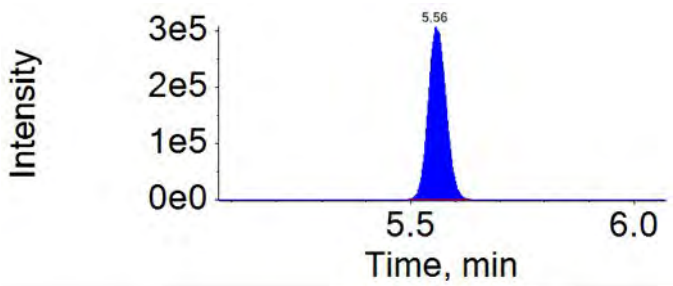
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



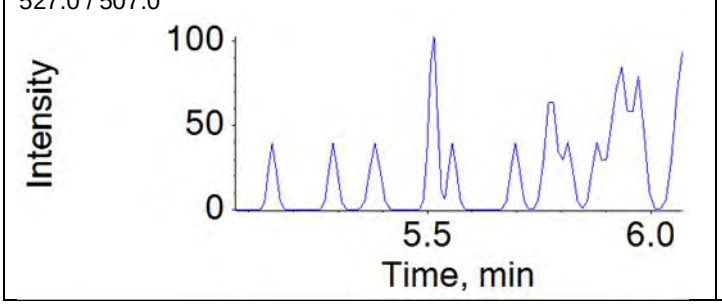


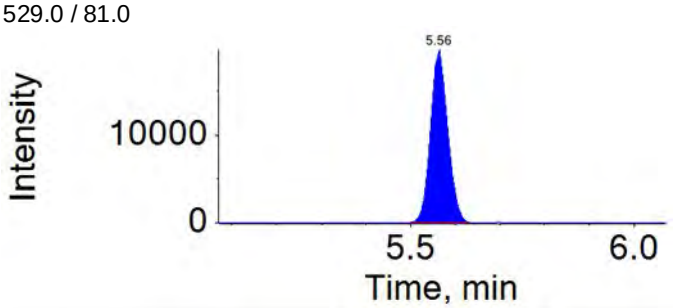
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



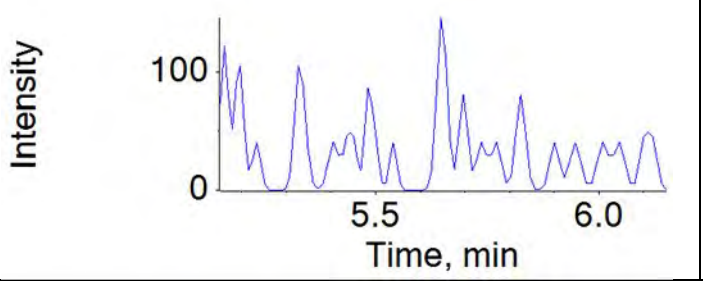


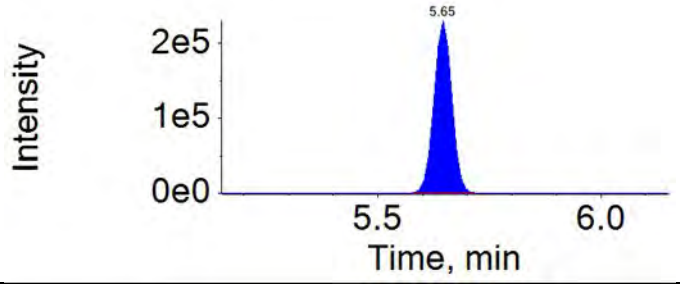
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

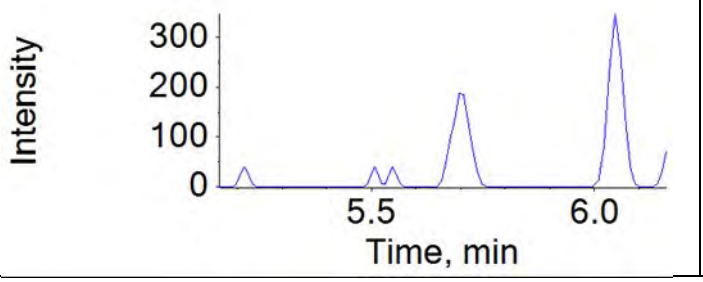
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

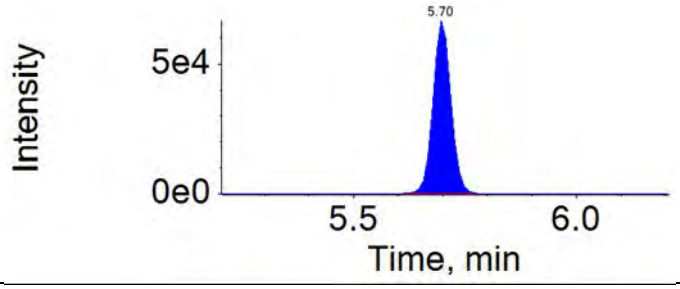
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



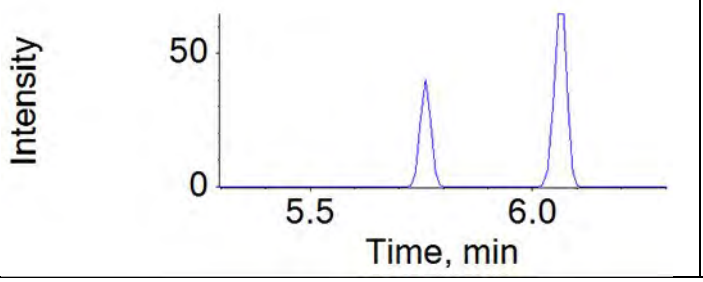


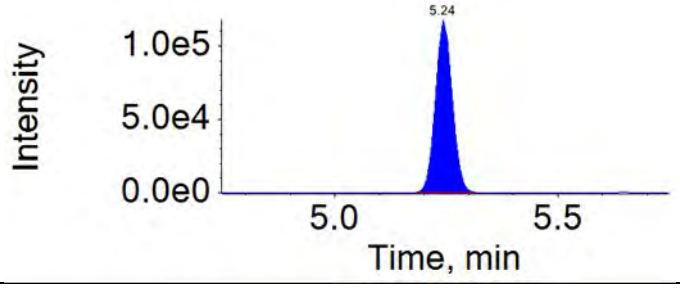
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



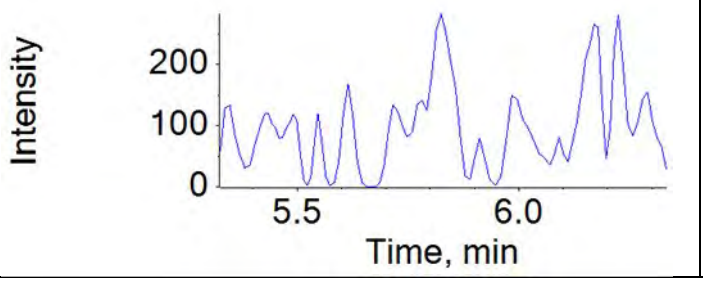


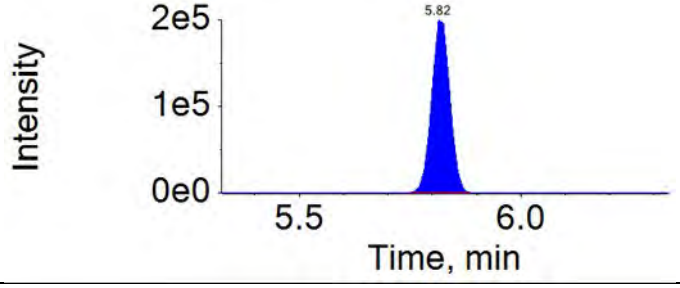
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



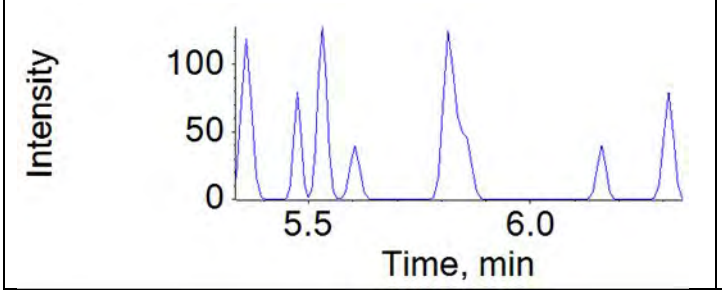


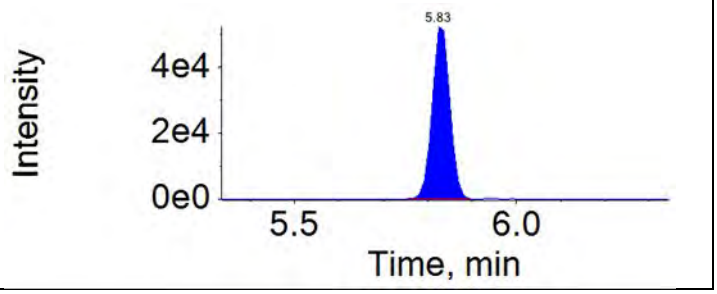
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

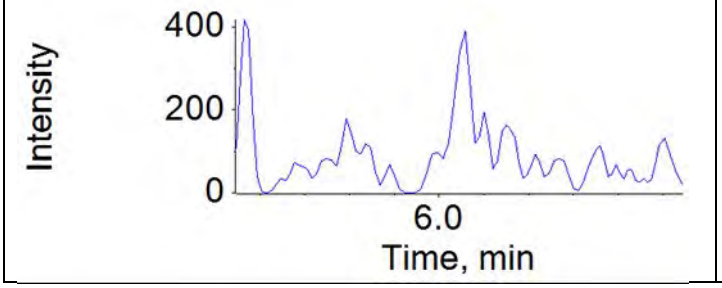
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

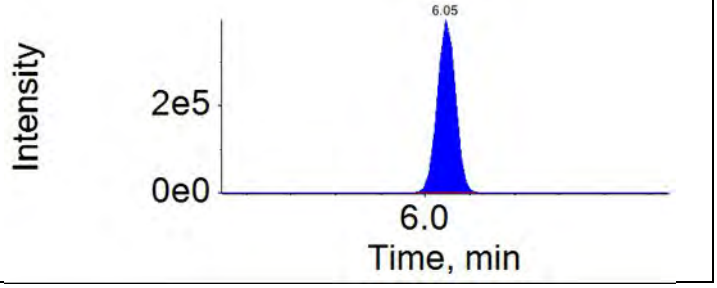
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



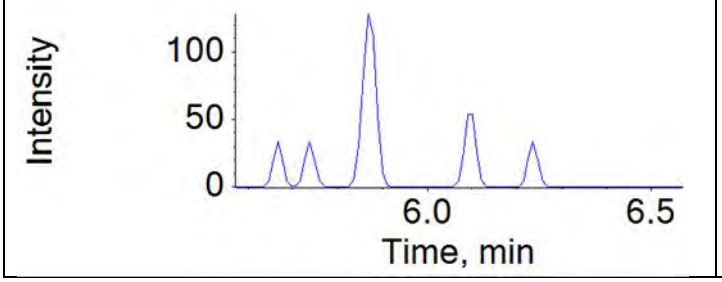


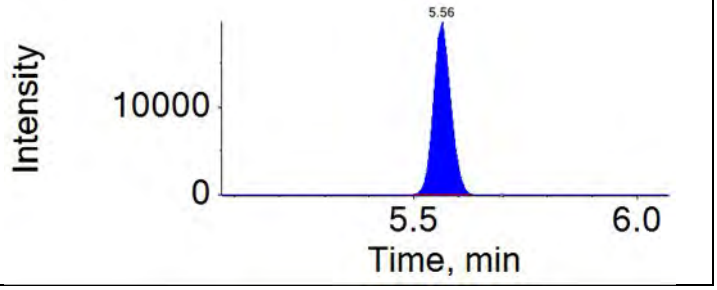
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



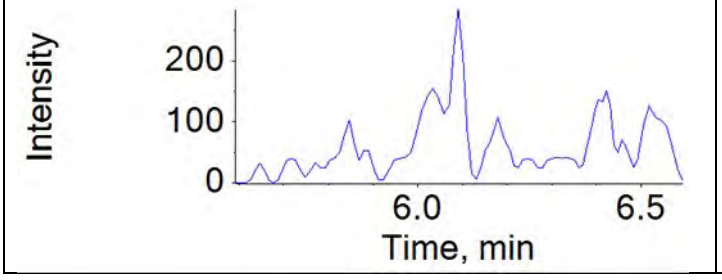


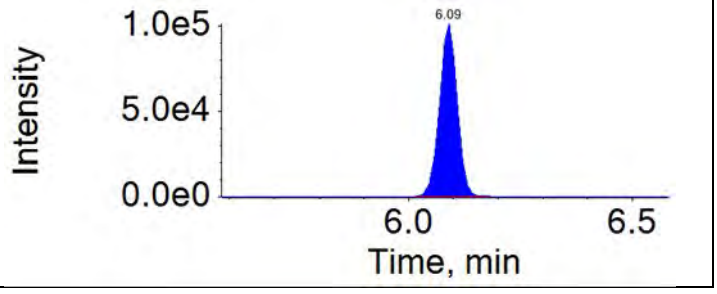
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



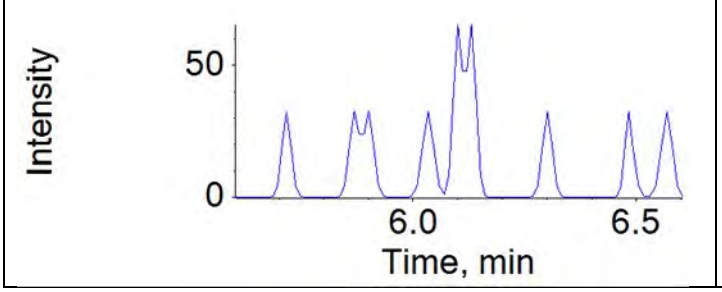


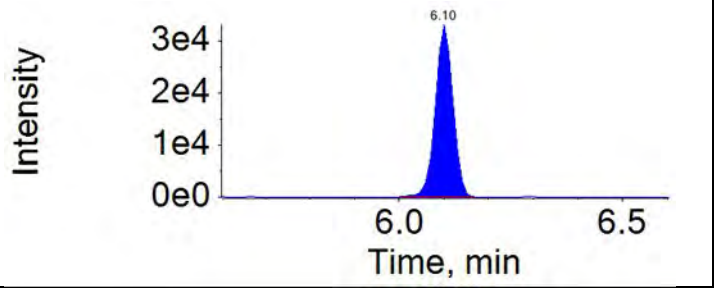
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

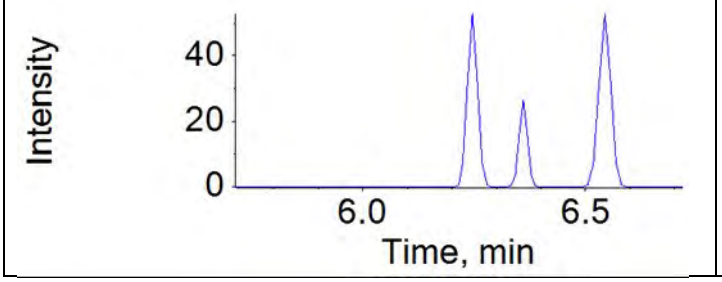
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

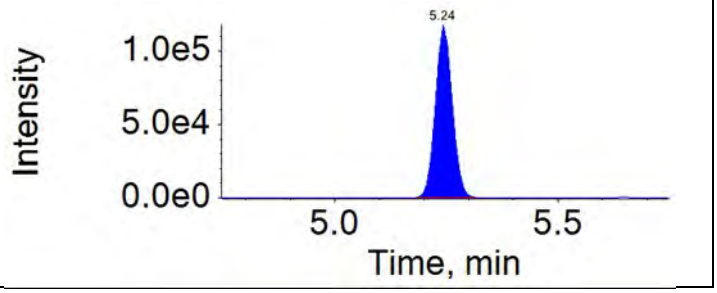
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



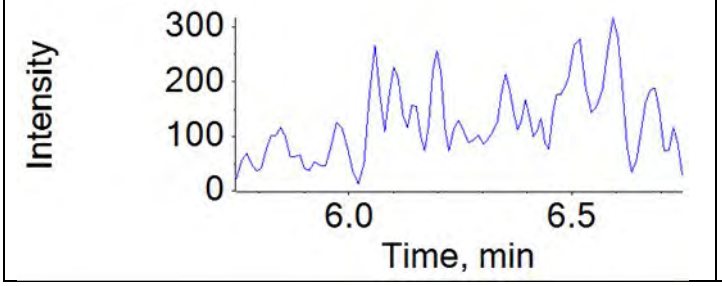


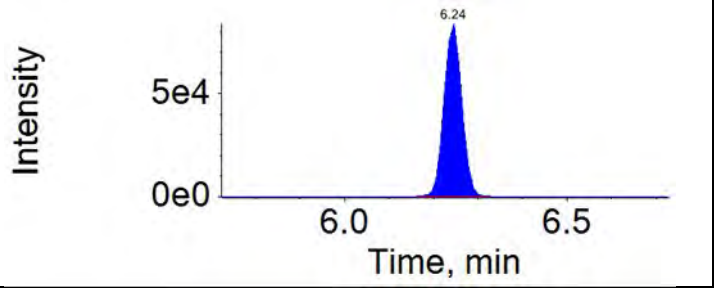
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



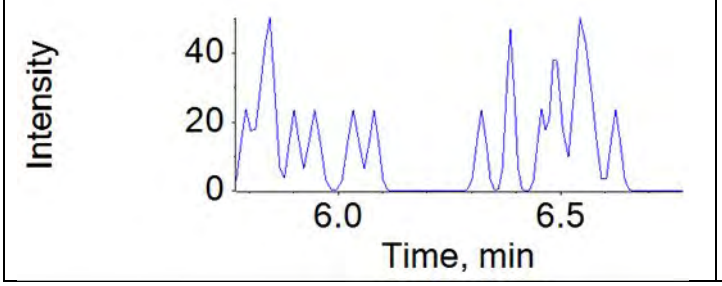


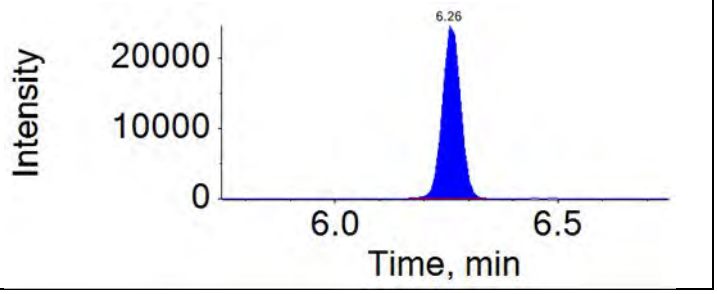
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



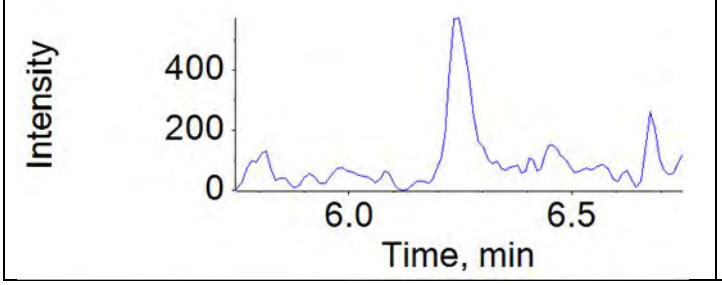


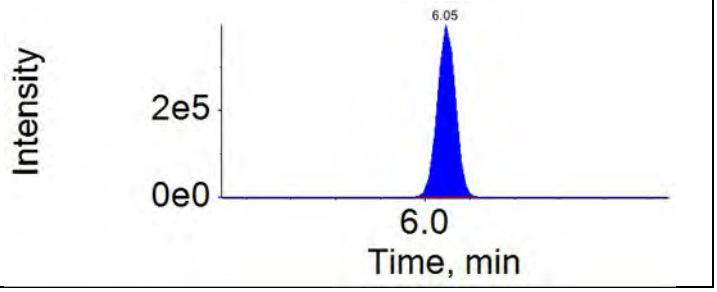
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

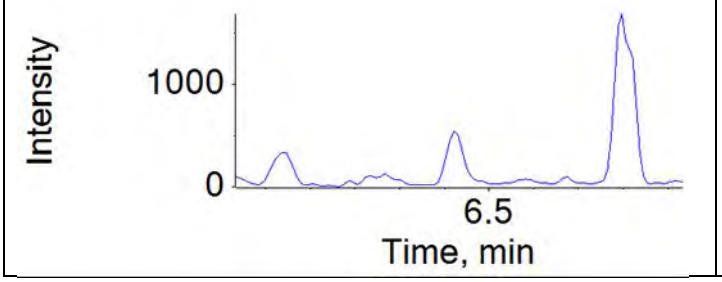
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

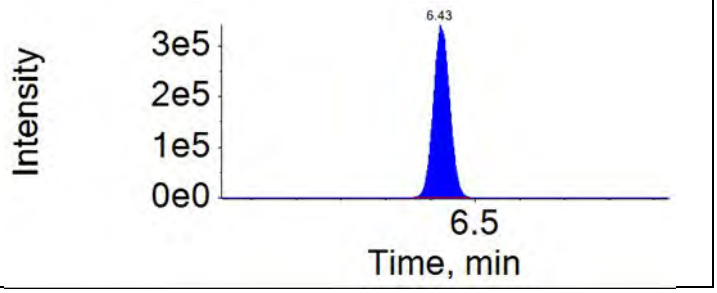
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



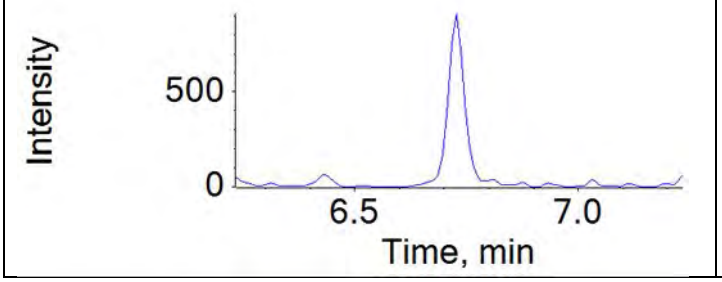


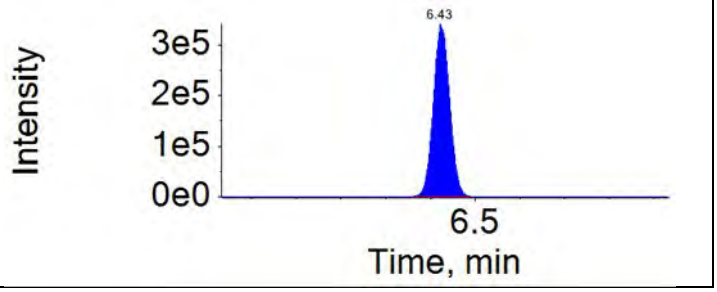
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



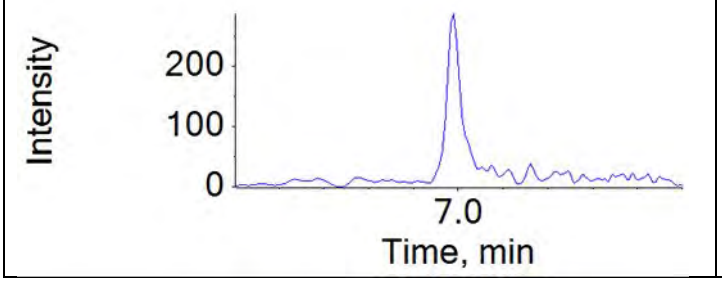


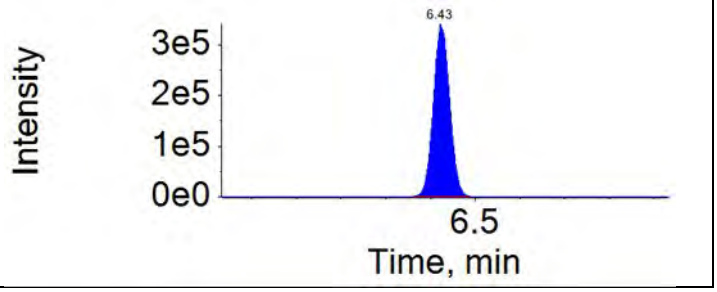
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



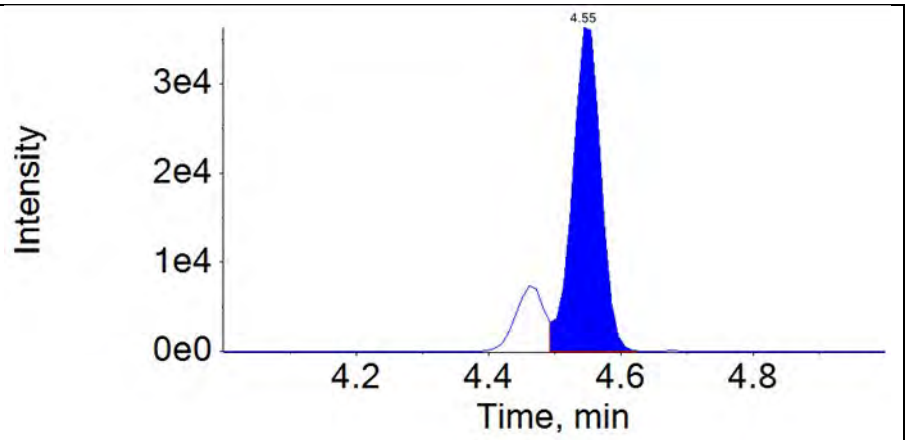


APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

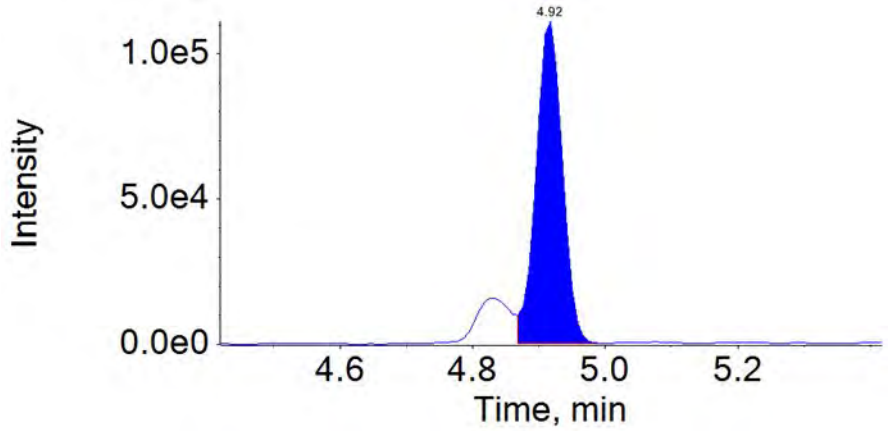
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
108728.54
Mass Range:
399.0 / 80.0
File Name:
18NOV28DCAL-15.wiff
Sample Name:
L+B CAL3



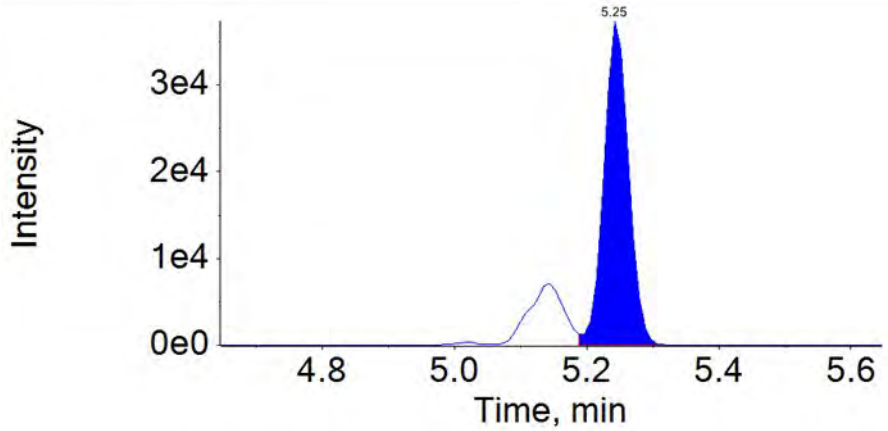
Integration Comment: incorrect integration

Component Name:
PFOA
RT (min.):
4.92
Peak Area:
305201.60
Mass Range:
413.0 / 369.0
File Name:
18NOV28DCAL-15.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.25
Peak Area:
97091.30
Mass Range:
499.0 / 80.0
File Name:
18NOV28DCAL-15.wiff
Sample Name:
L+B CAL3



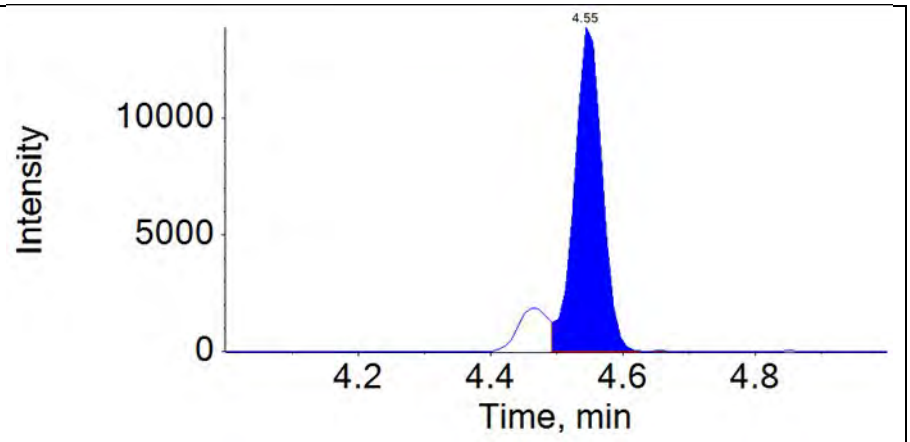
Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

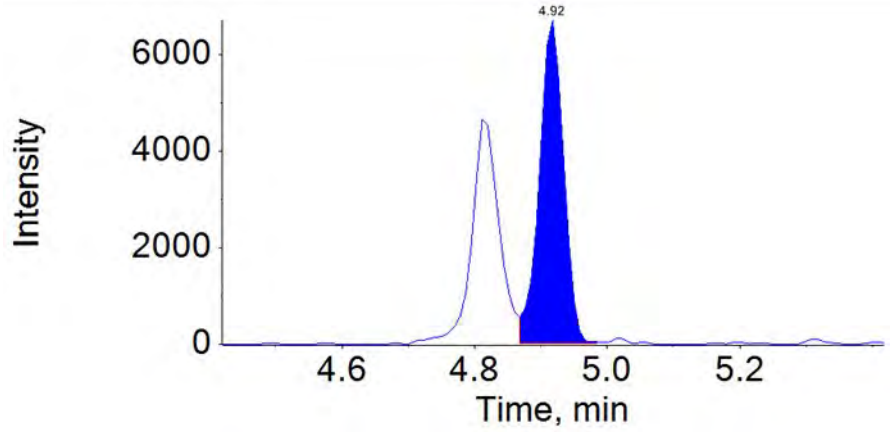
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
40449.59
Mass Range:
399.0 / 99.0
File Name:
18NOV28DCAL-15.wiff
Sample Name:
L+B CAL3



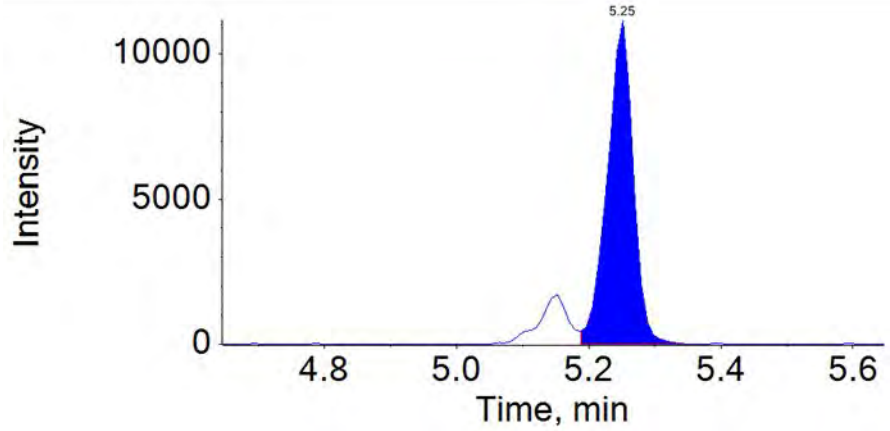
Integration Comment: incorrect integration

Component Name:
PFOA_2
RT (min.):
4.92
Peak Area:
17021.00
Mass Range:
413.0 / 169.0
File Name:
18NOV28DCAL-15.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.25
Peak Area:
30448.32
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-15.wiff
Sample Name:
L+B CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Ion Ratio Report

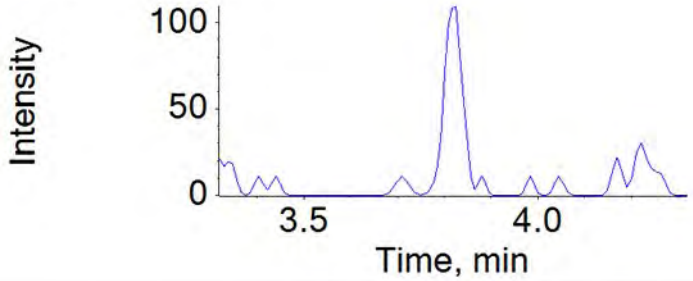
Sample Name: L+B CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-15.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	0.3655	N/A			
PFBS_2	N/A	N/A	N/A	A	0.3655	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	0.6383	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	0.6383	N/A		50	
PFHxA	N/A	N/A	N/A	A	0.0103	N/A			
PFHxA_2	N/A	N/A	N/A	A	0.0103	N/A		50	
PFPeS	N/A	N/A	N/A	A	0.4976	N/A			
PFPeS_2	N/A	N/A	N/A	A	0.4976	N/A		50	
PFHpA	N/A	N/A	N/A	A	0.0557	N/A			
PFHpA_2	N/A	N/A	N/A	A	0.0557	N/A		50	
PFHxS	4.55	1.00	130205.74	M	0.3693	0.3547			
PFHxS_2	4.55	1.00	46180.22	M	0.3693	0.3547	-4	50	
6:2-FTS	N/A	N/A	N/A	A	0.6625	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	0.6625	N/A		50	
PFHpS	N/A	N/A	N/A	A	0.3915	N/A			
PFHpS_2	N/A	N/A	N/A	A	0.3915	N/A		50	
PFOA	4.92	1.00	363985.16	M	0.0573	0.0845			
PFOA_2	4.89	1.00	30759.31	M	0.0573	0.0845	48	50	
PFOS	5.25	1.00	124397.26	M	0.2960	0.2871			
PFOS_2	5.25	1.00	35708.41	M	0.2960	0.2871	-3	50	
PFNA	N/A	N/A	N/A	A	0.0201	N/A			
PFNA_2	N/A	N/A	N/A	A	0.0201	N/A		50	
PFNS	N/A	N/A	N/A	A	0.4794	N/A			
PFNS_2	N/A	N/A	N/A	A	0.4794	N/A		50	
PFDA	N/A	N/A	N/A	A	0.0075	N/A			
PFDA_2	N/A	N/A	N/A	A	0.0075	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	0.5380	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	0.5380	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	0.2305	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	0.2305	N/A		50	
PFDS	N/A	N/A	N/A	A	0.5356	N/A			
PFDS_2	N/A	N/A	N/A	A	0.5356	N/A		50	
PFUnDA	N/A	N/A	N/A	A	0.0038	N/A			
PFUnDA_2	N/A	N/A	N/A	A	0.0038	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	0.7356	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	0.7356	N/A		50	
PFDoDA	N/A	N/A	N/A	A	0.0130	N/A			
PFDoDA_2	N/A	N/A	N/A	A	0.0130	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	0.6989	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	0.6989	N/A		50	
PFTrDA	N/A	N/A	N/A	A	0.0090	N/A			
PFTrDA_2	N/A	N/A	N/A	A	0.0090	N/A		50	
PFTeDA	N/A	N/A	N/A	A	0.0056	N/A			
PFTeDA_2	N/A	N/A	N/A	A	0.0056	N/A		50	
PFHxDA	N/A	N/A	N/A	A	0.0646	N/A			
PFHxDA_2	N/A	N/A	N/A	A	0.0646	N/A		50	
PFODA	N/A	N/A	N/A	A	0.0264	N/A			
PFODA_2	N/A	N/A	N/A	A	0.0264	N/A		50	

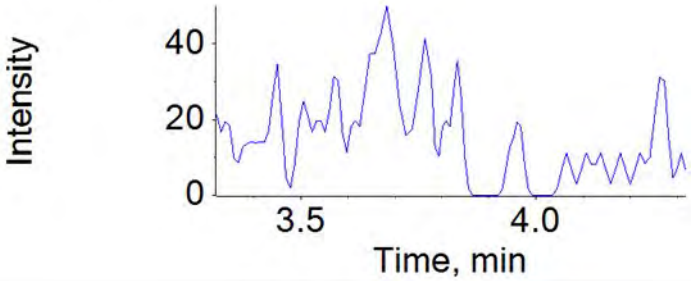
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

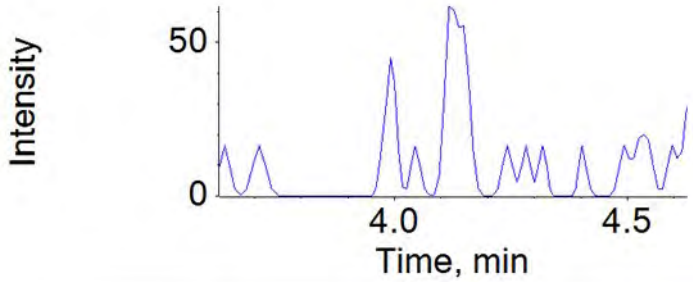
Component: PFBS
Primary Mass: 299.0 / 80.0



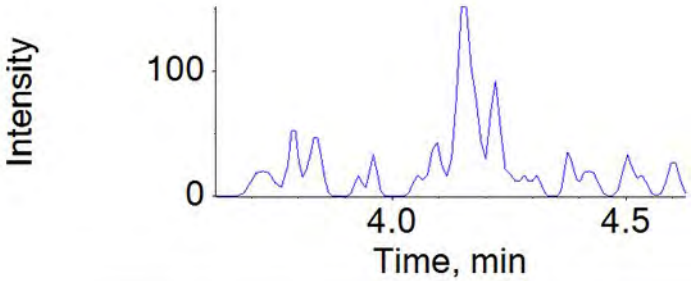
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



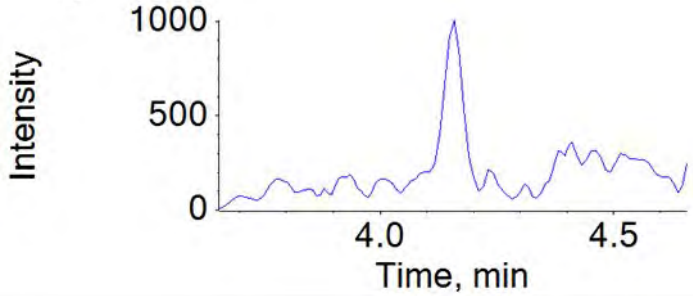
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



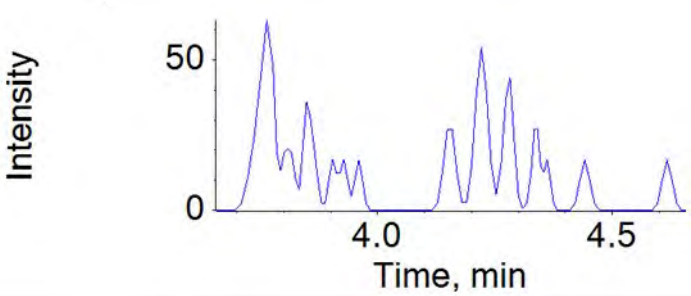
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



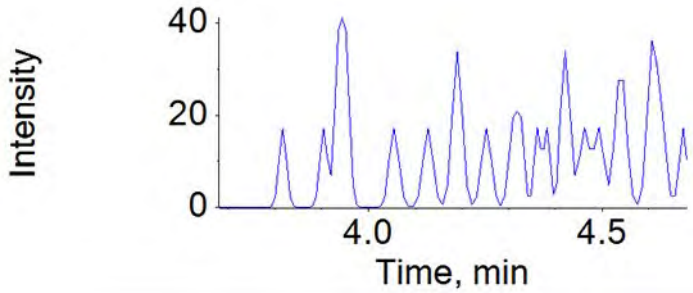
Component: PFHxA
Primary Mass: 313.0 / 269.0



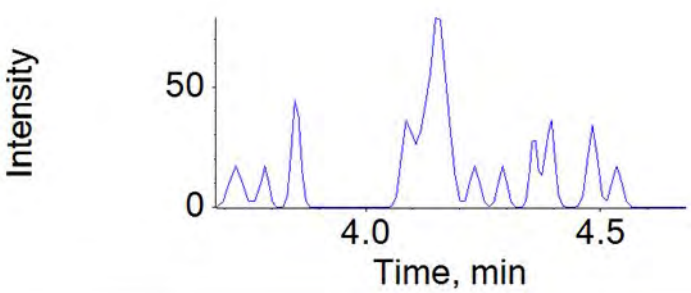
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



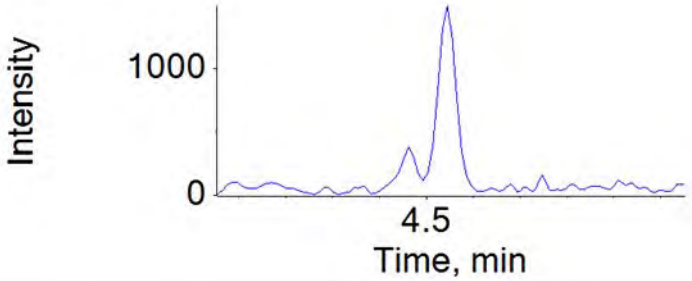
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



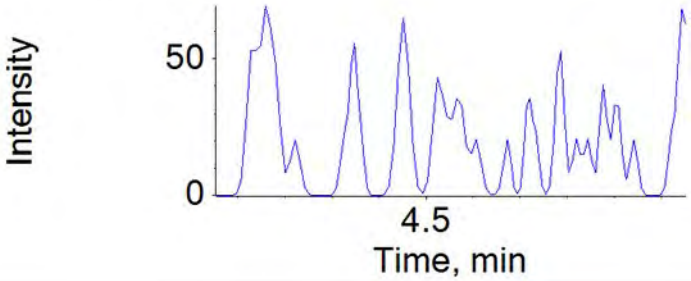
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

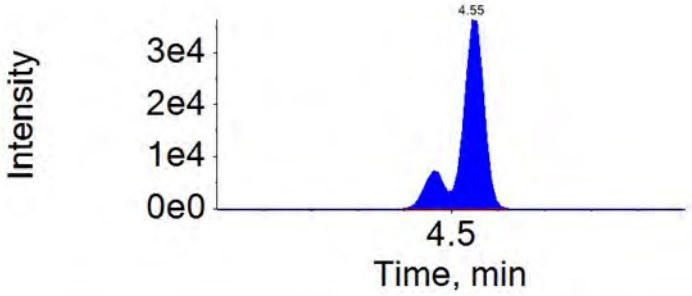
Component: PFHpA
Primary Mass: 363.0 / 319.0



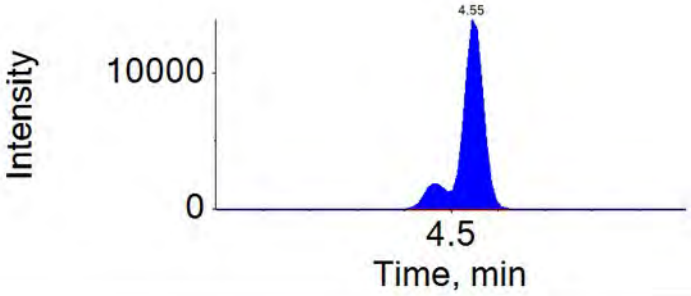
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



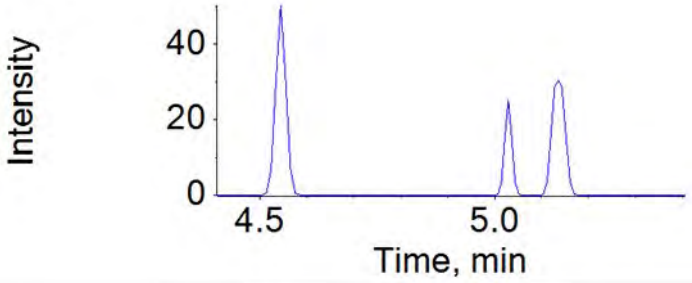
Component: PFHxS
Primary Mass: 399.0 / 80.0



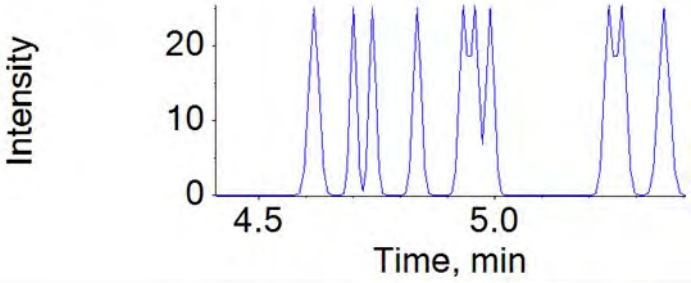
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



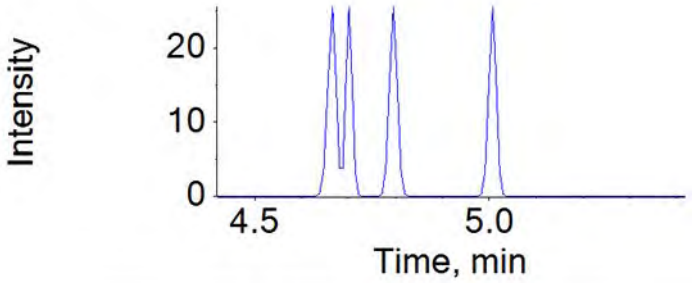
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



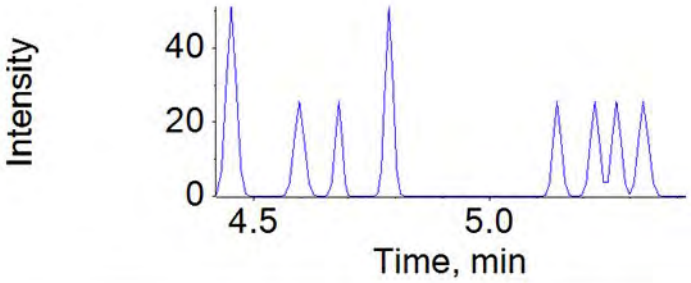
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



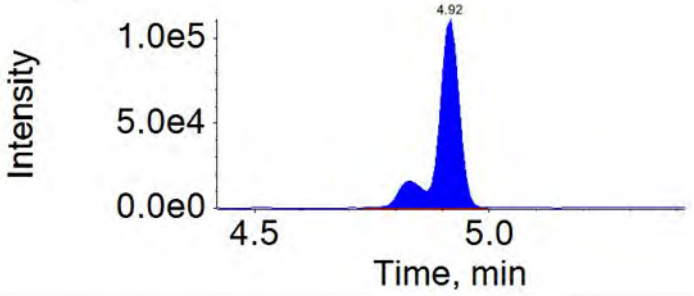
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



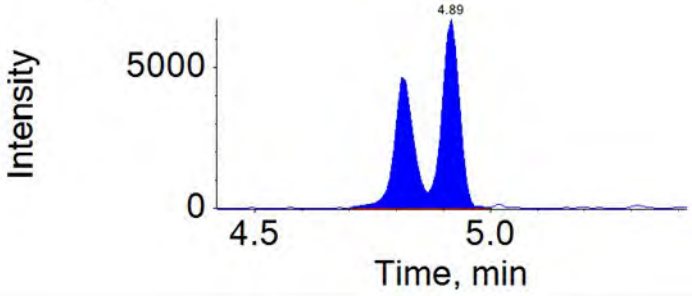
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

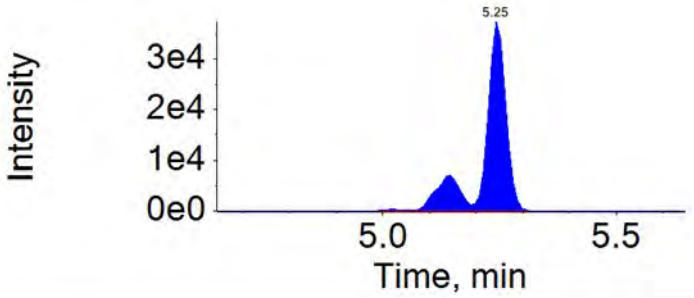
Component: PFOA
Primary Mass: 413.0 / 369.0



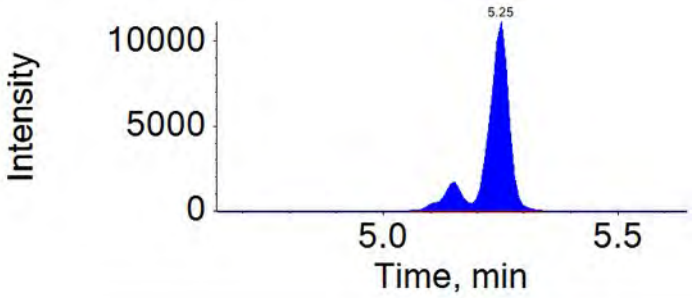
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



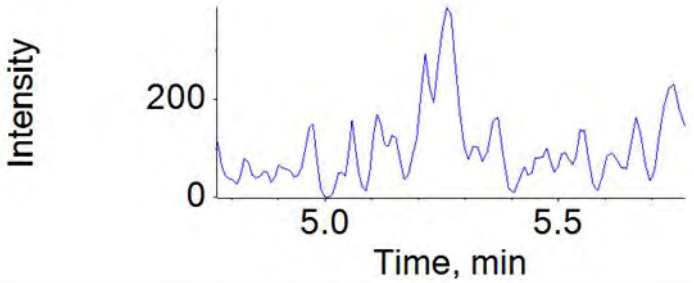
Component: PFOS
Primary Mass: 499.0 / 80.0



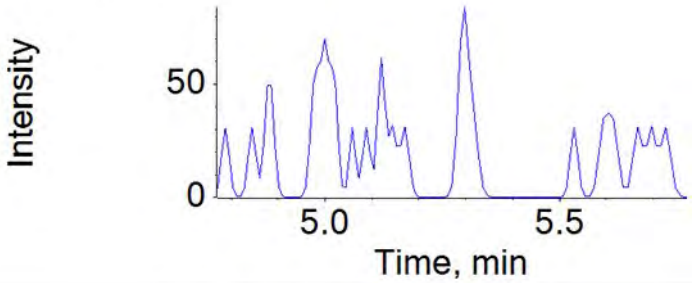
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



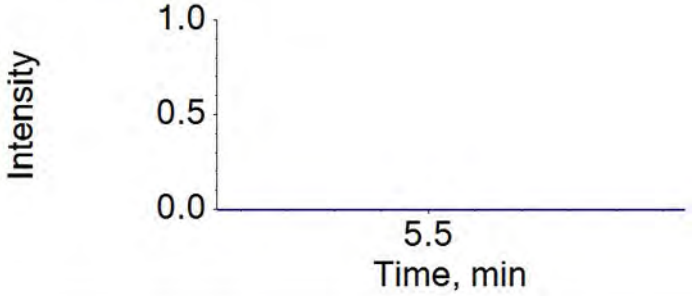
Component: PFNA
Primary Mass: 463.0 / 419.0



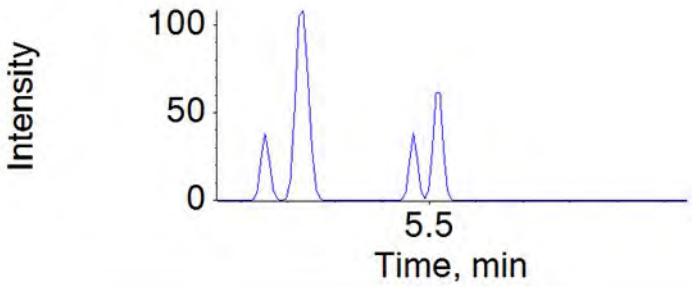
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



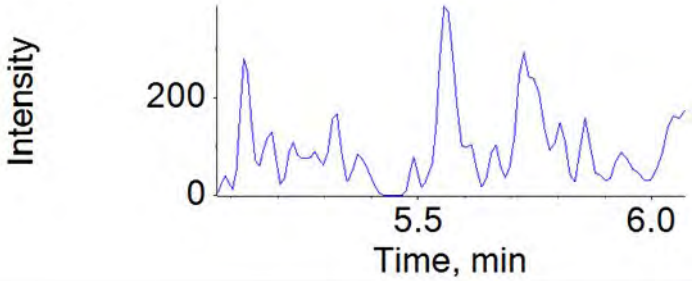
Component: PFNS
Primary Mass: 549.0 / 80.0



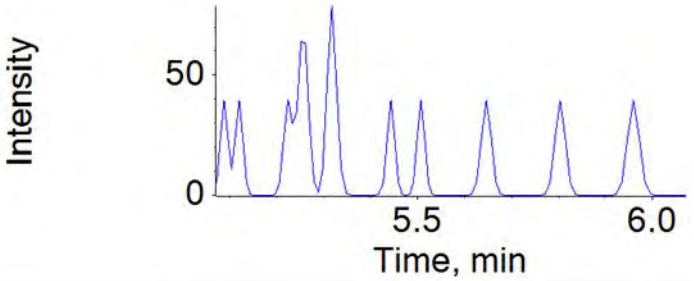
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



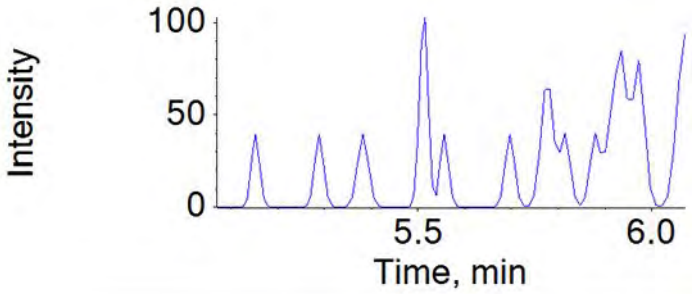
Component: PFDA
Primary Mass: 513.0 / 469.0



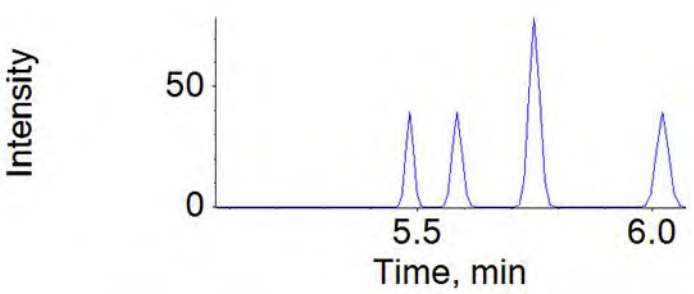
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



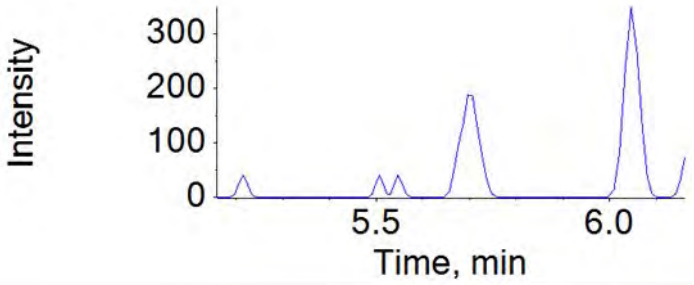
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



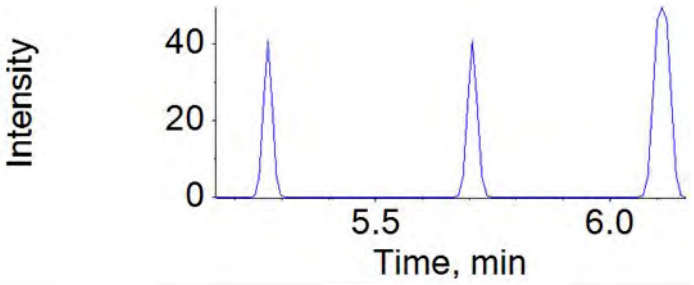
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



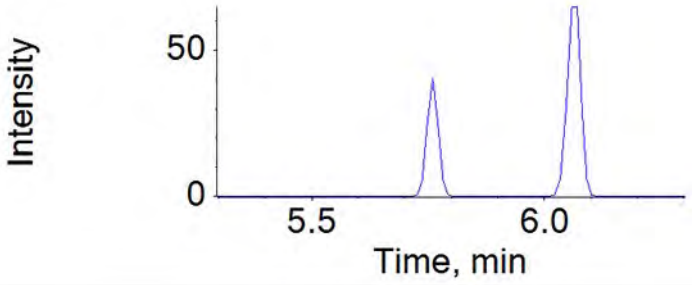
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



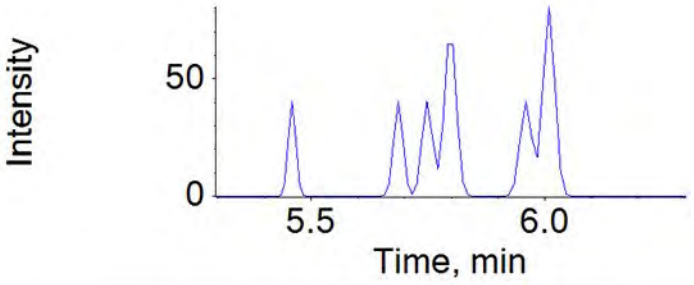
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



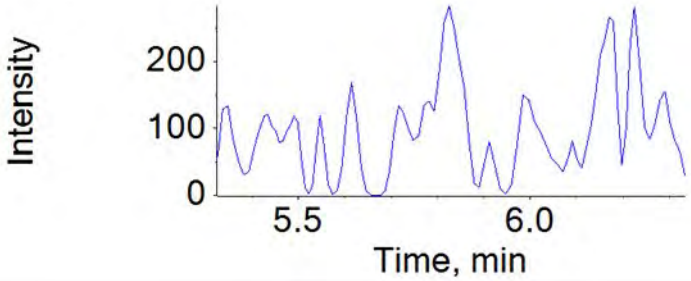
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



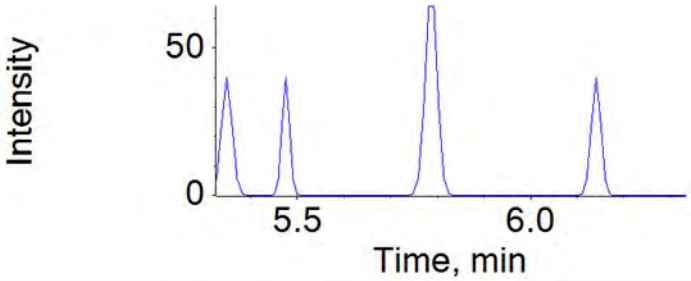
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

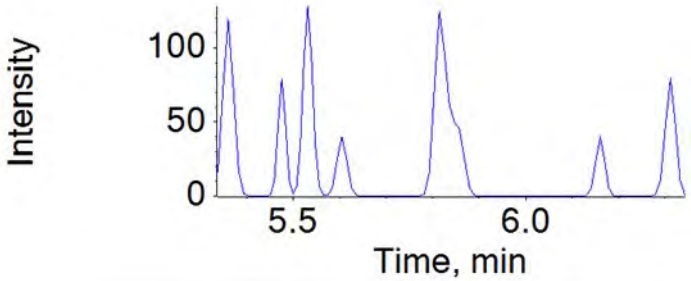
Component: PFUnDA
Primary Mass: 563.0 / 519.0



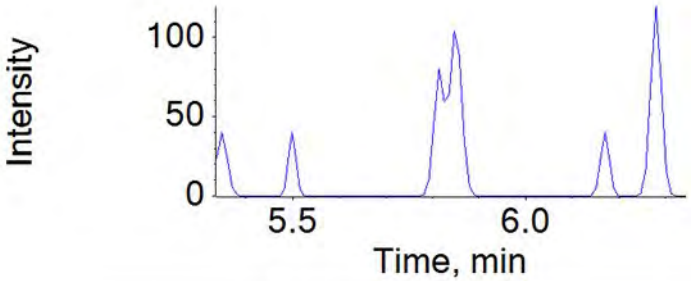
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



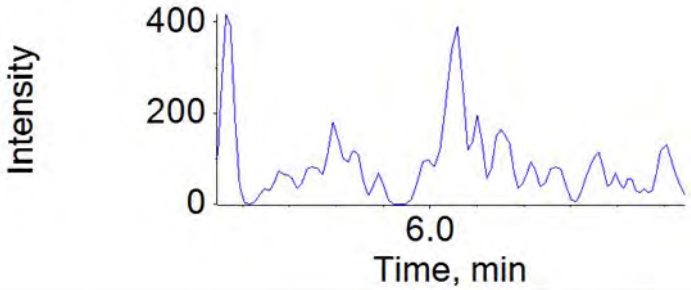
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



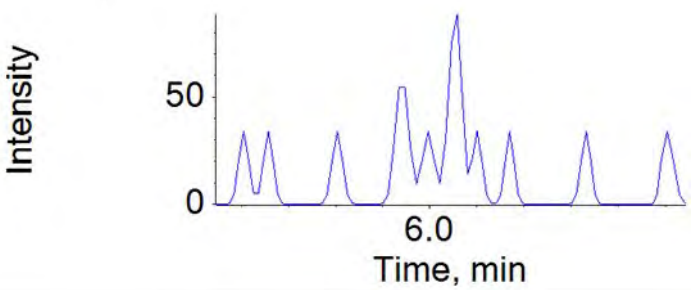
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



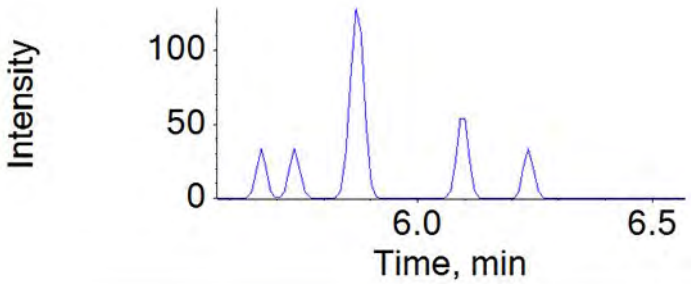
Component: PFDoDA
Primary Mass: 613.0 / 569.0



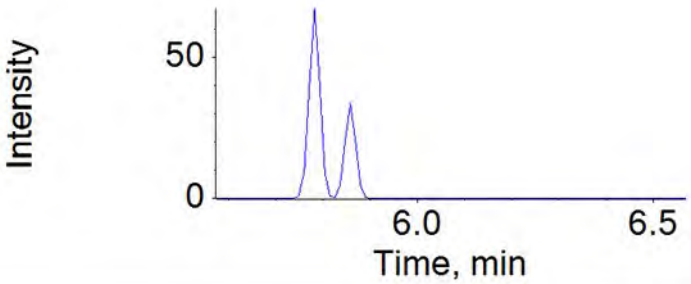
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



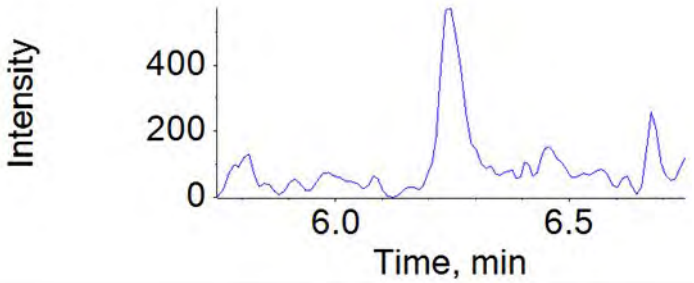
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



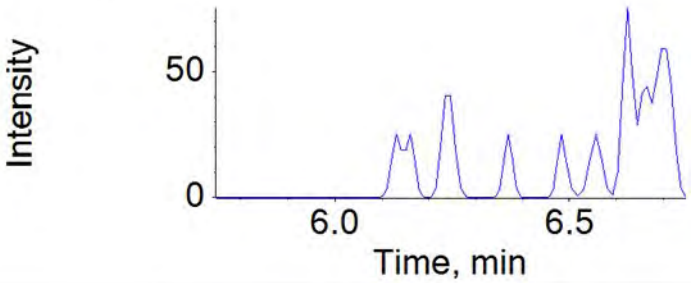
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

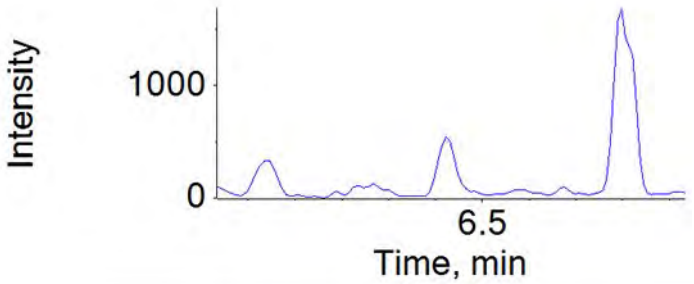
Component: PFTrDA
Primary Mass: 663.0 / 619.0



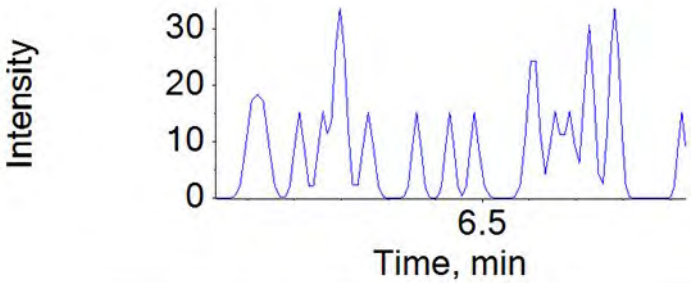
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



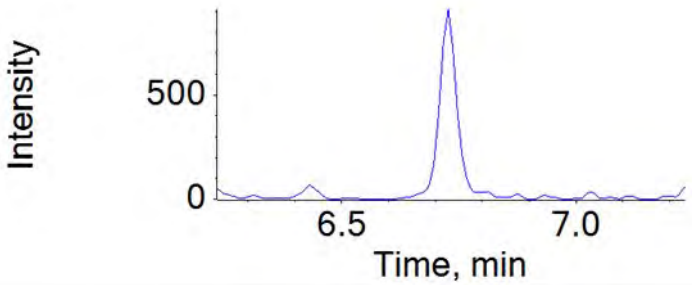
Component: PFTeDA
Primary Mass: 713.0 / 669.0



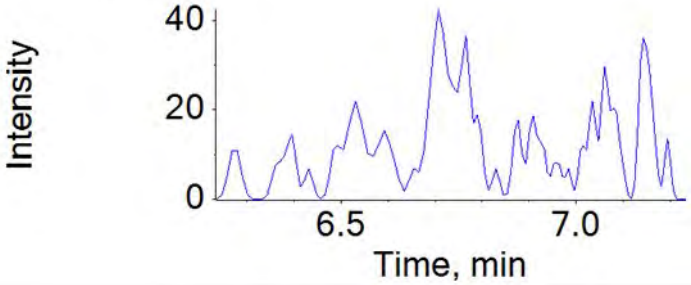
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



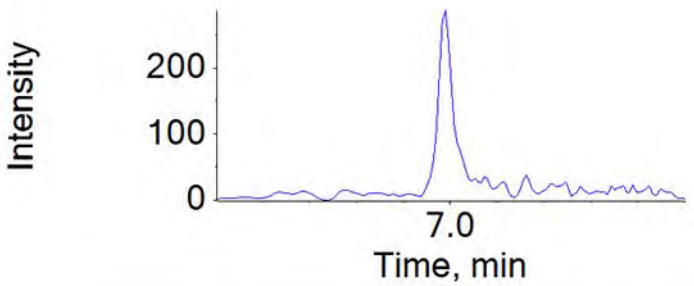
Component: PFHxDA
Primary Mass: 813.0 / 769.0



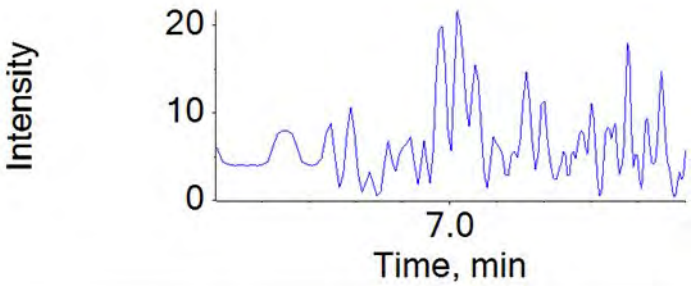
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



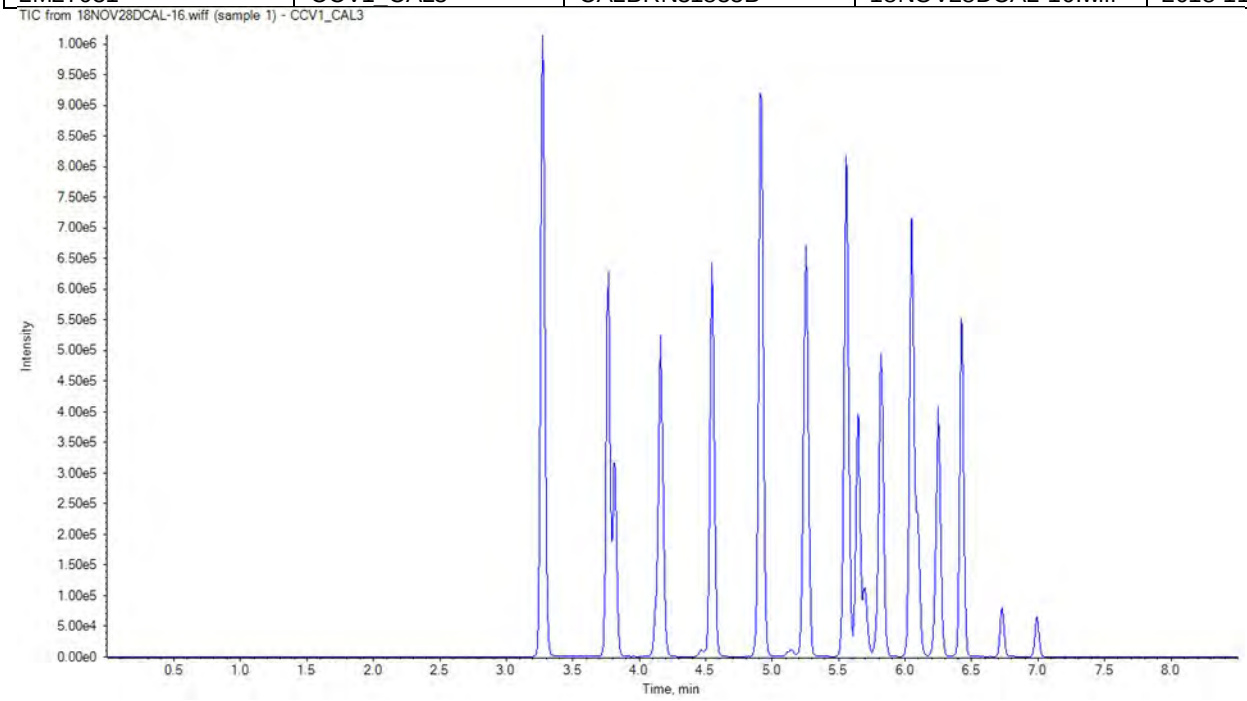
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALBRN31833B	18NOV28DCAL-16.wiff	2018-11-28T15:12:25



Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	892121.8	887248.9	1	50	
13C2-PFOA	5.0	497344.6	498501.6	0	50	
13C4-PFOS	4.8	284800.9	283214.2	1	50	
13C2-PFDA	5.0	454750.4	441790.6	3	50	

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_CAL3	CALBRN31833B	18NOV28DCAL-16.wiff	2018-11-28T15:12:25

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	414227.9	10	13C4-PFBA	991560.8	5.0	0.418	3.27	1.000	2.000	2.290	15	30	
PFPeA	406639.4	11	13C5-PFPeA	929799.0	5.0	0.437	3.77	1.000	2.000	2.146	7	30	
PFBS	166250.1	10	13C3-PFBS	423837.8	4.7	0.392	3.82	1.000	1.770	1.904	8	30	
4:2-FTS	56074.3	12	13C2-4:2-FTS	71502.2	4.7	0.784	4.13	1.000	1.870	2.099	12	30	
PFHxA	390006.3	12	13C5-PFHxA	673646.8	5.0	0.579	4.16	1.000	2.000	2.324	16	30	
PFPeS	88012.7	11	13C3-PFBS	423837.8	4.7	0.208	4.18	1.100	1.880	2.100	12	30	
PFHpA	393155.9	12	13C4-PFHpA	569502.8	5.0	0.690	4.55	1.000	2.000	2.131	7	30	
PFHxS	124485.3	18	13C3-PFHxS	316482.8	4.7	0.393	4.55	1.000	1.820	1.842	1	30	
6:2-FTS	55151.1	11	13C2-6:2-FTS	61242.4	4.8	0.901	4.90	1.000	1.900	2.350	24	30	
PFHpS	131029.4	11	13C3-PFHxS	316482.8	4.7	0.414	4.91	1.080	1.900	2.066	9	30	
PFOA	408992.7	11	13C8-PFOA	983417.9	5.0	0.416	4.92	1.000	2.000	2.149	7	30	
PFOS	137181.4	22	13C8-PFOS	303782.8	4.8	0.452	5.24	1.000	1.850	1.894	2	30	
PFNA	376585.8	11	13C9-PFNA	609889.2	5.0	0.617	5.26	1.000	2.000	2.366	18	30	
PFNS	94448.6	11	13C8-PFOS	303782.8	4.8	0.311	5.54	1.060	1.920	1.963	2	30	
PFDA	356261.0	11	13C6-PFDA	847665.4	5.0	0.420	5.56	1.000	2.000	2.379	19	30	
8:2-FTS	52676.1	12	13C2-8:2-FTS	53005.7	4.8	0.994	5.56	1.000	1.920	1.874	-2	30	
PFOSA	260574.1	12	13C8-PFOSA	629466.4	5.0	0.414	5.65	1.000	2.000	2.097	5	30	
NMeFOSAA	60912.6	18	d3-NMeFOSAA	187136.0	5.0	0.325	5.70	1.000	2.000	2.076	4	30	
PFDS	79486.5	12	13C8-PFOS	303782.8	4.8	0.262	5.79	1.100	1.930	2.075	7	30	
PFUnDA	368116.8	11	13C7-PFUnDA	549493.3	5.0	0.670	5.82	1.000	2.000	2.395	20	30	
NEtFOSAA	56175.4	22	d5-NEtFOSAA	144117.8	5.0	0.390	5.83	1.000	2.000	1.898	-5	30	
PFDoDA	480438.7	11	13C2-PFDoDA	1057435.2	5.0	0.454	6.05	1.000	2.000	2.489	24	30	
10:2-FTS	53244.1	12	13C2-8:2-FTS	53005.7	4.8	1.004	6.06	1.090	1.930	2.215	15	30	
NMePFOSAE	131874.4	12	d7-NMePFOSAE	263888.3	5.0	0.500	6.10	1.000	2.000	2.103	5	30	
NMePFOSA	35042.2	11	d3-NMePFOSA	87880.7	5.0	0.399	6.11	1.000	2.000	2.114	6	30	
PFDoS	41532.8	11	13C8-PFOS	303782.8	4.8	0.137	6.22	1.190	1.940	1.963	1	30	
NEtPFOSAE	145278.6	11	d9-NEtPFOSAE	227340.4	5.0	0.639	6.26	1.000	2.000	2.299	15	30	
NEtPFOSA	31416.5	11	d5-NEtPFOSA	63430.0	5.0	0.495	6.27	1.000	2.000	2.220	11	30	
PFTrDA	453601.4	11	13C2-PFDoDA	1057435.2	5.0	0.429	6.25	1.030	2.000	2.586	29	30	
PFTeDA	333159.1	11	13C2-PFTeDA	823659.2	5.0	0.404	6.43	1.000	2.000	2.292	15	30	
PFHxDA	160272.7	11	13C2-PFTeDA	823659.2	5.0	0.195	6.73	1.050	2.000	2.224	11	30	
PFODA	137372.8	10	13C2-PFTeDA	823659.2	5.0	0.167	6.99	1.090	2.000	2.222	11	30	

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV28DCAL 11/28/2018 4:47:11 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_CAL3			**Data File:**		18NOV28DCAL-16.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-28T15:12:25
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV28DCAL
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	892121.8	887248.9	1	50	
13C2-PFOA	5.0	497344.6	498501.6	0	50	
13C4-PFOS	4.8	284800.9	283214.2	1	50	
13C2-PFDA	5.0	454750.4	441790.6	3	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	991560.8	13C3-PFBA	892121.8	1.111	5.000	4.959	99	70-130	
E13C5-PFPeA	929799.0	13C3-PFBA	892121.8	1.042	5.000	4.867	97	70-130	
E13C3-PFBS	423837.8	13C3-PFBA	892121.8	0.475	4.650	4.533	97	70-130	
E13C2-4:2-FTS	71502.2	13C2-PFOA	497344.6	0.144	4.670	4.955	106	70-130	
E13C5-PFHxA	673646.8	13C2-PFOA	497344.6	1.354	5.000	4.975	100	70-130	
E13C3-PFHxS	316482.8	13C2-PFOA	497344.6	0.636	4.730	4.988	105	70-130	
E13C4-PFHpA	569502.8	13C2-PFOA	497344.6	1.145	5.000	5.262	105	70-130	
E13C2-6:2-FTS	61242.4	13C2-PFOA	497344.6	0.123	4.750	5.155	109	70-130	
E13C8-PFOA	983417.9	13C2-PFOA	497344.6	1.977	5.000	5.443	109	70-130	
E13C8-PFOS	303782.8	13C4-PFOS	284800.9	1.067	4.780	4.815	101	70-130	
E13C9-PFNA	609889.2	13C4-PFOS	284800.9	2.141	5.000	4.703	94	70-130	
E13C6-PFDA	847665.4	13C2-PFDA	454750.4	1.864	5.000	5.256	105	70-130	
E13C2-8:2-FTS	53005.7	13C2-PFDA	454750.4	0.117	4.790	5.010	105	70-130	
E13C8-PFOSA	629466.4	13C2-PFDA	454750.4	1.384	5.000	5.079	102	70-130	
Ed3-NMeFOSAA	187136.0	13C2-PFDA	454750.4	0.412	5.000	5.225	104	70-130	
E13C7-PFUnDA	549493.3	13C2-PFDA	454750.4	1.208	5.000	5.107	102	70-130	
Ed5-NEtFOSAA	144117.8	13C2-PFDA	454750.4	0.317	5.000	5.646	113	70-130	
E13C2-PFDoDA	1057435.2	13C2-PFDA	454750.4	2.325	5.000	4.886	98	70-130	
Ed7-NMePFOSAE	263888.3	13C2-PFDA	454750.4	0.580	5.000	5.015	100	70-130	
Ed3-NMePFOSA	87880.7	13C2-PFDA	454750.4	0.193	5.000	5.230	105	70-130	
Ed9-NEtPFOSAE	227340.4	13C2-PFDA	454750.4	0.500	5.000	5.068	101	70-130	
Ed5-NEtPFOSA	63430.0	13C2-PFDA	454750.4	0.139	5.000	4.847	97	70-130	
E13C2-PFTeDA	823659.2	13C2-PFDA	454750.4	1.811	5.000	5.012	100	70-130	

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

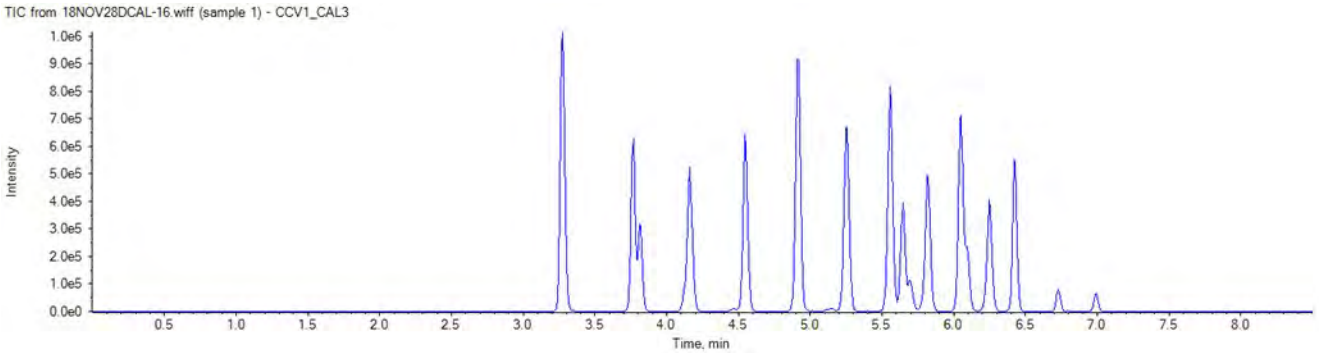
Analyte Quantitation Peak Table

Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-16.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	414227.9		A	13C4-PFBA	3.27	991560.8	0.418	2.290
PFPeA	3.77	1.000	406639.4		A	13C5-PFPeA	3.77	929799.0	0.437	2.146
PFBS	3.82	1.000	166250.1		A	13C3-PFBS	3.82	423837.8	0.392	1.904
4:2-FTS	4.13	1.000	56074.3		A	13C2-4:2-FTS	4.13	71502.2	0.784	2.099
PFHxA	4.16	1.000	390006.3		A	13C5-PFHxA	4.16	673646.8	0.579	2.324
PFPeS	4.18	1.100	88012.7		A	13C3-PFBS	3.82	423837.8	0.208	2.100
PFHpA	4.55	1.000	393155.9		A	13C4-PFHpA	4.55	569502.8	0.690	2.131
PFHxS	4.55	1.000	124485.3		M	13C3-PFHxS	4.55	316482.8	0.393	1.842
6:2-FTS	4.90	1.000	55151.1		A	13C2-6:2-FTS	4.91	61242.4	0.901	2.350
PFHpS	4.91	1.080	131029.4		A	13C3-PFHxS	4.55	316482.8	0.414	2.066
PFOA	4.92	1.000	408992.7		A	13C8-PFOA	4.92	983417.9	0.416	2.149
PFOS	5.24	1.000	137181.4		M	13C8-PFOS	5.24	303782.8	0.452	1.894
PFNA	5.26	1.000	376585.8		A	13C9-PFNA	5.26	609889.2	0.617	2.366
PFNS	5.54	1.060	94448.6		A	13C8-PFOS	5.24	303782.8	0.311	1.963
PFDA	5.56	1.000	356261.0		A	13C6-PFDA	5.56	847665.4	0.420	2.379
8:2-FTS	5.56	1.000	52676.1		A	13C2-8:2-FTS	5.56	53005.7	0.994	1.874
PFOSA	5.65	1.000	260574.1		A	13C8-PFOSA	5.65	629466.4	0.414	2.097
NMeFOSAA	5.70	1.000	60912.6		M	d3-NMeFOSAA	5.70	187136.0	0.325	2.076
PFDS	5.79	1.100	79486.5		A	13C8-PFOS	5.24	303782.8	0.262	2.075
PFUnDA	5.82	1.000	368116.8		A	13C7-PFUnDA	5.82	549493.3	0.670	2.395
NEtFOSAA	5.83	1.000	56175.4		M	d5-NEtFOSAA	5.83	144117.8	0.390	1.898
PFDoDA	6.05	1.000	480438.7		A	13C2-PFDoDA	6.05	1057435.2	0.454	2.489
10:2-FTS	6.06	1.090	53244.1		A	13C2-8:2-FTS	5.56	53005.7	1.004	2.215
NMePFOSAE	6.10	1.000	131874.4		A	d7-NMePFOSAE	6.09	263888.3	0.500	2.103
NMePFOSA	6.11	1.000	35042.2		A	d3-NMePFOSA	6.10	87880.7	0.399	2.114
PFDoS	6.22	1.190	41532.8		A	13C8-PFOS	5.24	303782.8	0.137	1.963
NEtPFOSAE	6.26	1.000	145278.6		A	d9-NEtPFOSAE	6.24	227340.4	0.639	2.299
NEtPFOSA	6.27	1.000	31416.5		A	d5-NEtPFOSA	6.26	63430.0	0.495	2.220
PFTrDA	6.25	1.030	453601.4		A	13C2-PFDoDA	6.05	1057435.2	0.429	2.586
PFTeDA	6.43	1.000	333159.1		A	13C2-PFTeDA	6.43	823659.2	0.404	2.292
PFHxDA	6.73	1.050	160272.7		A	13C2-PFTeDA	6.43	823659.2	0.195	2.224
PFODA	6.99	1.090	137372.8		A	13C2-PFTeDA	6.43	823659.2	0.167	2.222

Total Ion Chromatogram

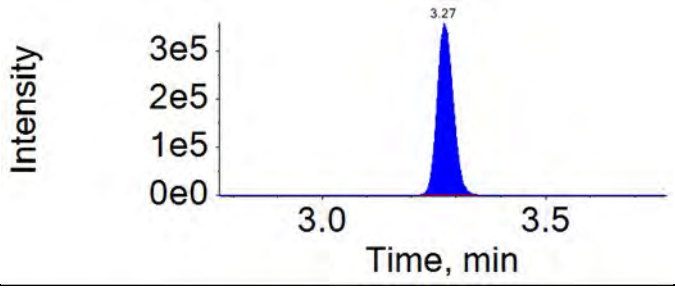


APPROVED
By MCD at 5:01 pm, 11/28/18

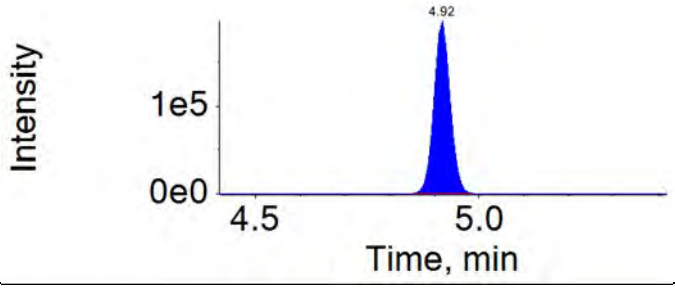
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

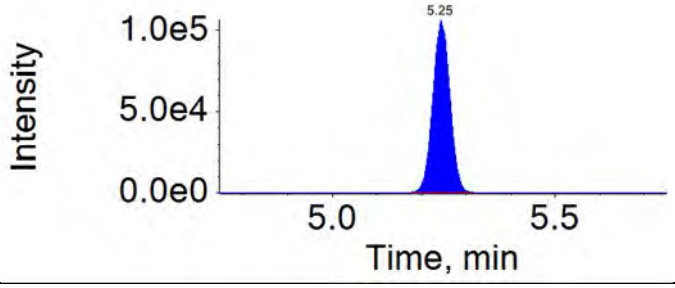
Injection Standard: 13C3-PFBA
216.0 / 172.0



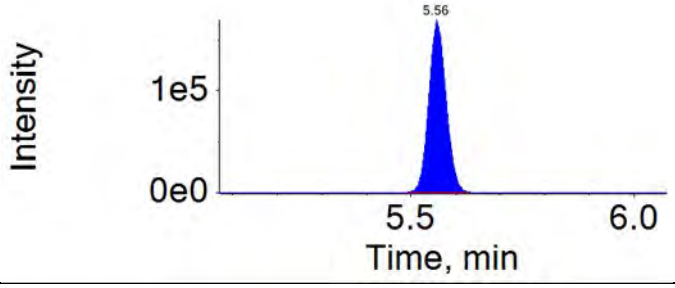
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

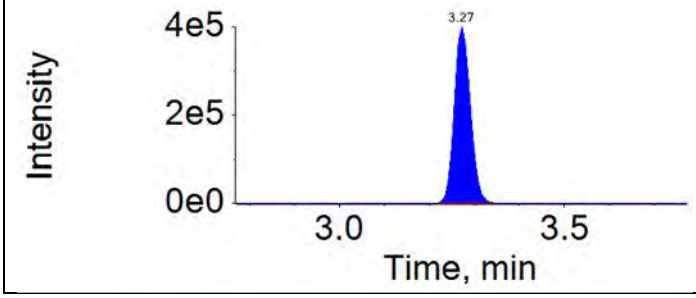


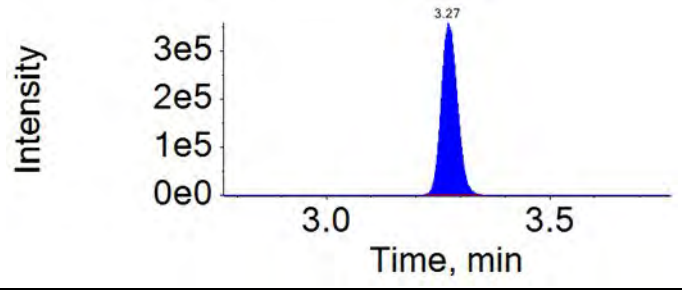
Injection Standard: 13C2-PFDA
515.0 / 470.0



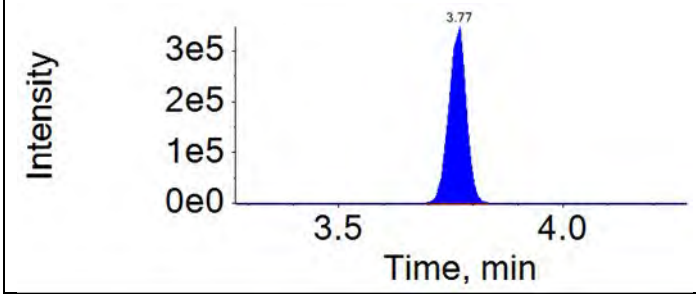
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

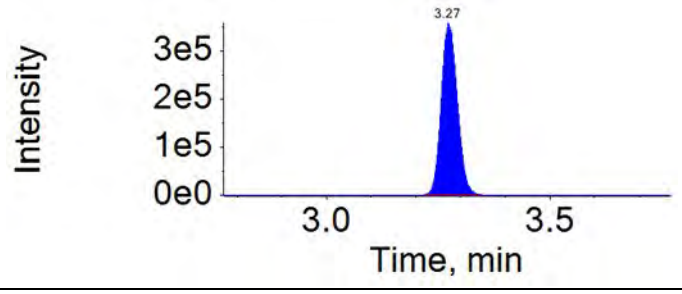
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



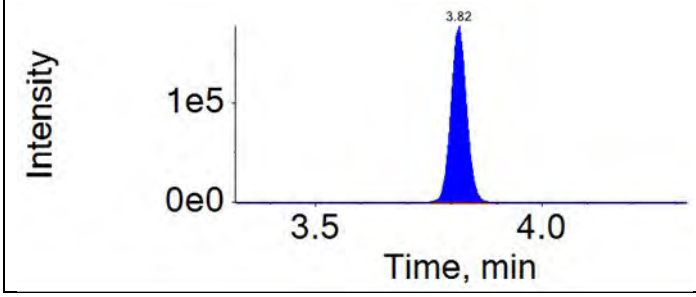


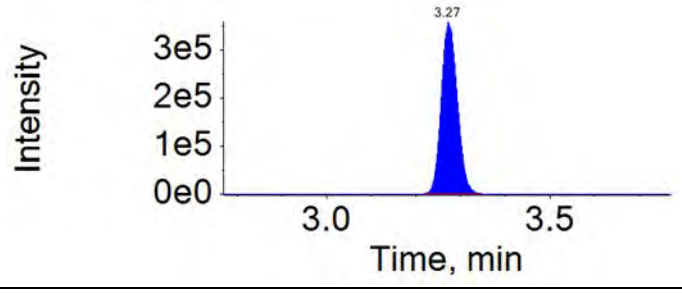
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



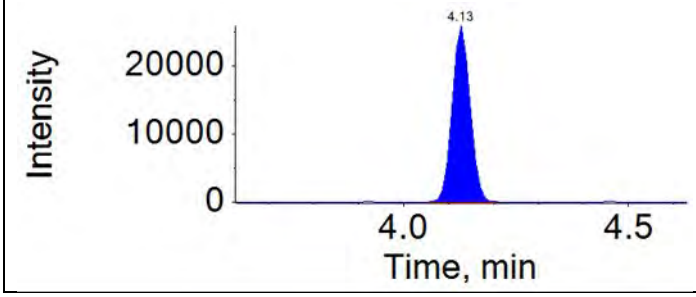


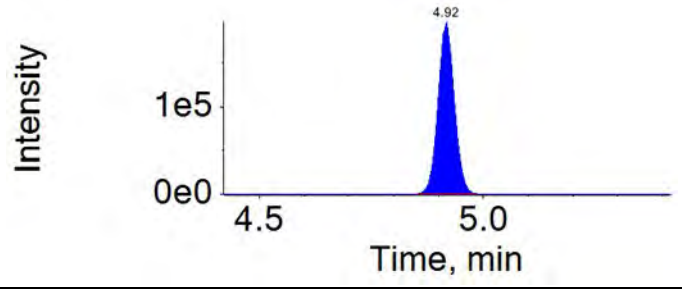
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





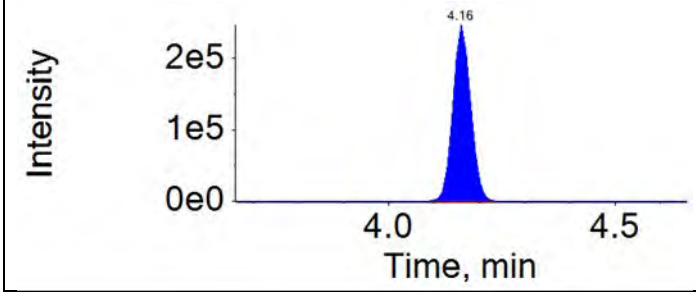
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0

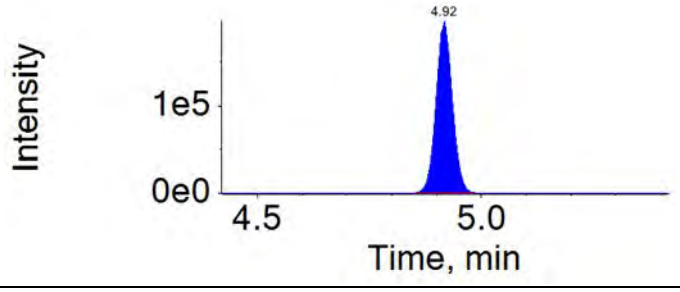




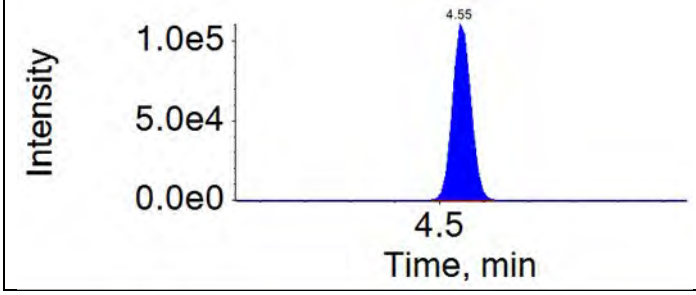
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

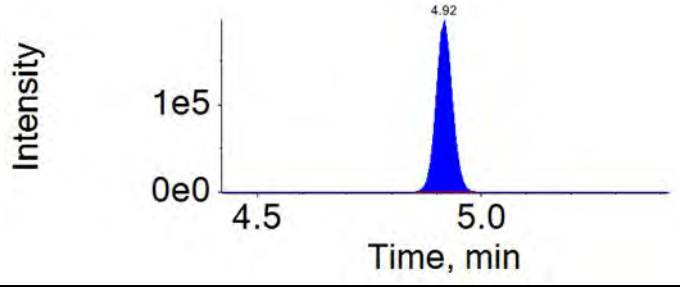
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



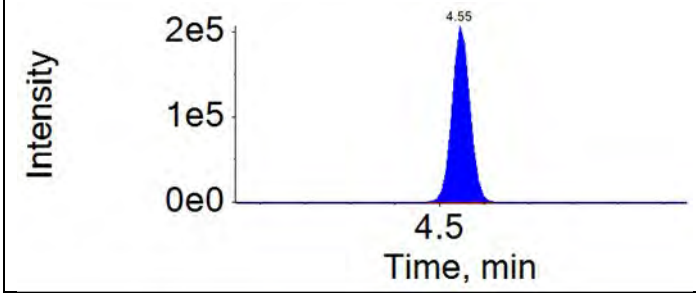


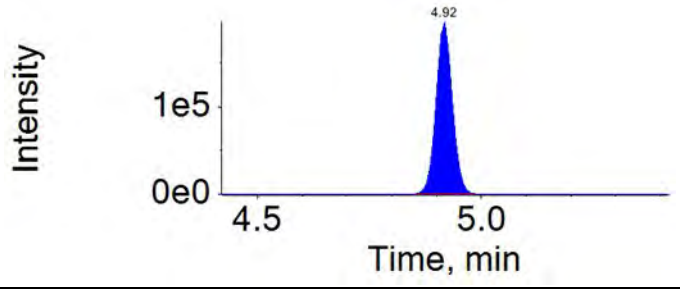
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



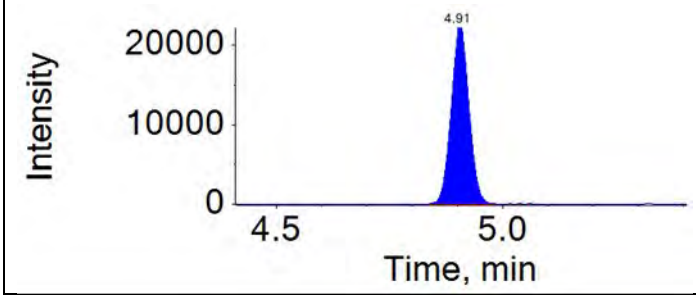


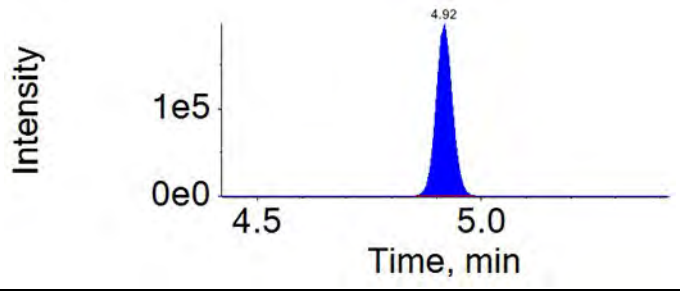
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

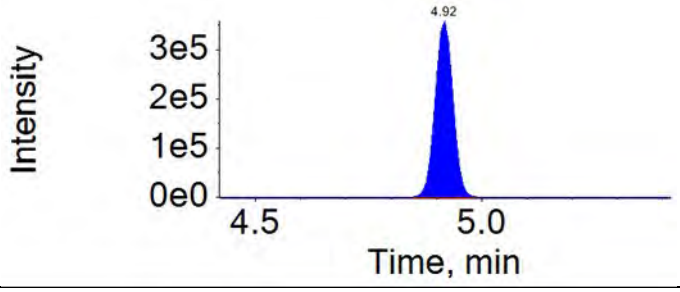
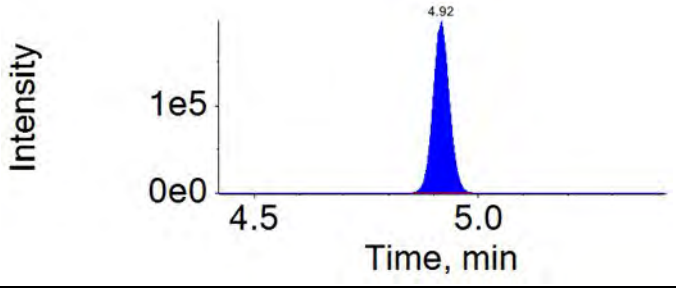


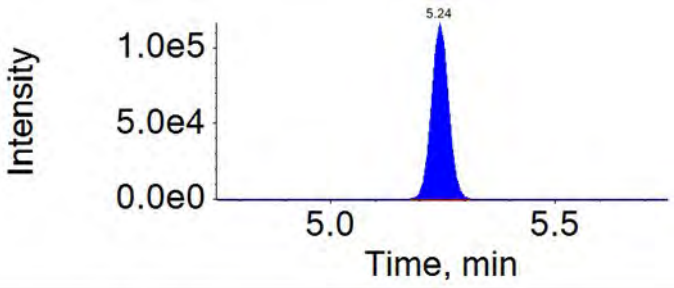
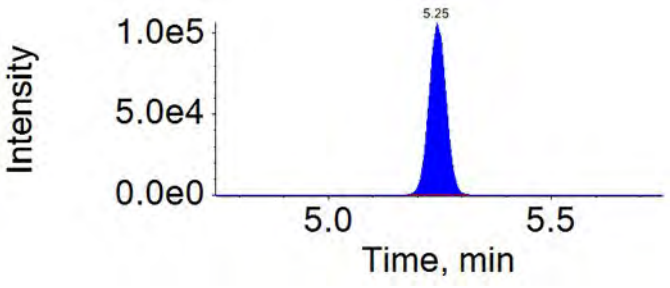


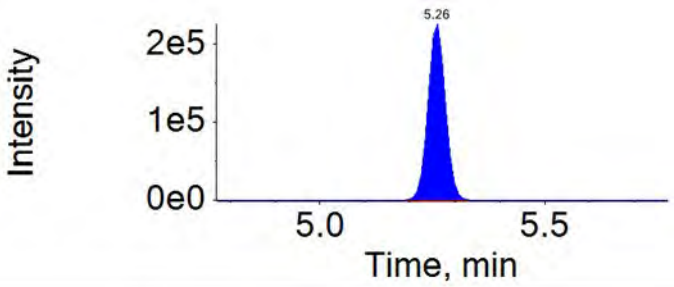
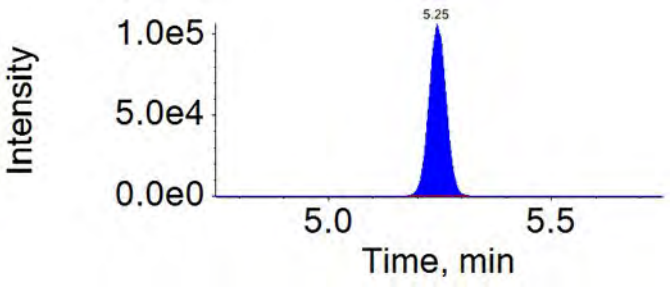
APPROVED
By MCD at 5:01 pm, 11/28/18

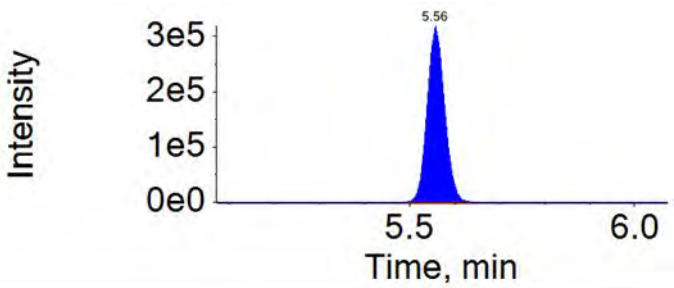
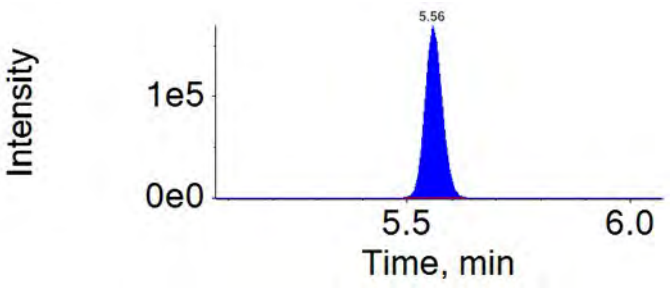
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

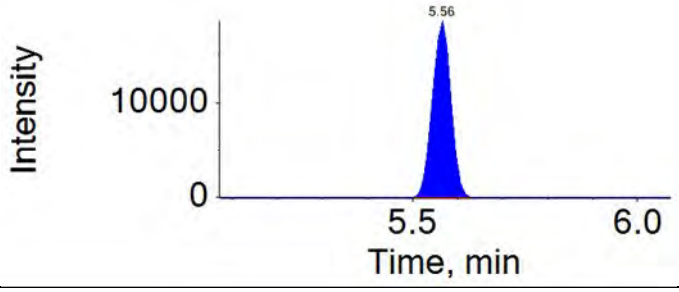
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

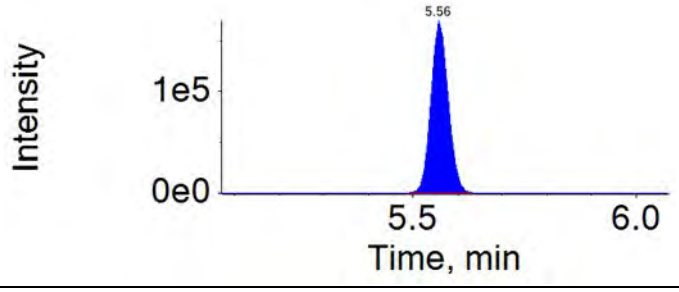
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

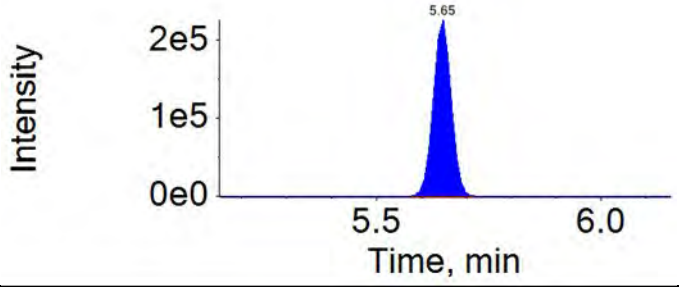
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

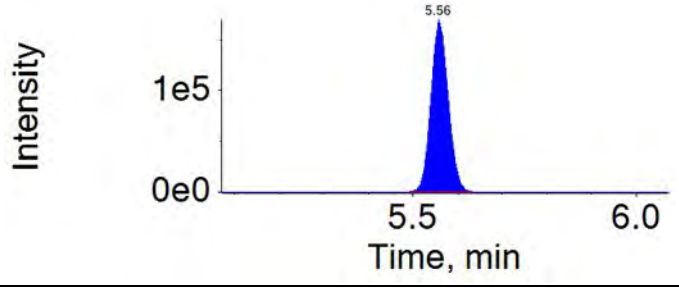
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



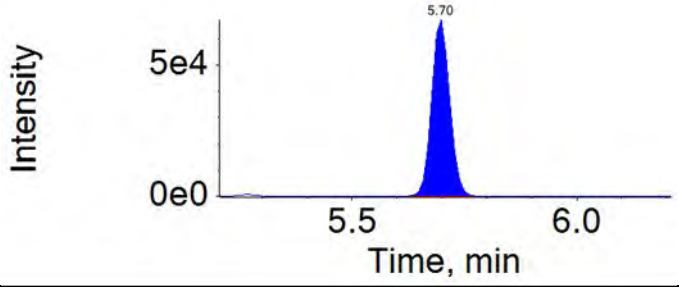


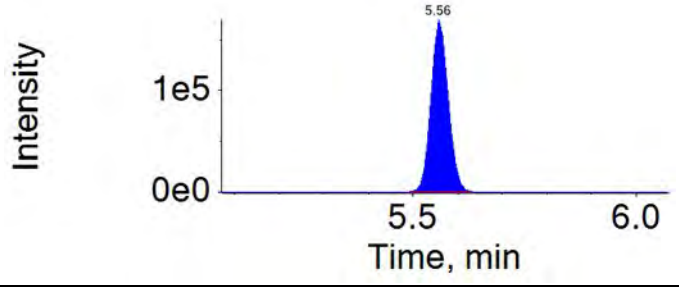
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



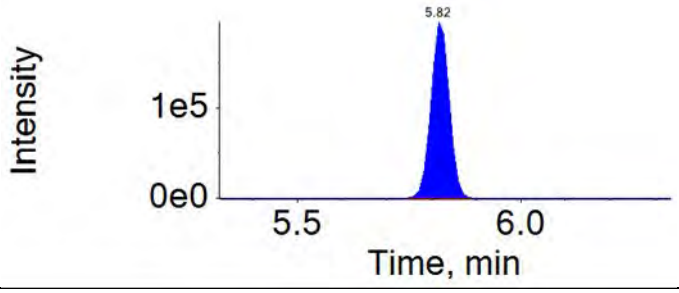


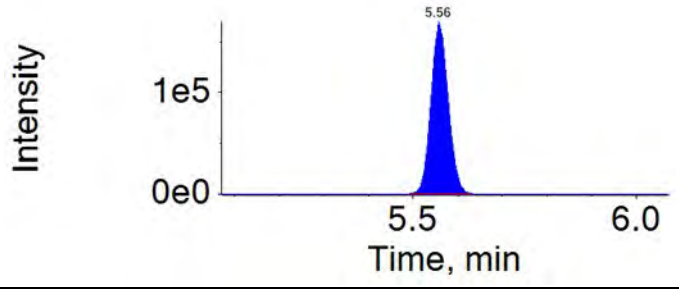
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0





Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0



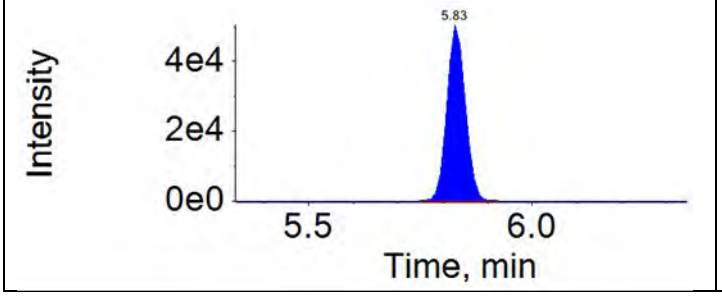


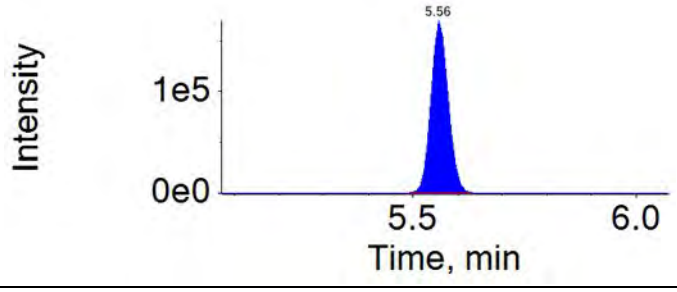
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

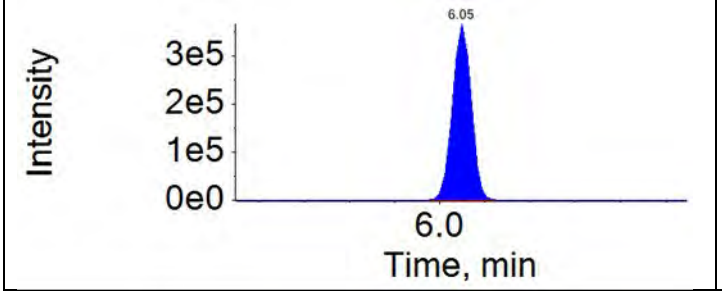
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

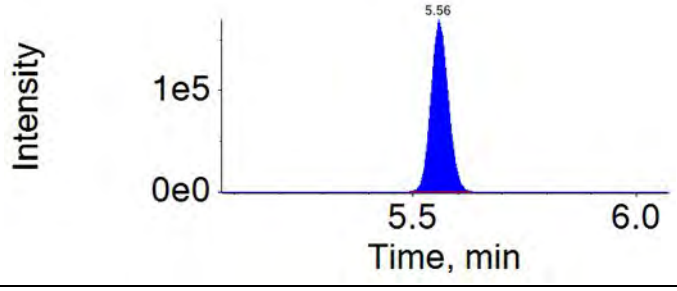
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



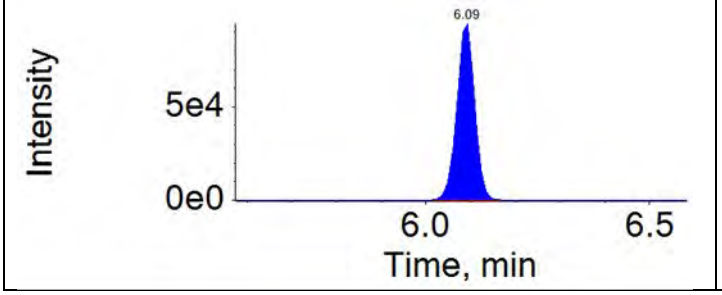


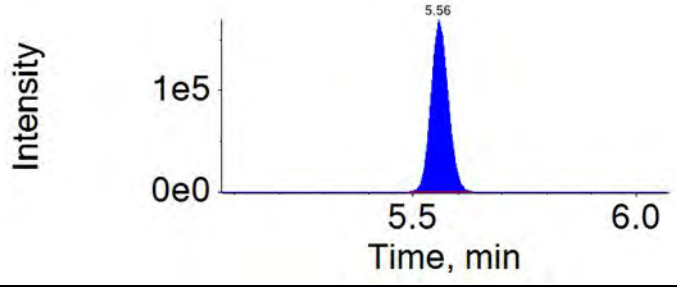
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



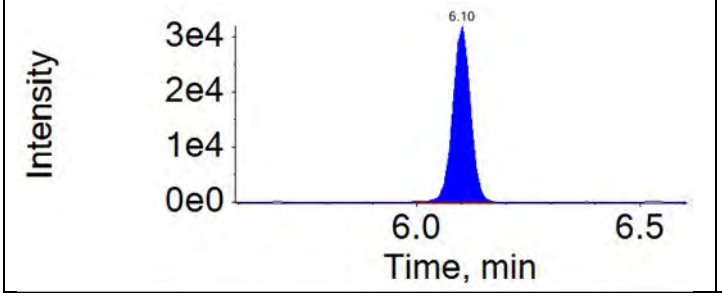


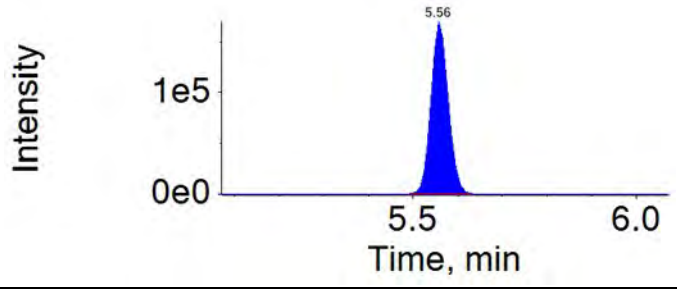
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



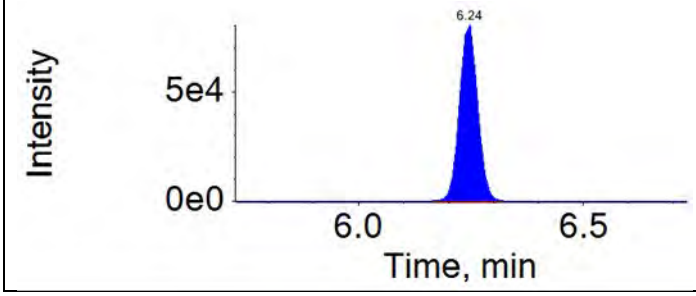


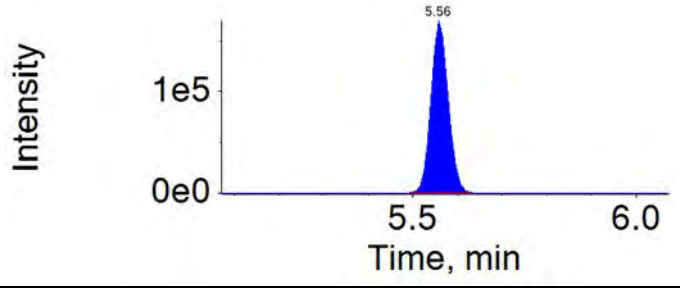
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

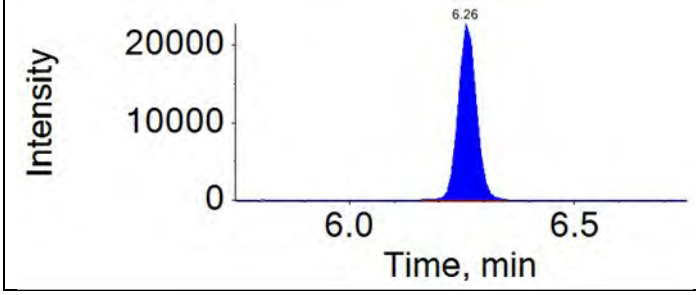
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

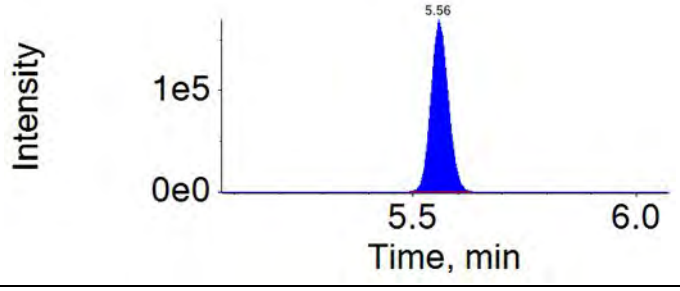
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



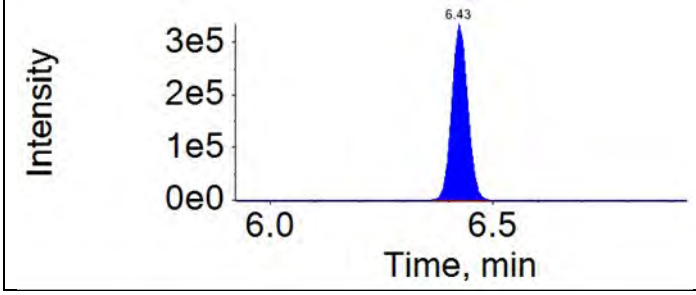


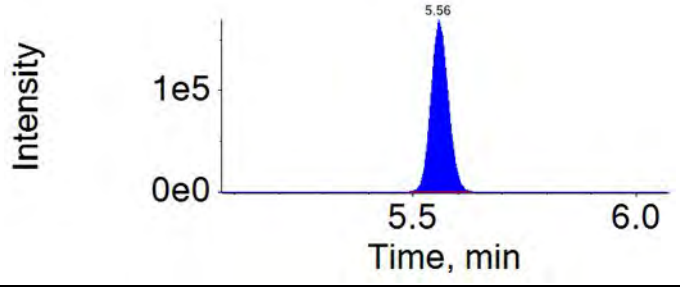
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



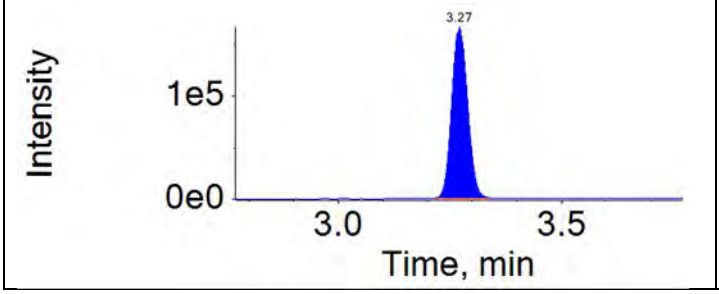


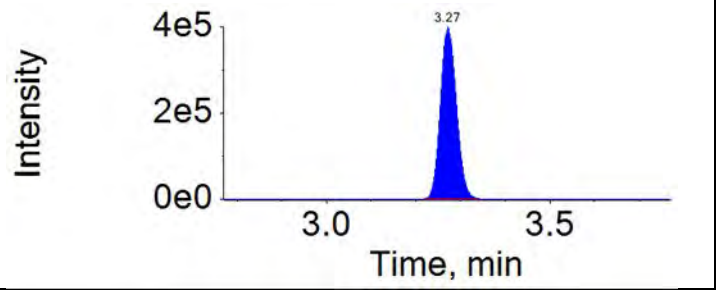
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

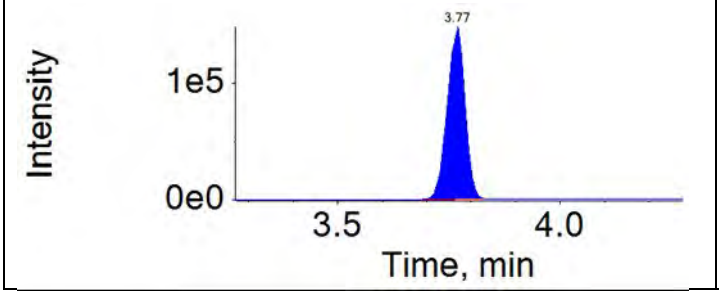
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

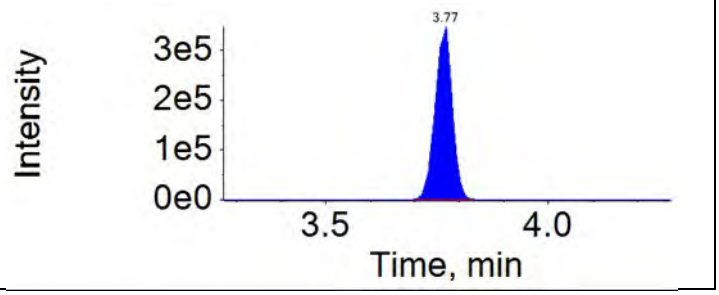
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



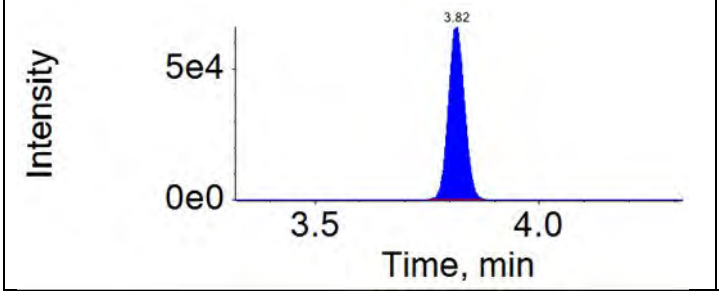


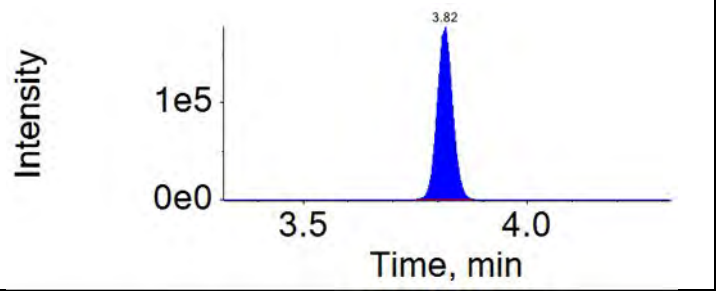
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



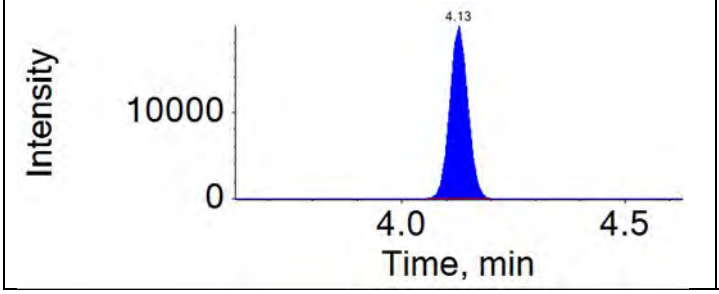


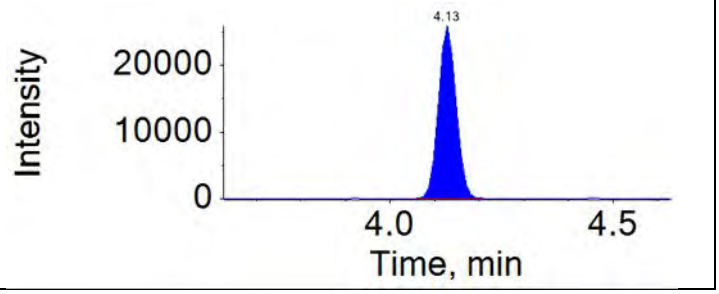
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



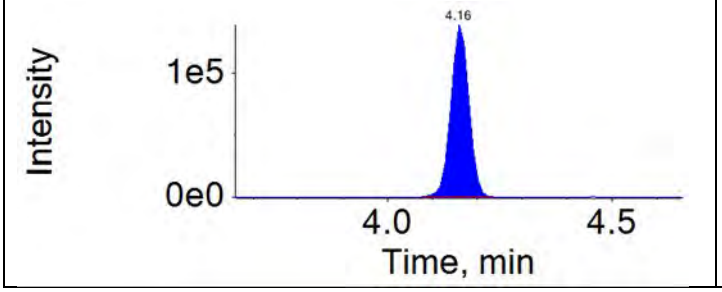


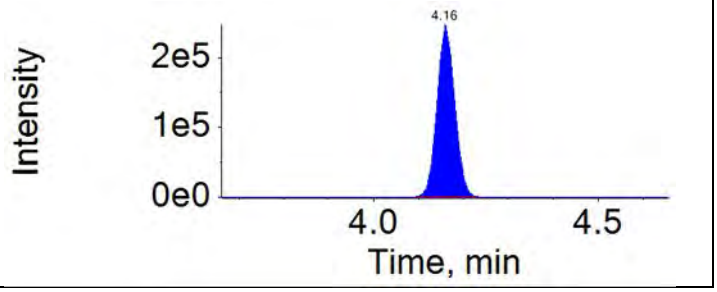
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

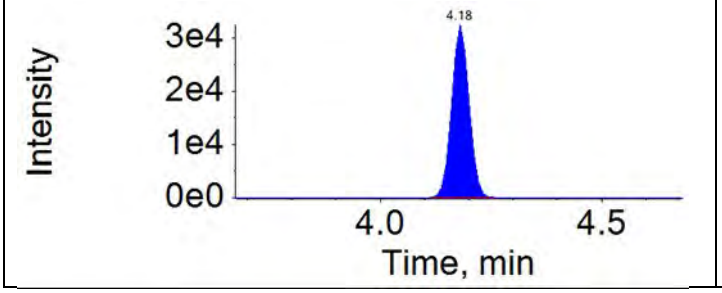
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

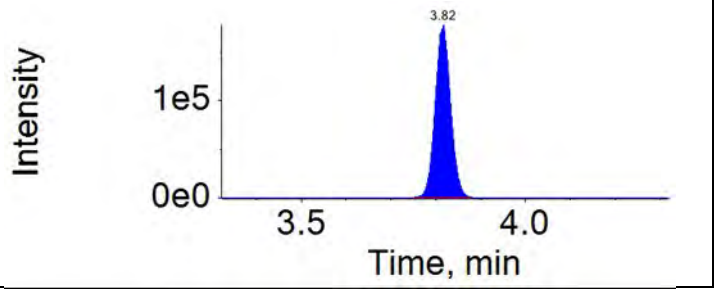
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



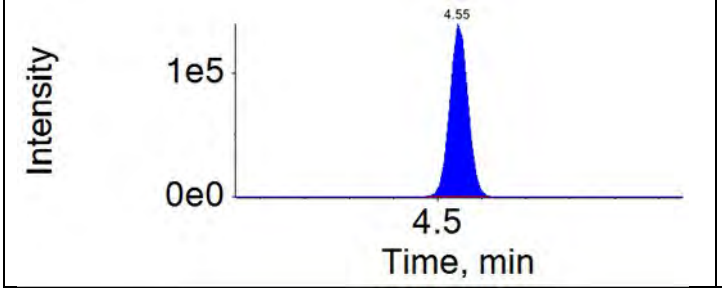


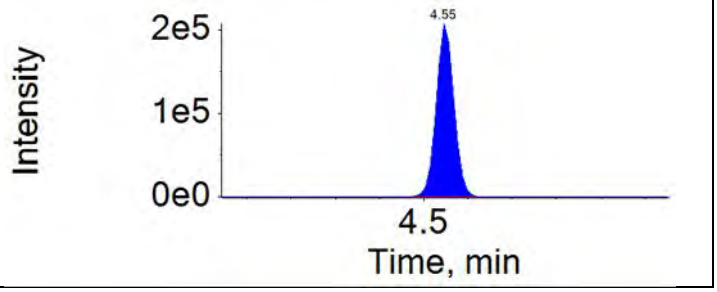
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



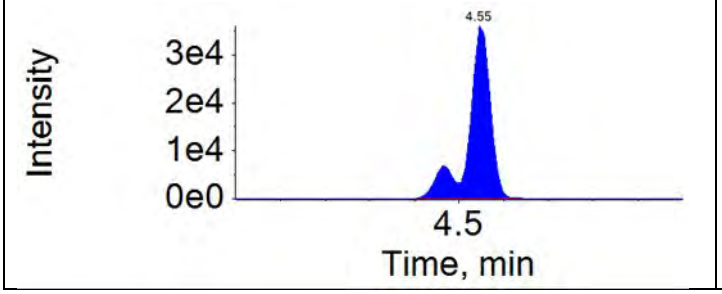


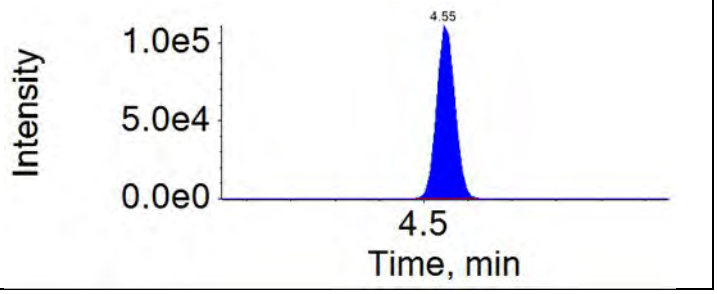
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

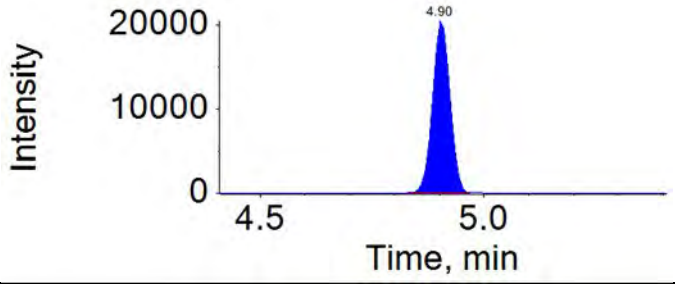
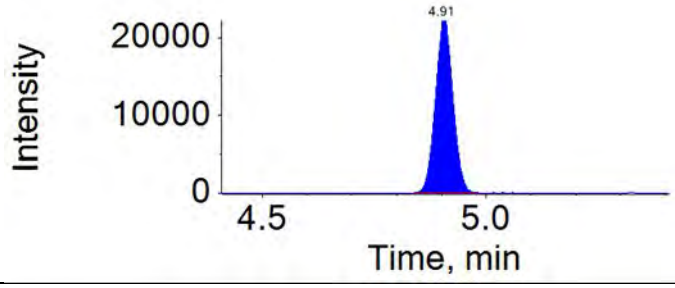


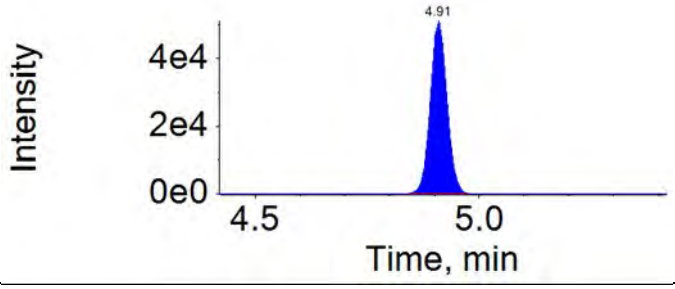
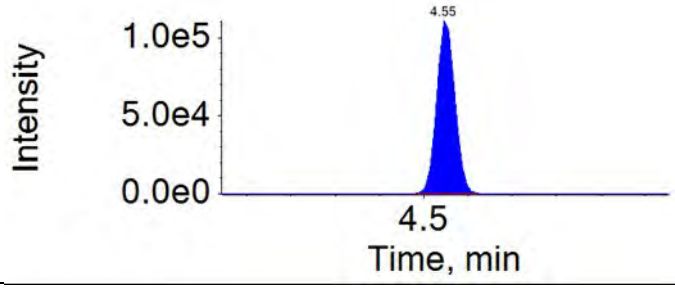


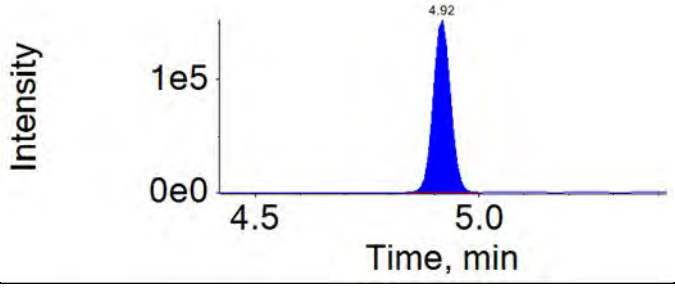
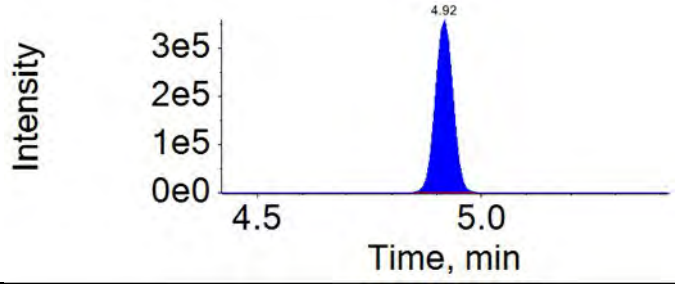
APPROVED
By MCD at 5:01 pm, 11/28/18

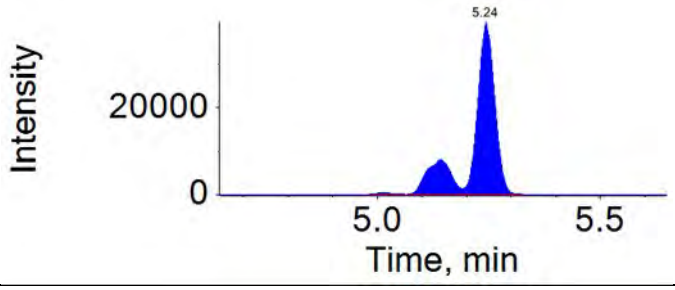
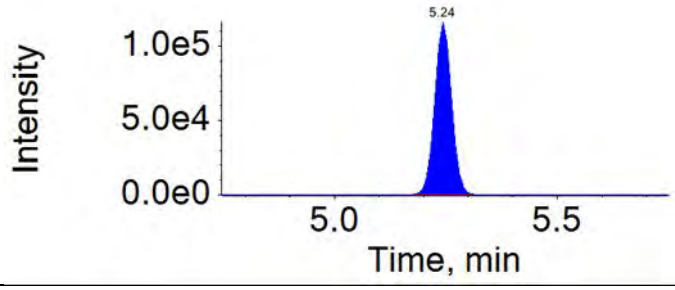
REVIEWED
By HMK at 12:22 pm, 11/29/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

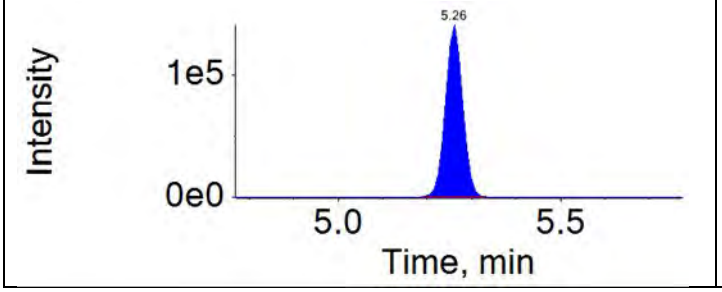
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

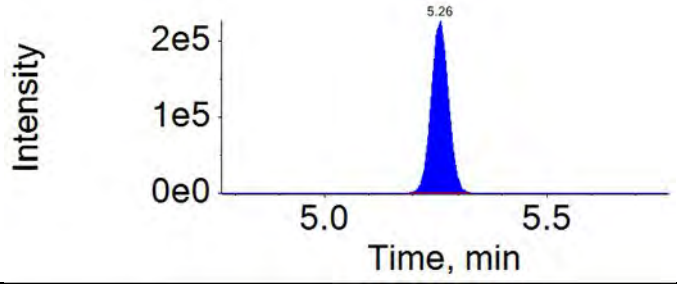
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

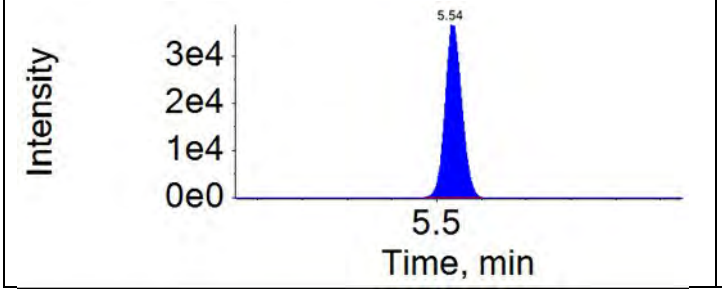
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

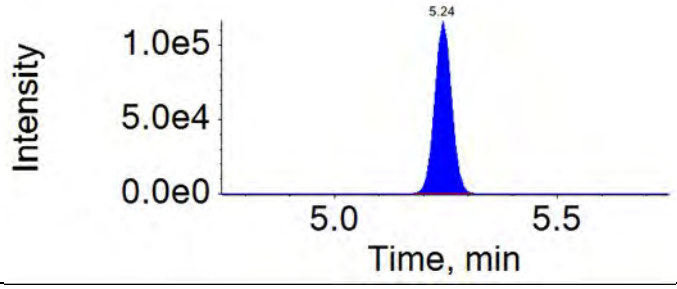
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



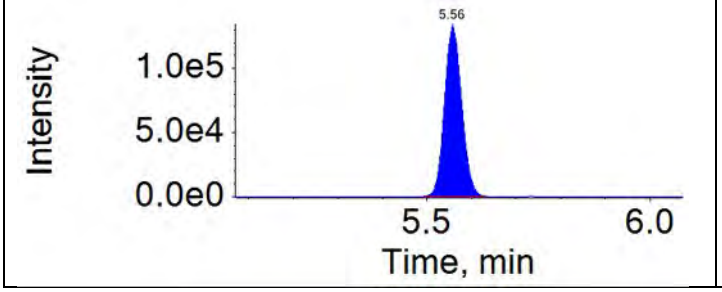


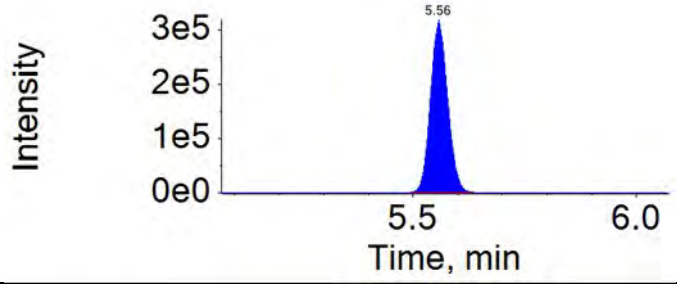
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



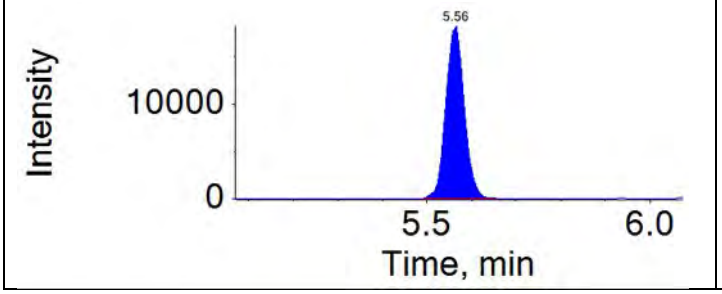


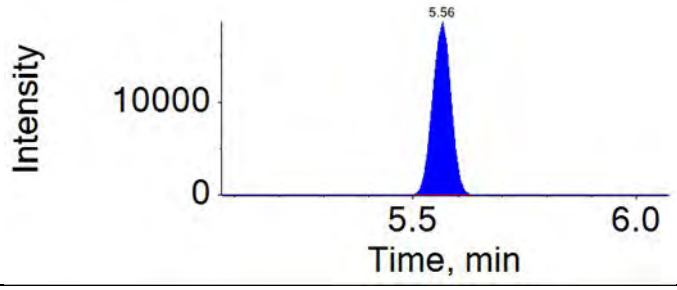
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



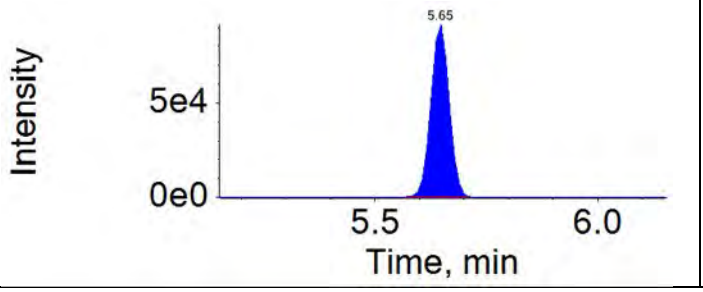


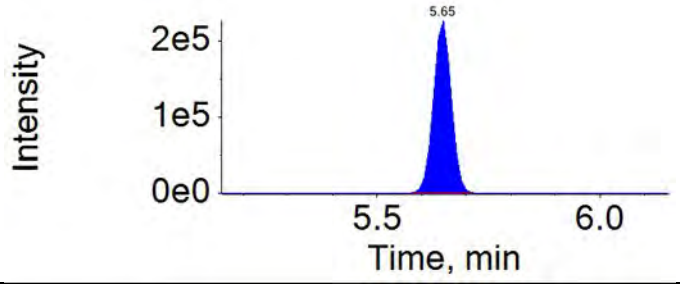
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

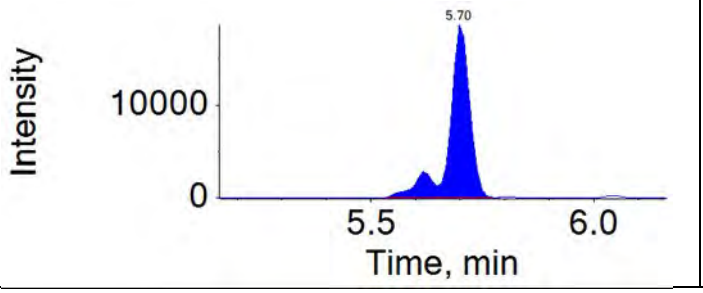
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

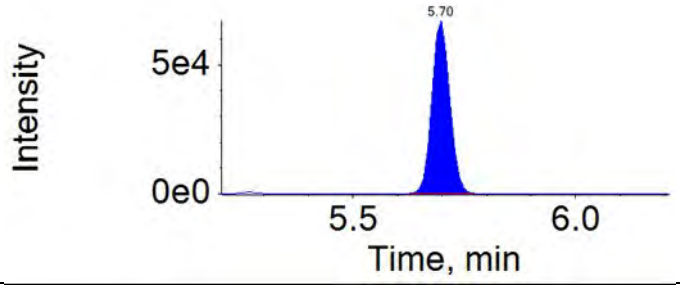
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



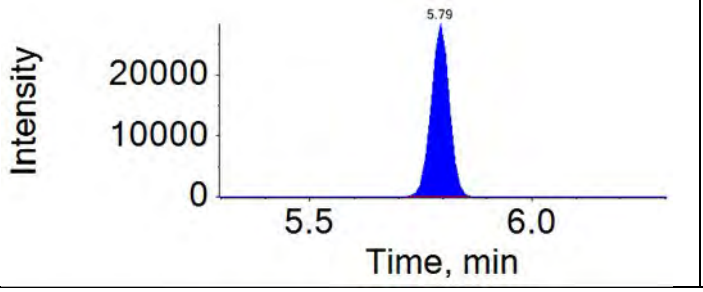


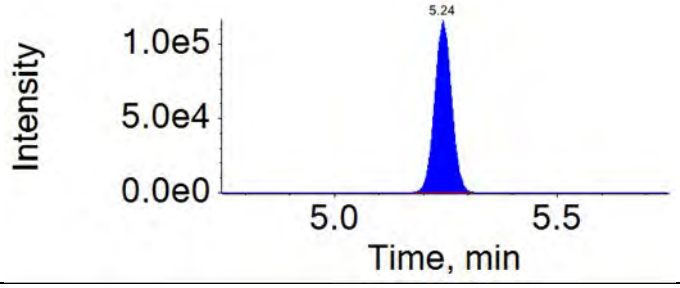
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



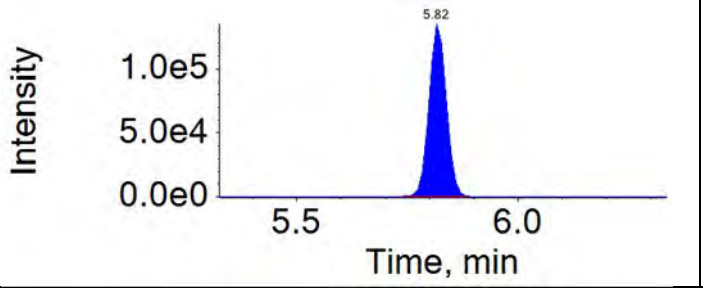


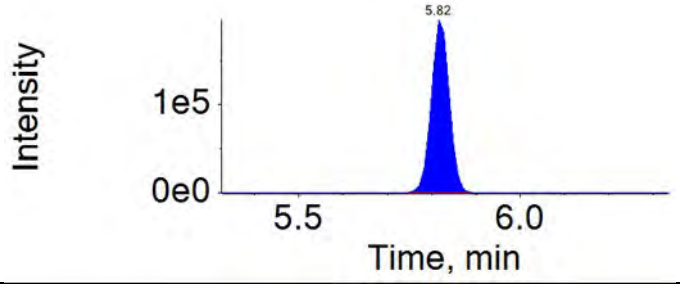
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



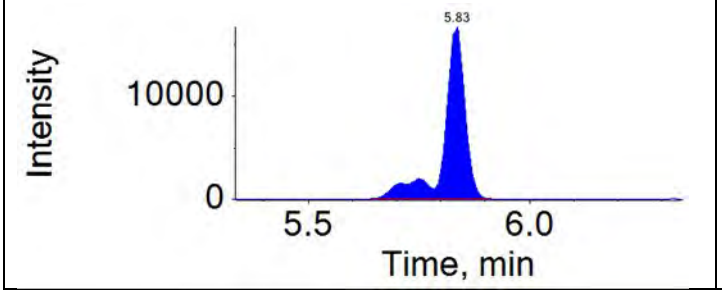


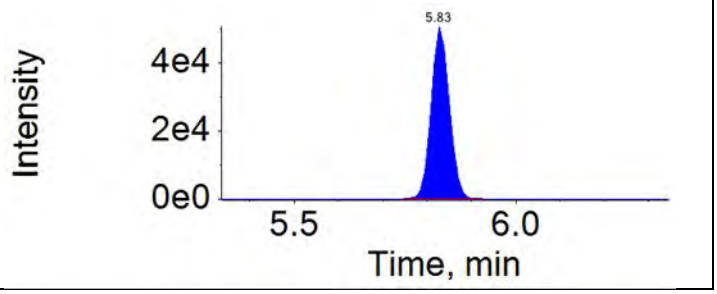
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

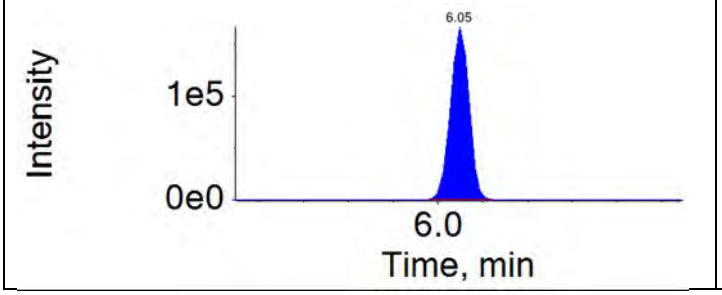
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

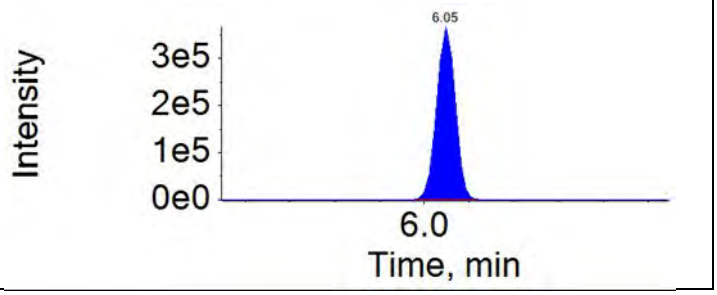
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



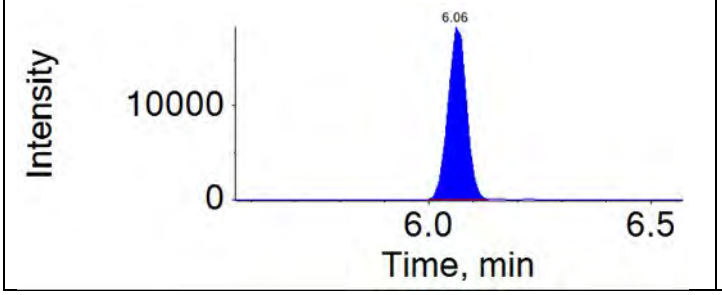


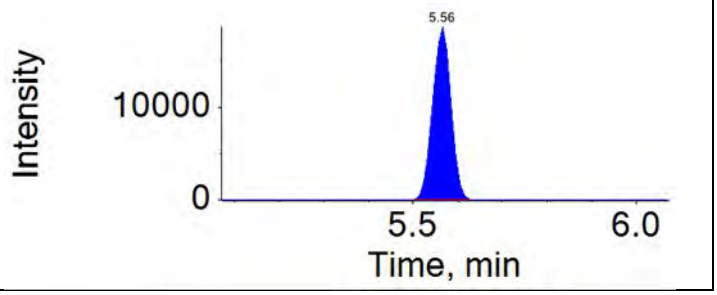
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



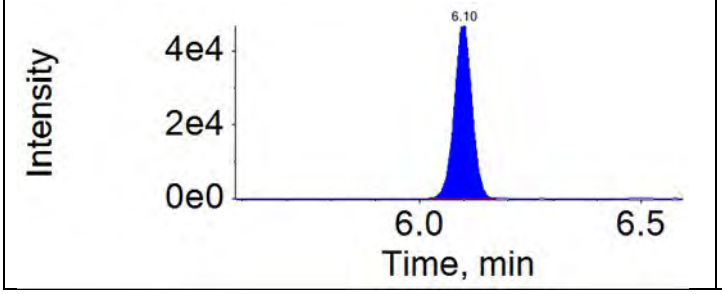


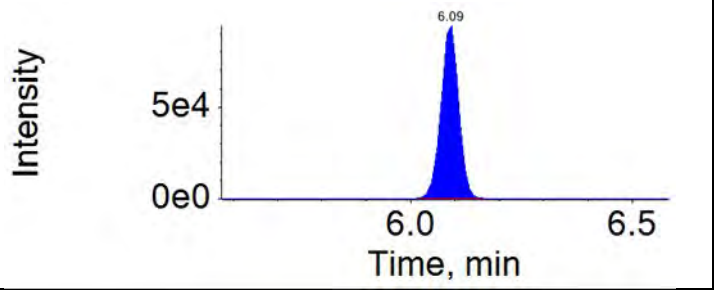
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



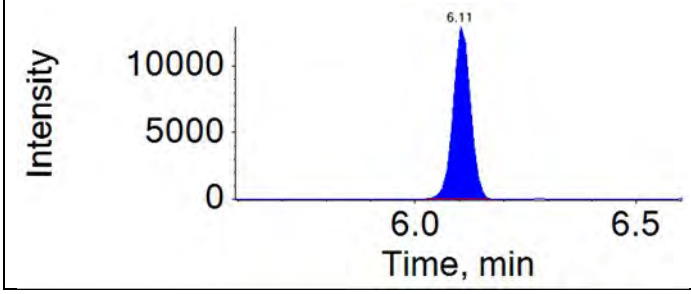


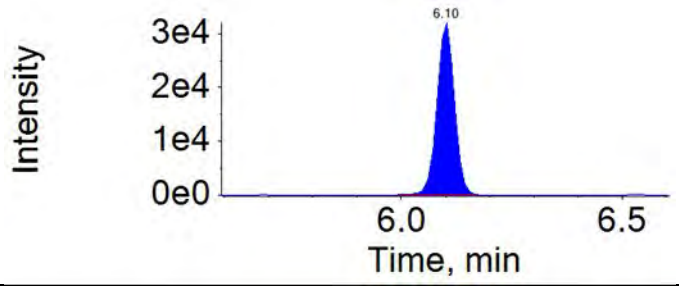
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

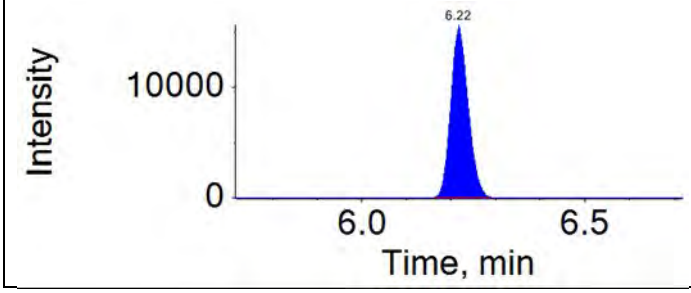
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

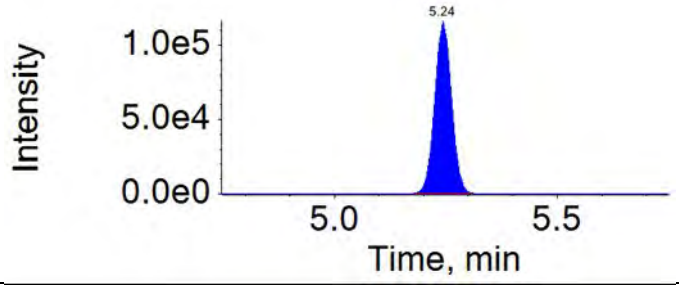
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



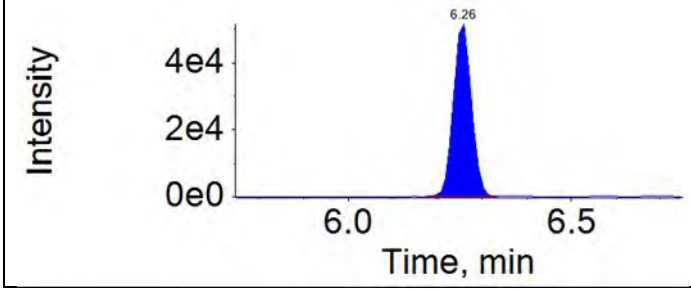


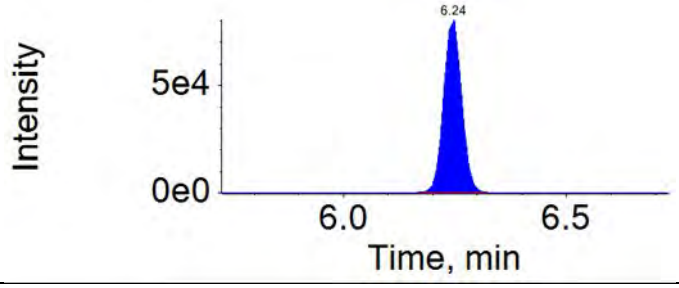
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



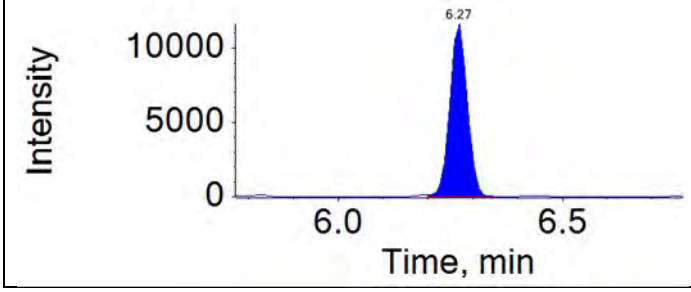


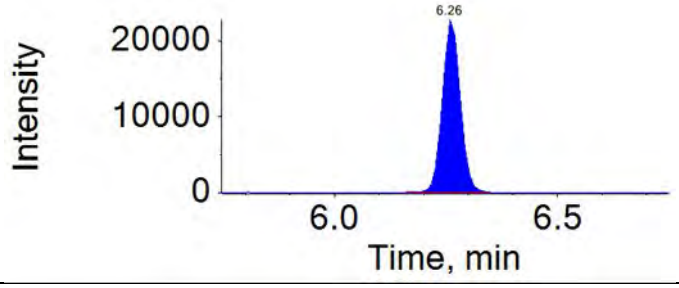
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



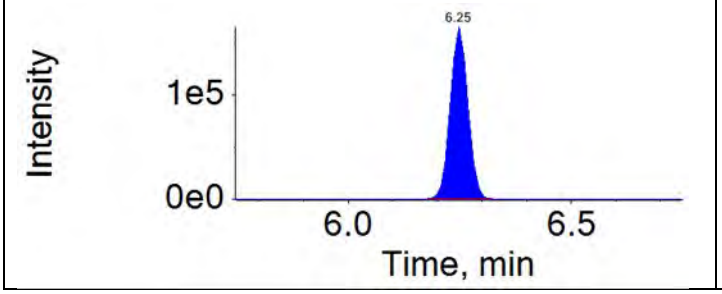


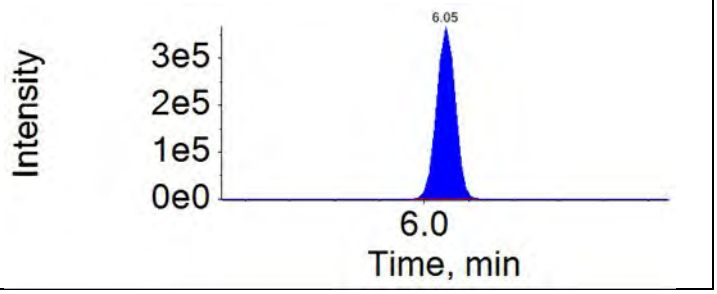
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

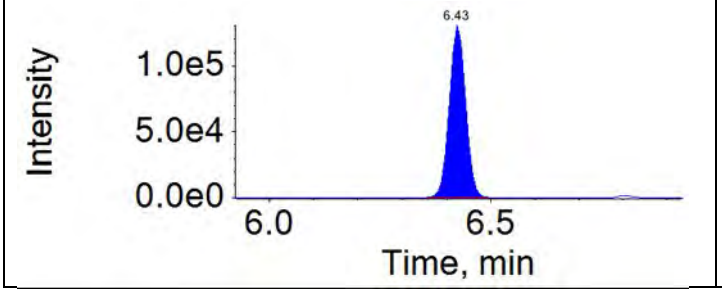
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV28DCAL 11/28/2018 4:47:11 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

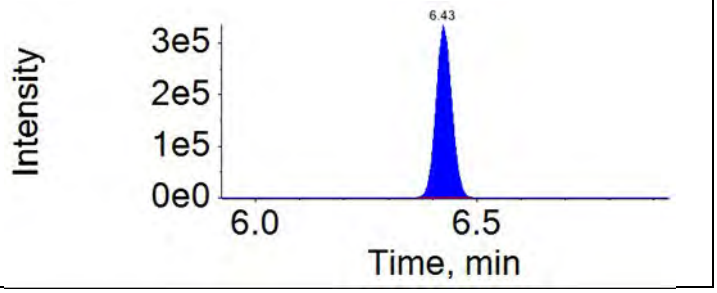
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



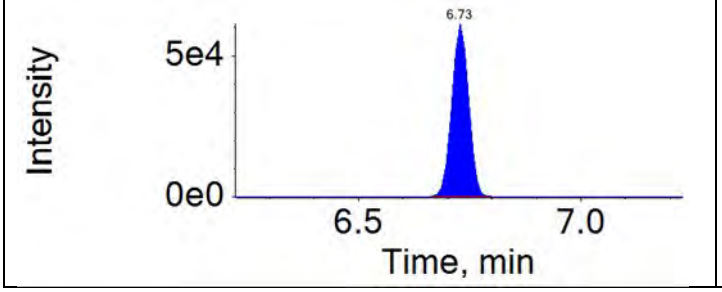


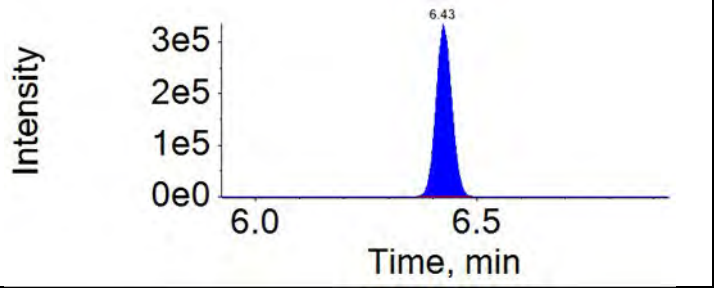
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



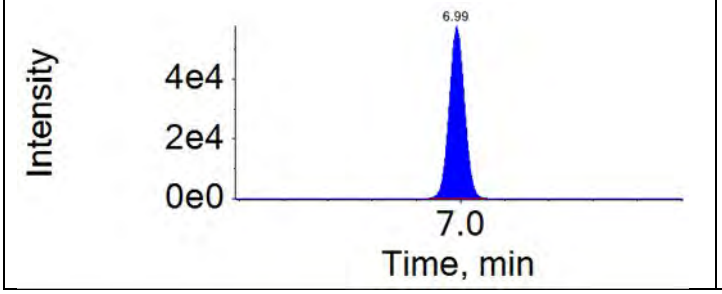


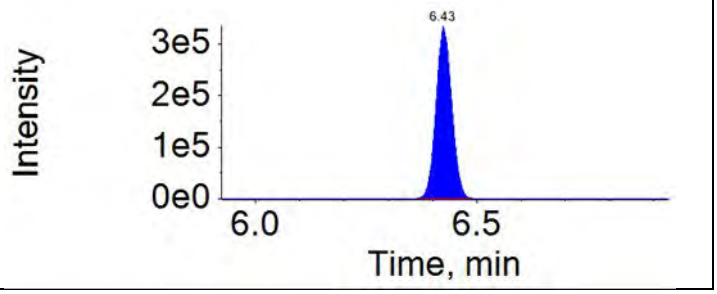
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0

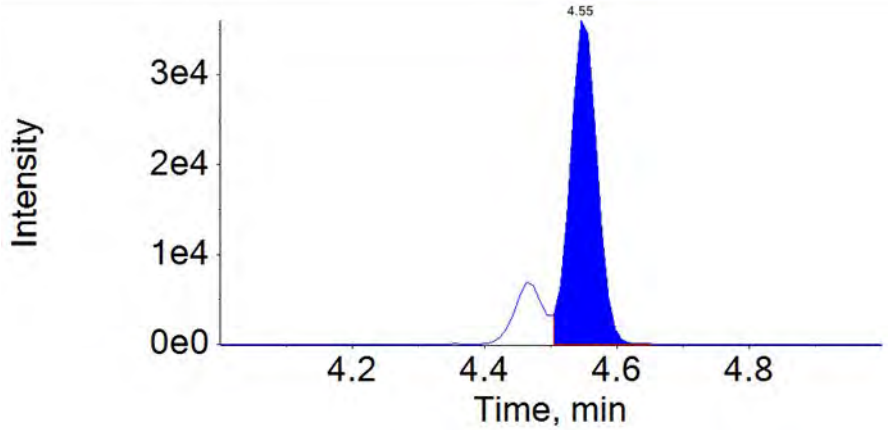
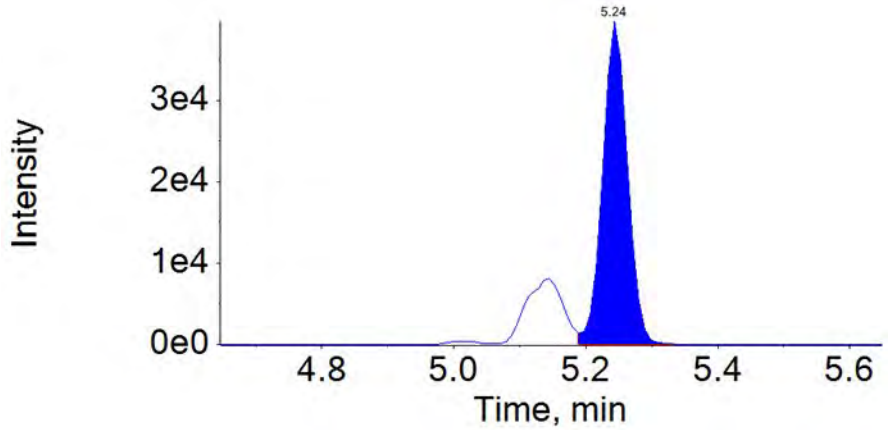
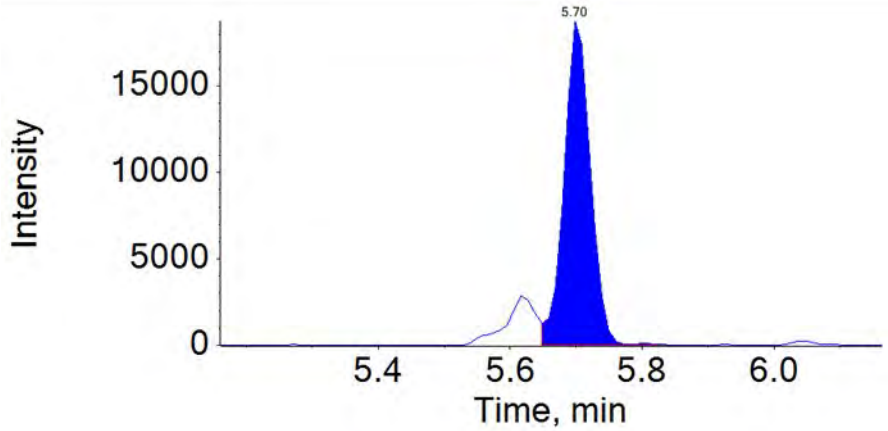




APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

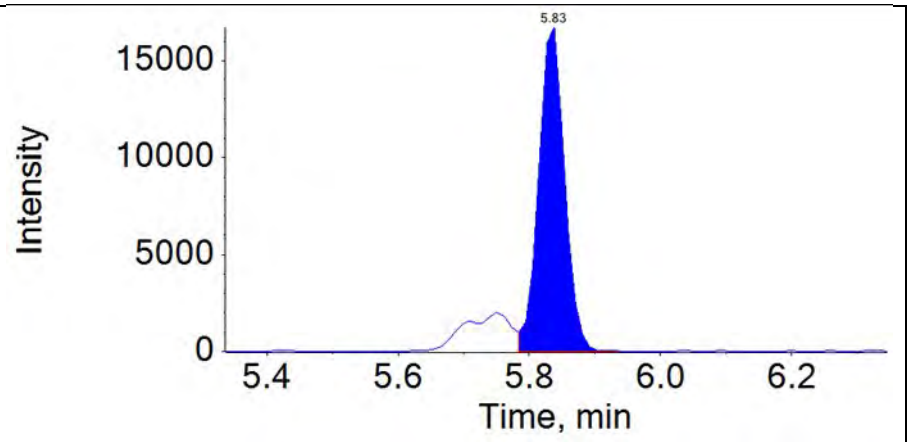
Component Name: PFHxS **RT (min.):** 4.55 **Peak Area:** 103015.29 **Mass Range:** 399.0 / 80.0 **File Name:** 18NOV28DCAL-16.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration
Component Name: PFOS **RT (min.):** 5.24 **Peak Area:** 103980.06 **Mass Range:** 499.0 / 80.0 **File Name:** 18NOV28DCAL-16.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration
Component Name: NMeFOSAA **RT (min.):** 5.70 **Peak Area:** 52224.93 **Mass Range:** 570.0 / 419.0 **File Name:** 18NOV28DCAL-16.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

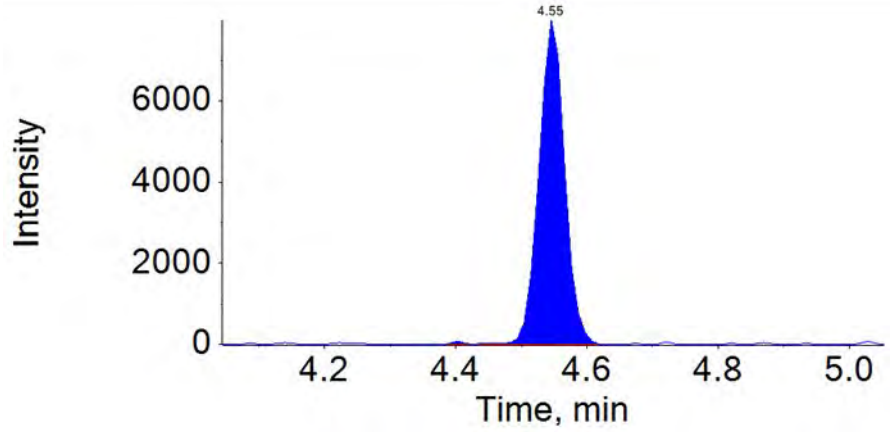
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
46203.64
Mass Range:
584.0 / 419.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



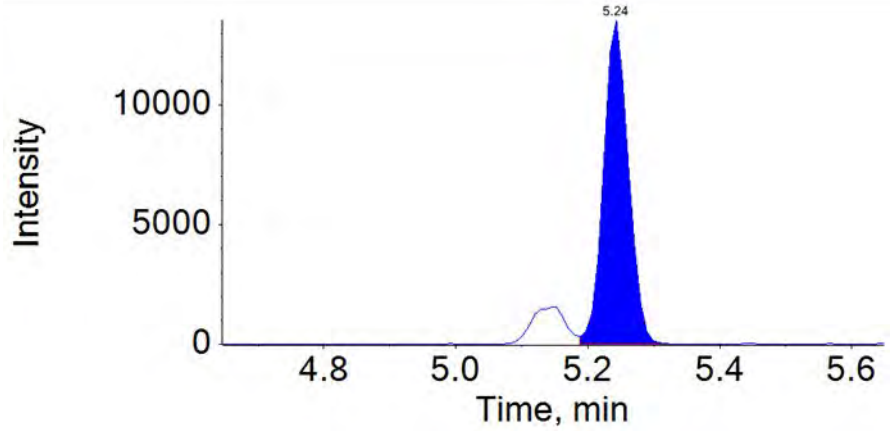
Integration Comment: incorrect integration

Component Name:
PFHpA_2
RT (min.):
4.55
Peak Area:
21948.97
Mass Range:
363.0 / 169.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
35538.74
Mass Range:
499.0 / 99.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3

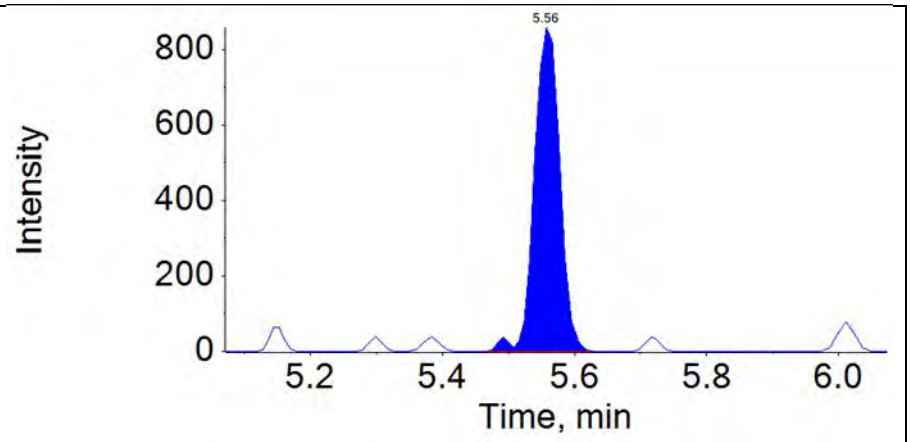
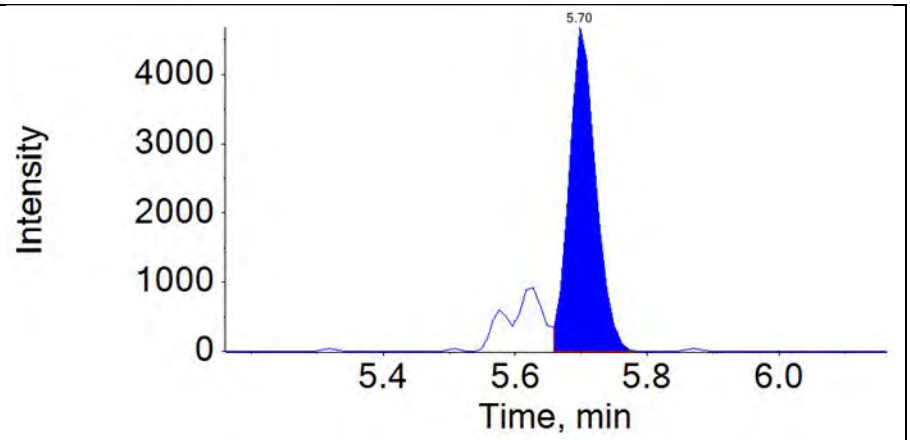
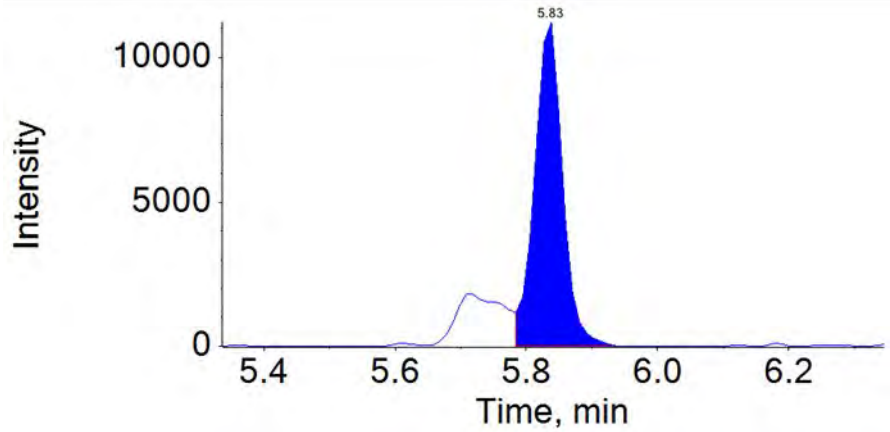


Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

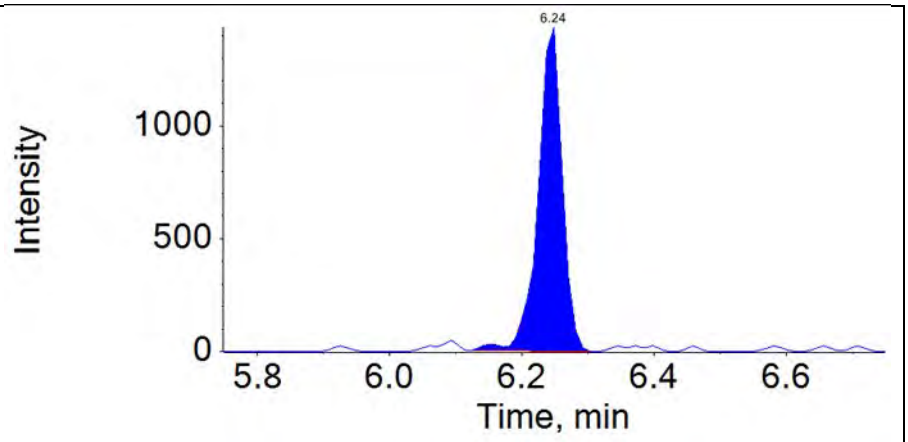
Component Name: PFDA_2 **RT (min.):** 5.56 **Peak Area:** 2325.21 **Mass Range:** 513.0 / 169.0 **File Name:** 18NOV28DCAL-16.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration
Component Name: NMeFOSAA_2 **RT (min.):** 5.70 **Peak Area:** 13049.28 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV28DCAL-16.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration
Component Name: NEtFOSAA_2 **RT (min.):** 5.83 **Peak Area:** 33290.95 **Mass Range:** 584.0 / 526.0 **File Name:** 18NOV28DCAL-16.wiff **Sample Name:** CCV1_CAL3	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

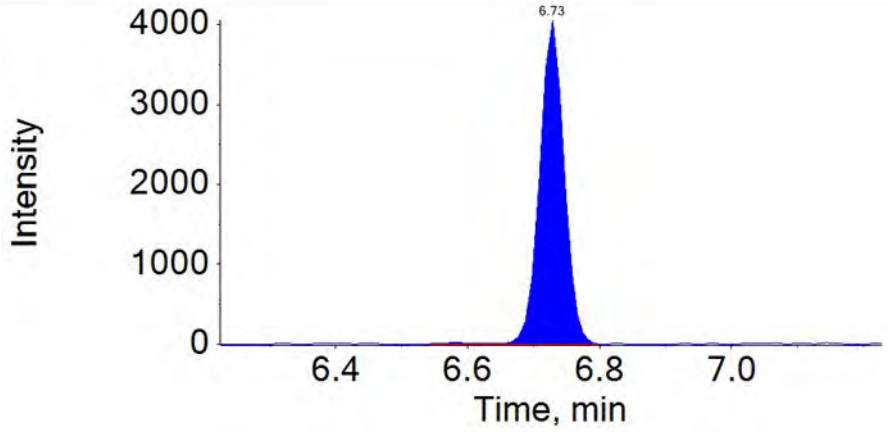
Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTrDA_2
RT (min.):
6.24
Peak Area:
3652.89
Mass Range:
663.0 / 169.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

Component Name:
PFHxDA_2
RT (min.):
6.73
Peak Area:
10506.81
Mass Range:
813.0 / 169.0
File Name:
18NOV28DCAL-16.wiff
Sample Name:
CCV1_CAL3



Integration Comment: incorrect integration

APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Results Table Name: 18NOV28DCAL
Results Table Date: 11/28/2018 4:52:53 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

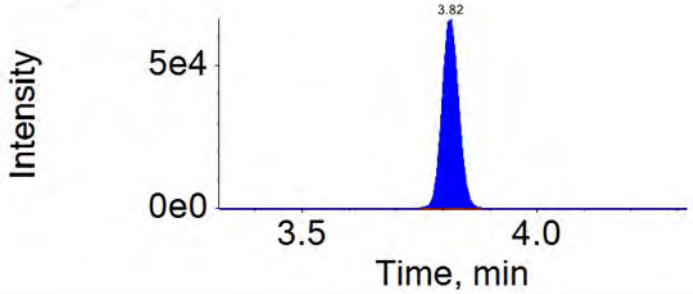
Sample Name: CCV1_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV28DCAL-16.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.82	1.00	166250.13	A	0.3655	0.3695			
PFBS_2	3.81	1.00	61434.35	A	0.3655	0.3695	1	50	
4:2-FTS	4.13	1.00	56074.30	A	0.6383	0.6136			
4:2-FTS_2	4.13	1.00	34408.16	A	0.6383	0.6136	-4	50	
PFHxA	4.16	1.00	390006.26	A	0.0103	0.0099			
PFHxA_2	4.16	1.00	3854.81	A	0.0103	0.0099	-4	50	
PFPeS	4.18	1.10	88012.70	A	0.4976	0.4974			
PFPeS_2	4.18	1.10	43775.32	A	0.4976	0.4974	0	50	
PFHpA	4.55	1.00	393155.85	A	0.0557	0.0555			
PFHpA_2	4.55	1.00	21824.16	M	0.0557	0.0555	0	50	
PFHxS	4.55	1.00	124485.31	M	0.3693	0.3510			
PFHxS_2	4.55	1.00	43693.97	A	0.3693	0.3510	-5	50	
6:2-FTS	4.90	1.00	55151.09	A	0.6625	0.6544			
6:2-FTS_2	4.91	1.00	36092.41	A	0.6625	0.6544	-1	50	
PFHpS	4.91	1.08	131029.41	A	0.3915	0.4044			
PFHpS_2	4.91	1.08	52990.65	A	0.3915	0.4044	3	50	
PFOA	4.92	1.00	408992.65	A	0.0573	0.0570			
PFOA_2	4.92	1.00	23307.23	A	0.0573	0.0570	-1	50	
PFOS	5.24	1.00	137181.43	M	0.2960	0.3006			
PFOS_2	5.24	1.00	41235.40	M	0.2960	0.3006	2	50	
PFNA	5.26	1.00	376585.83	A	0.0201	0.0177			
PFNA_2	5.26	1.00	6676.44	A	0.0201	0.0177	-12	50	
PFNS	5.54	1.06	94448.57	A	0.4794	0.4627			
PFNS_2	5.54	1.06	43699.58	A	0.4794	0.4627	-3	50	
PFDA	5.56	1.00	356261.03	A	0.0075	0.0064			
PFDA_2	5.56	1.00	2278.50	M	0.0075	0.0064	-15	50	
8:2-FTS	5.56	1.00	52676.08	A	0.5380	0.6399			
8:2-FTS_2	5.56	1.00	33705.68	A	0.5380	0.6399	19	50	
NMeFOSAA	5.70	1.00	60912.55	M	0.2305	0.2716			
NMeFOSAA_2	5.70	1.00	16546.59	M	0.2305	0.2716	18	50	
PFDS	5.79	1.10	79486.48	A	0.5356	0.5145			
PFDS_2	5.79	1.10	40894.63	A	0.5356	0.5145	-4	50	
PFUnDA	5.82	1.00	368116.78	A	0.0038	0.0042			
PFUnDA_2	5.81	1.00	1560.66	A	0.0038	0.0042	11	50	
NEtFOSAA	5.83	1.00	56175.38	M	0.7356	0.7568			
NEtFOSAA_2	5.83	1.00	42516.13	M	0.7356	0.7568	3	50	
PFDoDA	6.05	1.00	480438.66	A	0.0130	0.0114			
PFDoDA_2	6.05	1.00	5496.89	A	0.0130	0.0114	-12	50	
10:2-FTS	6.06	1.09	53244.09	A	0.6989	0.8103			
10:2-FTS_2	6.06	1.09	43141.45	A	0.6989	0.8103	16	50	
PFTrDA	6.25	1.03	453601.44	A	0.0090	0.0080			
PFTrDA_2	6.24	1.03	3606.85	M	0.0090	0.0080	-12	50	
PFTeDA	6.43	1.00	333159.05	A	0.0056	0.0056			
PFTeDA_2	6.43	1.00	1878.34	A	0.0056	0.0056	1	50	
PFHxDA	6.73	1.05	160272.72	A	0.0646	0.0649			
PFHxDA_2	6.73	1.05	10399.04	M	0.0646	0.0649	0	50	
PFODA	6.99	1.09	137372.78	A	0.0264	0.0264			
PFODA_2	6.99	1.09	3621.96	A	0.0264	0.0264	0	50	

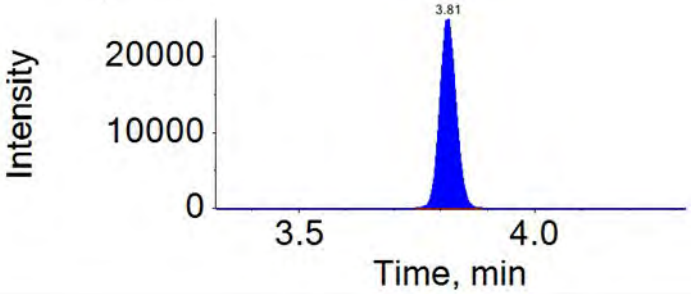
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

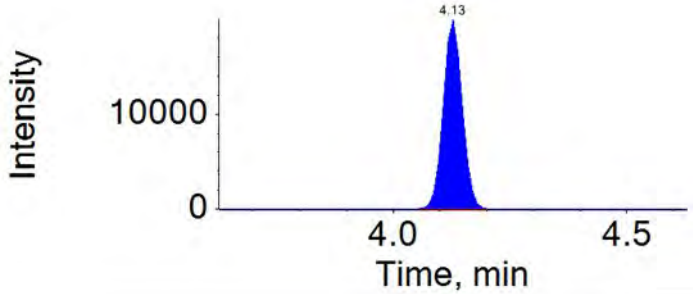
Component: PFBS
Primary Mass: 299.0 / 80.0



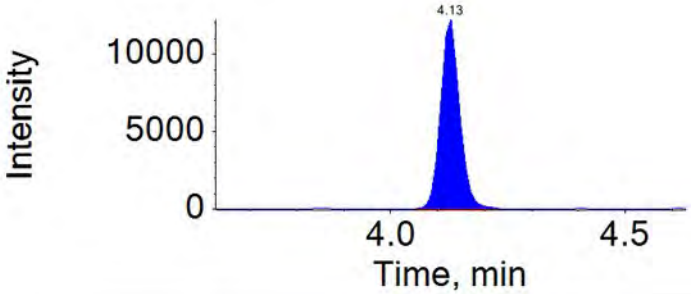
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



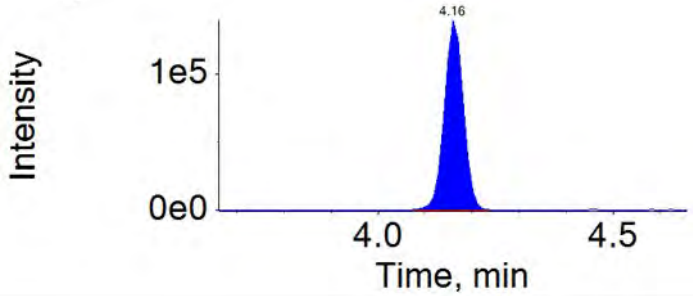
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



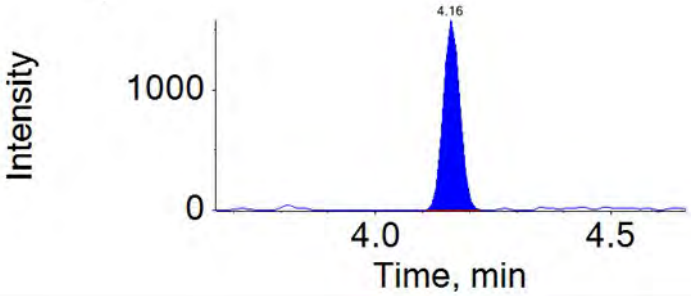
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



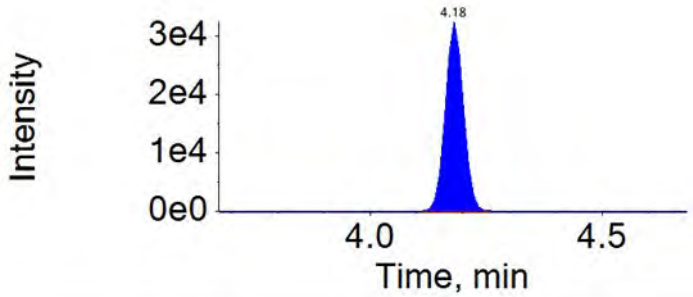
Component: PFHxA
Primary Mass: 313.0 / 269.0



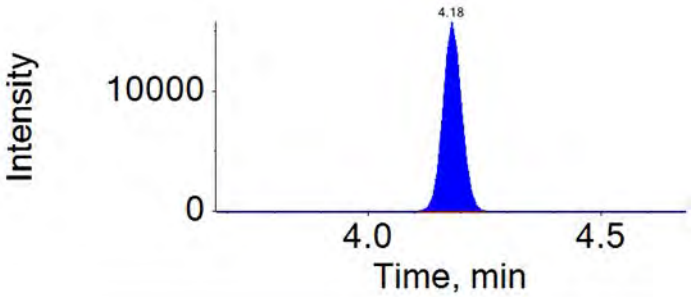
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



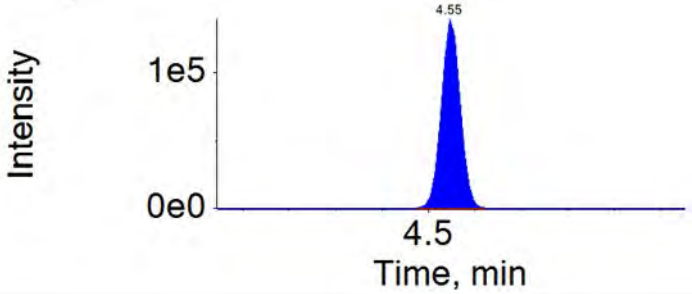
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



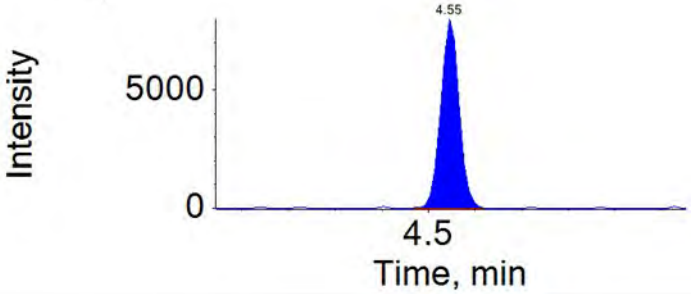
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

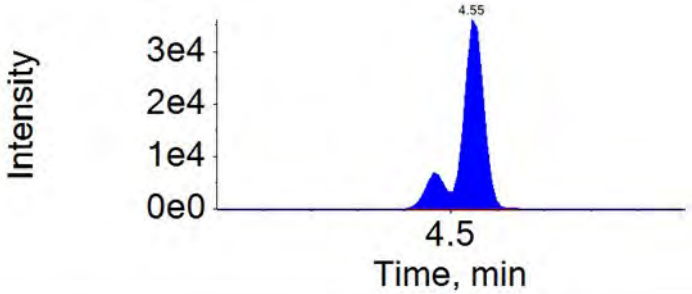
Component: PFHpA
Primary Mass: 363.0 / 319.0



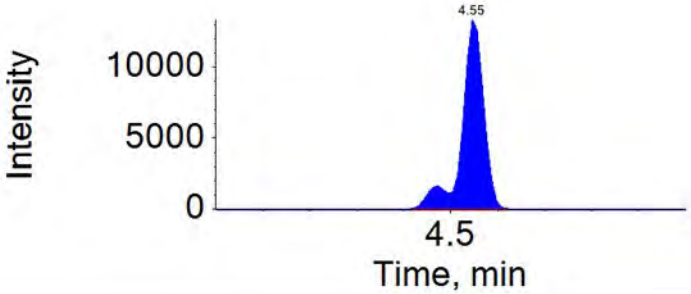
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



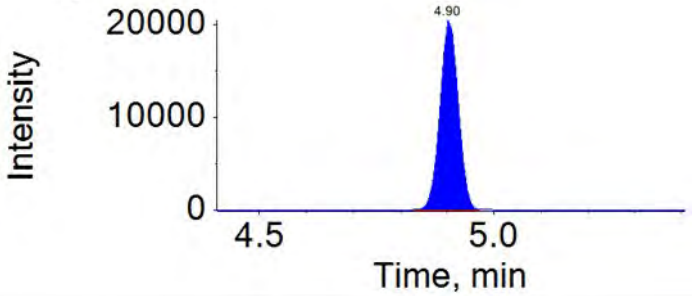
Component: PFHxS
Primary Mass: 399.0 / 80.0



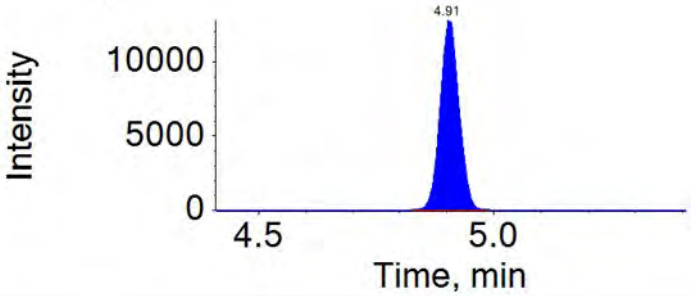
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



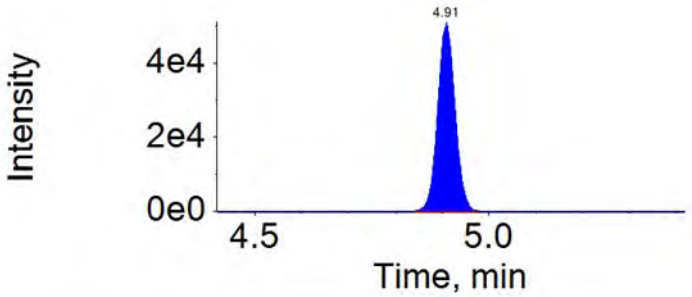
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



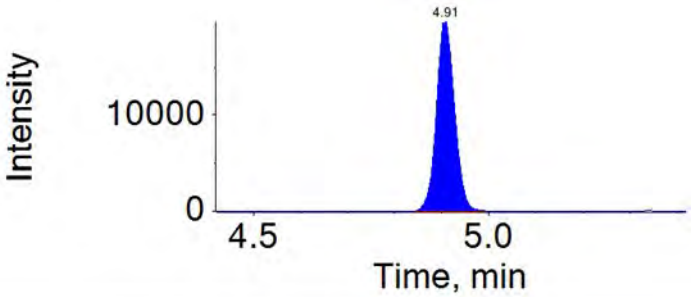
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



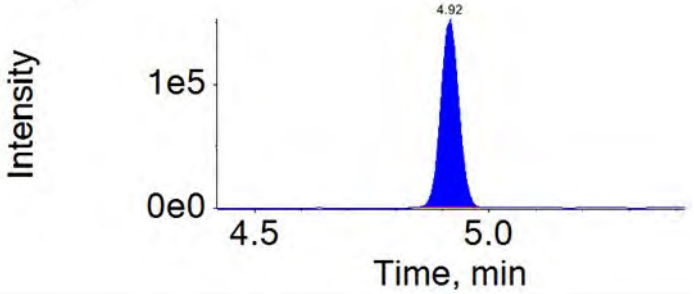
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



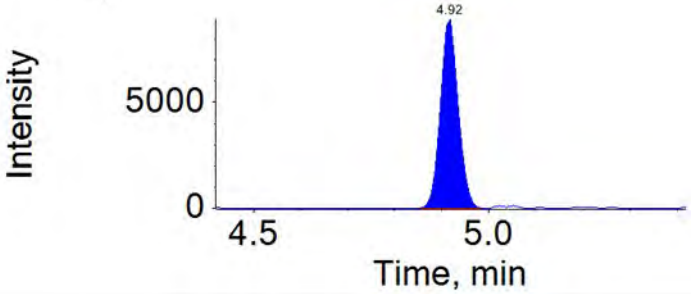
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

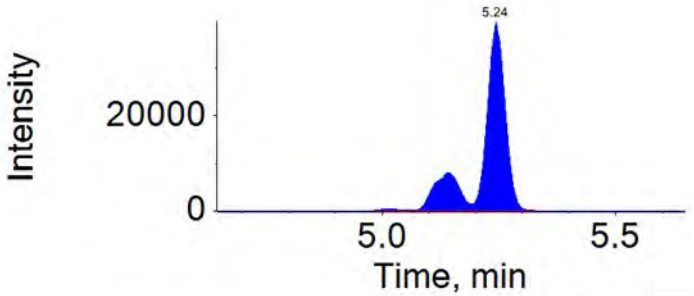
Component: PFOA
Primary Mass: 413.0 / 369.0



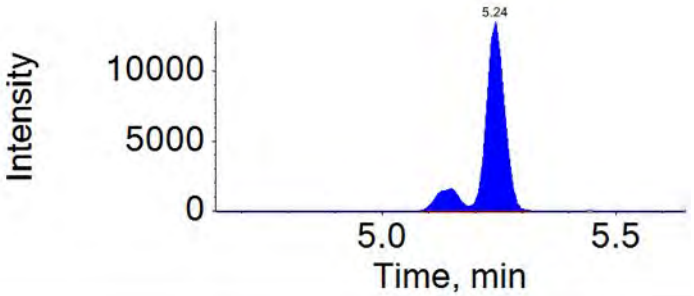
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



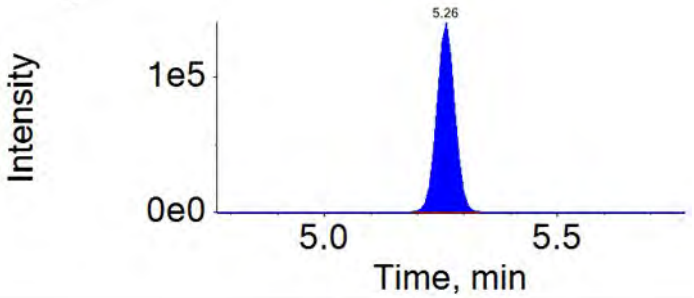
Component: PFOS
Primary Mass: 499.0 / 80.0



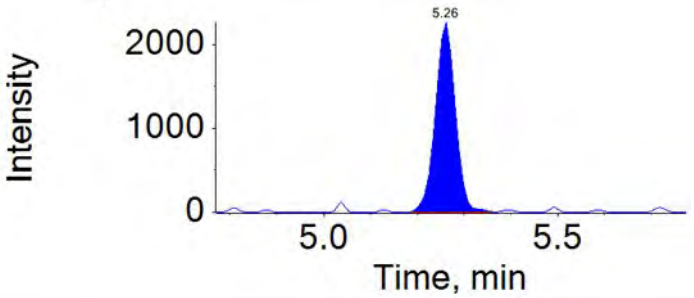
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



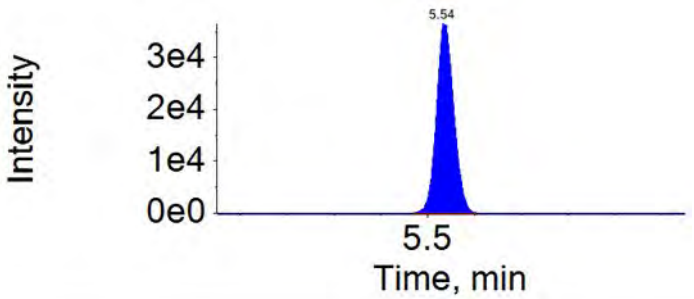
Component: PFNA
Primary Mass: 463.0 / 419.0



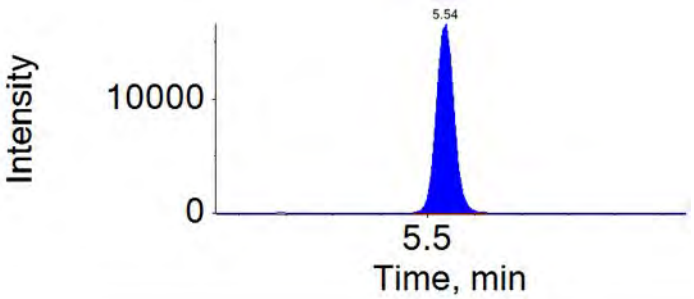
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



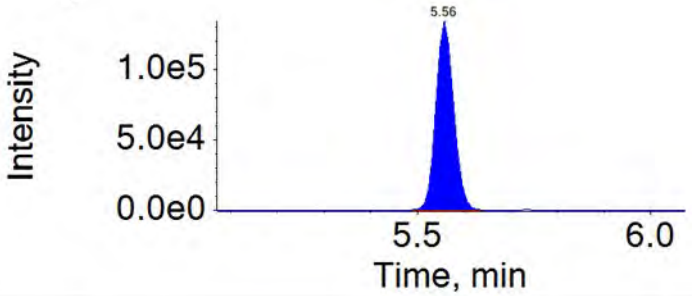
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



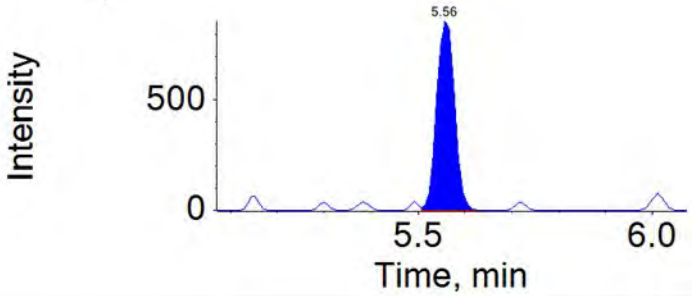
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

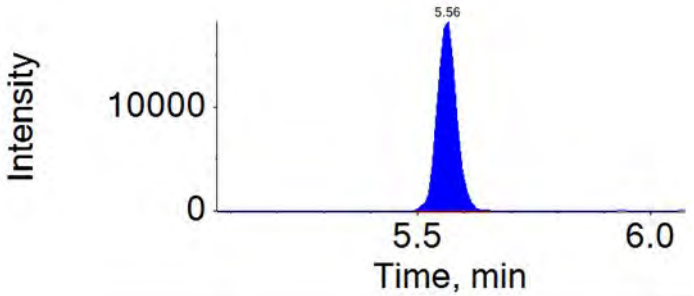
Component: PFDA
Primary Mass: 513.0 / 469.0



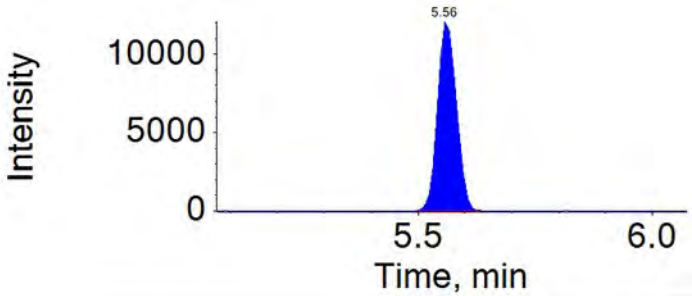
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



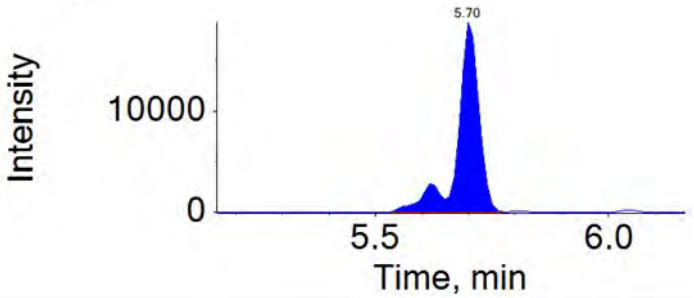
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



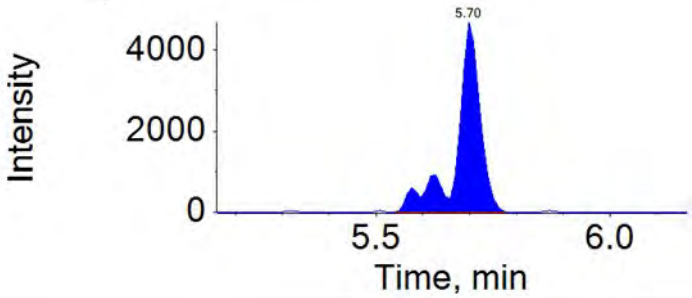
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



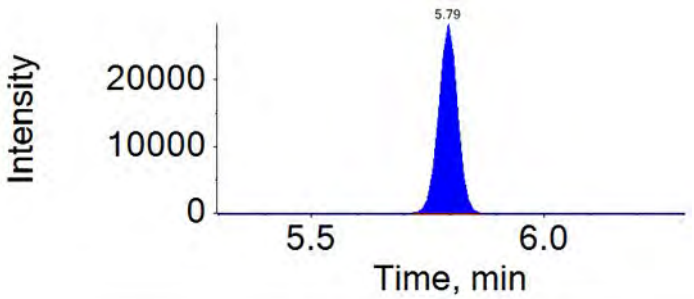
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



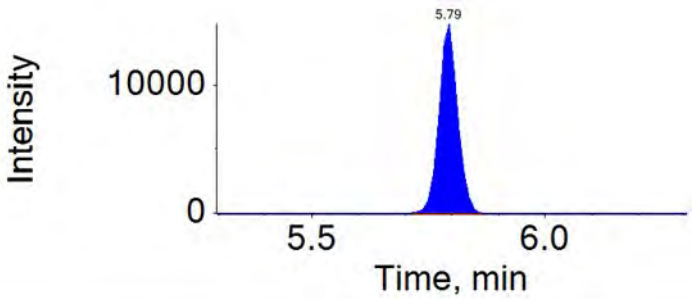
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



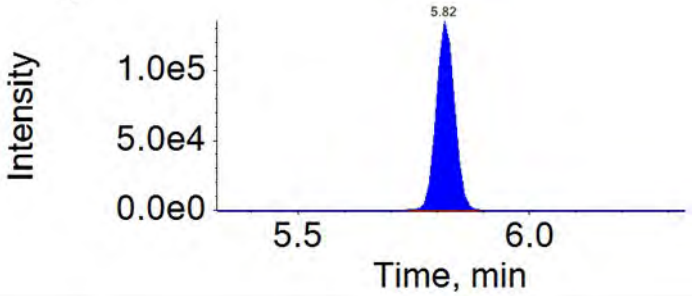
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



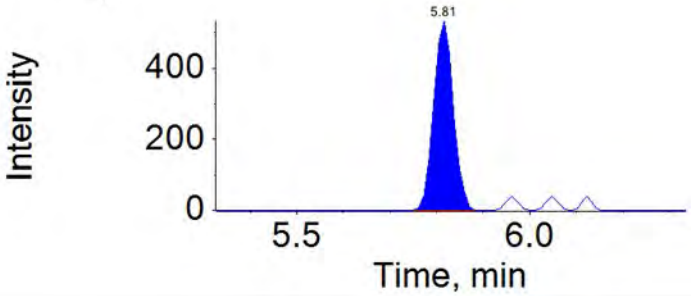
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

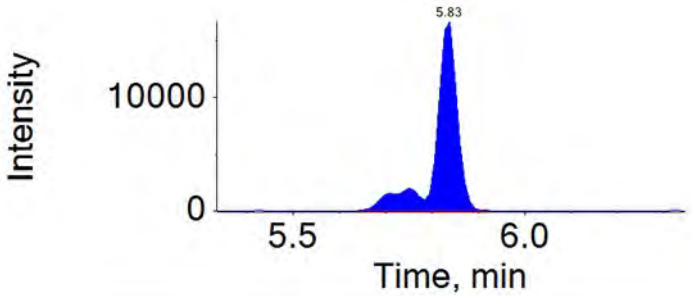
Component: PFUnDA
Primary Mass: 563.0 / 519.0



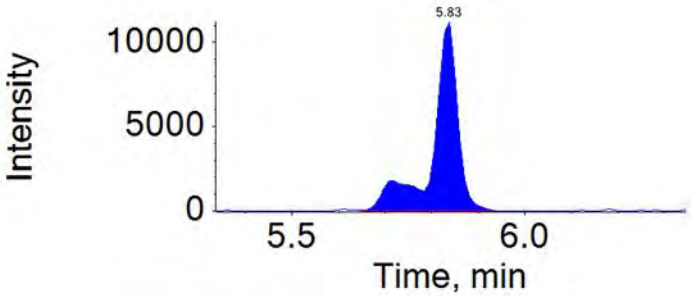
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



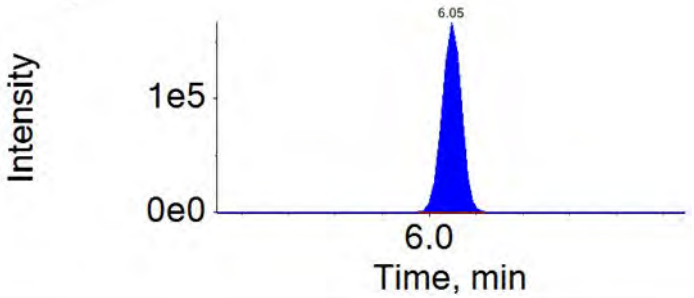
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



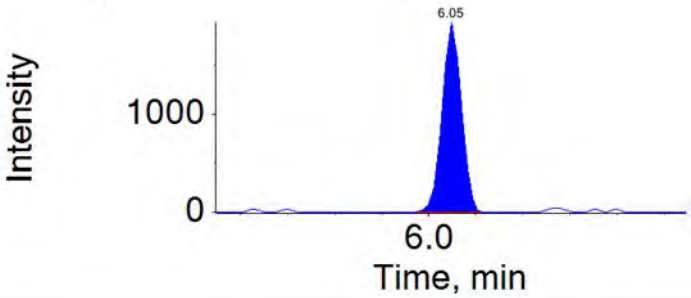
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



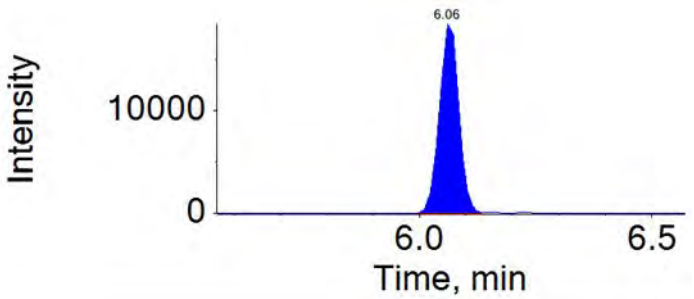
Component: PFDoDA
Primary Mass: 613.0 / 569.0



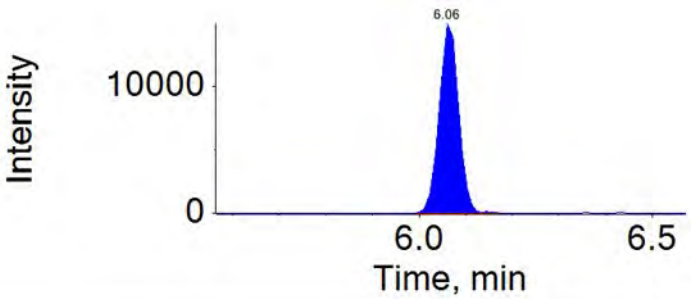
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



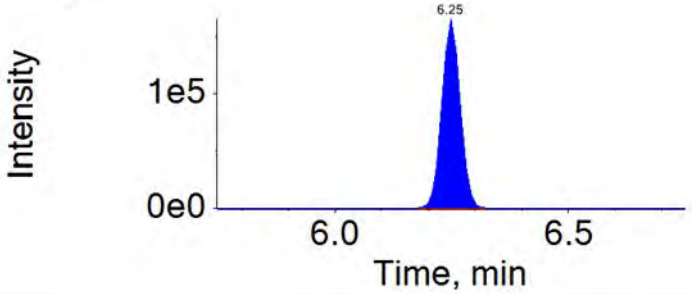
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



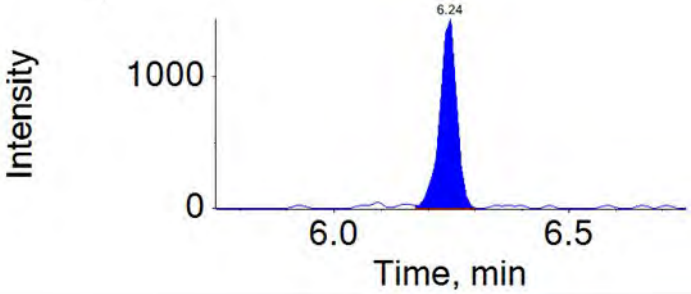
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

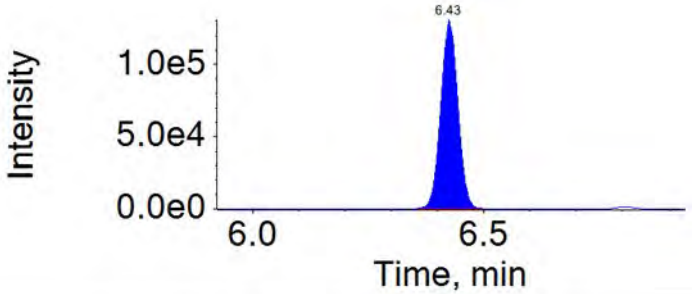
Component: PFTrDA
Primary Mass: 663.0 / 619.0



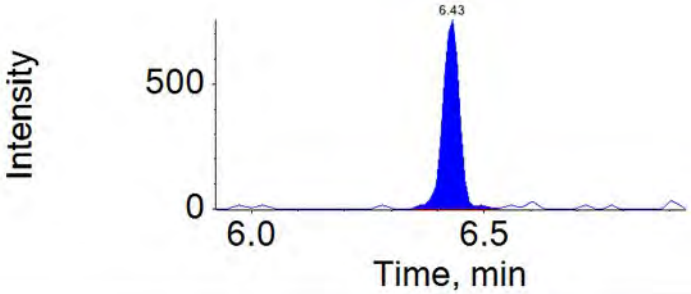
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



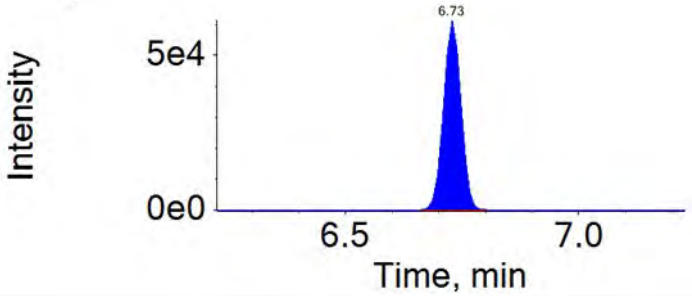
Component: PFTeDA
Primary Mass: 713.0 / 669.0



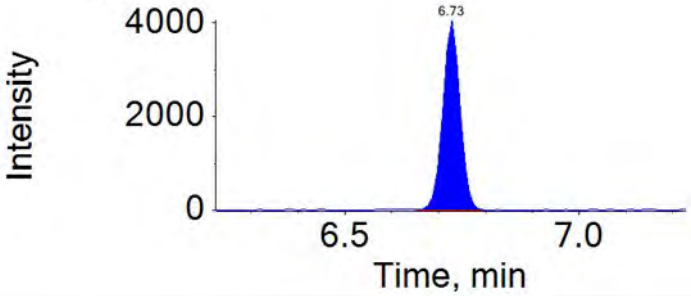
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



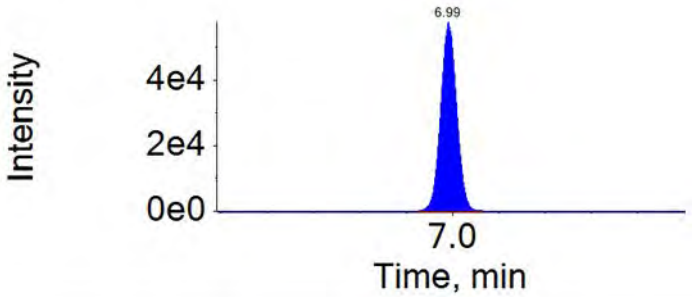
Component: PFHxDA
Primary Mass: 813.0 / 769.0



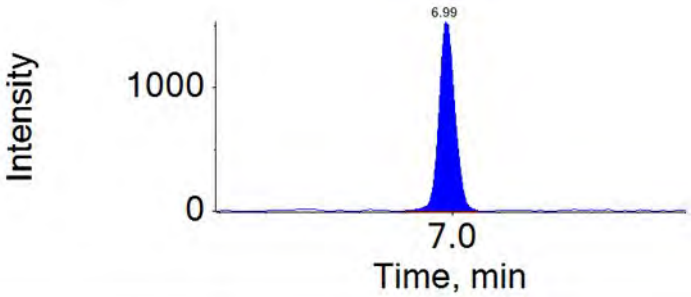
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



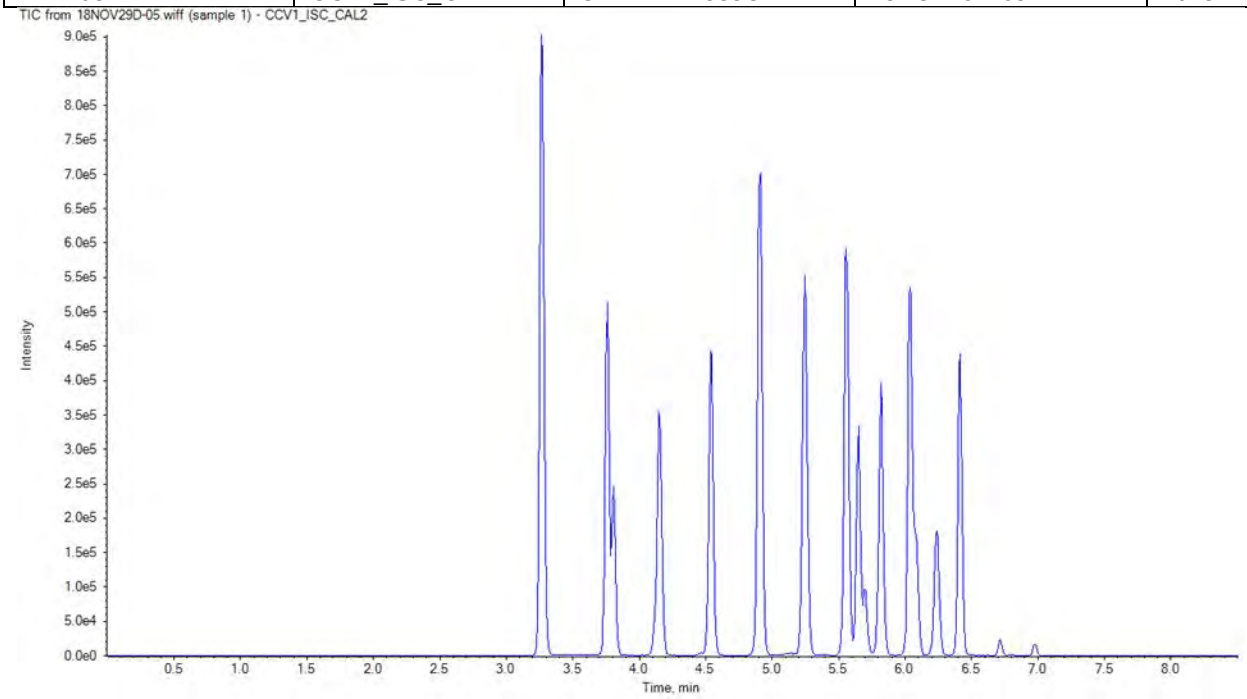
APPROVED
By MCD at 5:01 pm, 11/28/18

REVIEWED
By HMK at 12:22 pm, 11/29/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV29D-05.wiff	2018-11-29T10:33:38



Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	906425.4	887248.9	2	50	
13C2-PFOA	5.0	495984.0	498501.6	-1	50	
13C4-PFOS	4.8	296261.8	283214.2	5	50	
13C2-PFDA	5.0	451203.0	441790.6	2	50	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV1_ISC_CAL2	CALBRN21833C	18NOV29D-05.wiff	2018-11-29T10:33:38

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	110816.1	10	13C4-PFBA	1032944.8	5.0	0.107	3.26	1.000	0.600	0.588	-2	30	
PFPeA	102438.9	11	13C5-PFPeA	975653.2	5.0	0.105	3.76	1.000	0.600	0.515	-14	30	
PFBS	43167.2	11	13C3-PFBS	442664.0	4.7	0.098	3.81	1.000	0.531	0.473	-11	30	
4:2-FTS	12514.2	11	13C2-4:2-FTS	69056.9	4.7	0.181	4.12	1.000	0.560	0.485	-13	30	
PFHxA	100978.6	11	13C5-PFHxA	694772.3	5.0	0.145	4.15	1.000	0.600	0.583	-3	30	
PFPeS	24883.7	11	13C3-PFBS	442664.0	4.7	0.056	4.17	1.100	0.563	0.569	1	30	
PFHpA	99917.2	12	13C4-PFHpA	548364.3	5.0	0.182	4.54	1.000	0.600	0.562	-6	30	
PFHxS	34610.4	18	13C3-PFHxS	337158.7	4.7	0.103	4.54	1.000	0.547	0.481	-12	30	
6:2-FTS	14994.7	10	13C2-6:2-FTS	61226.3	4.8	0.245	4.90	1.000	0.569	0.639	12	30	
PFHpS	32932.0	11	13C3-PFHxS	337158.7	4.7	0.098	4.90	1.080	0.571	0.487	-15	30	
PFOA	107677.1	11	13C8-PFOA	1050891.3	5.0	0.102	4.91	1.000	0.600	0.529	-12	30	
PFOS	39254.5	21	13C8-PFOS	325457.1	4.8	0.121	5.24	1.000	0.555	0.506	-9	30	
PFNA	93355.4	12	13C9-PFNA	645112.4	5.0	0.145	5.25	1.000	0.600	0.555	-8	30	
PFNS	23416.1	11	13C8-PFOS	325457.1	4.8	0.072	5.54	1.060	0.576	0.454	-21	30	
PFDA	83849.1	11	13C6-PFDA	824275.9	5.0	0.102	5.56	1.000	0.600	0.576	-4	30	
8:2-FTS	15129.8	10	13C2-8:2-FTS	56119.6	4.8	0.270	5.56	1.000	0.575	0.508	-12	30	
PFOSA	69416.0	11	13C8-PFOSA	658157.0	5.0	0.105	5.65	1.000	0.600	0.534	-11	30	
NMeFOSAA	16285.3	17	d3-NMeFOSAA	192349.4	5.0	0.085	5.70	1.000	0.600	0.540	-10	30	
PFDS	22930.4	11	13C8-PFOS	325457.1	4.8	0.070	5.79	1.110	0.578	0.559	-3	30	
PFUnDA	94649.2	11	13C7-PFUnDA	586091.6	5.0	0.161	5.82	1.000	0.600	0.577	-4	30	
NEtFOSAA	15976.2	22	d5-NEtFOSAA	148667.1	5.0	0.107	5.83	1.000	0.600	0.523	-13	30	
PFDoDA	124243.3	12	13C2-PFDoDA	1129756.8	5.0	0.110	6.04	1.000	0.600	0.602	0	30	
10:2-FTS	14919.7	12	13C2-8:2-FTS	56119.6	4.8	0.266	6.05	1.090	0.578	0.586	1	30	
NMePFOSAE	36174.1	11	d7-NMePFOSAE	257961.3	5.0	0.140	6.09	1.000	0.600	0.590	-2	30	
NMePFOSA	8301.9	12	d3-NMePFOSA	85320.8	5.0	0.097	6.10	1.000	0.600	0.516	-14	30	
PFDoS	11172.3	11	13C8-PFOS	325457.1	4.8	0.034	6.20	1.180	0.581	0.493	-15	30	
NEtPFOSAE	36969.5	11	d9-NEtPFOSAE	229198.1	5.0	0.161	6.25	1.000	0.600	0.580	-3	30	
NEtPFOSA	7677.3	12	d5-NEtPFOSA	69372.1	5.0	0.111	6.26	1.000	0.600	0.496	-17	30	
PFTrDA	122778.8	11	13C2-PFDoDA	1129756.8	5.0	0.109	6.23	1.030	0.600	0.655	9	30	
PFTeDA	89123.1	10	13C2-PFTeDA	840112.8	5.0	0.106	6.41	1.000	0.600	0.601	0	30	
PFHxDA	45160.5	11	13C2-PFTeDA	840112.8	5.0	0.054	6.71	1.050	0.600	0.615	2	30	
PFODA	35571.7	10	13C2-PFTeDA	840112.8	5.0	0.042	6.98	1.090	0.600	0.564	-6	30	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV1_ISC_CAL2			**Data File:**		18NOV29D-05.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-29T10:33:38
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV29DCCV1-5
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV28DCAL-08

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	906425.4	887248.9	2	50	
13C2-PFOA	5.0	495984.0	498501.6	-1	50	
13C4-PFOS	4.8	296261.8	283214.2	5	50	
13C2-PFDA	5.0	451203.0	441790.6	2	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1032944.8	13C3-PFBA	906425.4	1.140	5.000	5.084	102	70-130	
E13C5-PFPeA	975653.2	13C3-PFBA	906425.4	1.076	5.000	5.026	101	70-130	
E13C3-PFBS	442664.0	13C3-PFBA	906425.4	0.488	4.650	4.659	100	70-130	
E13C2-4:2-FTS	69056.9	13C2-PFOA	495984.0	0.139	4.670	4.798	103	70-130	
E13C5-PFHxA	694772.3	13C2-PFOA	495984.0	1.401	5.000	5.145	103	70-130	
E13C3-PFHxS	337158.7	13C2-PFOA	495984.0	0.680	4.730	5.328	113	70-130	
E13C4-PFHpA	548364.3	13C2-PFOA	495984.0	1.106	5.000	5.080	102	70-130	
E13C2-6:2-FTS	61226.3	13C2-PFOA	495984.0	0.123	4.750	5.167	109	70-130	
E13C8-PFOA	1050891.3	13C2-PFOA	495984.0	2.119	5.000	5.832	117	70-130	
E13C8-PFOS	325457.1	13C4-PFOS	296261.8	1.099	4.780	4.959	104	70-130	
E13C9-PFNA	645112.4	13C4-PFOS	296261.8	2.178	5.000	4.783	96	70-130	
E13C6-PFDA	824275.9	13C2-PFDA	451203.0	1.827	5.000	5.151	103	70-130	
E13C2-8:2-FTS	56119.6	13C2-PFDA	451203.0	0.124	4.790	5.346	112	70-130	
E13C8-PFOSA	658157.0	13C2-PFDA	451203.0	1.459	5.000	5.352	107	70-130	
Ed3-NMeFOSAA	192349.4	13C2-PFDA	451203.0	0.426	5.000	5.413	108	70-130	
E13C7-PFUnDA	586091.6	13C2-PFDA	451203.0	1.299	5.000	5.490	110	70-130	
Ed5-NEtFOSAA	148667.1	13C2-PFDA	451203.0	0.329	5.000	5.870	117	70-130	
E13C2-PFDoDA	1129756.8	13C2-PFDA	451203.0	2.504	5.000	5.261	105	70-130	
Ed7-NMePFOSAE	257961.3	13C2-PFDA	451203.0	0.572	5.000	4.941	99	70-130	
Ed3-NMePFOSA	85320.8	13C2-PFDA	451203.0	0.189	5.000	5.118	102	70-130	
Ed9-NEtPFOSAE	229198.1	13C2-PFDA	451203.0	0.508	5.000	5.150	103	70-130	
Ed5-NEtPFOSA	69372.1	13C2-PFDA	451203.0	0.154	5.000	5.342	107	70-130	
E13C2-PFTeDA	840112.8	13C2-PFDA	451203.0	1.862	5.000	5.152	103	70-130	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

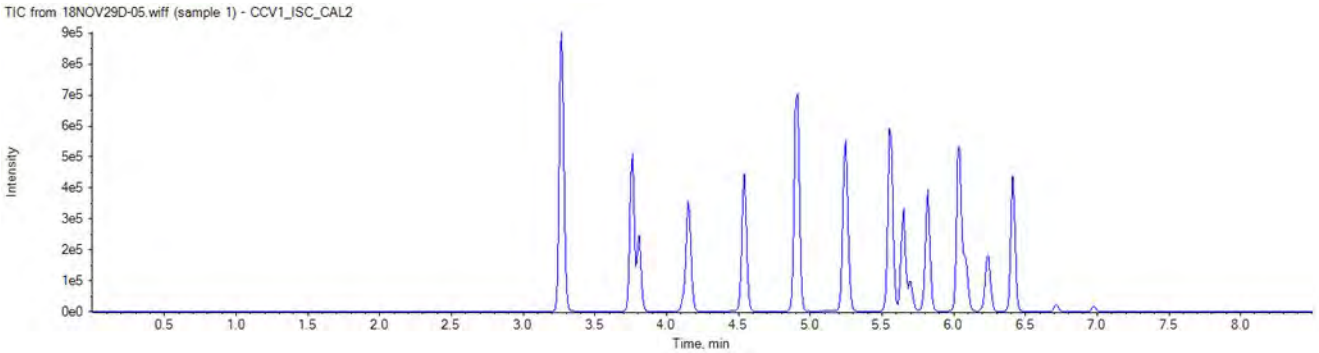
Analyte Quantitation Peak Table

Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV29D-05.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	110816.1		A	13C4-PFBA	3.27	1032944.8	0.107	0.588
PFPeA	3.76	1.000	102438.9		A	13C5-PFPeA	3.76	975653.2	0.105	0.515
PFBS	3.81	1.000	43167.2		A	13C3-PFBS	3.81	442664.0	0.098	0.473
4:2-FTS	4.12	1.000	12514.2		A	13C2-4:2-FTS	4.12	69056.9	0.181	0.485
PFHxA	4.15	1.000	100978.6		A	13C5-PFHxA	4.15	694772.3	0.145	0.583
PFPeS	4.17	1.100	24883.7		A	13C3-PFBS	3.81	442664.0	0.056	0.569
PFHpA	4.54	1.000	99917.2		A	13C4-PFHpA	4.54	548364.3	0.182	0.562
PFHxS	4.54	1.000	34610.4		M	13C3-PFHxS	4.54	337158.7	0.103	0.481
6:2-FTS	4.90	1.000	14994.7		A	13C2-6:2-FTS	4.90	61226.3	0.245	0.639
PFHpS	4.90	1.080	32932.0		A	13C3-PFHxS	4.54	337158.7	0.098	0.487
PFOA	4.91	1.000	107677.1		A	13C8-PFOA	4.91	1050891.3	0.102	0.529
PFOS	5.24	1.000	39254.5		M	13C8-PFOS	5.24	325457.1	0.121	0.506
PFNA	5.25	1.000	93355.4		A	13C9-PFNA	5.25	645112.4	0.145	0.555
PFNS	5.54	1.060	23416.1		A	13C8-PFOS	5.24	325457.1	0.072	0.454
PFDA	5.56	1.000	83849.1		A	13C6-PFDA	5.56	824275.9	0.102	0.576
8:2-FTS	5.56	1.000	15129.8		A	13C2-8:2-FTS	5.56	56119.6	0.270	0.508
PFOSA	5.65	1.000	69416.0		A	13C8-PFOSA	5.65	658157.0	0.105	0.534
NMeFOSAA	5.70	1.000	16285.3		M	d3-NMeFOSAA	5.70	192349.4	0.085	0.540
PFDS	5.79	1.110	22930.4		A	13C8-PFOS	5.24	325457.1	0.070	0.559
PFUnDA	5.82	1.000	94649.2		A	13C7-PFUnDA	5.82	586091.6	0.161	0.577
NEtFOSAA	5.83	1.000	15976.2		M	d5-NEtFOSAA	5.83	148667.1	0.107	0.523
PFDoDA	6.04	1.000	124243.3		A	13C2-PFDoDA	6.04	1129756.8	0.110	0.602
10:2-FTS	6.05	1.090	14919.7		A	13C2-8:2-FTS	5.56	56119.6	0.266	0.586
NMePFOSAE	6.09	1.000	36174.1		A	d7-NMePFOSAE	6.08	257961.3	0.140	0.590
NMePFOSA	6.10	1.000	8301.9		A	d3-NMePFOSA	6.09	85320.8	0.097	0.516
PFDoS	6.20	1.180	11172.3		A	13C8-PFOS	5.24	325457.1	0.034	0.493
NEtPFOSAE	6.25	1.000	36969.5		A	d9-NEtPFOSAE	6.23	229198.1	0.161	0.580
NEtPFOSA	6.26	1.000	7677.3		A	d5-NEtPFOSA	6.25	69372.1	0.111	0.496
PFTrDA	6.23	1.030	122778.8		A	13C2-PFDoDA	6.04	1129756.8	0.109	0.655
PFTeDA	6.41	1.000	89123.1		A	13C2-PFTeDA	6.41	840112.8	0.106	0.601
PFHxDA	6.71	1.050	45160.5		A	13C2-PFTeDA	6.41	840112.8	0.054	0.615
PFODA	6.98	1.090	35571.7		A	13C2-PFTeDA	6.41	840112.8	0.042	0.564

Total Ion Chromatogram

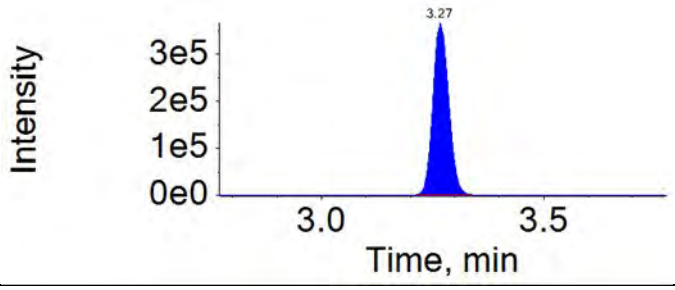


APPROVED
By MCD at 8:06 pm, 11/29/18

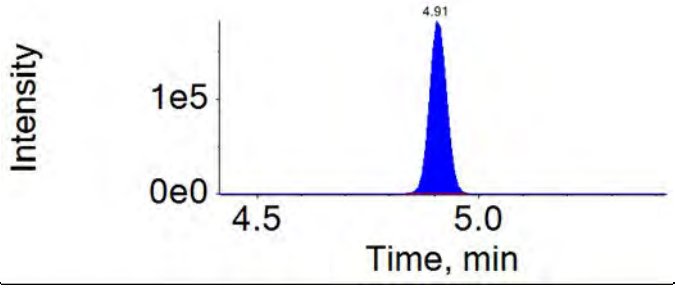
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

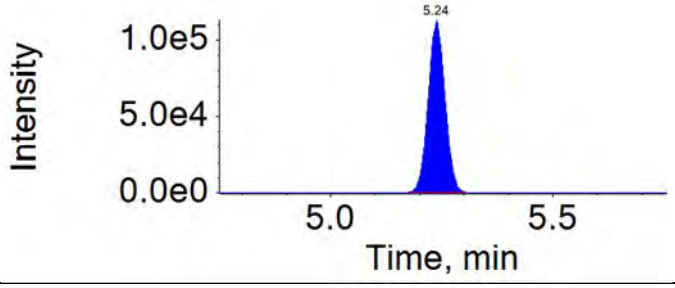
Injection Standard: 13C3-PFBA
216.0 / 172.0



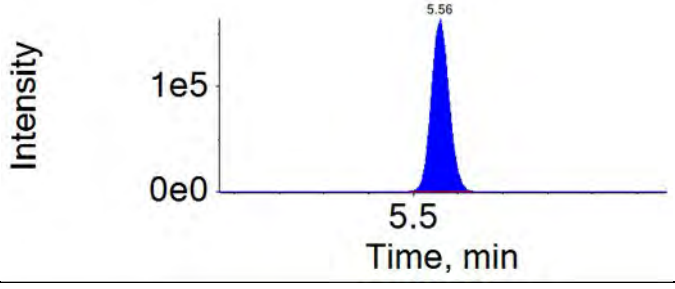
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



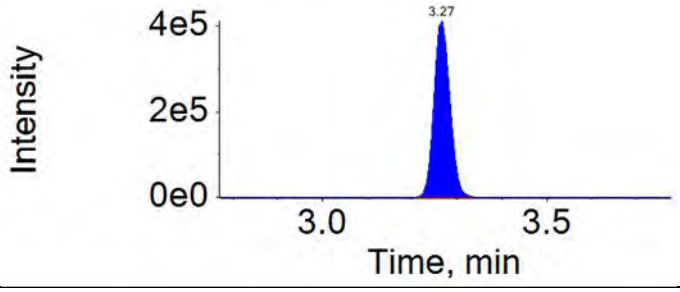
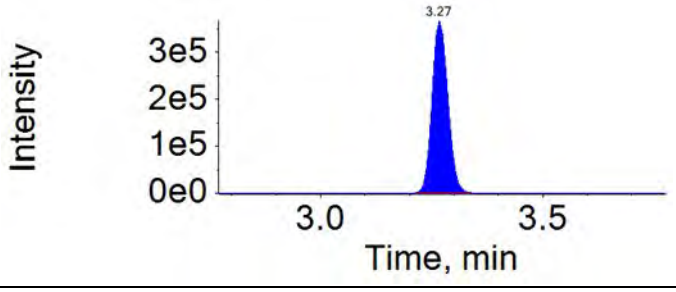
Injection Standard: 13C2-PFDA
515.0 / 470.0

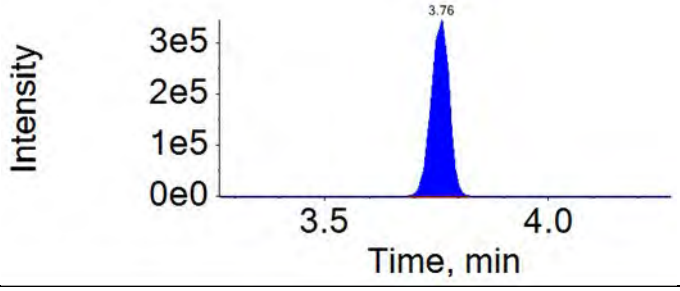
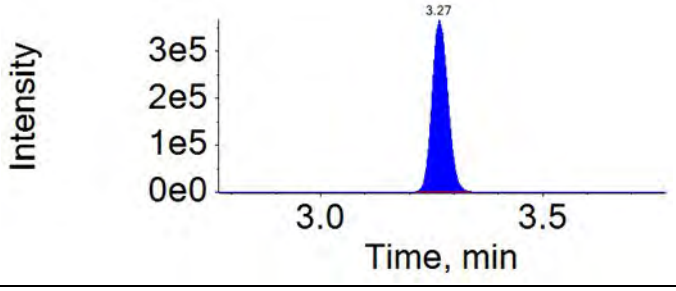


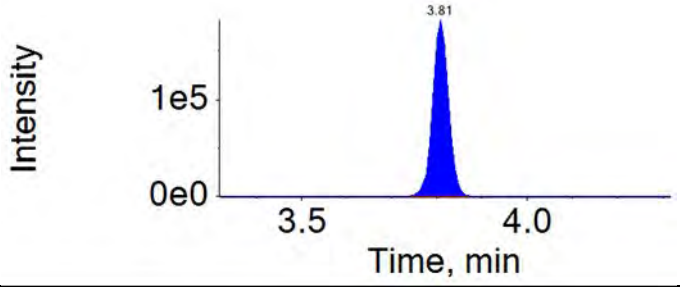
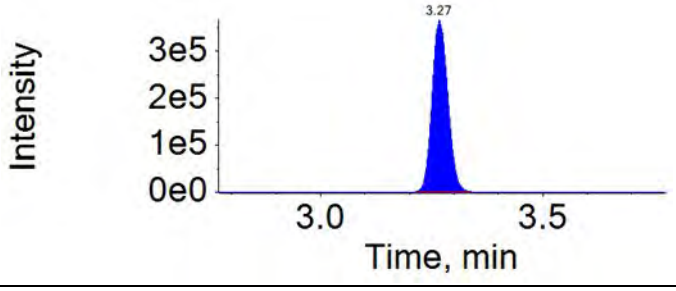
APPROVED
By MCD at 8:06 pm, 11/29/18

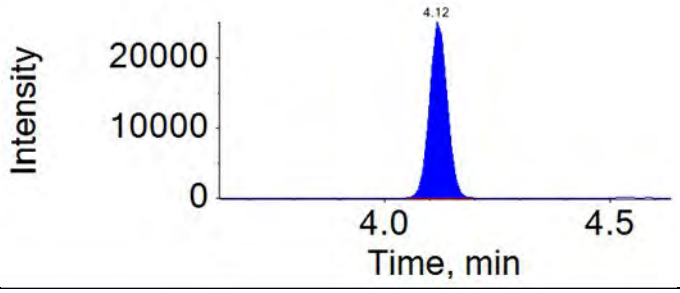
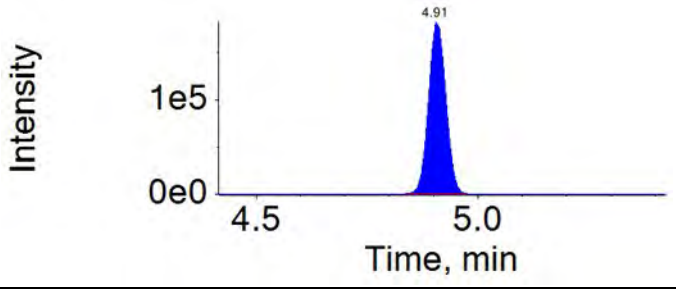
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

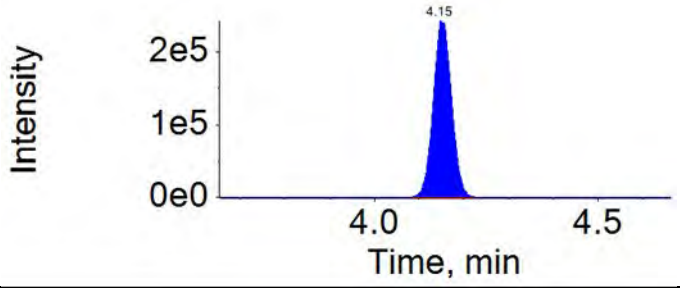
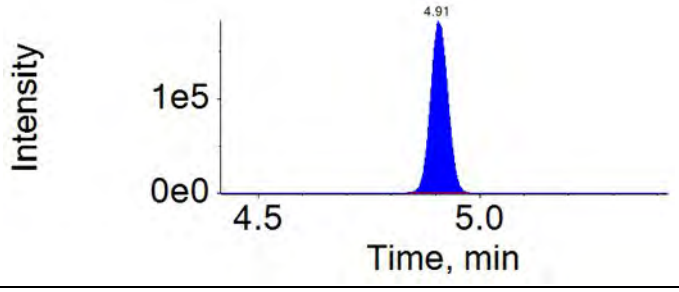
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

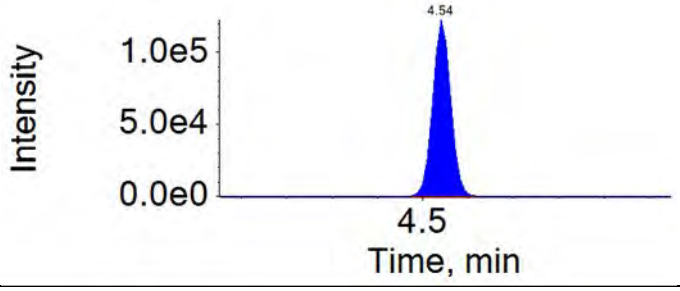
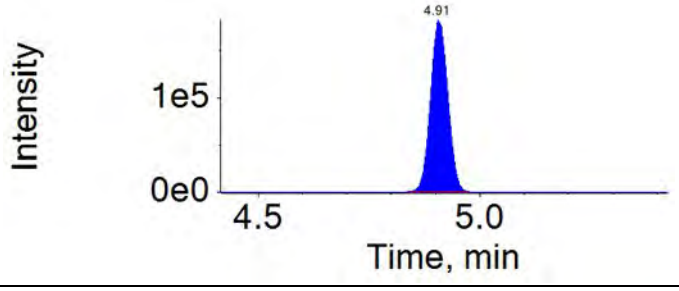
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

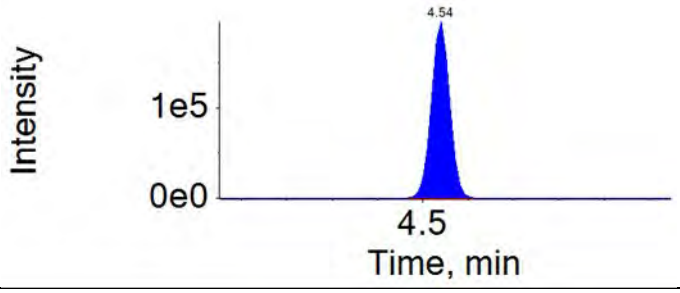
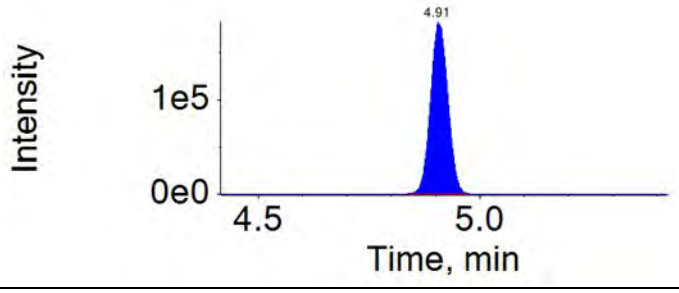
APPROVED
By MCD at 8:06 pm, 11/29/18

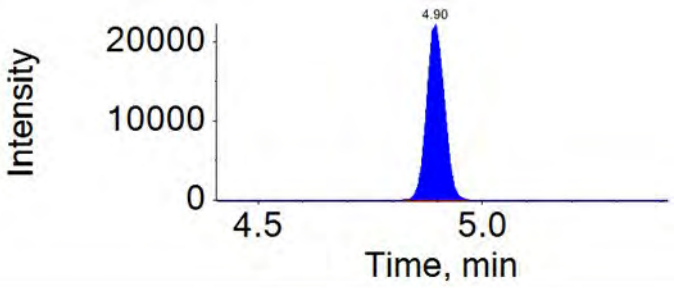
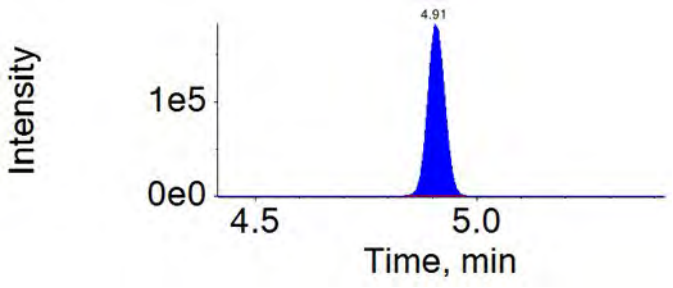
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

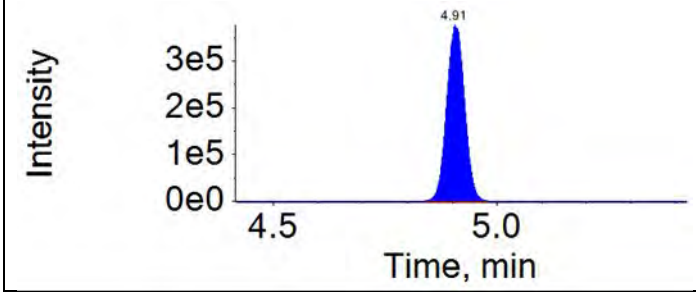
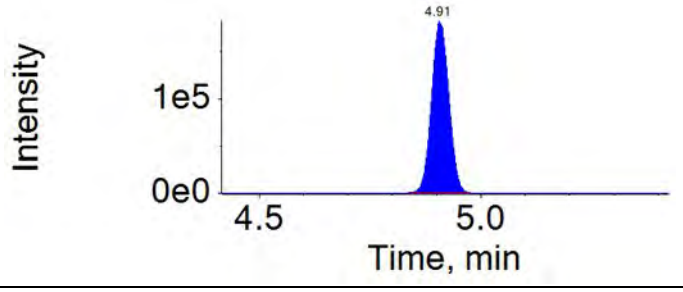
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

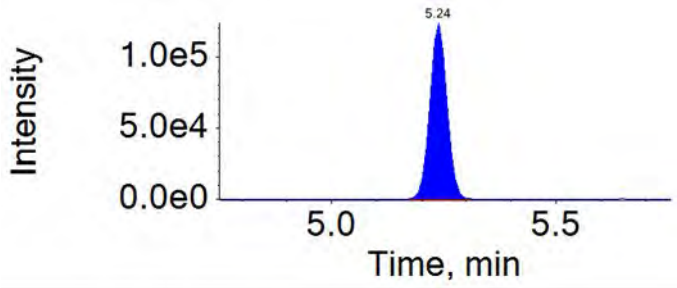
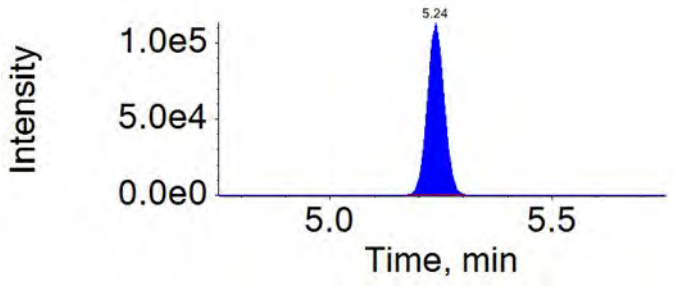
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

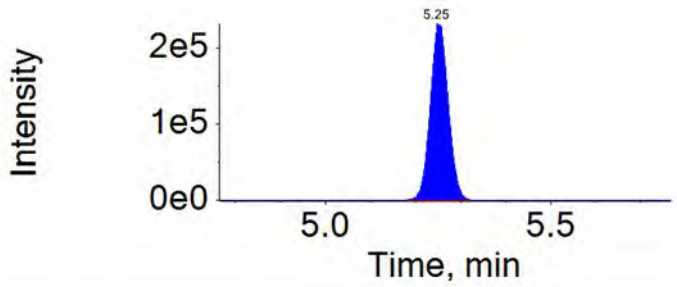
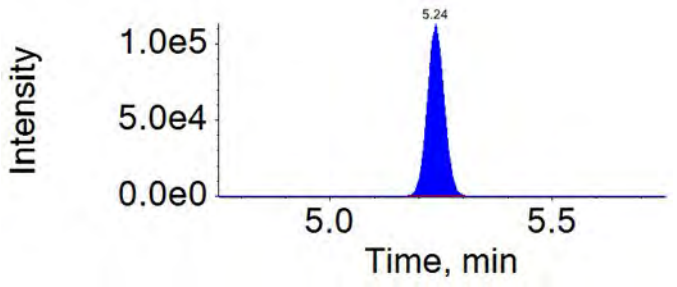
APPROVED
By MCD at 8:06 pm, 11/29/18

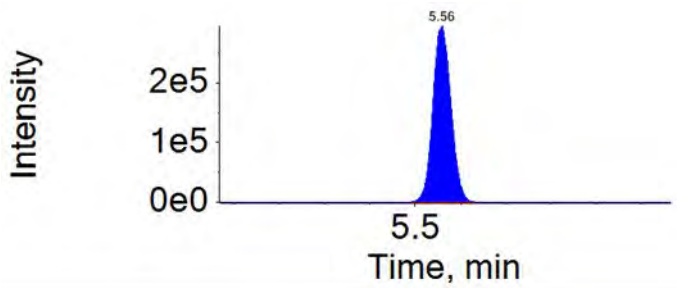
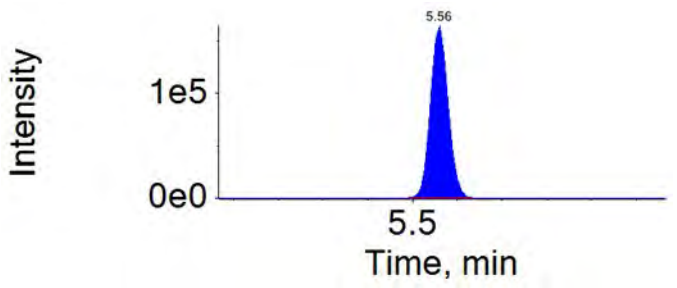
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

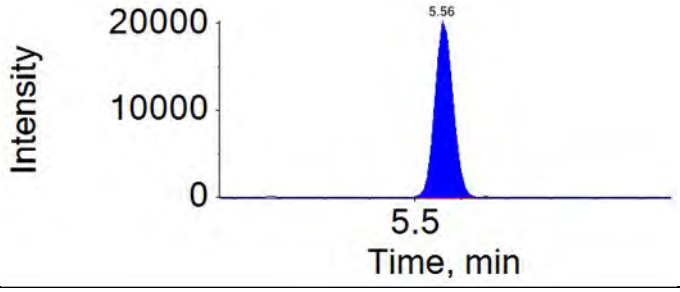
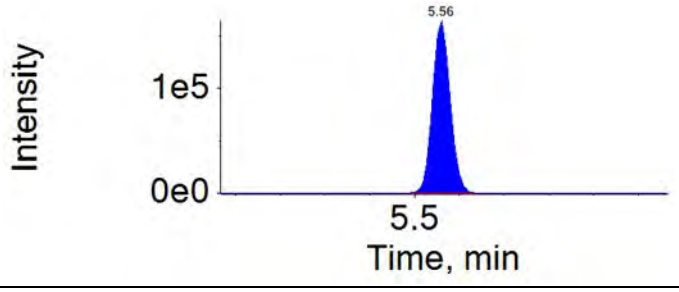
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

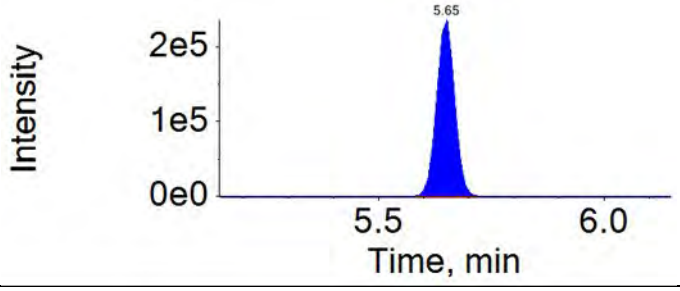
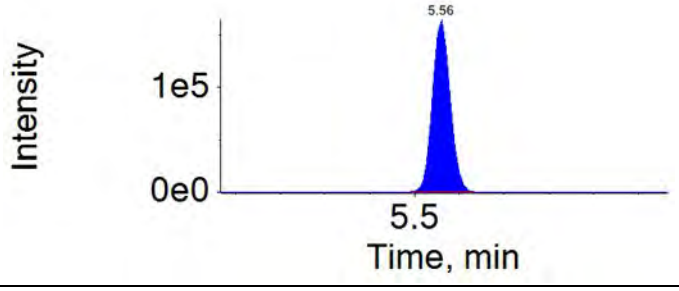
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

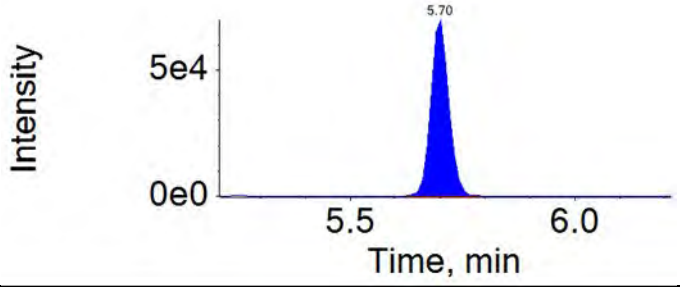
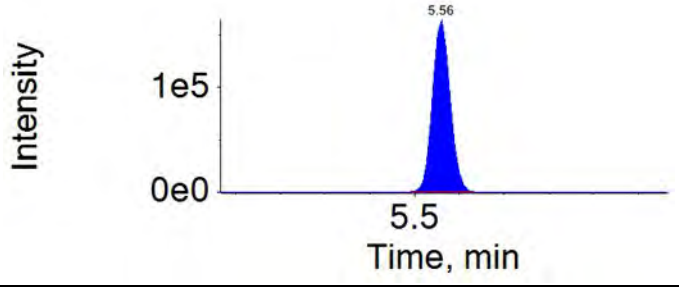
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

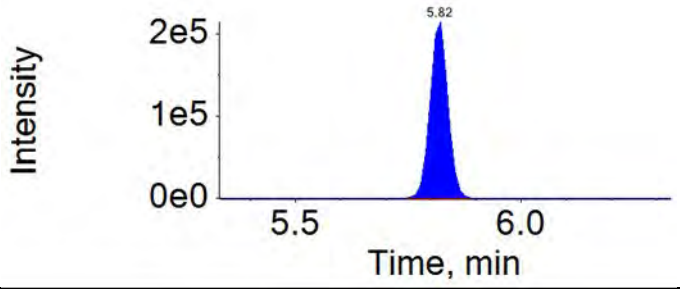
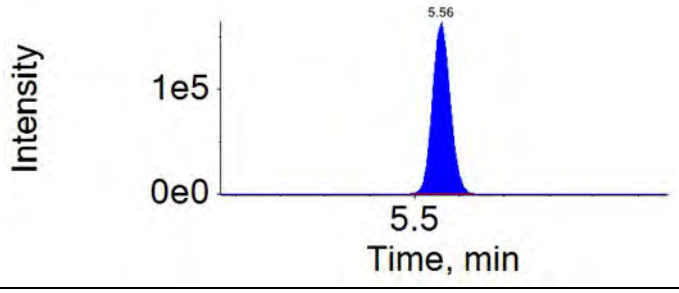
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

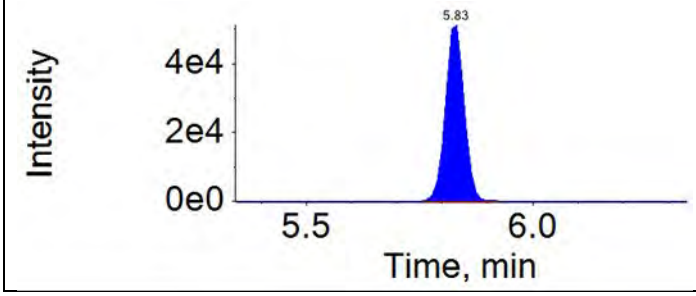
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

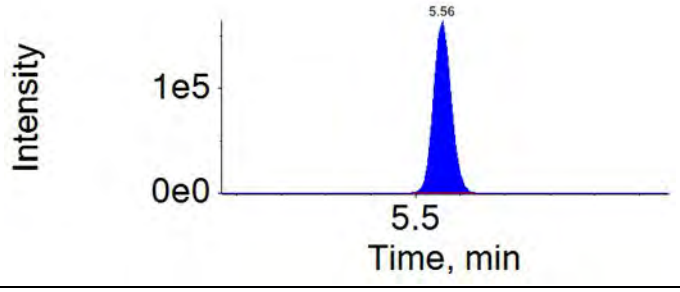
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

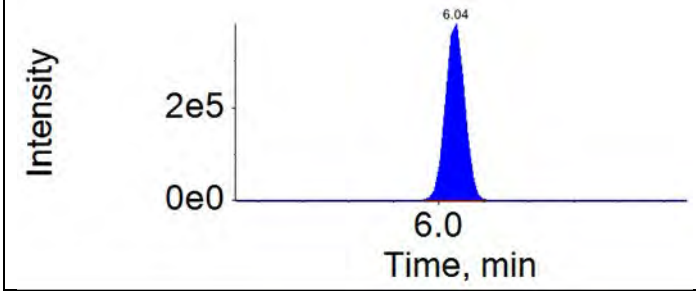
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

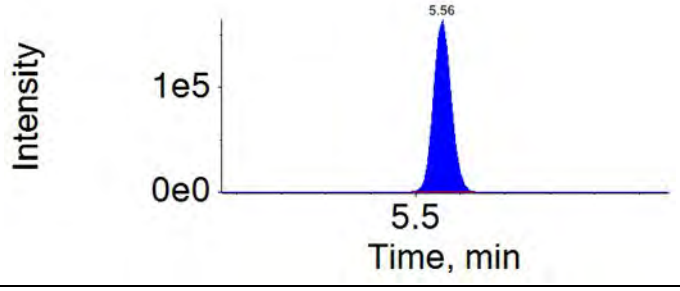
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



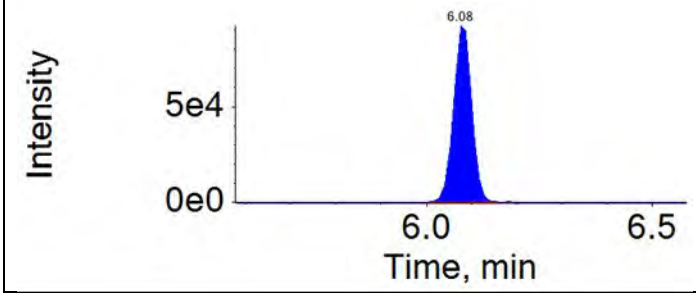


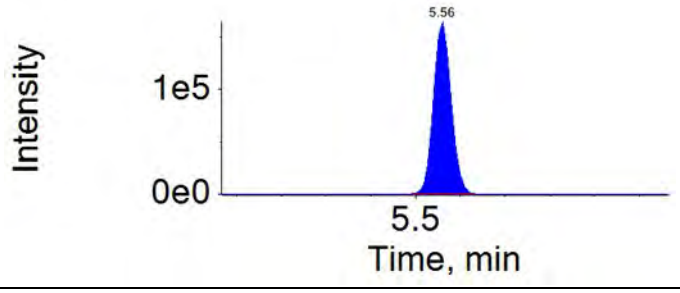
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



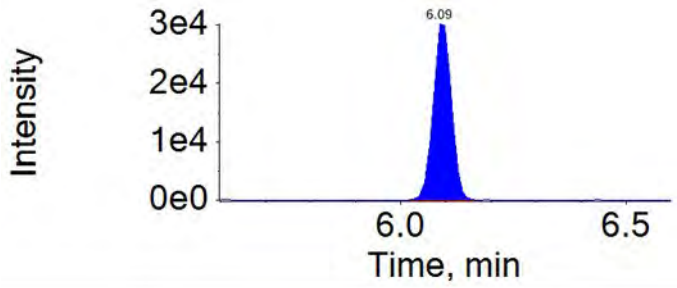


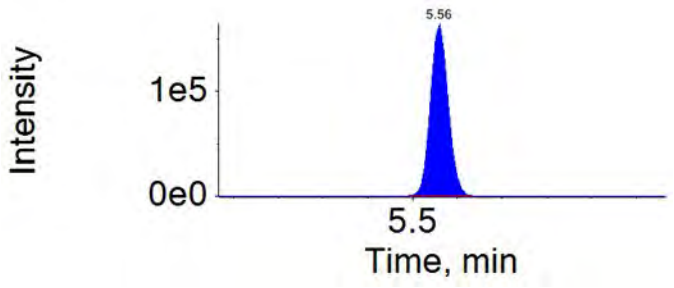
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



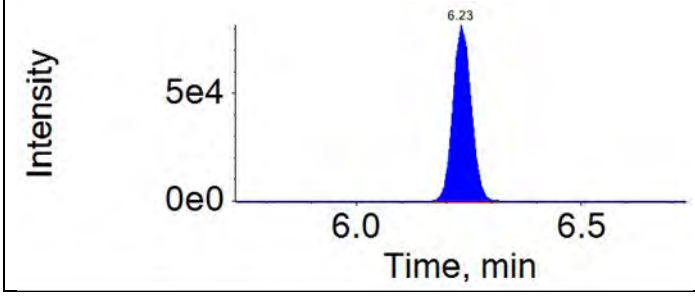


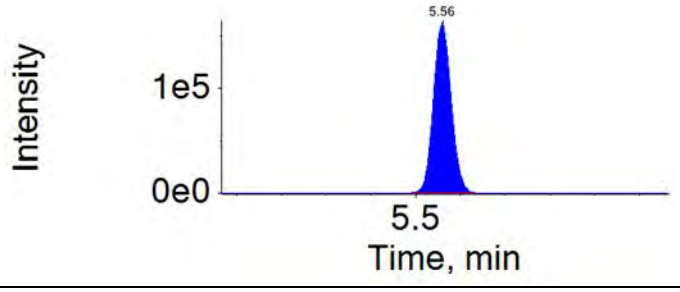
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

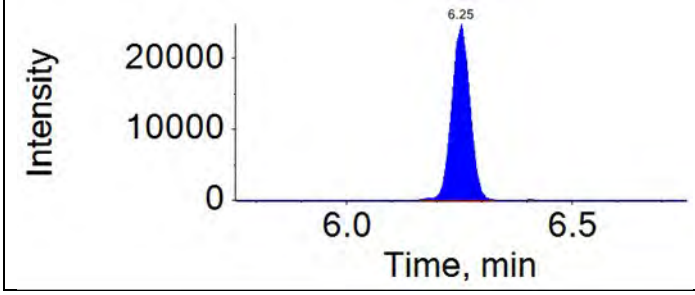
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

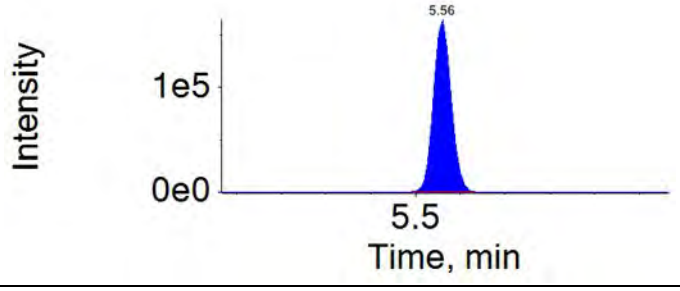
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



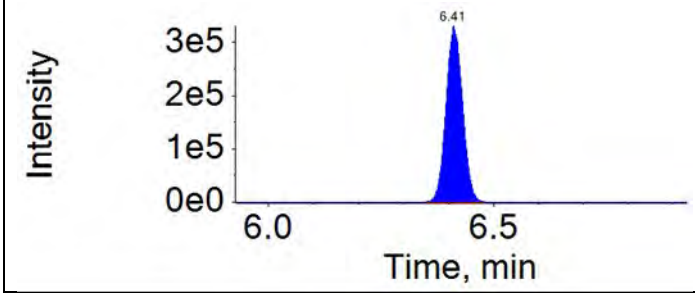


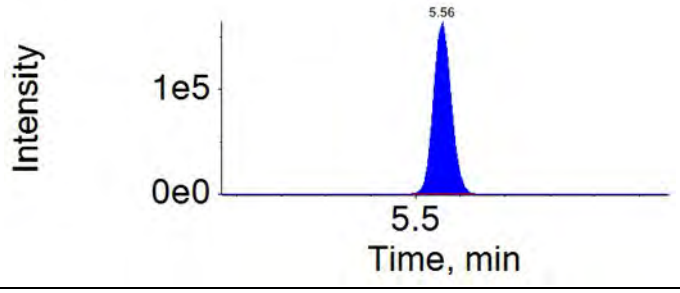
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



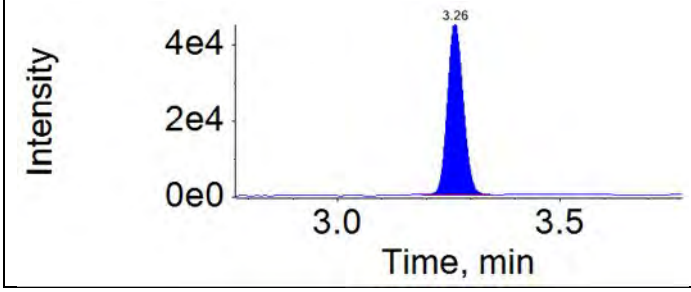


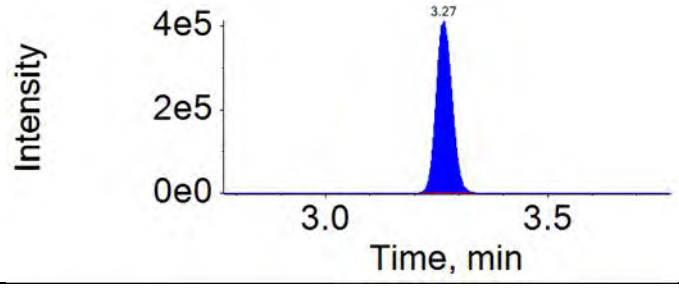
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

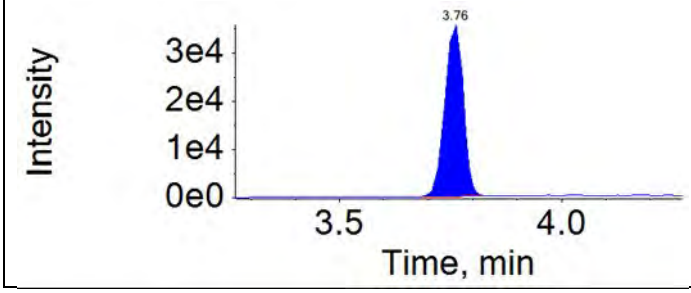
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

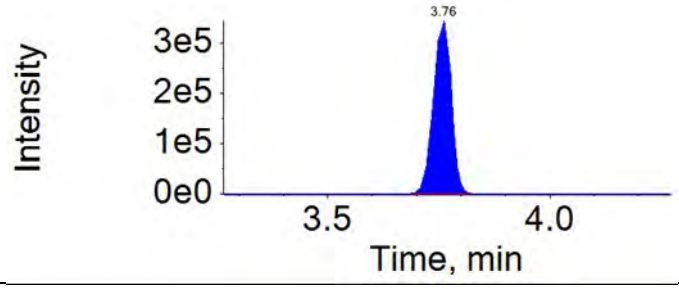
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



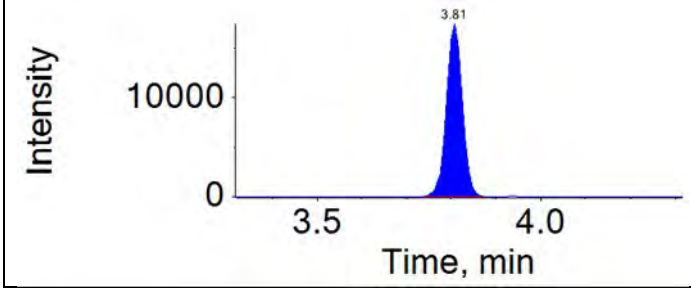


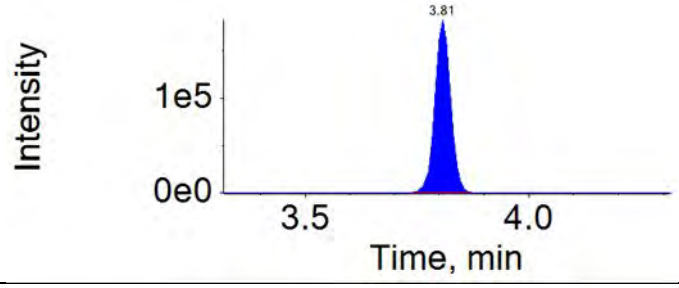
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



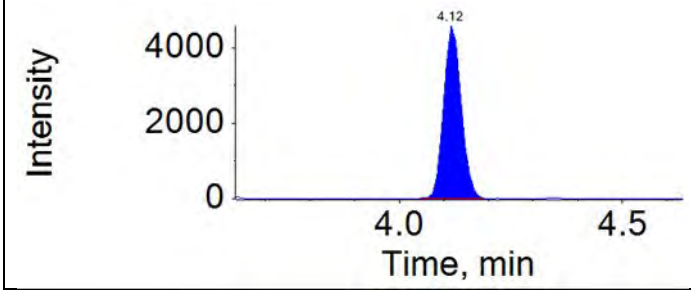


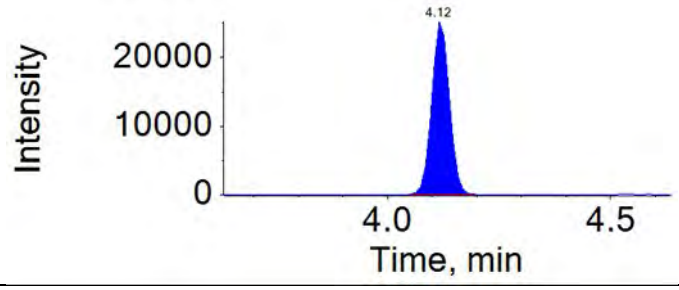
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0

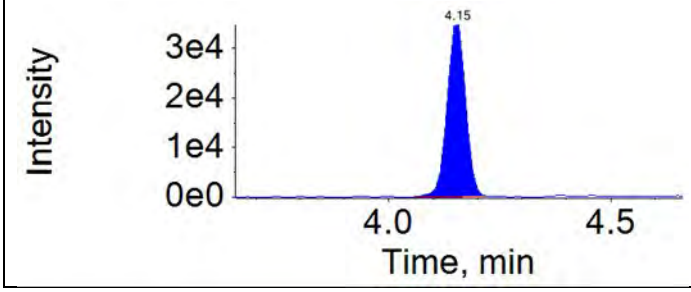
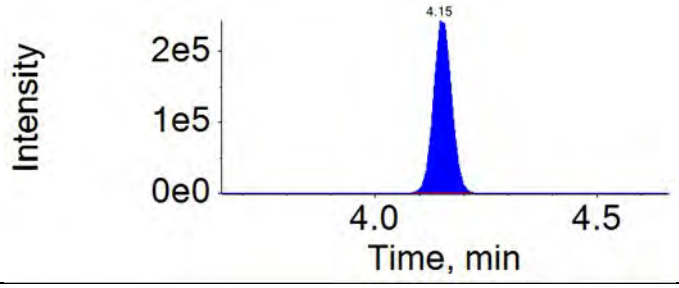


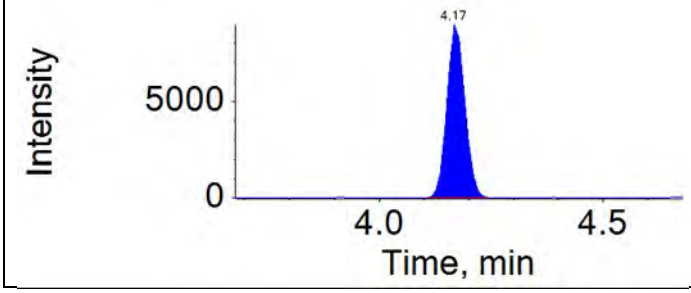
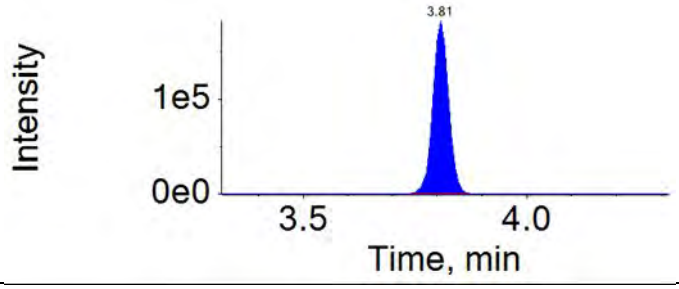


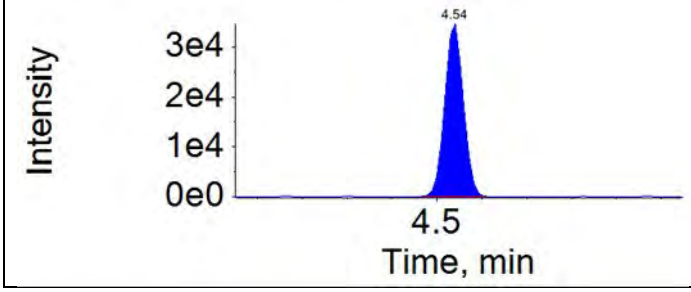
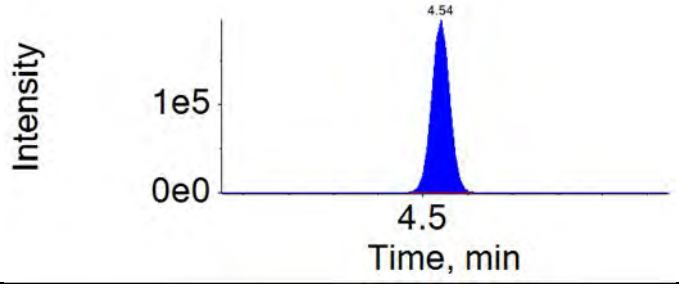
APPROVED
By MCD at 8:06 pm, 11/29/18

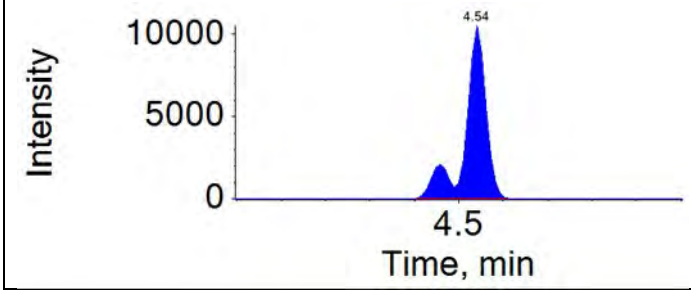
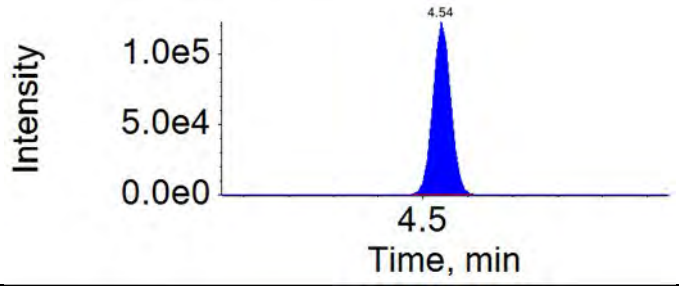
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

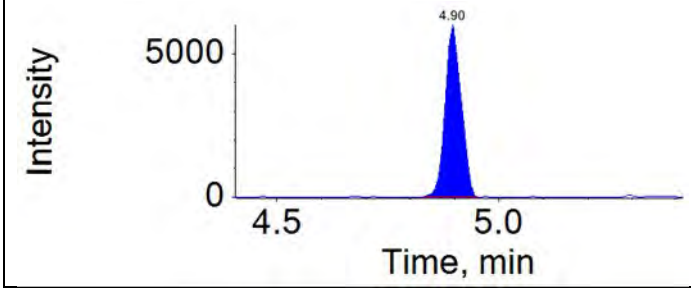
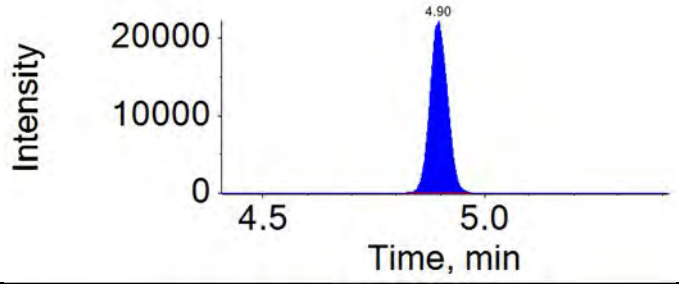
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0
	

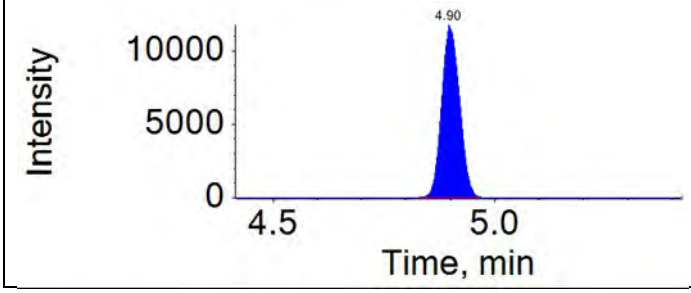
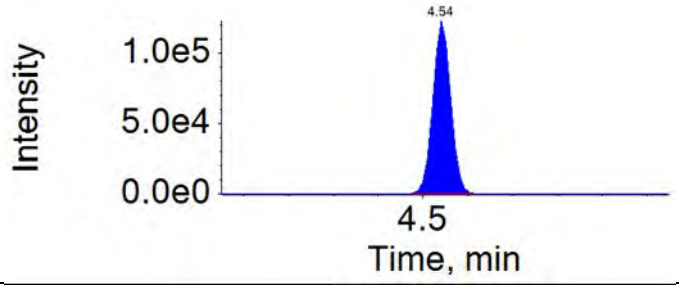
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0
	

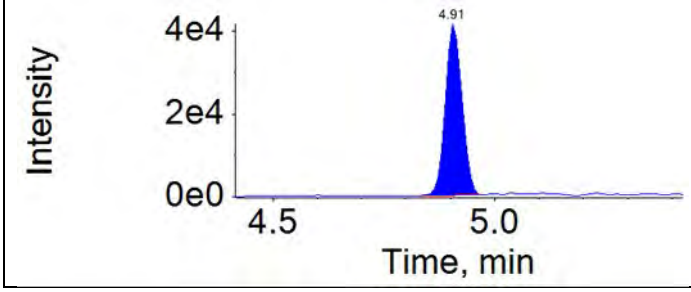
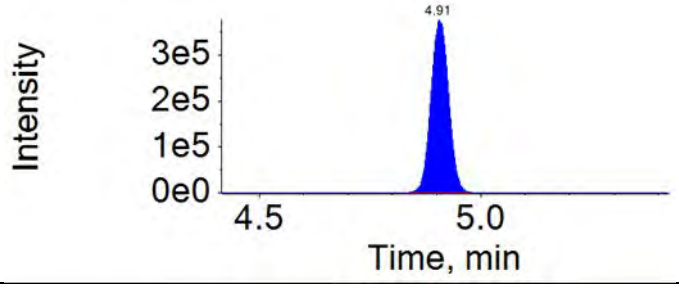
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0
	

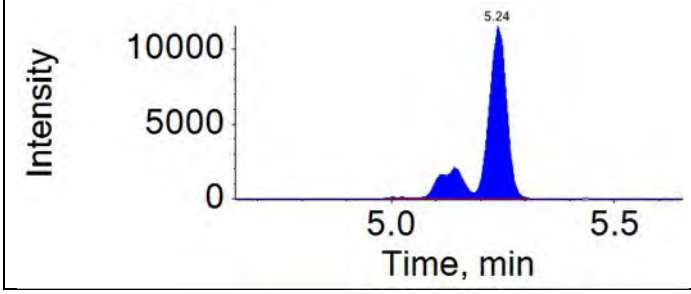
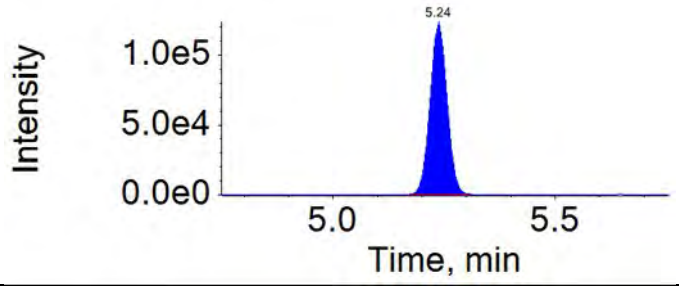
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

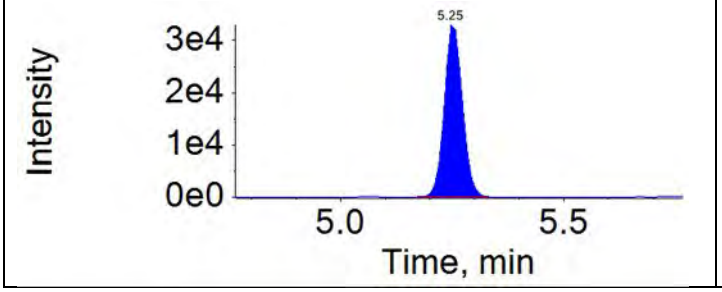
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

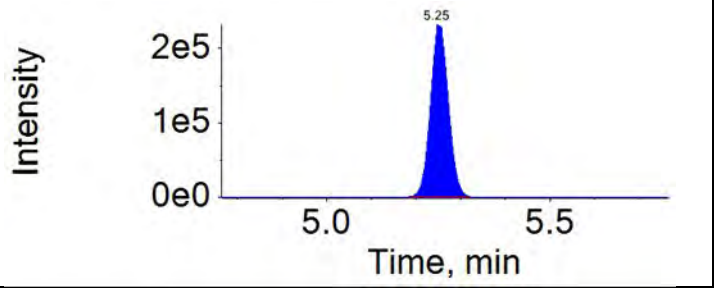
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

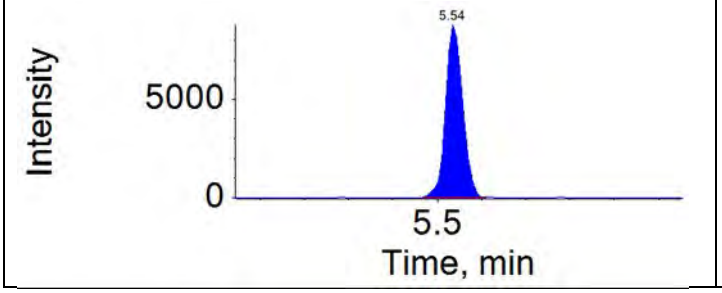
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

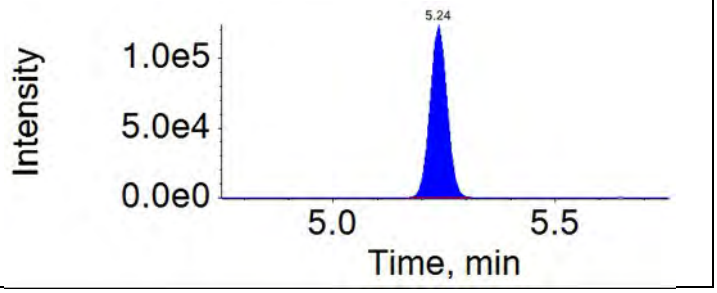
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



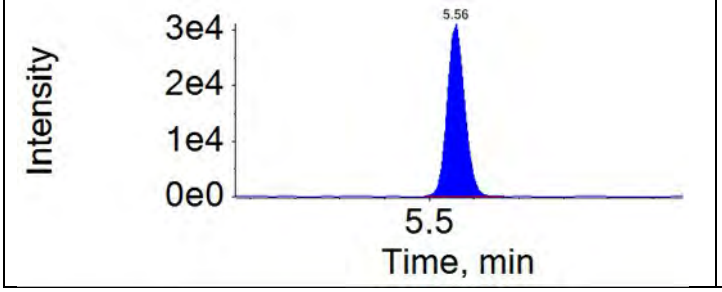


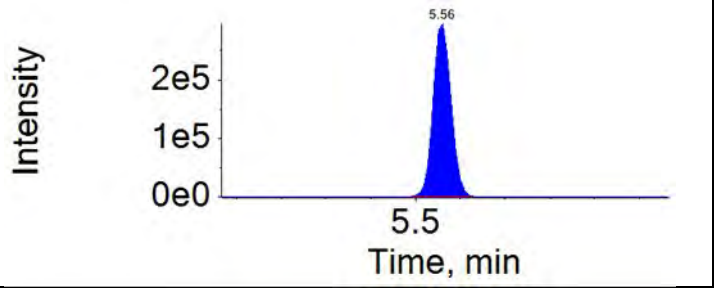
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



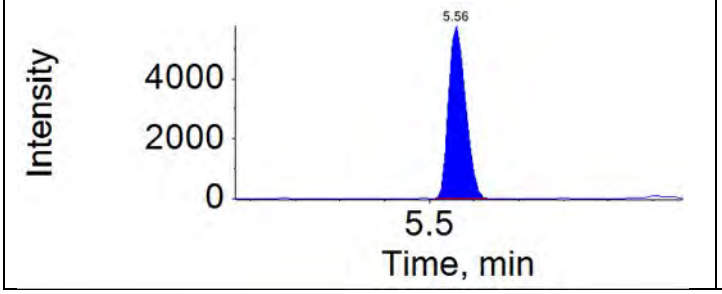


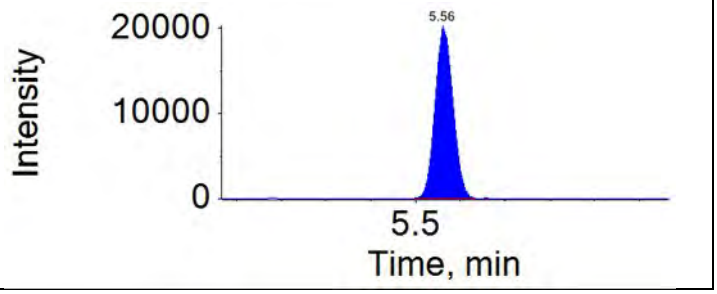
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

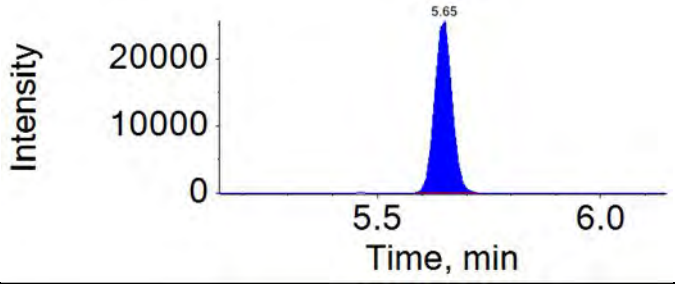
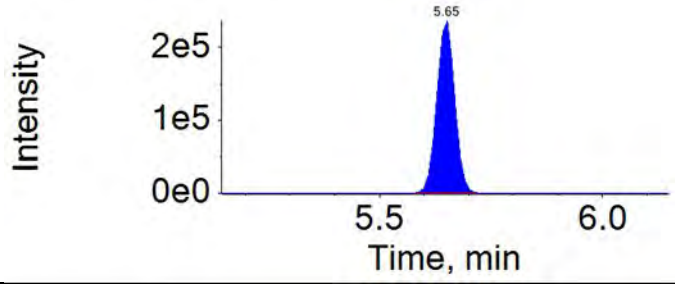


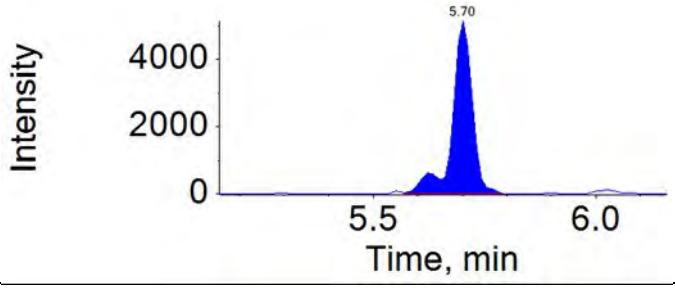
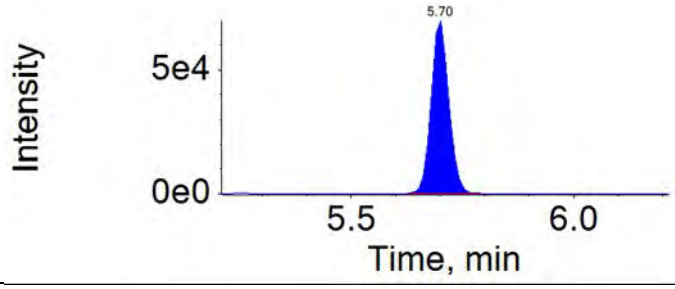


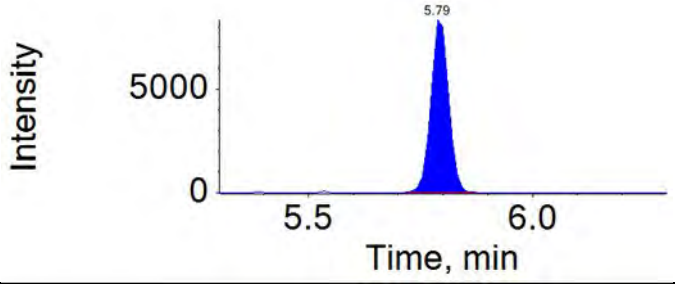
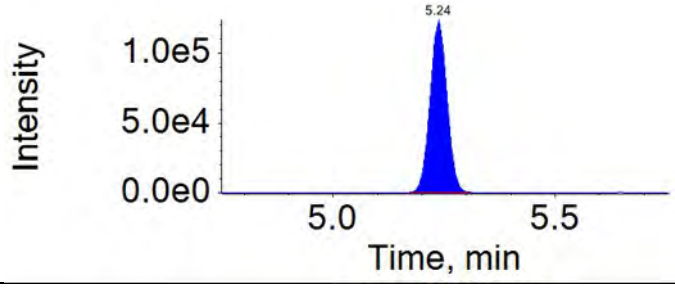
APPROVED
By MCD at 8:06 pm, 11/29/18

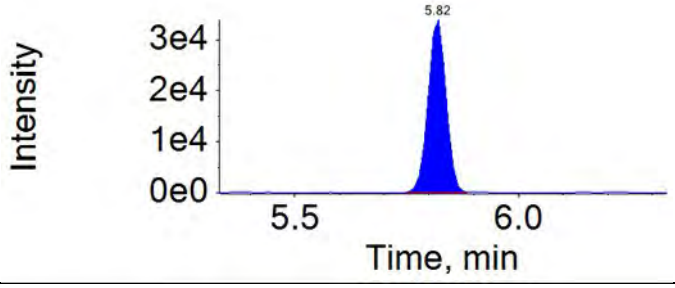
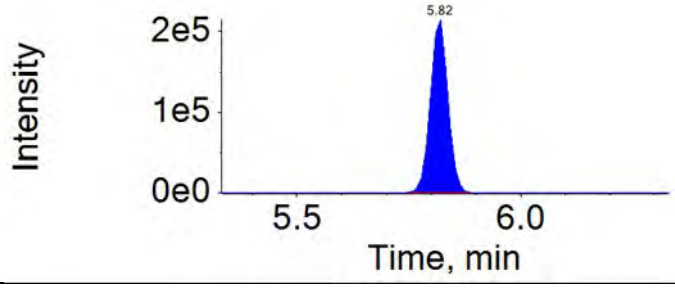
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

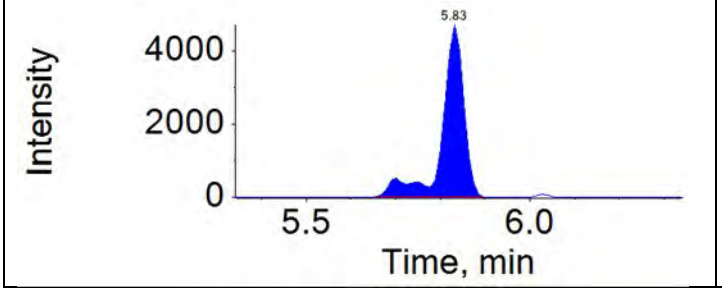
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

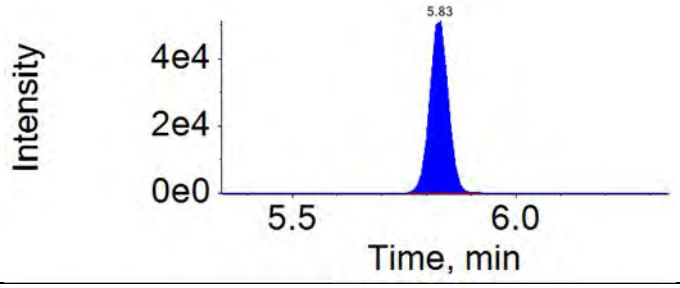
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

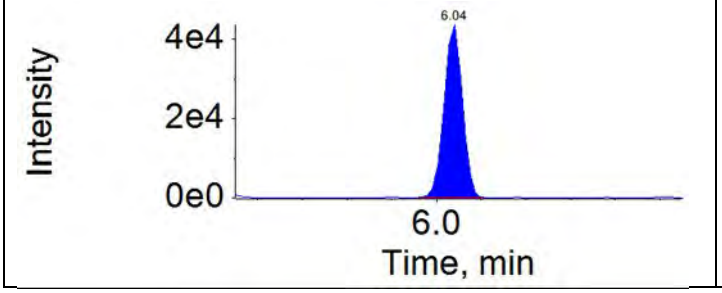
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

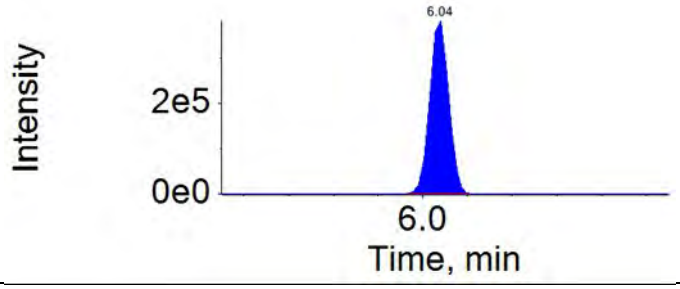
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



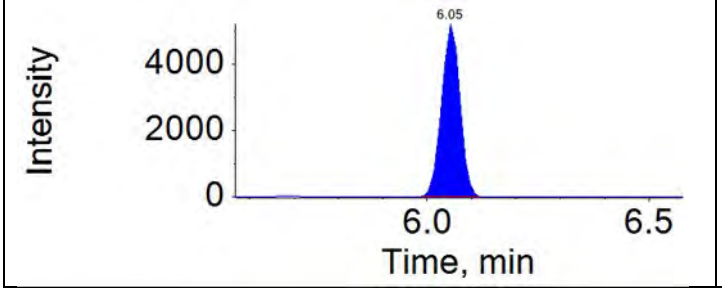


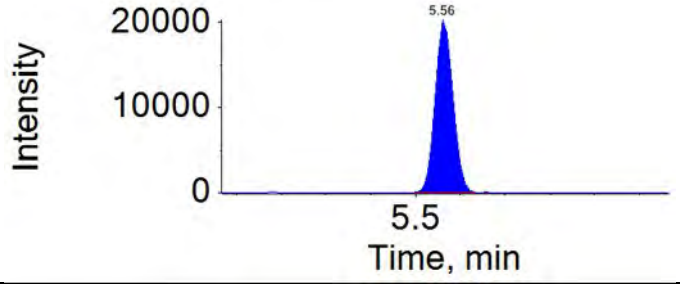
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



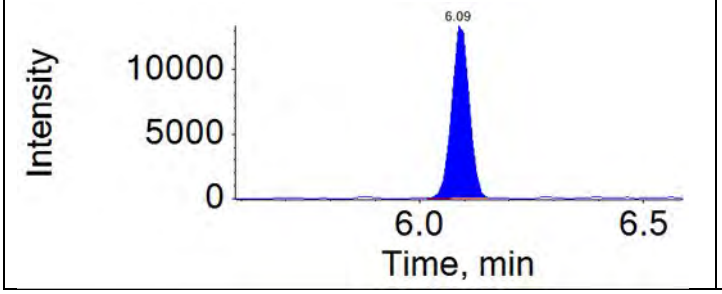


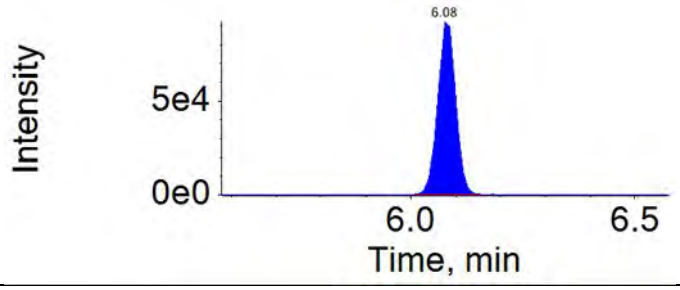
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



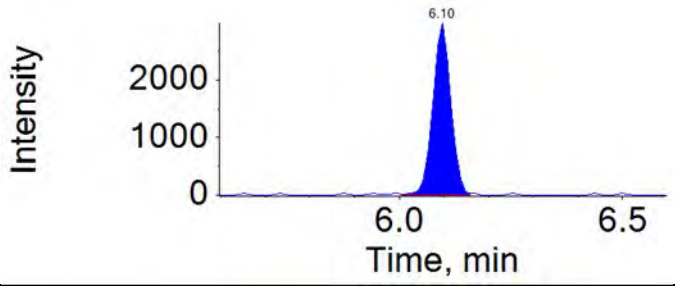


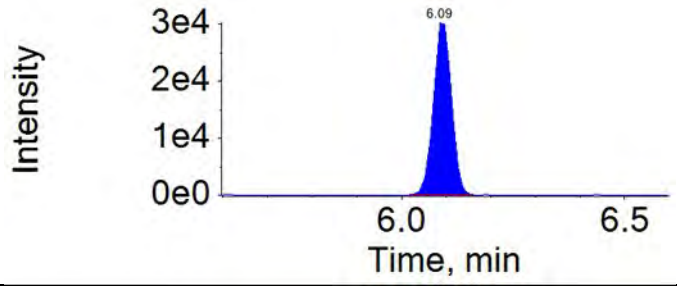
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

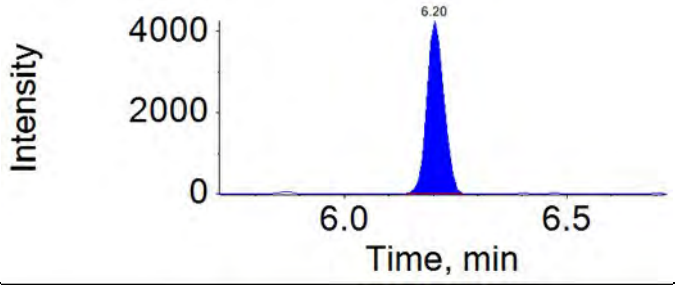
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

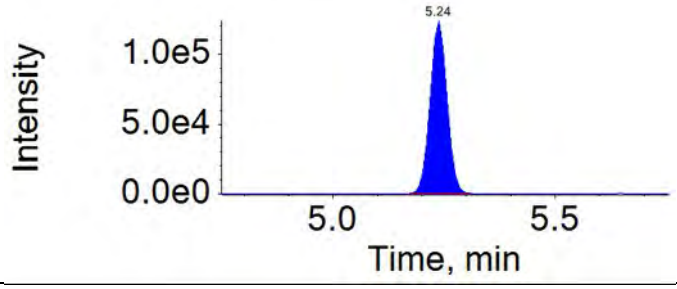
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



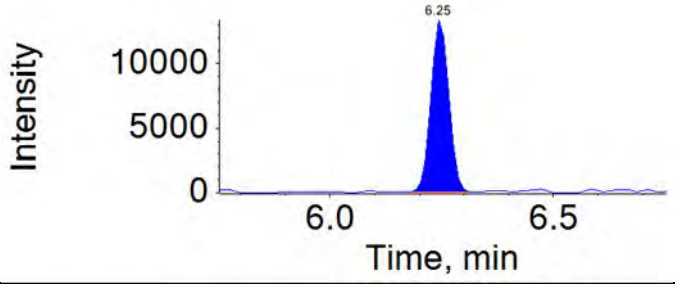


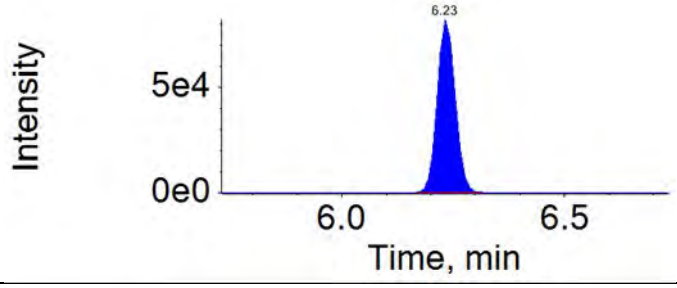
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



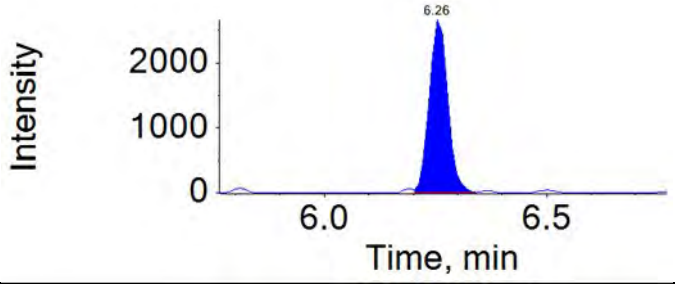


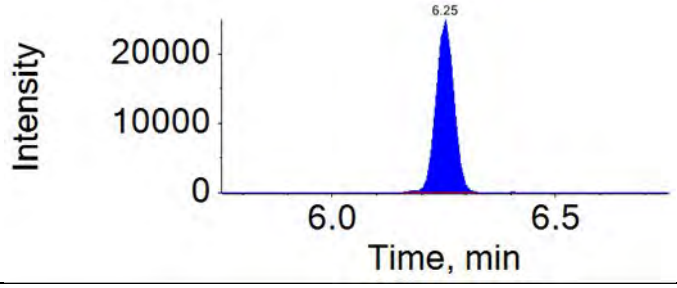
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

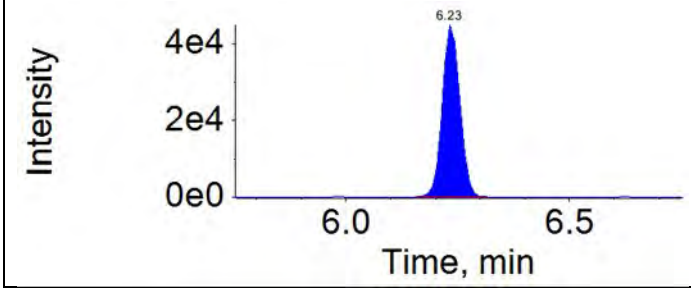
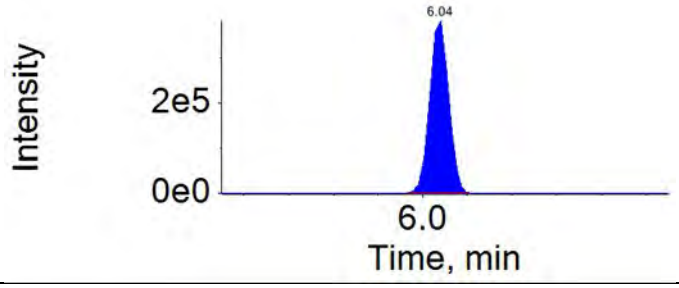


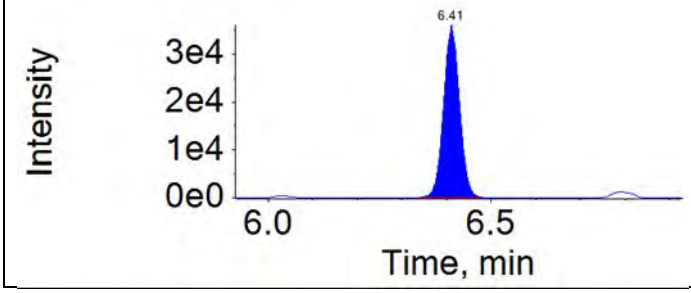
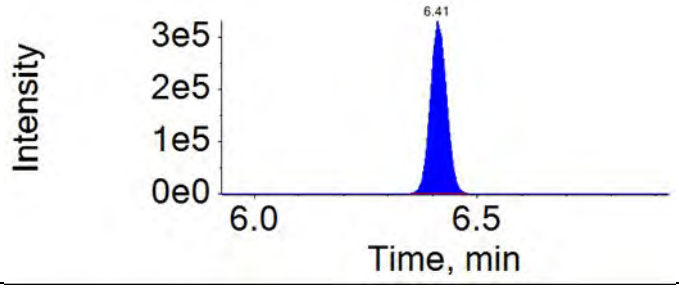


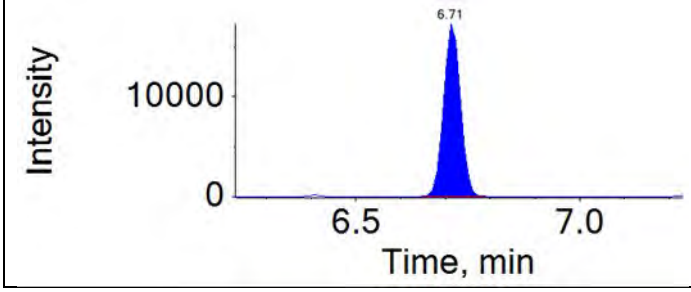
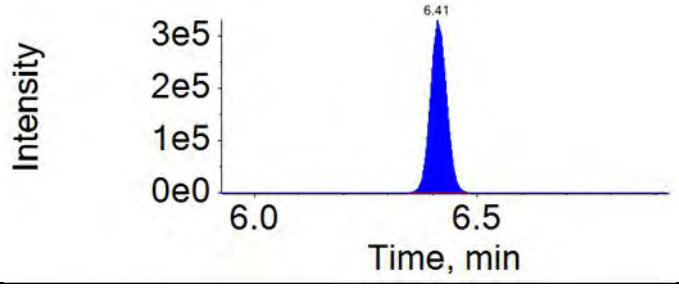
APPROVED
By MCD at 8:06 pm, 11/29/18

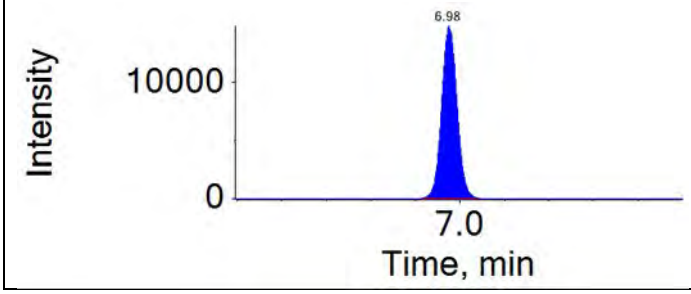
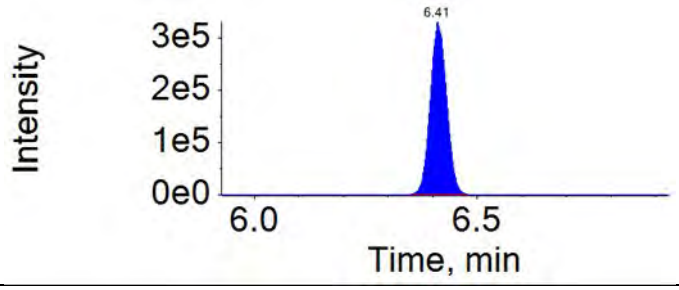
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

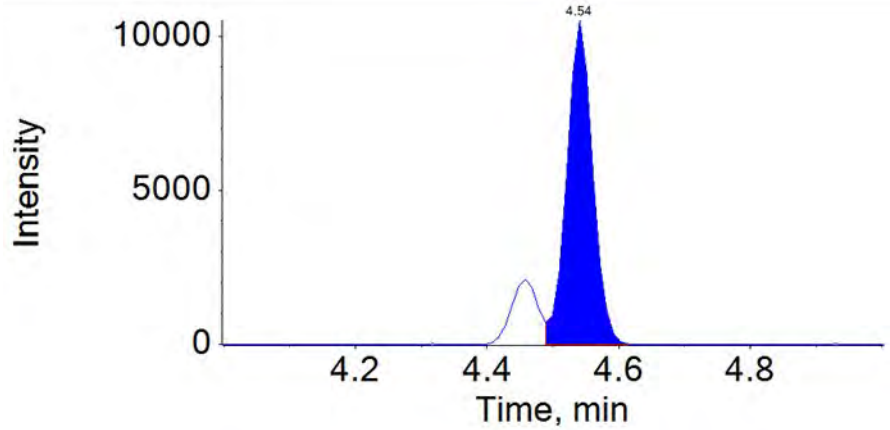
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

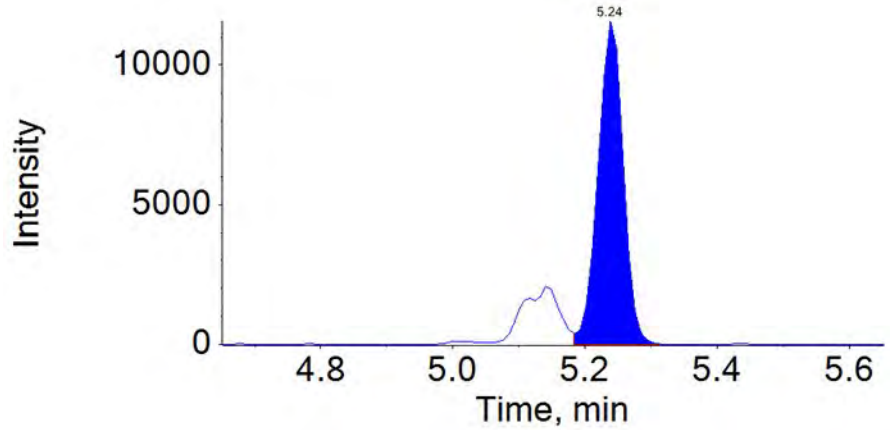
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
28783.5
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



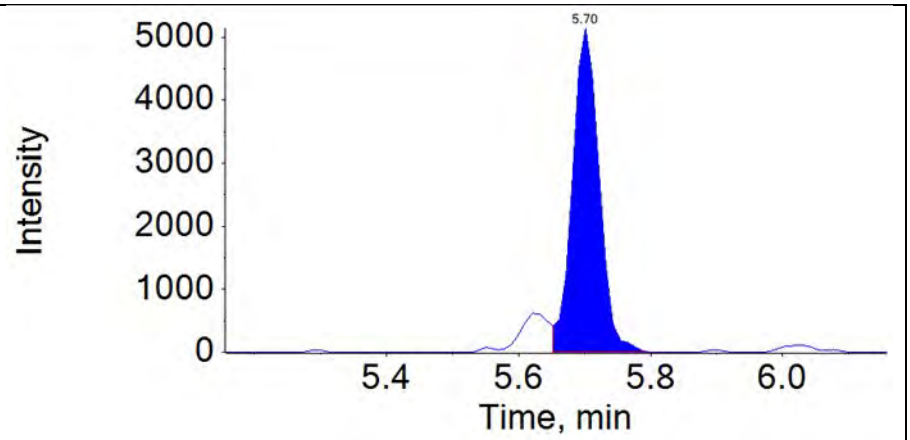
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
30774.9
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
14468.0
Mass Range:
570.0 / 419.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2

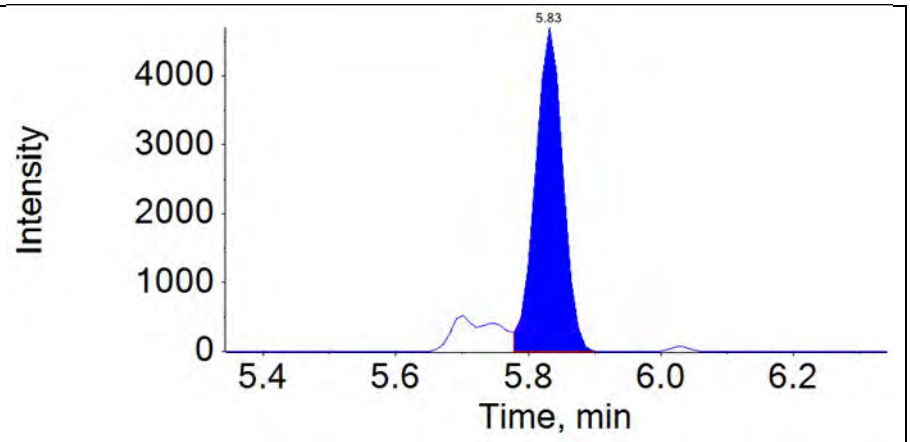


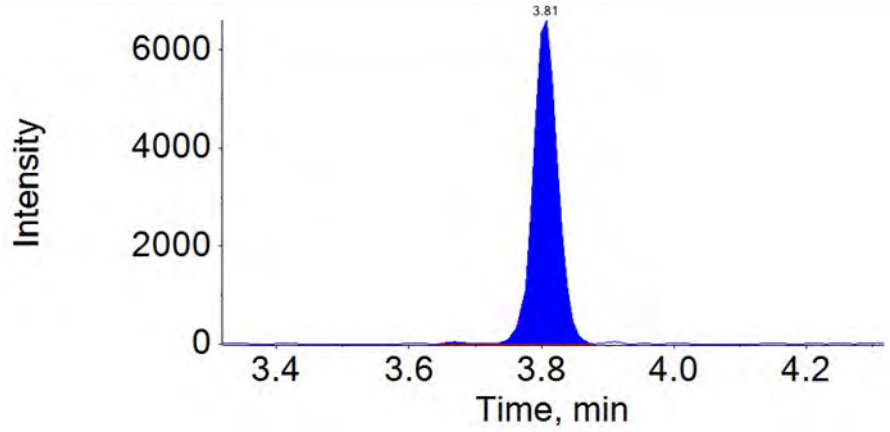
Integration Comment: incorrect integration

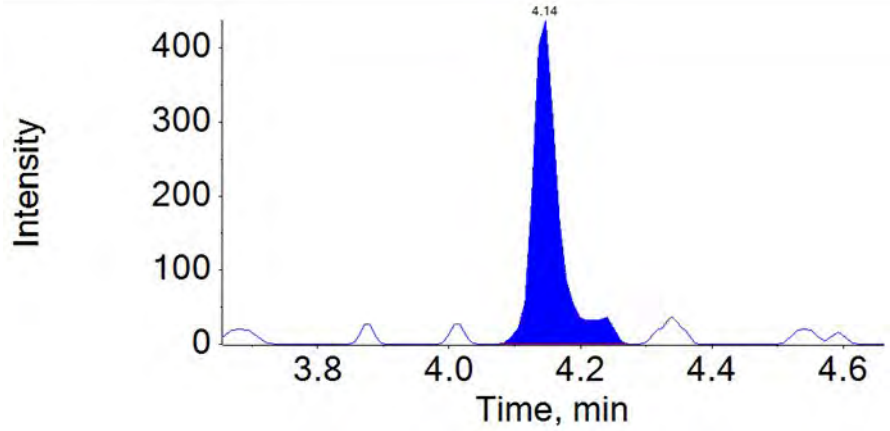
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NEtFOSAA **RT (min.):** 5.83 **Peak Area:** 13564.4 **Mass Range:** 584.0 / 419.0 **File Name:** 18NOV29D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: PFBS_2 **RT (min.):** 3.81 **Peak Area:** 17159.7 **Mass Range:** 299.0 / 99.0 **File Name:** 18NOV29D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

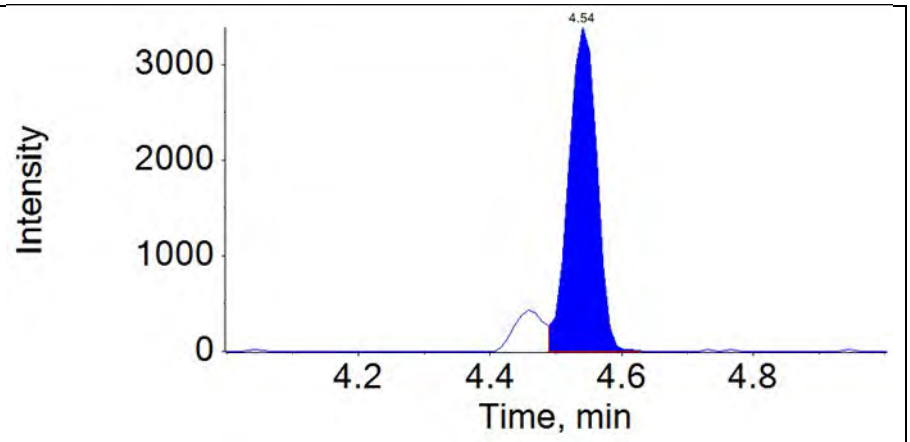
Component Name: PFHxA_2 **RT (min.):** 4.14 **Peak Area:** 1214.8 **Mass Range:** 313.0 / 119.0 **File Name:** 18NOV29D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

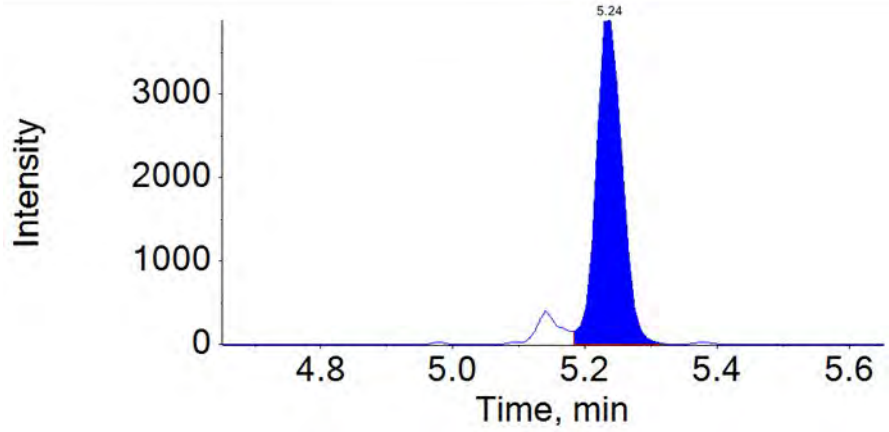
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS_2
RT (min.):
4.54
Peak Area:
10090.1
Mass Range:
399.0 / 99.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



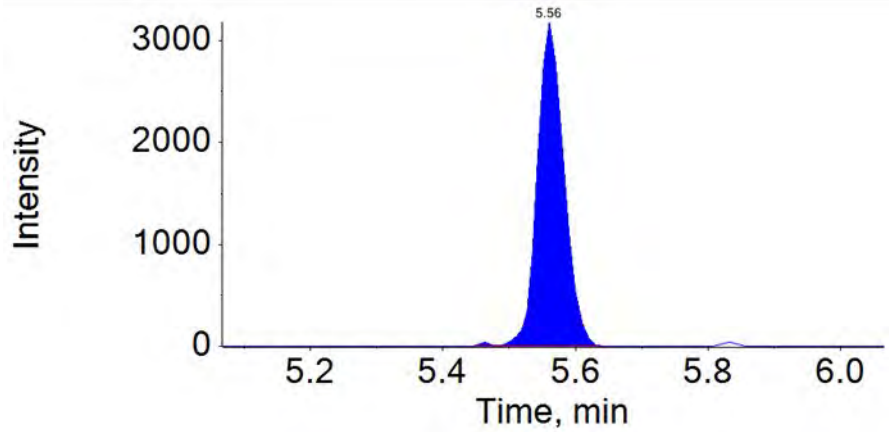
Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
10719.2
Mass Range:
499.0 / 99.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
8:2-FTS_2
RT (min.):
5.56
Peak Area:
8908.1
Mass Range:
527.0 / 81.0
File Name:
18NOV29D-05.wiff
Sample Name:
CCV1_ISC_CAL2

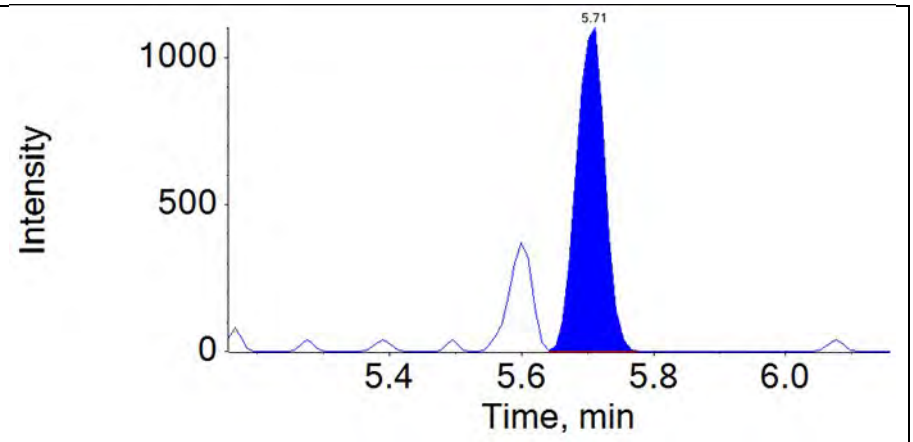


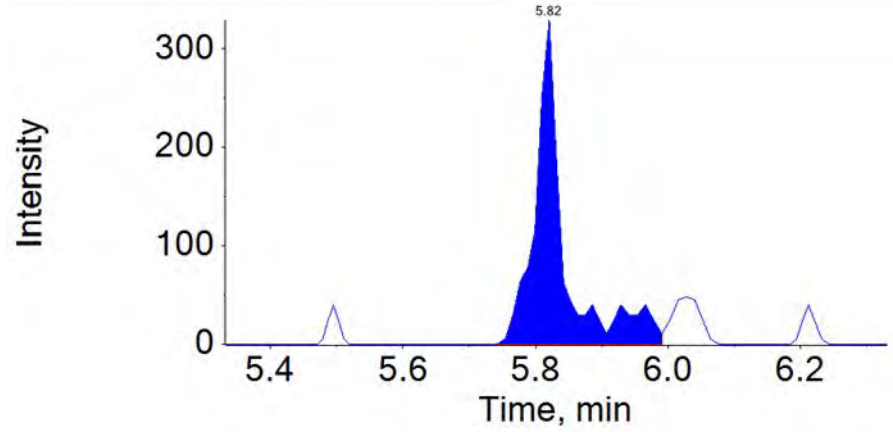
Integration Comment: incorrect integration

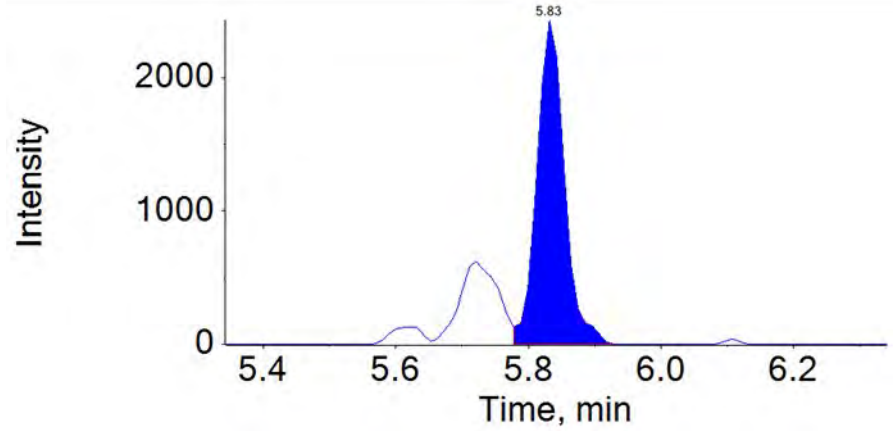
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: NMeFOSAA_2 **RT (min.):** 5.71 **Peak Area:** 3325.7 **Mass Range:** 570.0 / 483.0 **File Name:** 18NOV29D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: PFUnDA_2 **RT (min.):** 5.82 **Peak Area:** 991.3 **Mass Range:** 563.0 / 169.0 **File Name:** 18NOV29D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

Component Name: NEtFOSAA_2 **RT (min.):** 5.83 **Peak Area:** 7057.3 **Mass Range:** 584.0 / 526.0 **File Name:** 18NOV29D-05.wiff **Sample Name:** CCV1_ISC_CAL2	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

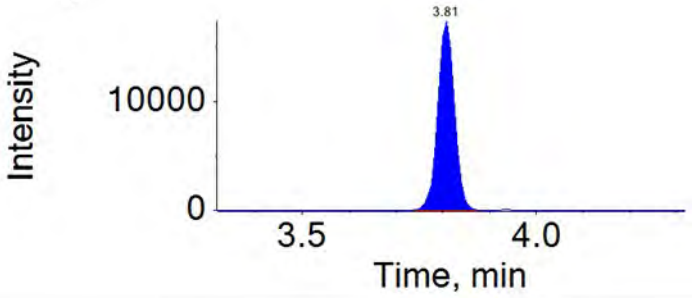
Sample Name: CCV1_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV29D-05.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	43167.2	A	N/A	0.3951			
PFBS_2	3.81	1.00	17055.1	M	N/A	0.3951	8	50	
4:2-FTS	4.12	1.00	12514.2	A	N/A	0.6079			
4:2-FTS_2	4.12	1.00	7607.9	A	N/A	0.6079	-5	50	
PFHxA	4.15	1.00	100978.6	A	N/A	0.0112			
PFHxA_2	4.14	1.00	1134.2	M	N/A	0.0112	9	50	
PFPeS	4.17	1.10	24883.7	A	N/A	0.4838			
PFPeS_2	4.17	1.10	12039.0	A	N/A	0.4838	-3	50	
PFHpA	4.54	1.00	99917.2	A	N/A	0.0612			
PFHpA_2	4.54	1.00	6111.0	A	N/A	0.0612	10	50	
PFHxS	4.54	1.00	34610.4	M	N/A	0.3297			
PFHxS_2	4.54	1.00	11410.8	M	N/A	0.3297	-11	50	
6:2-FTS	4.90	1.00	14994.7	A	N/A	0.5391			
6:2-FTS_2	4.89	1.00	8084.1	A	N/A	0.5391	-19	50	
PFHpS	4.90	1.08	32932.0	A	N/A	0.4237			
PFHpS_2	4.90	1.08	13952.3	A	N/A	0.4237	8	50	
PFOA	4.91	1.00	107677.1	A	N/A	0.0617			
PFOA_2	4.91	1.00	6647.5	A	N/A	0.0617	8	50	
PFOS	5.24	1.00	39254.5	M	N/A	0.2989			
PFOS_2	5.24	1.00	11733.5	M	N/A	0.2989	1	50	
PFNA	5.25	1.00	93355.4	A	N/A	0.0139			
PFNA_2	5.25	1.00	1298.8	A	N/A	0.0139	-31	50	
PFNS	5.54	1.06	23416.1	A	N/A	0.5500			
PFNS_2	5.54	1.06	12879.8	A	N/A	0.5500	15	50	
PFDA	5.56	1.00	83849.1	A	N/A	0.0057			
PFDA_2	5.57	1.00	480.8	A	N/A	0.0057	-23	50	
8:2-FTS	5.56	1.00	15129.8	A	N/A	0.5856			
8:2-FTS_2	5.56	1.00	8859.9	M	N/A	0.5856	9	50	
NMeFOSAA	5.70	1.00	16285.3	M	N/A	0.2608			
NMeFOSAA_2	5.71	1.00	4247.6	M	N/A	0.2608	13	50	
PFDS	5.79	1.11	22930.4	A	N/A	0.3845			
PFDS_2	5.79	1.11	8816.6	A	N/A	0.3845	-28	50	
PFUnDA	5.82	1.00	94649.2	A	N/A	0.0084			
PFUnDA_2	5.82	1.00	791.7	M	N/A	0.0084	120	50	OOS
NEtFOSAA	5.83	1.00	15976.2	M	N/A	0.6268			
NEtFOSAA_2	5.83	1.00	10013.4	M	N/A	0.6268	-15	50	
PFDoDA	6.04	1.00	124243.3	A	N/A	0.0095			
PFDoDA_2	6.04	1.00	1178.3	A	N/A	0.0095	-27	50	
10:2-FTS	6.05	1.09	14919.7	A	N/A	0.6728			
10:2-FTS_2	6.05	1.09	10038.3	A	N/A	0.6728	-4	50	
PFTrDA	6.23	1.03	122778.8	A	N/A	0.0057			
PFTrDA_2	6.24	1.03	698.1	A	N/A	0.0057	-37	50	
PFTeDA	6.41	1.00	89123.1	A	N/A	0.0041			
PFTeDA_2	6.42	1.00	367.7	A	N/A	0.0041	-26	50	
PFHxDA	6.71	1.05	45160.5	A	N/A	0.0596			
PFHxDA_2	6.71	1.05	2692.3	A	N/A	0.0596	-8	50	
PFODA	6.98	1.09	35571.7	A	N/A	0.0222			
PFODA_2	6.97	1.09	790.0	A	N/A	0.0222	-16	50	

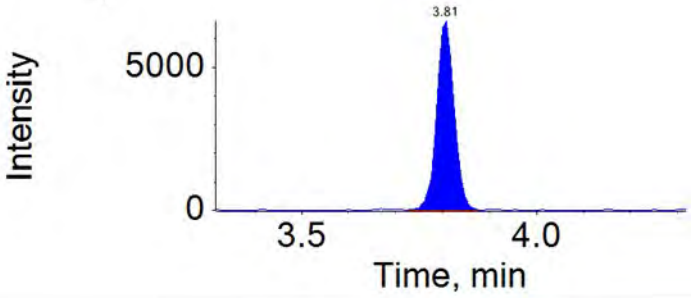
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

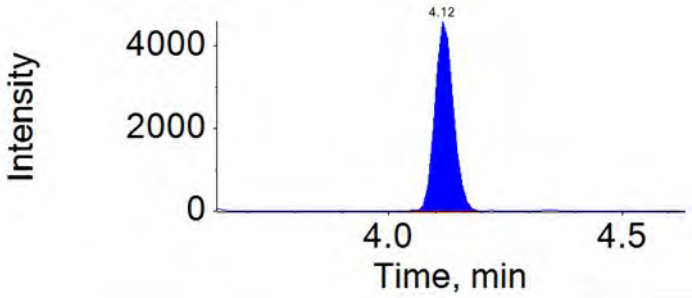
Component: PFBS
Primary Mass: 299.0 / 80.0



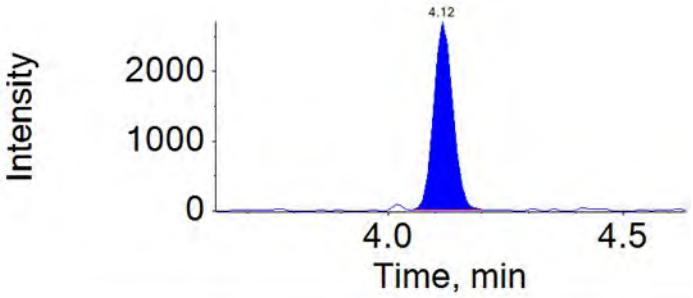
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



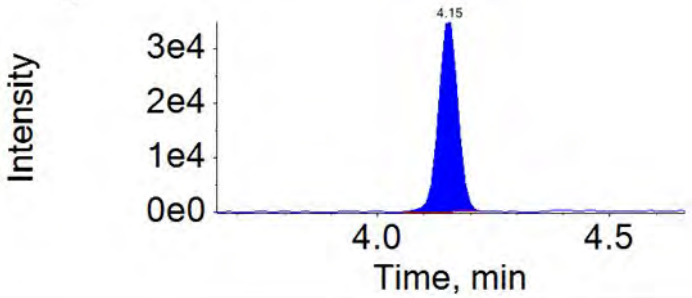
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



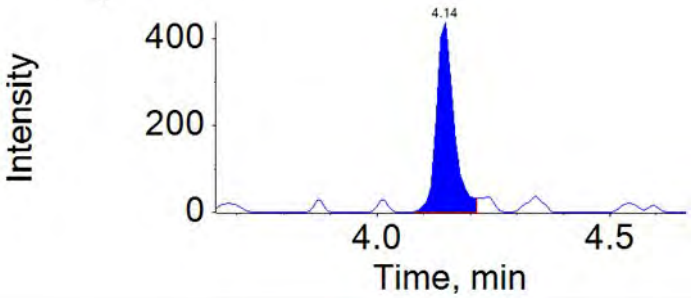
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



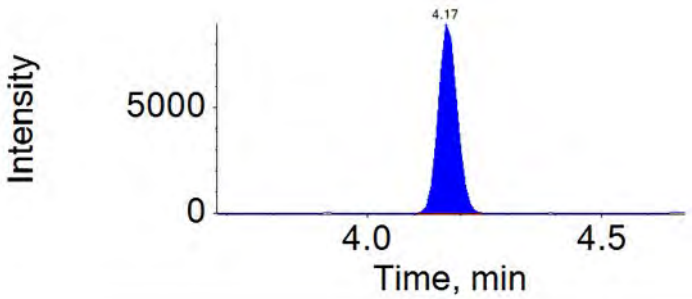
Component: PFHxA
Primary Mass: 313.0 / 269.0



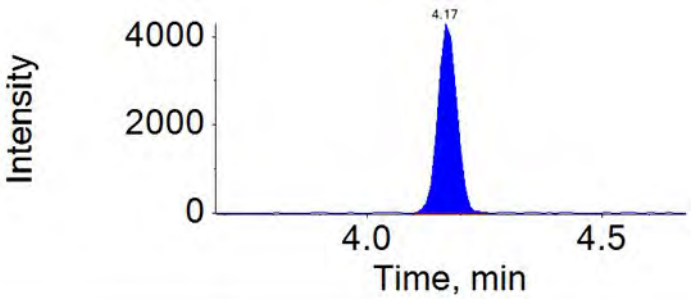
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



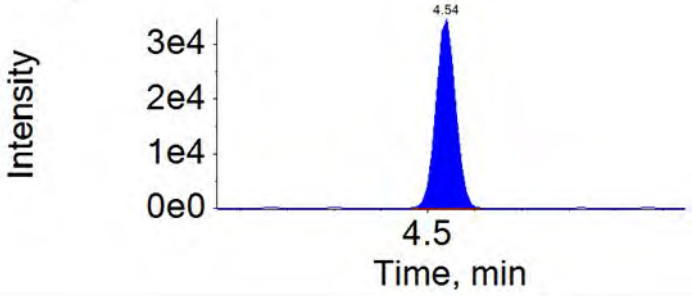
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



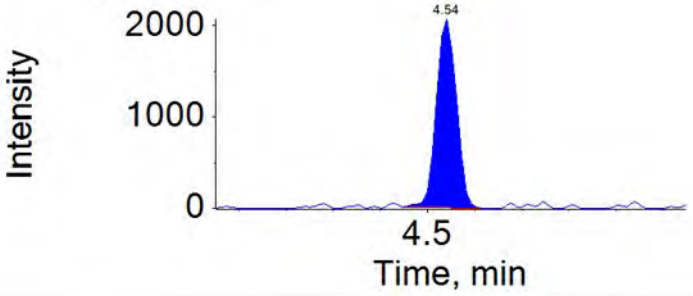
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

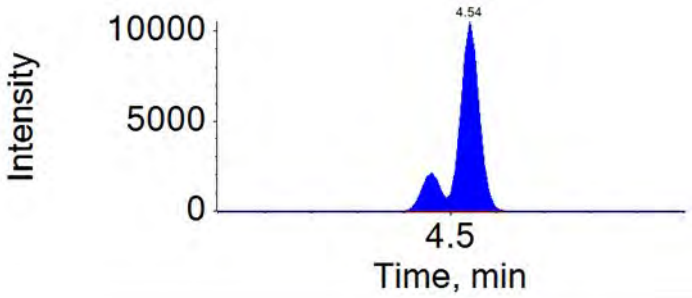
Component: PFHpA
Primary Mass: 363.0 / 319.0



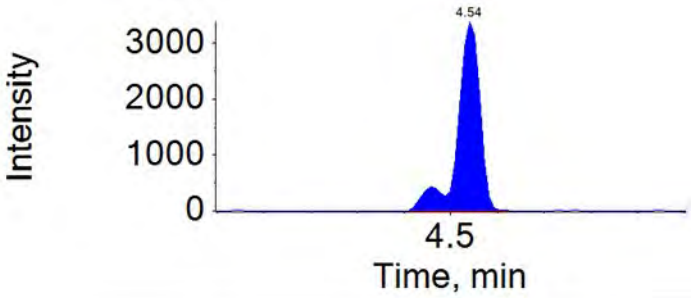
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



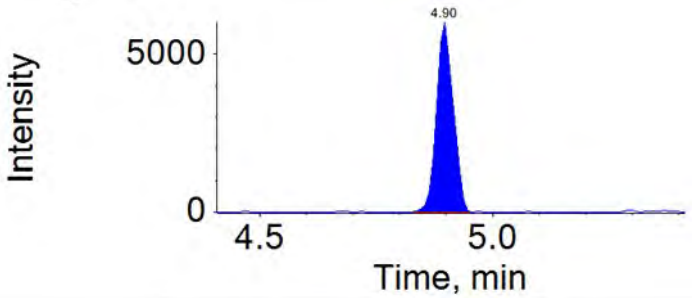
Component: PFHxS
Primary Mass: 399.0 / 80.0



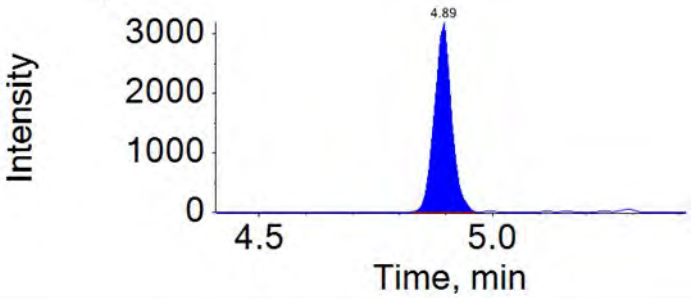
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



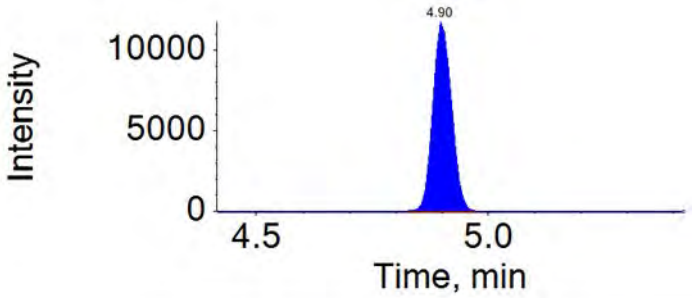
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



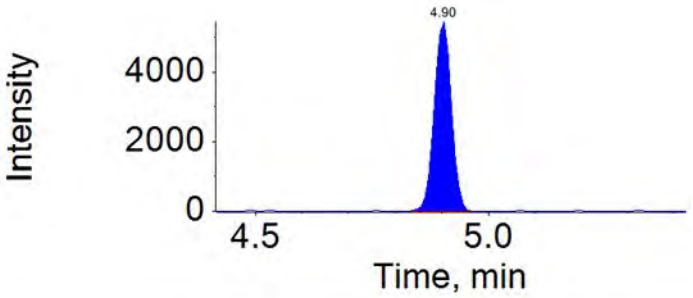
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



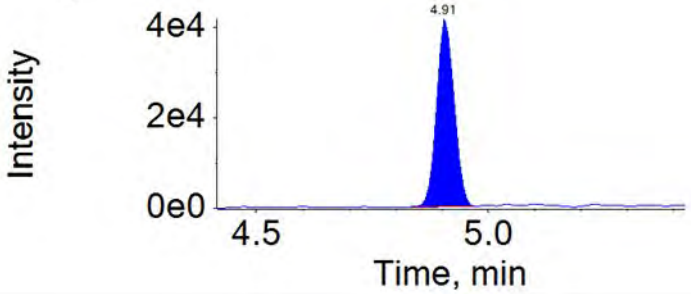
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



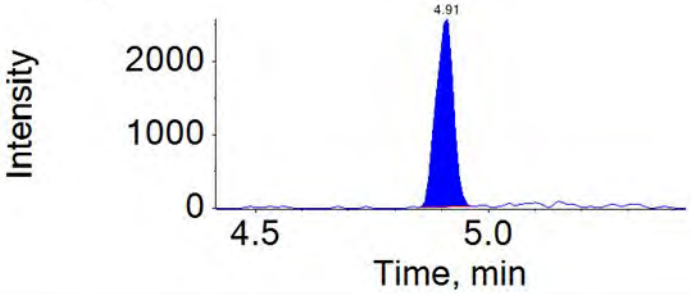
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

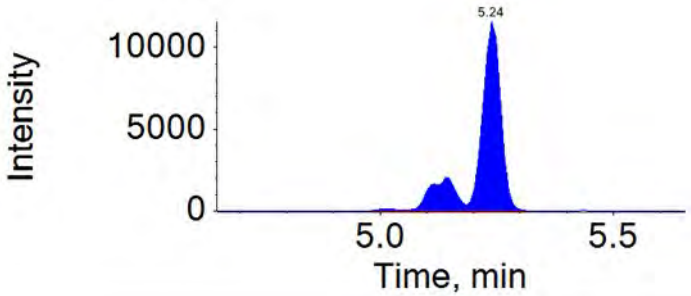
Component: PFOA
Primary Mass: 413.0 / 369.0



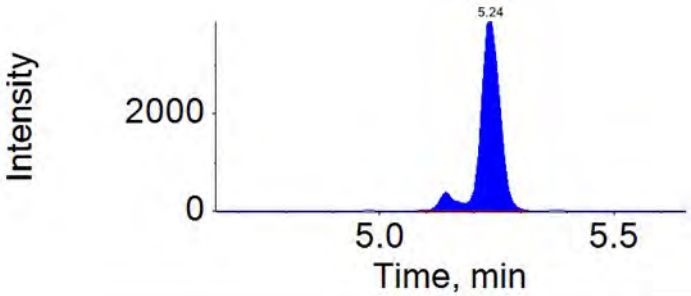
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



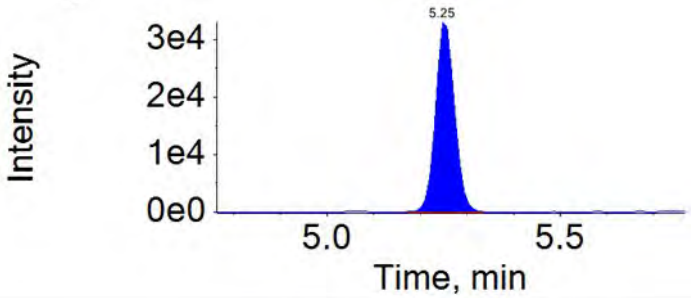
Component: PFOS
Primary Mass: 499.0 / 80.0



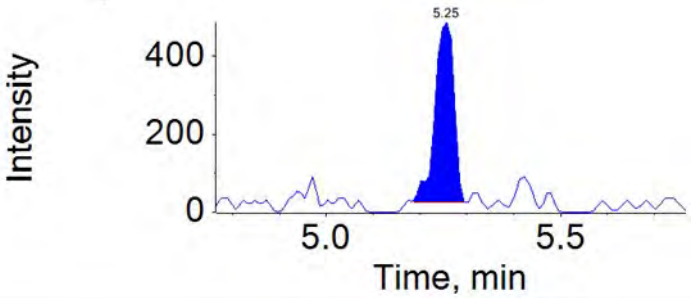
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



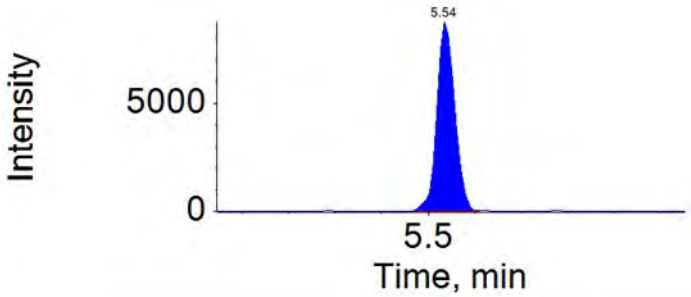
Component: PFNA
Primary Mass: 463.0 / 419.0



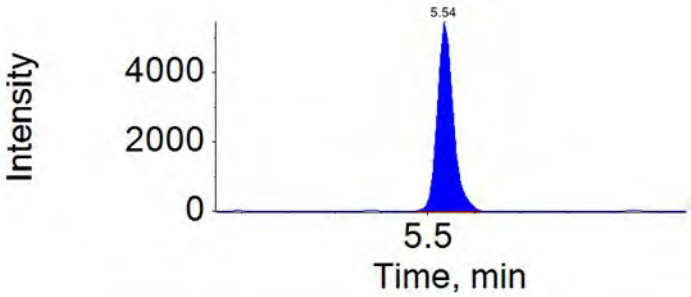
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



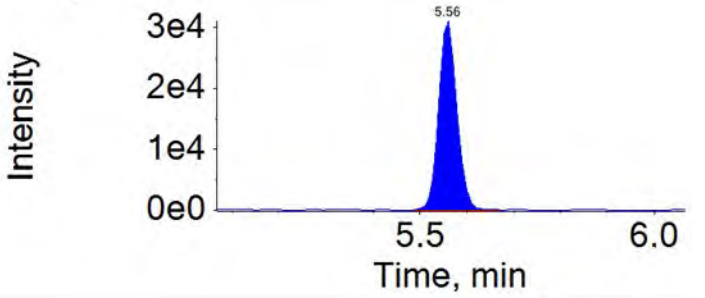
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



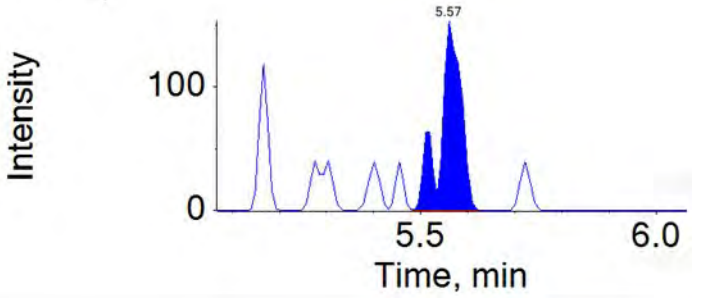
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

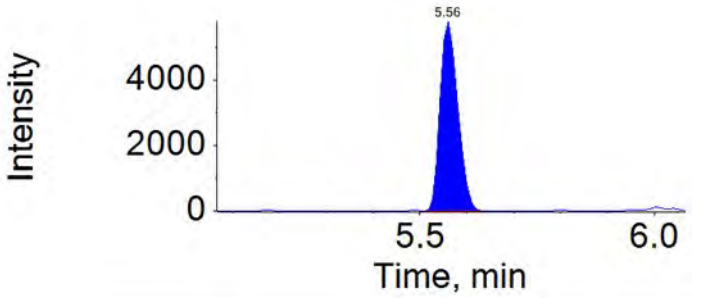
Component: PFDA
Primary Mass: 513.0 / 469.0



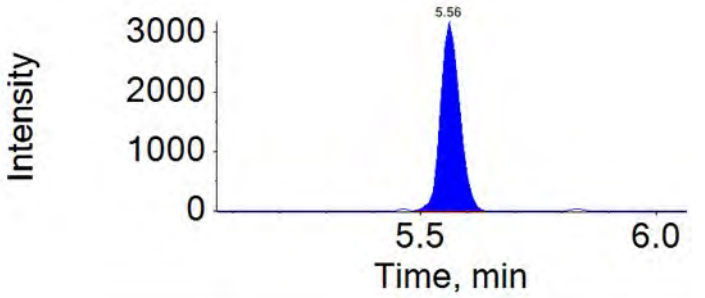
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



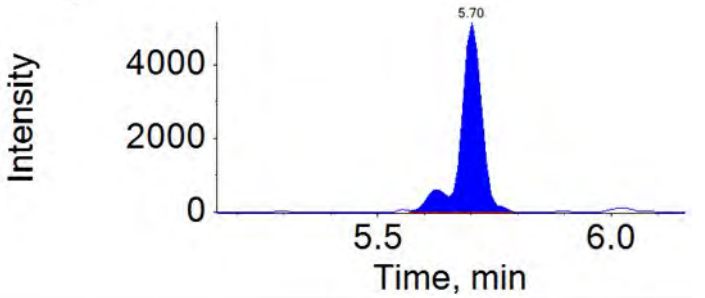
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



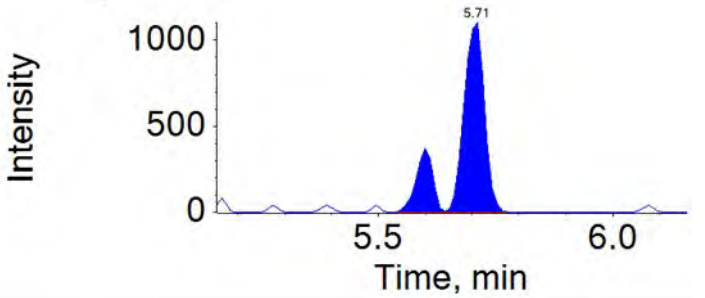
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



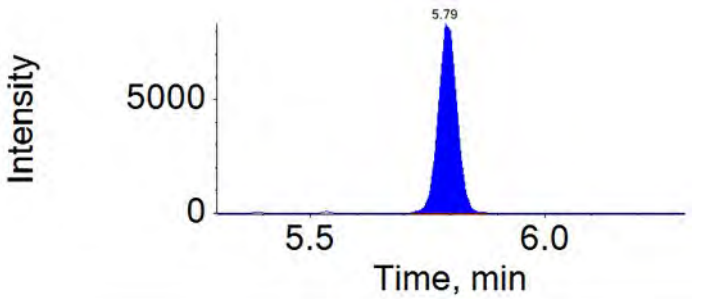
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



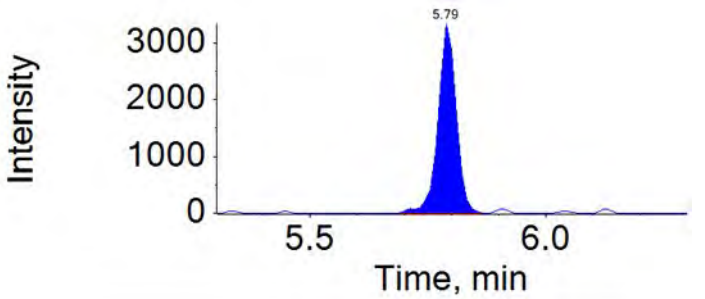
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



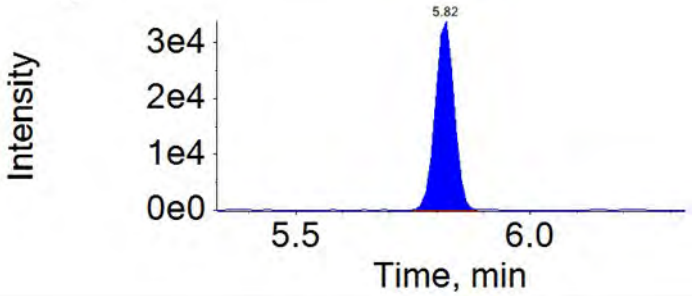
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



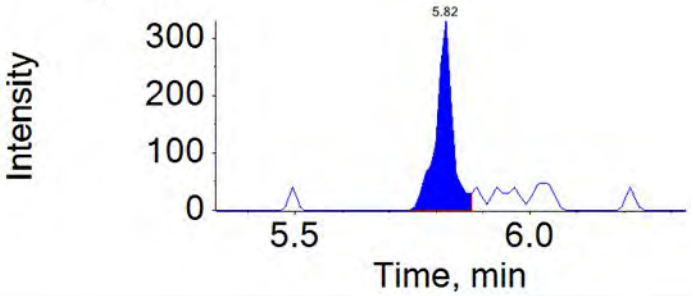
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

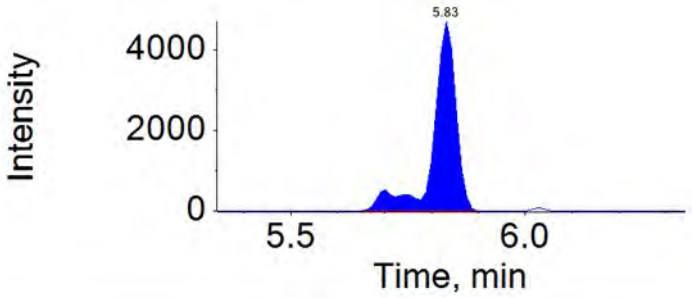
Component: PFUnDA
Primary Mass: 563.0 / 519.0



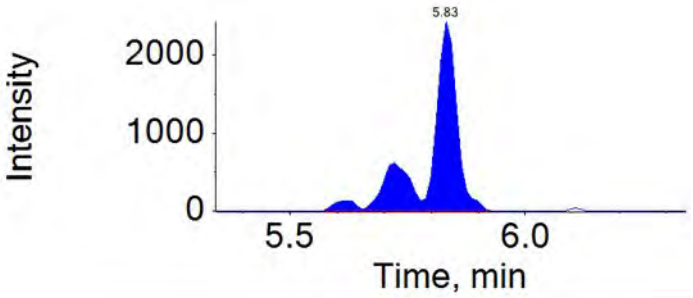
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



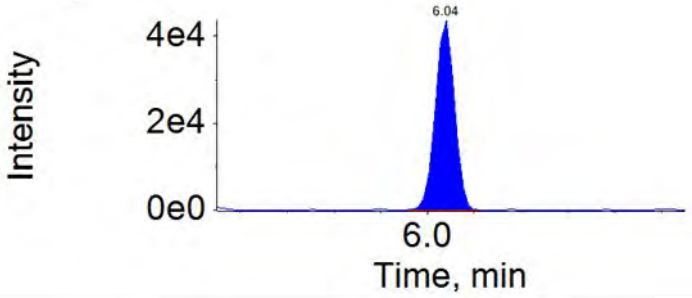
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



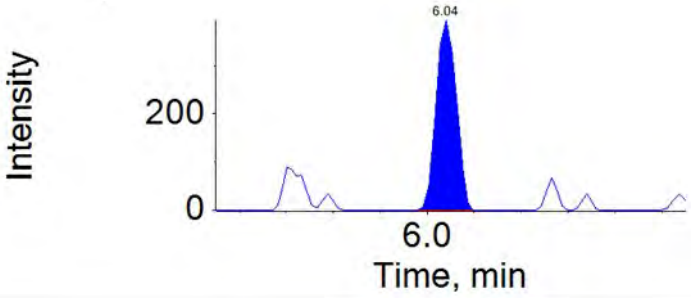
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



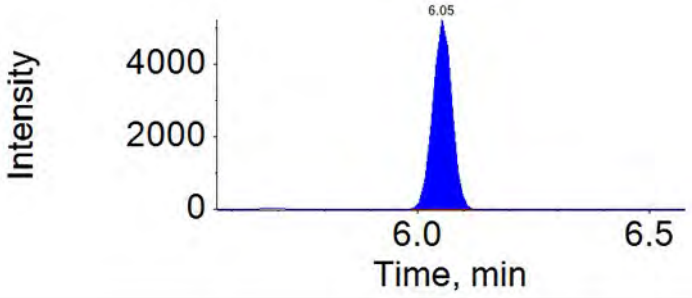
Component: PFDoDA
Primary Mass: 613.0 / 569.0



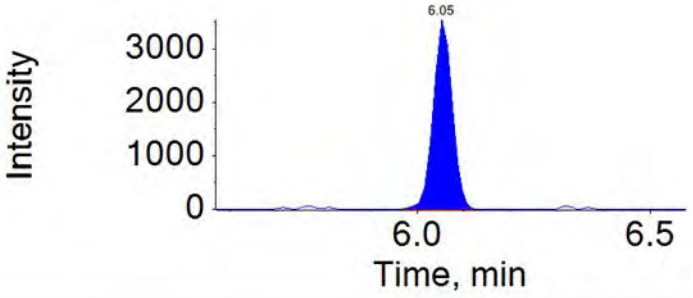
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



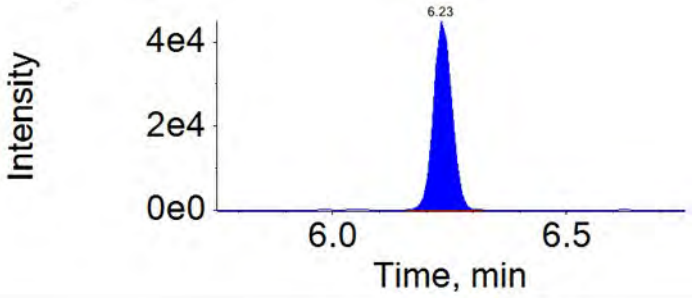
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



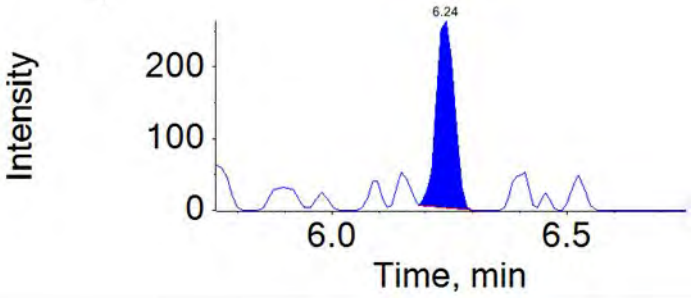
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

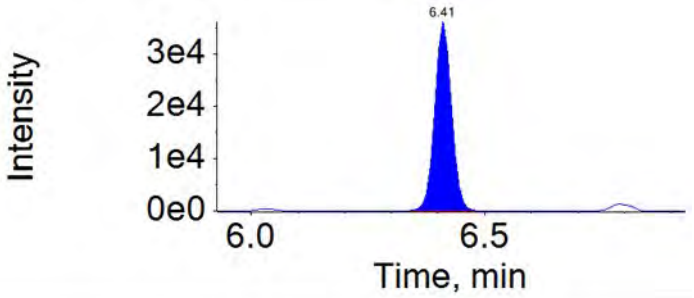
Component: PFTrDA
Primary Mass: 663.0 / 619.0



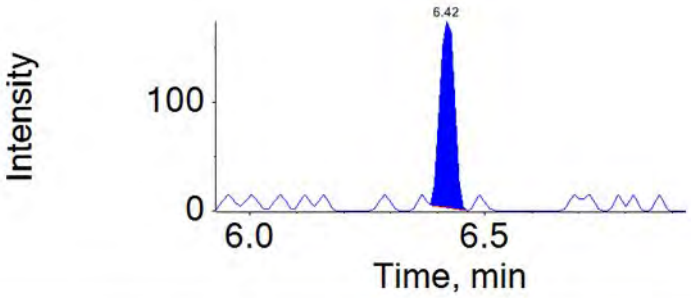
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



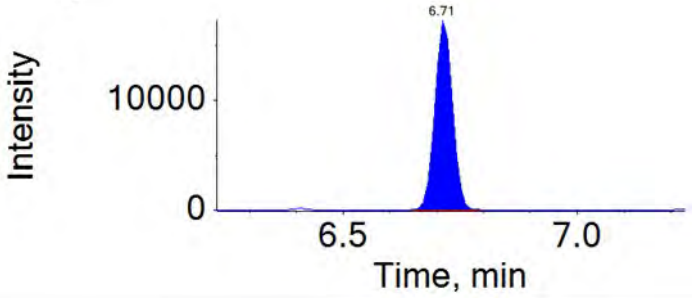
Component: PFTeDA
Primary Mass: 713.0 / 669.0



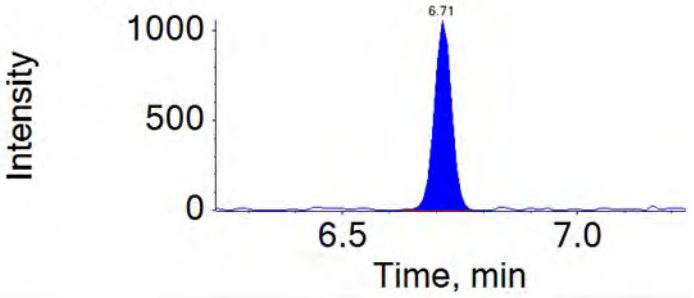
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



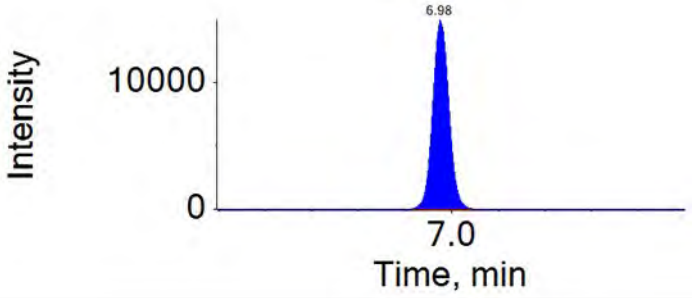
Component: PFHxDA
Primary Mass: 813.0 / 769.0



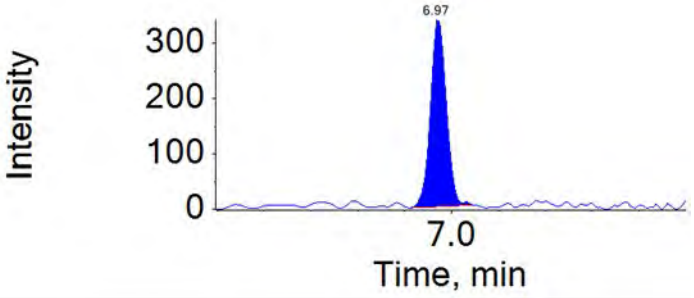
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	Instrument Blank			**Data File:**		18NOV29D-06.wiff
Sample ID:	methanol+labels			**Acquis Date:**		2018-11-29T10:42:38
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	1			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV29DCCV1-5
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1062005.8	906425.4	17	50	
13C2-PFOA	5.0	590090.2	495984.0	19	50	
13C4-PFOS	4.8	349343.8	296261.8	18	50	
13C2-PFDA	5.0	572455.9	451203.0	27	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1132653.7	13C3-PFBA	1062005.8	1.067	5.000	4.758	95	70-130	
E13C5-PFPeA	1128083.1	13C3-PFBA	1062005.8	1.062	5.000	4.960	99	70-130	
E13C3-PFBS	476370.7	13C3-PFBA	1062005.8	0.449	4.650	4.279	92	70-130	
E13C2-4:2-FTS	78954.9	13C2-PFOA	590090.2	0.134	4.670	4.611	99	70-130	
E13C5-PFHxA	755459.8	13C2-PFOA	590090.2	1.280	5.000	4.702	94	70-130	
E13C3-PFHxS	367272.1	13C2-PFOA	590090.2	0.622	4.730	4.878	103	70-130	
E13C4-PFHpA	595459.5	13C2-PFOA	590090.2	1.009	5.000	4.637	93	70-130	
E13C2-6:2-FTS	74720.2	13C2-PFOA	590090.2	0.127	4.750	5.301	112	70-130	
E13C8-PFOA	1117311.6	13C2-PFOA	590090.2	1.893	5.000	5.212	104	70-130	
E13C8-PFOS	362141.8	13C4-PFOS	349343.8	1.037	4.780	4.680	98	70-130	
E13C9-PFNA	736579.7	13C4-PFOS	349343.8	2.108	5.000	4.631	93	70-130	
E13C6-PFDA	971727.0	13C2-PFDA	572455.9	1.697	5.000	4.786	96	70-130	
E13C2-8:2-FTS	64213.8	13C2-PFDA	572455.9	0.112	4.790	4.821	101	70-130	
E13C8-PFOSA	703815.0	13C2-PFDA	572455.9	1.229	5.000	4.511	90	70-130	
Ed3-NMeFOSAA	270439.1	13C2-PFDA	572455.9	0.472	5.000	5.998	120	70-130	
E13C7-PFUnDA	658462.5	13C2-PFDA	572455.9	1.150	5.000	4.861	97	70-130	
Ed5-NEtFOSAA	166412.1	13C2-PFDA	572455.9	0.291	5.000	5.179	104	70-130	
E13C2-PFDoDA	1273913.7	13C2-PFDA	572455.9	2.225	5.000	4.676	94	70-130	
Ed7-NMePFOSAE	305138.6	13C2-PFDA	572455.9	0.533	5.000	4.607	92	70-130	
Ed3-NMePFOSA	98756.0	13C2-PFDA	572455.9	0.173	5.000	4.669	93	70-130	
Ed9-NEtPFOSAE	275015.1	13C2-PFDA	572455.9	0.480	5.000	4.871	97	70-130	
Ed5-NEtPFOSA	83472.3	13C2-PFDA	572455.9	0.146	5.000	5.067	101	70-130	
E13C2-PFTeDA	926470.4	13C2-PFDA	572455.9	1.618	5.000	4.478	90	70-130	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

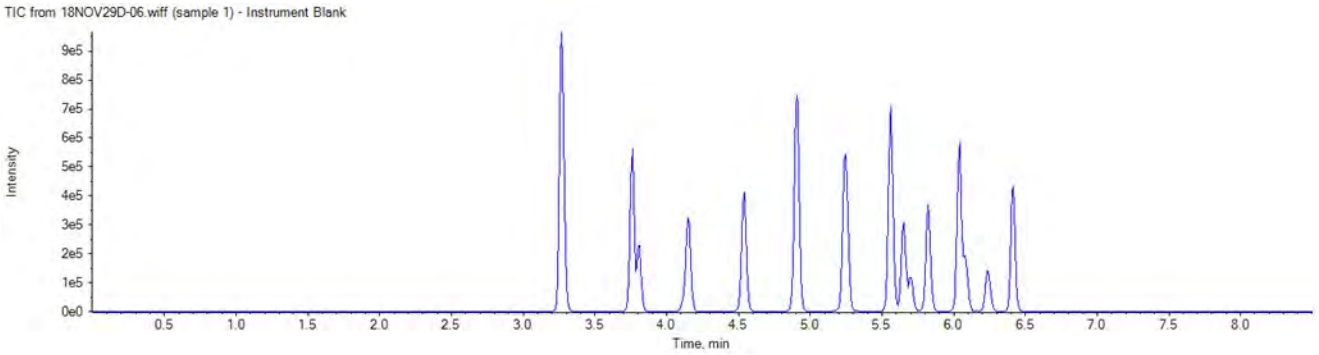
Analyte Quantitation Peak Table

Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV29D-06.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	1132653.7	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	1128083.1	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	476370.7	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	78954.9	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	755459.8	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	476370.7	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	595459.5	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	367272.1	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	74720.2	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	367272.1	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	1117311.6	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	362141.8	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	736579.7	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	362141.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	971727.0	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	64213.8	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	703815.0	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	270439.1	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	362141.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	658462.5	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	166412.1	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1273913.7	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.57	64213.8	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	305138.6	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.09	98756.0	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	362141.8	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.23	275015.1	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.25	83472.3	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	1273913.7	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	926470.4	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	926470.4	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.41	926470.4	N/A	

Total Ion Chromatogram

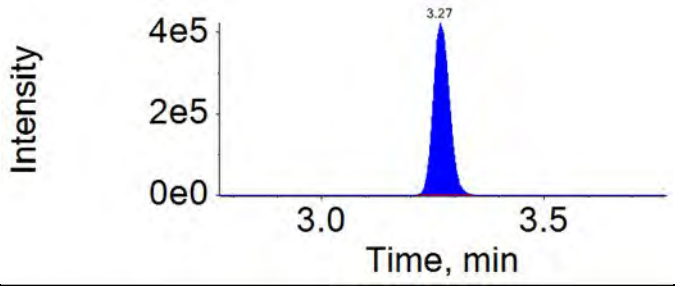


APPROVED
By MCD at 8:06 pm, 11/29/18

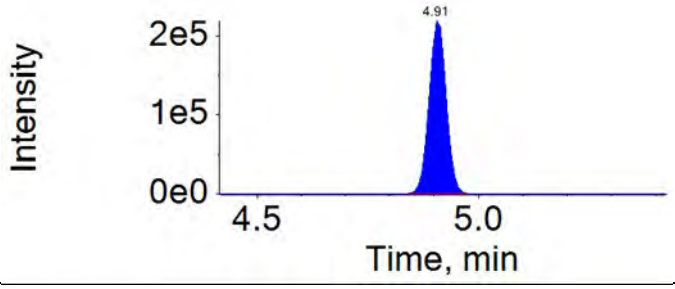
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

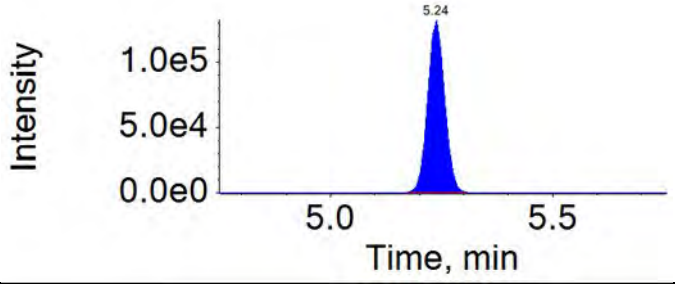
Injection Standard: 13C3-PFBA
216.0 / 172.0



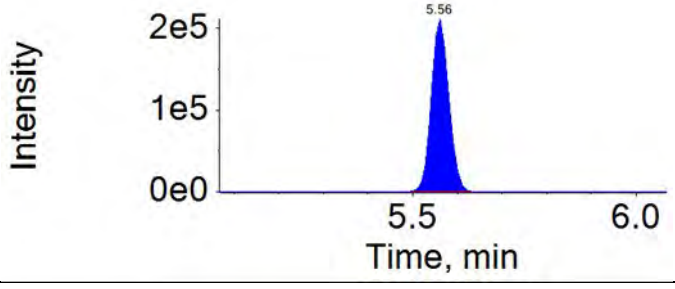
Injection Standard: 13C2-PFOA
415.0 / 370.0



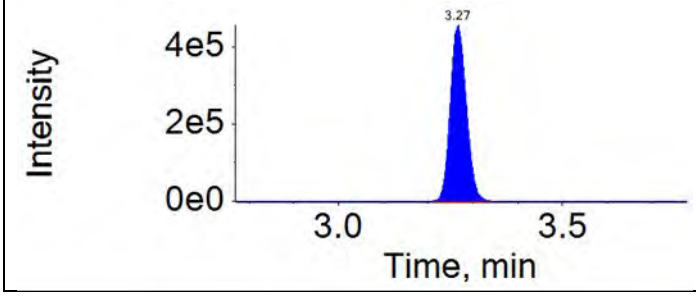
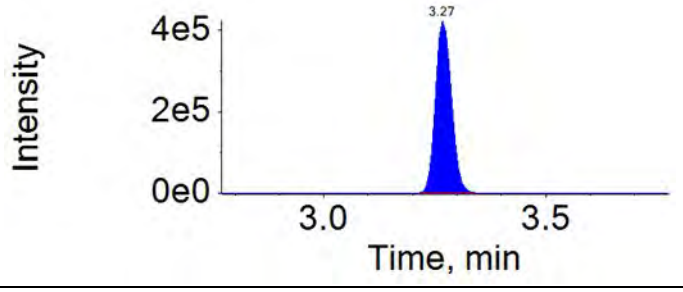
Injection Standard: 13C4-PFOS
503.0 / 80.0

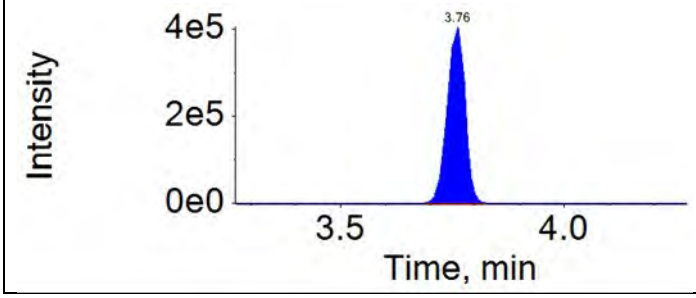
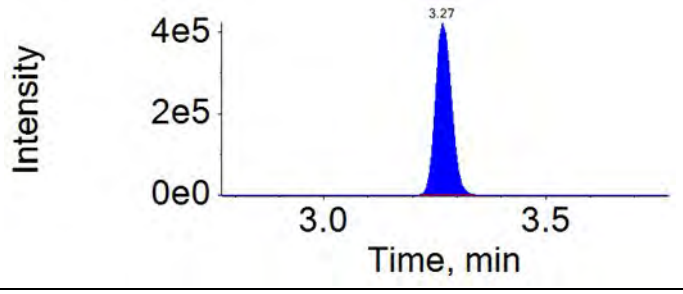


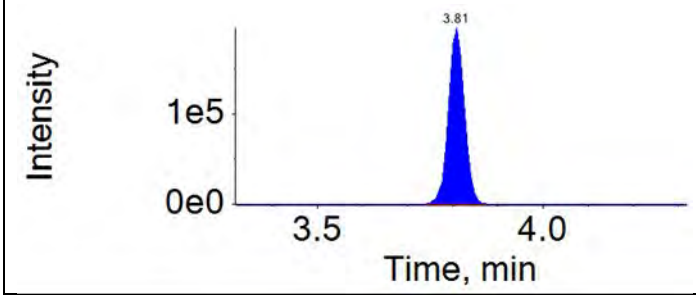
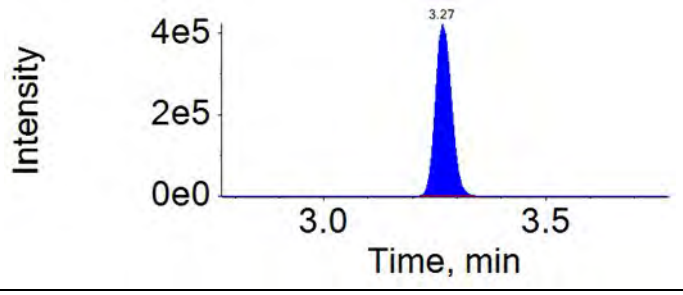
Injection Standard: 13C2-PFDA
515.0 / 470.0

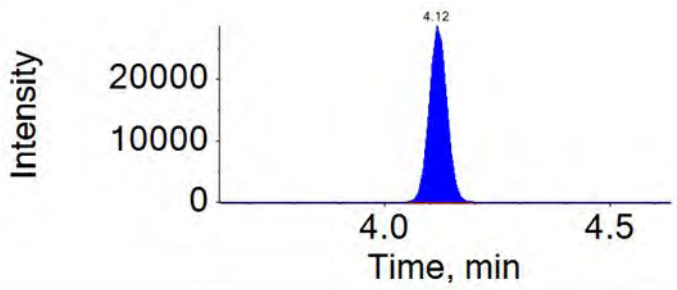
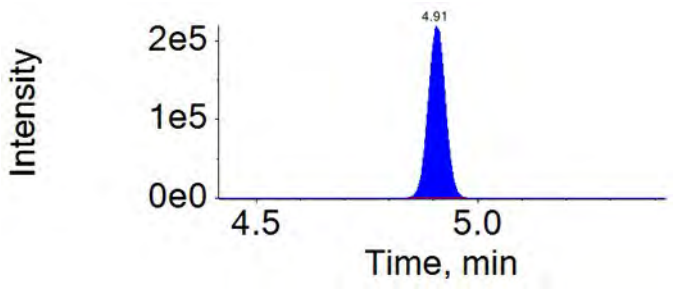


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

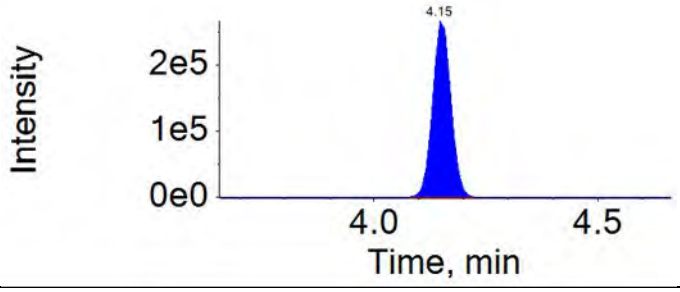
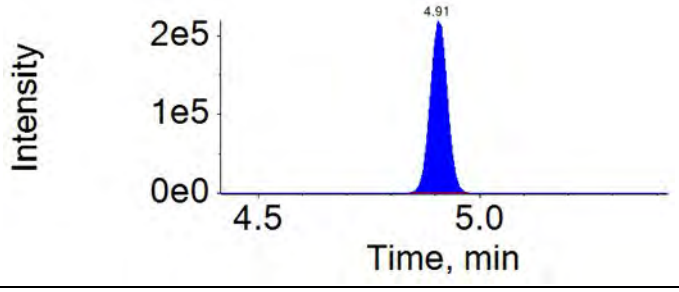
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

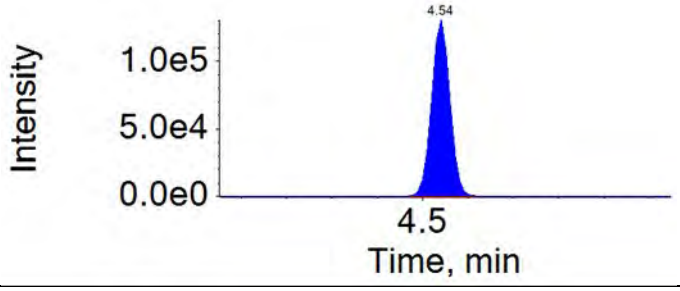
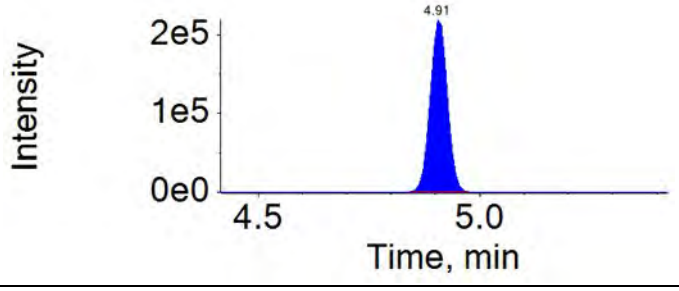
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

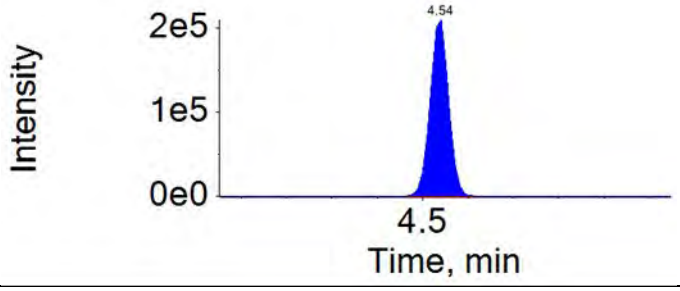
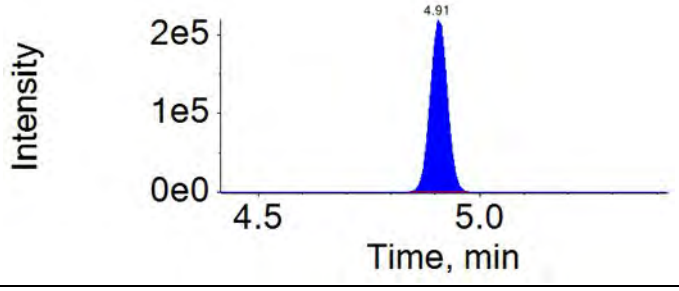
APPROVED
By MCD at 8:06 pm, 11/29/18

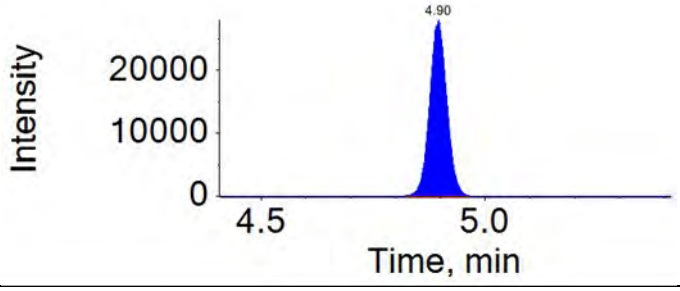
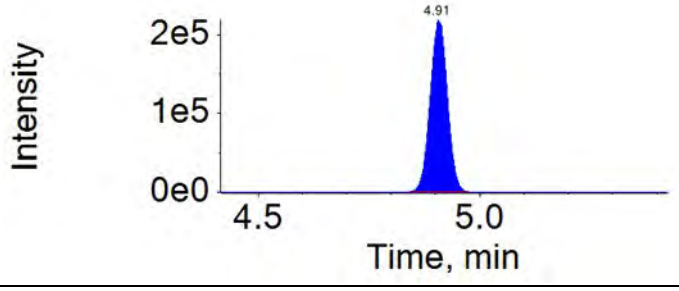
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

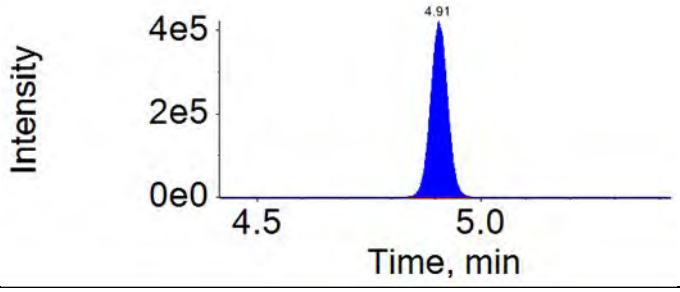
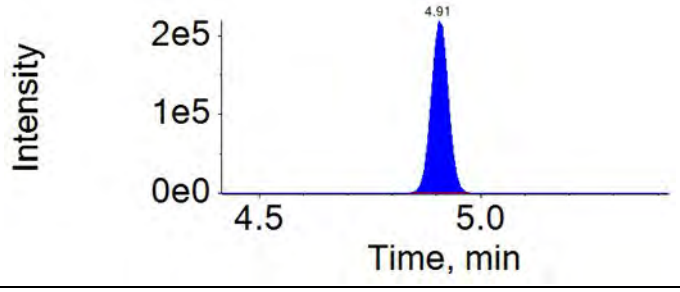
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

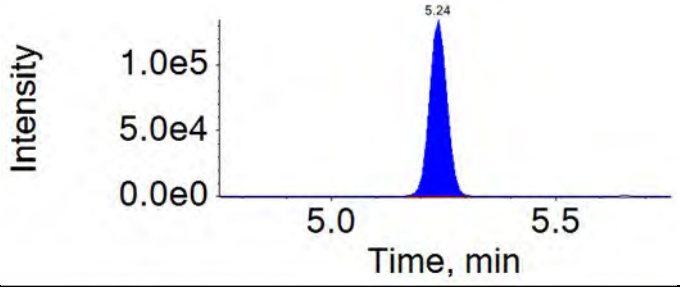
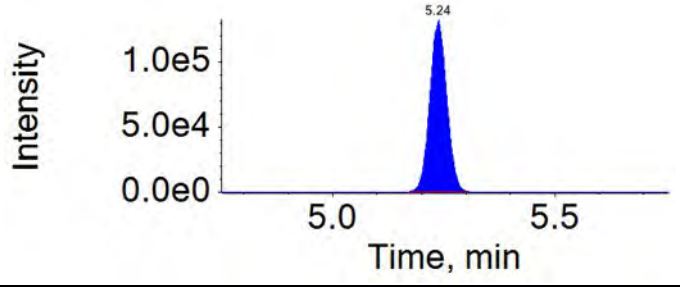
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

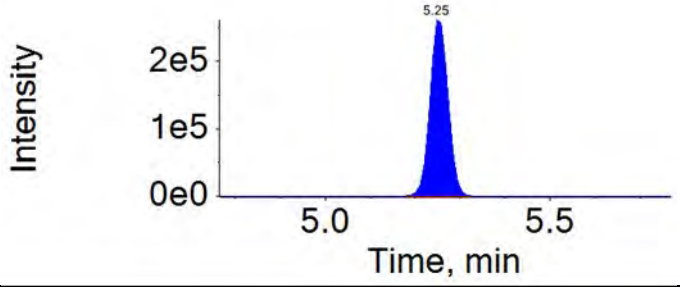
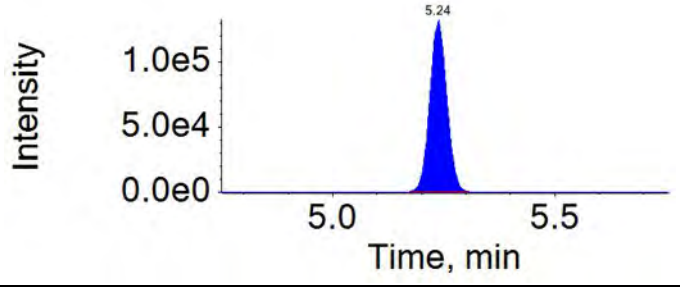
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

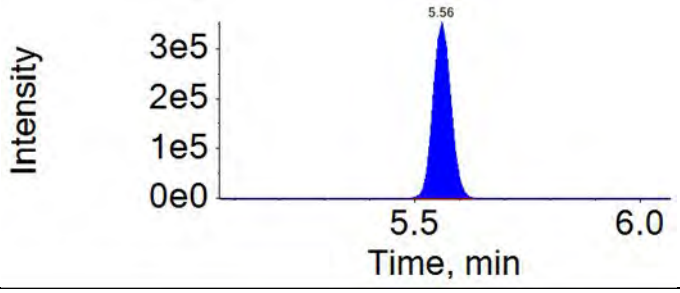
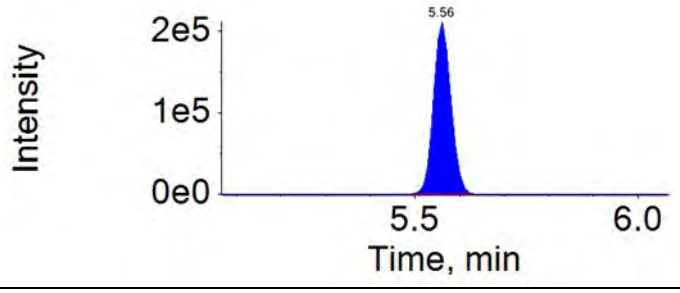
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

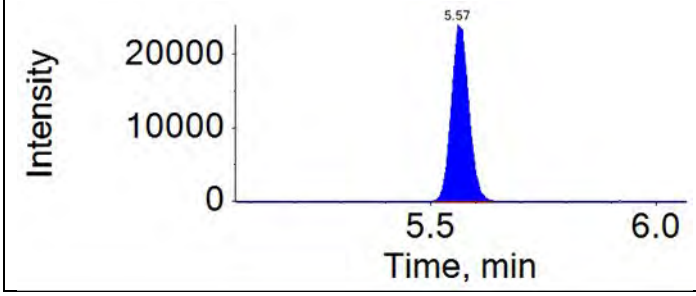
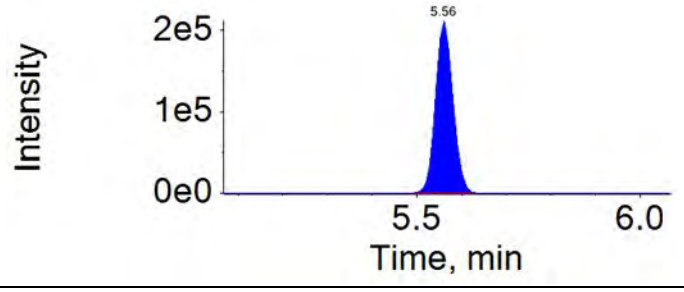
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

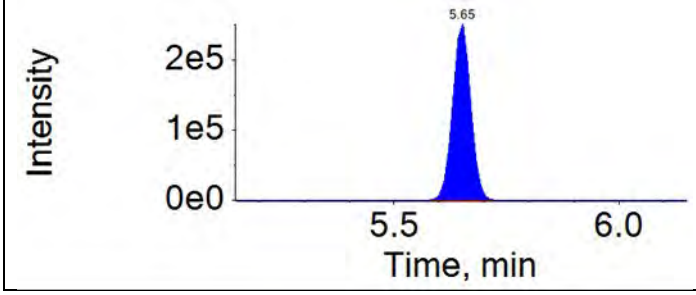
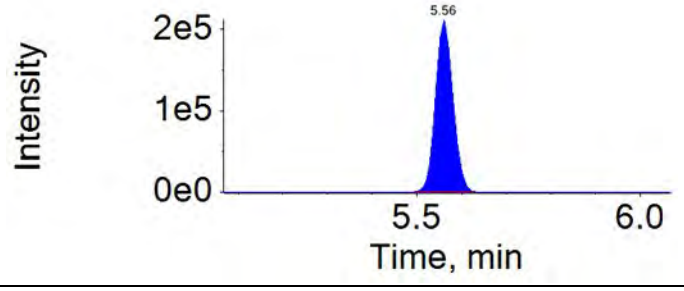
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

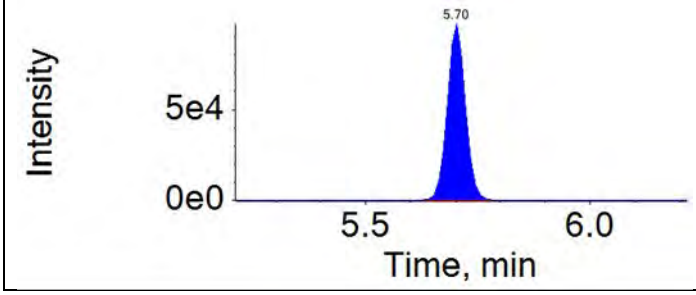
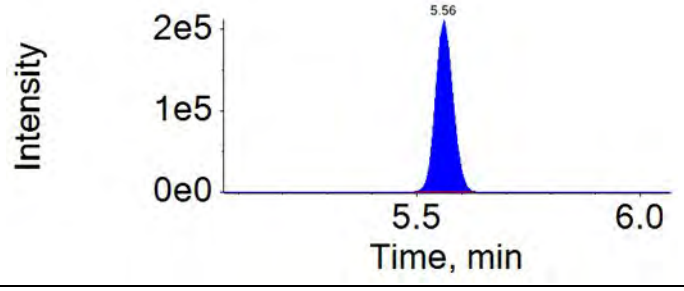
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

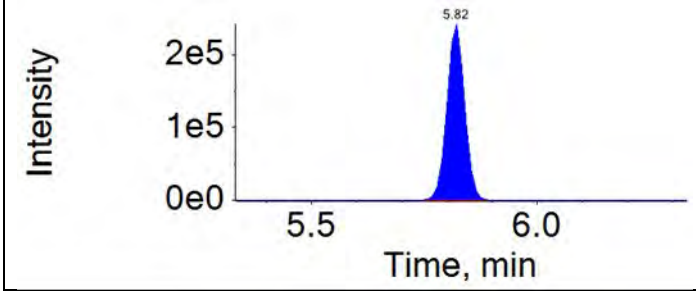
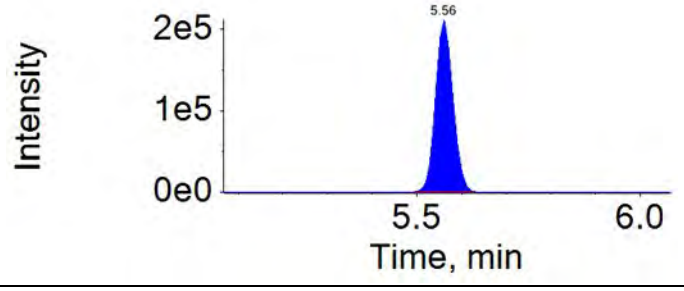
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

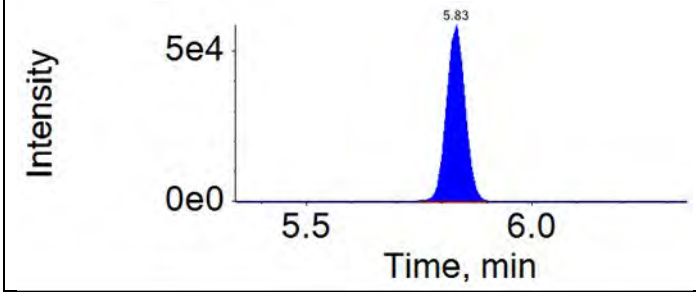
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

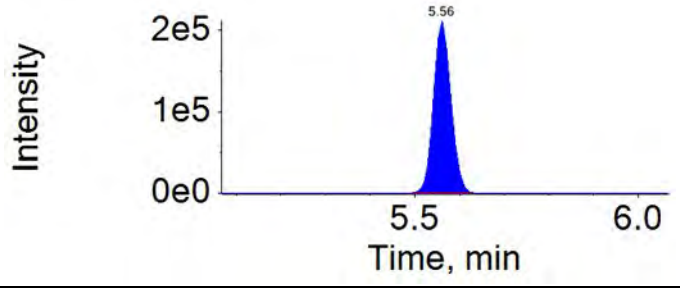
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

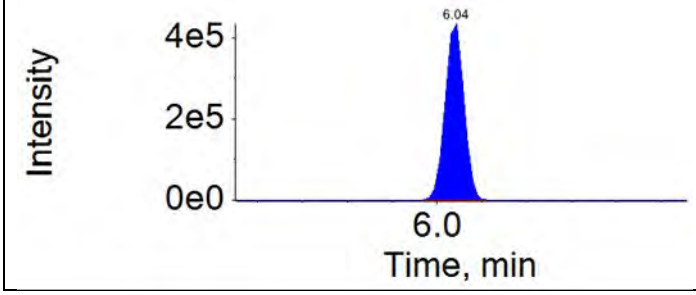
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

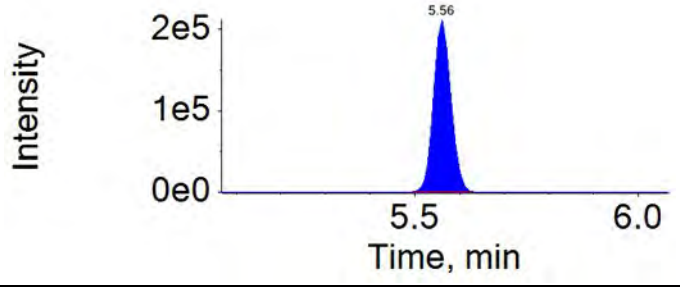
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



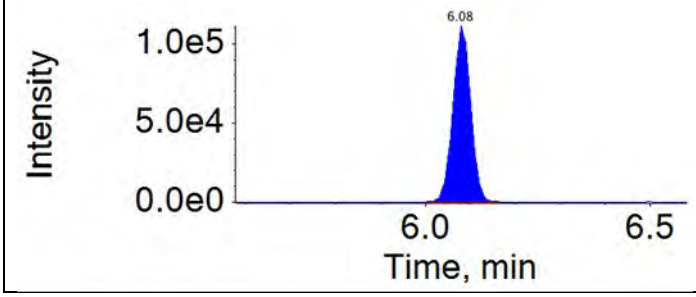


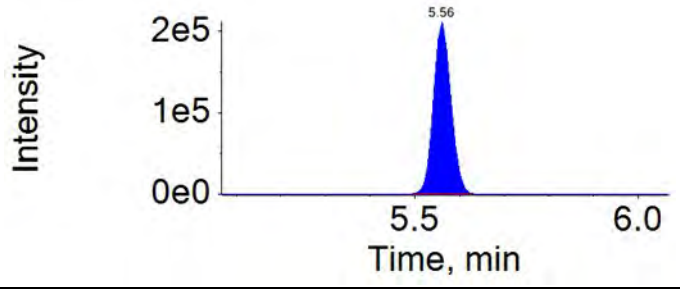
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



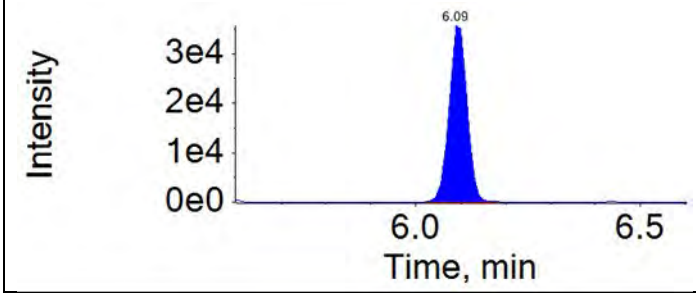


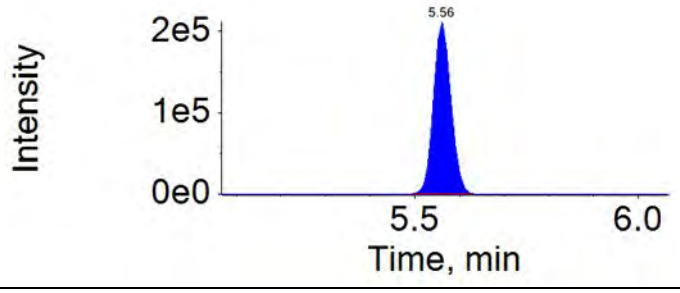
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



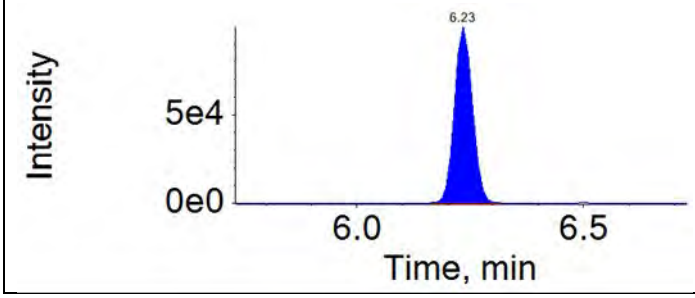


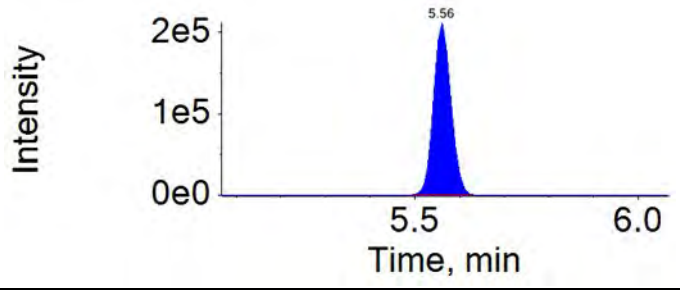
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

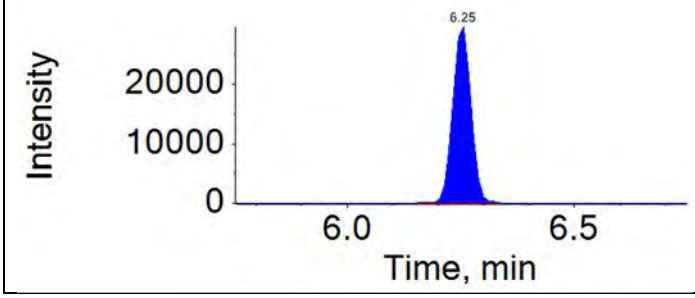
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

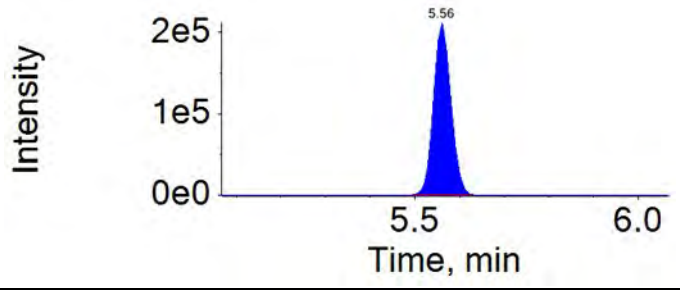
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



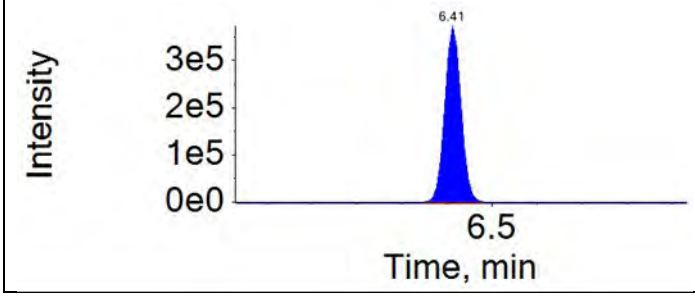


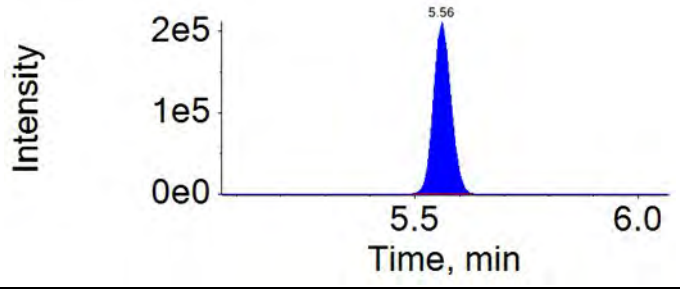
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



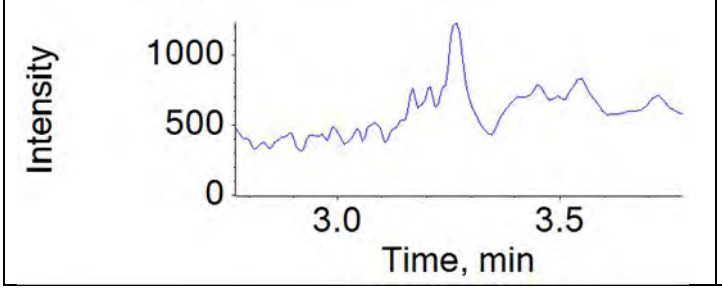


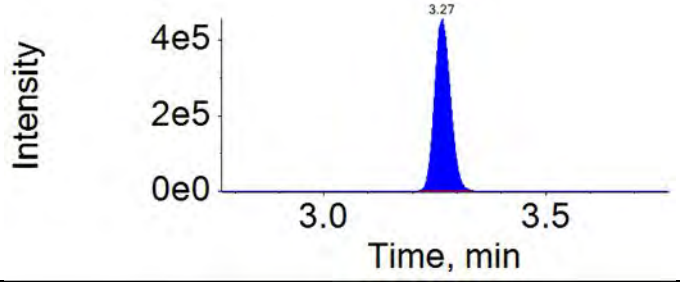
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

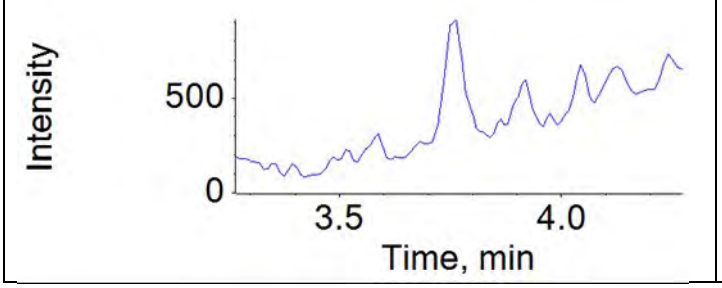
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

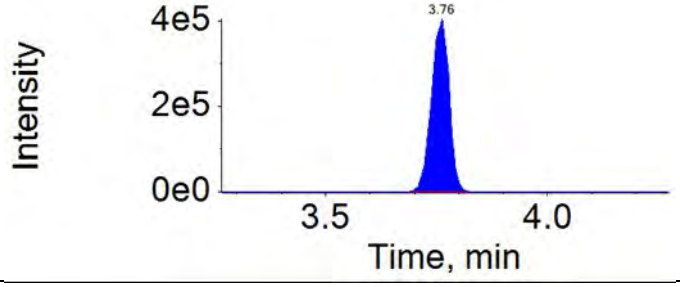
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



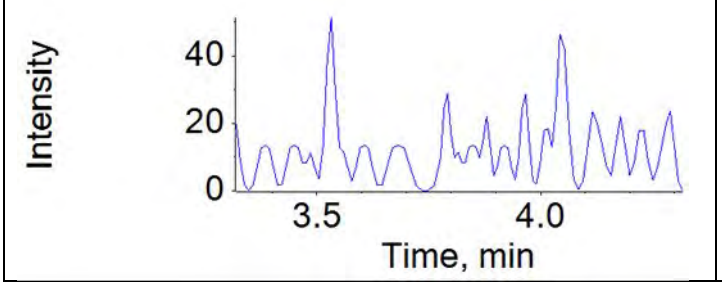


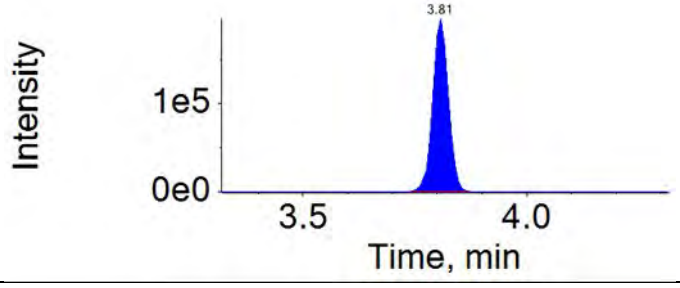
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



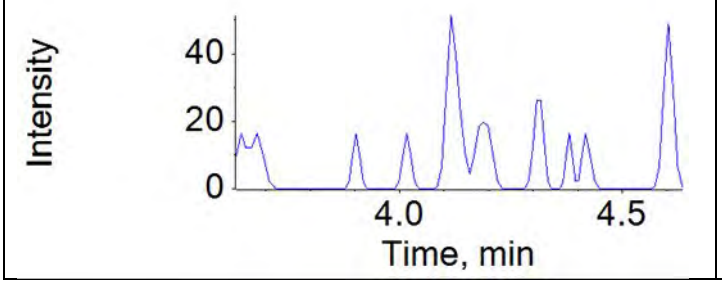


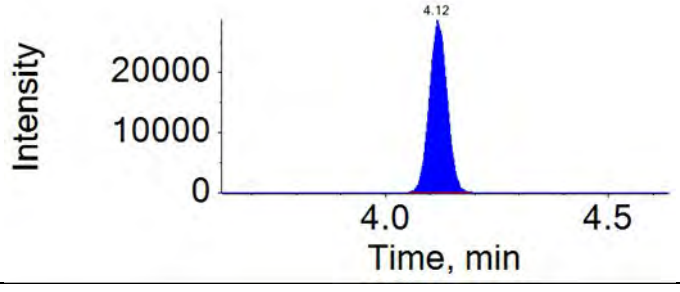
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



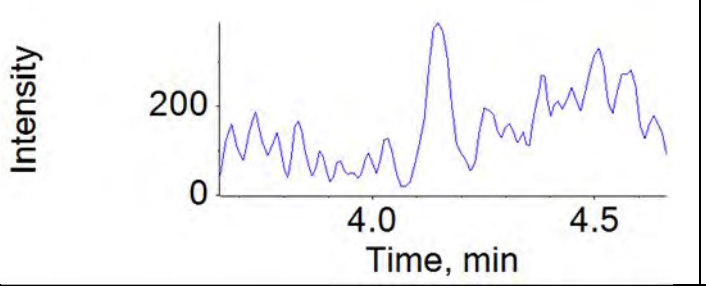


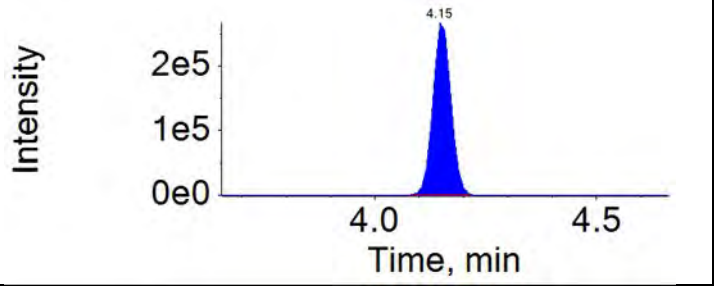
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

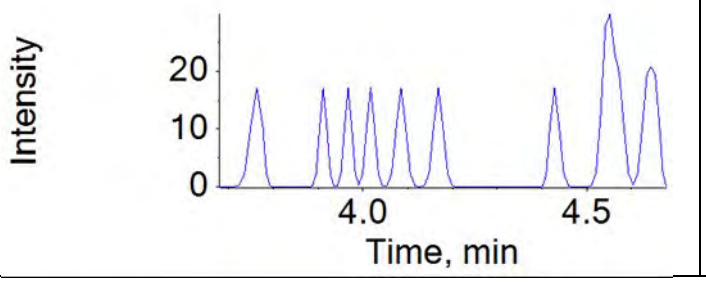
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

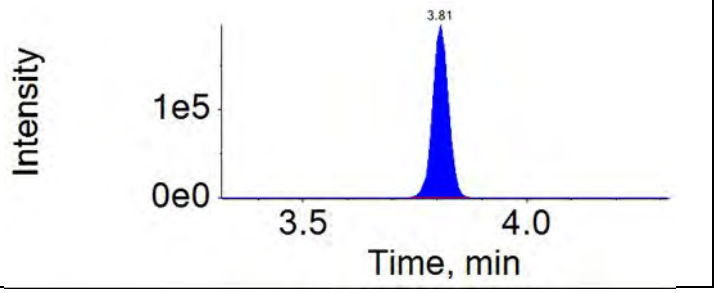
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



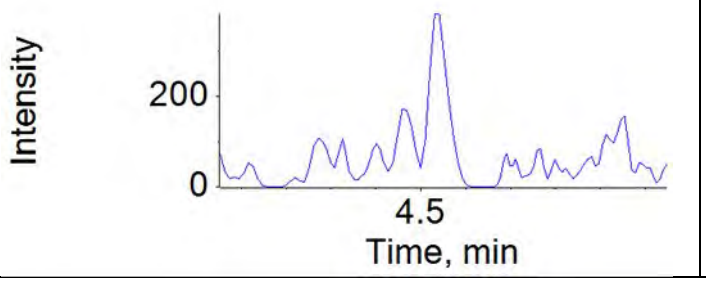


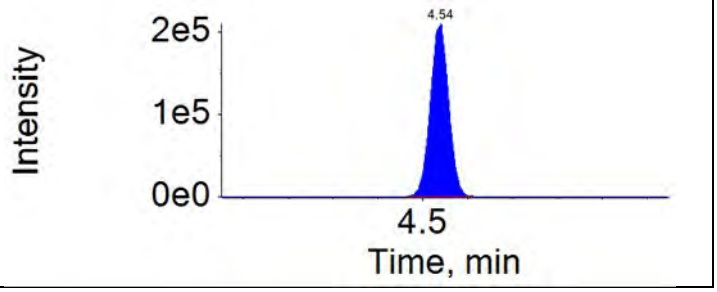
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



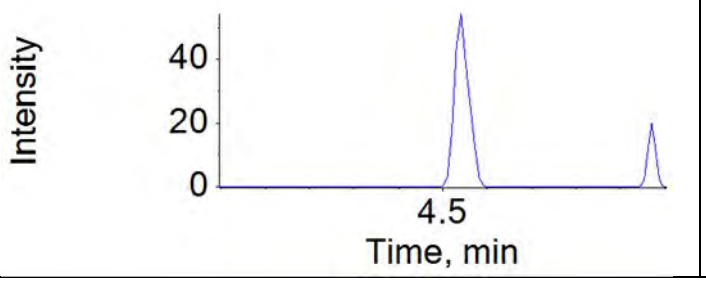


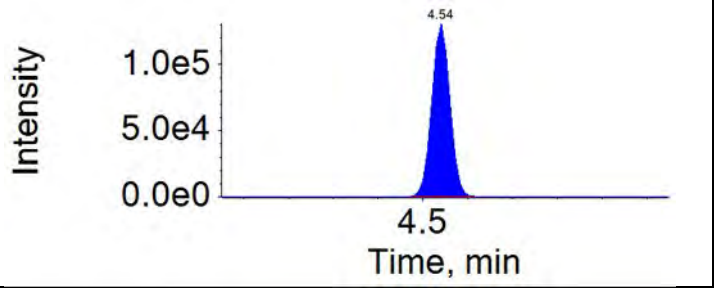
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



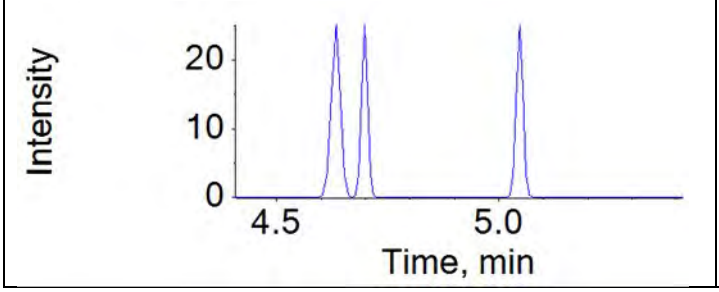


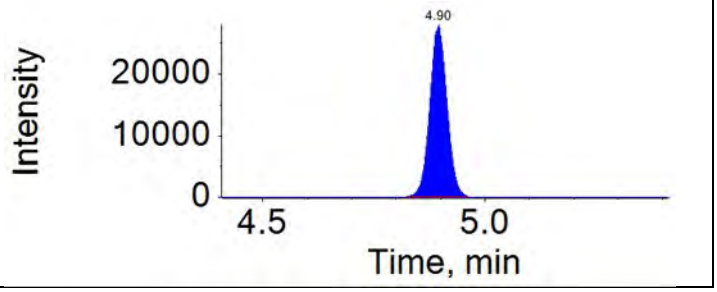
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

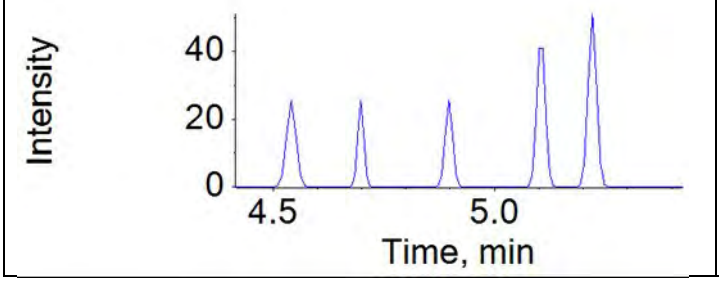
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

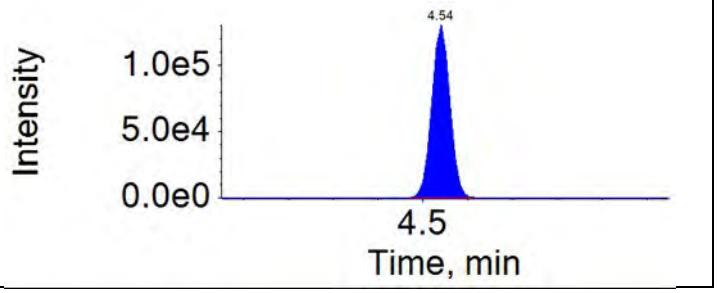
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



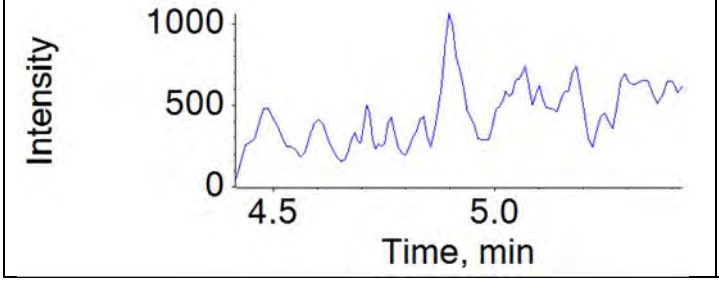


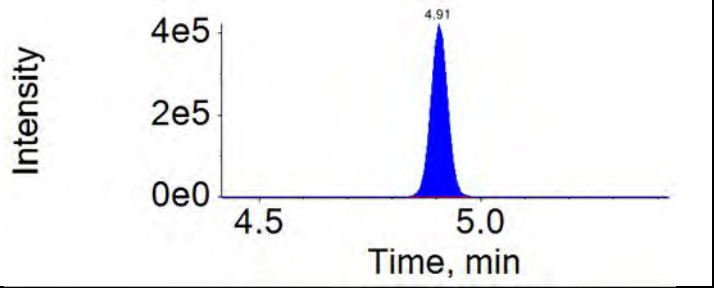
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



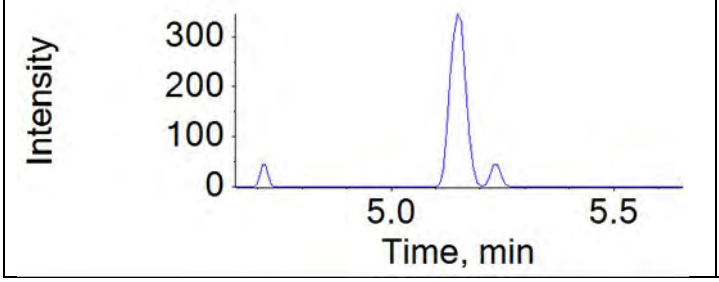


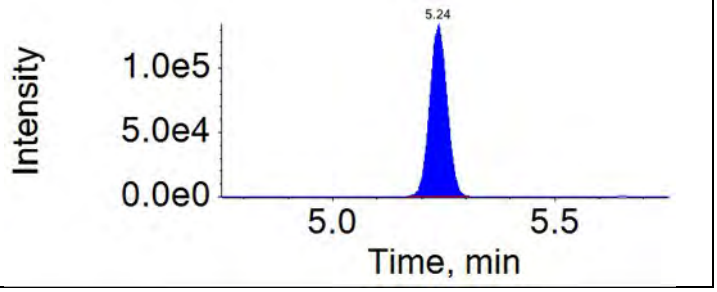
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



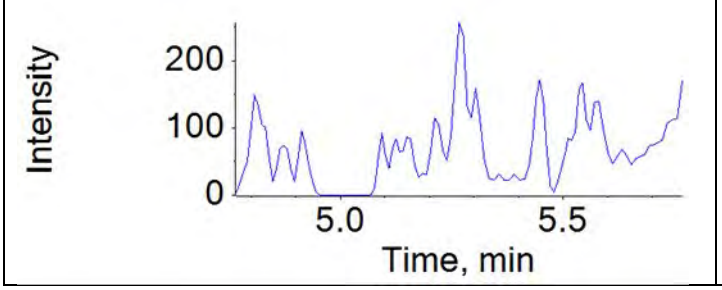


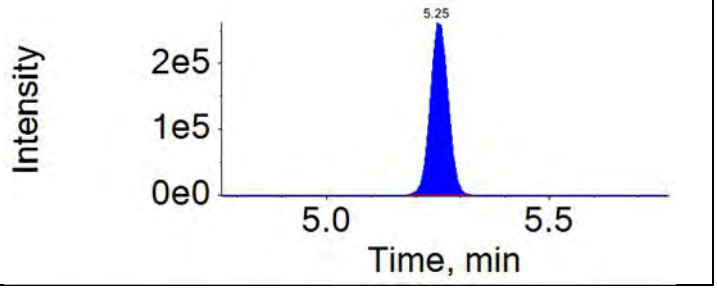
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

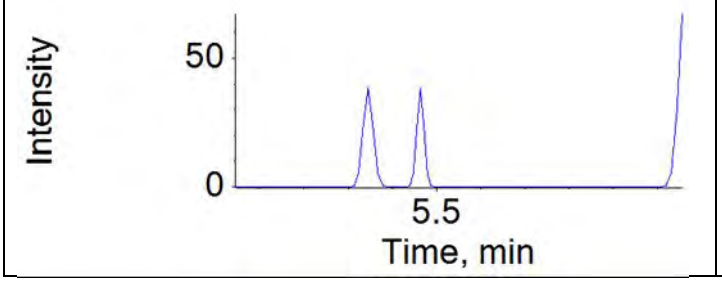
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

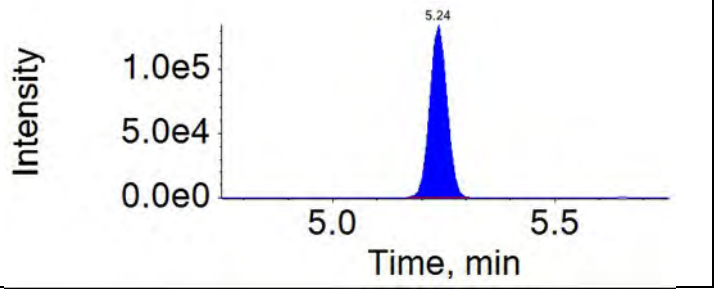
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



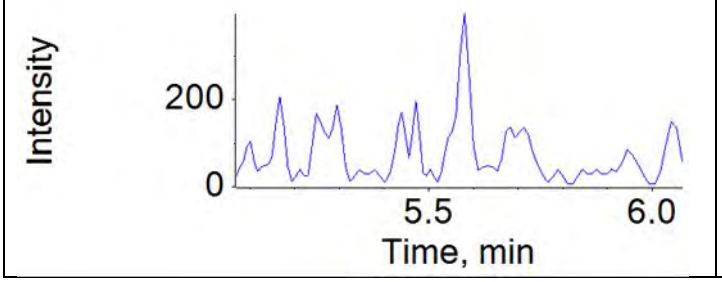


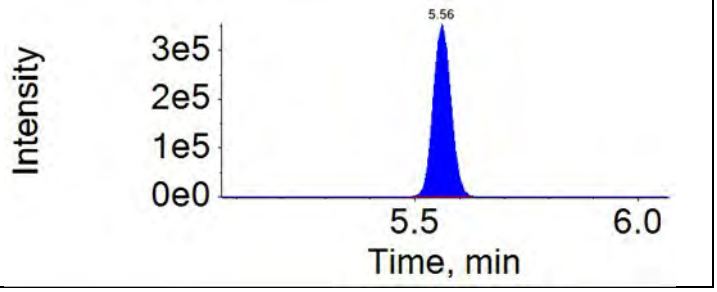
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



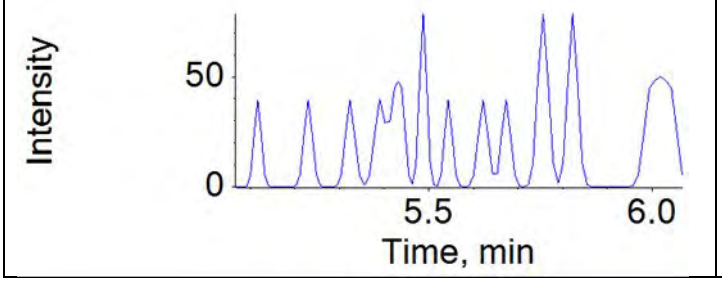


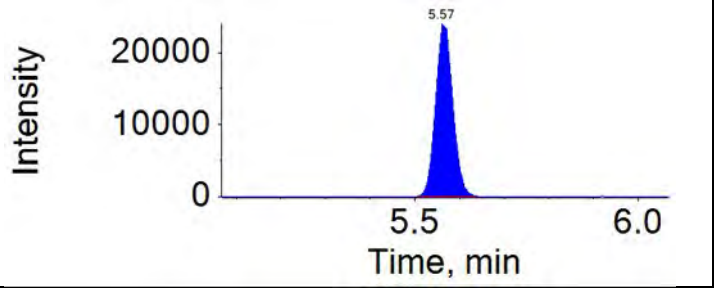
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



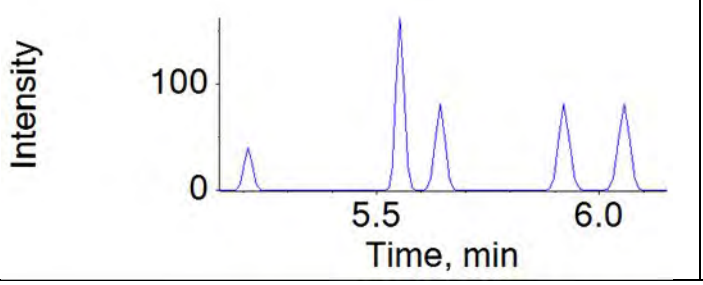


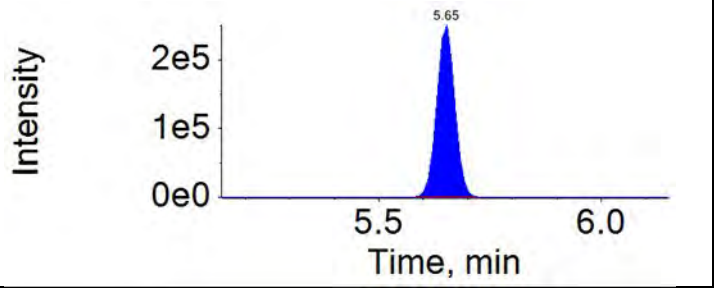
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

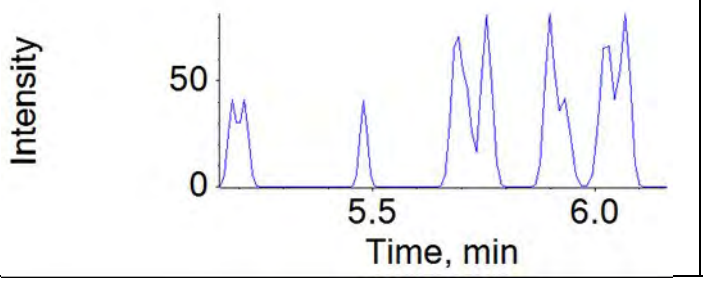
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

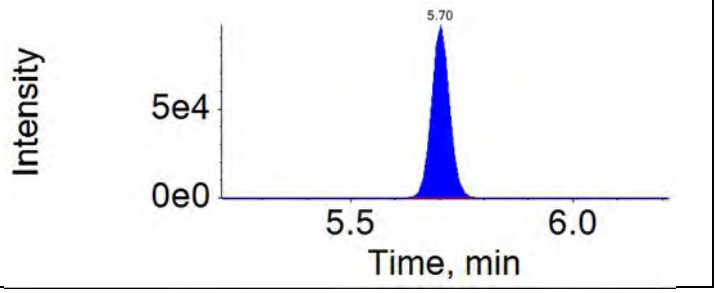
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



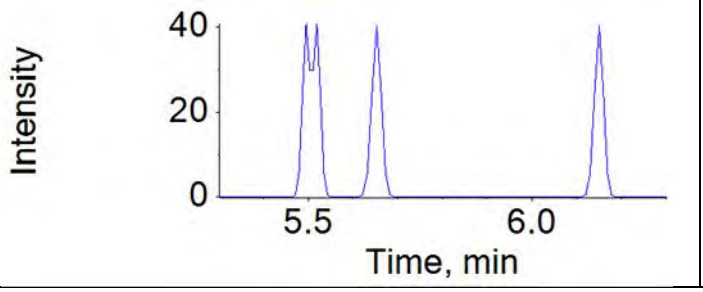


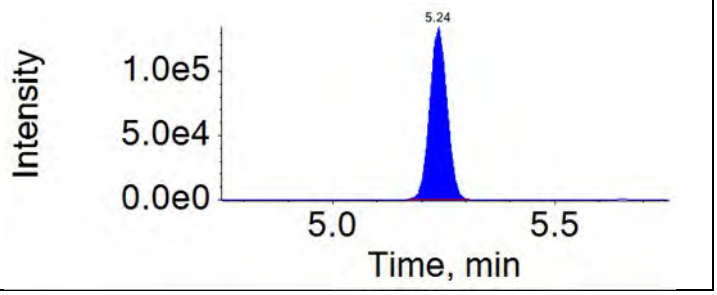
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



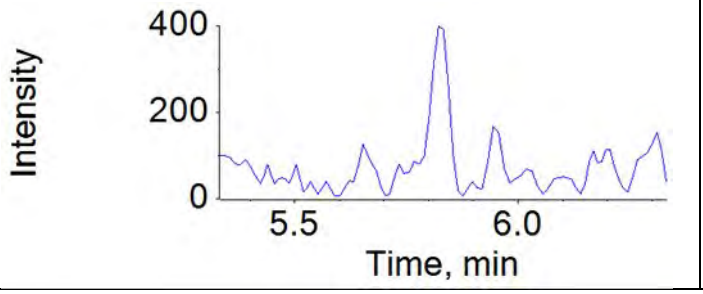


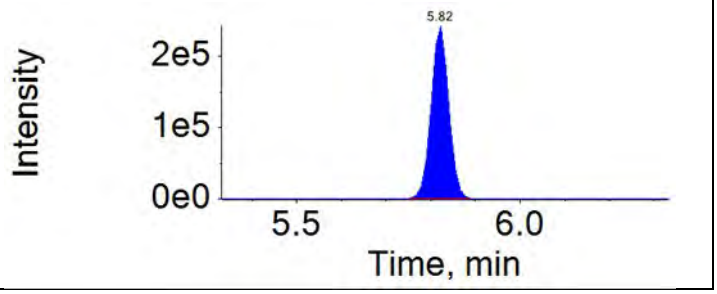
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



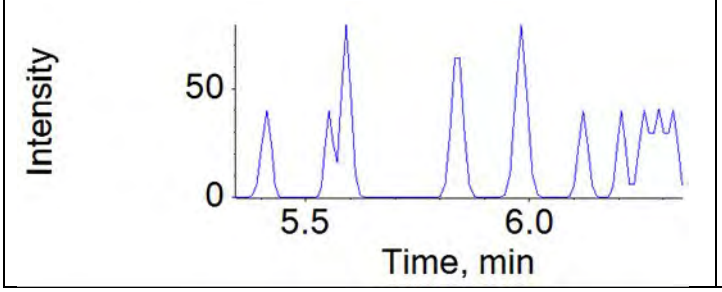


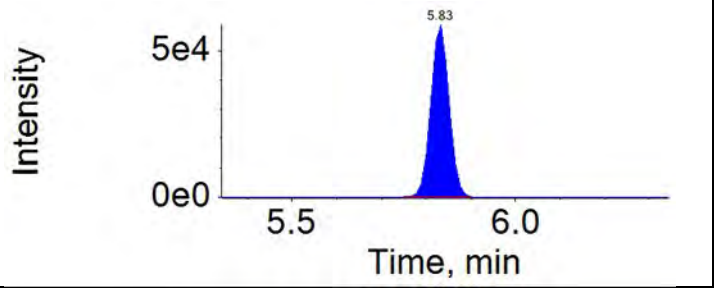
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

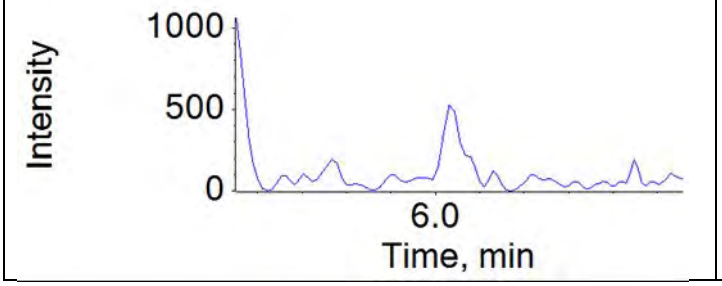
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

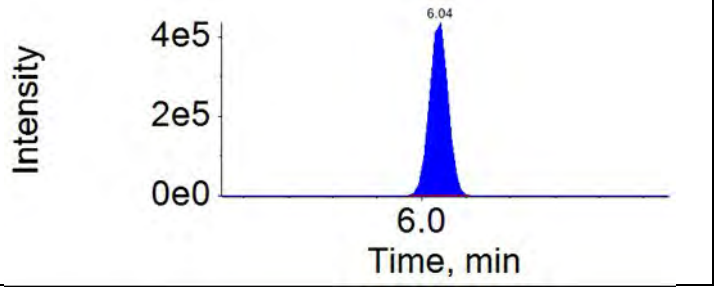
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



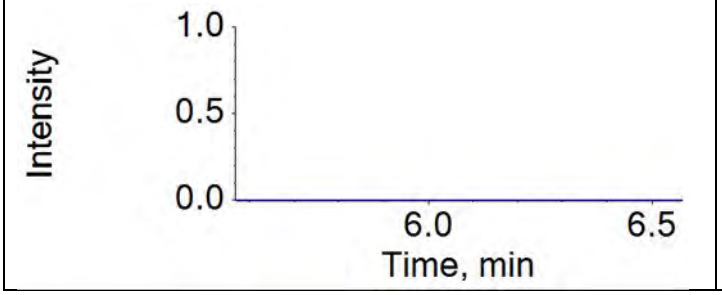


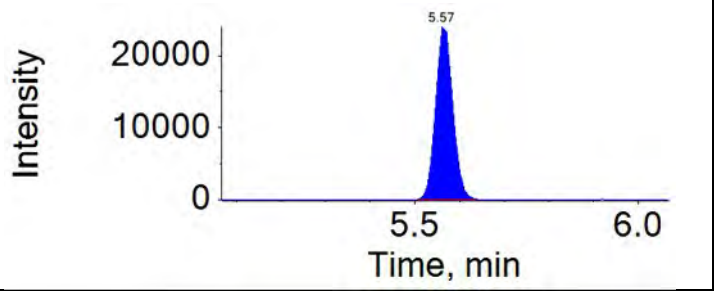
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



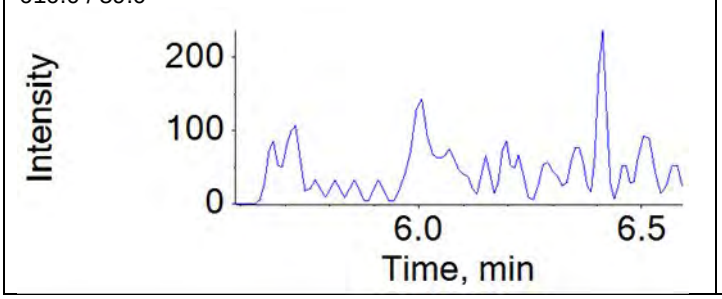


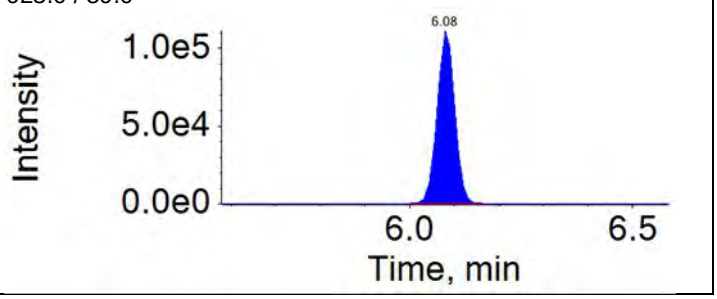
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



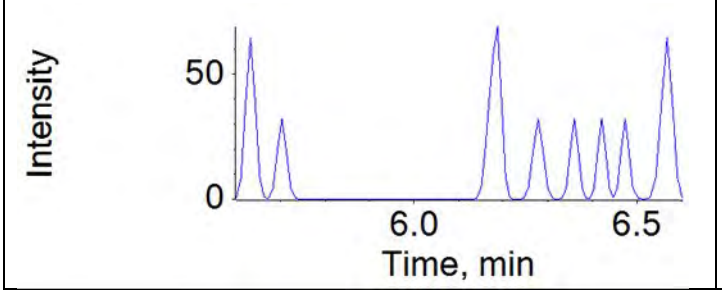


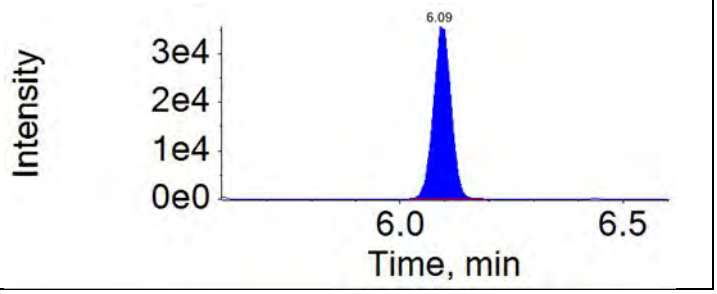
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

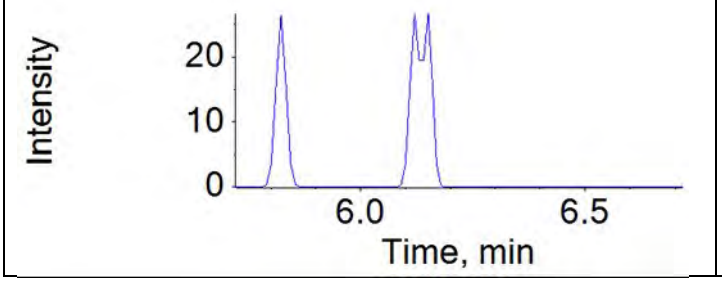
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

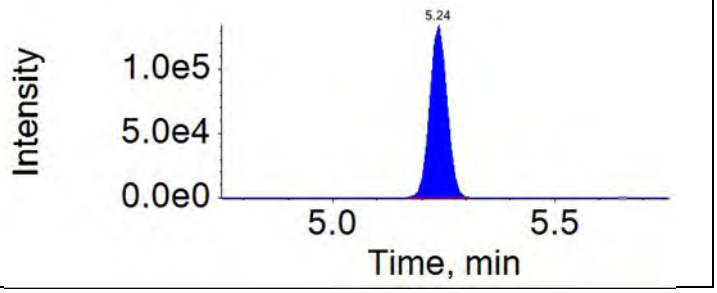
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



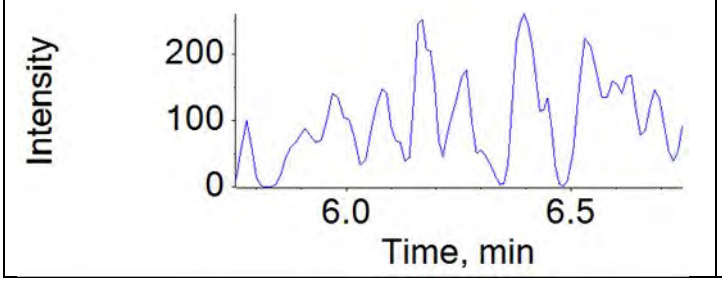


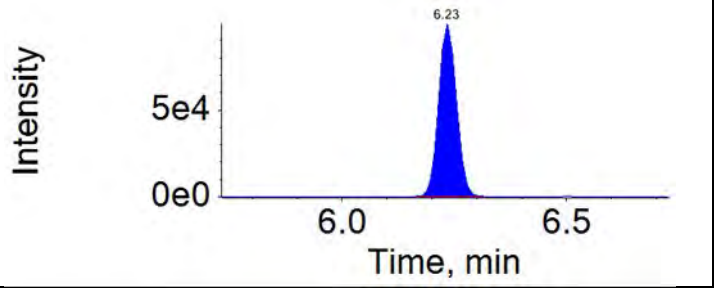
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



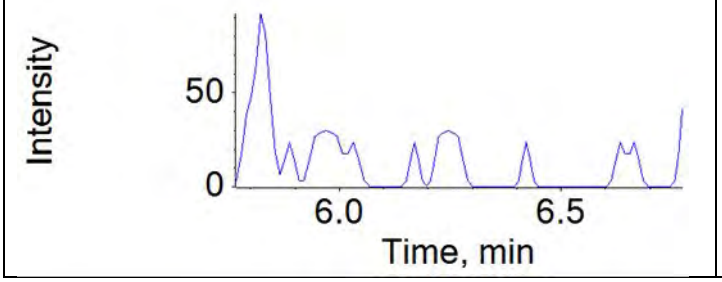


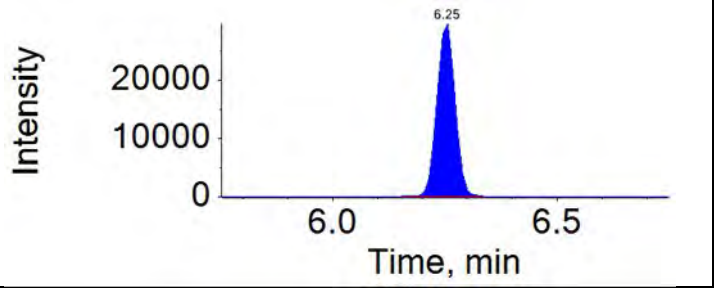
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



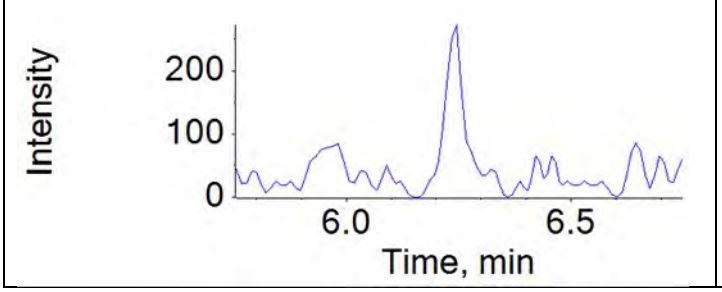


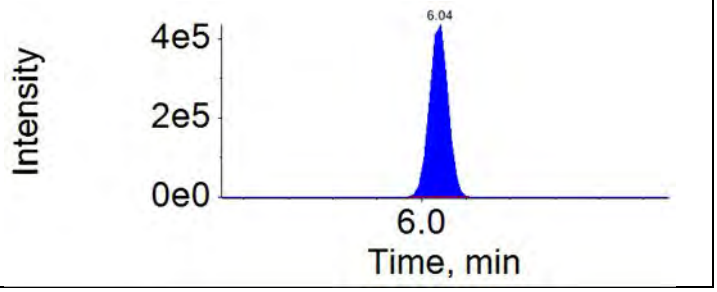
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

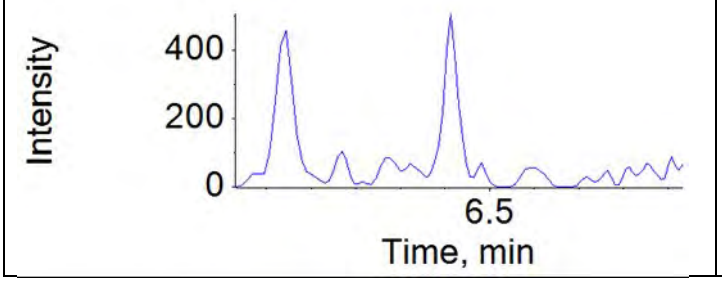
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

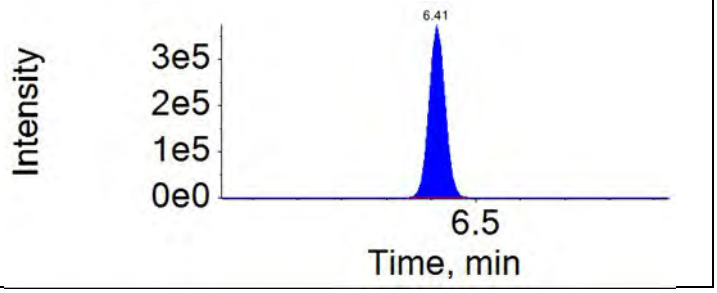
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



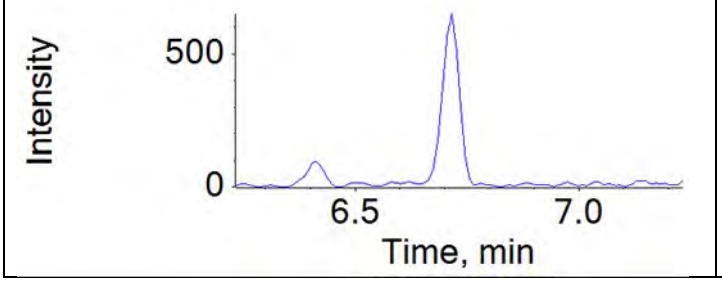


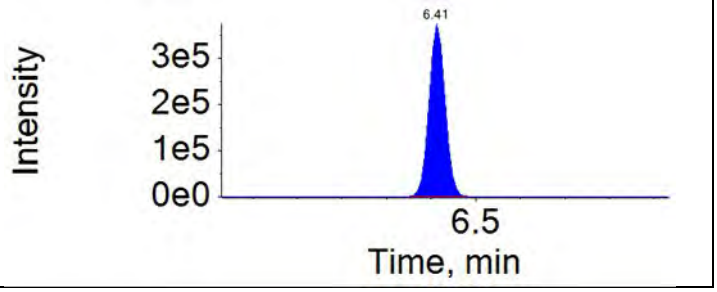
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



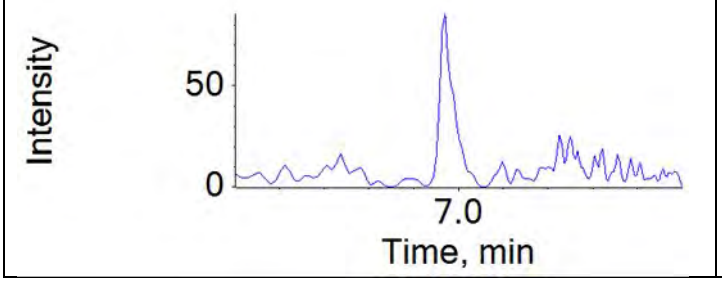


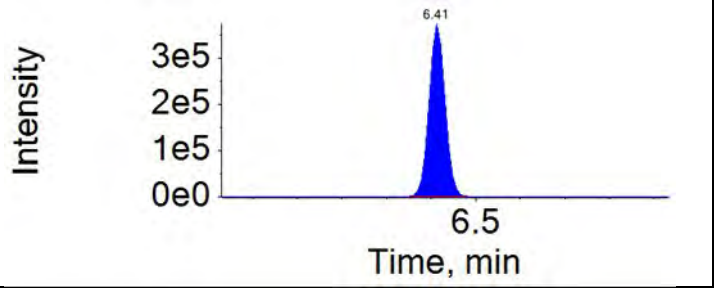
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Ion Ratio Report

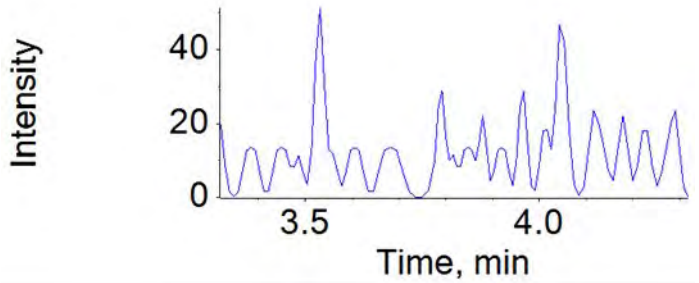
Sample Name: Instrument Blank **Instrument Name:** LM27631 **File Name:** 18NOV29D-06.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

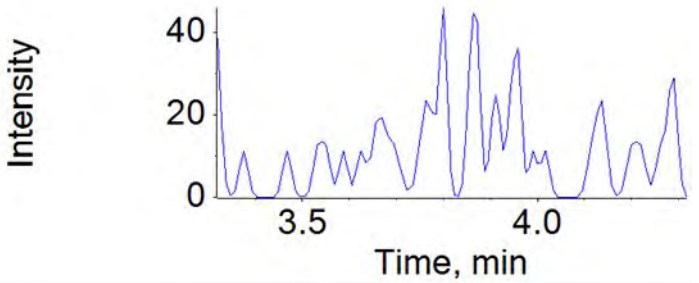
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

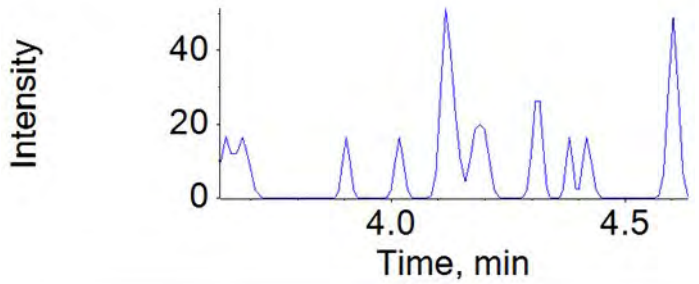
Component: PFBS
Primary Mass: 299.0 / 80.0



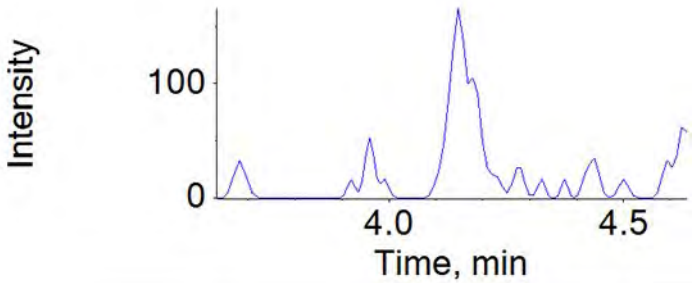
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



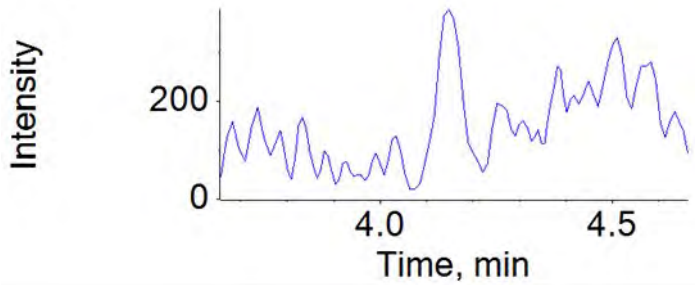
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



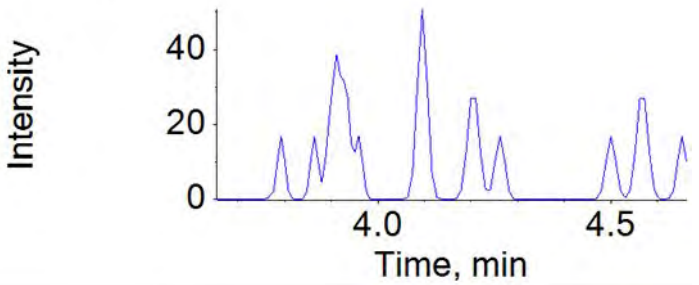
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



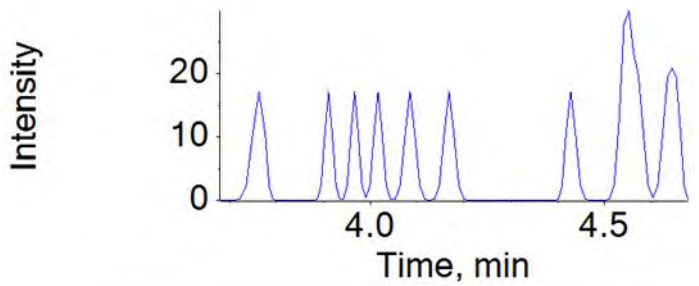
Component: PFHxA
Primary Mass: 313.0 / 269.0



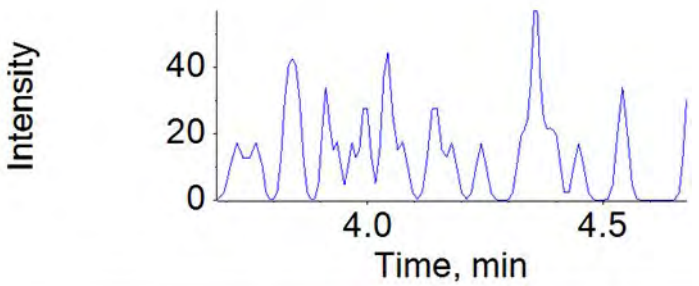
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



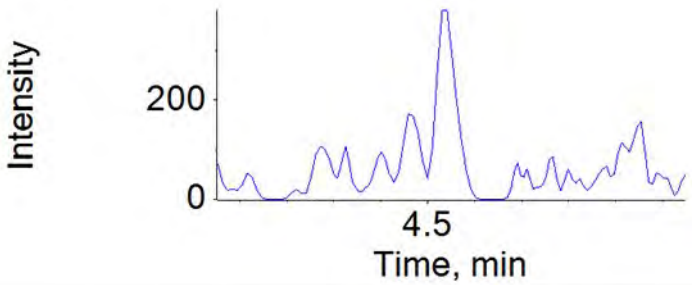
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



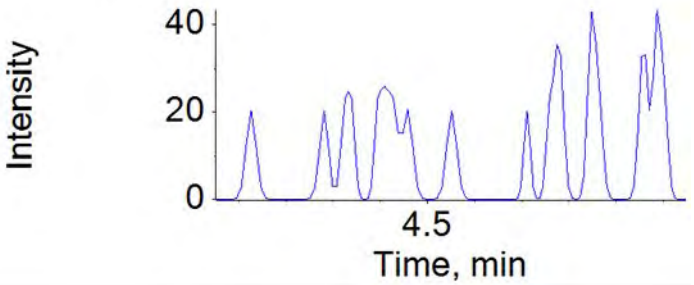
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

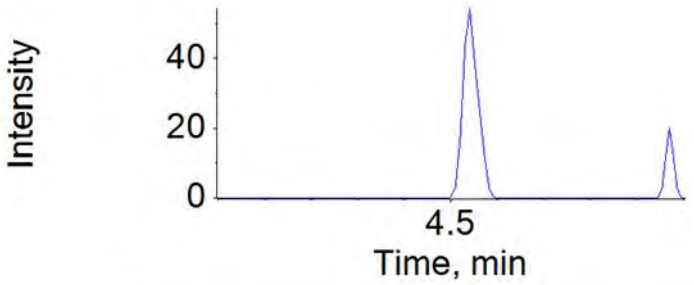
Component: PFHpA
Primary Mass: 363.0 / 319.0



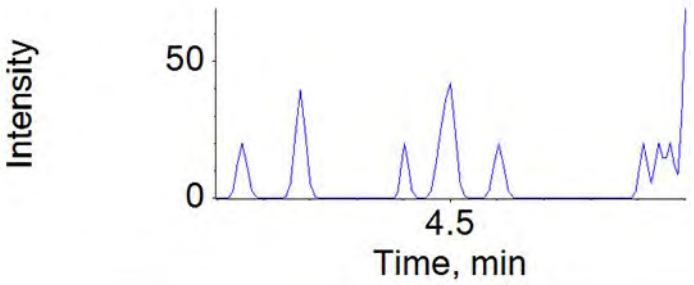
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



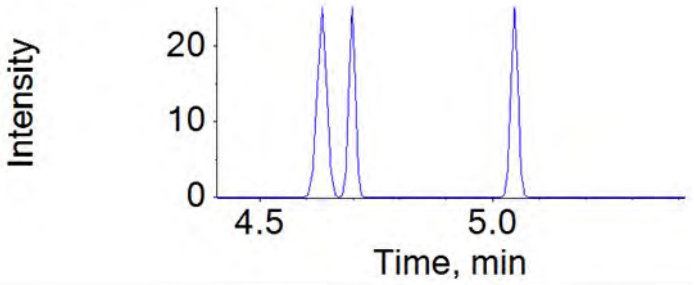
Component: PFHxS
Primary Mass: 399.0 / 80.0



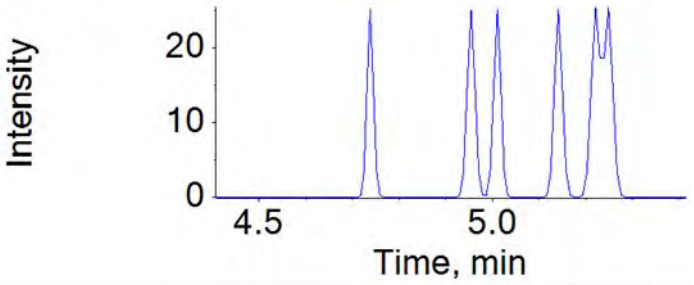
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



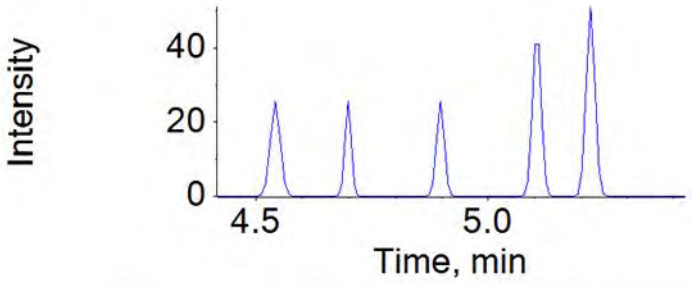
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



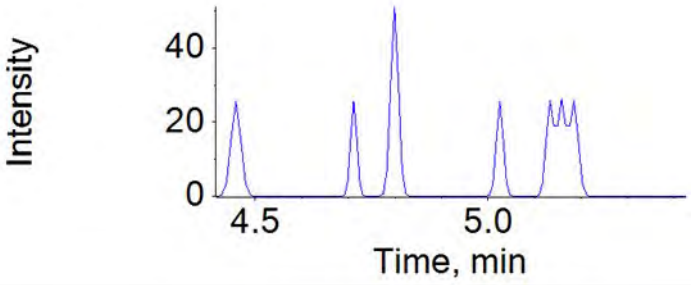
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



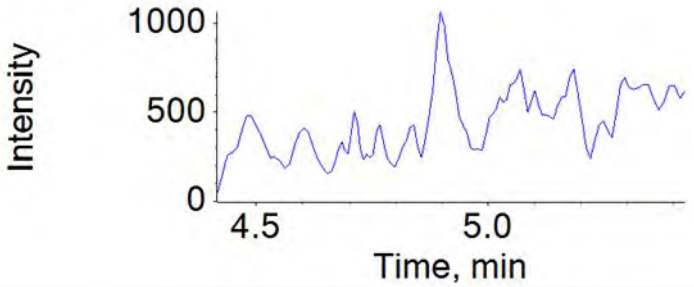
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



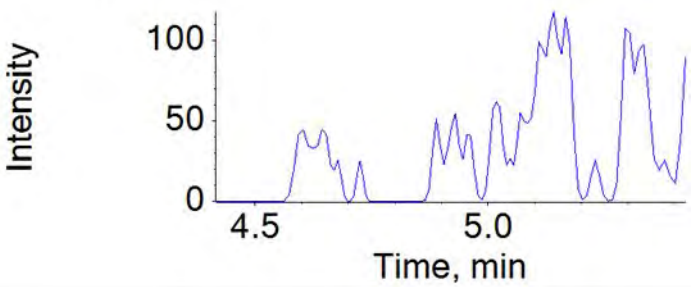
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

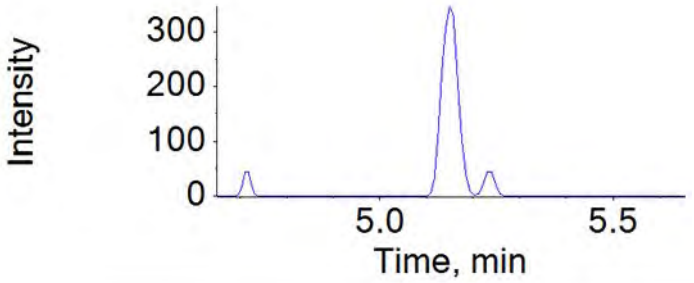
Component: PFOA
Primary Mass: 413.0 / 369.0



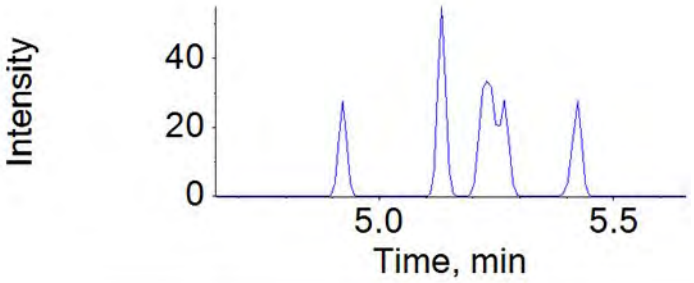
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



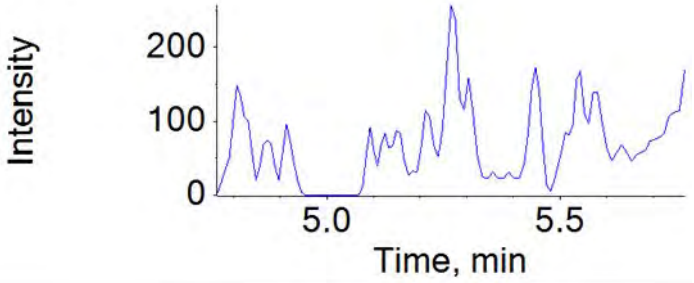
Component: PFOS
Primary Mass: 499.0 / 80.0



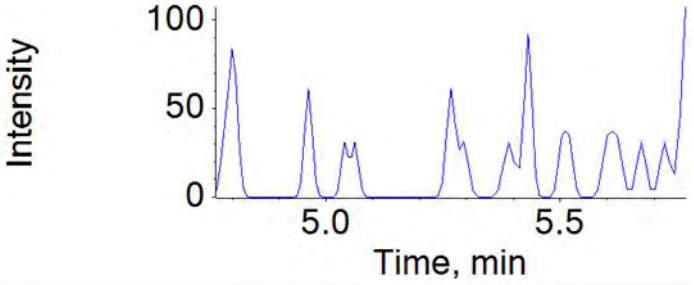
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



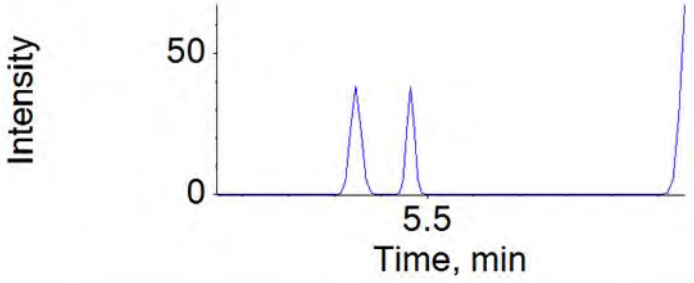
Component: PFNA
Primary Mass: 463.0 / 419.0



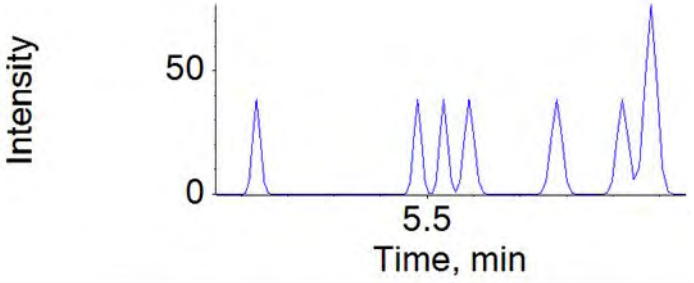
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



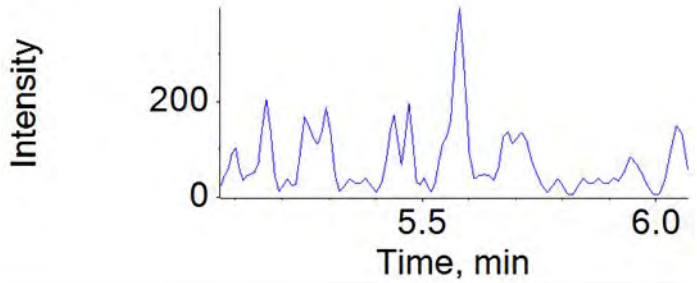
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



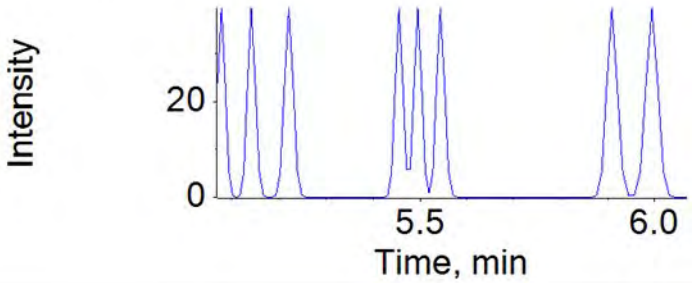
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

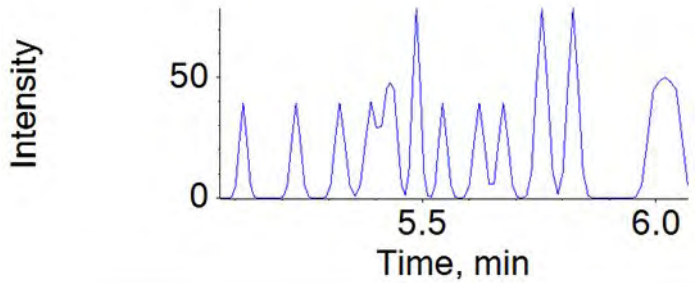
Component: PFDA
Primary Mass: 513.0 / 469.0



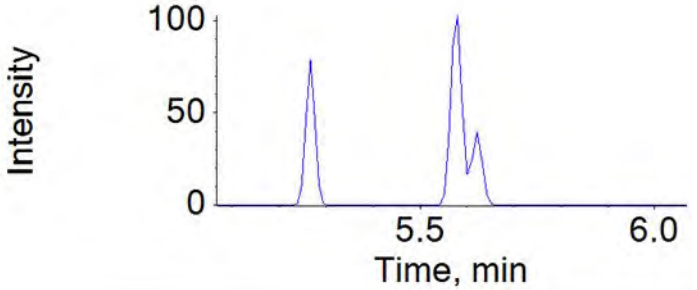
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



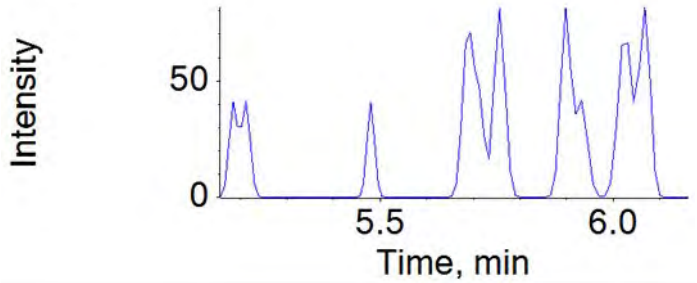
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



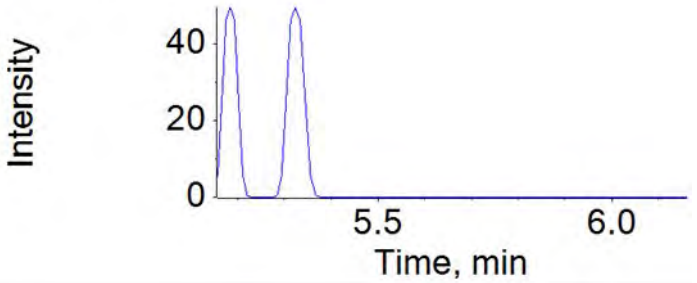
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



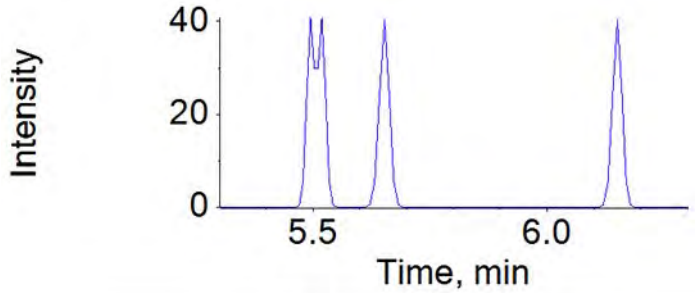
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



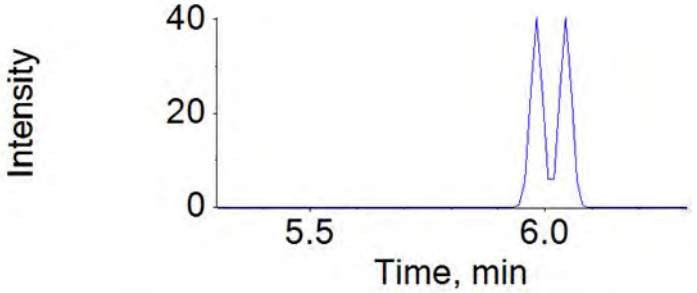
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



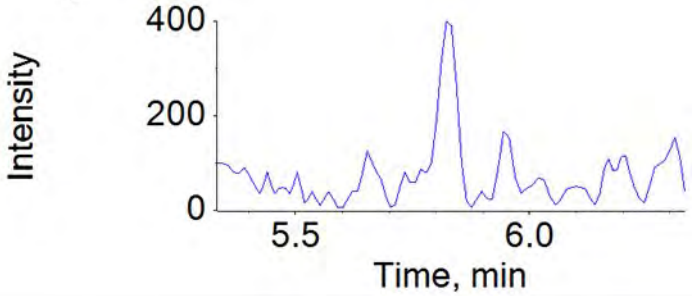
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



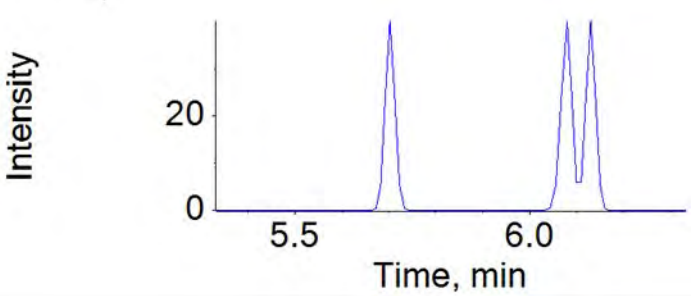
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

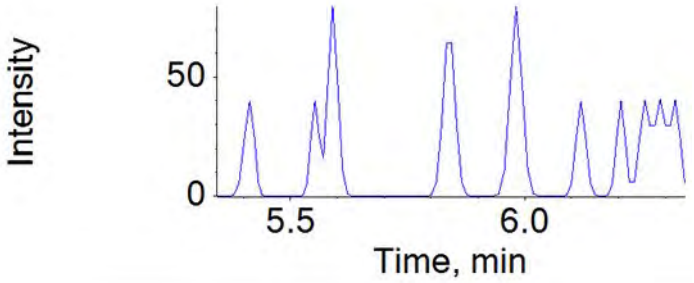
Component: PFUnDA
Primary Mass: 563.0 / 519.0



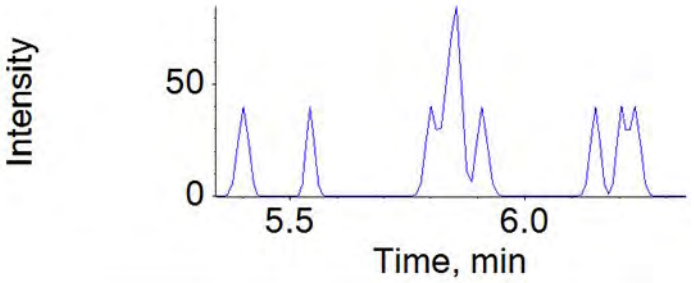
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



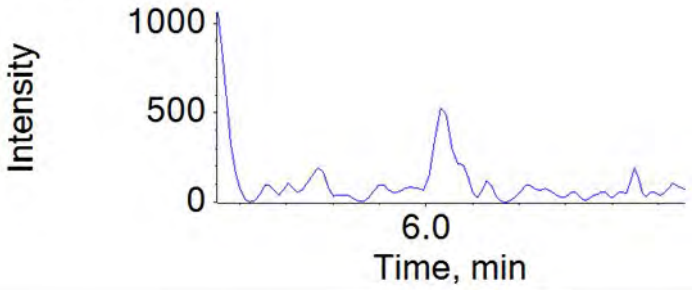
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



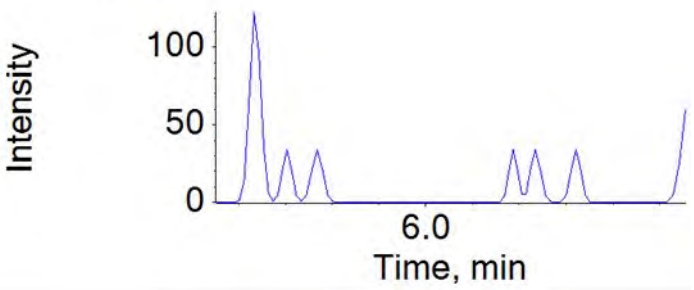
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



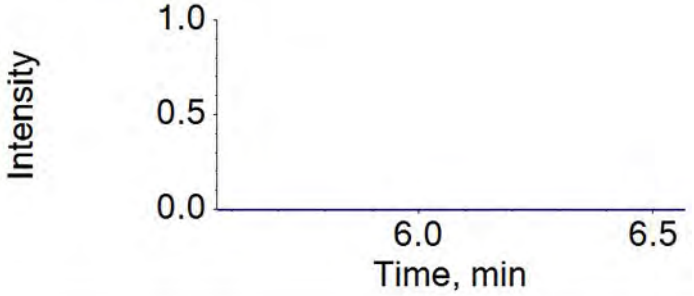
Component: PFDoDA
Primary Mass: 613.0 / 569.0



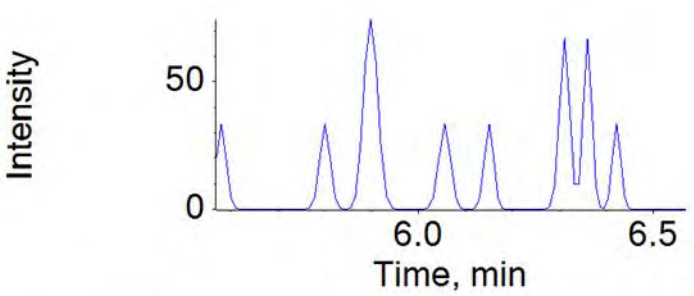
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



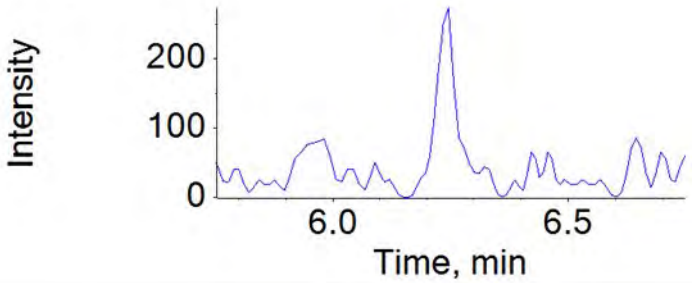
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



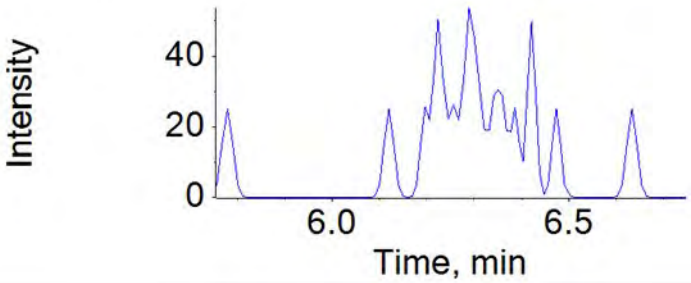
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



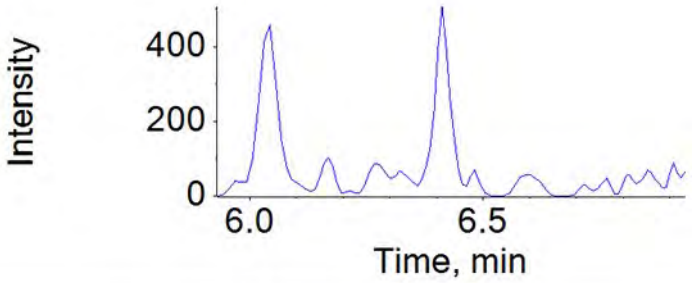
Component: PFTrDA
Primary Mass: 663.0 / 619.0



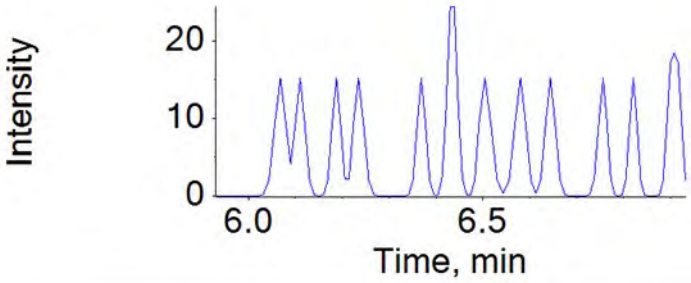
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



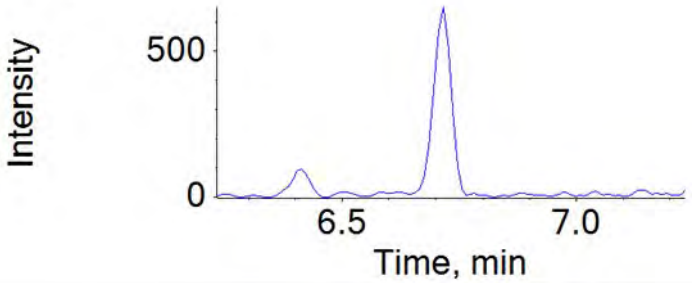
Component: PFTeDA
Primary Mass: 713.0 / 669.0



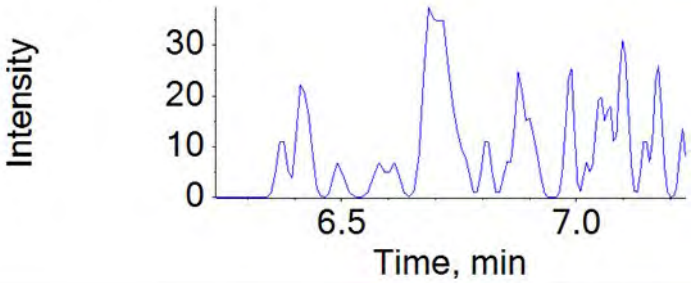
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



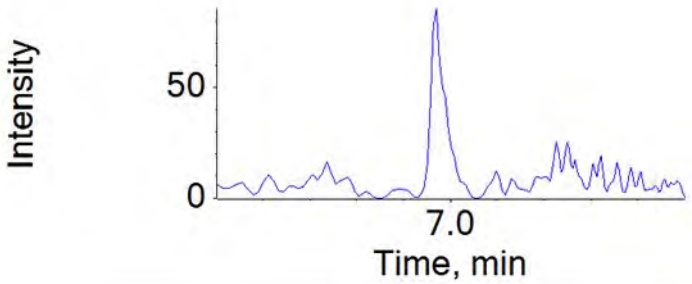
Component: PFHxDA
Primary Mass: 813.0 / 769.0



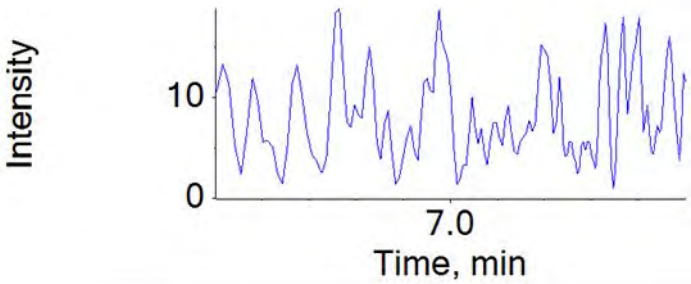
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



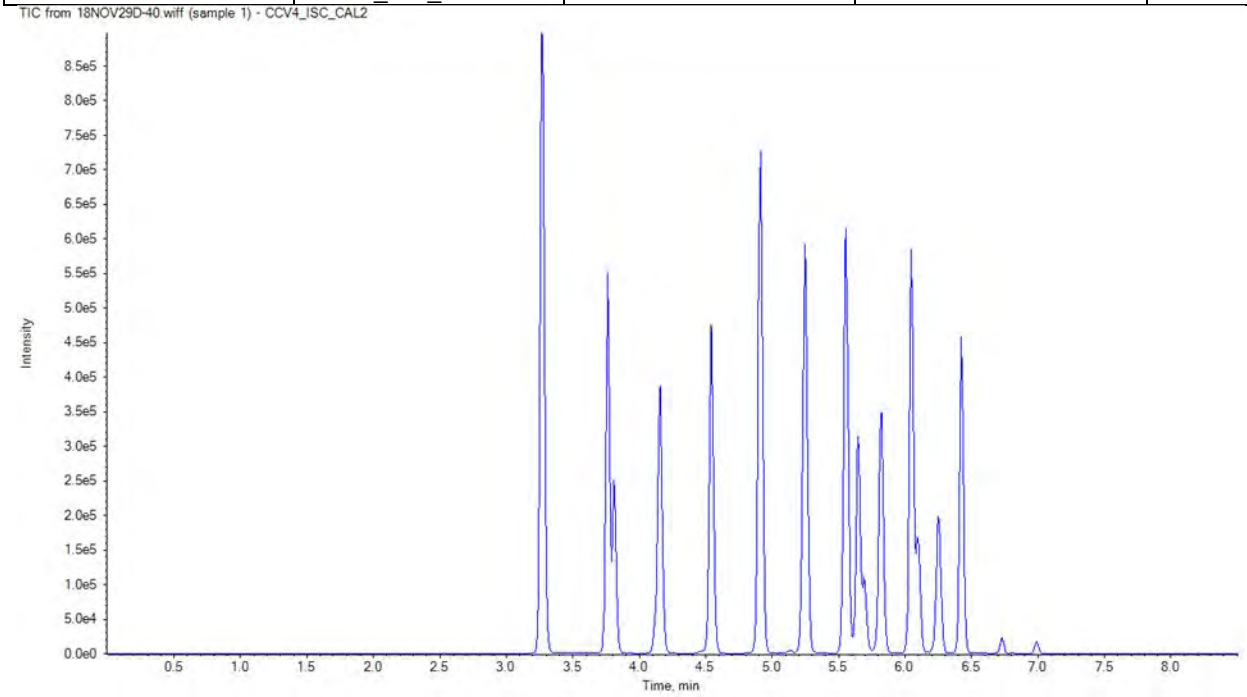
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV4_ISC_CAL2	CALBRN21833C	18NOV29D-40.wiff	2018-11-29T15:49:06



Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	904710.7	906425.4	0	50	
13C2-PFOA	5.0	483121.2	495984.0	-3	50	
13C4-PFOS	4.8	298883.9	296261.8	1	50	
13C2-PFDA	5.0	449760.0	451203.0	0	50	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV4_ISC_CAL2	CALBRN21833C	18NOV29D-40.wiff	2018-11-29T15:49:06

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	110124.9	10	13C4-PFBA	1044843.5	5.0	0.105	3.27	1.000	0.600	0.578	-4	30	
PFPeA	101713.3	11	13C5-PFPeA	944287.9	5.0	0.108	3.76	1.000	0.600	0.529	-12	30	
PFBS	45293.9	10	13C3-PFBS	436282.4	4.7	0.104	3.81	1.000	0.531	0.504	-5	30	
4:2-FTS	13722.8	11	13C2-4:2-FTS	70626.3	4.7	0.194	4.12	1.000	0.560	0.520	-7	30	
PFHxA	97880.8	12	13C5-PFHxA	724335.1	5.0	0.135	4.16	1.000	0.600	0.542	-10	30	
PFPeS	22597.4	11	13C3-PFBS	436282.4	4.7	0.052	4.18	1.100	0.563	0.524	-7	30	
PFHpA	103944.3	11	13C4-PFHpA	563929.9	5.0	0.184	4.54	1.000	0.600	0.569	-5	30	
PFHxS	29569.0	18	13C3-PFHxS	333802.1	4.7	0.089	4.54	1.000	0.547	0.415	-24	30	
6:2-FTS	15183.2	12	13C2-6:2-FTS	60187.0	4.8	0.252	4.90	1.000	0.569	0.658	16	30	
PFHpS	32181.3	11	13C3-PFHxS	333802.1	4.7	0.096	4.90	1.080	0.571	0.481	-16	30	
PFOA	109440.5	11	13C8-PFOA	1003624.4	5.0	0.109	4.91	1.000	0.600	0.563	-6	30	
PFOS	34621.4	21	13C8-PFOS	329584.2	4.8	0.105	5.24	1.000	0.555	0.441	-21	30	
PFNA	95267.9	11	13C9-PFNA	669584.2	5.0	0.142	5.26	1.000	0.600	0.545	-9	30	
PFNS	27262.2	10	13C8-PFOS	329584.2	4.8	0.083	5.53	1.060	0.576	0.522	-9	30	
PFDA	82998.2	11	13C6-PFDA	799715.0	5.0	0.104	5.55	1.000	0.600	0.587	-2	30	
8:2-FTS	15680.8	12	13C2-8:2-FTS	57243.1	4.8	0.274	5.56	1.000	0.575	0.517	-10	30	
PFOSA	71123.4	11	13C8-PFOSA	640143.3	5.0	0.111	5.65	1.000	0.600	0.563	-6	30	
NMeFOSAA	18125.1	20	d3-NMeFOSAA	203620.9	5.0	0.089	5.70	1.000	0.600	0.568	-5	30	
PFDS	20714.1	11	13C8-PFOS	329584.2	4.8	0.063	5.79	1.110	0.578	0.498	-14	30	
PFUnDA	96054.9	11	13C7-PFUnDA	567535.7	5.0	0.169	5.82	1.000	0.600	0.605	1	30	
NEtFOSAA	15666.3	22	d5-NEtFOSAA	154113.2	5.0	0.102	5.84	1.000	0.600	0.495	-17	30	
PFDoDA	131944.1	12	13C2-PFDoDA	1094211.6	5.0	0.121	6.05	1.000	0.600	0.661	10	30	
10:2-FTS	15267.5	12	13C2-8:2-FTS	57243.1	4.8	0.267	6.07	1.090	0.578	0.588	2	30	
NMePFOSAE	31587.8	12	d7-NMePFOSAE	269911.9	5.0	0.117	6.10	1.000	0.600	0.492	-18	30	
NMePFOSA	11973.1	12	d3-NMePFOSA	89358.5	5.0	0.134	6.11	1.000	0.600	0.710	18	30	
PFDoS	10063.5	11	13C8-PFOS	329584.2	4.8	0.031	6.22	1.190	0.581	0.439	-25	30	
NEtPFOSAE	41722.2	11	d9-NEtPFOSAE	241131.4	5.0	0.173	6.26	1.000	0.600	0.622	4	30	
NEtPFOSA	8110.2	11	d5-NEtPFOSA	72189.7	5.0	0.112	6.28	1.000	0.600	0.504	-16	30	
PFTrDA	125959.9	11	13C2-PFDoDA	1094211.6	5.0	0.115	6.25	1.030	0.600	0.694	16	30	
PFTeDA	85168.5	11	13C2-PFTeDA	854334.1	5.0	0.100	6.42	1.000	0.600	0.565	-6	30	
PFHxDA	43933.6	11	13C2-PFTeDA	854334.1	5.0	0.051	6.73	1.050	0.600	0.588	-2	30	
PFODA	36556.6	10	13C2-PFTeDA	854334.1	5.0	0.043	6.99	1.090	0.600	0.570	-5	30	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Instrument Sensitivity Check/ Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV4_ISC_CAL2			**Data File:**		18NOV29D-40.wiff
Sample ID:	CALBRN21833C			**Acquis Date:**		2018-11-29T15:49:06
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	4			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV29DCCV1-5
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	904710.7	906425.4	0	50	
13C2-PFOA	5.0	483121.2	495984.0	-3	50	
13C4-PFOS	4.8	298883.9	296261.8	1	50	
13C2-PFDA	5.0	449760.0	451203.0	0	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1044843.5	13C3-PFBA	904710.7	1.155	5.000	5.153	103	70-130	
E13C5-PFPeA	944287.9	13C3-PFBA	904710.7	1.044	5.000	4.874	97	70-130	
E13C3-PFBS	436282.4	13C3-PFBA	904710.7	0.482	4.650	4.601	99	70-130	
E13C2-4:2-FTS	70626.3	13C2-PFOA	483121.2	0.146	4.670	5.038	108	70-130	
E13C5-PFHxA	724335.1	13C2-PFOA	483121.2	1.499	5.000	5.507	110	70-130	
E13C3-PFHxS	333802.1	13C2-PFOA	483121.2	0.691	4.730	5.415	114	70-130	
E13C4-PFHpA	563929.9	13C2-PFOA	483121.2	1.167	5.000	5.363	107	70-130	
E13C2-6:2-FTS	60187.0	13C2-PFOA	483121.2	0.125	4.750	5.215	110	70-130	
E13C8-PFOA	1003624.4	13C2-PFOA	483121.2	2.077	5.000	5.718	114	70-130	
E13C8-PFOS	329584.2	13C4-PFOS	298883.9	1.103	4.780	4.978	104	70-130	
E13C9-PFNA	669584.2	13C4-PFOS	298883.9	2.240	5.000	4.921	98	70-130	
E13C6-PFDA	799715.0	13C2-PFDA	449760.0	1.778	5.000	5.013	100	70-130	
E13C2-8:2-FTS	57243.1	13C2-PFDA	449760.0	0.127	4.790	5.470	114	70-130	
E13C8-PFOSA	640143.3	13C2-PFDA	449760.0	1.423	5.000	5.223	104	70-130	
Ed3-NMeFOSAA	203620.9	13C2-PFDA	449760.0	0.453	5.000	5.748	115	70-130	
E13C7-PFUnDA	567535.7	13C2-PFDA	449760.0	1.262	5.000	5.333	107	70-130	
Ed5-NEtFOSAA	154113.2	13C2-PFDA	449760.0	0.343	5.000	6.105	122	70-130	
E13C2-PFDoDA	1094211.6	13C2-PFDA	449760.0	2.433	5.000	5.112	102	70-130	
Ed7-NMePFOSAE	269911.9	13C2-PFDA	449760.0	0.600	5.000	5.186	104	70-130	
Ed3-NMePFOSA	89358.5	13C2-PFDA	449760.0	0.199	5.000	5.377	108	70-130	
Ed9-NEtPFOSAE	241131.4	13C2-PFDA	449760.0	0.536	5.000	5.435	109	70-130	
Ed5-NEtPFOSA	72189.7	13C2-PFDA	449760.0	0.161	5.000	5.577	112	70-130	
E13C2-PFTeDA	854334.1	13C2-PFDA	449760.0	1.900	5.000	5.256	105	70-130	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

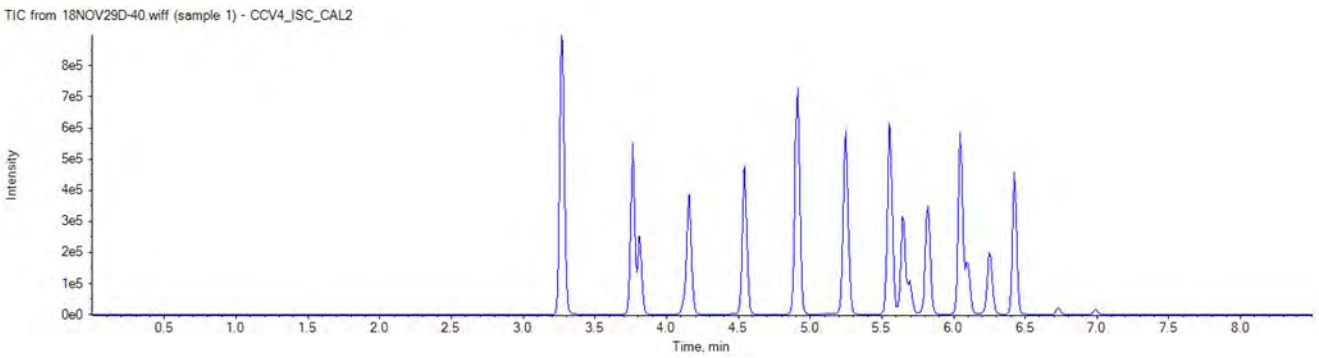
Analyte Quantitation Peak Table

Sample Name: CCV4_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV29D-40.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	110124.9		A	13C4-PFBA	3.27	1044843.5	0.105	0.578
PFPeA	3.76	1.000	101713.3		A	13C5-PFPeA	3.76	944287.9	0.108	0.529
PFBS	3.81	1.000	45293.9		A	13C3-PFBS	3.81	436282.4	0.104	0.504
4:2-FTS	4.12	1.000	13722.8		A	13C2-4:2-FTS	4.12	70626.3	0.194	0.520
PFHxA	4.16	1.000	97880.8		A	13C5-PFHxA	4.16	724335.1	0.135	0.542
PFPeS	4.18	1.100	22597.4		A	13C3-PFBS	3.81	436282.4	0.052	0.524
PFHpA	4.54	1.000	103944.3		A	13C4-PFHpA	4.54	563929.9	0.184	0.569
PFHxS	4.54	1.000	29569.0		M	13C3-PFHxS	4.55	333802.1	0.089	0.415
6:2-FTS	4.90	1.000	15183.2		A	13C2-6:2-FTS	4.90	60187.0	0.252	0.658
PFHpS	4.90	1.080	32181.3		A	13C3-PFHxS	4.55	333802.1	0.096	0.481
PFOA	4.91	1.000	109440.5		A	13C8-PFOA	4.91	1003624.4	0.109	0.563
PFOS	5.24	1.000	34621.4		M	13C8-PFOS	5.24	329584.2	0.105	0.441
PFNA	5.26	1.000	95267.9		A	13C9-PFNA	5.25	669584.2	0.142	0.545
PFNS	5.53	1.060	27262.2		A	13C8-PFOS	5.24	329584.2	0.083	0.522
PFDA	5.55	1.000	82998.2		A	13C6-PFDA	5.56	799715.0	0.104	0.587
8:2-FTS	5.56	1.000	15680.8		A	13C2-8:2-FTS	5.56	57243.1	0.274	0.517
PFOSA	5.65	1.000	71123.4		A	13C8-PFOSA	5.65	640143.3	0.111	0.563
NMeFOSAA	5.70	1.000	18125.1		M	d3-NMeFOSAA	5.70	203620.9	0.089	0.568
PFDS	5.79	1.110	20714.1		A	13C8-PFOS	5.24	329584.2	0.063	0.498
PFUnDA	5.82	1.000	96054.9		A	13C7-PFUnDA	5.82	567535.7	0.169	0.605
NEtFOSAA	5.84	1.000	15666.3		A	d5-NEtFOSAA	5.83	154113.2	0.102	0.495
PFDoDA	6.05	1.000	131944.1		A	13C2-PFDoDA	6.05	1094211.6	0.121	0.661
10:2-FTS	6.07	1.090	15267.5		A	13C2-8:2-FTS	5.56	57243.1	0.267	0.588
NMePFOSAE	6.10	1.000	31587.8		A	d7-NMePFOSAE	6.09	269911.9	0.117	0.492
NMePFOSA	6.11	1.000	11973.1		A	d3-NMePFOSA	6.11	89358.5	0.134	0.710
PFDoS	6.22	1.190	10063.5		A	13C8-PFOS	5.24	329584.2	0.031	0.439
NEtPFOSAE	6.26	1.000	41722.2		A	d9-NEtPFOSAE	6.25	241131.4	0.173	0.622
NEtPFOSA	6.28	1.000	8110.2		A	d5-NEtPFOSA	6.27	72189.7	0.112	0.504
PFTrDA	6.25	1.030	125959.9		A	13C2-PFDoDA	6.05	1094211.6	0.115	0.694
PFTeDA	6.42	1.000	85168.5		A	13C2-PFTeDA	6.43	854334.1	0.100	0.565
PFHxDA	6.73	1.050	43933.6		A	13C2-PFTeDA	6.43	854334.1	0.051	0.588
PFODA	6.99	1.090	36556.6		A	13C2-PFTeDA	6.43	854334.1	0.043	0.570

Total Ion Chromatogram

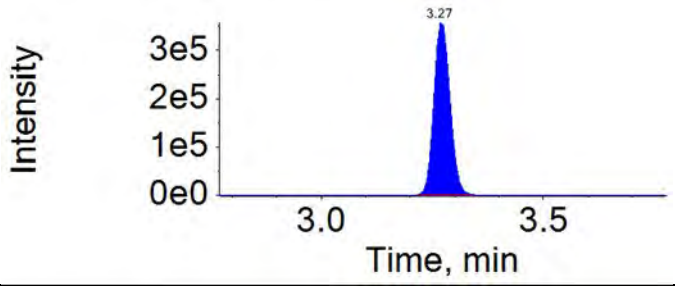


APPROVED
By MCD at 8:06 pm, 11/29/18

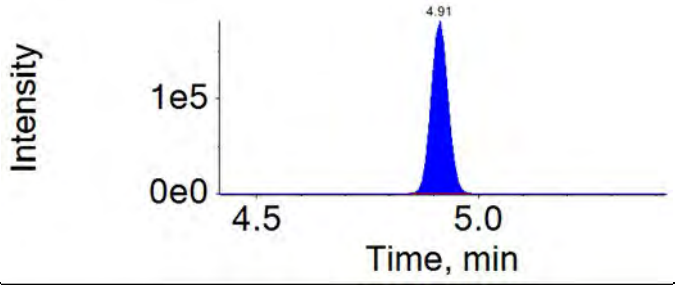
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

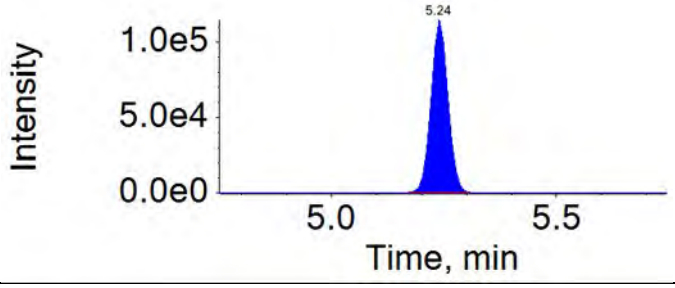
Injection Standard: 13C3-PFBA
216.0 / 172.0



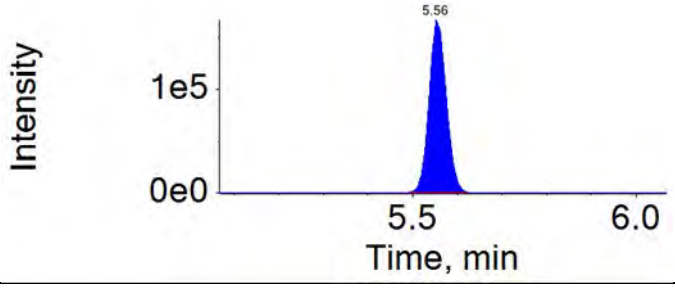
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

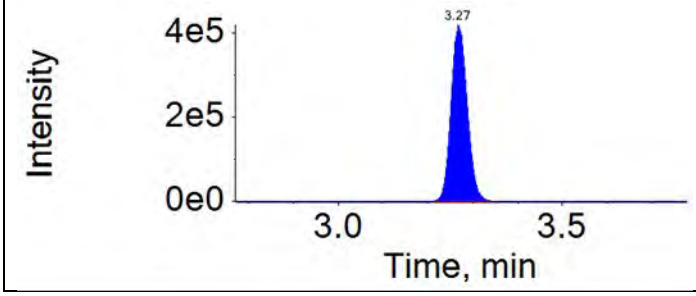


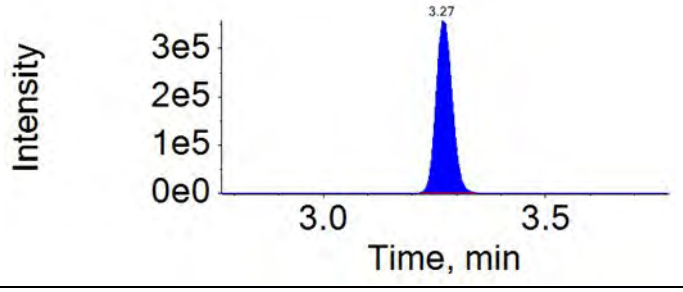
Injection Standard: 13C2-PFDA
515.0 / 470.0



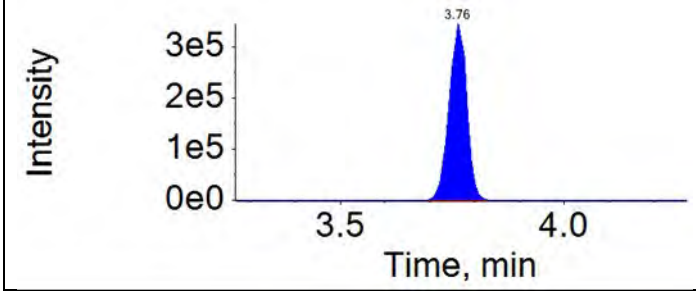
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

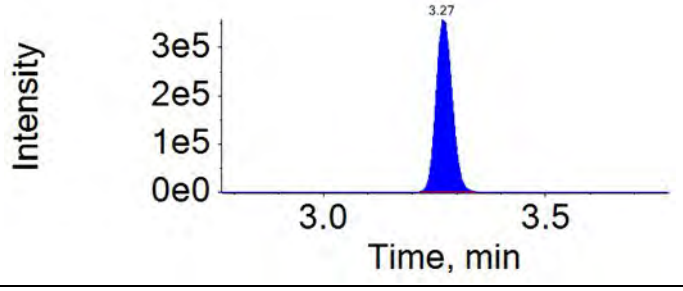
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



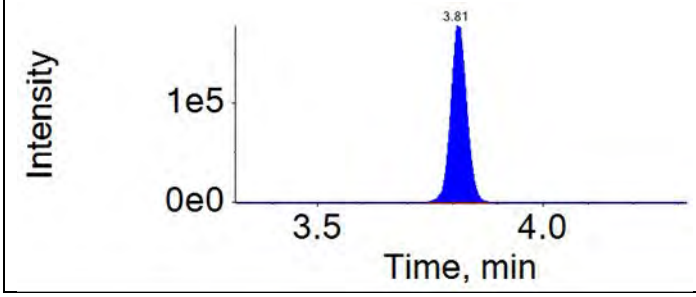


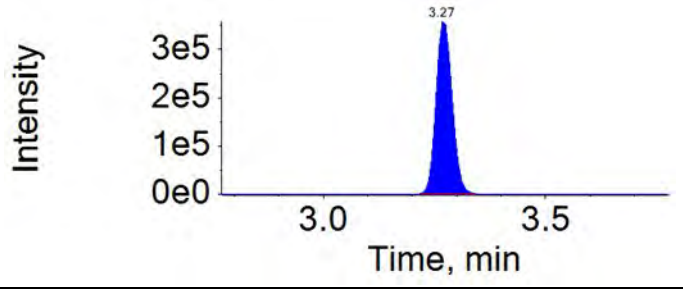
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



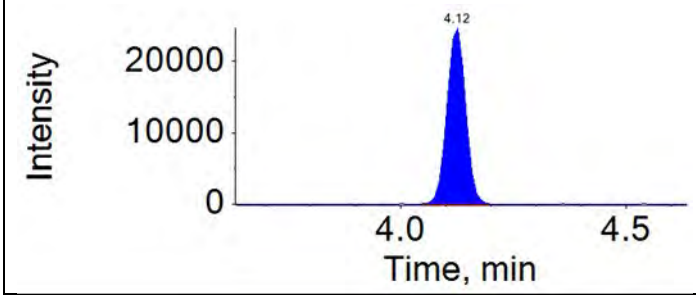


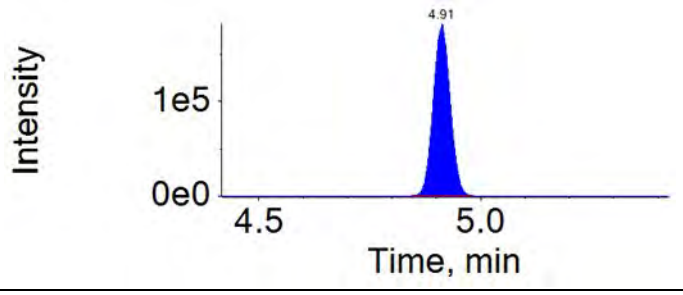
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



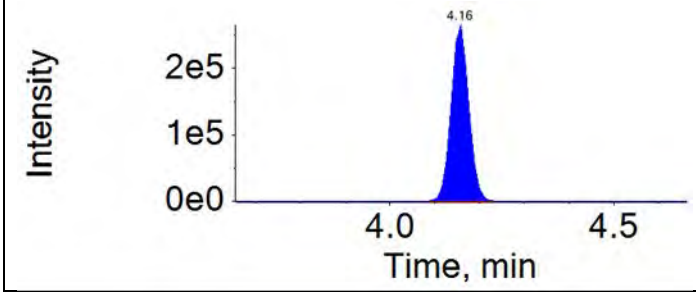


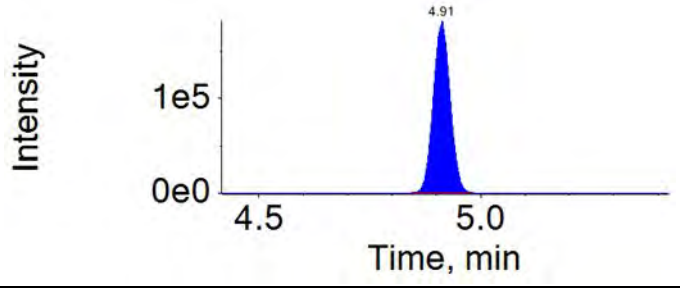
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

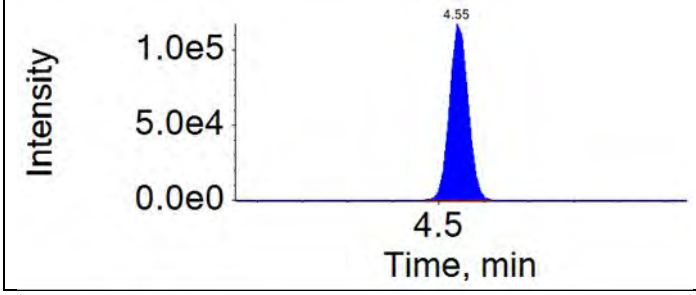
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

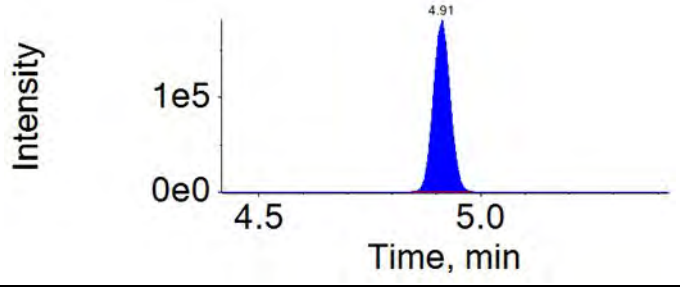
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



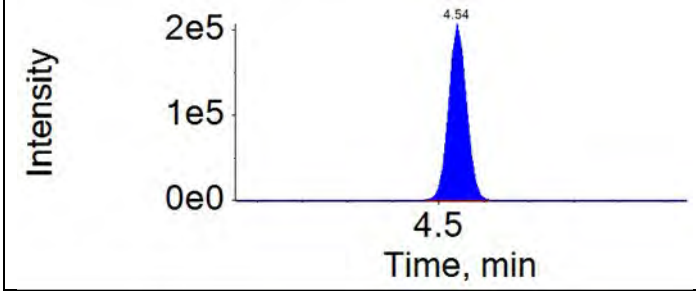


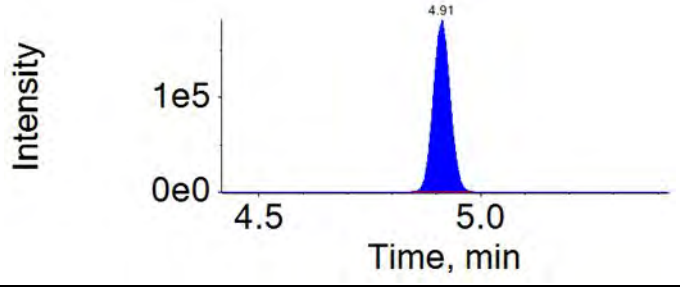
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



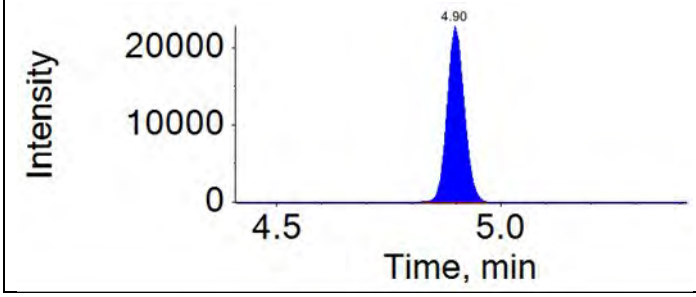


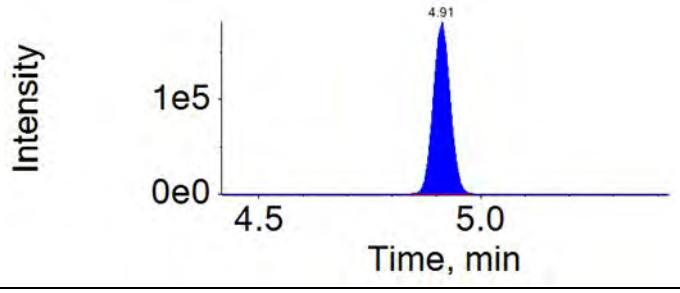
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

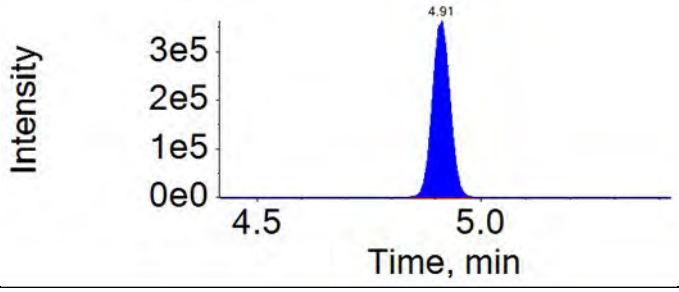
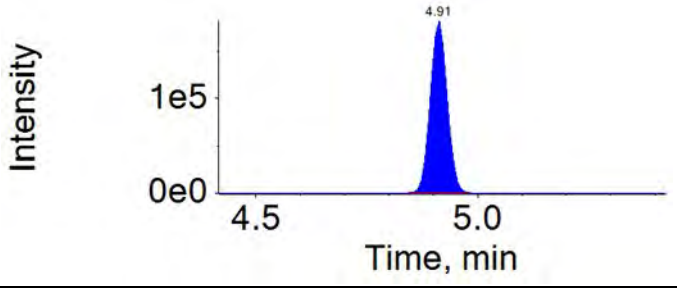


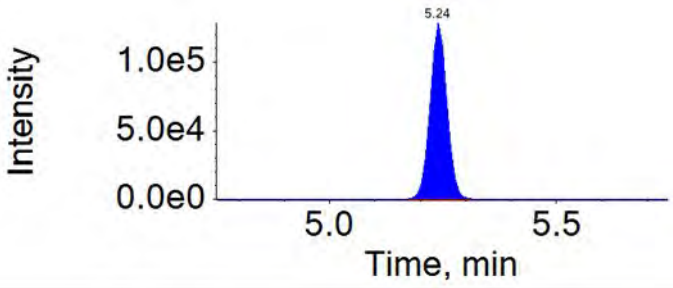
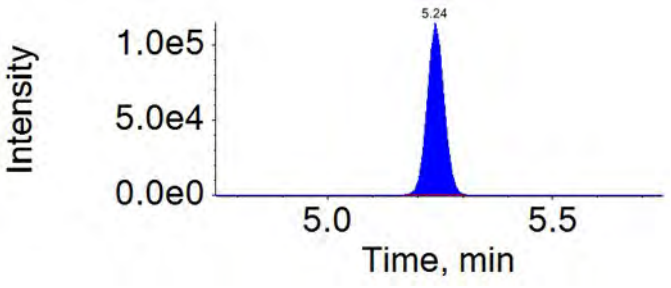


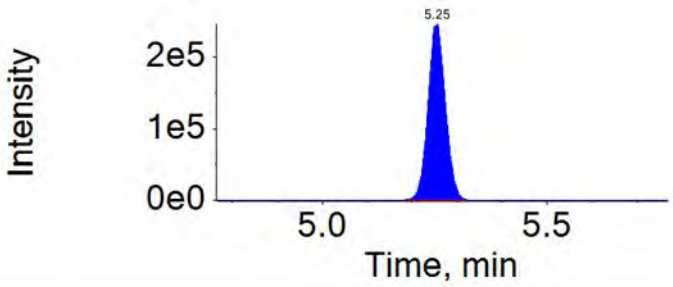
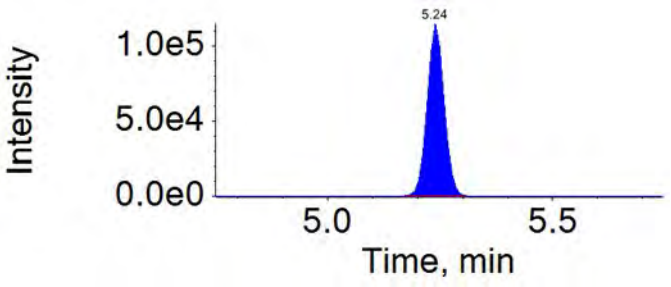
APPROVED
By MCD at 8:06 pm, 11/29/18

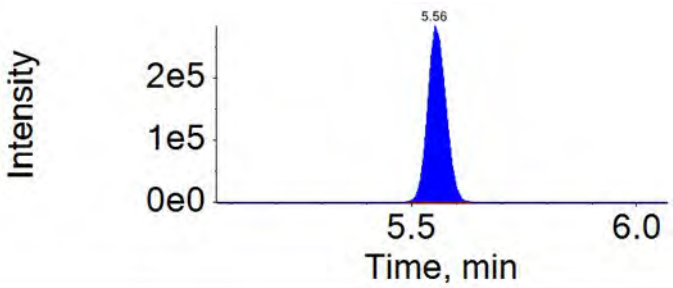
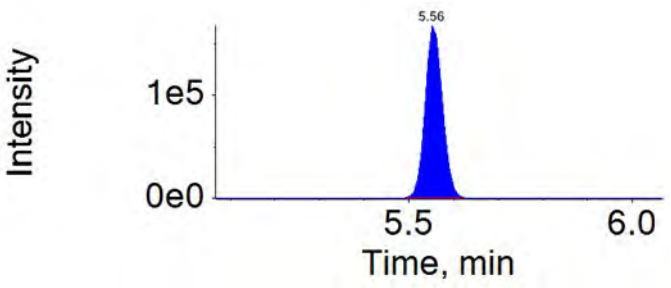
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

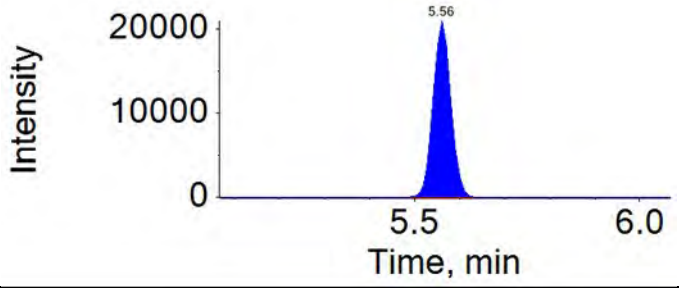
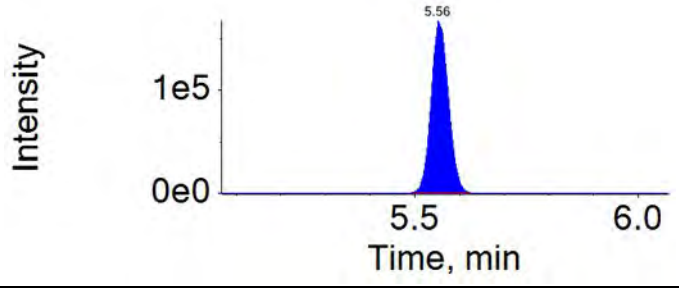
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

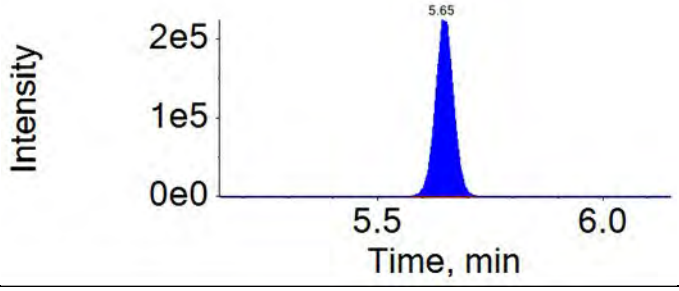
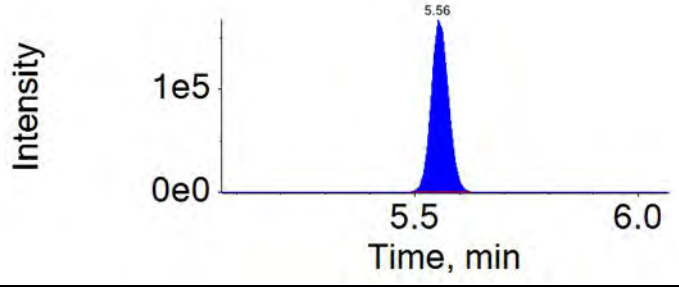
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

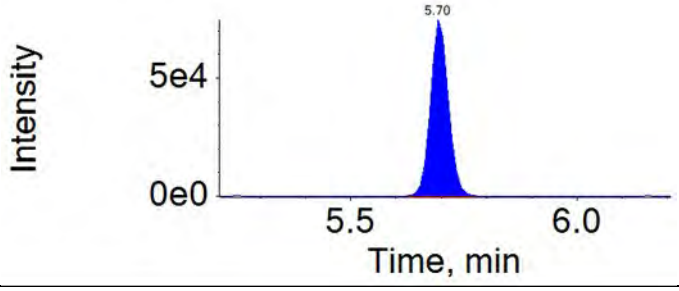
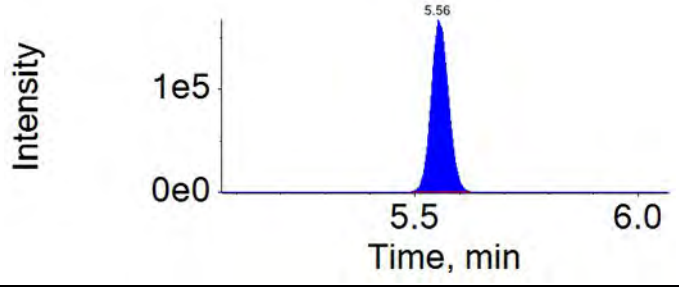
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

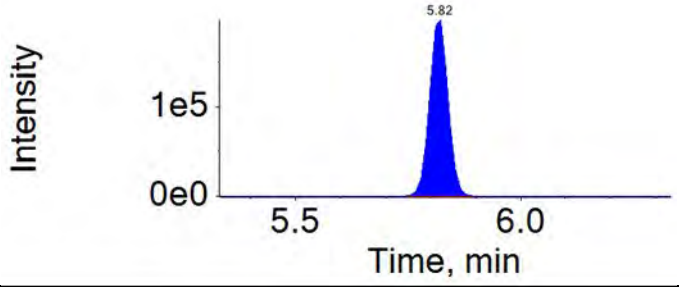
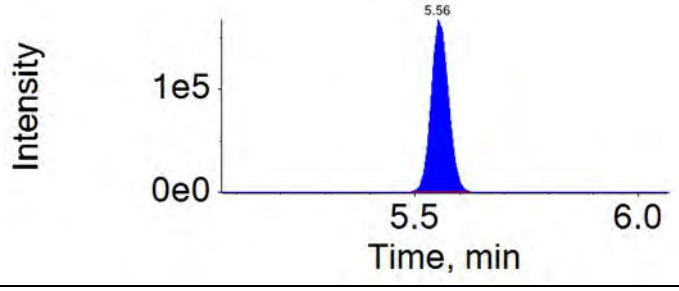
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

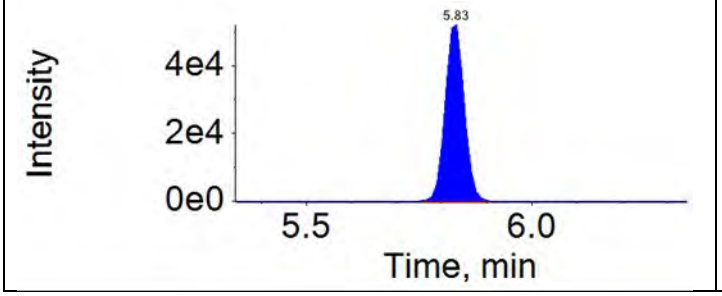
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

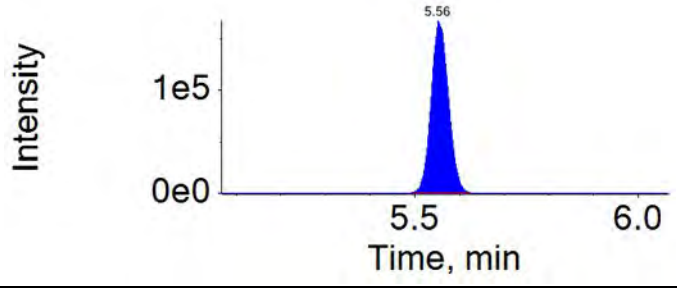
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

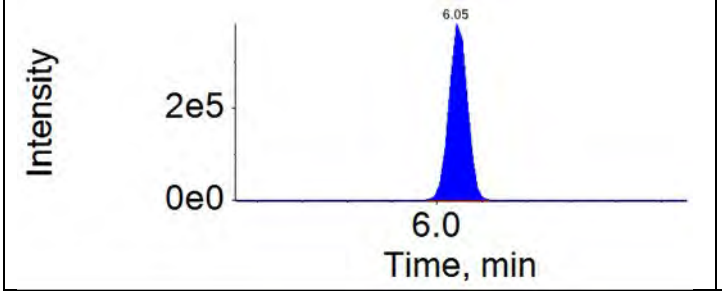
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

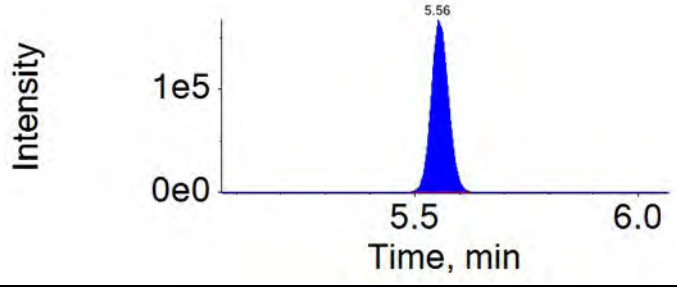
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



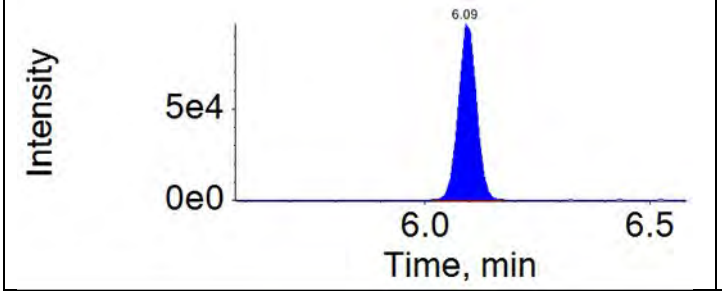


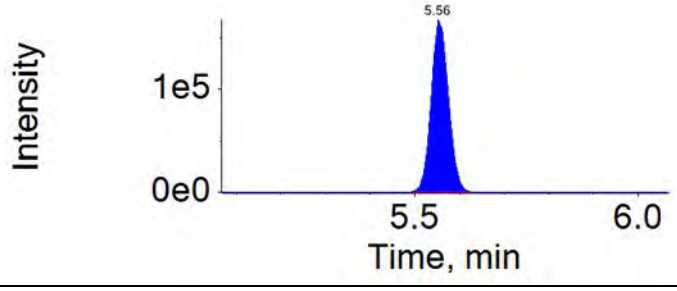
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



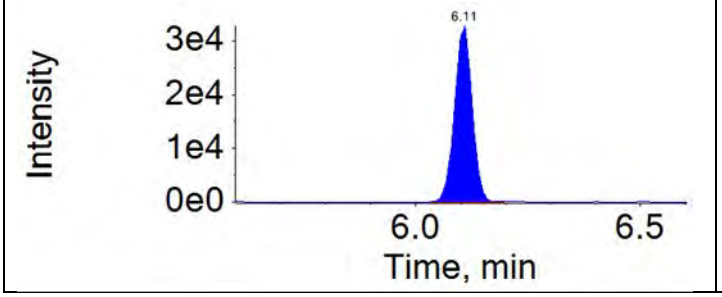


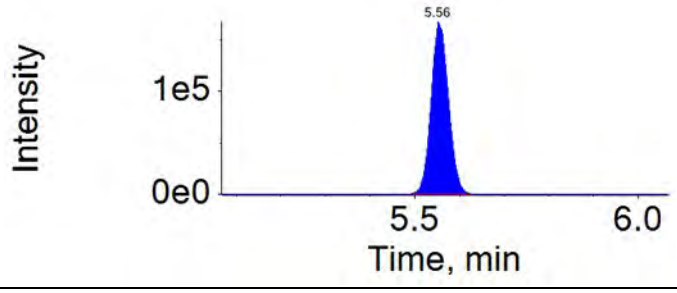
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



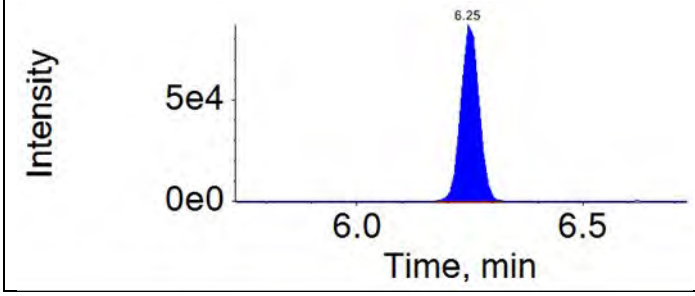


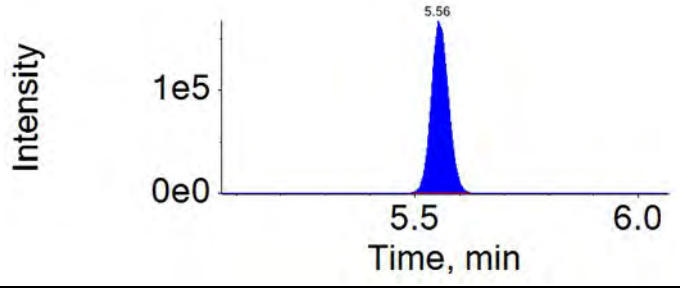
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

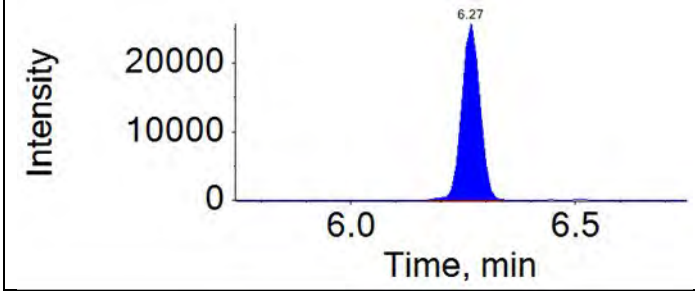
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

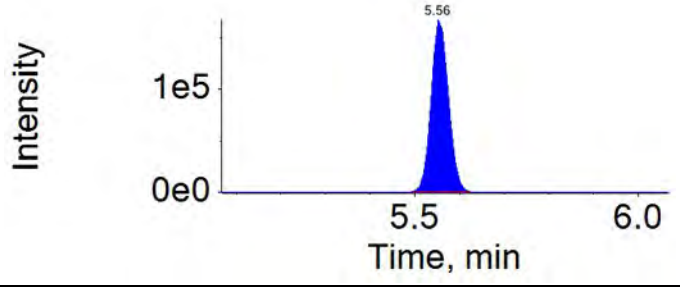
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



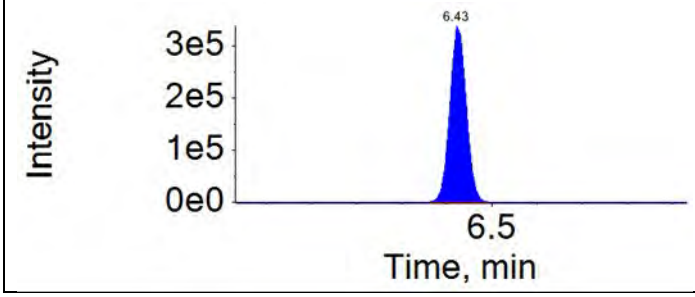


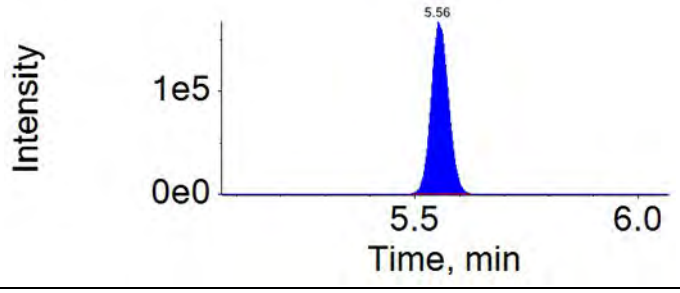
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



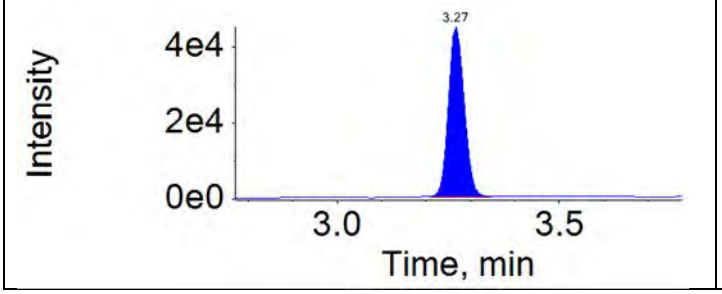


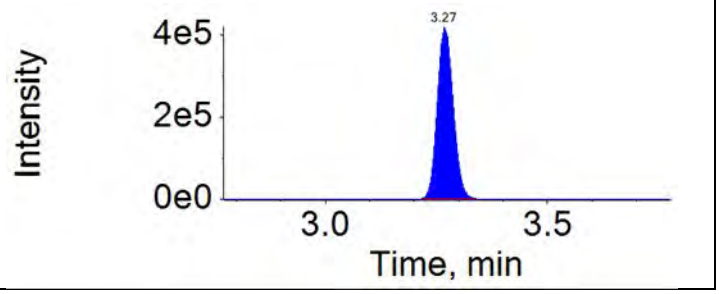
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

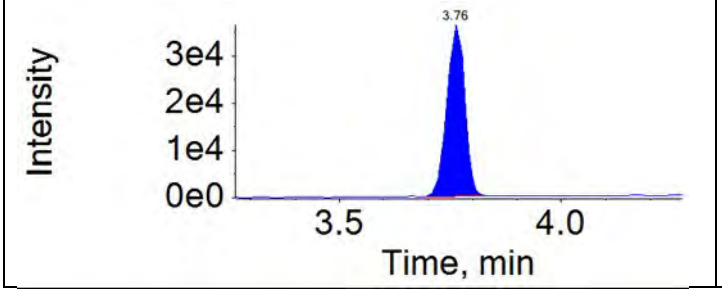
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

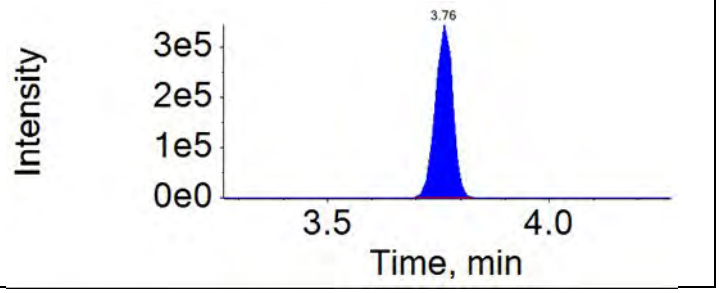
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



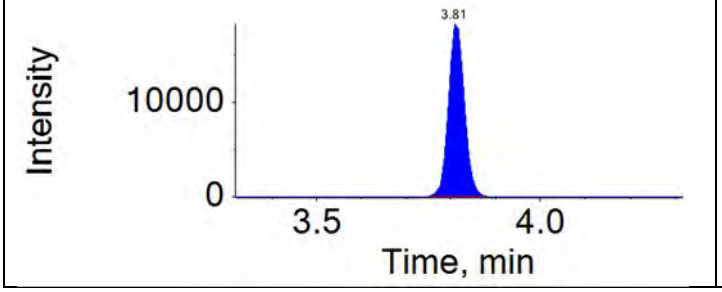


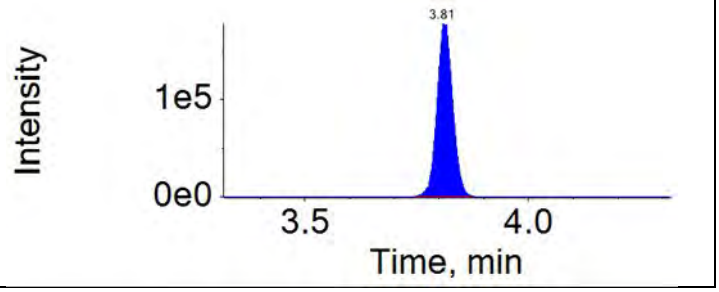
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



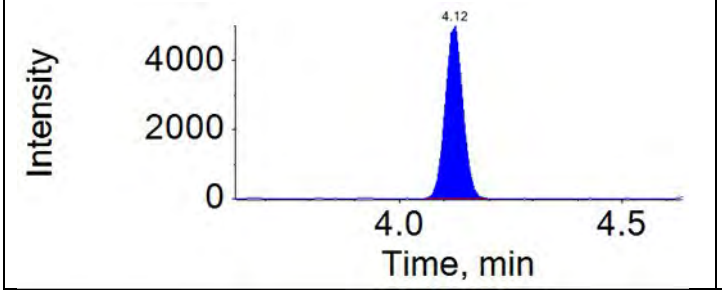


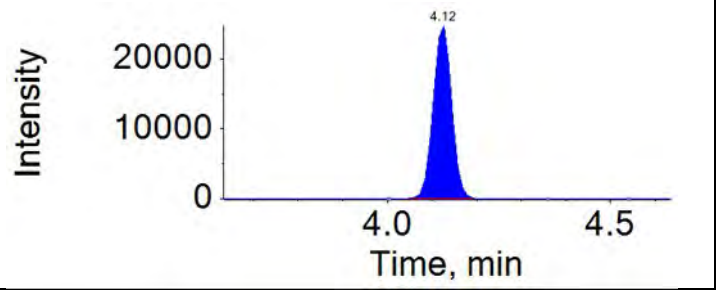
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



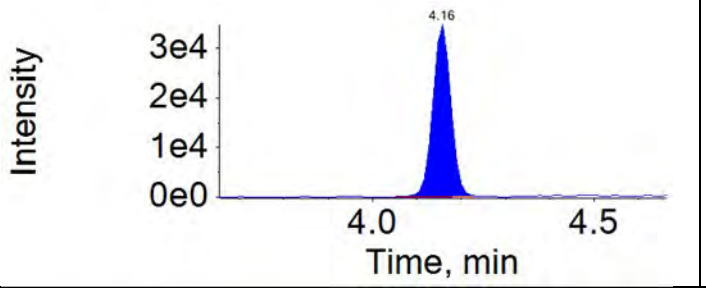


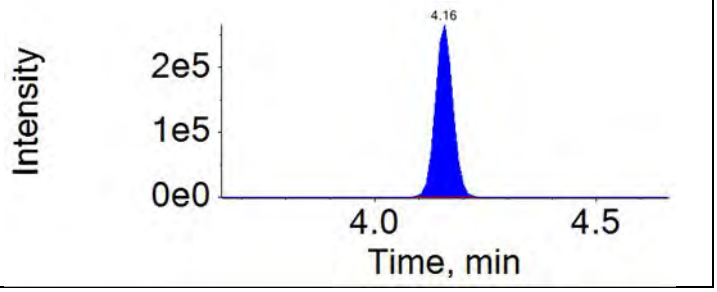
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

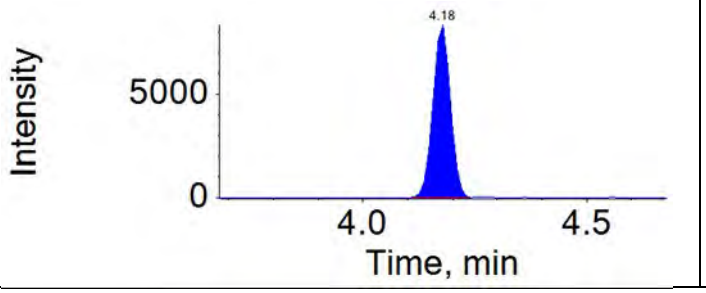
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

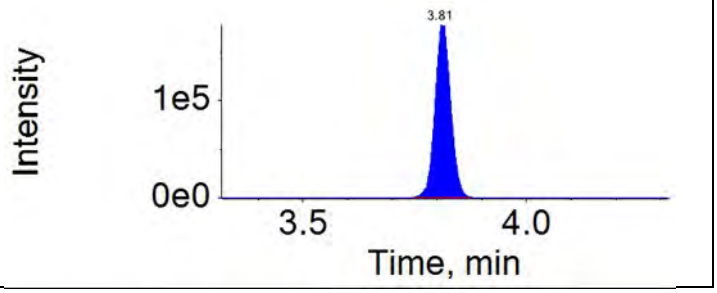
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



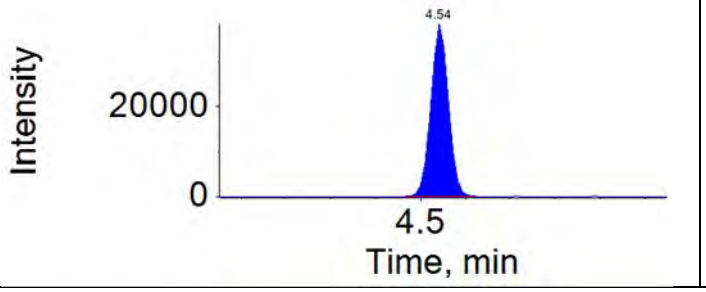


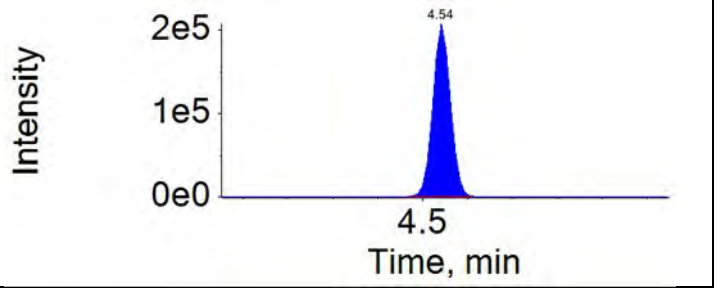
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



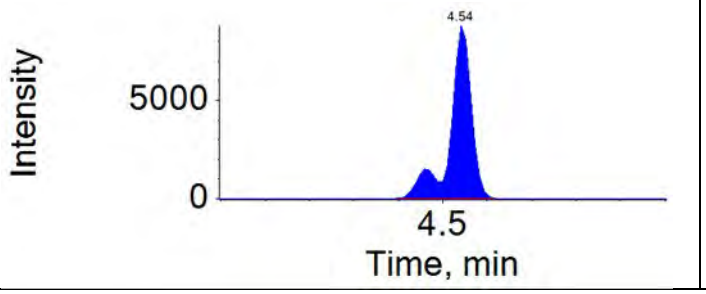


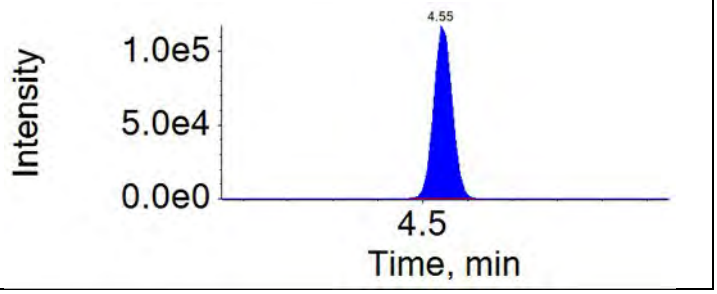
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

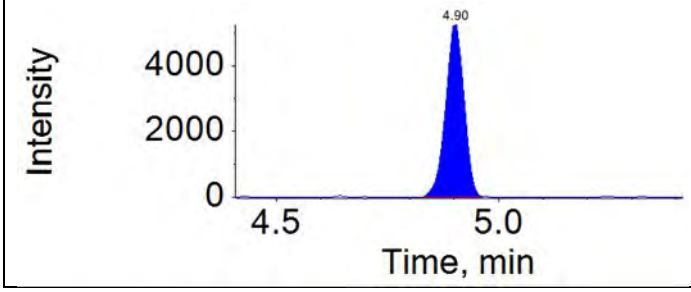
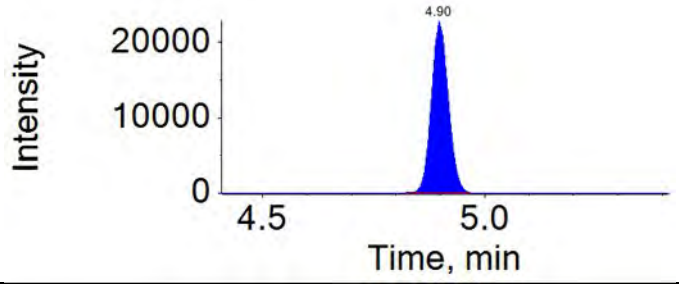


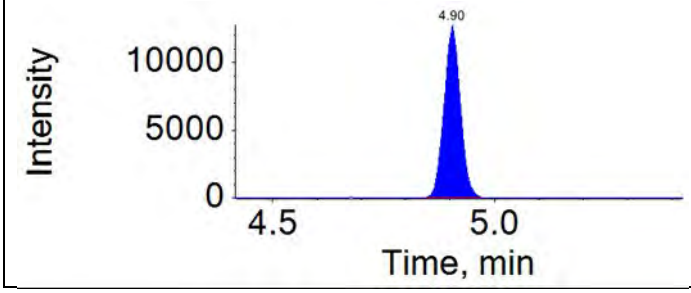
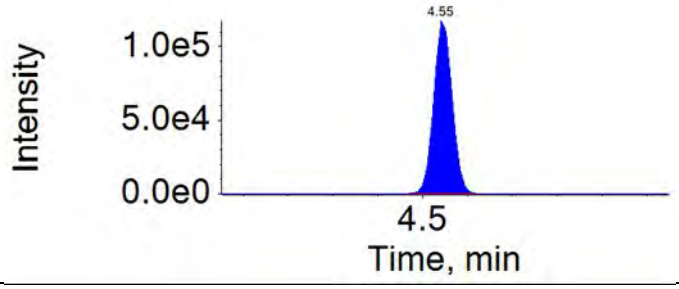


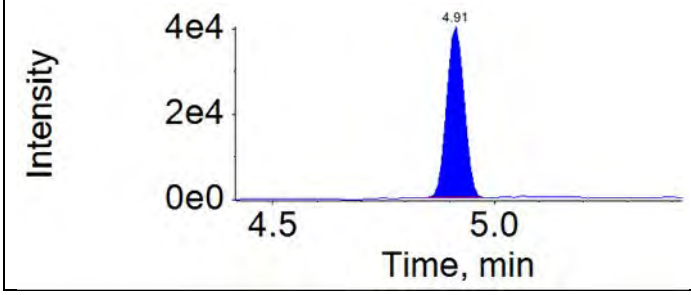
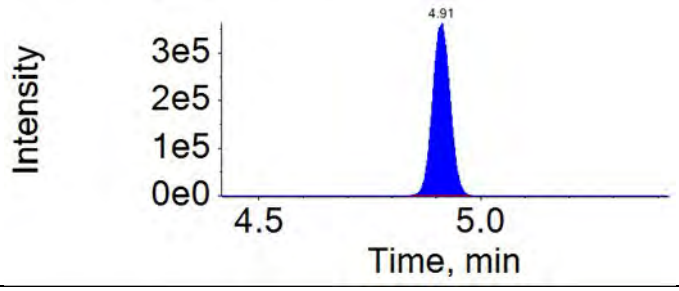
APPROVED
By MCD at 8:06 pm, 11/29/18

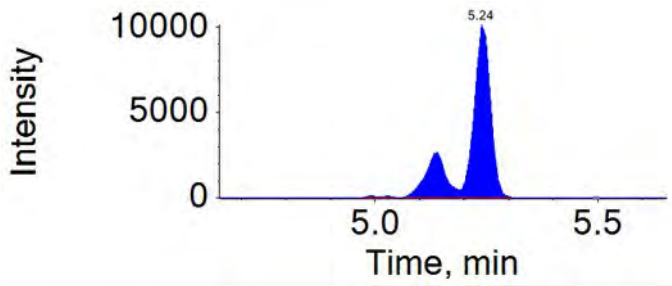
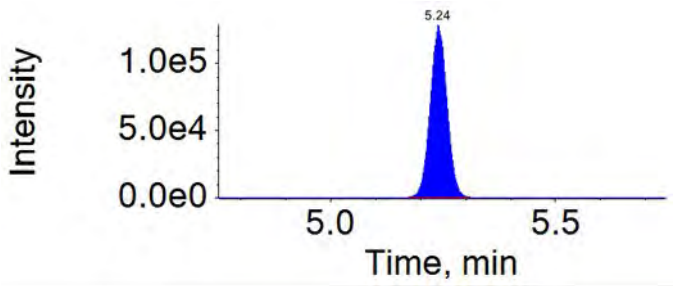
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

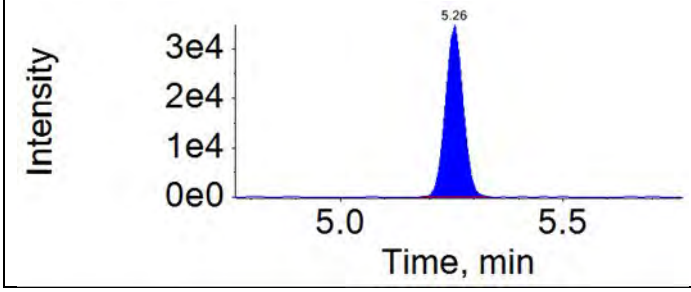
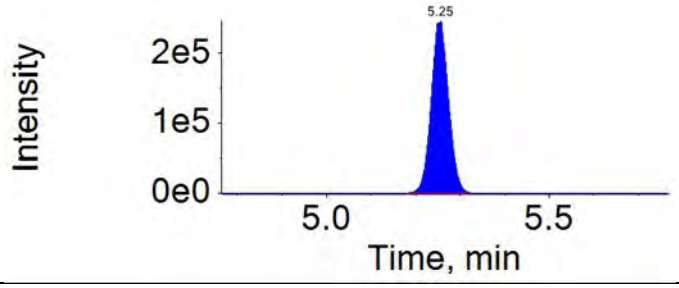
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

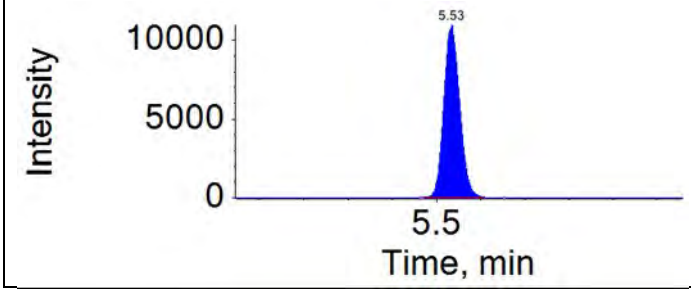
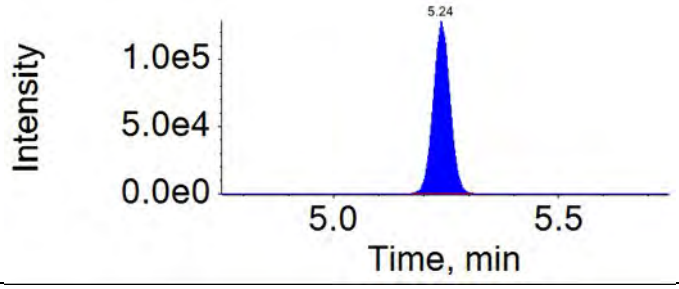
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

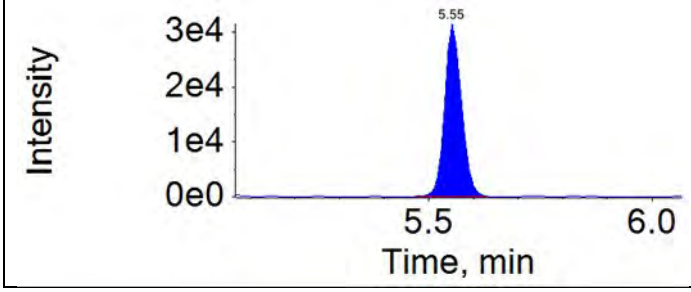
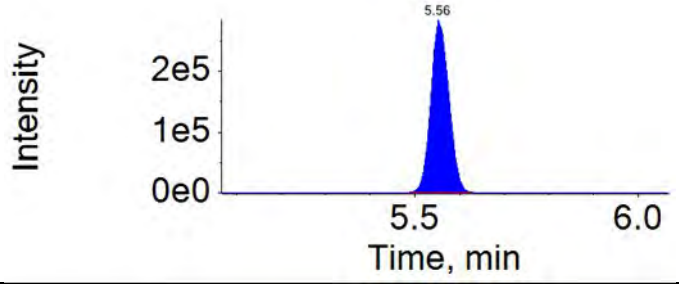
APPROVED
By MCD at 8:06 pm, 11/29/18

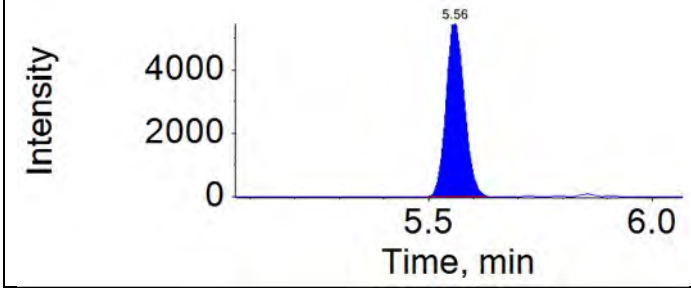
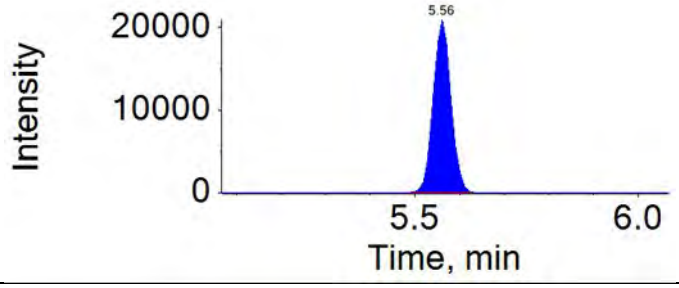
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0
	

Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0
	

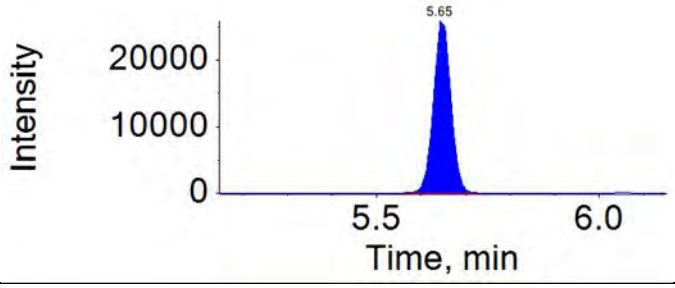
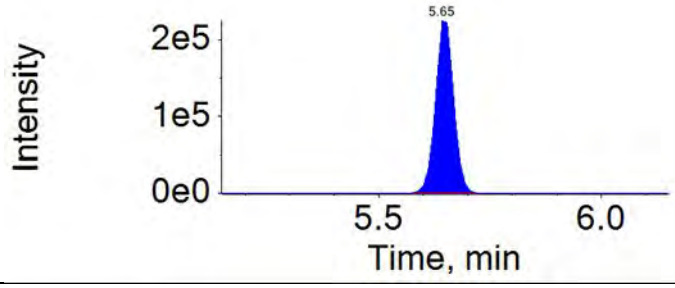
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0
	

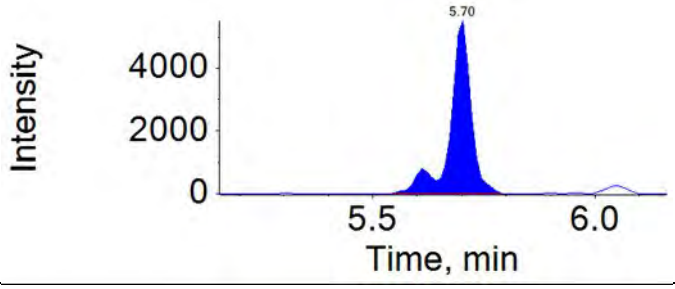
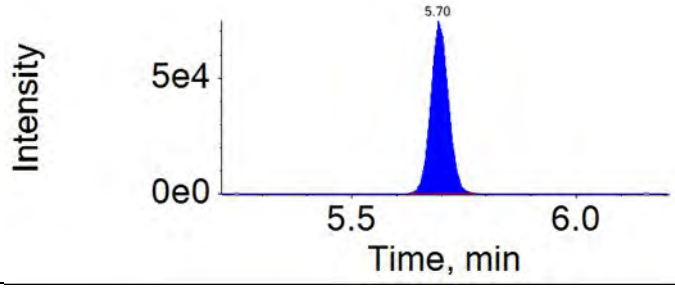
Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0
	

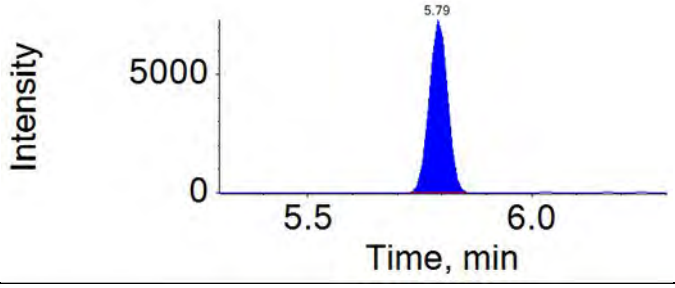
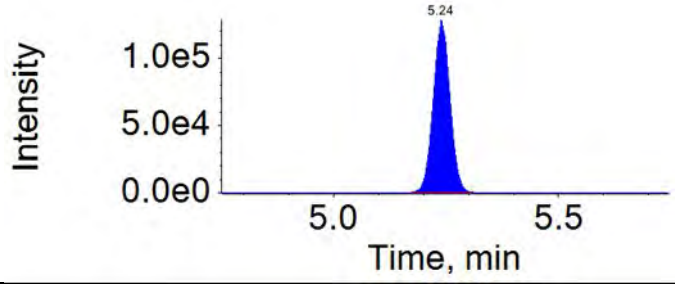
APPROVED
By MCD at 8:06 pm, 11/29/18

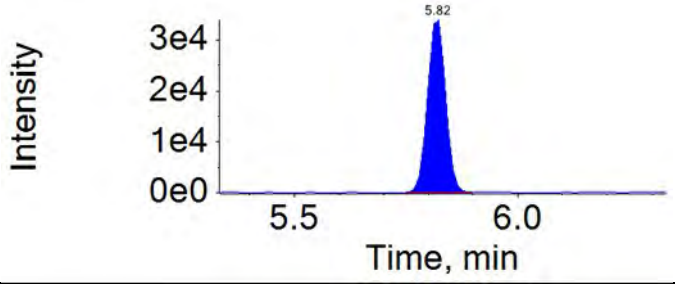
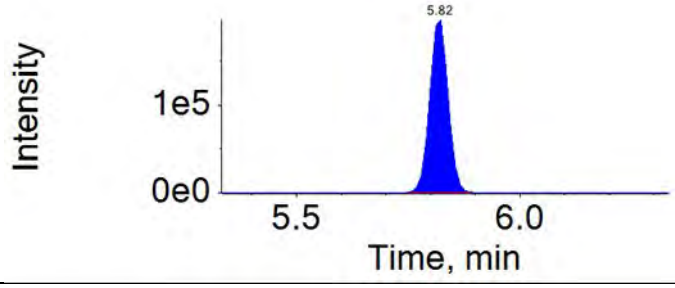
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

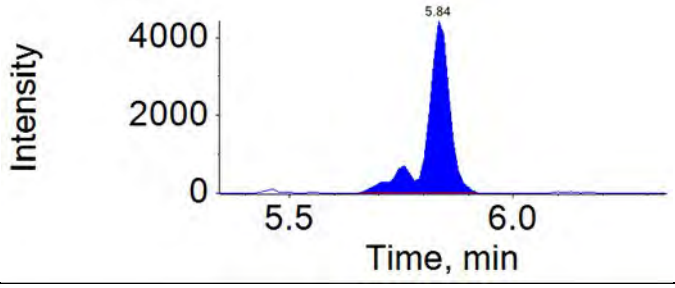
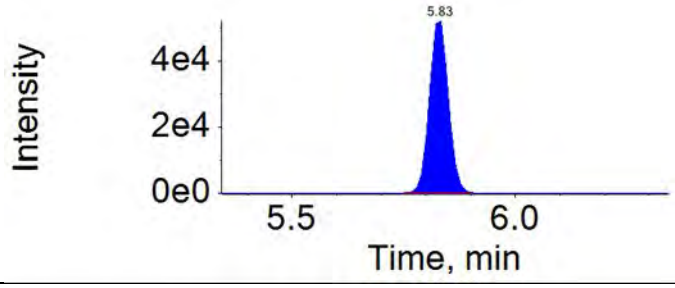
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

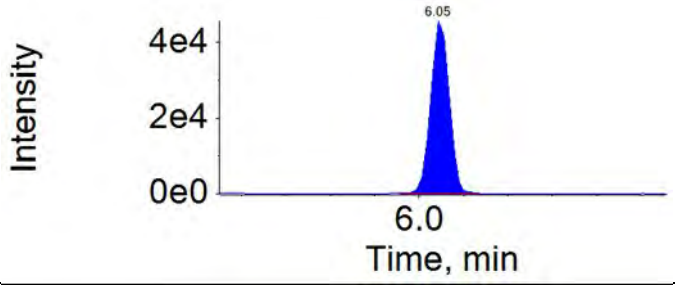
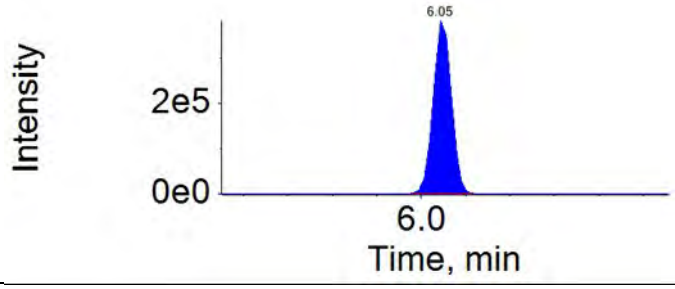
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

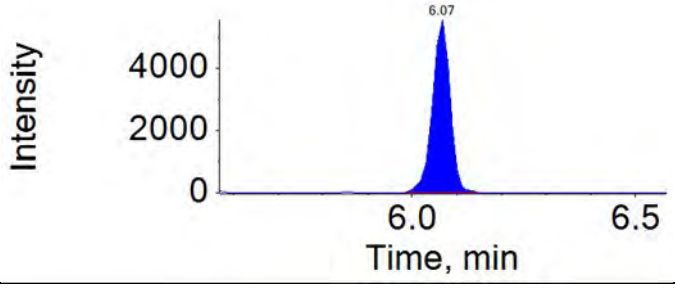
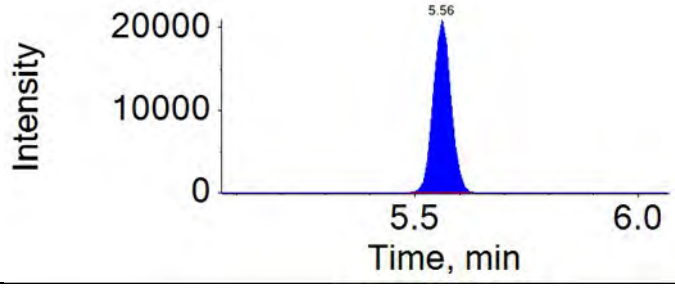
APPROVED
By MCD at 8:06 pm, 11/29/18

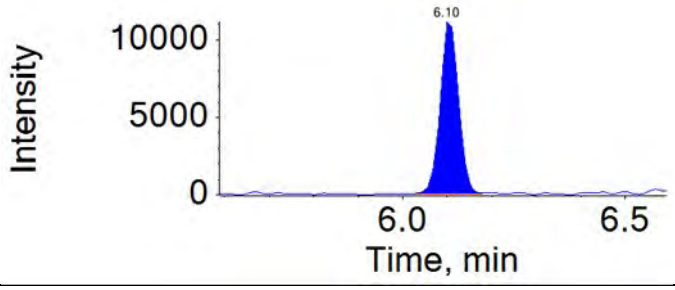
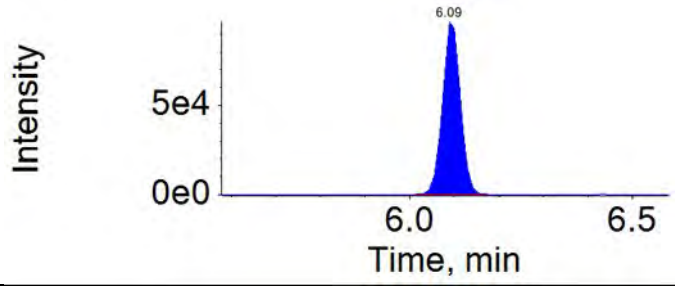
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

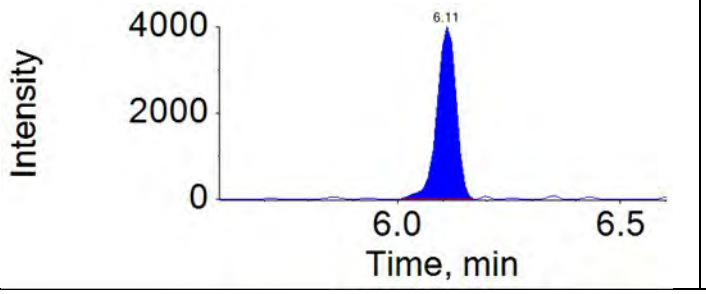
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

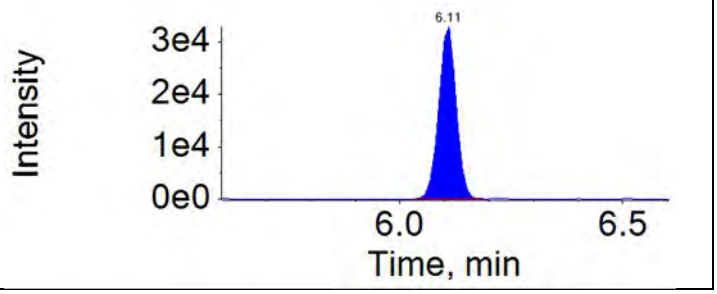
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

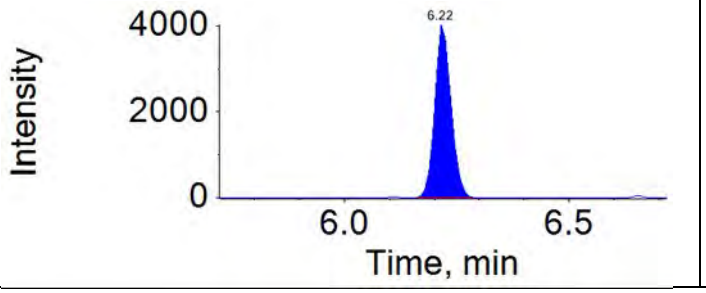
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

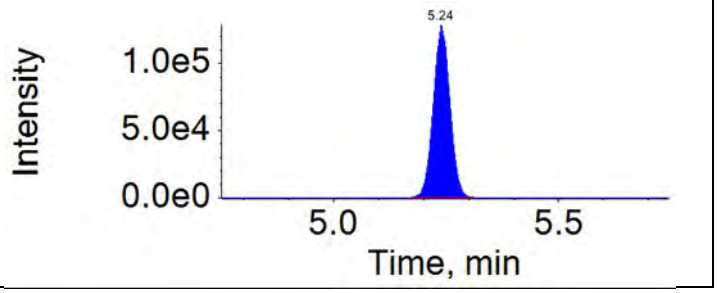
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



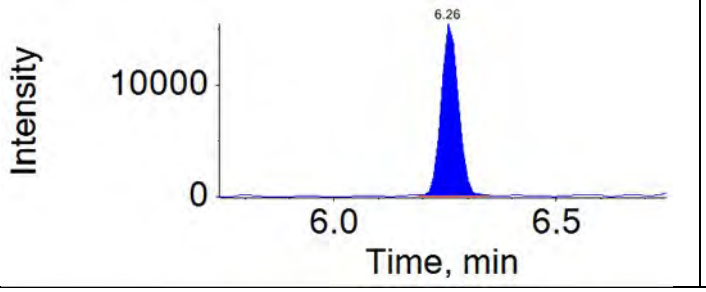


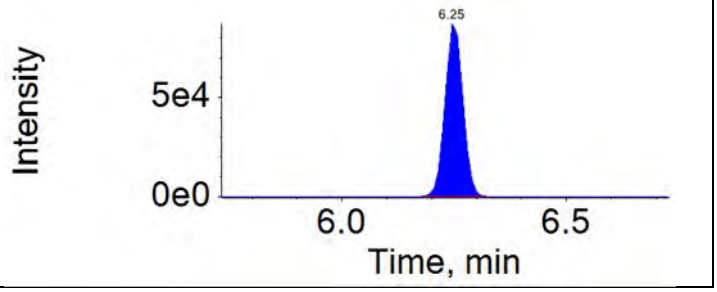
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



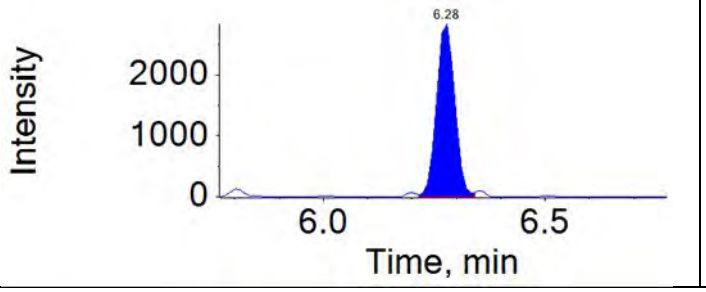


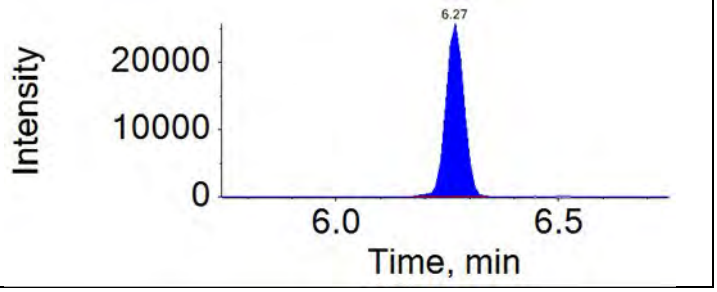
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



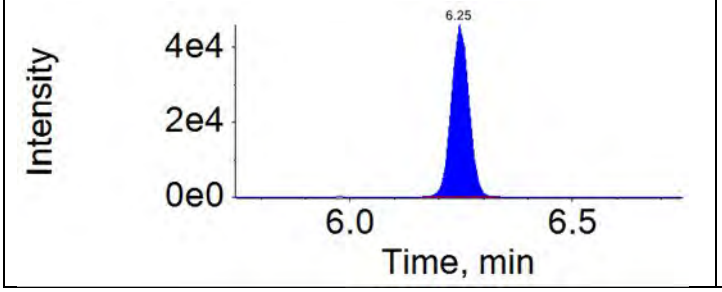


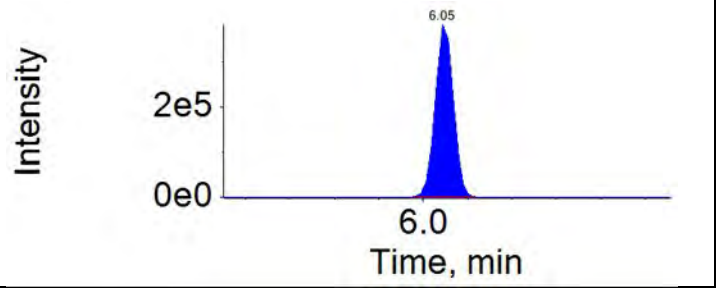
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

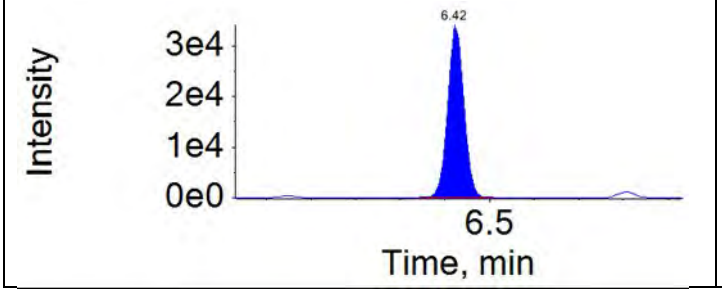
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

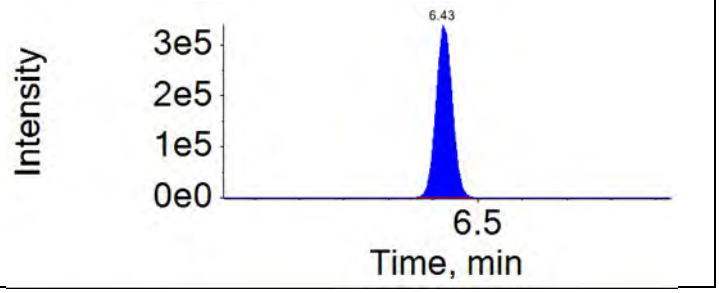
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



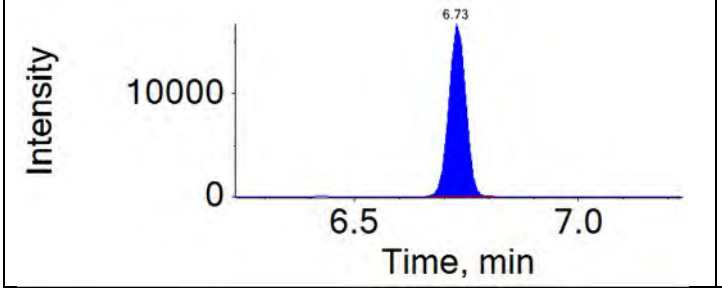


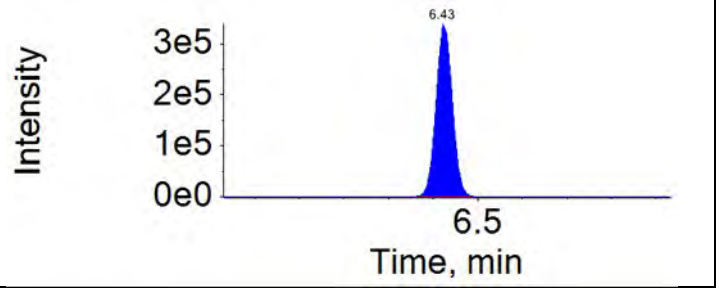
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



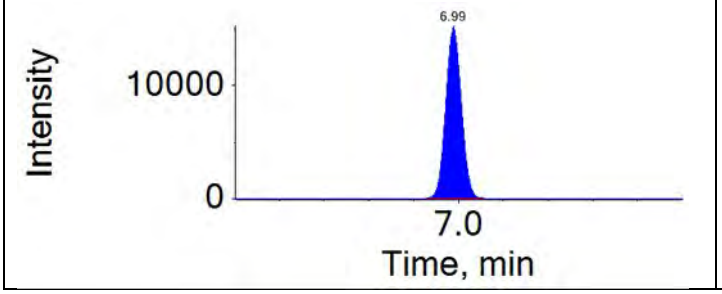


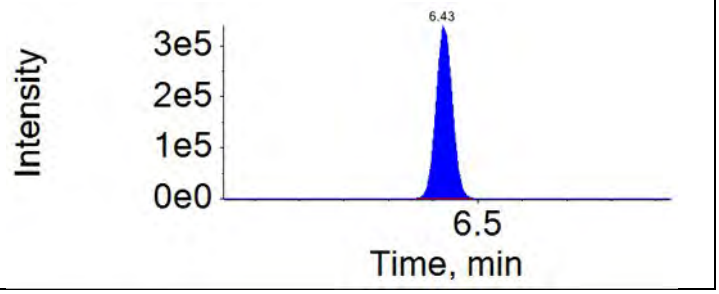
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0



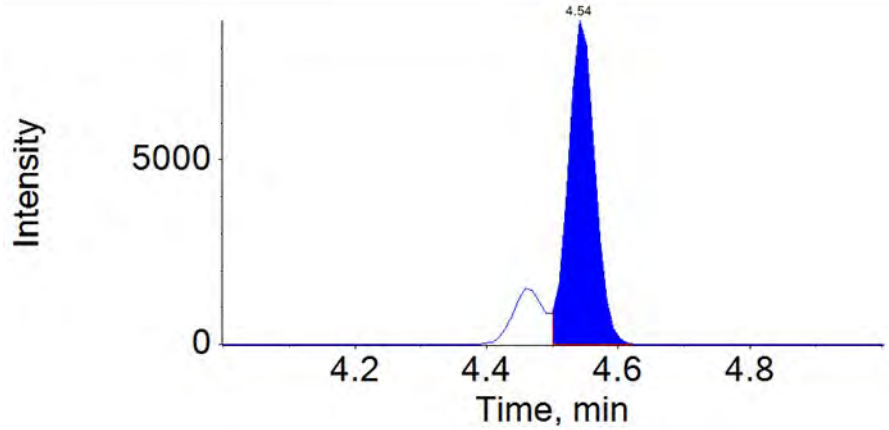


APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

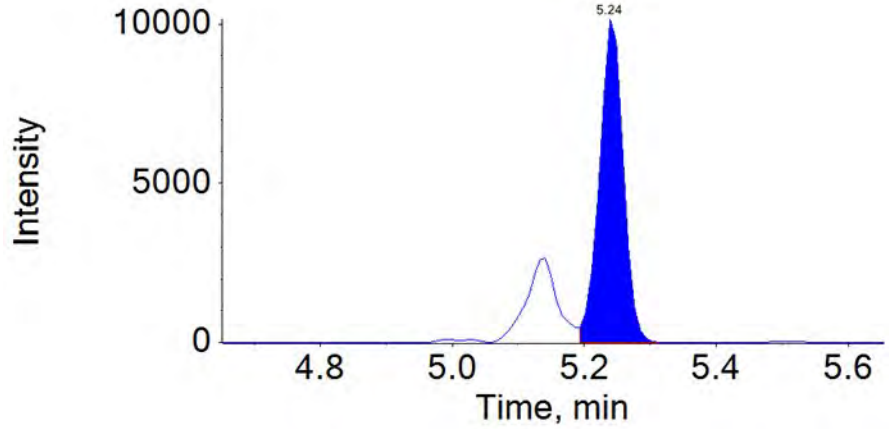
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.54
Peak Area:
24572.3
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-40.wiff
Sample Name:
CCV4_ISC_CAL2



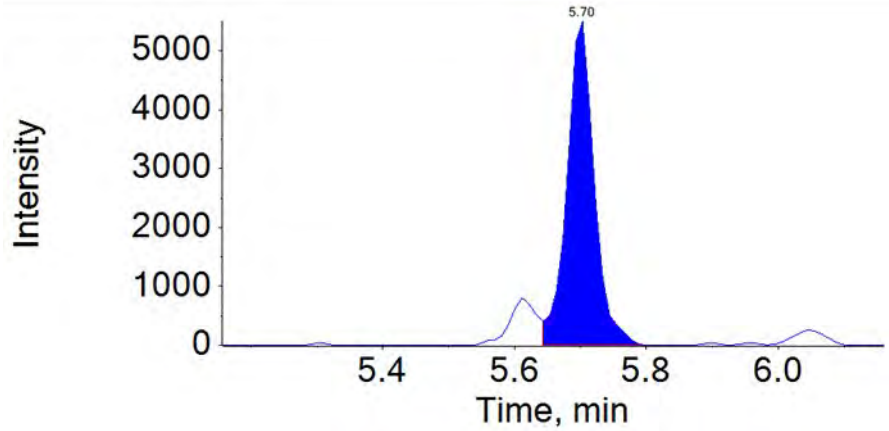
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
25465.9
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-40.wiff
Sample Name:
CCV4_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
15875.9
Mass Range:
570.0 / 419.0
File Name:
18NOV29D-40.wiff
Sample Name:
CCV4_ISC_CAL2



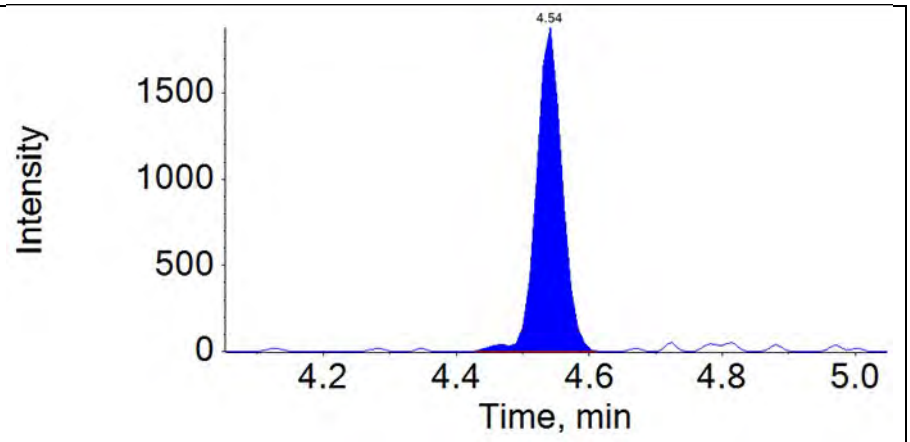
Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

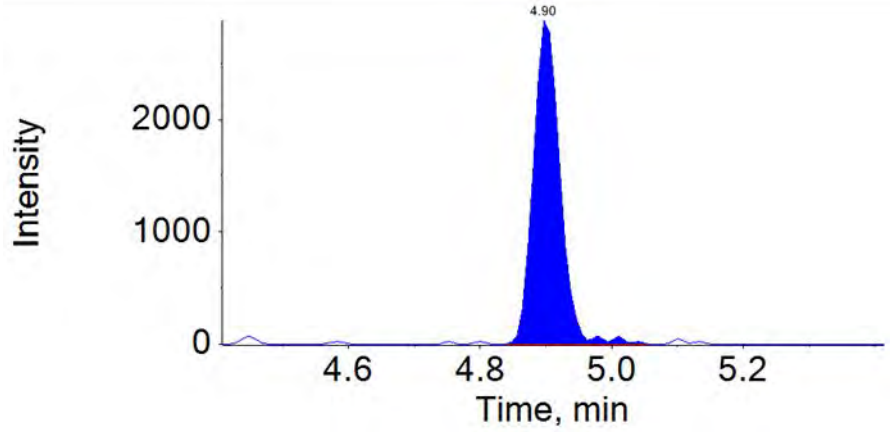
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA_2
RT (min.):
4.54
Peak Area:
5055.3
Mass Range:
363.0 / 169.0
File Name:
18NOV29D-40.wiff
Sample Name:
CCV4_ISC_CAL2



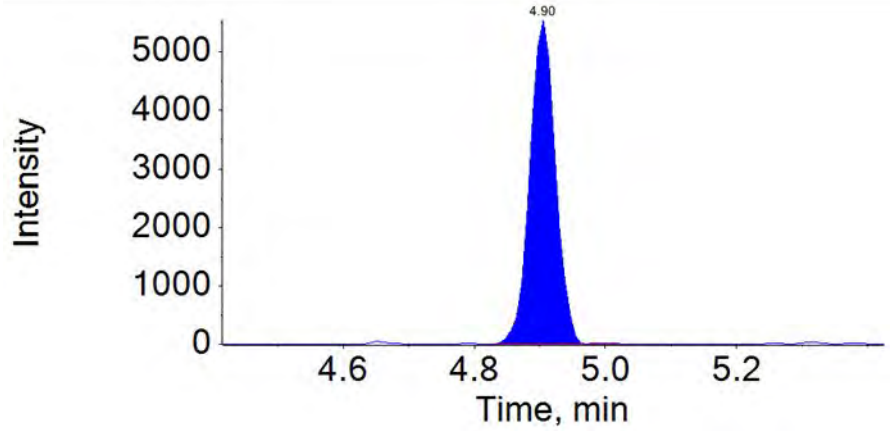
Integration Comment: incorrect integration

Component Name:
6:2-FTS_2
RT (min.):
4.90
Peak Area:
8193.6
Mass Range:
427.0 / 81.0
File Name:
18NOV29D-40.wiff
Sample Name:
CCV4_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFHpS_2
RT (min.):
4.90
Peak Area:
15103.2
Mass Range:
449.0 / 99.0
File Name:
18NOV29D-40.wiff
Sample Name:
CCV4_ISC_CAL2



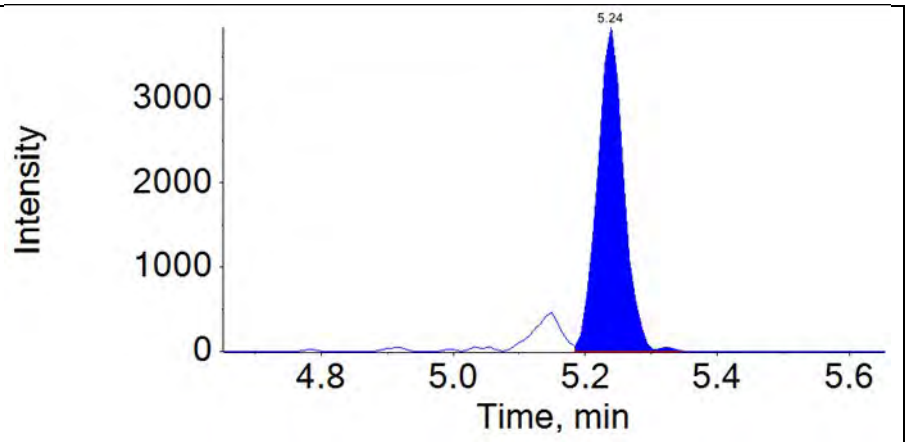
Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

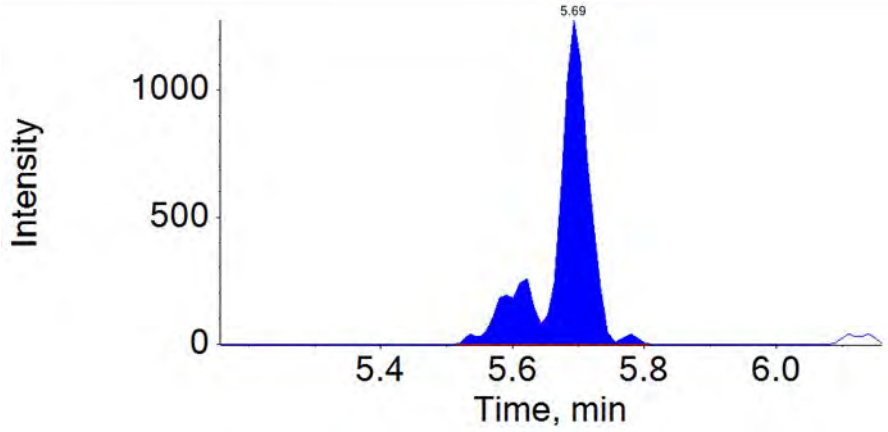
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
10649.5
Mass Range:
499.0 / 99.0
File Name:
18NOV29D-40.wiff
Sample Name:
CCV4_ISC_CAL2



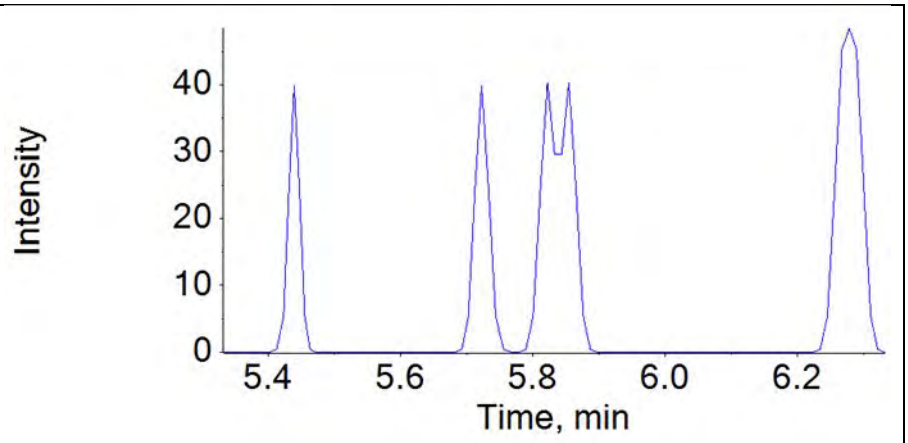
Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.69
Peak Area:
4530.3
Mass Range:
570.0 / 483.0
File Name:
18NOV29D-40.wiff
Sample Name:
CCV4_ISC_CAL2



Integration Comment: incorrect integration

Component Name:
PFUnDA_2
RT (min.):
N/A
Peak Area:
N/A
Mass Range:
563.0 / 169.0
File Name:
18NOV29D-40.wiff
Sample Name:
CCV4_ISC_CAL2



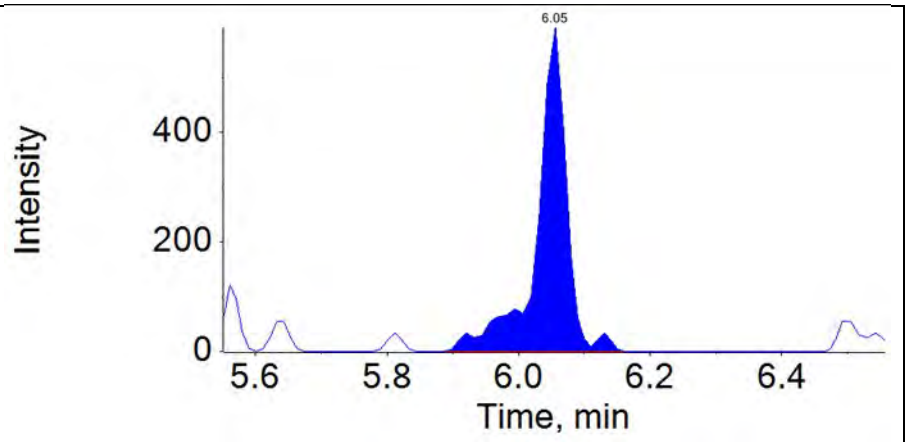
Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDoDA_2
RT (min.):
6.05
Peak Area:
1892.6
Mass Range:
613.0 / 169.0
File Name:
18NOV29D-40.wiff
Sample Name:
CCV4_ISC_CAL2



Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Ion Ratio Report

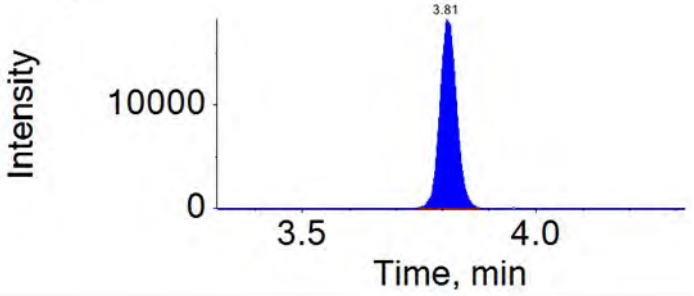
Sample Name: CCV4_ISC_CAL2 **Instrument Name:** LM27631 **File Name:** 18NOV29D-40.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	45293.9	A	N/A	0.3437			
PFBS_2	3.81	1.00	15566.4	A	N/A	0.3437	-6	50	
4:2-FTS	4.12	1.00	13722.8	A	N/A	0.6288			
4:2-FTS_2	4.12	1.00	8629.6	A	N/A	0.6288	-1	50	
PFHxA	4.16	1.00	97880.8	A	N/A	0.0130			
PFHxA_2	4.16	1.00	1268.8	A	N/A	0.0130	25	50	
PFPeS	4.18	1.10	22597.4	A	N/A	0.4989			
PFPeS_2	4.18	1.10	11274.1	A	N/A	0.4989	0	50	
PFHpA	4.54	1.00	103944.3	A	N/A	0.0478			
PFHpA_2	4.54	1.00	4969.9	M	N/A	0.0478	-14	50	
PFHxS	4.54	1.00	29569.0	M	N/A	0.4154			
PFHxS_2	4.54	1.00	12282.4	A	N/A	0.4154	12	50	
6:2-FTS	4.90	1.00	15183.2	A	N/A	0.5257			
6:2-FTS_2	4.90	1.00	7982.0	M	N/A	0.5257	-21	50	
PFHpS	4.90	1.08	32181.3	A	N/A	0.4675			
PFHpS_2	4.90	1.08	15045.9	M	N/A	0.4675	19	50	
PFOA	4.91	1.00	109440.5	A	N/A	0.0581			
PFOA_2	4.91	1.00	6360.6	A	N/A	0.0581	1	50	
PFOS	5.24	1.00	34621.4	M	N/A	0.3495			
PFOS_2	5.24	1.00	12100.2	M	N/A	0.3495	18	50	
PFNA	5.26	1.00	95267.9	A	N/A	0.0200			
PFNA_2	5.26	1.00	1906.7	A	N/A	0.0200	0	50	
PFNS	5.53	1.06	27262.2	A	N/A	0.4296			
PFNS_2	5.53	1.06	11712.0	A	N/A	0.4296	-10	50	
PFDA	5.55	1.00	82998.2	A	N/A	0.0083			
PFDA_2	5.55	1.00	689.0	A	N/A	0.0083	11	50	
8:2-FTS	5.56	1.00	15680.8	A	N/A	0.5827			
8:2-FTS_2	5.56	1.00	9137.3	A	N/A	0.5827	8	50	
NMeFOSAA	5.70	1.00	18125.1	M	N/A	0.2463			
NMeFOSAA_2	5.69	1.00	4463.4	M	N/A	0.2463	7	50	
PFDS	5.79	1.11	20714.1	A	N/A	0.4648			
PFDS_2	5.79	1.11	9628.7	A	N/A	0.4648	-13	50	
PFUnDA	5.82	1.00	96054.9	A	N/A	0.0014			
PFUnDA_2	5.84	1.00	129.8	M	N/A	0.0014	-65	50	OOS
NEtFOSAA	5.84	1.00	15666.3	A	N/A	0.6711			
NEtFOSAA_2	5.83	1.00	10514.1	A	N/A	0.6711	-9	50	
PFDoDA	6.05	1.00	131944.1	A	N/A	0.0116			
PFDoDA_2	6.05	1.00	1535.9	M	N/A	0.0116	-11	50	
10:2-FTS	6.07	1.09	15267.5	A	N/A	0.7099			
10:2-FTS_2	6.07	1.09	10838.1	A	N/A	0.7099	2	50	
PFTrDA	6.25	1.03	125959.9	A	N/A	0.0098			
PFTrDA_2	6.25	1.03	1229.1	A	N/A	0.0098	8	50	
PFTeDA	6.42	1.00	85168.5	A	N/A	0.0083			
PFTeDA_2	6.43	1.00	709.2	A	N/A	0.0083	48	50	
PFHxDA	6.73	1.05	43933.6	A	N/A	0.0684			
PFHxDA_2	6.73	1.05	3006.9	A	N/A	0.0684	6	50	
PFODA	6.99	1.09	36556.6	A	N/A	0.0264			
PFODA_2	6.99	1.09	963.9	A	N/A	0.0264	0	50	

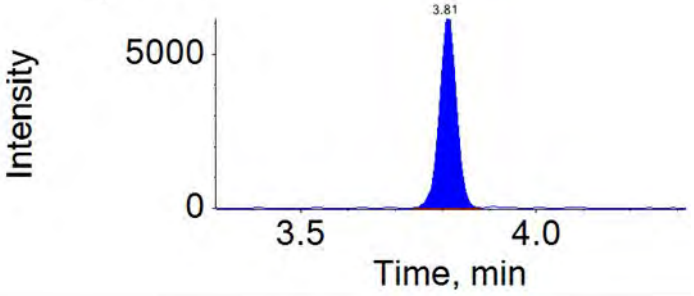
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

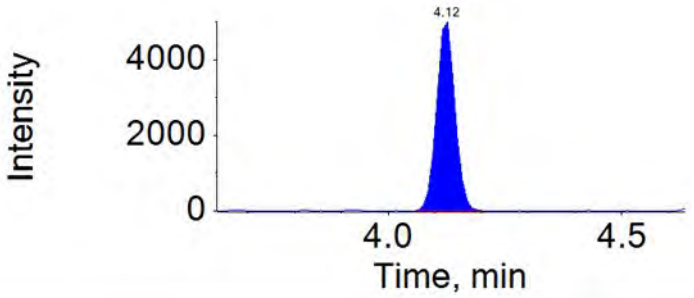
Component: PFBS
Primary Mass: 299.0 / 80.0



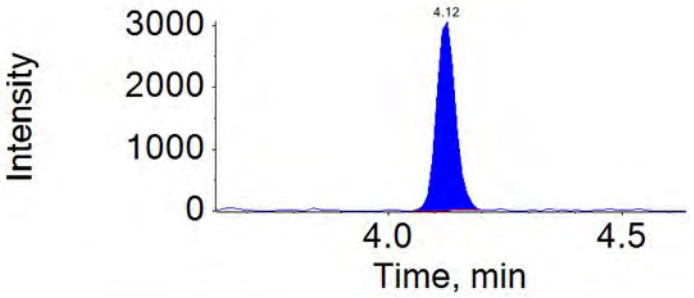
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



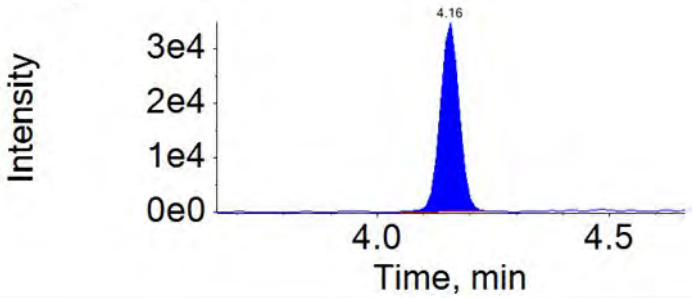
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



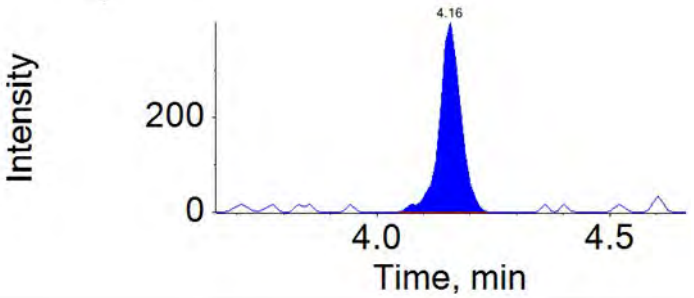
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



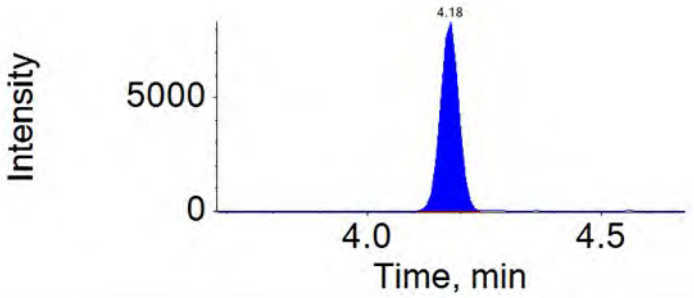
Component: PFHxA
Primary Mass: 313.0 / 269.0



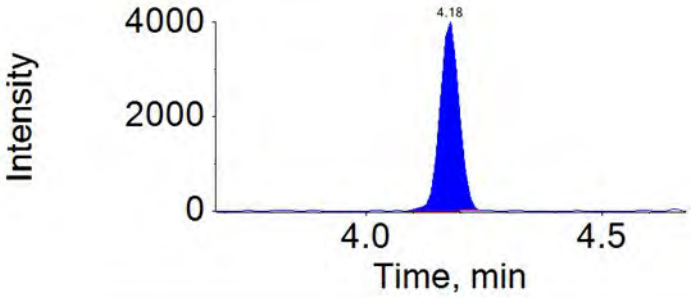
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



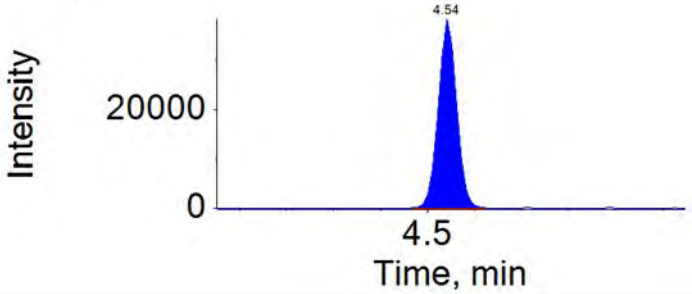
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



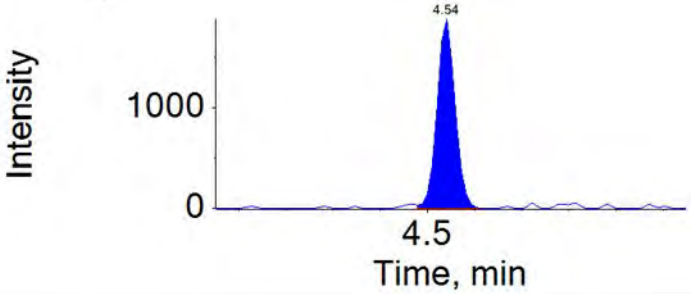
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

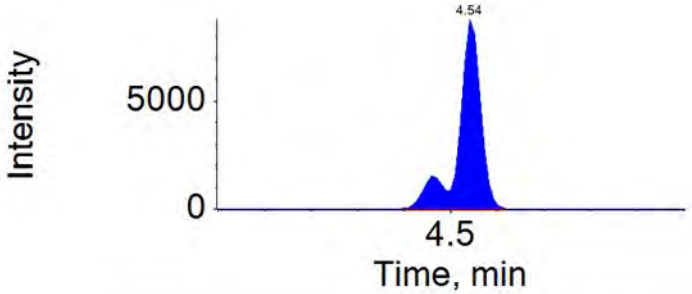
Component: PFHpA
Primary Mass: 363.0 / 319.0



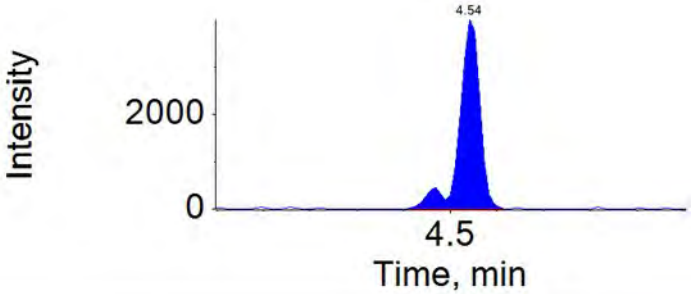
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



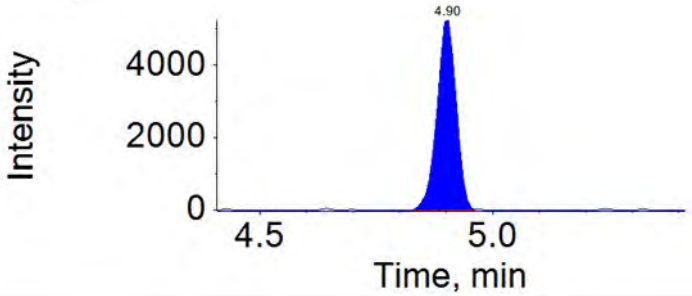
Component: PFHxS
Primary Mass: 399.0 / 80.0



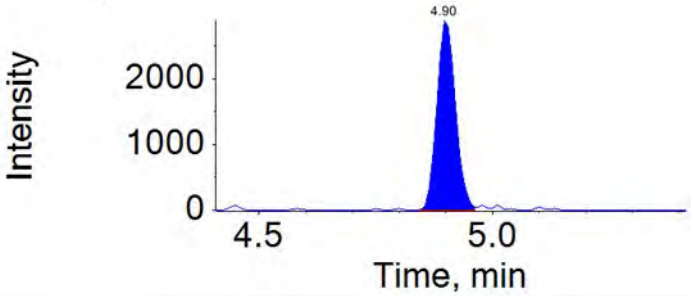
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



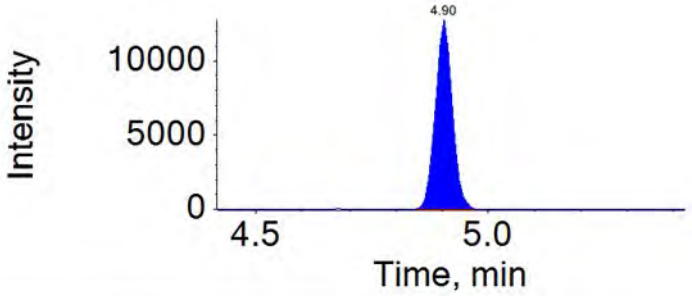
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



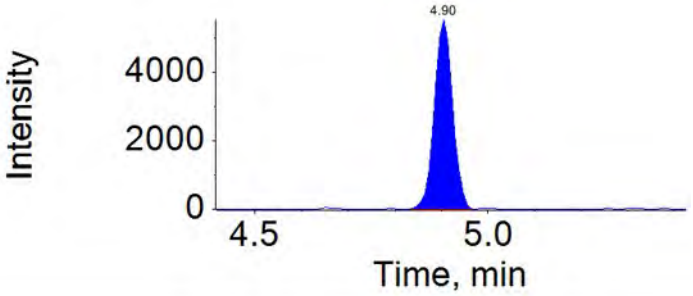
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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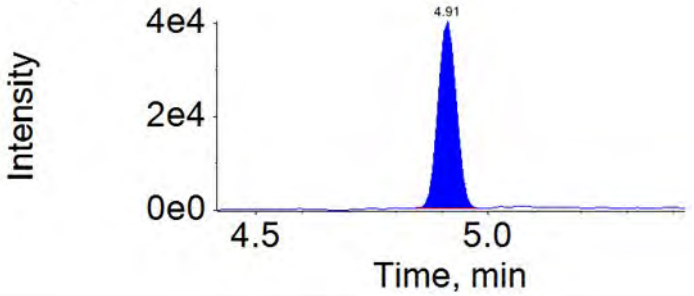
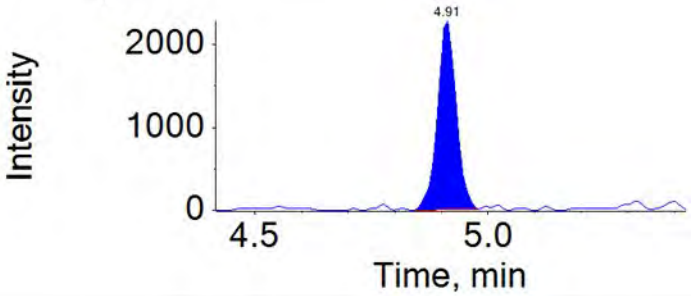
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

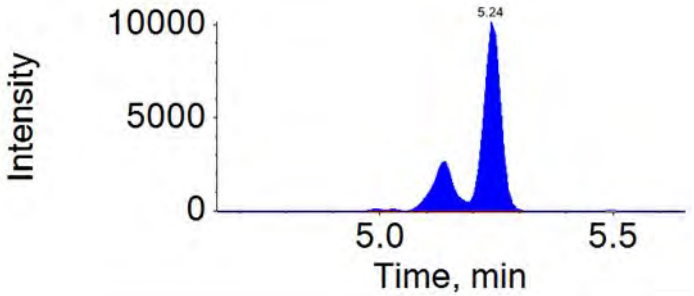
Component: PFOA
Primary Mass: 413.0 / 369.0



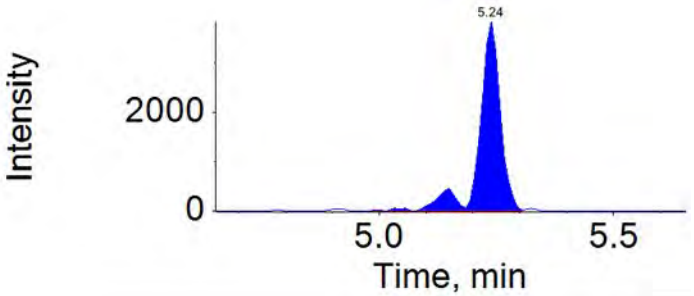
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



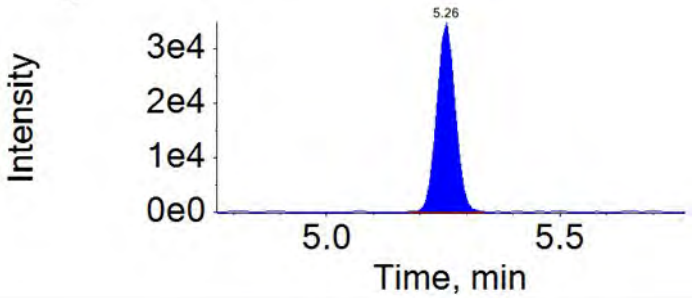
Component: PFOS
Primary Mass: 499.0 / 80.0



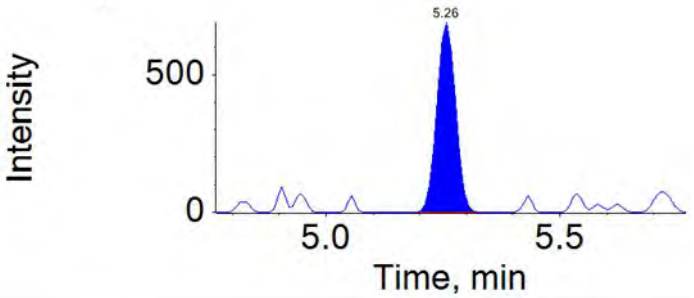
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



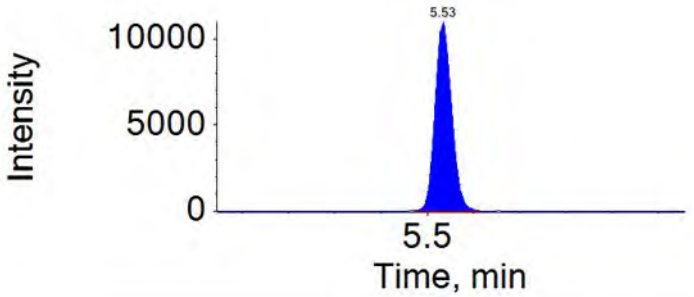
Component: PFNA
Primary Mass: 463.0 / 419.0



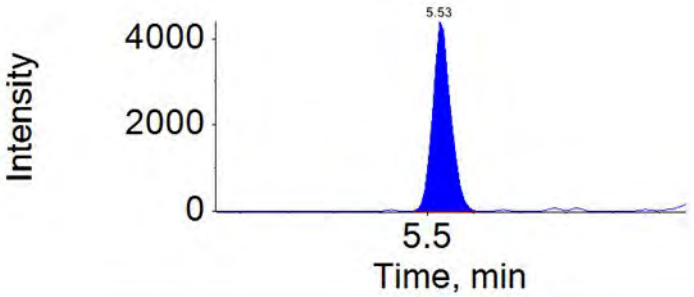
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



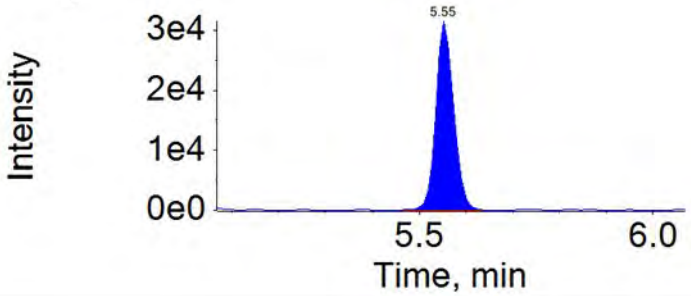
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



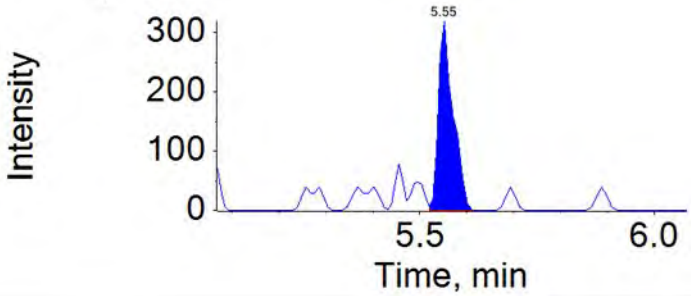
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

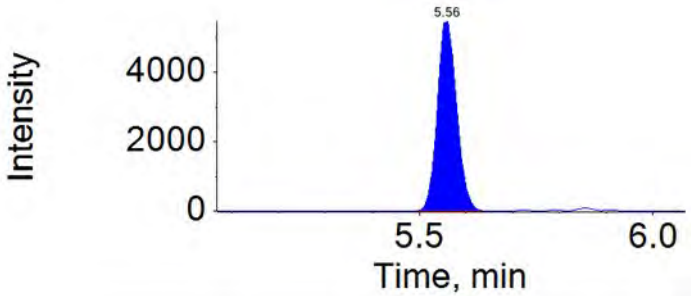
Component: PFDA
Primary Mass: 513.0 / 469.0



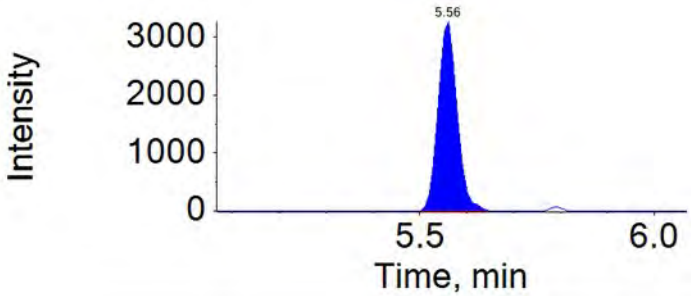
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



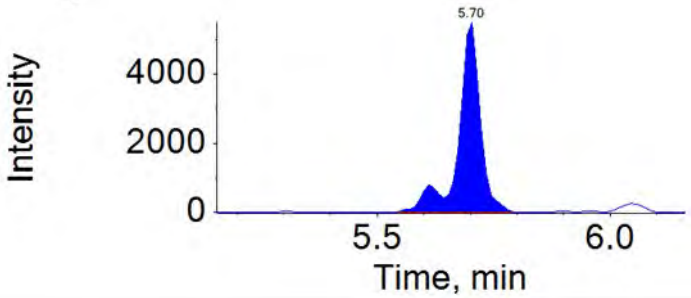
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



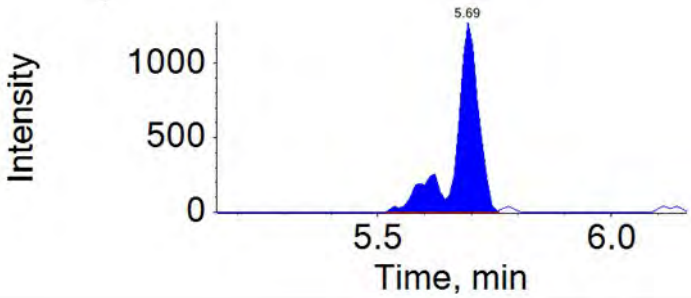
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



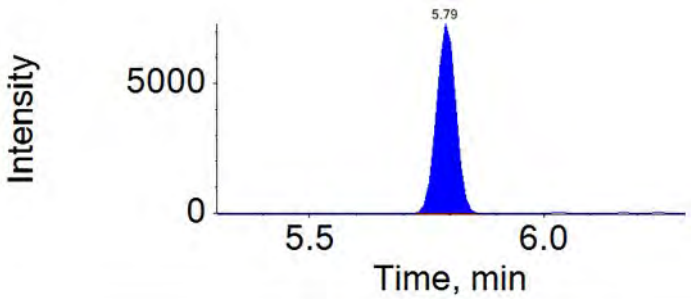
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



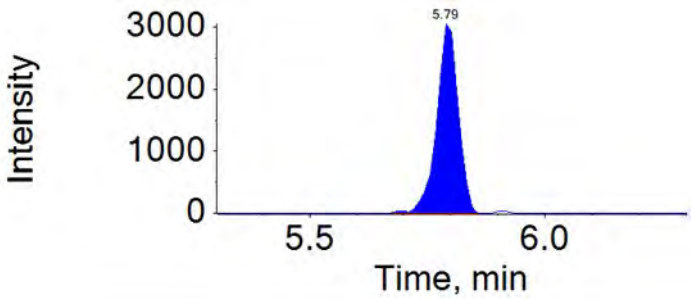
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



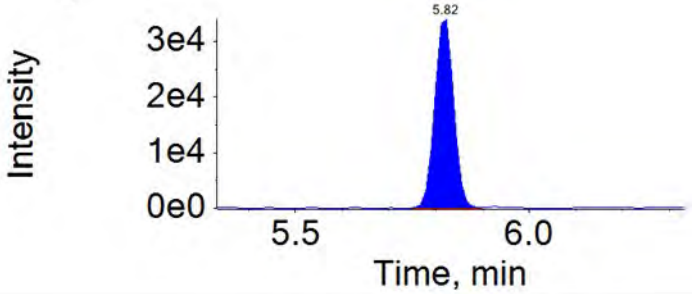
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



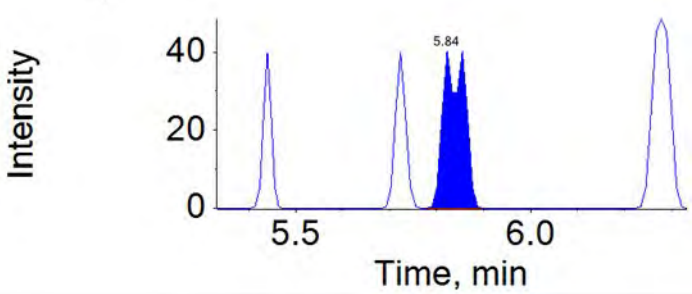
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

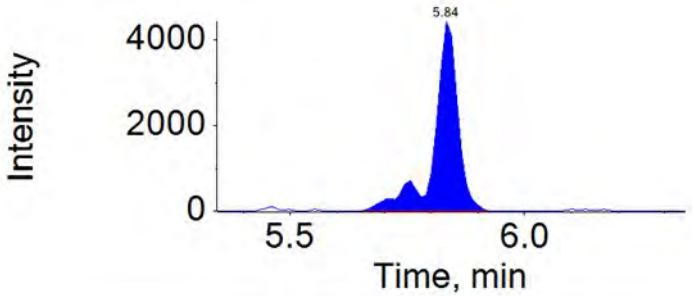
Component: PFUnDA
Primary Mass: 563.0 / 519.0



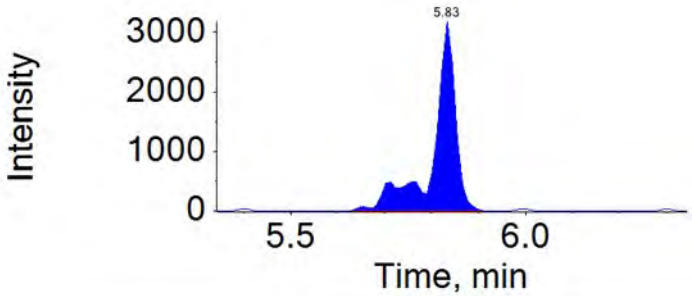
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



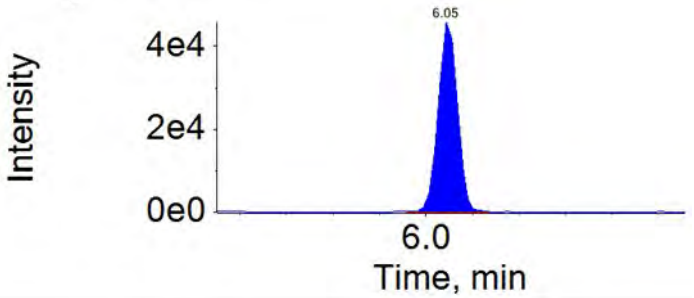
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



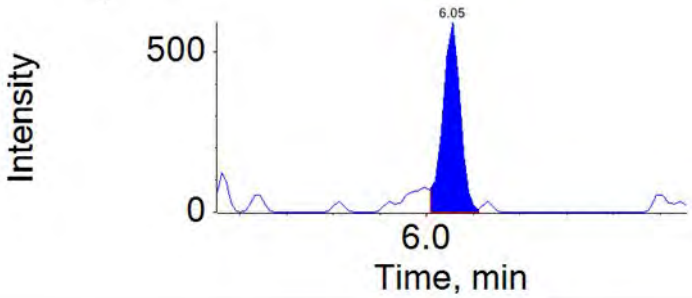
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



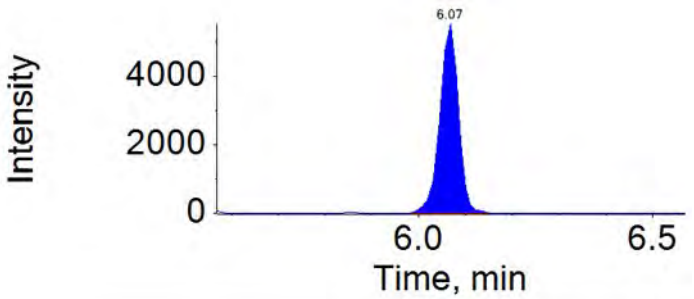
Component: PFDoDA
Primary Mass: 613.0 / 569.0



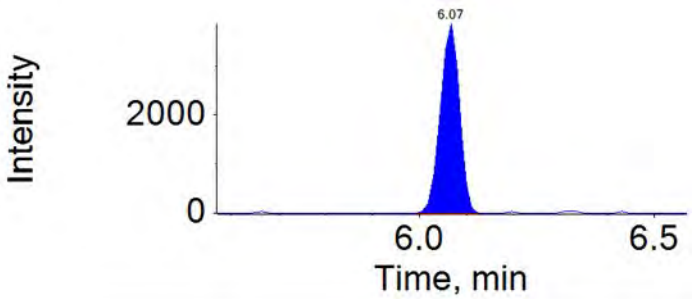
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



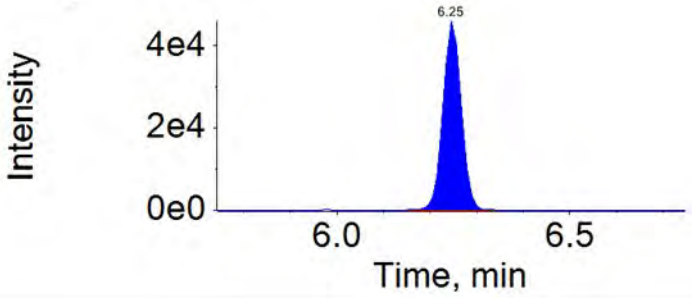
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



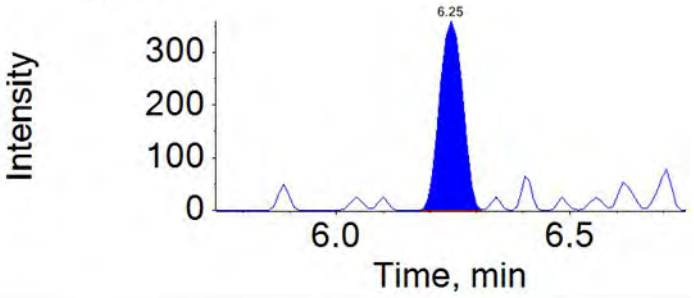
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

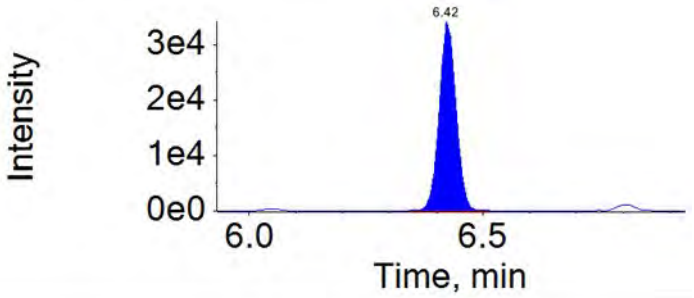
Component: PFTrDA
Primary Mass: 663.0 / 619.0



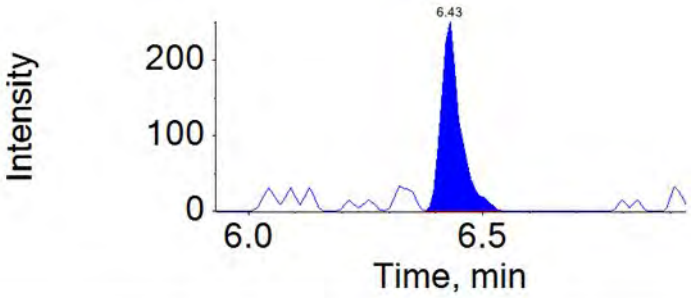
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



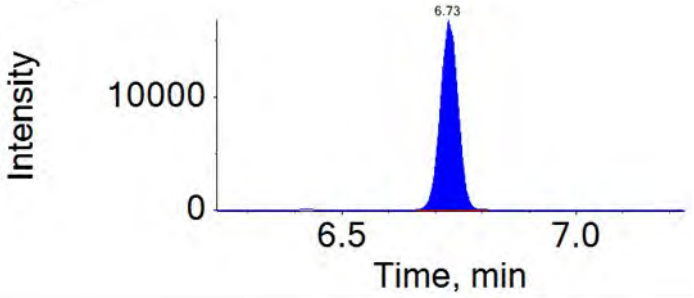
Component: PFTeDA
Primary Mass: 713.0 / 669.0



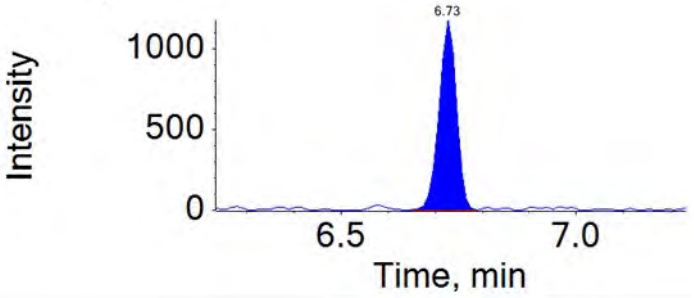
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



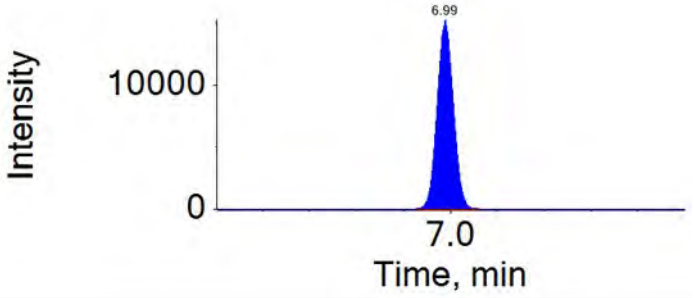
Component: PFHxDA
Primary Mass: 813.0 / 769.0



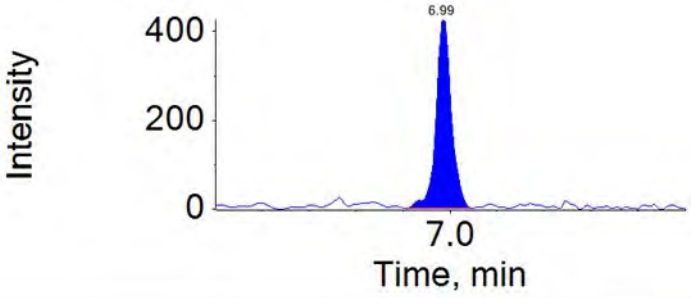
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



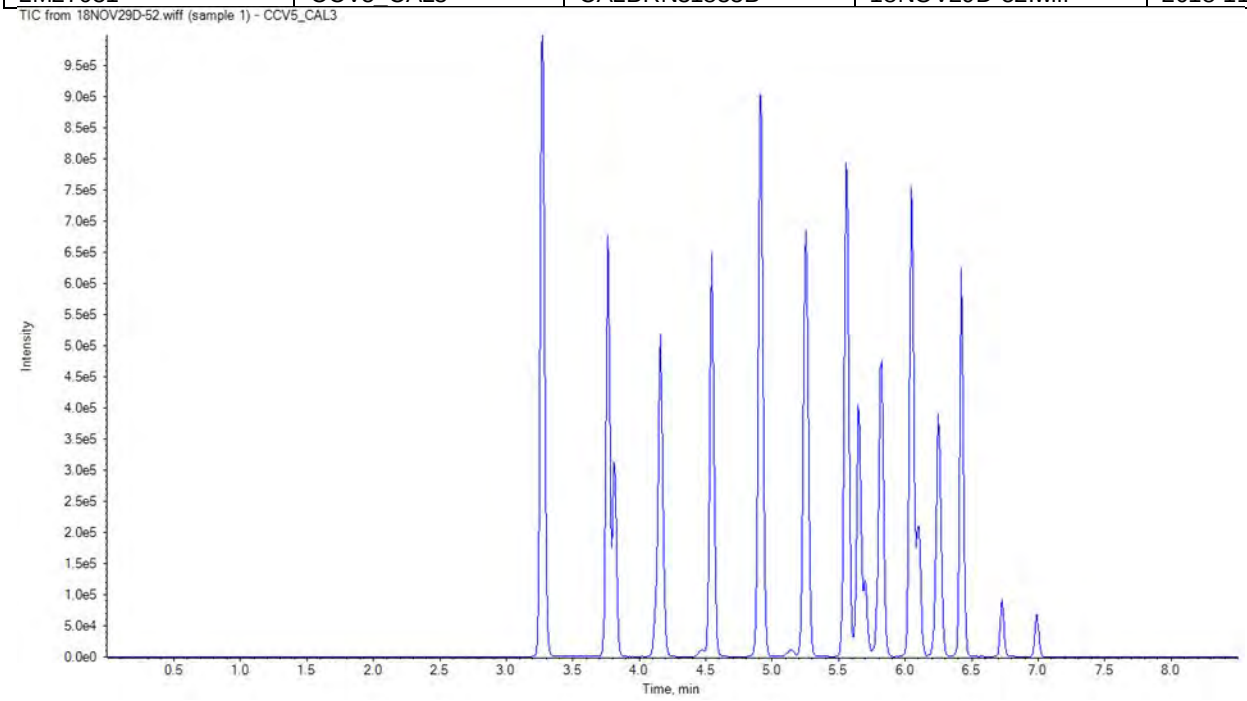
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV5_CAL3	CALBRN31833B	18NOV29D-52.wiff	2018-11-29T17:37:36



Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	888103.1	906425.4	-2	50	
13C2-PFOA	5.0	482099.7	495984.0	-3	50	
13C4-PFOS	4.8	299552.8	296261.8	1	50	
13C2-PFDA	5.0	454503.3	451203.0	1	50	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	CCV5_CAL3	CALBRN31833B	18NOV29D-52.wiff	2018-11-29T17:37:36

Analyte Name	Analyte Area	Sc /pk	Ext Std Name	Ext Std Area	Ext Std con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBA	410376.9	10	13C4-PFBA	1003538.1	5.0	0.409	3.27	1.000	2.000	2.242	12	30	
PFPeA	400188.5	11	13C5-PFPeA	935080.6	5.0	0.428	3.77	1.000	2.000	2.100	5	30	
PFBS	172355.2	10	13C3-PFBS	424594.0	4.7	0.406	3.81	1.000	1.770	1.970	11	30	
4:2-FTS	52632.4	12	13C2-4:2-FTS	66022.9	4.7	0.797	4.12	1.000	1.870	2.134	14	30	
PFHxA	392712.5	11	13C5-PFHxA	665817.1	5.0	0.590	4.16	1.000	2.000	2.368	18	30	
PFPeS	89389.0	11	13C3-PFBS	424594.0	4.7	0.211	4.18	1.100	1.880	2.129	13	30	
PFHpA	396806.2	11	13C4-PFHpA	547436.1	5.0	0.725	4.54	1.000	2.000	2.237	12	30	
PFHxS	127006.9	19	13C3-PFHxS	327068.8	4.7	0.388	4.55	1.000	1.820	1.818	0	30	
6:2-FTS	51799.6	11	13C2-6:2-FTS	58432.7	4.8	0.886	4.90	1.000	1.900	2.313	22	30	
PFHpS	129025.9	11	13C3-PFHxS	327068.8	4.7	0.394	4.91	1.080	1.900	1.969	4	30	
PFOA	407078.9	11	13C8-PFOA	958420.1	5.0	0.425	4.91	1.000	2.000	2.195	10	30	
PFOS	138995.5	21	13C8-PFOS	336404.9	4.8	0.413	5.24	1.000	1.850	1.733	-6	30	
PFNA	382168.0	11	13C9-PFNA	639090.1	5.0	0.598	5.26	1.000	2.000	2.292	15	30	
PFNS	98297.2	11	13C8-PFOS	336404.9	4.8	0.292	5.54	1.060	1.920	1.845	-4	30	
PFDA	343068.9	11	13C6-PFDA	857518.7	5.0	0.400	5.56	1.000	2.000	2.265	13	30	
8:2-FTS	54309.5	11	13C2-8:2-FTS	55836.5	4.8	0.973	5.56	1.000	1.920	1.834	-4	30	
PFOSA	268924.0	12	13C8-PFOSA	644731.6	5.0	0.417	5.65	1.000	2.000	2.113	6	30	
NMeFOSAA	64182.7	18	d3-NMeFOSAA	182307.0	5.0	0.352	5.70	1.000	2.000	2.246	12	30	
PFDS	79891.7	12	13C8-PFOS	336404.9	4.8	0.237	5.79	1.100	1.930	1.883	-2	30	
PFUnDA	355883.8	11	13C7-PFUnDA	567707.2	5.0	0.627	5.82	1.000	2.000	2.241	12	30	
NEtFOSAA	64211.1	22	d5-NEtFOSAA	138062.3	5.0	0.465	5.83	1.000	2.000	2.265	13	30	
PFDoDA	467324.6	12	13C2-PFDoDA	1144067.1	5.0	0.408	6.05	1.000	2.000	2.238	12	30	
10:2-FTS	54230.7	12	13C2-8:2-FTS	55836.5	4.8	0.971	6.07	1.090	1.930	2.142	11	30	
NMePFOSAE	136711.2	11	d7-NMePFOSAE	257051.1	5.0	0.532	6.10	1.000	2.000	2.238	12	30	
NMePFOSA	35299.2	11	d3-NMePFOSA	82258.4	5.0	0.429	6.11	1.000	2.000	2.275	14	30	
PFDoS	43145.4	11	13C8-PFOS	336404.9	4.8	0.128	6.22	1.190	1.940	1.842	-5	30	
NEtPFOSAE	152658.0	11	d9-NEtPFOSAE	225911.1	5.0	0.676	6.26	1.000	2.000	2.431	22	30	
NEtPFOSA	32593.5	11	d5-NEtPFOSA	68497.7	5.0	0.476	6.27	1.000	2.000	2.133	7	30	
PFTrDA	477187.4	11	13C2-PFDoDA	1144067.1	5.0	0.417	6.25	1.030	2.000	2.514	26	30	
PFTeDA	345082.9	10	13C2-PFTeDA	853856.6	5.0	0.404	6.42	1.000	2.000	2.290	14	30	
PFHxDA	172538.3	11	13C2-PFTeDA	853856.6	5.0	0.202	6.73	1.050	2.000	2.310	16	30	
PFODA	141132.9	10	13C2-PFTeDA	853856.6	5.0	0.165	6.99	1.090	2.000	2.202	10	30	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Continuing Calibration Verfication

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18NOV29DCCV1-5 11/29/2018 7:56:19 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	CCV5_CAL3			**Data File:**		18NOV29D-52.wiff
Sample ID:	CALBRN31833B			**Acquis Date:**		2018-11-29T17:37:36
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	5			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18NOV29DCCV1-5
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	N/A			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		1.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	888103.1	906425.4	-2	50	
13C2-PFOA	5.0	482099.7	495984.0	-3	50	
13C4-PFOS	4.8	299552.8	296261.8	1	50	
13C2-PFDA	5.0	454503.3	451203.0	1	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	1003538.1	13C3-PFBA	888103.1	1.130	5.000	5.041	101	70-130	
E13C5-PFPeA	935080.6	13C3-PFBA	888103.1	1.053	5.000	4.917	98	70-130	
E13C3-PFBS	424594.0	13C3-PFBA	888103.1	0.478	4.650	4.561	98	70-130	
E13C2-4:2-FTS	66022.9	13C2-PFOA	482099.7	0.137	4.670	4.720	101	70-130	
E13C5-PFHxA	665817.1	13C2-PFOA	482099.7	1.381	5.000	5.073	101	70-130	
E13C3-PFHxS	327068.8	13C2-PFOA	482099.7	0.678	4.730	5.317	112	70-130	
E13C4-PFHpA	547436.1	13C2-PFOA	482099.7	1.136	5.000	5.218	104	70-130	
E13C2-6:2-FTS	58432.7	13C2-PFOA	482099.7	0.121	4.750	5.074	107	70-130	
E13C8-PFOA	958420.1	13C2-PFOA	482099.7	1.988	5.000	5.472	109	70-130	
E13C8-PFOS	336404.9	13C4-PFOS	299552.8	1.123	4.780	5.070	106	70-130	
E13C9-PFNA	639090.1	13C4-PFOS	299552.8	2.133	5.000	4.686	94	70-130	
E13C6-PFDA	857518.7	13C2-PFDA	454503.3	1.887	5.000	5.320	106	70-130	
E13C2-8:2-FTS	55836.5	13C2-PFDA	454503.3	0.123	4.790	5.280	110	70-130	
E13C8-PFOSA	644731.6	13C2-PFDA	454503.3	1.419	5.000	5.205	104	70-130	
Ed3-NMeFOSAA	182307.0	13C2-PFDA	454503.3	0.401	5.000	5.093	102	70-130	
E13C7-PFUnDA	567707.2	13C2-PFDA	454503.3	1.249	5.000	5.279	106	70-130	
Ed5-NEtFOSAA	138062.3	13C2-PFDA	454503.3	0.304	5.000	5.412	108	70-130	
E13C2-PFDoDA	1144067.1	13C2-PFDA	454503.3	2.517	5.000	5.289	106	70-130	
Ed7-NMePFOSAE	257051.1	13C2-PFDA	454503.3	0.566	5.000	4.888	98	70-130	
Ed3-NMePFOSA	82258.4	13C2-PFDA	454503.3	0.181	5.000	4.898	98	70-130	
Ed9-NEtPFOSAE	225911.1	13C2-PFDA	454503.3	0.497	5.000	5.039	101	70-130	
Ed5-NEtPFOSA	68497.7	13C2-PFDA	454503.3	0.151	5.000	5.237	105	70-130	
E13C2-PFTeDA	853856.6	13C2-PFDA	454503.3	1.879	5.000	5.198	104	70-130	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

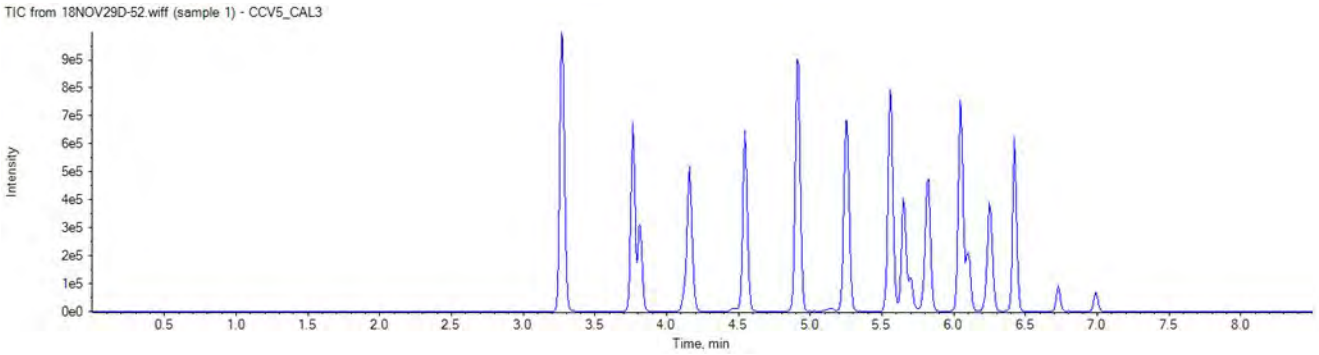
Analyte Quantitation Peak Table

Sample Name: CCV5_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV29D-52.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	410376.9		A	13C4-PFBA	3.27	1003538.1	0.409	2.242
PFPeA	3.77	1.000	400188.5		A	13C5-PFPeA	3.76	935080.6	0.428	2.100
PFBS	3.81	1.000	172355.2		A	13C3-PFBS	3.81	424594.0	0.406	1.970
4:2-FTS	4.12	1.000	52632.4		A	13C2-4:2-FTS	4.13	66022.9	0.797	2.134
PFHxA	4.16	1.000	392712.5		A	13C5-PFHxA	4.16	665817.1	0.590	2.368
PFPeS	4.18	1.100	89389.0		A	13C3-PFBS	3.81	424594.0	0.211	2.129
PFHpA	4.54	1.000	396806.2		A	13C4-PFHpA	4.54	547436.1	0.725	2.237
PFHxS	4.55	1.000	127006.9		M	13C3-PFHxS	4.55	327068.8	0.388	1.818
6:2-FTS	4.90	1.000	51799.6		A	13C2-6:2-FTS	4.90	58432.7	0.886	2.313
PFHpS	4.91	1.080	129025.9		A	13C3-PFHxS	4.55	327068.8	0.394	1.969
PFOA	4.91	1.000	407078.9		A	13C8-PFOA	4.91	958420.1	0.425	2.195
PFOS	5.24	1.000	138995.5		M	13C8-PFOS	5.24	336404.9	0.413	1.733
PFNA	5.26	1.000	382168.0		A	13C9-PFNA	5.26	639090.1	0.598	2.292
PFNS	5.54	1.060	98297.2		A	13C8-PFOS	5.24	336404.9	0.292	1.845
PFDA	5.56	1.000	343068.9		A	13C6-PFDA	5.56	857518.7	0.400	2.265
8:2-FTS	5.56	1.000	54309.5		A	13C2-8:2-FTS	5.56	55836.5	0.973	1.834
PFOSA	5.65	1.000	268924.0		A	13C8-PFOSA	5.65	644731.6	0.417	2.113
NMeFOSAA	5.70	1.000	64182.7		A	d3-NMeFOSAA	5.70	182307.0	0.352	2.246
PFDS	5.79	1.100	79891.7		A	13C8-PFOS	5.24	336404.9	0.237	1.883
PFUnDA	5.82	1.000	355883.8		A	13C7-PFUnDA	5.82	567707.2	0.627	2.241
NEtFOSAA	5.83	1.000	64211.1		M	d5-NEtFOSAA	5.83	138062.3	0.465	2.265
PFDoDA	6.05	1.000	467324.6		A	13C2-PFDoDA	6.05	1144067.1	0.408	2.238
10:2-FTS	6.07	1.090	54230.7		A	13C2-8:2-FTS	5.56	55836.5	0.971	2.142
NMePFOSAE	6.10	1.000	136711.2		A	d7-NMePFOSAE	6.10	257051.1	0.532	2.238
NMePFOSA	6.11	1.000	35299.2		A	d3-NMePFOSA	6.11	82258.4	0.429	2.275
PFDoS	6.22	1.190	43145.4		A	13C8-PFOS	5.24	336404.9	0.128	1.842
NEtPFOSAE	6.26	1.000	152658.0		A	d9-NEtPFOSAE	6.25	225911.1	0.676	2.431
NEtPFOSA	6.27	1.000	32593.5		A	d5-NEtPFOSA	6.27	68497.7	0.476	2.133
PFTrDA	6.25	1.030	477187.4		A	13C2-PFDoDA	6.05	1144067.1	0.417	2.514
PFTeDA	6.42	1.000	345082.9		A	13C2-PFTeDA	6.42	853856.6	0.404	2.290
PFHxDA	6.73	1.050	172538.3		A	13C2-PFTeDA	6.42	853856.6	0.202	2.310
PFODA	6.99	1.090	141132.9		A	13C2-PFTeDA	6.42	853856.6	0.165	2.202

Total Ion Chromatogram

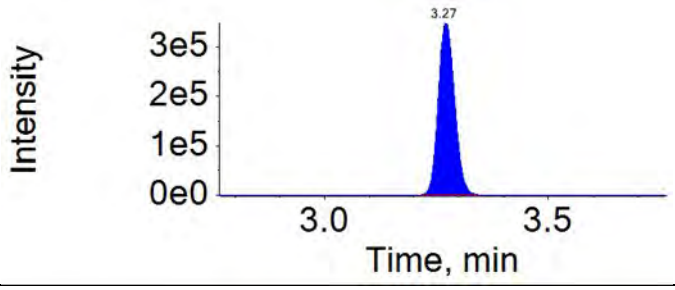


APPROVED
By MCD at 8:06 pm, 11/29/18

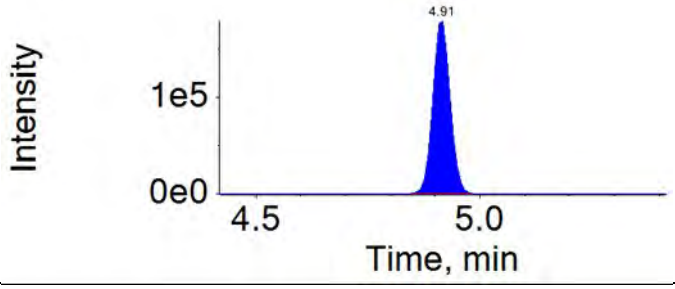
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

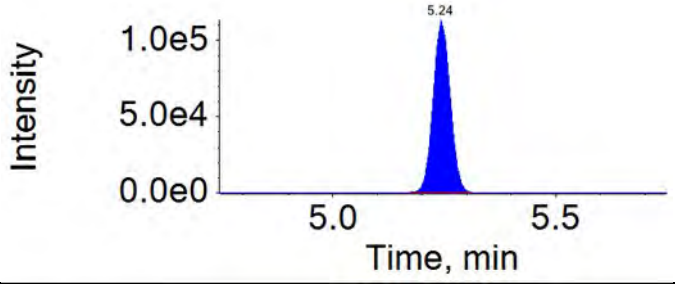
Injection Standard: 13C3-PFBA
216.0 / 172.0



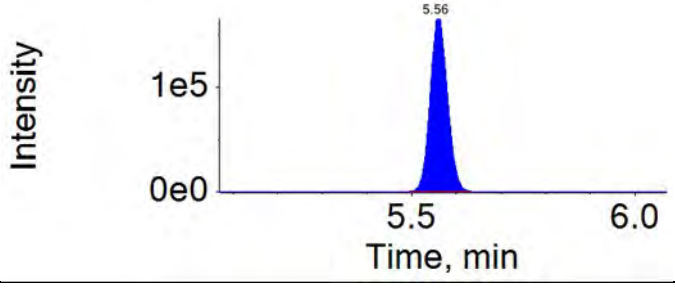
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0

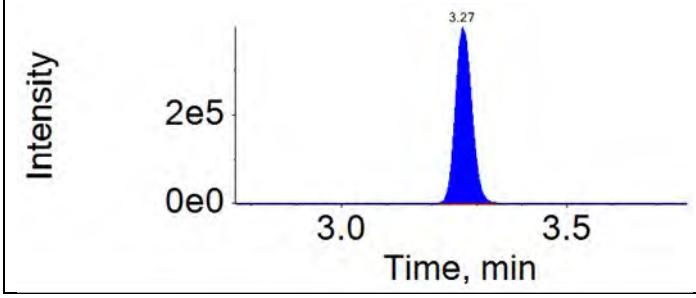


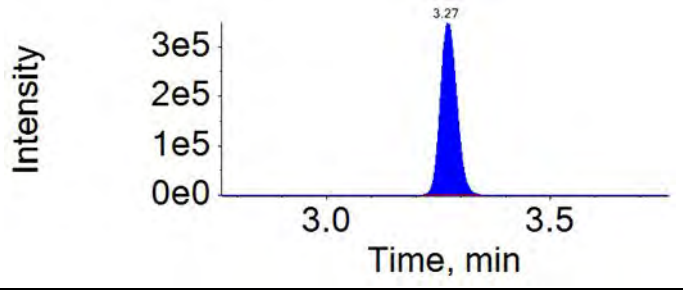
Injection Standard: 13C2-PFDA
515.0 / 470.0



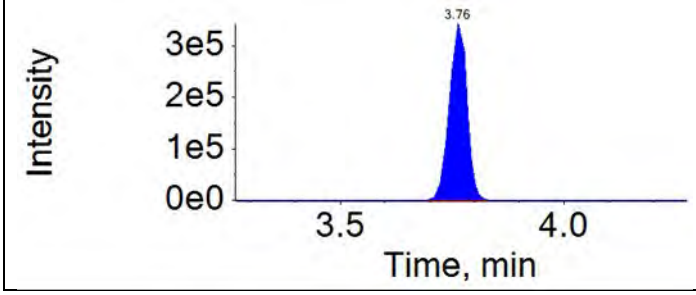
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

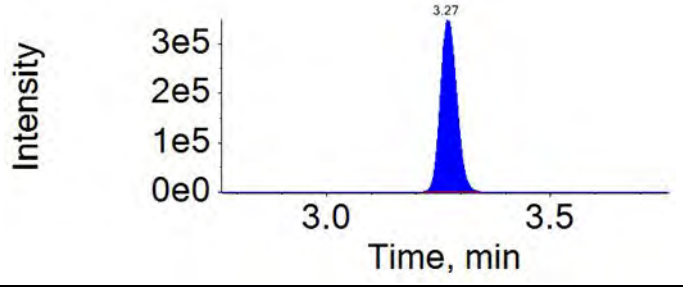
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



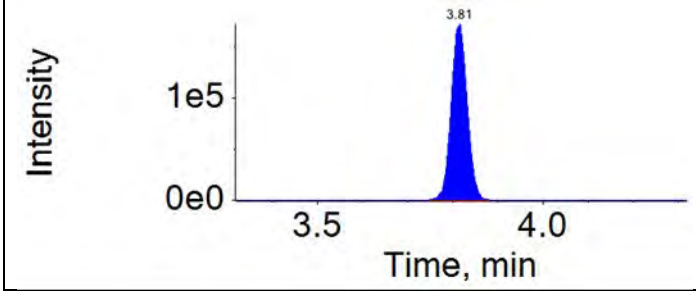


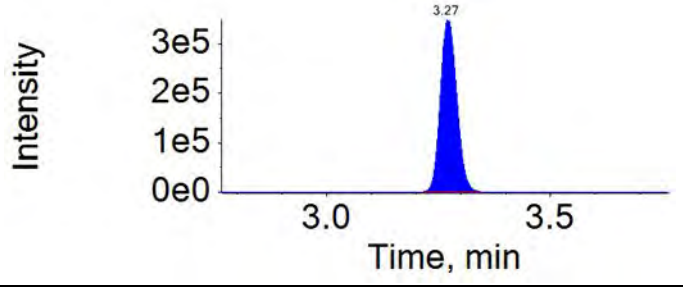
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



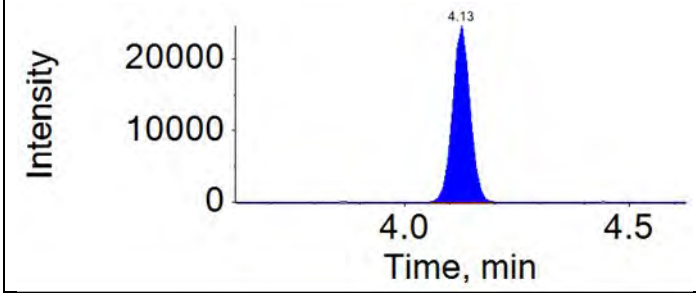


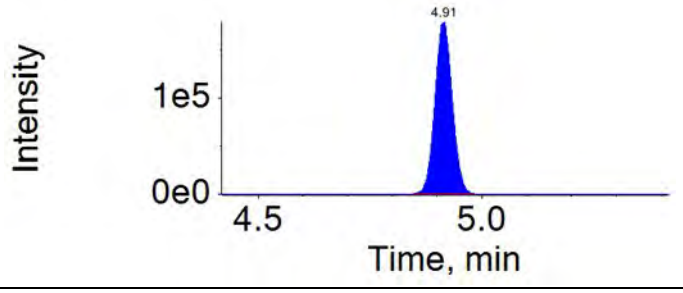
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



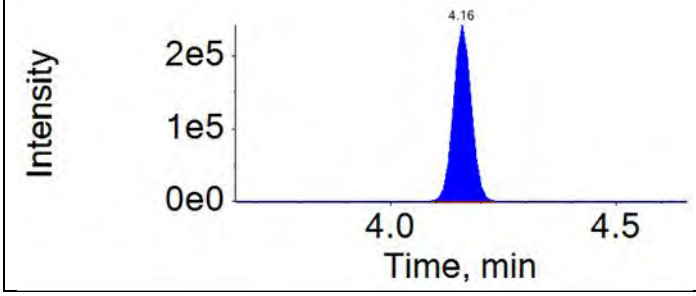


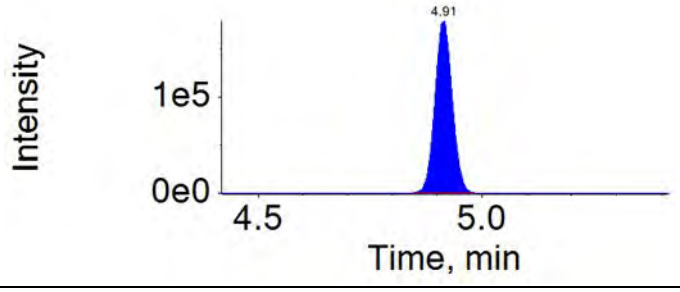
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

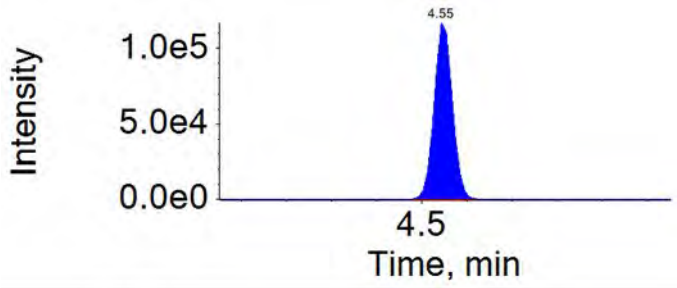
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

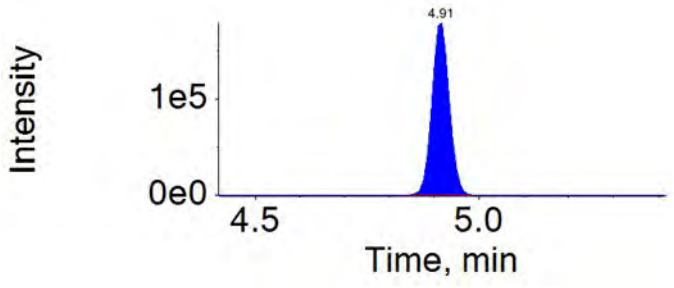
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



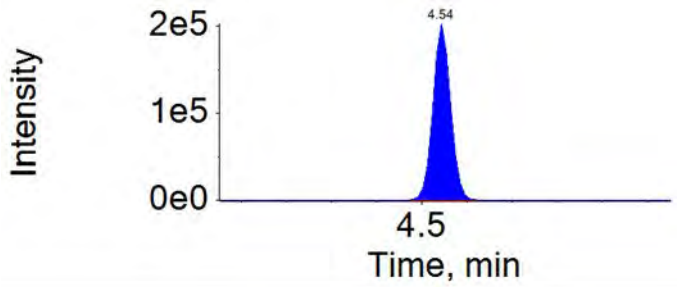


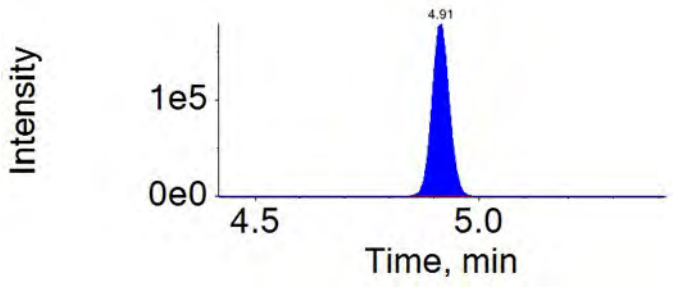
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



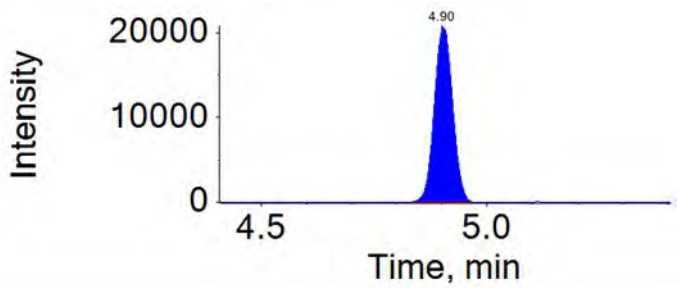


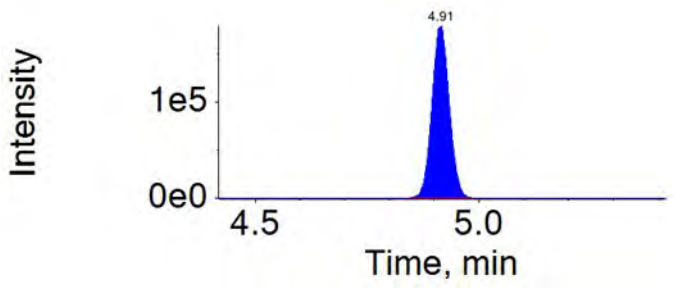
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

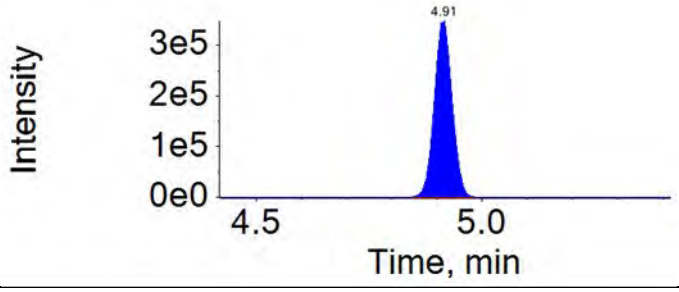
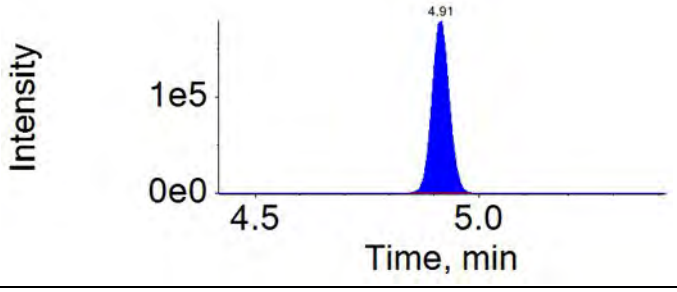


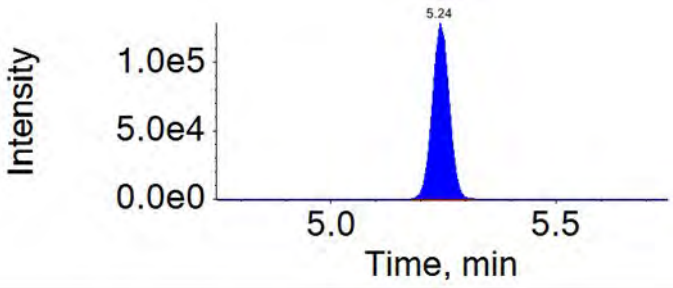
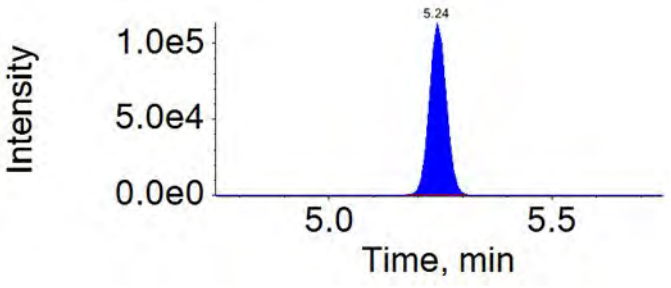


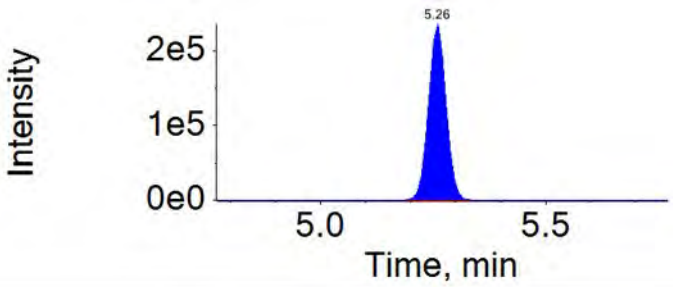
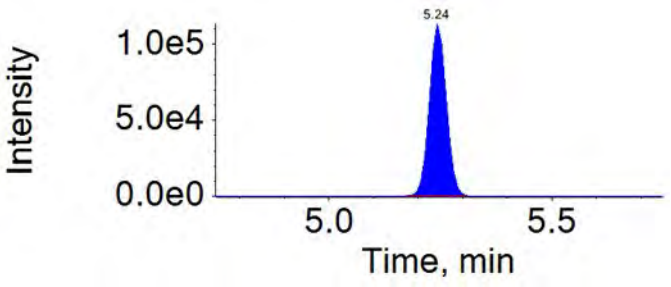
APPROVED
By MCD at 8:06 pm, 11/29/18

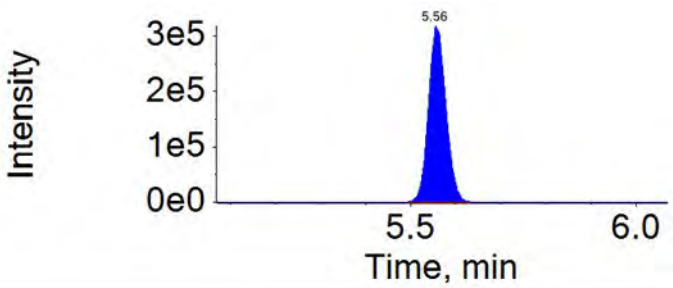
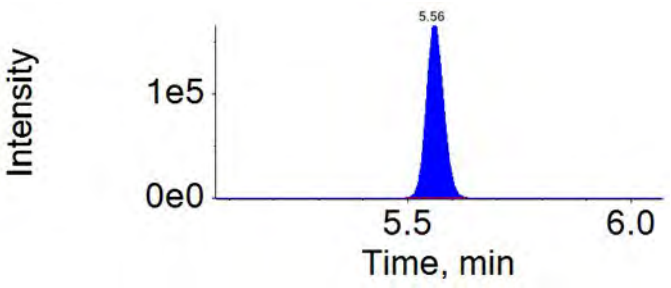
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

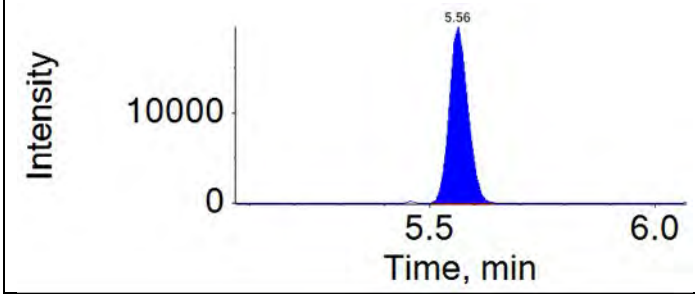
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

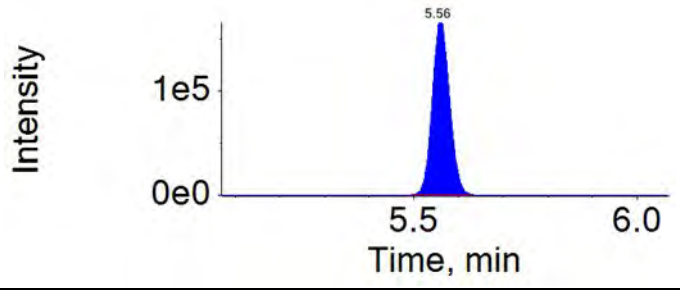
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

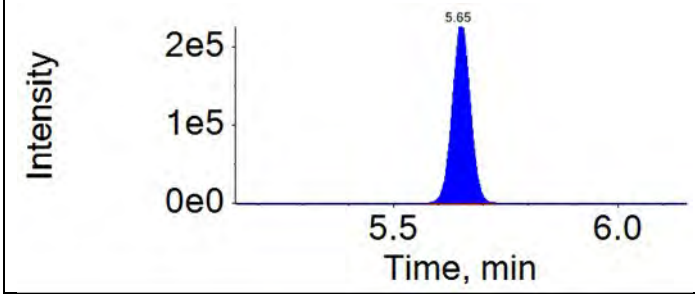
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

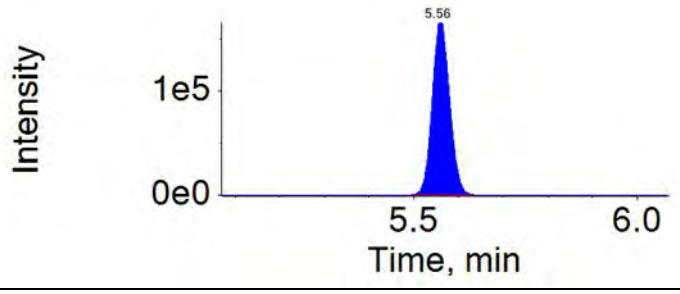
Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0



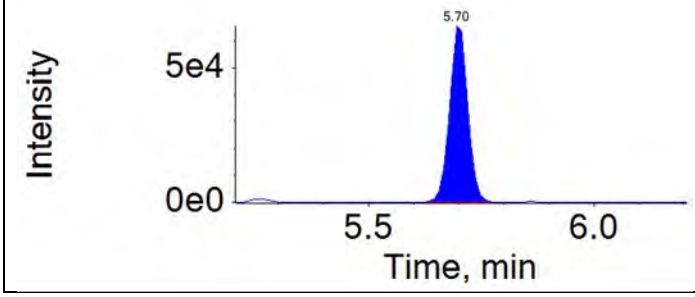


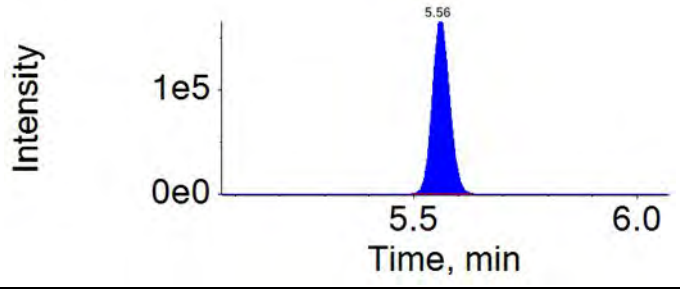
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0



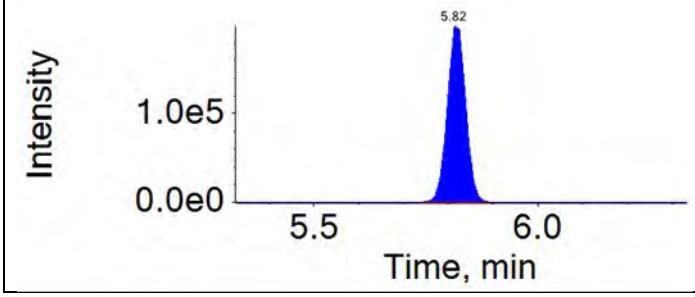


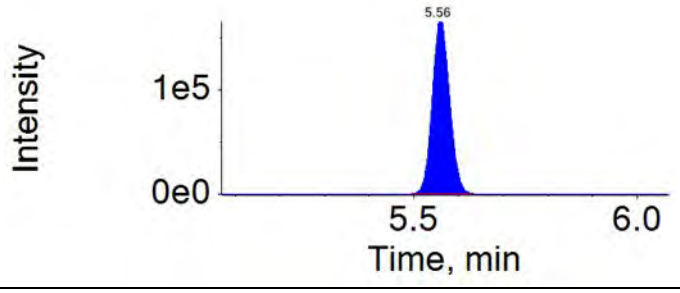
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0



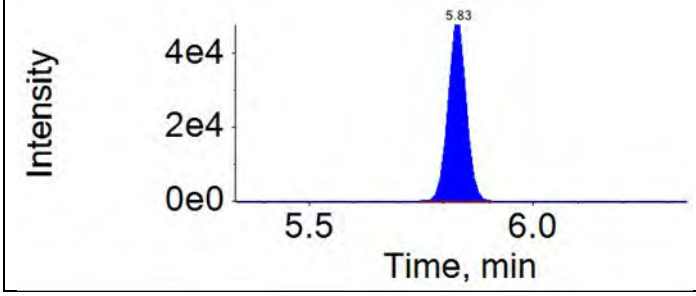
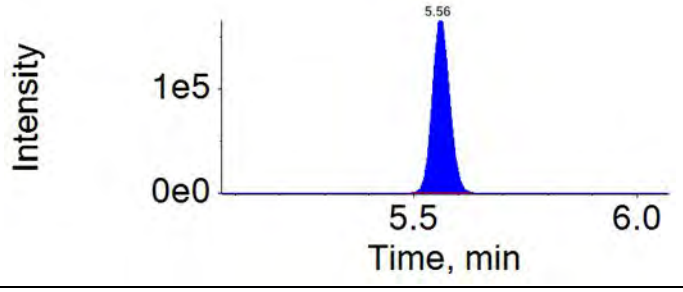


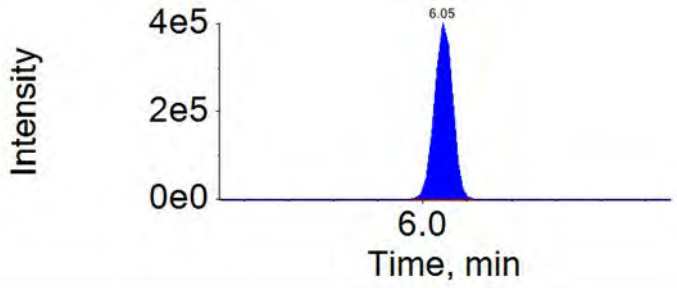
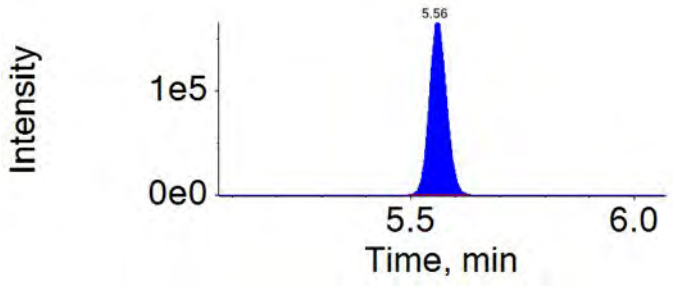
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0

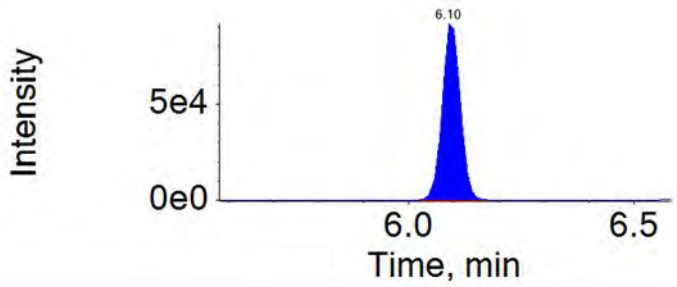
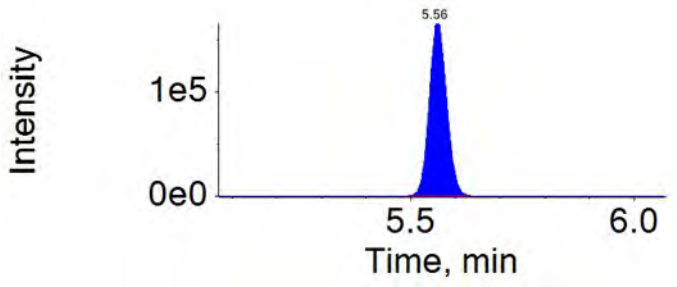


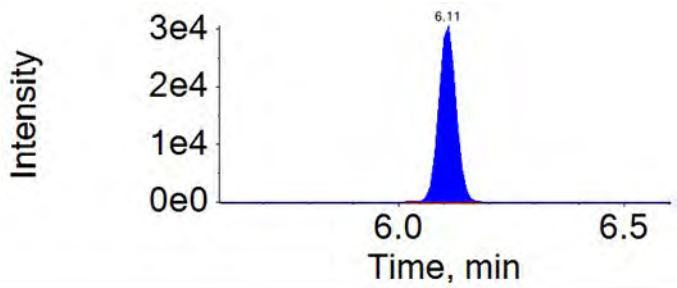
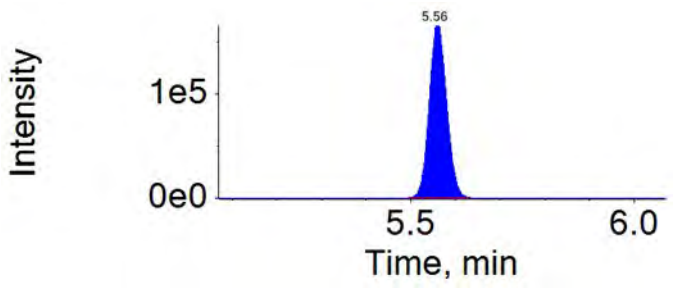


ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

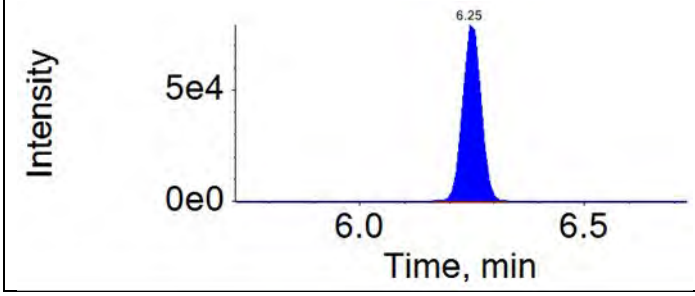
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

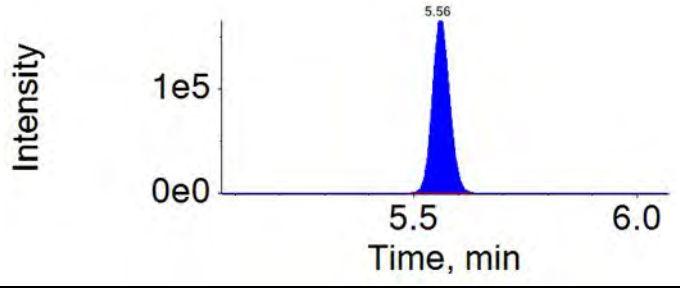
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

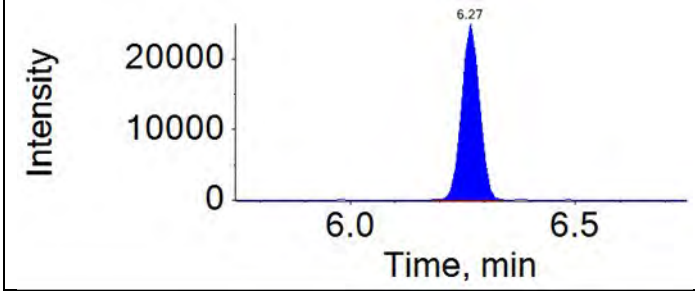
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

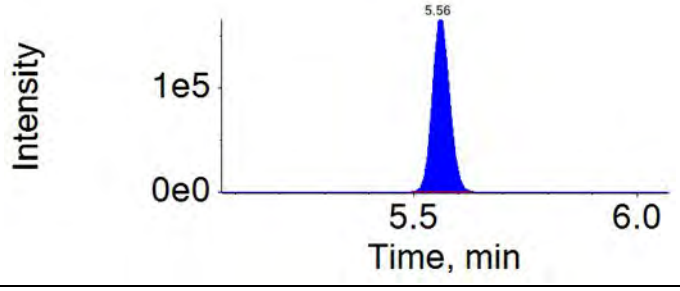
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



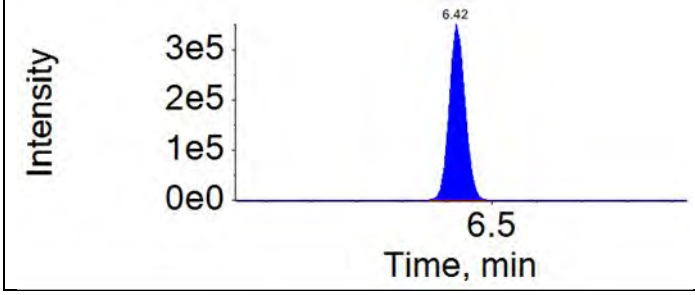


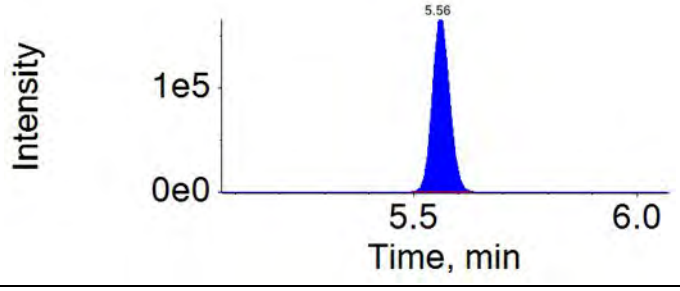
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



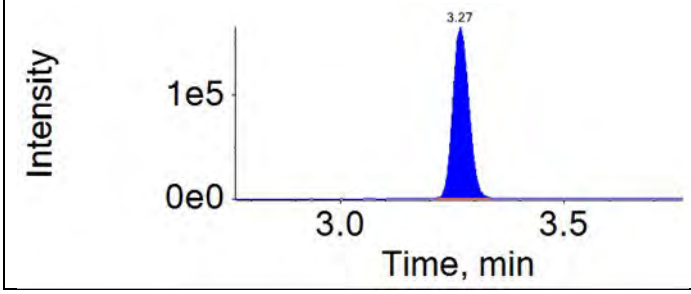


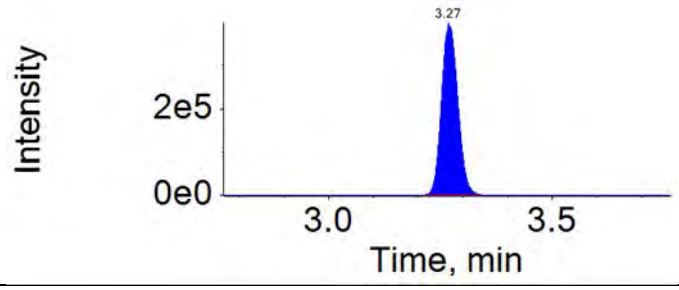
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

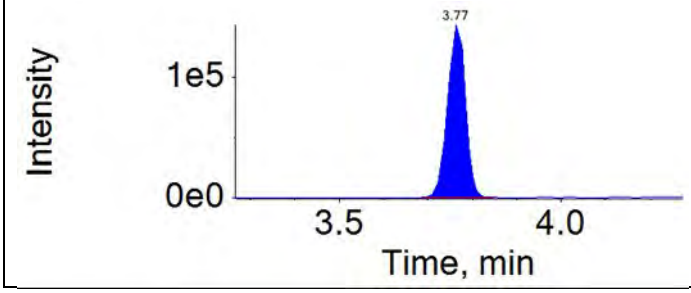
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

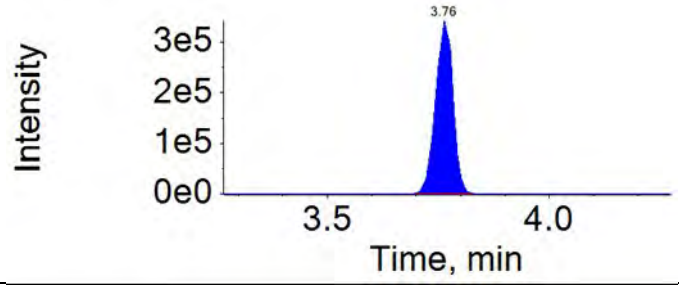
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



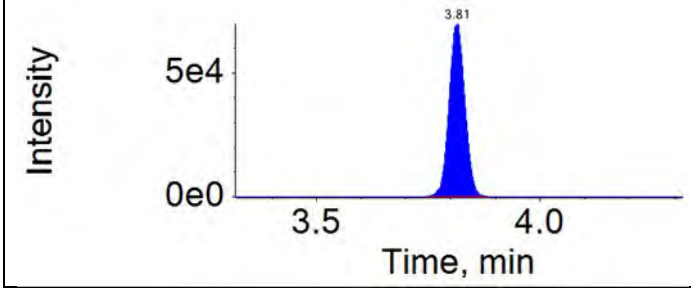


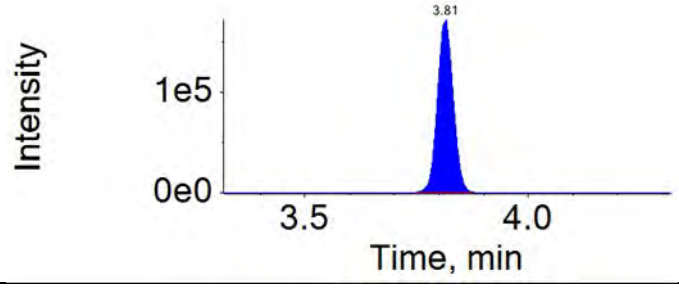
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



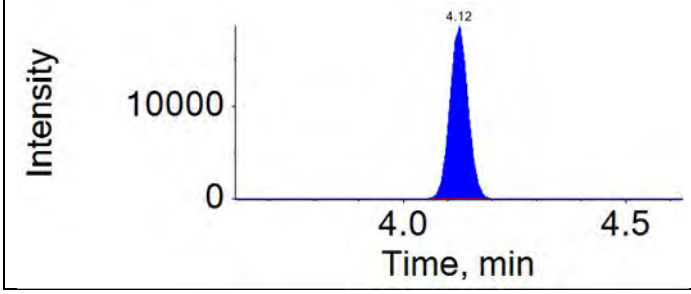


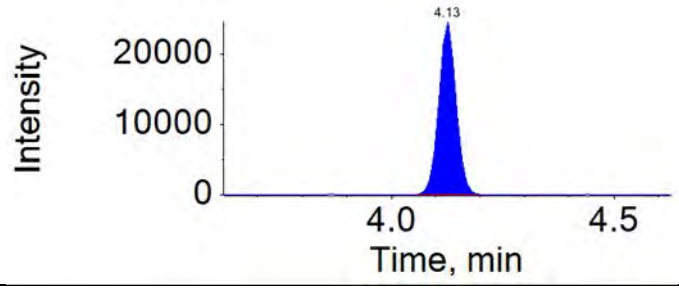
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



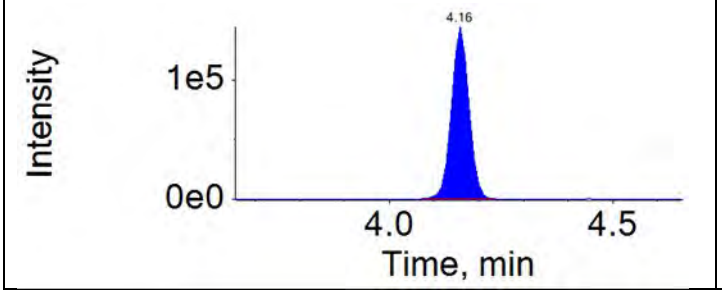


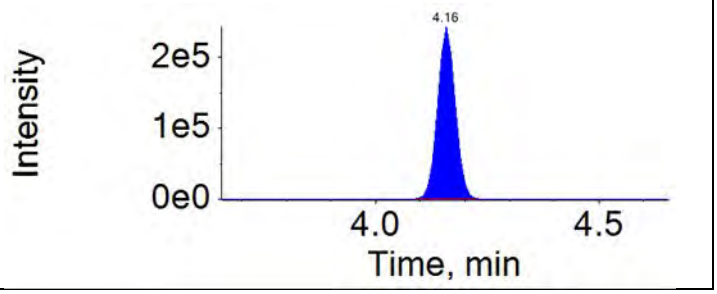
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

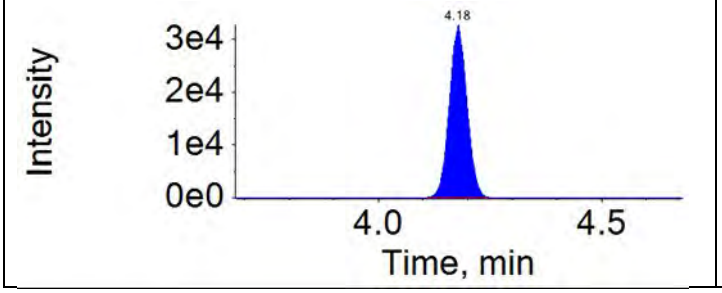
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

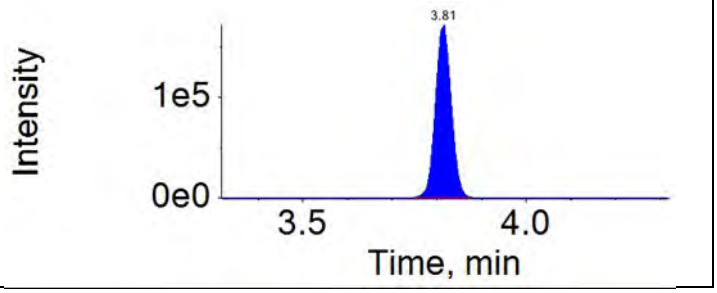
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



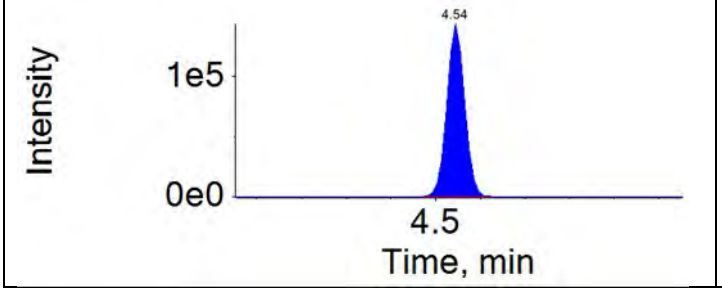


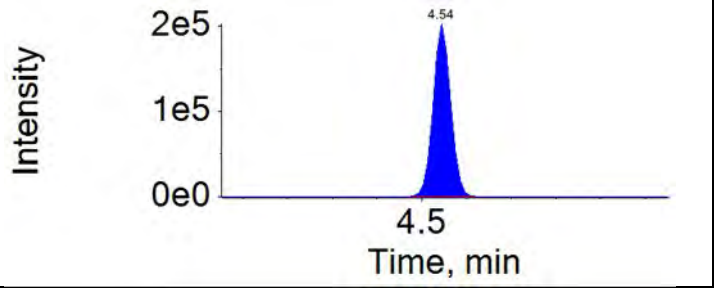
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



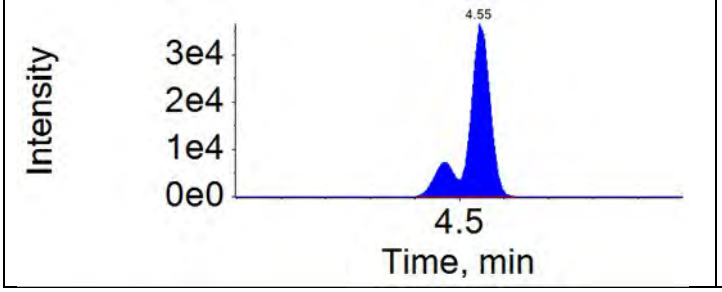


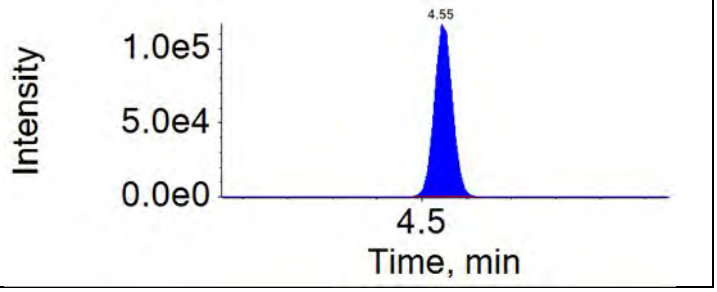
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





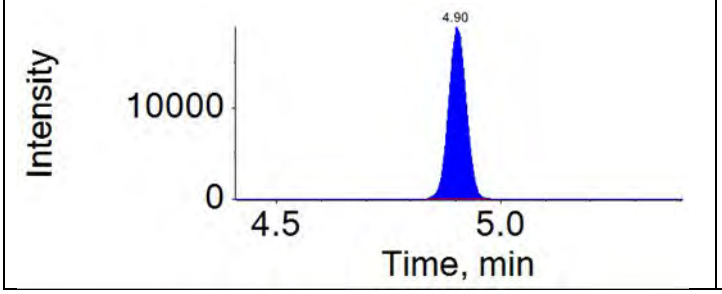
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

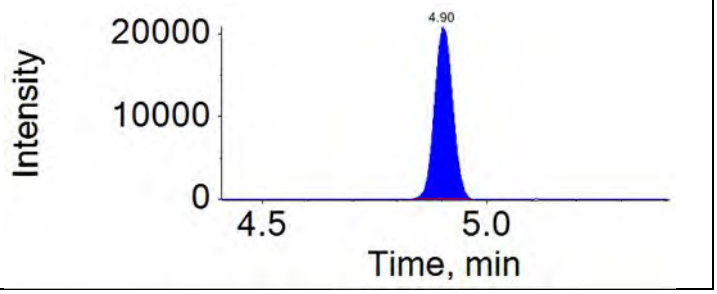




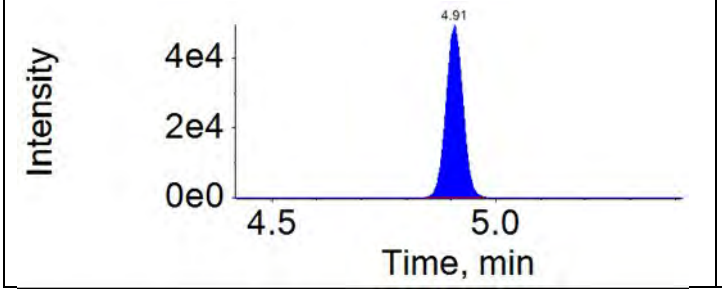
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

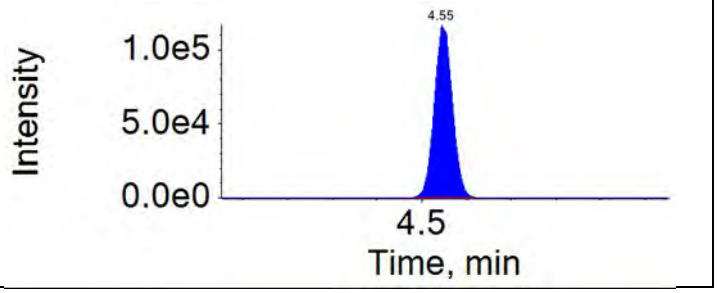
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



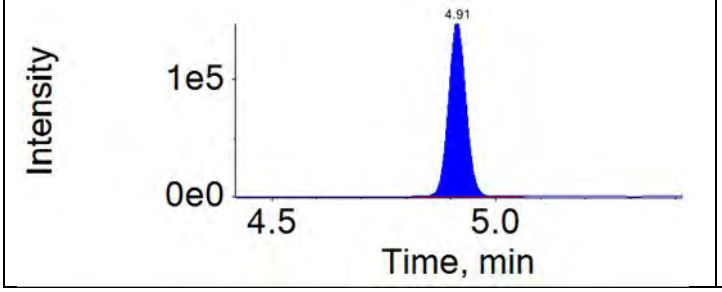


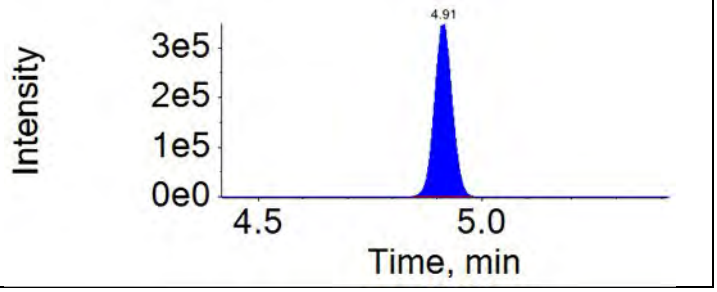
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



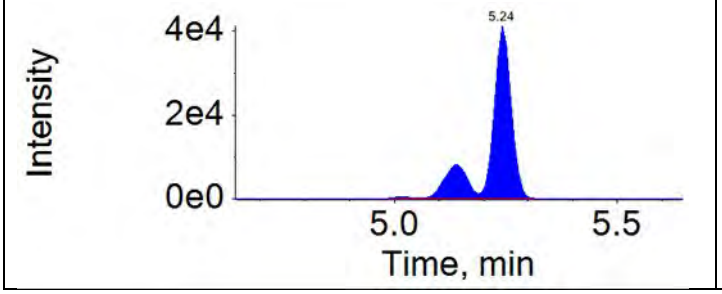


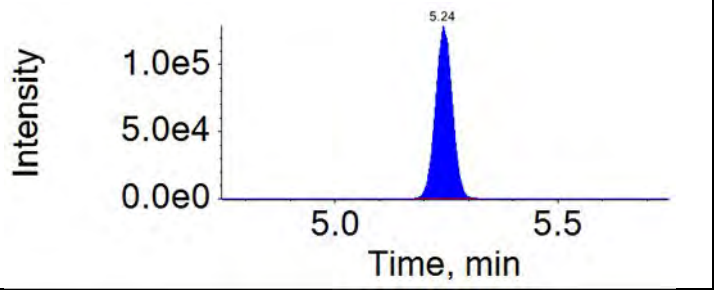
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



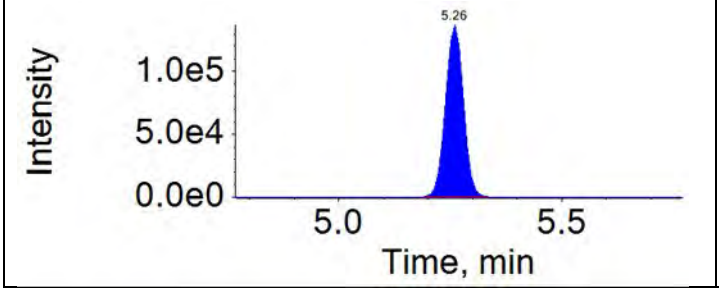


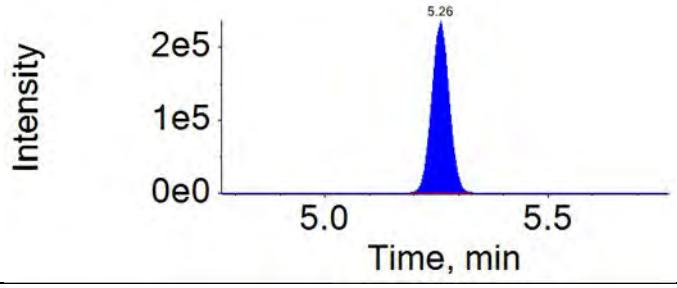
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

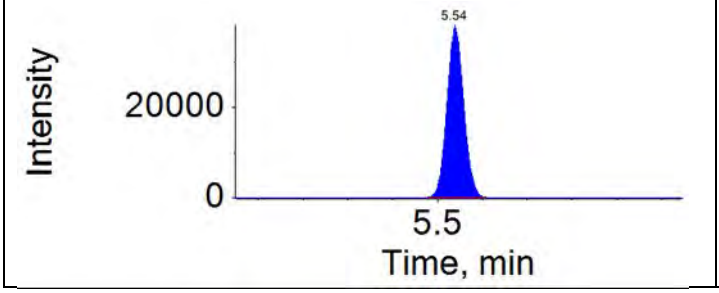
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

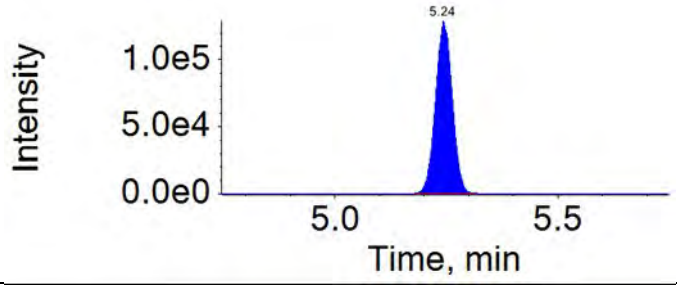
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



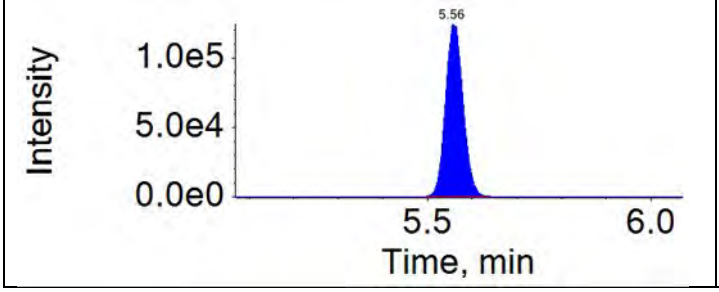


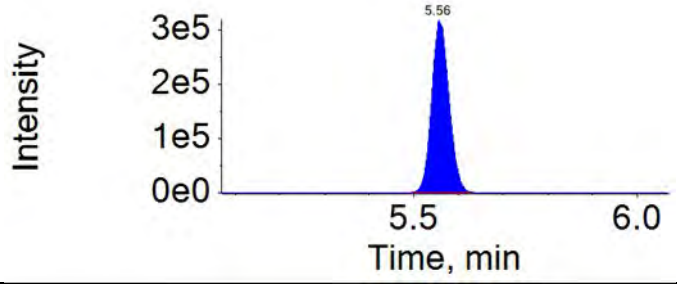
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



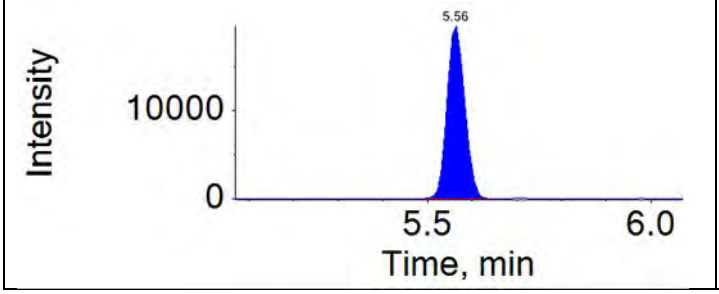


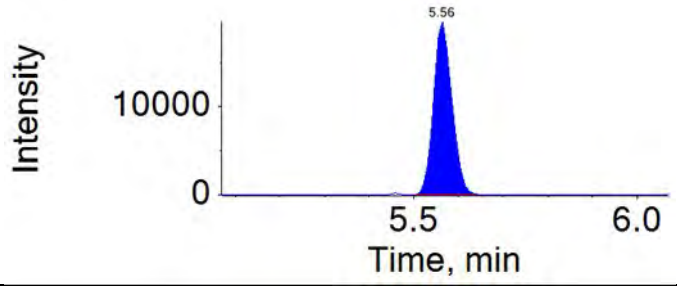
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

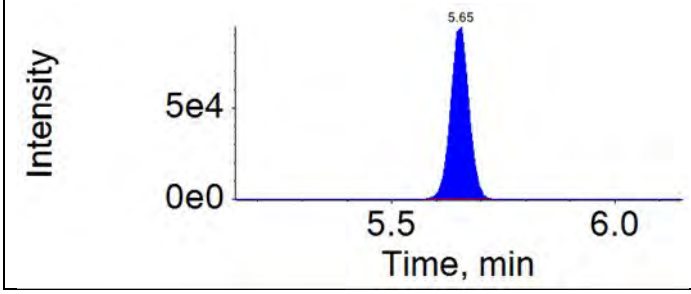
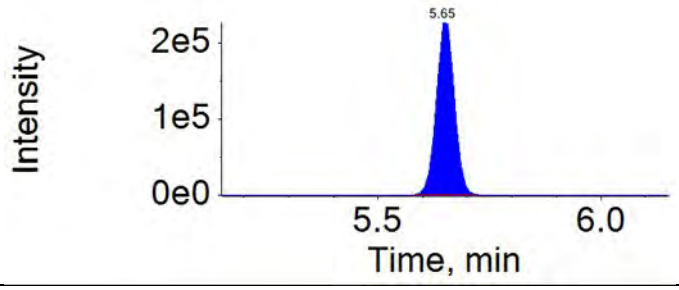


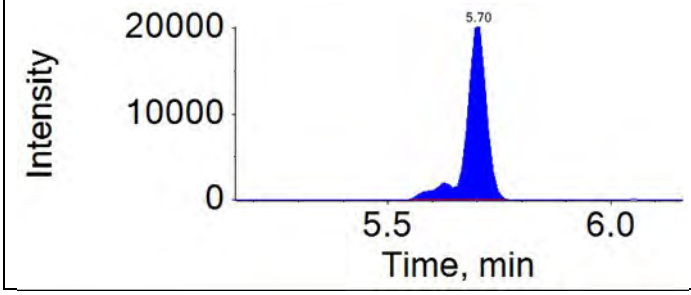
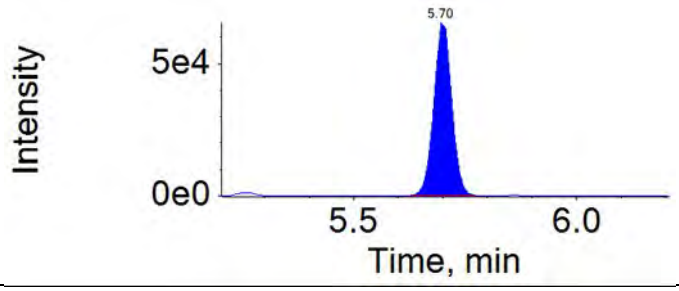


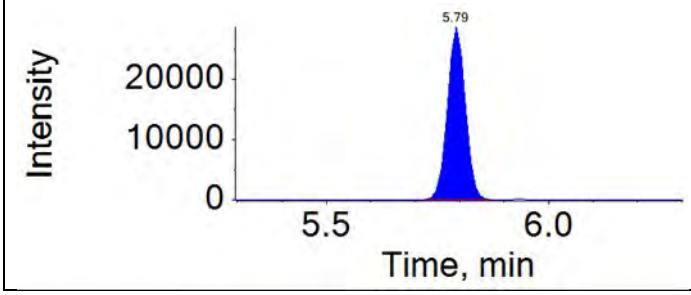
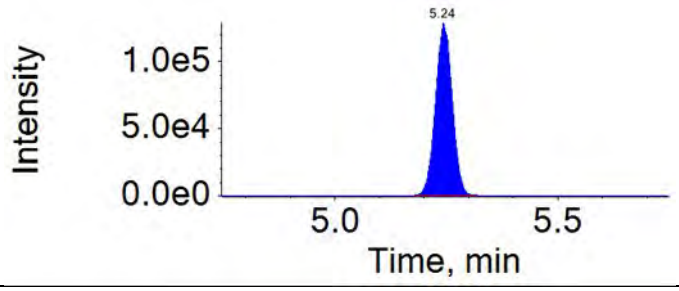
APPROVED
By MCD at 8:06 pm, 11/29/18

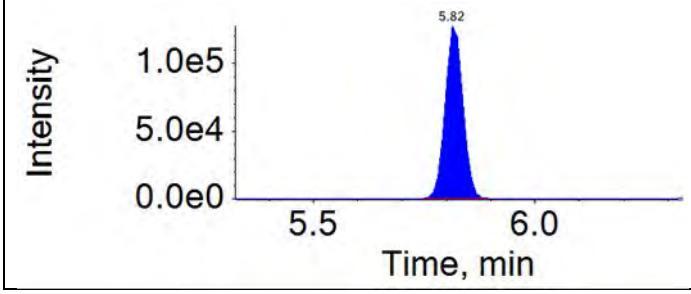
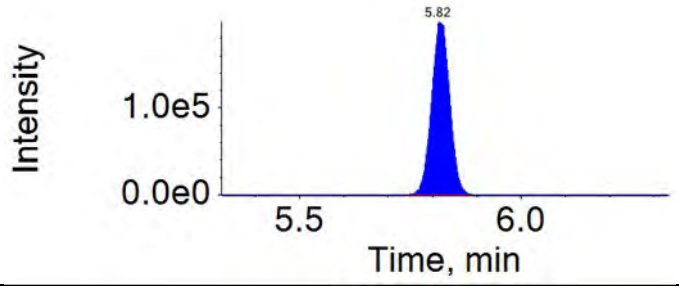
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

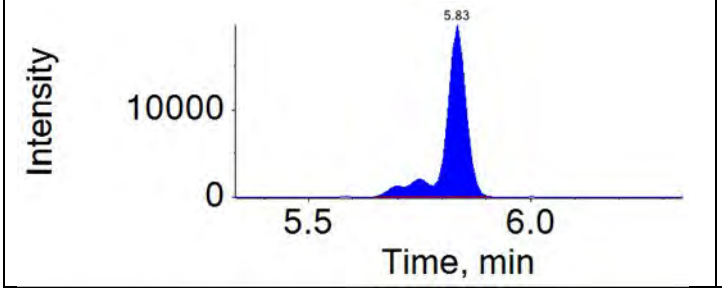
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

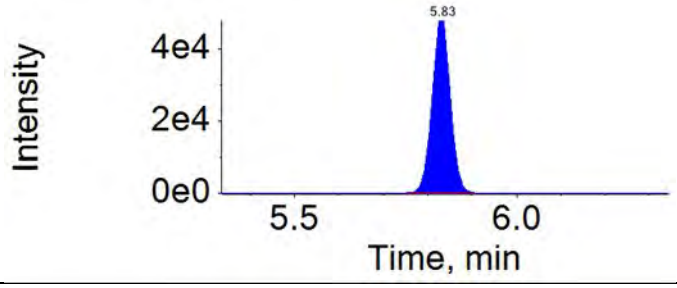
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

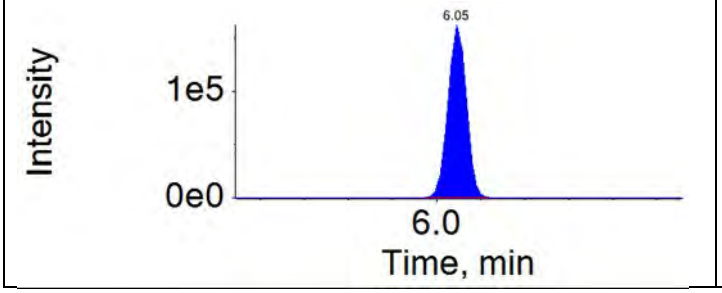
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

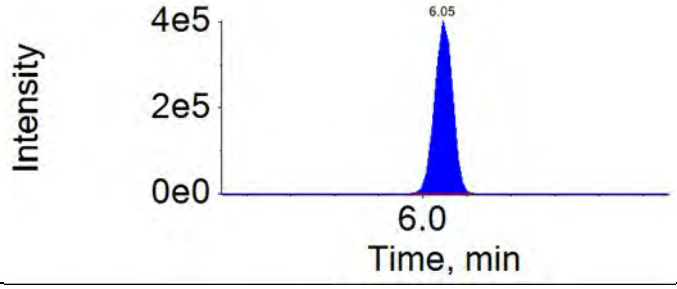
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



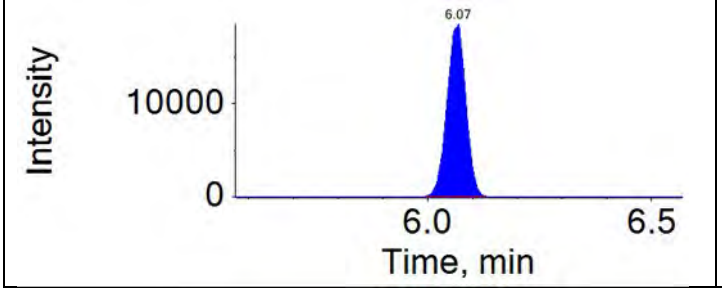


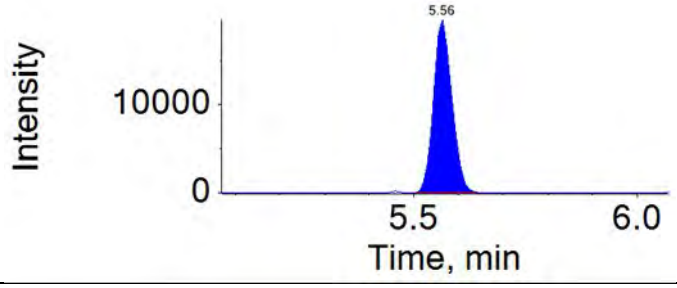
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



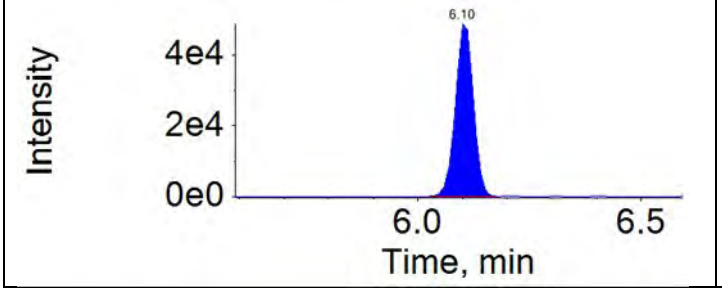


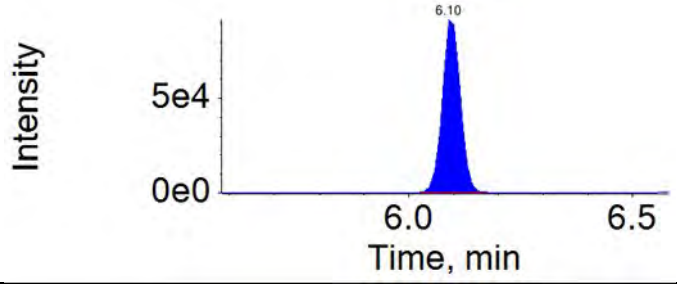
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



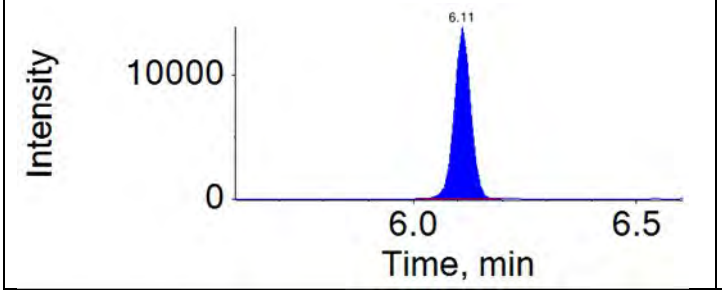


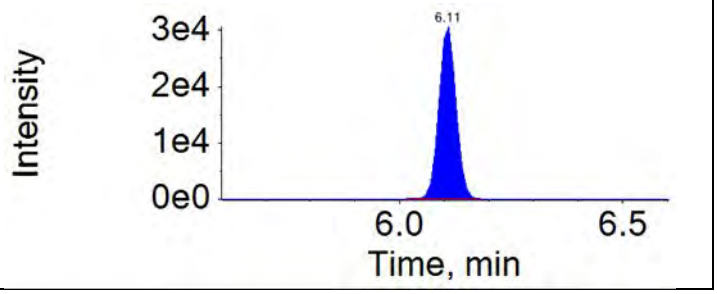
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

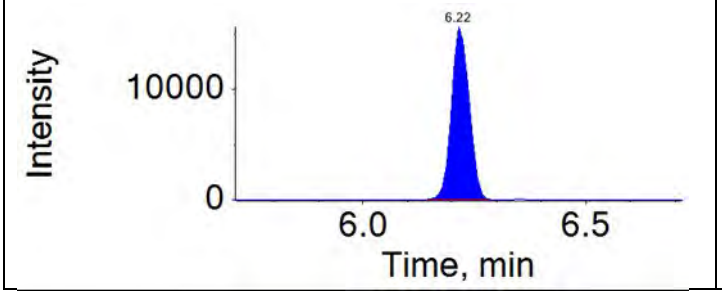
ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

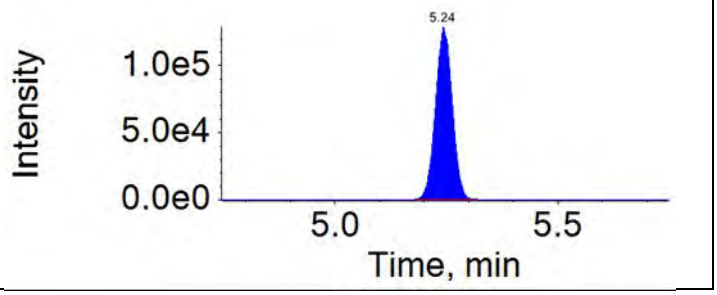
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



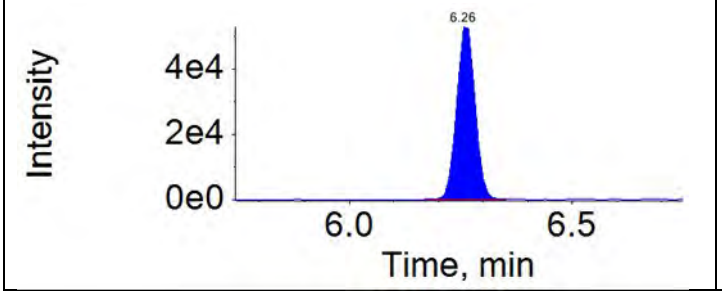


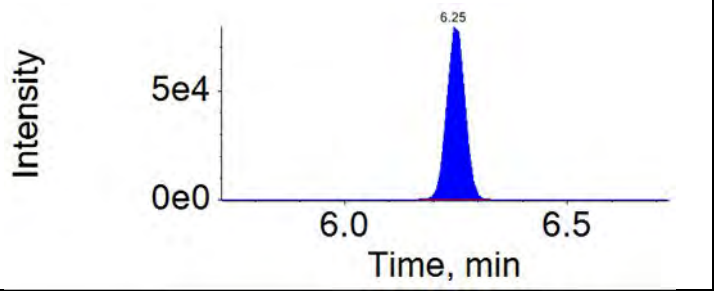
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



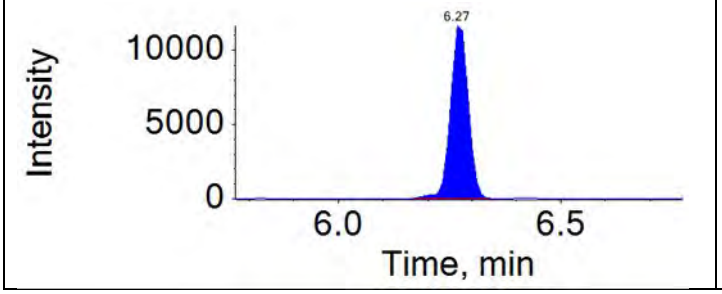


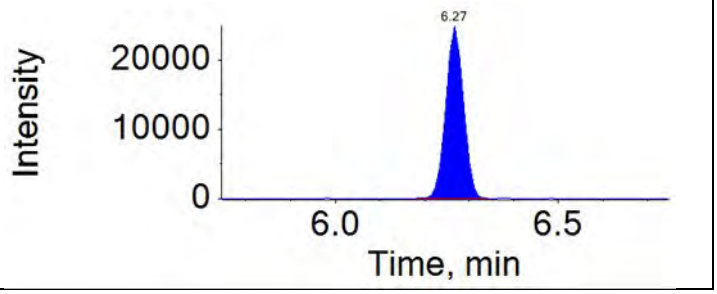
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

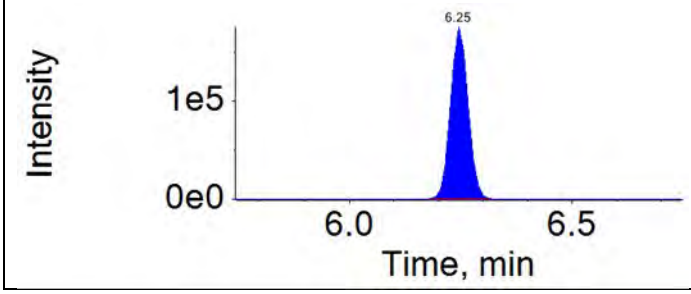
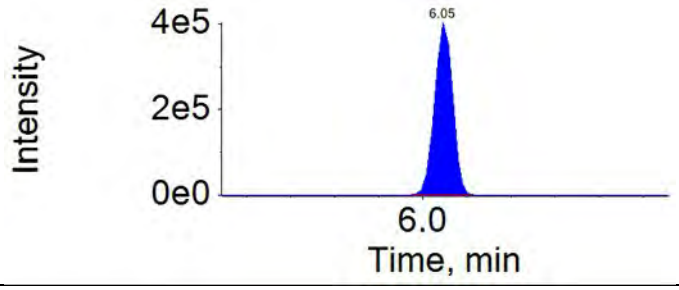


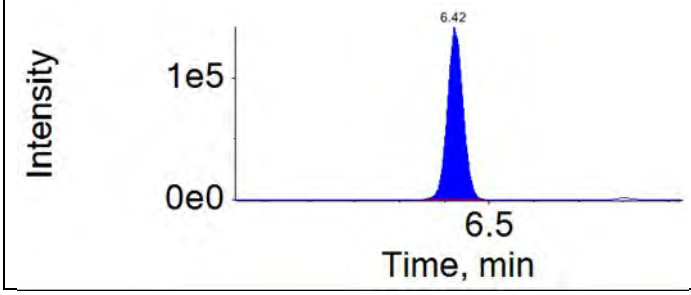
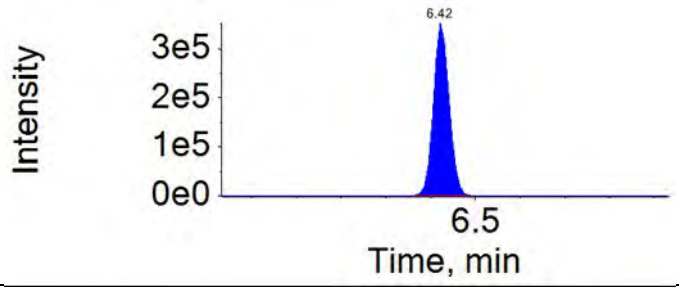


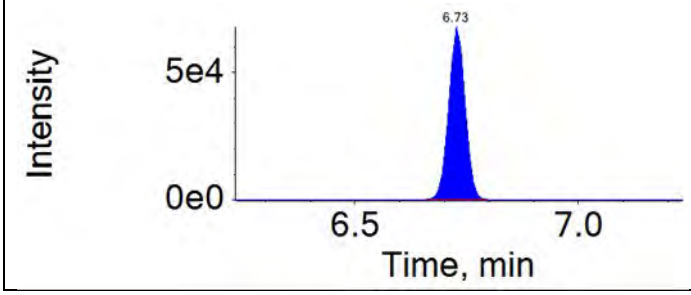
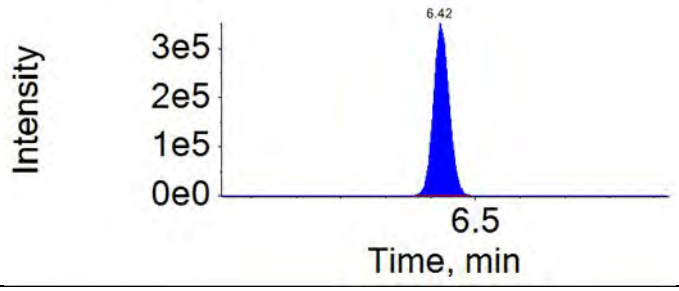
APPROVED
By MCD at 8:06 pm, 11/29/18

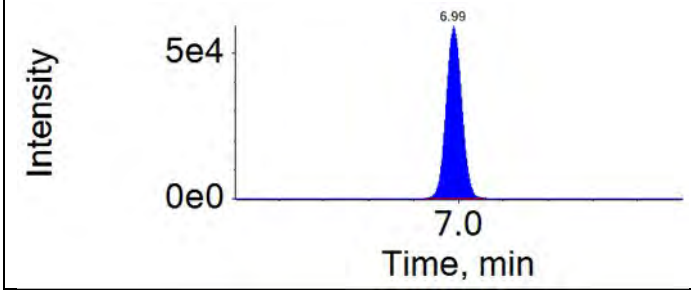
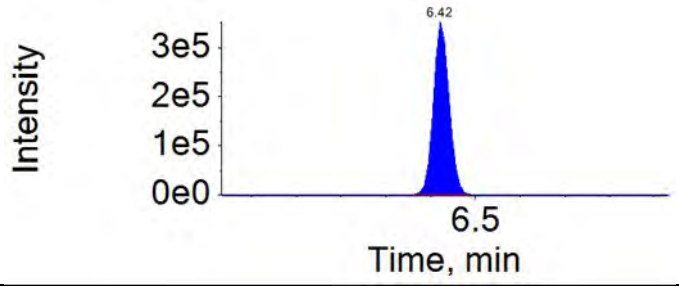
REVIEWED
By HMK at 9:40 am, 12/5/18

ICAL Name: 18NOV28DCAL **Result Table:** 18NOV29DCCV1-5 11/29/2018 7:58:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

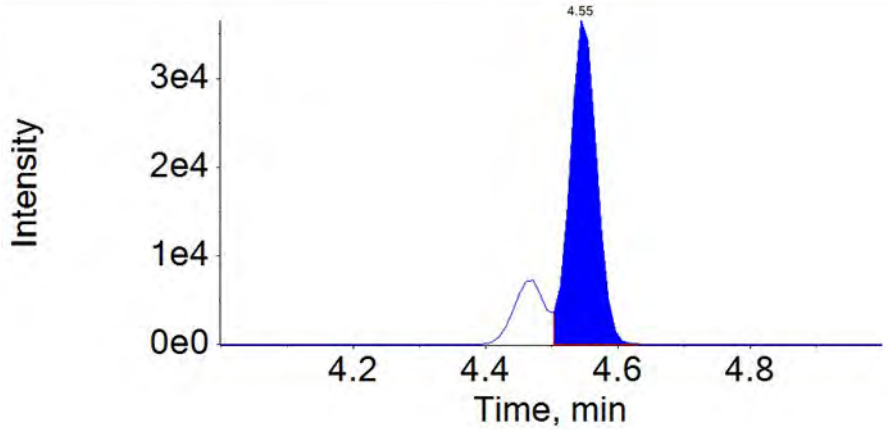
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

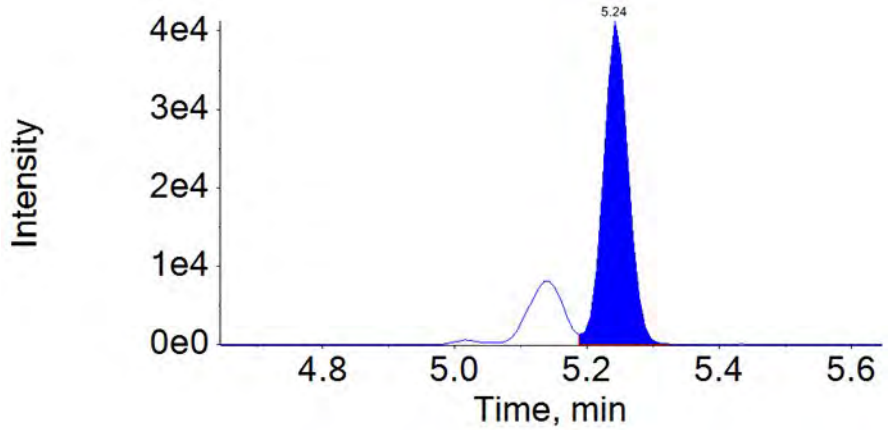
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHxS
RT (min.):
4.55
Peak Area:
103048.0
Mass Range:
399.0 / 80.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



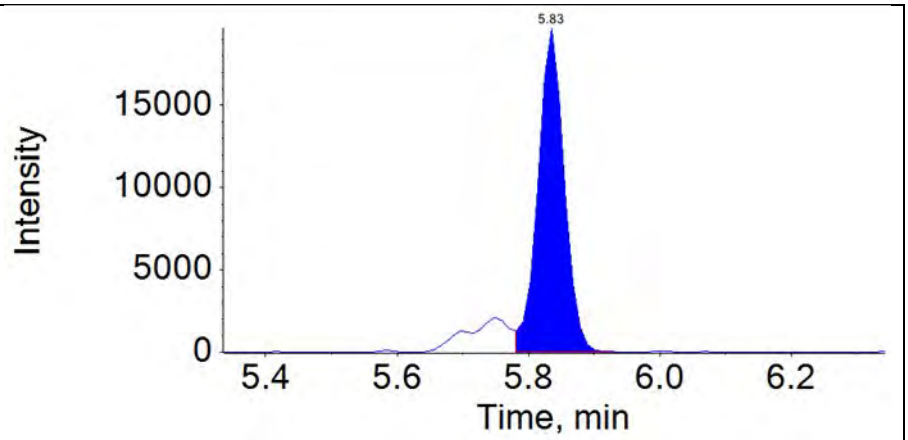
Integration Comment: incorrect integration

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
107440.5
Mass Range:
499.0 / 80.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
54491.9
Mass Range:
584.0 / 419.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



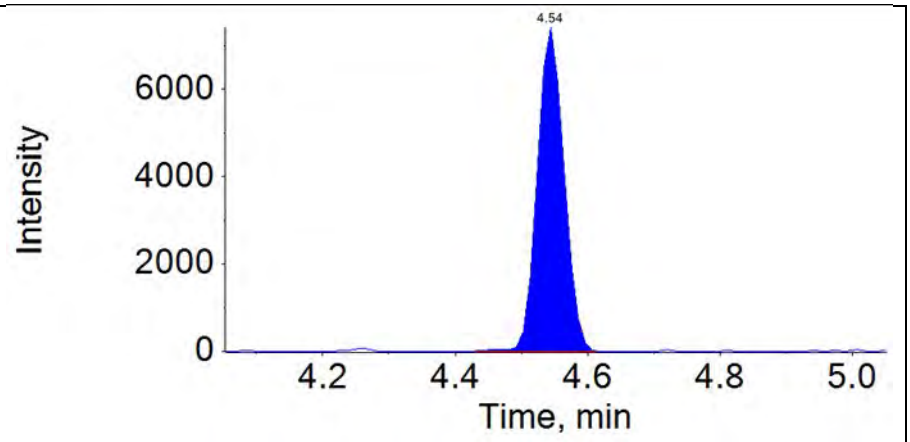
Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

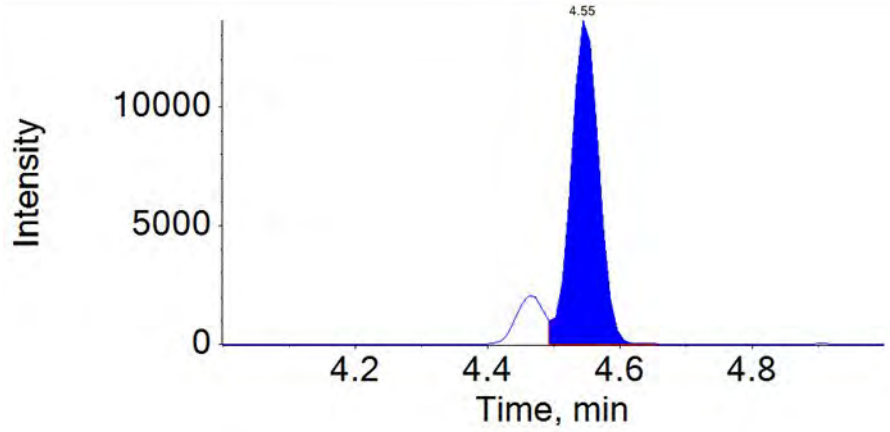
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA_2
RT (min.):
4.54
Peak Area:
20844.3
Mass Range:
363.0 / 169.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



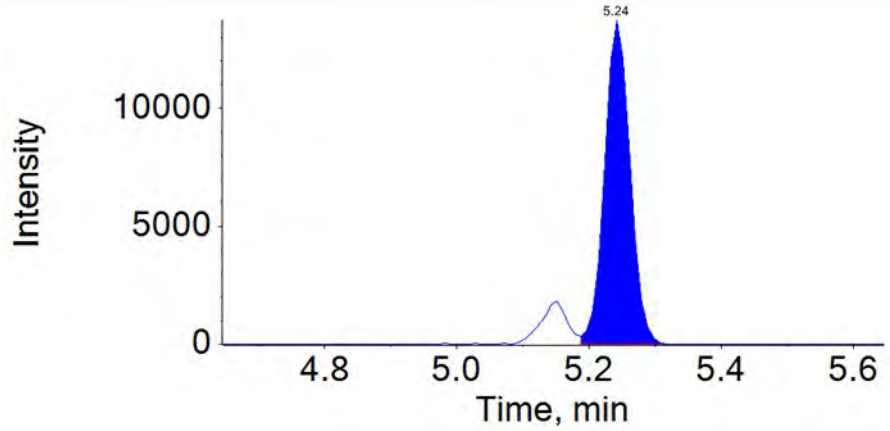
Integration Comment: incorrect integration

Component Name:
PFHxS_2
RT (min.):
4.55
Peak Area:
39908.0
Mass Range:
399.0 / 99.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

Component Name:
PFOS_2
RT (min.):
5.24
Peak Area:
36914.5
Mass Range:
499.0 / 99.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



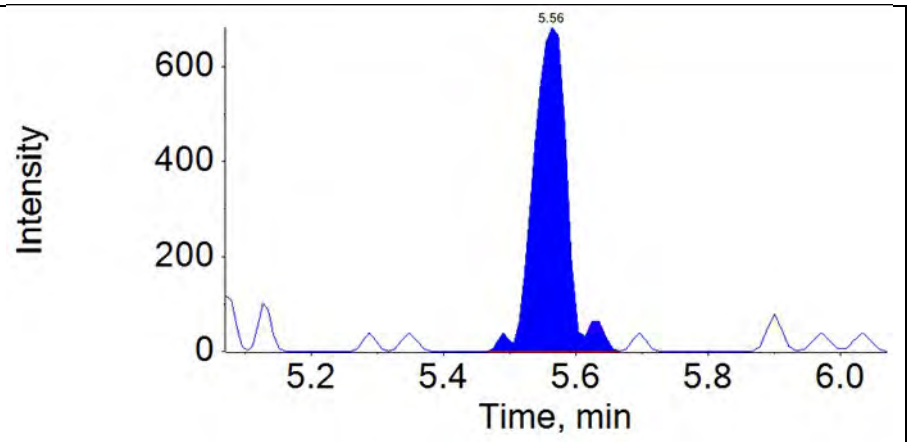
Integration Comment: incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

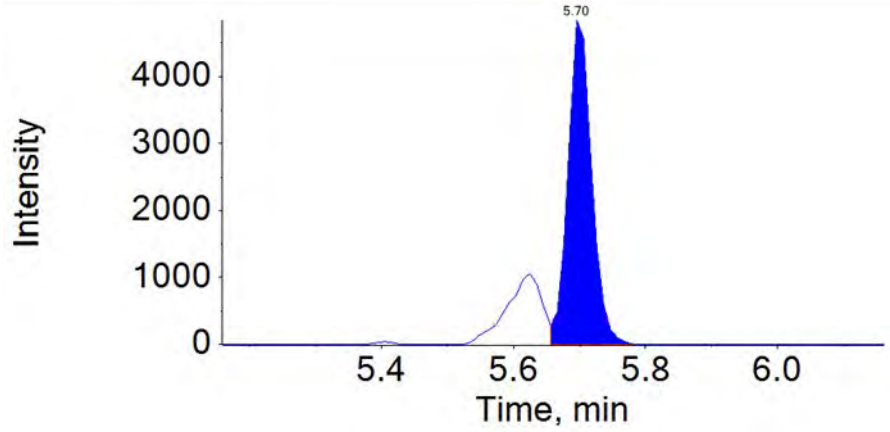
Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFDA_2
RT (min.):
5.56
Peak Area:
2438.8
Mass Range:
513.0 / 169.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



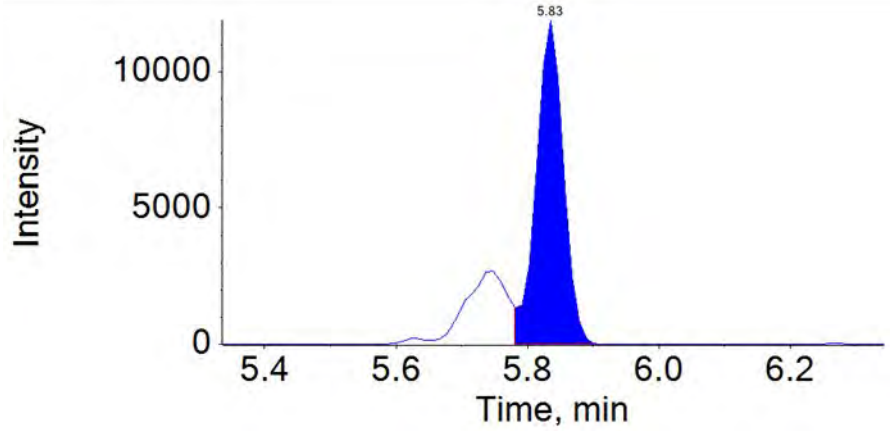
Integration Comment: incorrect integration

Component Name:
NMeFOSAA_2
RT (min.):
5.70
Peak Area:
12072.2
Mass Range:
570.0 / 483.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3



Integration Comment: incorrect integration

Component Name:
NEtFOSAA_2
RT (min.):
5.83
Peak Area:
34118.1
Mass Range:
584.0 / 526.0
File Name:
18NOV29D-52.wiff
Sample Name:
CCV5_CAL3

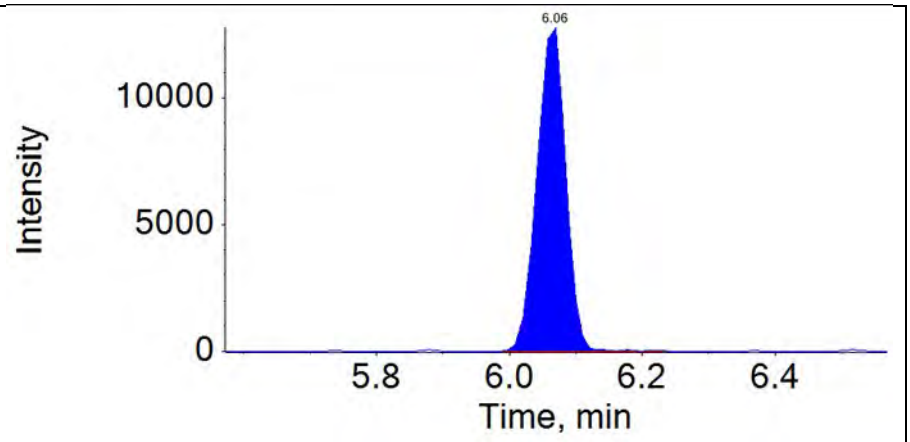


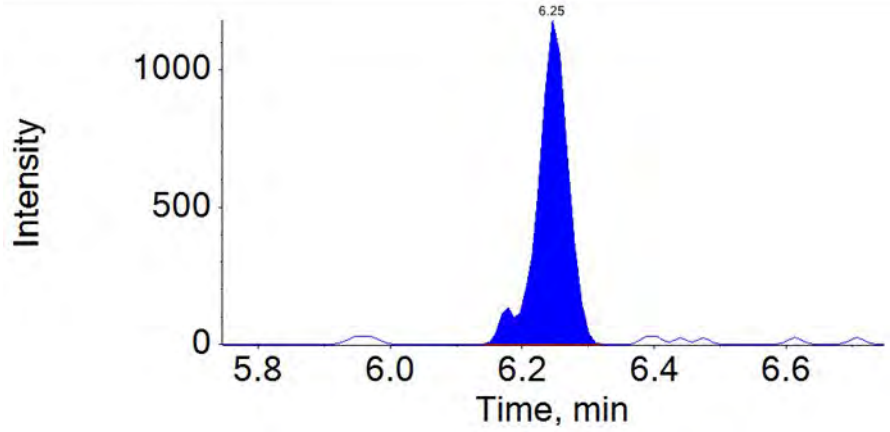
Integration Comment: incorrect integration

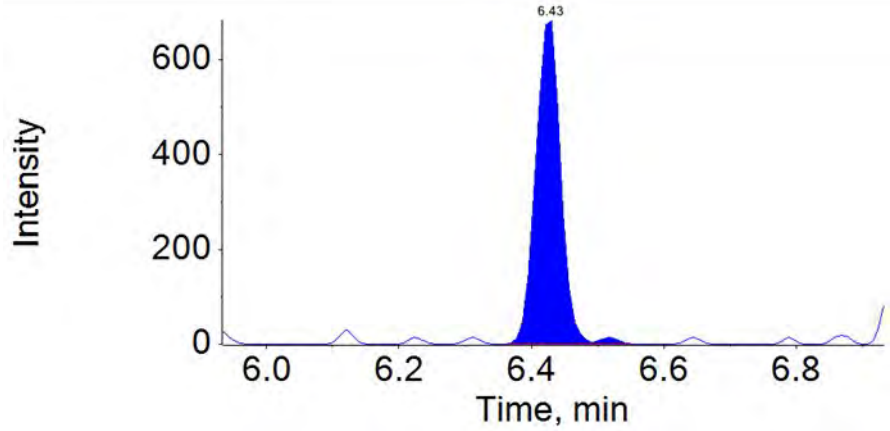
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: 10:2-FTS_2 **RT (min.):** 6.06 **Peak Area:** 38871.1 **Mass Range:** 627.0 / 81.0 **File Name:** 18NOV29D-52.wiff **Sample Name:** CCV5_CAL3	 **Integration Comment:** incorrect integration

Component Name: PFTrDA_2 **RT (min.):** 6.25 **Peak Area:** 3806.2 **Mass Range:** 663.0 / 169.0 **File Name:** 18NOV29D-52.wiff **Sample Name:** CCV5_CAL3	 **Integration Comment:** incorrect integration

Component Name: PFTeDA_2 **RT (min.):** 6.43 **Peak Area:** 1816.4 **Mass Range:** 713.0 / 169.0 **File Name:** 18NOV29D-52.wiff **Sample Name:** CCV5_CAL3	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Results Table Name: 18NOV29DCCV1-5
Results Table Date: 11/29/2018 7:58:55 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

Ion Ratio Report

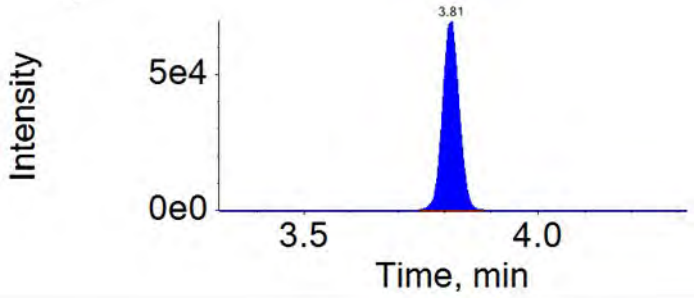
Sample Name: CCV5_CAL3 **Instrument Name:** LM27631 **File Name:** 18NOV29D-52.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	172355.2	A	N/A	0.3496			
PFBS_2	3.81	1.00	60254.5	A	N/A	0.3496	-4	50	
4:2-FTS	4.12	1.00	52632.4	A	N/A	0.6128			
4:2-FTS_2	4.12	1.00	32253.6	A	N/A	0.6128	-4	50	
PFHxA	4.16	1.00	392712.5	A	N/A	0.0095			
PFHxA_2	4.16	1.00	3748.1	A	N/A	0.0095	-8	50	
PFPeS	4.18	1.10	89389.0	A	N/A	0.5510			
PFPeS_2	4.18	1.10	49253.8	A	N/A	0.5510	11	50	
PFHpA	4.54	1.00	396806.2	A	N/A	0.0523			
PFHpA_2	4.54	1.00	20756.9	M	N/A	0.0523	-6	50	
PFHxS	4.55	1.00	127006.9	M	N/A	0.3604			
PFHxS_2	4.55	1.00	45767.4	M	N/A	0.3604	-2	50	
6:2-FTS	4.90	1.00	51799.6	A	N/A	0.5825			
6:2-FTS_2	4.90	1.00	30171.4	A	N/A	0.5825	-12	50	
PFHpS	4.91	1.08	129025.9	A	N/A	0.3916			
PFHpS_2	4.91	1.08	50522.7	A	N/A	0.3916	0	50	
PFOA	4.91	1.00	407078.9	A	N/A	0.0597			
PFOA_2	4.92	1.00	24289.8	A	N/A	0.0597	4	50	
PFOS	5.24	1.00	138995.5	M	N/A	0.3024			
PFOS_2	5.24	1.00	42028.6	M	N/A	0.3024	2	50	
PFNA	5.26	1.00	382168.0	A	N/A	0.0151			
PFNA_2	5.26	1.00	5752.1	A	N/A	0.0151	-25	50	
PFNS	5.54	1.06	98297.2	A	N/A	0.4813			
PFNS_2	5.54	1.06	47307.0	A	N/A	0.4813	0	50	
PFDA	5.56	1.00	343068.9	A	N/A	0.0067			
PFDA_2	5.56	1.00	2285.7	M	N/A	0.0067	-11	50	
8:2-FTS	5.56	1.00	54309.5	A	N/A	0.6811			
8:2-FTS_2	5.56	1.00	36991.3	A	N/A	0.6811	27	50	
NMeFOSAA	5.70	1.00	64182.7	A	N/A	0.2484			
NMeFOSAA_2	5.70	1.00	15945.6	M	N/A	0.2484	8	50	
PFDS	5.79	1.10	79891.7	A	N/A	0.4226			
PFDS_2	5.79	1.10	33761.0	A	N/A	0.4226	-21	50	
PFUnDA	5.82	1.00	355883.8	A	N/A	0.0042			
PFUnDA_2	5.82	1.00	1497.1	A	N/A	0.0042	11	50	
NEtFOSAA	5.83	1.00	64211.1	M	N/A	0.7219			
NEtFOSAA_2	5.83	1.00	46352.7	M	N/A	0.7219	-2	50	
PFDoDA	6.05	1.00	467324.6	A	N/A	0.0131			
PFDoDA_2	6.05	1.00	6130.3	A	N/A	0.0131	1	50	
10:2-FTS	6.07	1.09	54230.7	A	N/A	0.7133			
10:2-FTS_2	6.06	1.09	38681.2	M	N/A	0.7133	2	50	
PFTrDA	6.25	1.03	477187.4	A	N/A	0.0076			
PFTrDA_2	6.25	1.03	3624.2	M	N/A	0.0076	-16	50	
PFTeDA	6.42	1.00	345082.9	A	N/A	0.0052			
PFTeDA_2	6.43	1.00	1787.5	M	N/A	0.0052	-8	50	
PFHxDA	6.73	1.05	172538.3	A	N/A	0.0603			
PFHxDA_2	6.73	1.05	10401.9	A	N/A	0.0603	-7	50	
PFODA	6.99	1.09	141132.9	A	N/A	0.0256			
PFODA_2	6.99	1.09	3617.6	A	N/A	0.0256	-3	50	

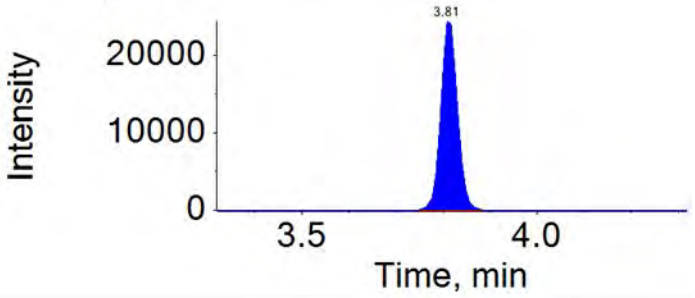
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

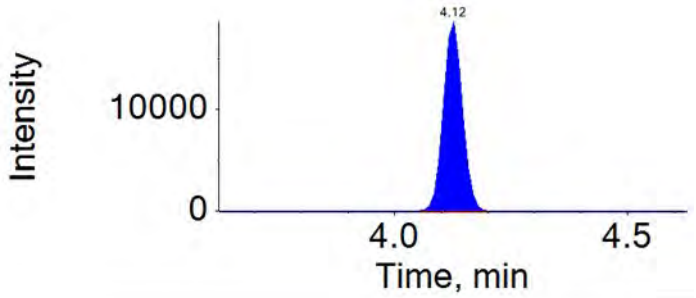
Component: PFBS
Primary Mass: 299.0 / 80.0



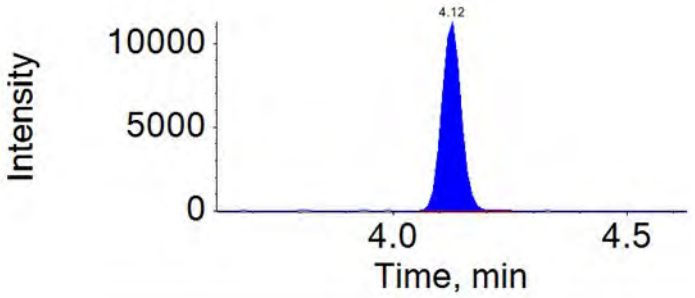
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



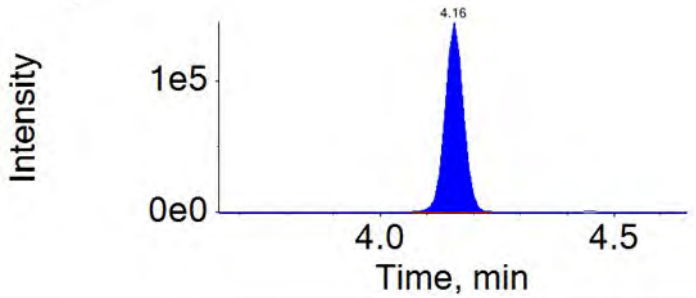
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



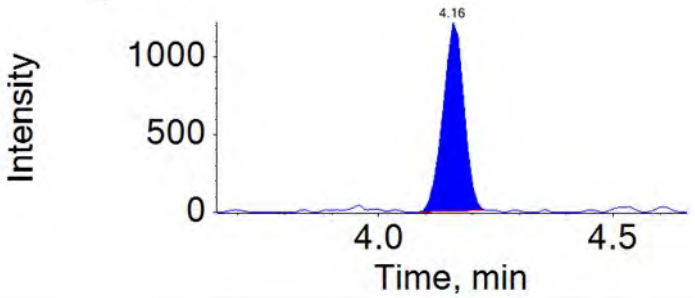
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



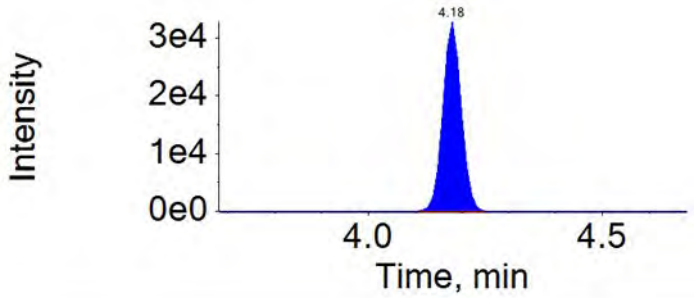
Component: PFHxA
Primary Mass: 313.0 / 269.0



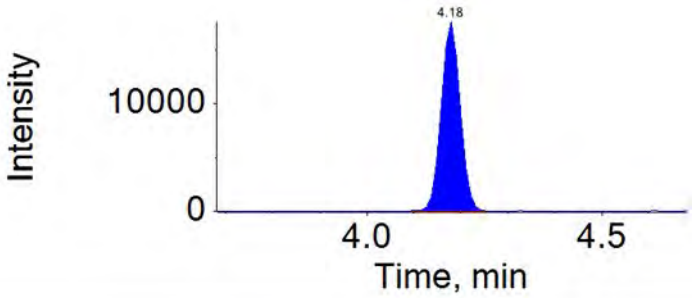
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
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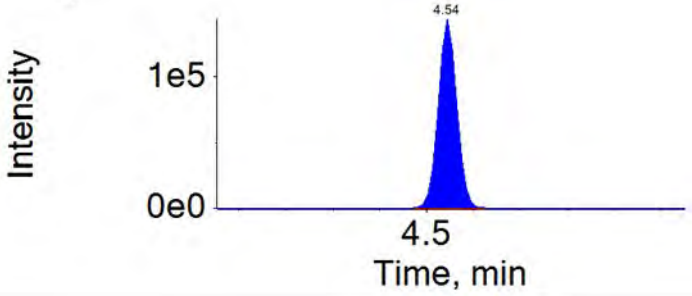
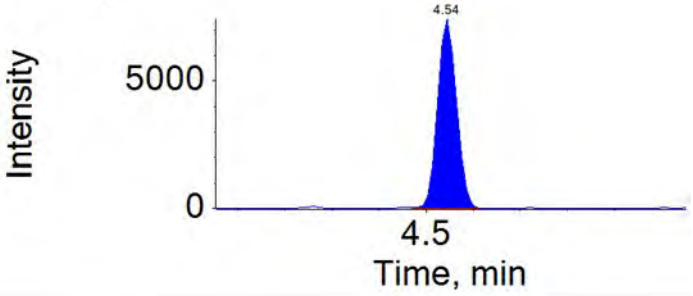
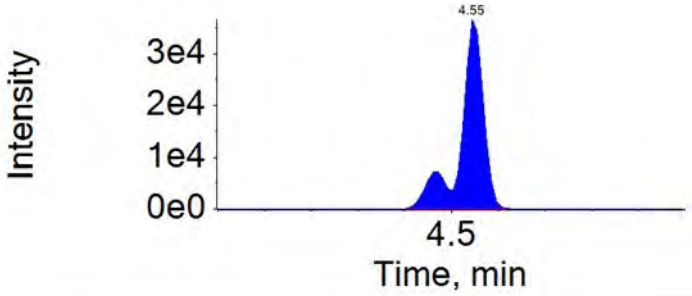
Component: PFHpA
Primary Mass: 363.0 / 319.0



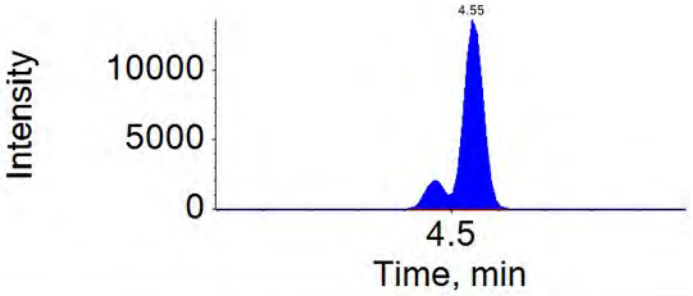
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



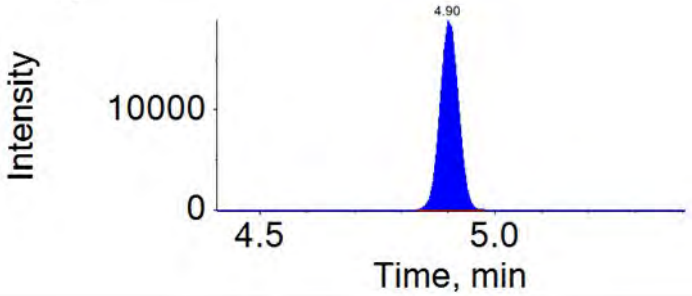
Component: PFHxS
Primary Mass: 399.0 / 80.0



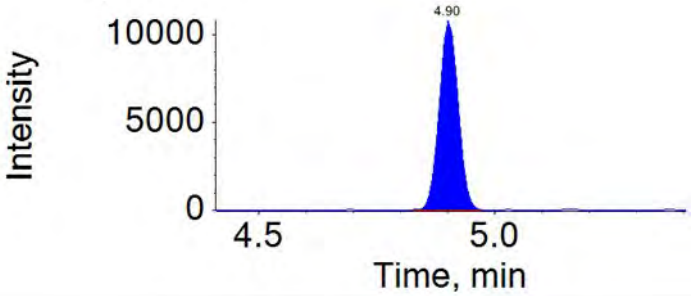
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



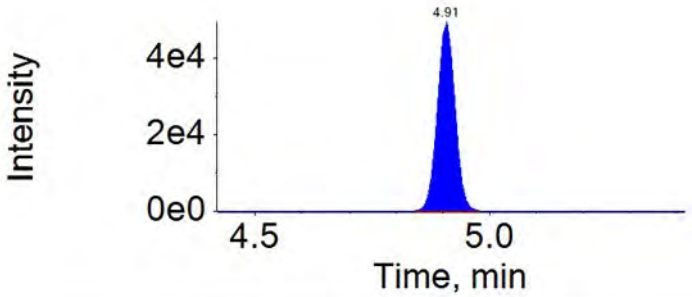
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



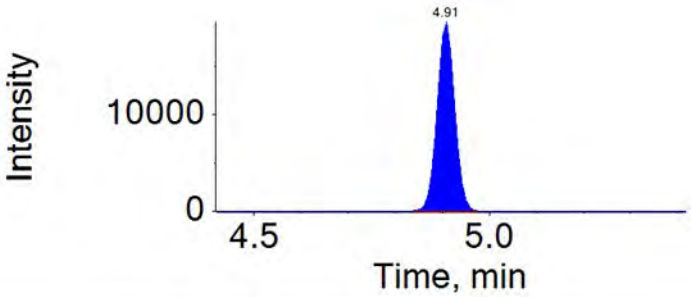
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



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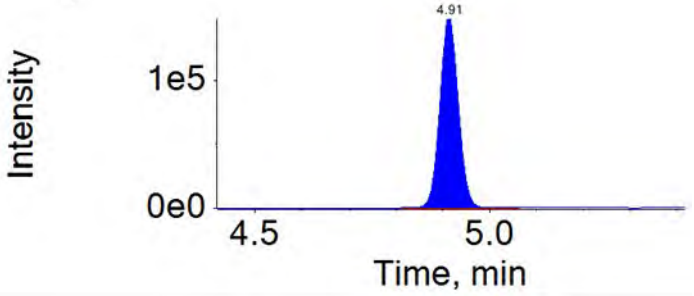
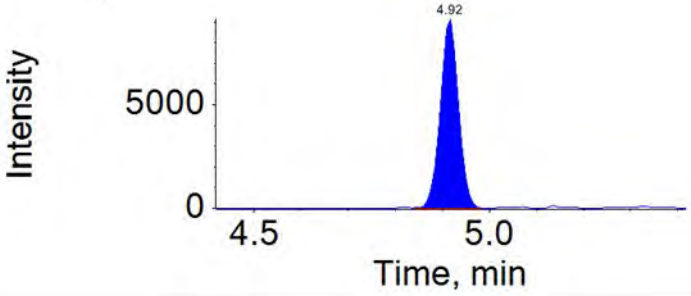
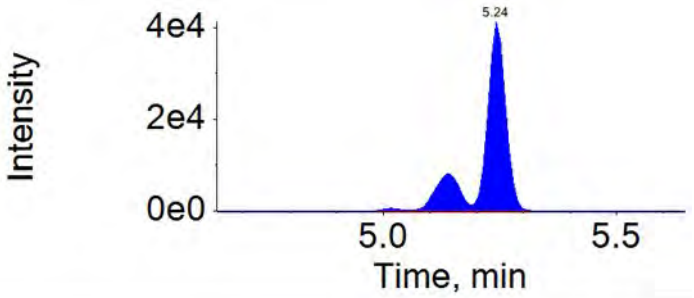
Component: PFOA
Primary Mass: 413.0 / 369.0



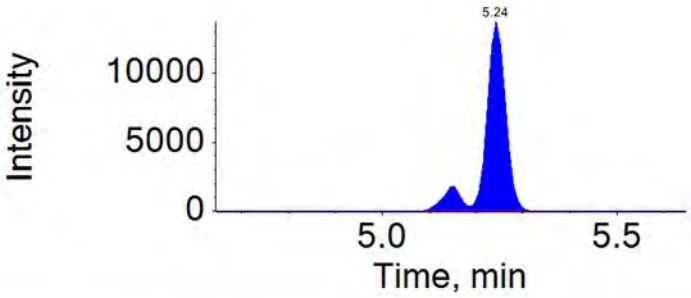
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



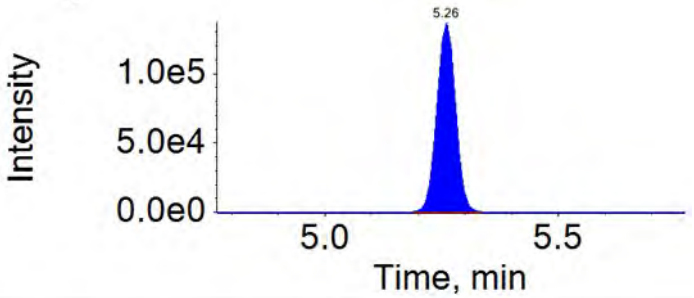
Component: PFOS
Primary Mass: 499.0 / 80.0



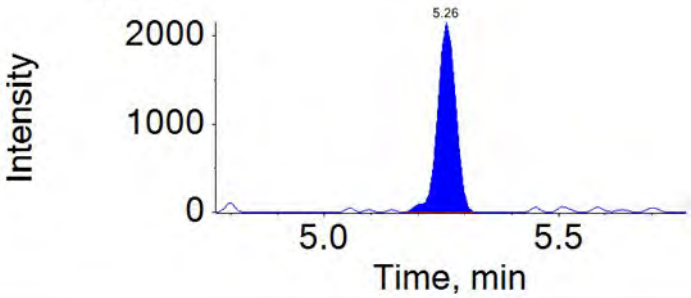
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



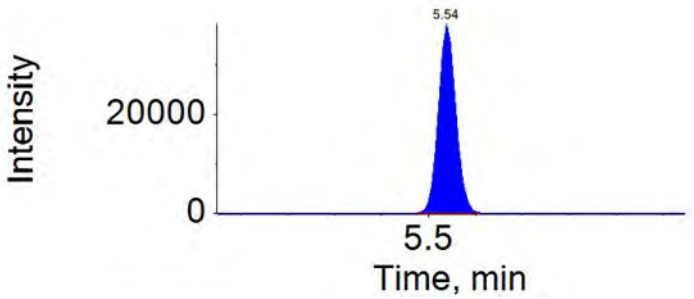
Component: PFNA
Primary Mass: 463.0 / 419.0



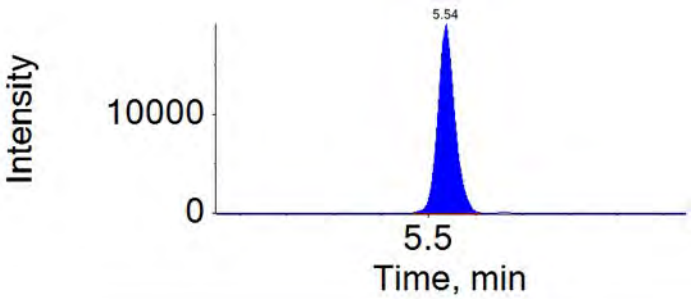
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



APPROVED
By MCD at 8:06 pm, 11/29/18

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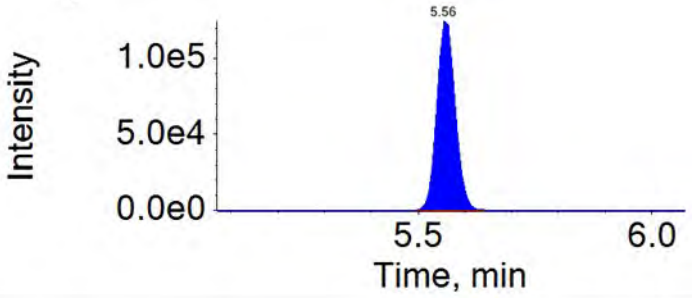
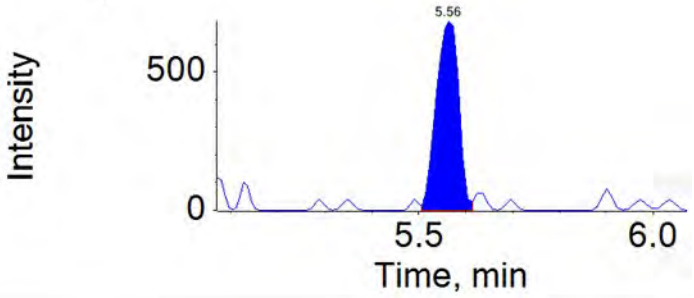
By HMK at 9:40 am, 12/5/18

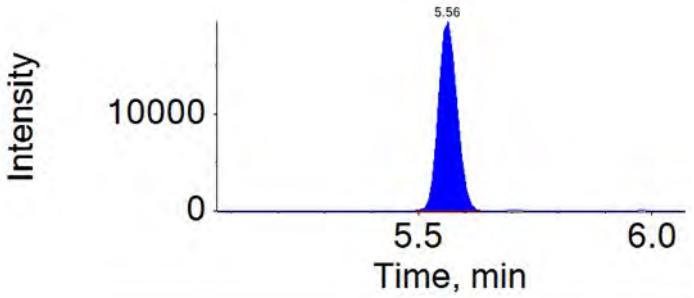
Component: PFDA
Primary Mass: 513.0 / 469.0



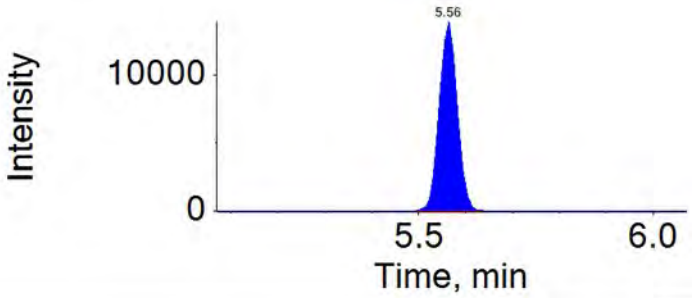
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



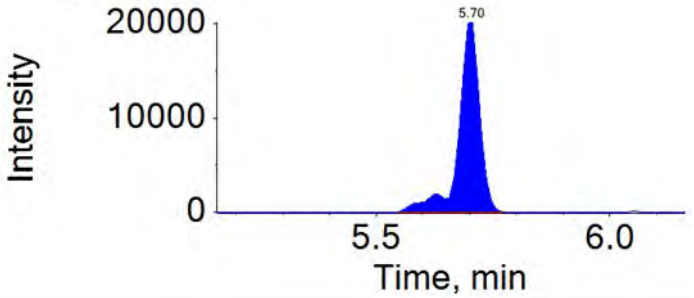
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



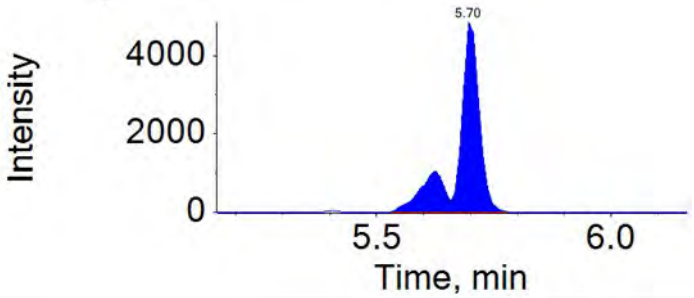
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



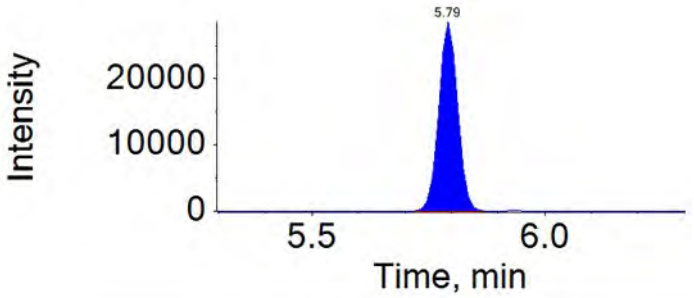
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



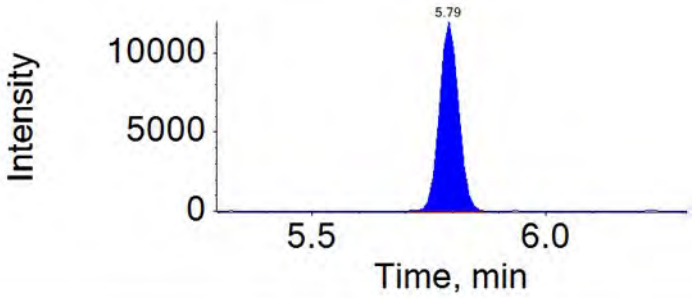
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



Component: PFDS_2
Secondary Mass: 599.0 / 99.0



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By MCD at 8:06 pm, 11/29/18

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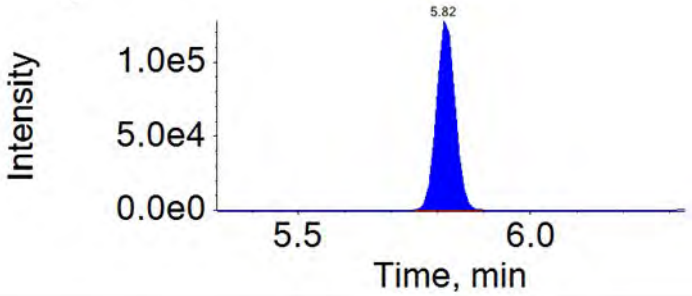
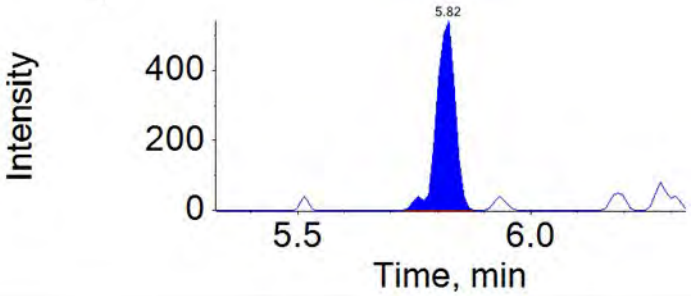
By HMK at 9:40 am, 12/5/18

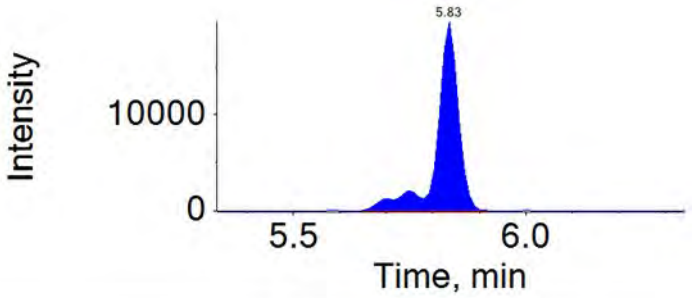
Component: PFUnDA
Primary Mass: 563.0 / 519.0



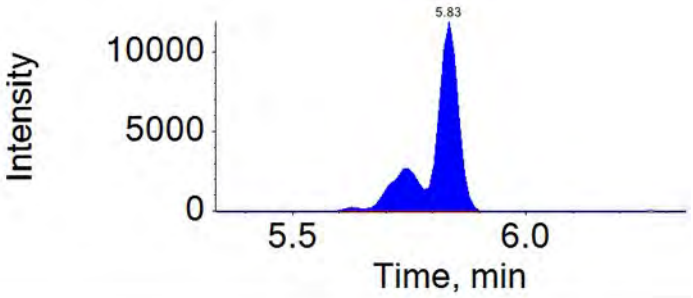
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



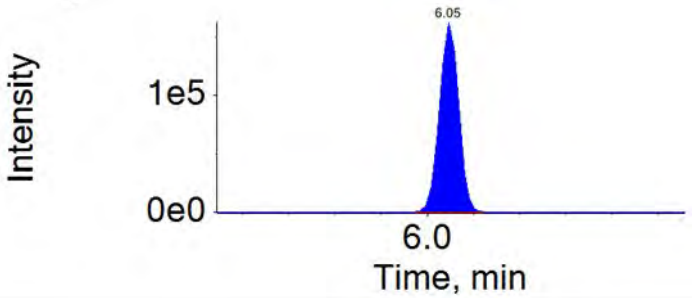
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



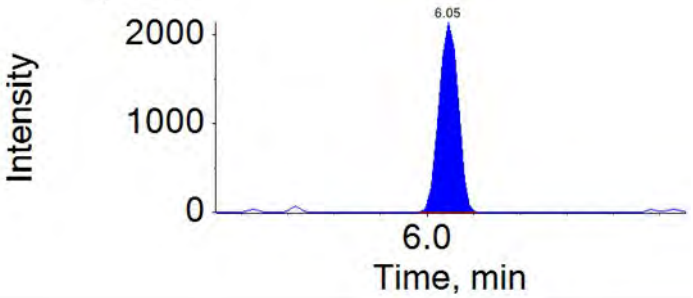
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



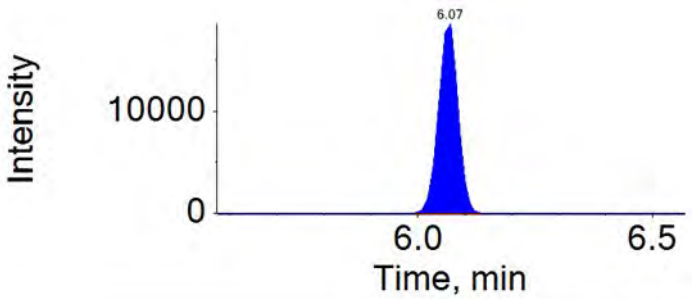
Component: PFDoDA
Primary Mass: 613.0 / 569.0



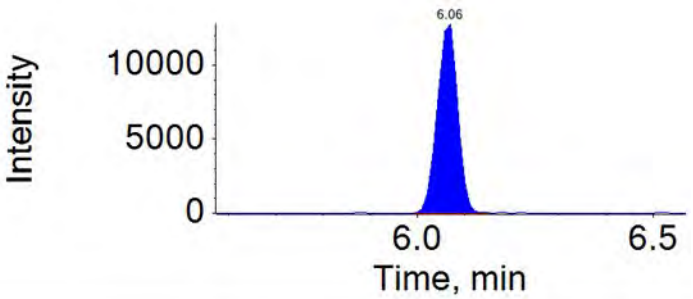
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



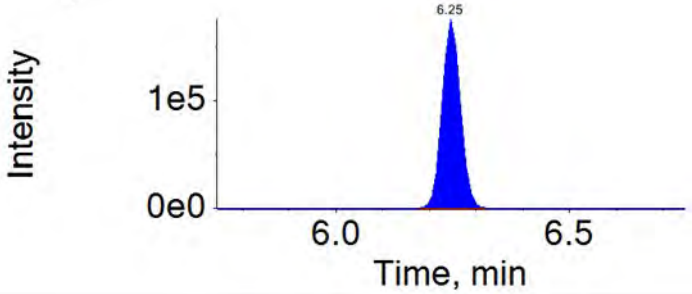
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



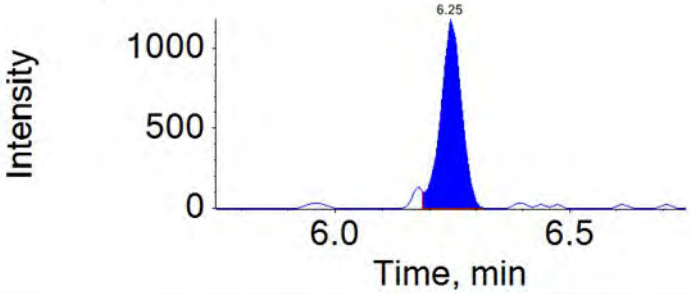
APPROVED
By MCD at 8:06 pm, 11/29/18

REVIEWED
By HMK at 9:40 am, 12/5/18

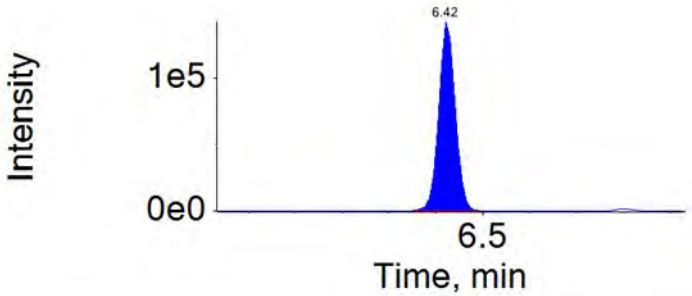
Component: PFTrDA
Primary Mass: 663.0 / 619.0



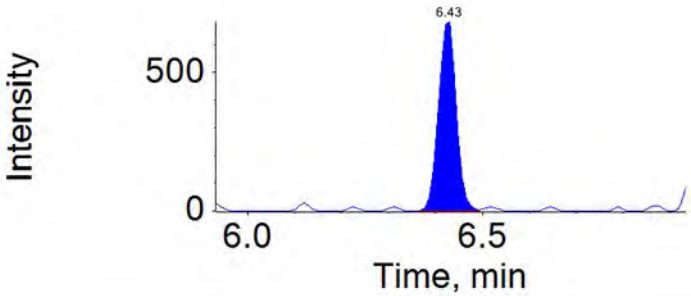
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



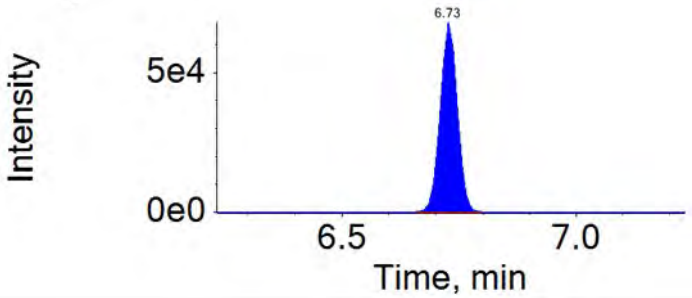
Component: PFTeDA
Primary Mass: 713.0 / 669.0



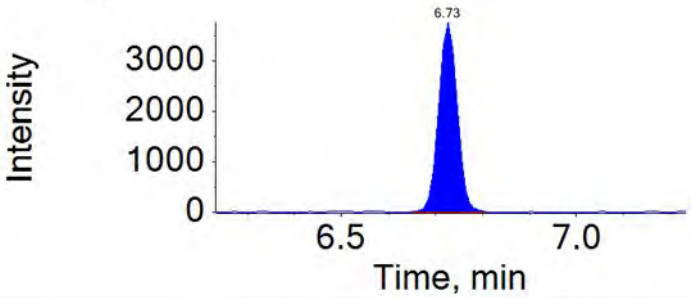
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



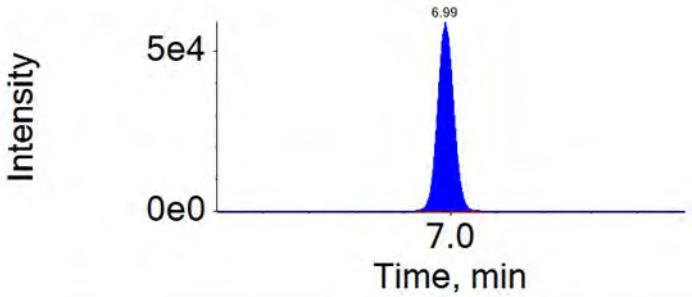
Component: PFHxDA
Primary Mass: 813.0 / 769.0



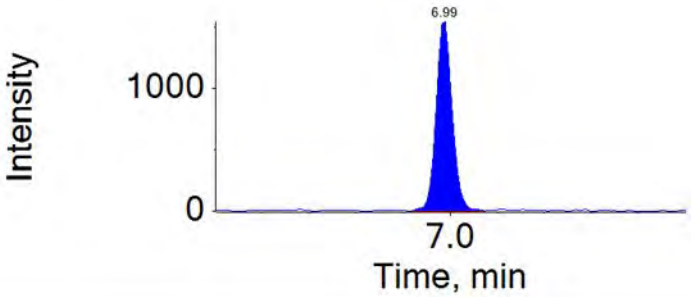
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 8:06 pm, 11/29/18

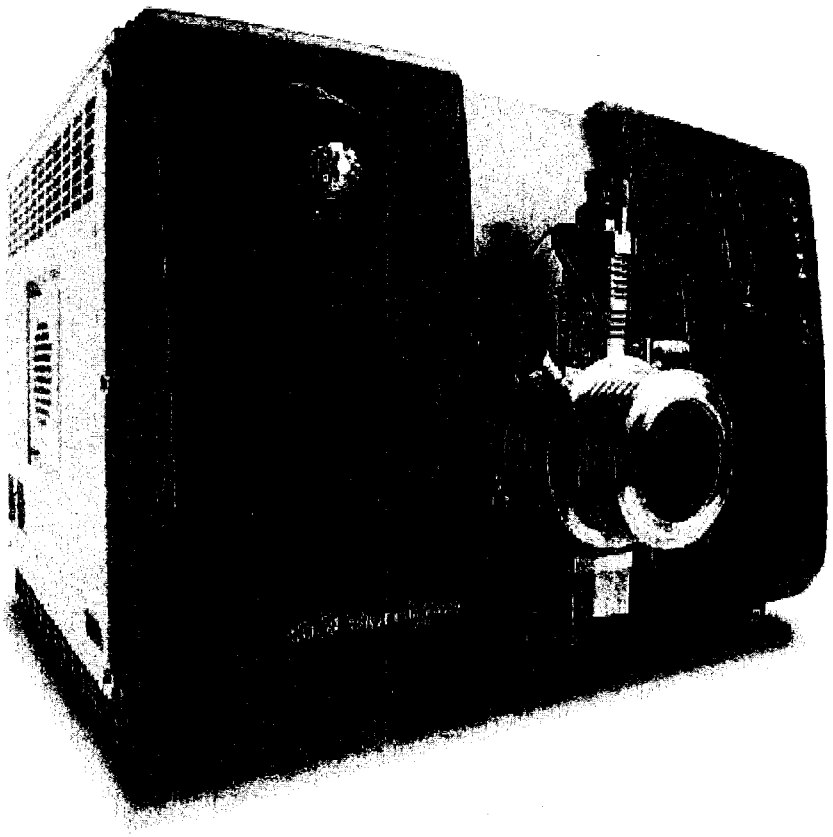
REVIEWED
By HMK at 9:40 am, 12/5/18

LM27631

SCIEX

Triple Quad™ 4500 and Triple Quad™ 4500MD Systems

Installation Checklist and Data Log



GEN-IDV-06-1212-C | D5082309 C

October 2016

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Installation Preparation 1

Note: For regulatory and safety information for the mass spectrometer, refer to the *System User Guide*.

Note: Before starting the installation, verify that the customer has completed the checklist in the *Site Planning Guide*.

Customer Information

Organization	Eurofins		
Address	2425 New Holland Pike Lancaster, PA 17601		
Telephone	717-556-7231	Fax	N/A
Contact name	Charles Neslund		
E-mail address	CharlesNeslund@eurofinsUS.com		

System Information

Table 1-1 Mass Spectrometer Information

Mass spectrometer location	A-223
Mass Spectrometer model name	4500QQQ
Mass spectrometer serial number	EB220251804
Firmware version	PIL1801
Roughing pump serial number	31001702300

Table 1-2 Acquisition Computer Information

Model	XE2	Service tag	5L3QLN2
OS version	Win7 64bit	OS service pack	SP1
Analyst® or Analyst® MD software version	1.7.0	Analyst® or Analyst® MD software hotfix	HF2
Cliquid® MD software version (4500MD systems only)	N/A		
MultiQuant™ or MultiQuant™ MD software version	3.0.3		

Table 1-3 Ion Source Information

Component	Serial Number
Turbo V™ ion source • TurboIonSpray® probe • APCI probe (if applicable)	2001171218 20380180321 20252180221
NanoSpray® ion source (if applicable, non-MD systems only)	N/A
DuoSpray™ ion source (if applicable, non-MD systems only) • TurboIonSpray® probe • APCI probe (if applicable)	N/A N/A N/A
Other/Third-party ion source (if applicable, non-MD systems only)	N/A

Table 1-4 System Components and Peripherals

Component	Serial Number
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

Installation Checklist 2

The Field Service Employee (FSE) must complete this checklist to make sure that every step in the installation procedure is completed. The checklist also contains an installation acceptance form for the customer representative and the FSE to sign when the work is complete. Refer to Signoff on page 21.

Unpacking and Inspection

Task	Complete	N/A
Inspect the packaging: • Inspect all tip and shock indicators for signs of excessive shock or tilting. • Inspect the boxes for exterior damage.	☑	
Unpack and inspect all of the components.	☑	
(Optional) Unpack, inspect, and install the bench. 1. Inspect the packaging for exterior damage. 2. Unpack the bench and then inspect for damage. 3. Install the bench.	◉	◉

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Hardware Installation

Task	Complete	N/A
Install the mass spectrometer on the bench.	☑	
Affix the name plate on the front cover of the mass spectrometer (only applies to mass spectrometer with the prefix 'CJ' in the serial number).	☑	
Verify that the mains supply outlets for the roughing pump and the mass spectrometer deliver stable output voltages that meet the specified electrical requirements.	☑	
(Optional) Install the SCIEX-supplied UPS.	○	○
Install the roughing pump, connecting it to the mass spectrometer and the vent. Make sure that the roughing pump contains sufficient oil.	☑	
(Optional) Install the SCIEX-supplied gas generator.	○	○
Connect the gas lines.	☑	
Install and connect the drain bottle.	☑	
Install the Turbo V™ ion source. Refer to the *Turbo V™ Ion Source Operator Guide*. For 4500MD systems, refer to the *System User Guide*. For other systems, refer to the *Turbo V™ Ion Source Operator Guide*.	☑	
Adjust the stopper on the integrated syringe pump.	☑	
WARNING! Electrical Shock Hazard. Make sure that the system can be disconnected from the mains supply outlet in an emergency. Do not block the mains supply outlet. Plug in and turn on the roughing pump, and then plug in and turn on the mass spectrometer.	☑	

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Acquisition Computer Installation

Task	Complete	N/A
Install the computer and monitor on the computer table.	☑	
Connect the Ethernet cable from the computer to the mass spectrometer.	☑	
Turn on the computer.	☑	
Configure IP addresses for communication with the mass spectrometer.	☑	
(Optional) Connect the computer to the customer network.	◉	◉
Install the Analyst® or Analyst® MD software.	☑	
Install any applicable Analyst® or Analyst® MD software hotfixes.	◉	◉
(4500MD systems) Install the Cliquid® MD software.	◉	◉
Install the MultiQuant™ or MultiQuant™ MD software.	☑	
(If applicable, not for use with 4500MD systems) Install the StatusScope® agent on the acquisition computer, and then perform these tasks: • Discuss warranty coverage for the StatusScope® software. • If the customer wants the StatusScope® software installed, then complete the StatusScope® user access form. • If the customer does not want theStatusScope® software installed, then remove the StatusScope® software.	◉	◉
(Optional) Install and license any add-on software purchased and shipped with the system. • (Non-MD systems) If applicable, Cliquid® software has been installed. • Other Analyst® or Analyst® MD compatible add-on software shipped with the system has been installed.	◉	◉

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Task	Complete	N/A
Verify and update the firmware and configuration files.	☑	
Install the factory files.	☑	

Initialization and Verification

Note: Perform these tasks after the mass spectrometer reaches operating vacuum.

Task	Complete	N/A
Perform the high pressure source and blocked exhaust flow tests.		
Measure and tune the Q1, Q3, and QJet® coil boxes.	◉	◉
Perform all installation tests, print out the test results, and complete the Data Log.	☑	

Wrap-up

Task	Complete	N/A
Delete unnecessary files from the computers.	☑	
Back up the computer file systems, including the Analyst Data folder.	☑	
Create a computer image using the image utility.	☑	
Apply the biohazard labels included in the install kit. Apply one label to the ion source, and the other to the waste bottle. Find a vacant space that is clearly visible to affix the labels.	☑	

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Task	Complete	N/A
Complete all of the sections in the *Customer Familiarization Checklist*. Make a copy of the completed checklist and then give the original to the customer.	☑	
Inform the customer about the continuous improvement telephone surveys, and then advise the customer that a third party will call to obtain feedback.	☑	
Complete the *Installation Checklist and Data Log*: • Obtain customer acceptance. • Make a copy of the form and the test results. • Provide the customer with the originals. • (For MD systems only) E-mail this completed document and the test result files to servicedata@sciex.com.	☑	

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Data Log 3

Use this log to record the test data obtained during performance of the system verification tests during installation.

Note: Perform all procedures with the Turbo V™ ion source, unless otherwise specified.

Pre-test Pressure Verification is Complete	☑

Perform this test with the Analyst® or Analyst® MD software.

Test	Specification	Result
Vacuum chamber pressure with CAD gas off	0.4×10^{-5} torr ≤ $P_{CAD\ 0}$ ≤ 1.1×10^{-5} torr	0.7 x 10e-5 torr
Vacuum chamber pressure with CAD gas set to Full	1.8×10^{-5} torr ≤ ($P_{CAD\ 12} - P_{CAD\ 0}$) ≤ 2.8×10^{-5} torr	2.1 x 10e-5 torr

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Q1 Positive PPGs Test is Complete: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10) ☑

- **Test solution:** POS PPG, 2e-6 M
- **Flow rate:** 5 µL/min
- **MCA:** On
- **Printouts required:** Spectra for masses 59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427, with peak intensities, peak width, and mass shift results, complete with method file information.

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
175.133	$\geq 8.0 \times 10^6$	1.6298e7	0.6 to 0.8	0.7105
500.380	$\geq 8.0 \times 10^6$	2.4240e7	0.6 to 0.8	0.6995
906.673	$\geq 2.0 \times 10^7$	3.2349e7	0.6 to 0.8	0.7151
1952.427	$\geq 8.8 \times 10^5$	1.8122e6	0.6 to 0.8	0.7423

Q1 Positive PPGs Test is Complete: Peak Width for Identified Masses ☑

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427	10	10	0.6 to 0.8	☑
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

Q3 Positive PPGs Test is Complete: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10)	☑

- **Test solution:** POS PPG, 2e-6 M
- **Flow rate:** 5 µL/min
- **MCA:** On
- **Printouts required:** Spectra for masses 59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427, with peak intensities, peak width, and mass shift results, complete with method file information.

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
175.133	$\geq 8.0 \times 10^6$	1.950[illegible]	0.6 to 0.8	0.6916
500.380	$\geq 8.0 \times 10^6$	1.925[illegible]	0.6 to 0.8	0.7278
906.673	$\geq 2.0 \times 10^7$	3.1634[illegible]	0.6 to 0.8	0.7403
1952.427	$\geq 8.8 \times 10^5$	2.4968e6	0.6 to 0.8	0.7828

Q3 Positive PPGs Test is Complete: Peak Width for Identified Masses ☑

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427	10	10	0.6 to 0.8	☑
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

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Q1 Negative PPGs Test is Complete ☑

- **Test solution:** NEG PPG, 3e-4 M
- **Flow rate:** 10 µL/min
- **MCA:** On
- **Printouts required:** Spectra for masses 44.998, 411.259, 585.385, 933.636, 1223.845, 1572.097, 1863.306, 1979.389, with peak intensities, peak width, and mass shift results, complete with method file information.

Table 3-1 Verification: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10) for the Q1 Negative PPGs Tests

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
933.636	≥ 1.8×10^7	2.23786e7	0.6 to 0.8	0.6638
1863.306	≥ 1.4×10^6	2.11046e6	0.6 to 0.8	0.7369

Table 3-2 Verification: Peak Width for Identified Masses for the Q1 Negative PPGs Tests

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
44.998, 411.259, 585.385, 933.636 1223.845, 1572.097, 1863.306, 1979.389	10	10	0.6 to 0.8	☑
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

Q3 Negative PPGs Test is Complete ☑

- **Test solution:** NEG PPG, 3e-4 M
- **Flow rate:** 10 µL/min
- **MCA:** On
- **Printouts required:** Spectra for masses 44.998, 411.259, 585.385, 933.636, 1223.845, 1572.097, 1863.306, 1979.389, with peak intensities, peak width, and mass shift results, complete with method file information.

Table 3-3 Verification: Intensity and Peak Width (Scan Rate=10 Da/s, Cycles=10) for the Q3 Negative PPGs Tests

Mass (Da)	Intensity (cps)		Peak width (Da)	
	Specification	Result	Specification	Result
933.636	≥ 1.8×10^7	2.6621e7	0.6 to 0.8	0.7288
1863.306	≥ 2.0×10^6	3.5734e6	0.6 to 0.8	0.7033

Table 3-4 Verification: Peak Width for Identified Masses for the Q3 Negative PPGs Tests

Mass (Da)	Scan Rate (Da/s)	Cycles	Specification (Da)	Result (Passed)
44.998, 411.259, 585.385, 933.636 1223.845, 1572.097, 1863.306 1979.389	10	10	0.6 to 0.8	☑
	200	50	0.6 to 0.8	
	1000	50	0.6 to 0.8	
	2000	100	0.6 to 0.8	

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Reserpine MS/MS Test is Complete	☑

- **Test solution:** Reserpine solution 0.167 pmol/µL
- **Flow rate:** 5 µL/min
- **Scan rate:** 10 Da/s (both MS and MS/MS)
- **Scan mode:** Product Ion (MS2)
- **Product Of:** 609.3 (or as calibrated)
- **Product Ion:** 195.1
- **Cycles:** 10
- **MCA:** On
- **Printouts required:** Spectra for masses 609.3 and 195.1, with peak intensities, peak width, and mass shift results, complete with method file information.

Table 3-5 Verification for the Reserpine MS/MS Test

Specification	Result
Transmission efficiency $\frac{Intensity\ for\ ion\ at\ m/z\ 195.1}{Intensity\ for\ ion\ at\ m/z\ 609.2\ (or\ as\ calibrated)} \times 100 \geq 10\%$	[redacted]

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Turbo V™ Ion Source Acceptance Test is Complete	☑

Table 3-6 Verification for the Turbo V™ Ion Source Acceptance Test

Probe	Test	Specification	Result (Passed)
TurboIonSpray®	Set the temperature parameter to 500 °C.	The Analyst® or Analyst® MD software reports that the temperature is reached.	☑
APCI	Set the temperature parameter to 400 °C.	The Analyst® or Analyst® MD software reports that the temperature is reached.	☑

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Post-test Pressure Verification is Complete	☑

Perform this test with the Analyst® or Analyst® MD software.

Test	Specification	Result
Vacuum chamber pressure with CAD gas off	0.4×10^{-5} torr ≤ $P_{CAD\ 0}$ ≤ 1.1×10^{-5} torr	0.4x10e-5 torr
Vacuum chamber pressure with CAD gas set to Full	1.8×10^{-5} torr ≤ ($P_{CAD\ 12} - P_{CAD\ 0}$) ≤ 2.8×10^{-5} torr	2.1x10e-5 torr

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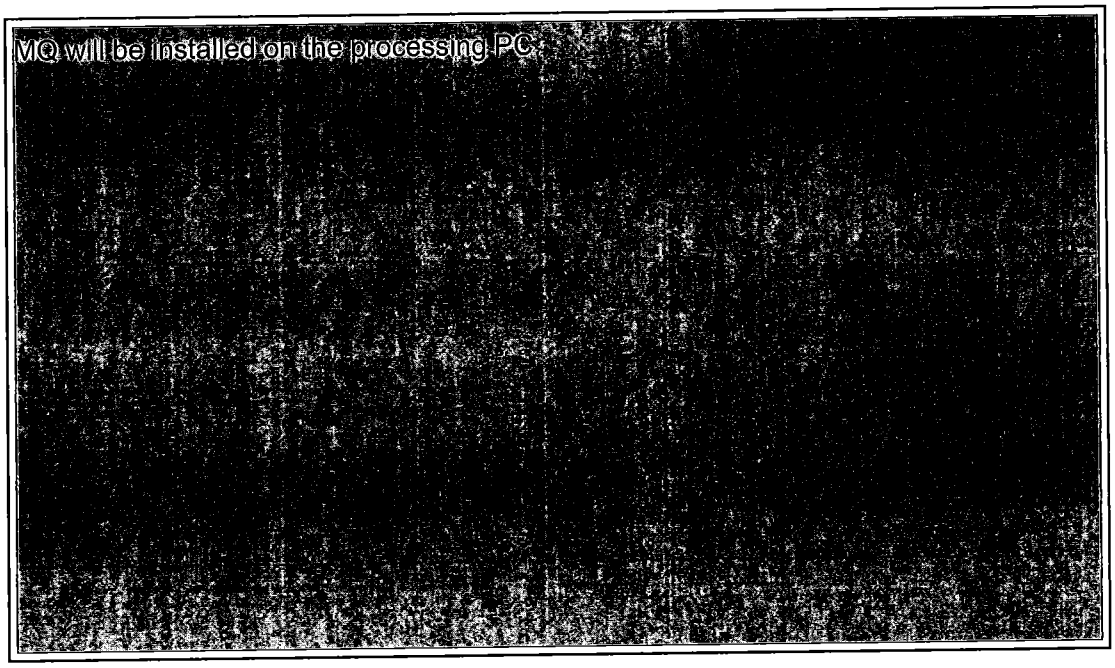
Signoff 4

Organization	Eurofins		
Customer contact name		Date (yyyy-mm-dd)	
Customer contact signature*			
FSE name	Michael F Pennell	Date (yyyy-mm-dd)	2018-05-29
FSE signature			

* Signature required on hard copy only.

Comments and Exceptions



Revision History

Revision	Reason for Change	Date
A	First release of the combined *SCIEX Triple Quad™ 4500 and 4500MD System Installation Checklist and Data Log.* Replaces D5028556 E.	May 2014
B	Updated the installation test data.	December 2014
C	• Applied new template. • Updated the System Information, Acquisition Computer Installation, and Data Log sections.	October 2016

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

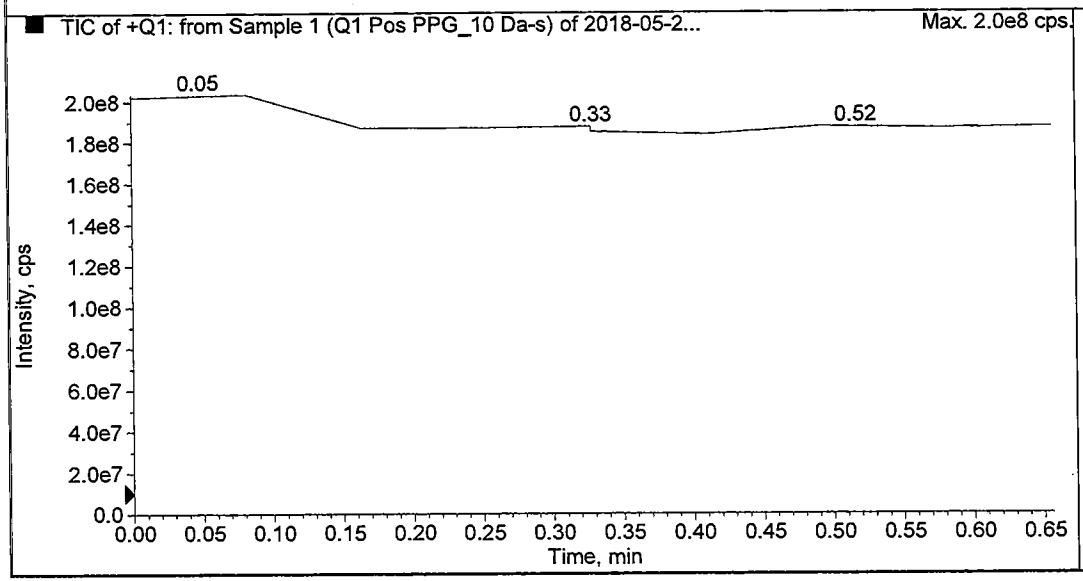
Mass Spectrometer Method Properties

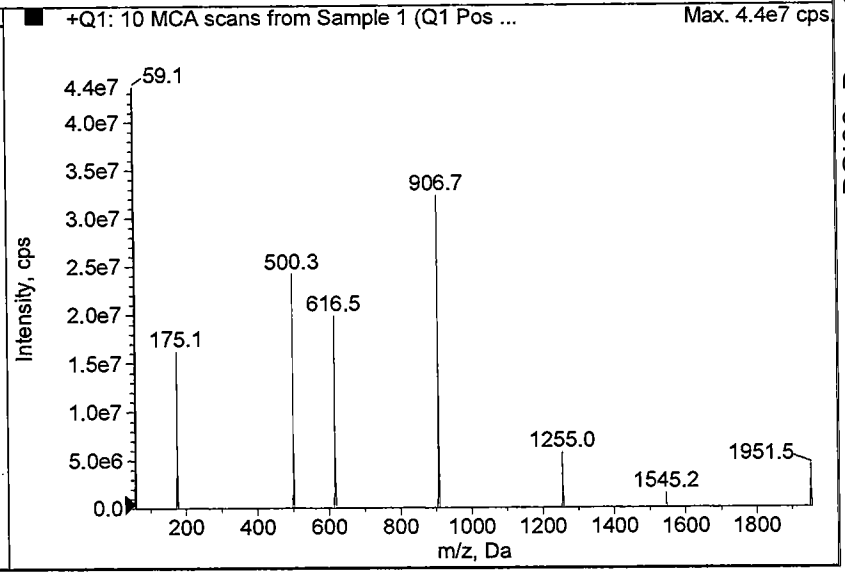
Period 1:

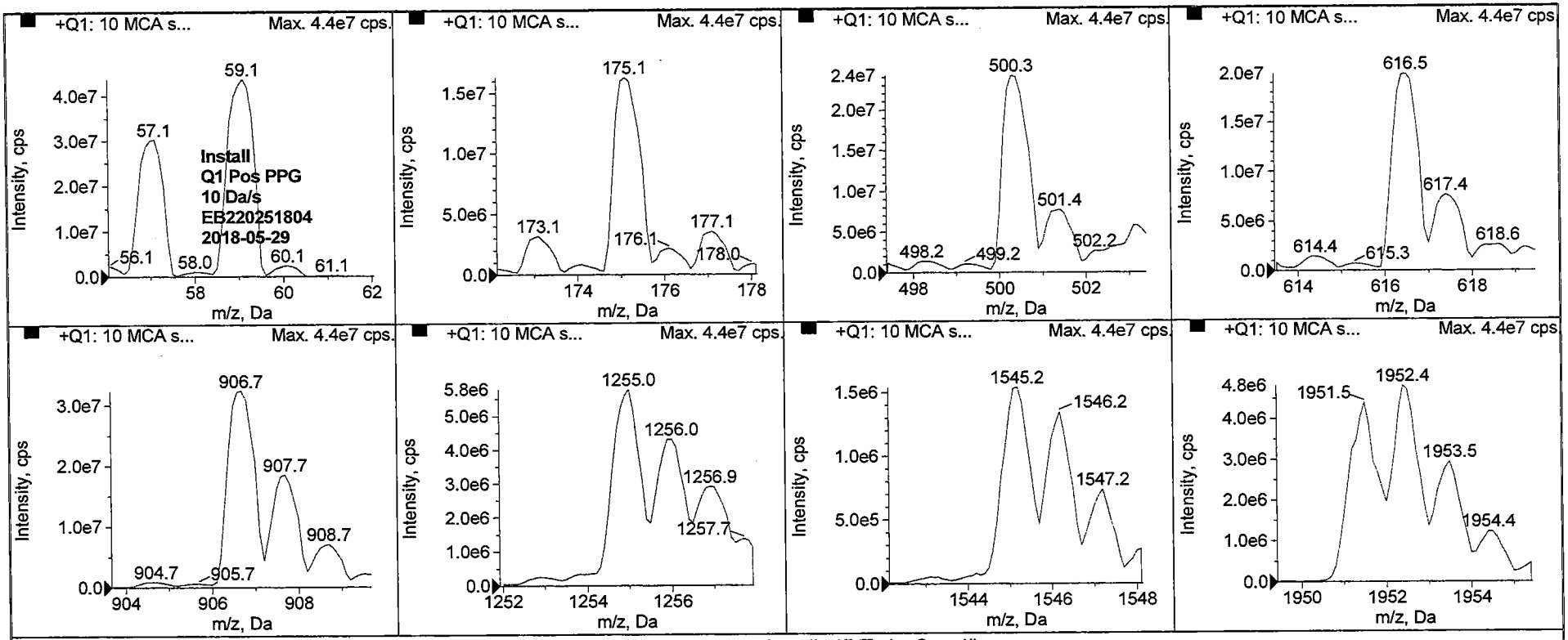
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " +Q1: 10 MCA scans from Sample 1 (Q1 Pos PPG_10 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0559	4.3682e7	0.6931	-5.8810e-3
2	175.1330	175.1423	1.6298e7	0.7105	-9.3008e-3
3	500.3800	500.3732	2.4240e7	0.6995	6.8010e-3
4	616.4640	616.4825	1.9901e7	0.6890	-0.0185
5	906.6730	906.6804	3.2349e7	0.7151	-7.3891e-3
6	1254.9250	1254.9327	5.7895e6	0.7632	-7.6510e-3
7	1545.1340	1545.1665	1.5381e6	0.7694	-0.0325
8	1952.4270	1952.4521	4.8122e6	0.7423	-0.0251

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

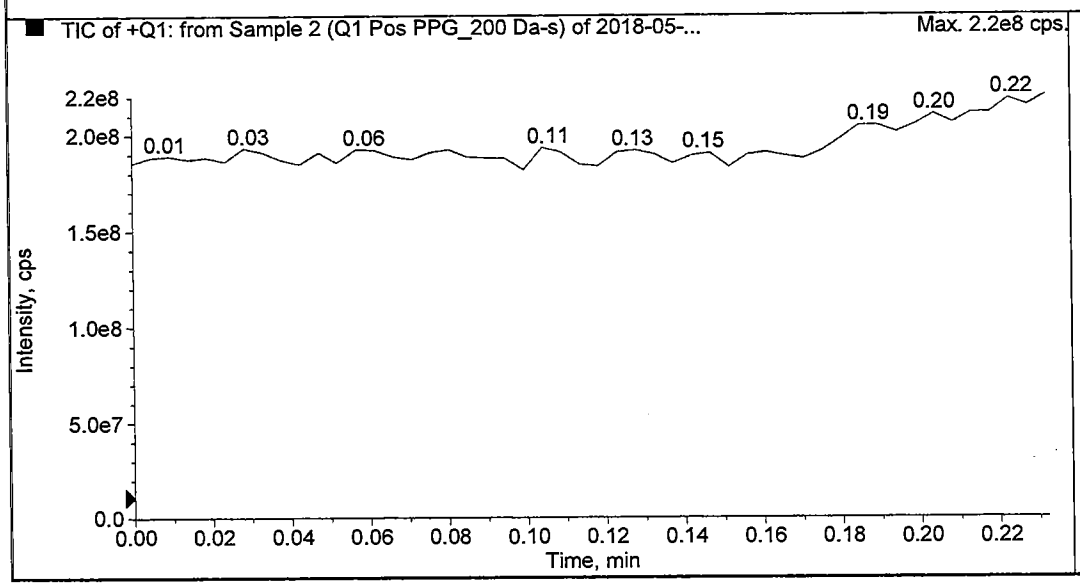
Mass Spectrometer Method Properties

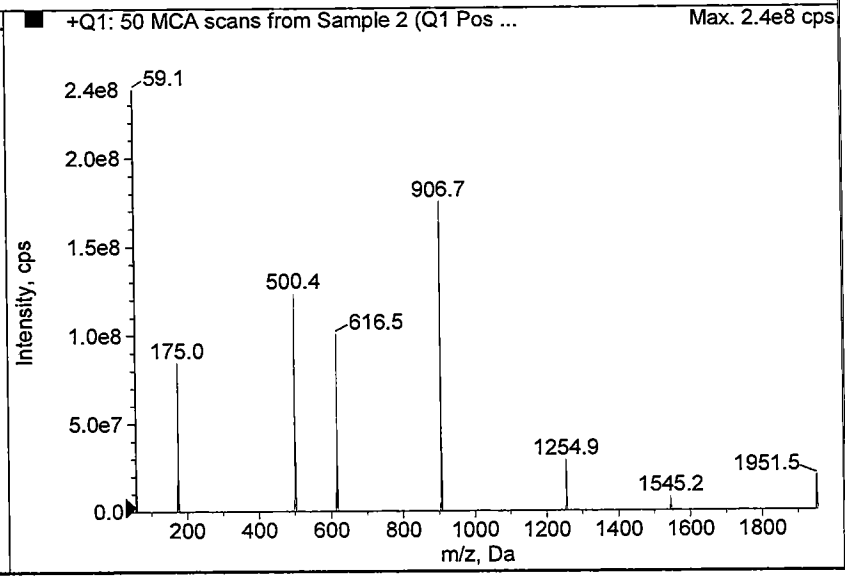
Period 1:

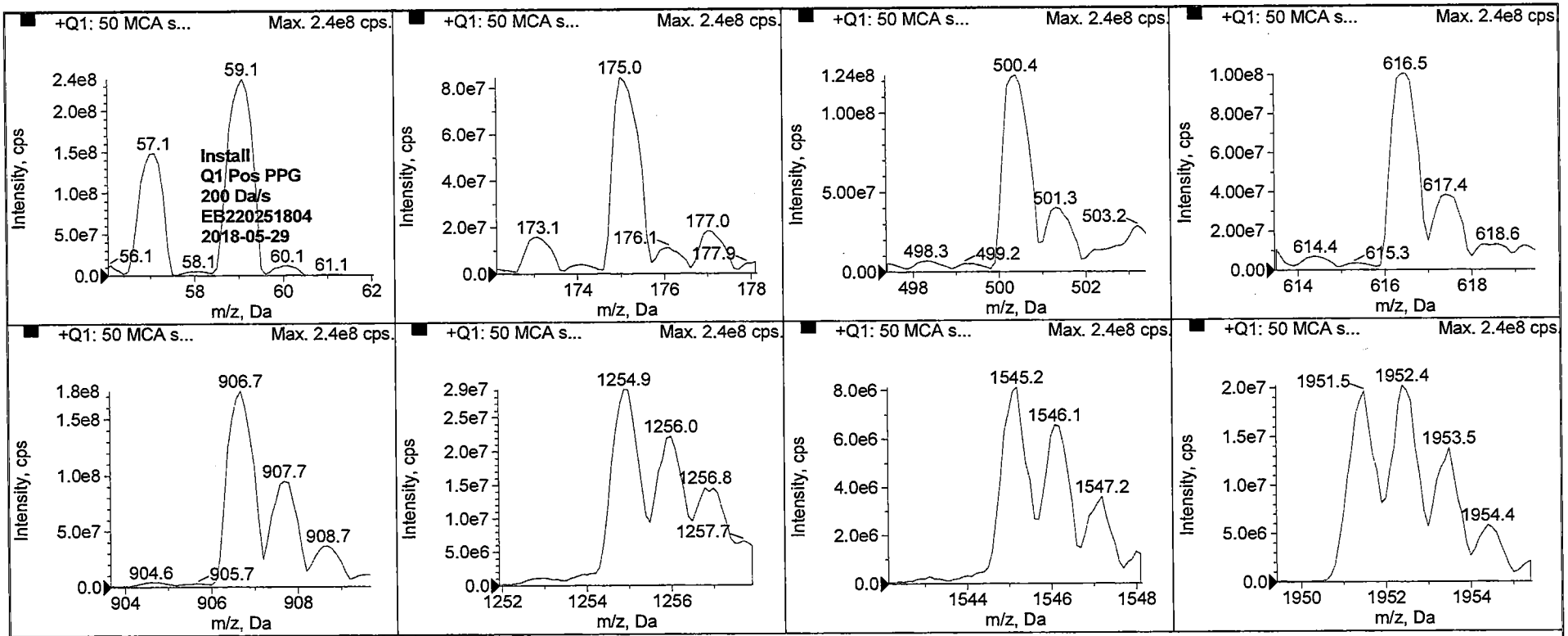
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " +Q1: 50 MCA scans from Sample 2 (Q1 Pos PPG_200 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0570	2.3875e8	0.6632	-6.9868e-3
2	175.1330	175.1204	8.4656e7	0.7253	0.0126
3	500.3800	500.3915	1.2366e8	0.7160	-0.0115
4	616.4640	616.4631	1.0058e8	0.7191	9.0862e-4
5	906.6730	906.6801	1.7505e8	0.7187	-7.0740e-3
6	1254.9250	1254.9211	2.9174e7	0.7662	3.8790e-3
7	1545.1340	1545.1254	8.1140e6	0.7324	8.6264e-3
8	1952.4270	1952.4458	2.0214e7	0.7760	-0.0188

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

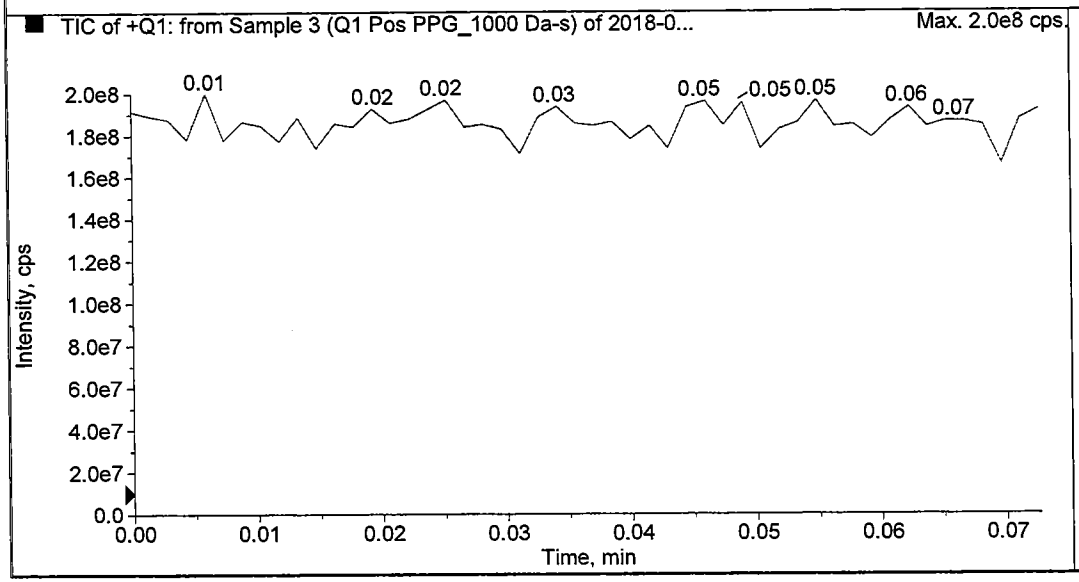
Mass Spectrometer Method Properties

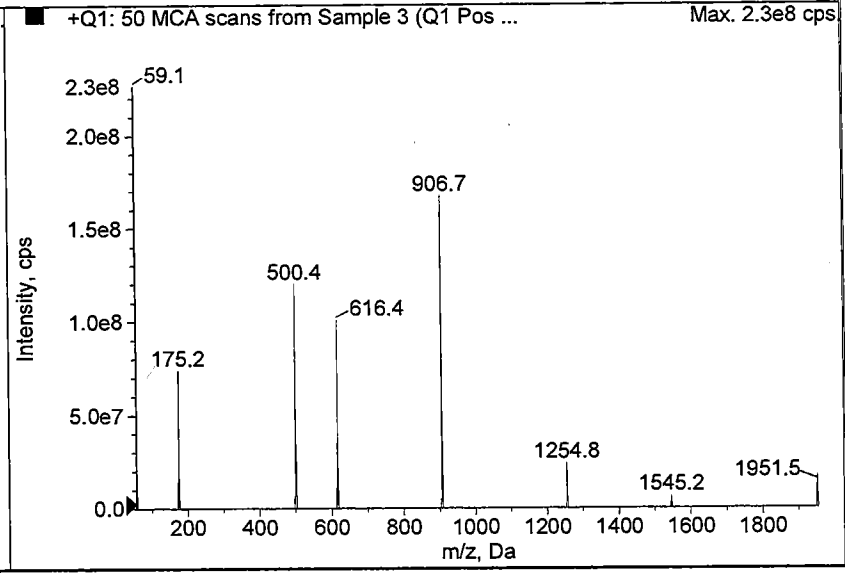
Period 1:

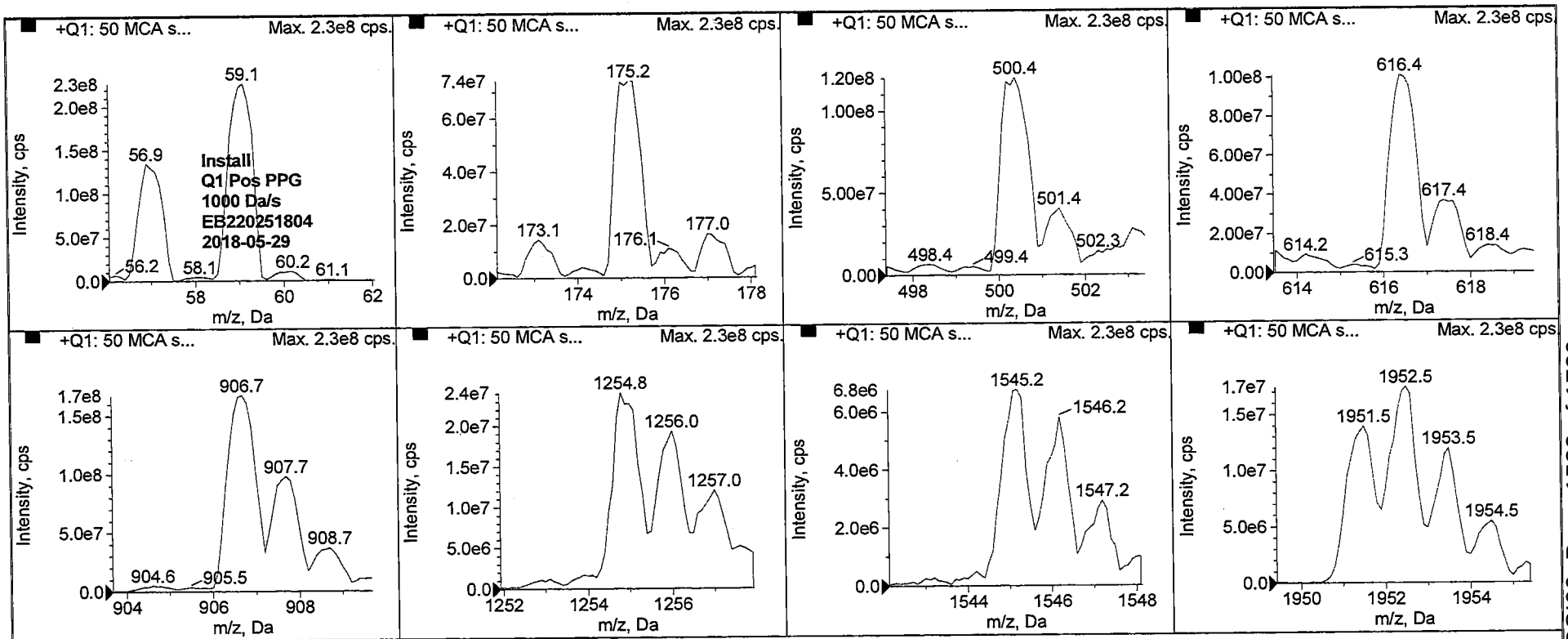
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " +Q1: 50 MCA scans from Sample 3 (Q1 Pos PPG_1000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0540	2.2668e8	0.6411	-4.0020e-3
2	175.1330	175.1630	7.4160e7	0.7037	-0.0300
3	500.3800	500.3767	1.2013e8	0.7536	3.3425e-3
4	616.4640	616.4720	1.0080e8	0.7224	-8.0022e-3
5	906.6730	906.6738	1.6743e8	0.7638	-8.2831e-4
6	1254.9250	1254.9160	2.4100e7	0.7104	9.0009e-3
7	1545.1340	1545.1314	6.7600e6	0.6758	2.5866e-3
8	1952.4270	1952.4259	1.7440e7	0.7572	1.0770e-3

State Parameter Editor

Ion Source:	Turbo Spray
Ion Source Temperature Reached	
Curtain Gas (CUR):	10.0
IonSpray Voltage (IS):	5500.0
Temperature (TEM):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Entrance Potential (EP):	10.0
Q1 Resolution:	Unit
Ion Energy 1 (IE1):	1.2
CEM (CEM):	1800.0

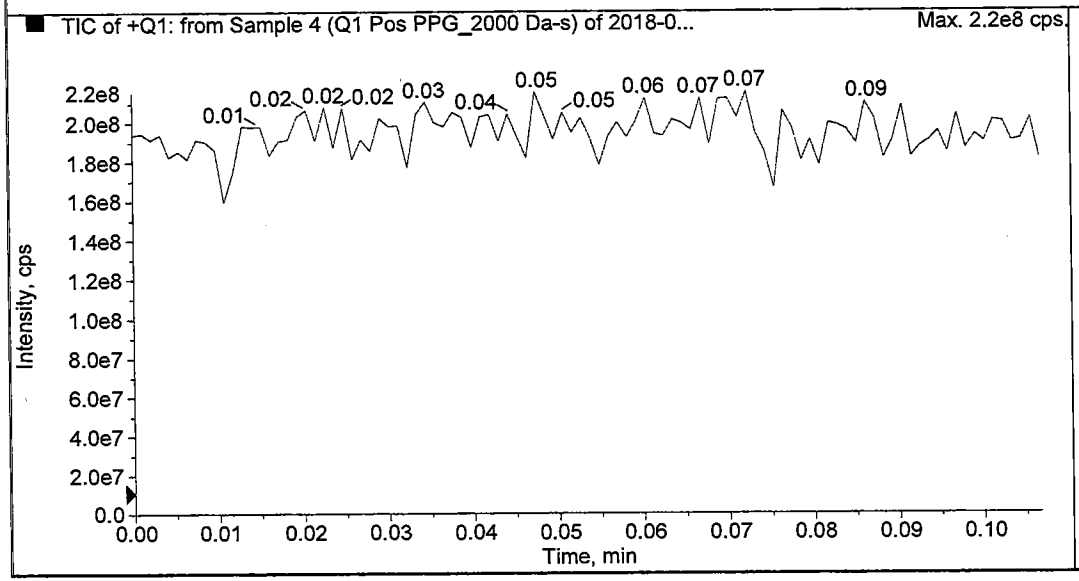
Mass Spectrometer Method Properties

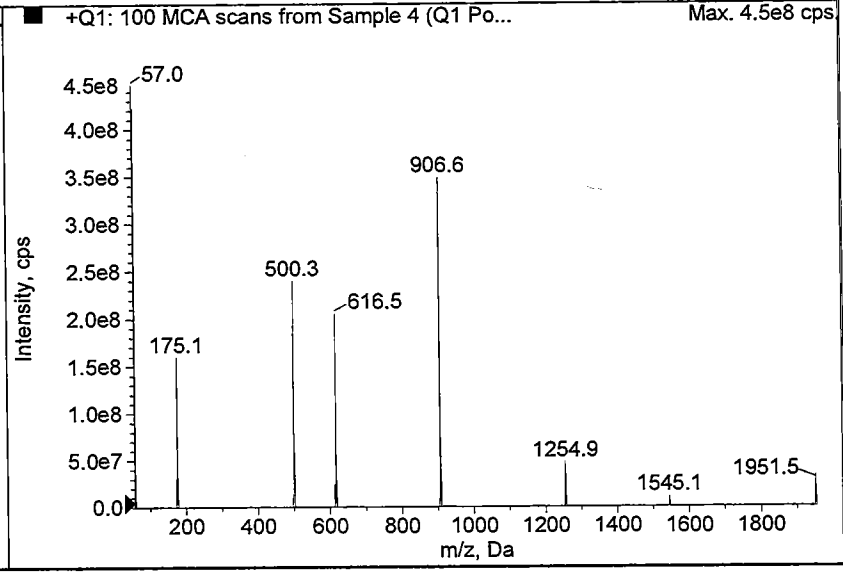
Period 1:

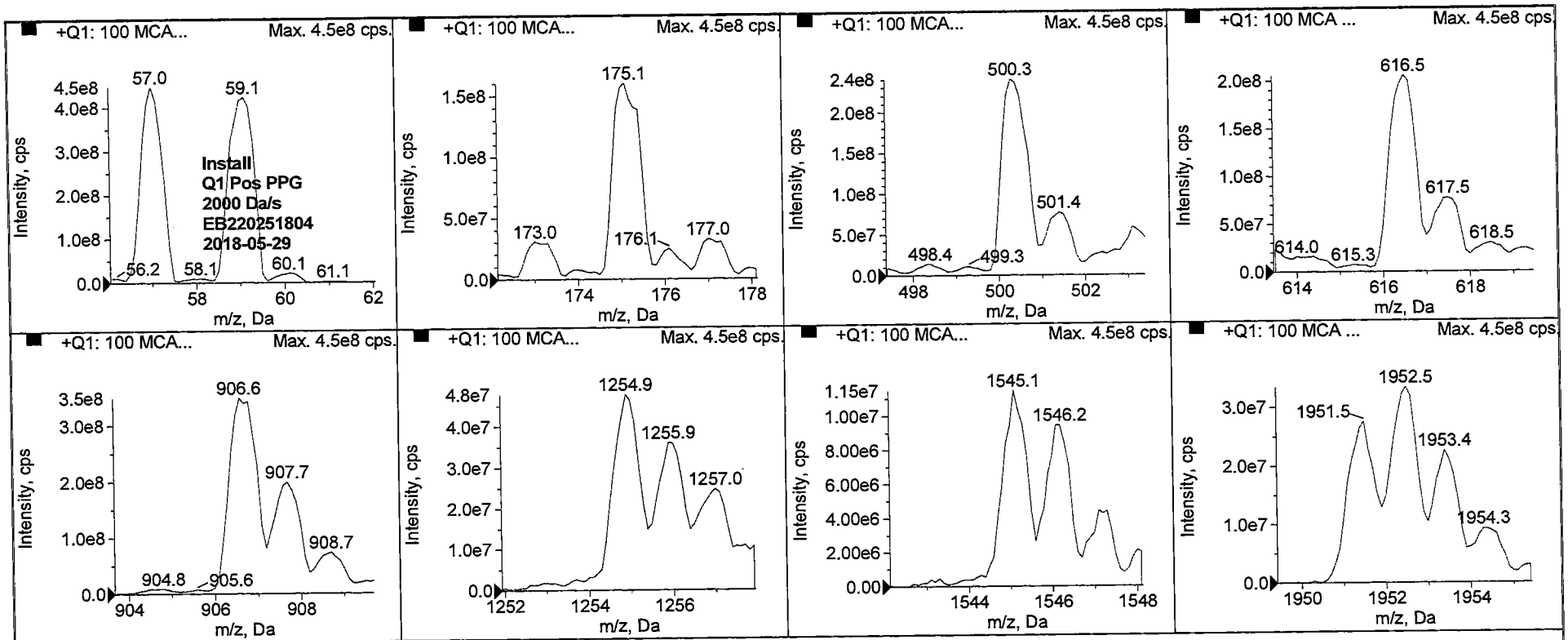
Scans in Period:	100
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

Period 1 Experiment 1:

Scan Type:	Q1 MS (Q1)
Polarity:	Positive
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q1:	Unit







Peak List for " +Q1: 100 MCA scans from Sample 4 (Q1 Pos PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0541	4.2264e8	0.6747	-4.1197e-3
2	175.1330	175.1367	1.6034e8	0.7378	-3.7421e-3
3	500.3800	500.3744	2.4052e8	0.6995	5.5649e-3
4	616.4640	616.4767	2.0538e8	0.7070	-0.0127
5	906.6730	906.6844	3.4888e8	0.7414	-0.0114
6	1254.9250	1254.9130	4.7800e7	0.7332	0.0120
7	1545.1340	1545.1396	1.1460e7	0.6649	-5.5517e-3
8	1952.4270	1952.4475	3.3400e7	0.7743	-0.0205

State Parameter Editor

Ion Source:	Turbo Spray
Ion Source Temperature Reached	
Curtain Gas (CUR):	10.0
IonSpray Voltage (IS):	5500.0
Temperature (TEM):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Entrance Potential (EP):	10.0
Q3 Resolution:	Unit
Ion Energy 3 (IE3):	1.1
CEM (CEM):	1800.0

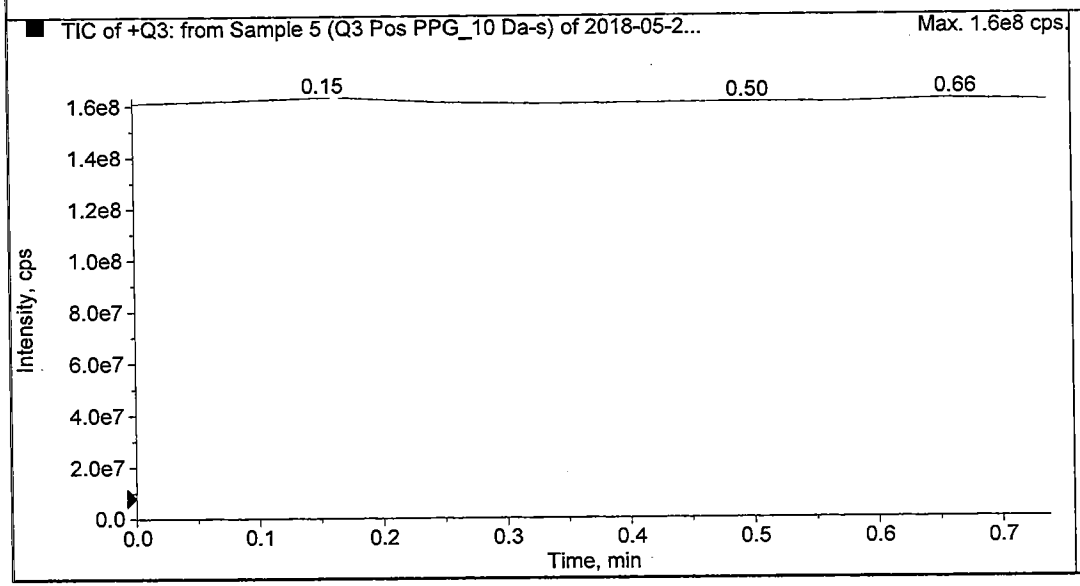
Mass Spectrometer Method Properties

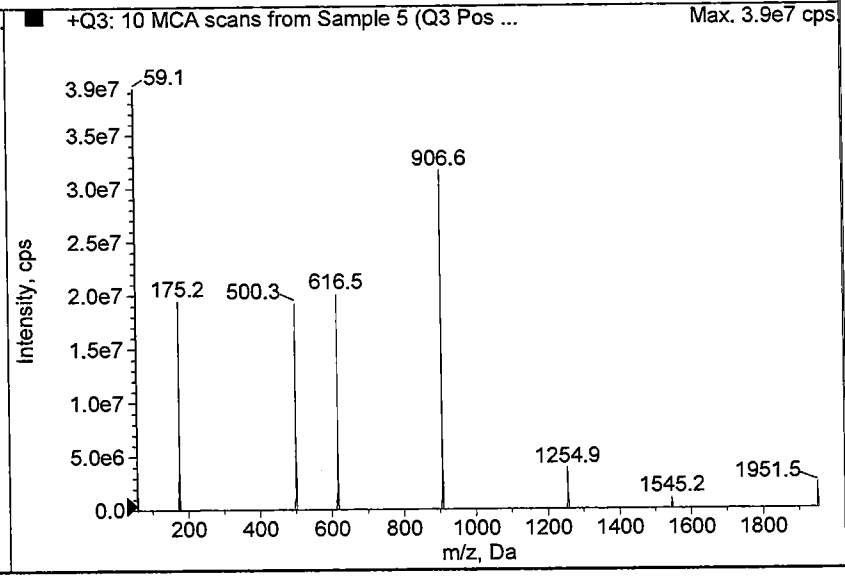
Period 1:

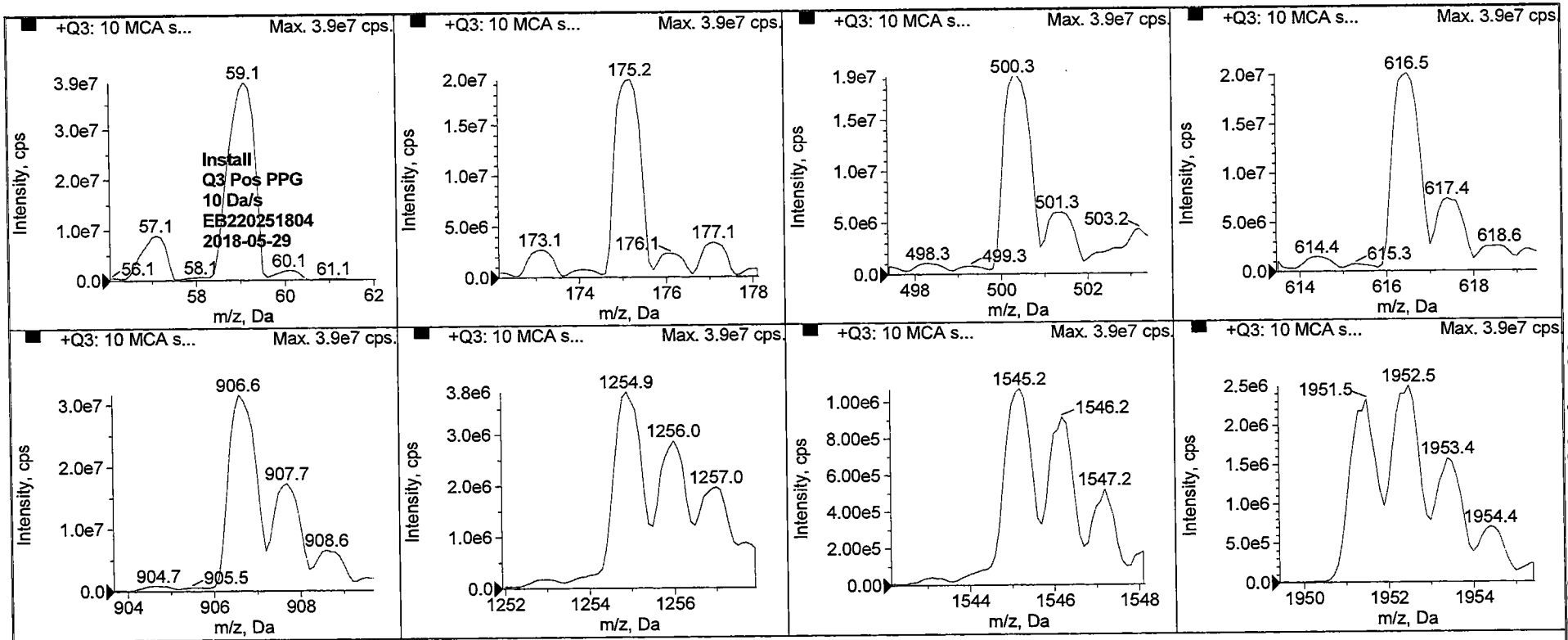
Scans in Period:	10
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

Period 1 Experiment 1:

Scan Type:	Q3 MS (Q3)
Polarity:	Positive
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q3:	Unit







Peak List for "+Q3: 10 MCA scans from Sample 5 (Q3 Pos PPG_10 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0600	3.9407e7	0.7175	-9.9728e-3
2	175.1330	175.1331	1.9501e7	0.6916	-1.2286e-4
3	500.3800	500.3823	1.9253e7	0.7278	-2.2612e-3
4	616.4640	616.4685	2.0128e7	0.7214	-4.5095e-3
5	906.6730	906.6736	3.1634e7	0.7403	-6.1273e-4
6	1254.9250	1254.9230	3.8338e6	0.7464	2.0449e-3
7	1545.1340	1545.1599	1.0717e6	0.7475	-0.0259
8	1952.4270	1952.4105	2.4968e6	0.7828	0.0165

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): 1.0

CEM (CEM): 1800.0

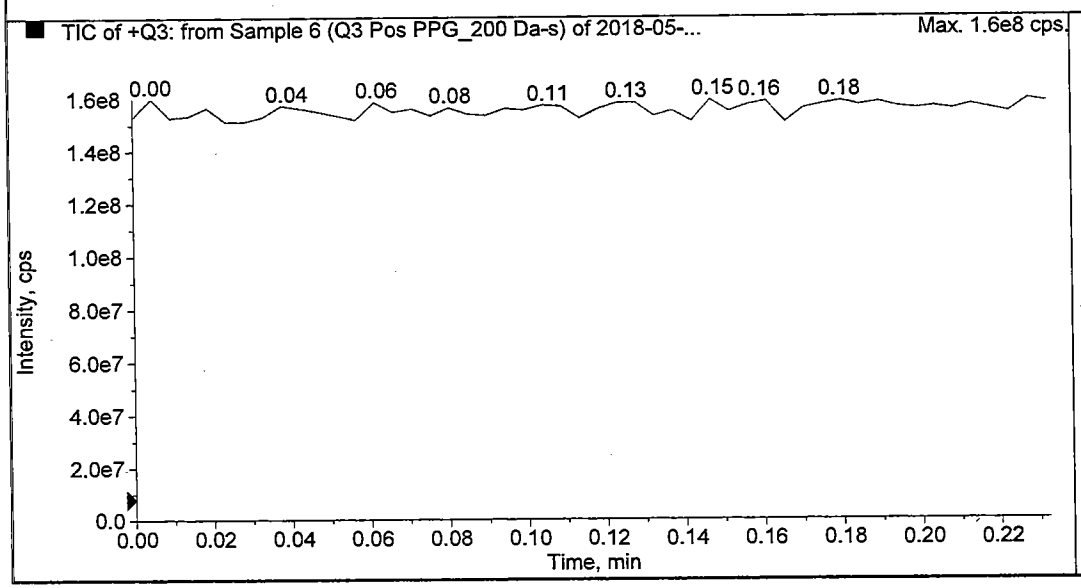
Mass Spectrometer Method Properties

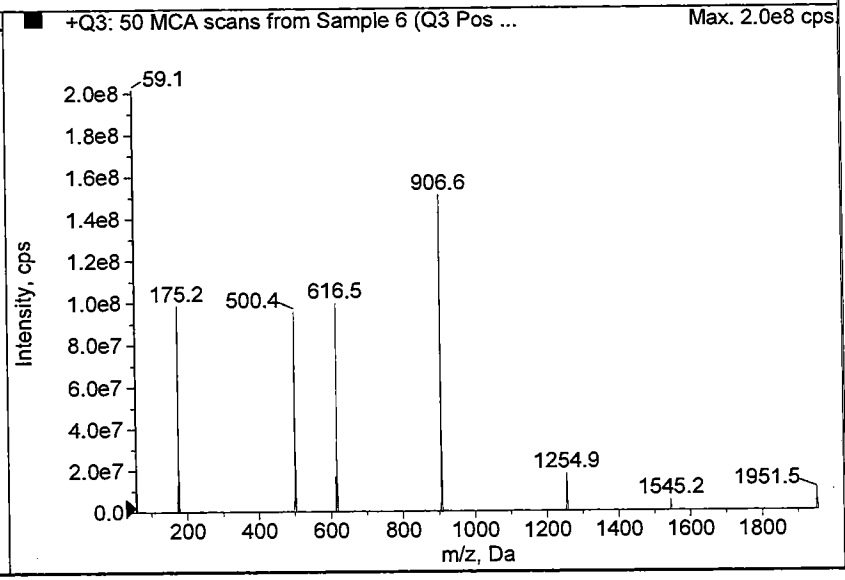
Period 1:

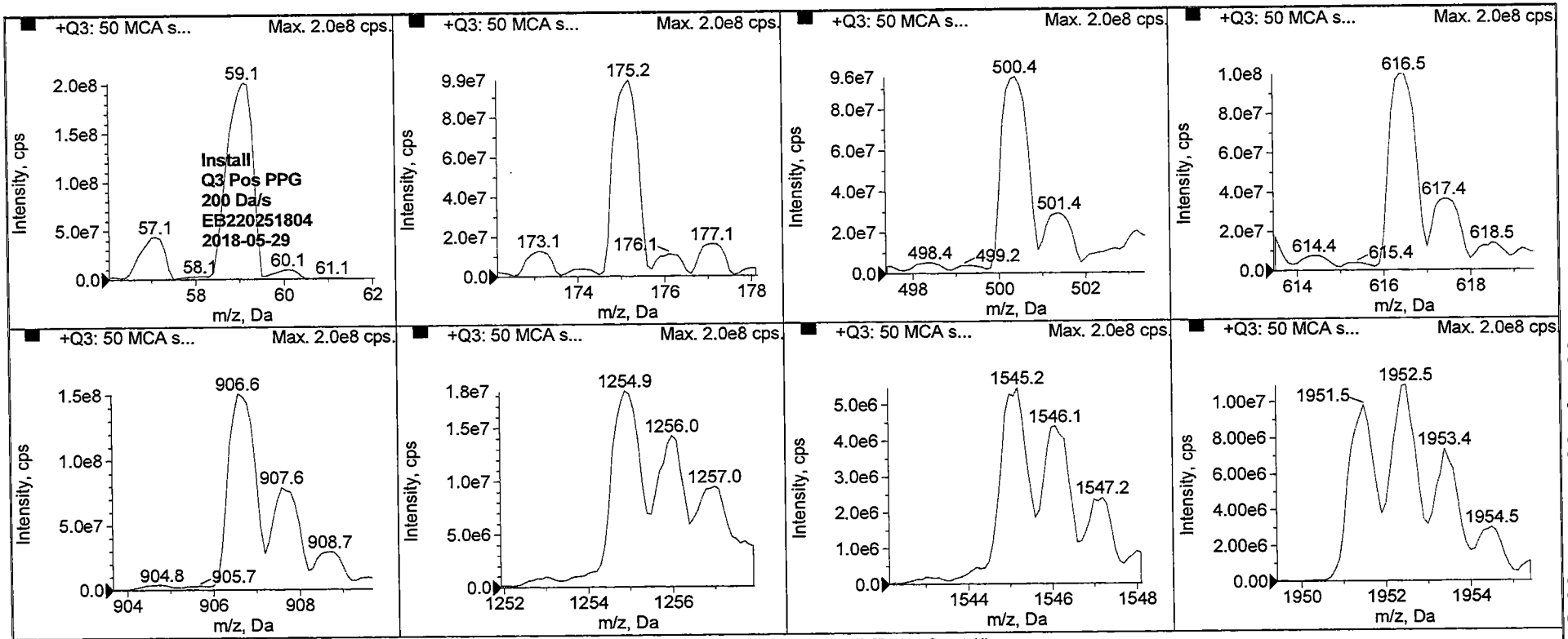
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for " +Q3: 50 MCA scans from Sample 6 (Q3 Pos PPG_200 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0535	2.0159e8	0.6898	-3.5186e-3
2	175.1330	175.1234	9.8734e7	0.6779	9.5931e-3
3	500.3800	500.3781	9.5670e7	0.7134	1.9254e-3
4	616.4640	616.4537	9.9852e7	0.7073	0.0103
5	906.6730	906.6796	1.5094e8	0.7211	-6.5779e-3
6	1254.9250	1254.9165	1.8432e7	0.7818	8.4504e-3
7	1545.1340	1545.1060	5.4540e6	0.7324	0.0280
8	1952.4270	1952.4363	1.0900e7	0.7220	-9.3366e-3

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): 1.0

CEM (CEM): 1800.0

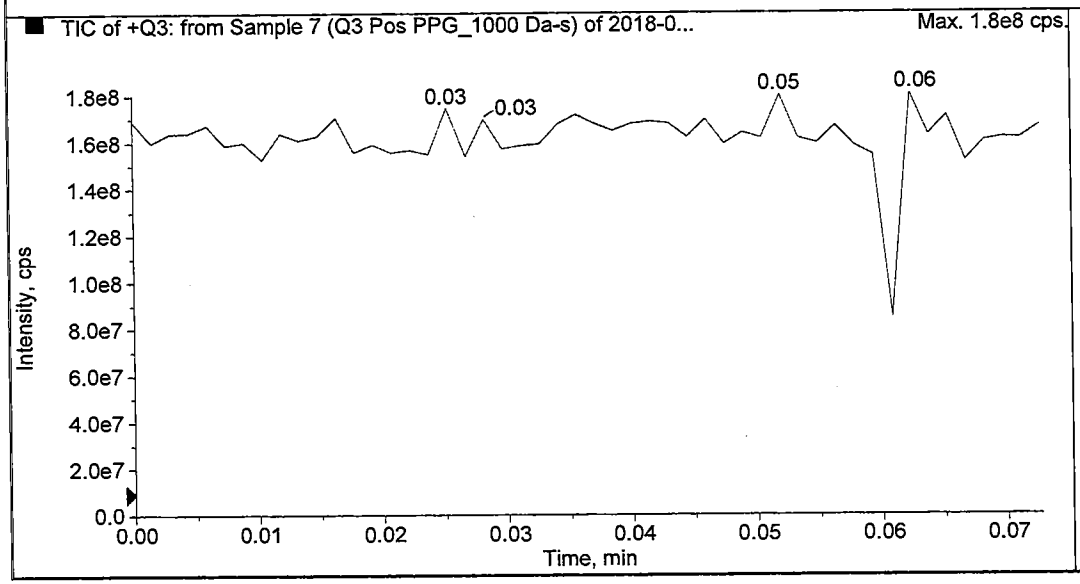
Mass Spectrometer Method Properties

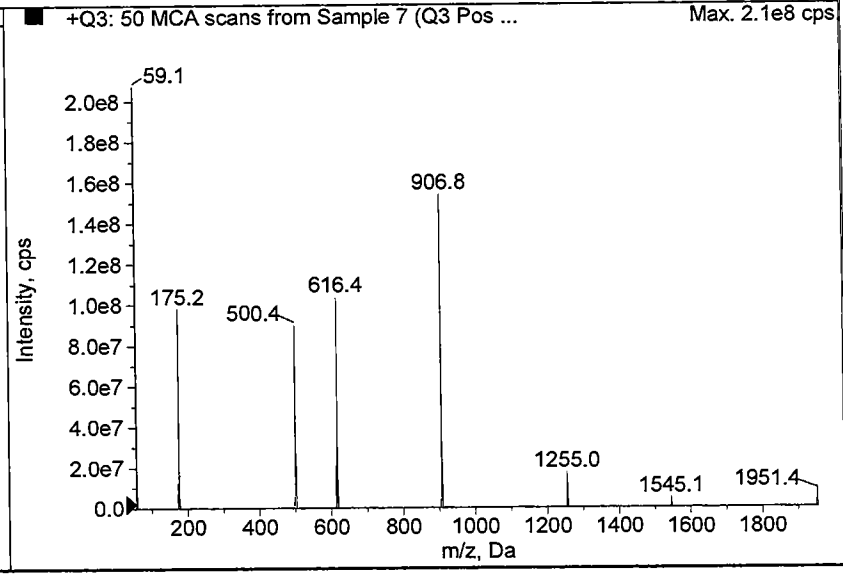
Period 1:

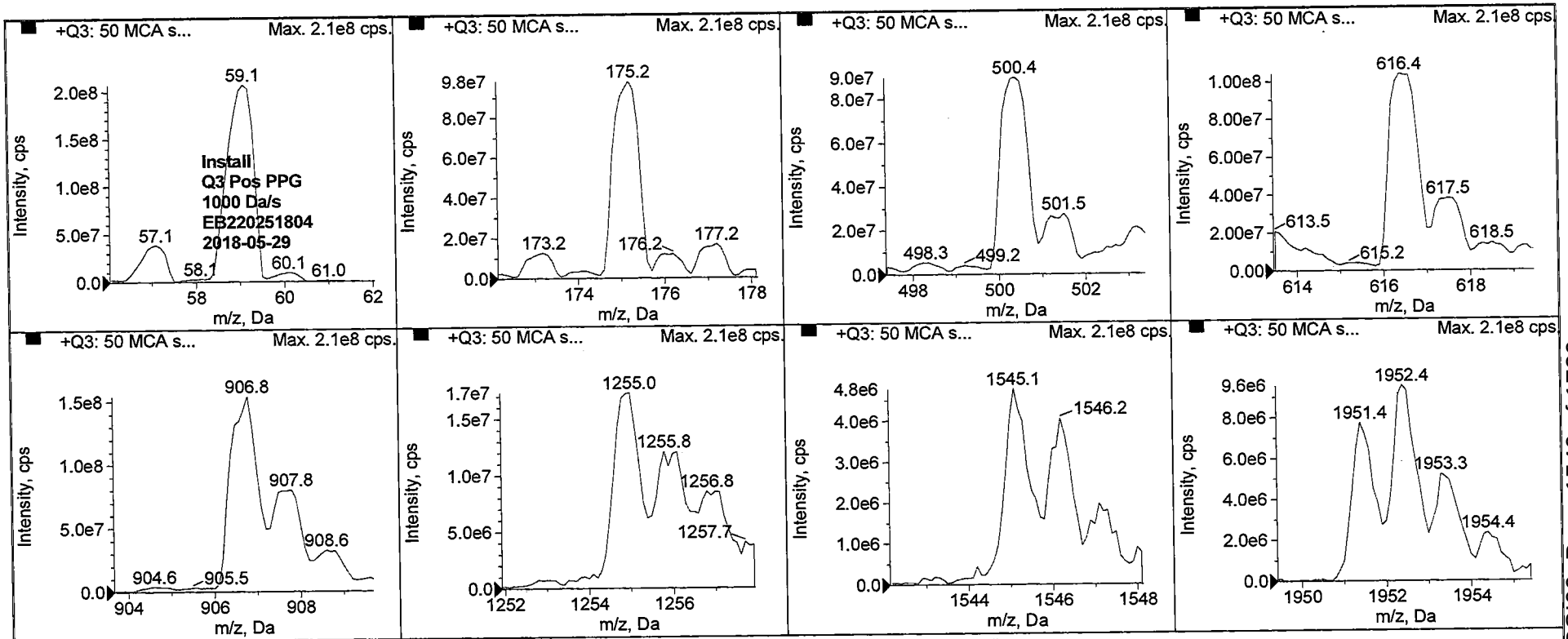
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for " +Q3: 50 MCA scans from Sample 7 (Q3 Pos PPG_1000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0525	2.0725e8	0.7070	-2.4950e-3
2	175.1330	175.1317	9.8190e7	0.6991	1.2969e-3
3	500.3800	500.3731	8.9990e7	0.7222	6.9400e-3
4	616.4640	616.4761	1.0393e8	0.7599	-0.0121
5	906.6730	906.6936	1.5407e8	0.7541	-0.0206
6	1254.9250	1254.9120	1.7310e7	0.7068	0.0130
7	1545.1340	1545.1453	4.7800e6	0.6227	-0.0113
8	1952.4270	1952.4249	9.5700e6	0.6631	2.0854e-3

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): 10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): 1.2

CEM (CEM): 1800.0

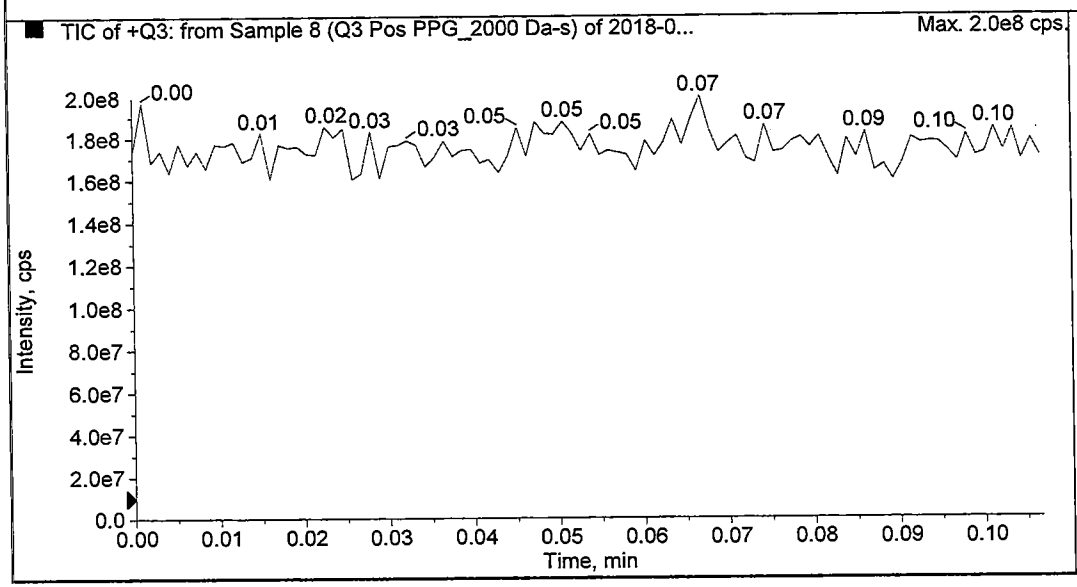
Mass Spectrometer Method Properties

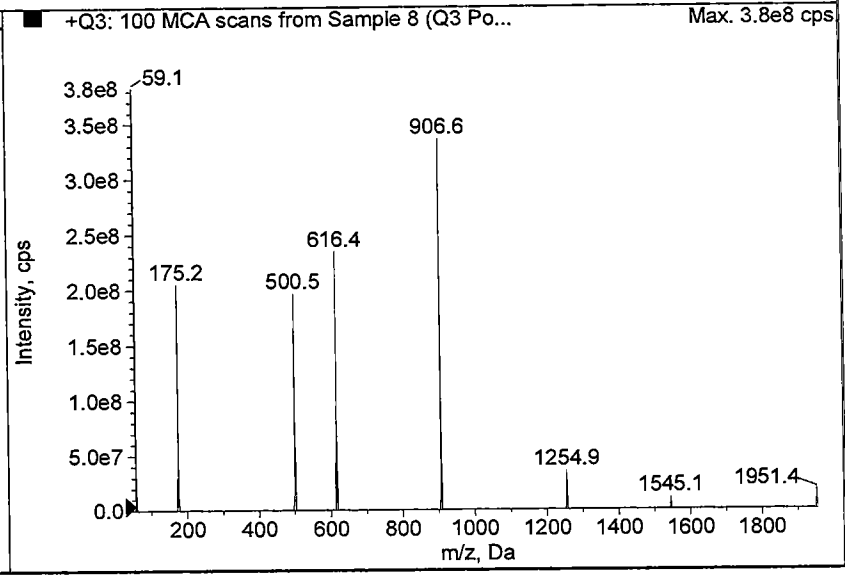
Period 1:

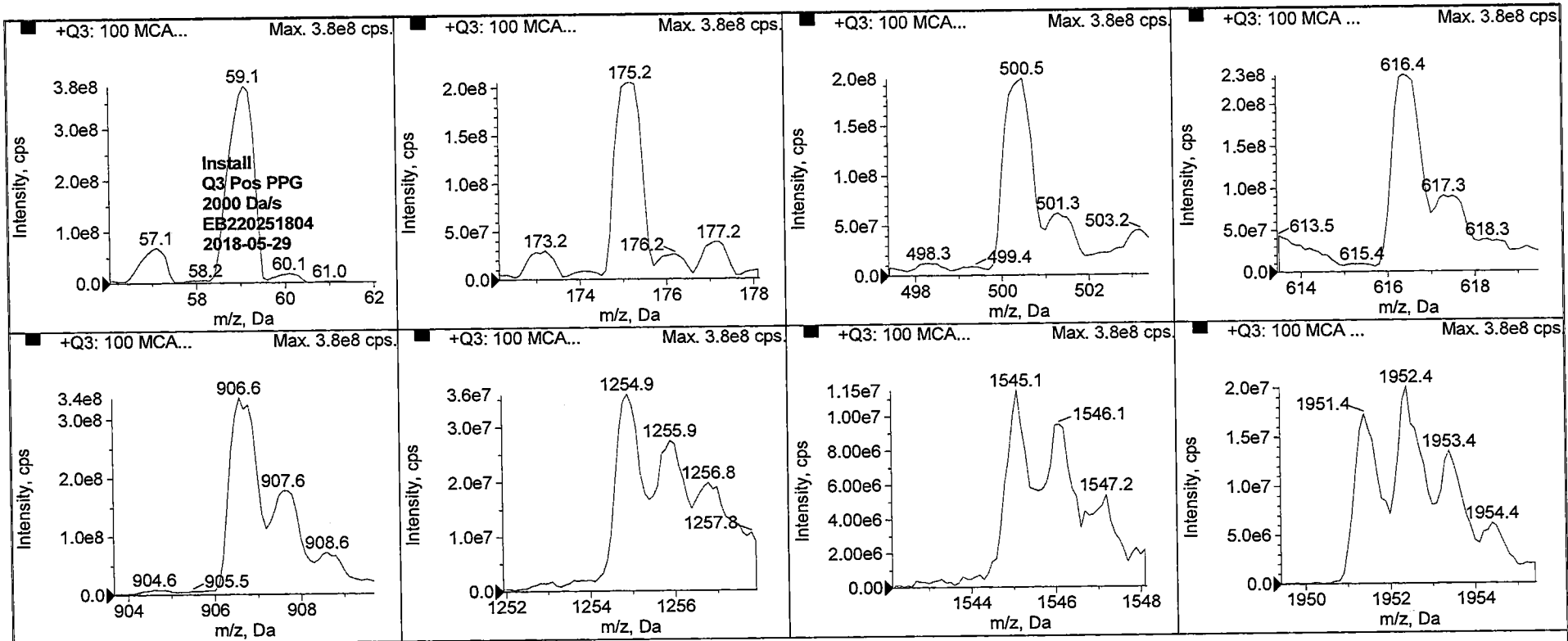
Scans in Period: 100
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for " +Q3: 100 MCA scans from Sample 8 (Q3 Pos PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	59.0500	59.0613	3.8304e8	0.6857	-0.0113
2	175.1330	175.1384	2.0544e8	0.7196	-5.4303e-3
3	500.3800	500.3896	1.9692e8	0.7603	-9.6113e-3
4	616.4640	616.4545	2.3484e8	0.7563	9.5275e-3
5	906.6730	906.6804	3.3638e8	0.7428	-7.4202e-3
6	1254.9250	1254.9055	3.5980e7	0.7182	0.0195
7	1545.1340	1545.0988	1.1500e7	0.6834	0.0352
8	1952.4270	1952.4546	2.0100e7	0.7640	-0.0276

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): -1.0

CEM (CEM): 1900.0

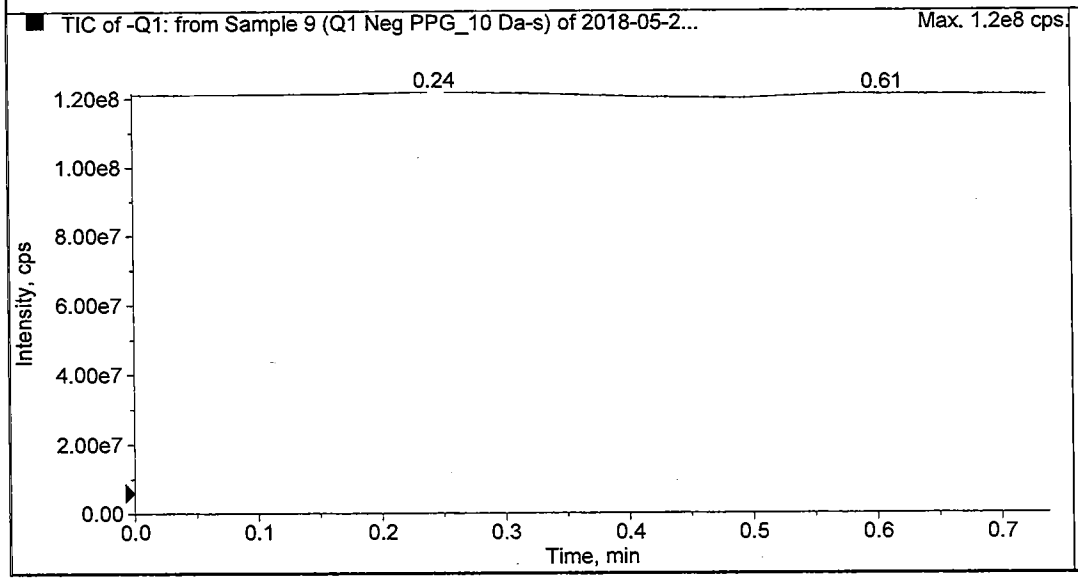
Mass Spectrometer Method Properties

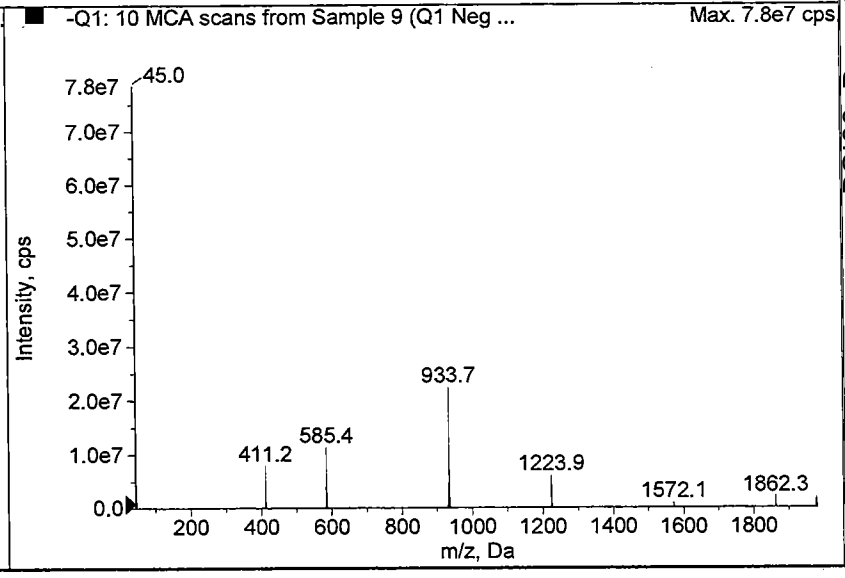
Period 1:

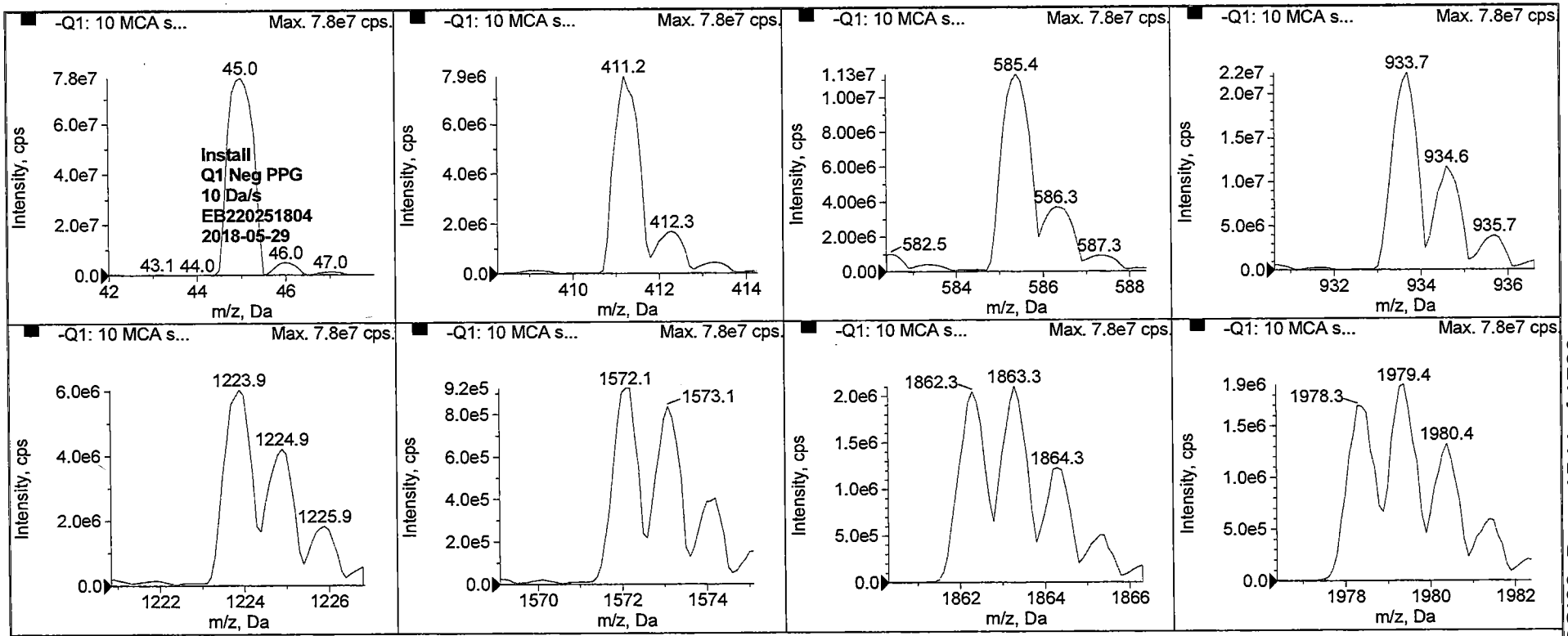
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for "-Q1: 10 MCA scans from Sample 9 (Q1 Neg PPG_10 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9947	7.8484e7	0.6977	3.3302e-3
2	411.2590	411.2640	7.9184e6	0.7009	-4.9843e-3
3	585.3850	585.3944	1.1318e7	0.7674	-9.3834e-3
4	933.6360	933.6513	2.2378e7	0.6638	-0.0153
5	1223.8450	1223.8605	6.0413e6	0.7621	-0.0155
6	1572.0970	1572.0967	9.2320e5	0.6727	2.8078e-4
7	1863.3060	1863.2949	2.1046e6	0.7369	0.0111
8	1979.3890	1979.3655	1.8985e6	0.7323	0.0235

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): -1.0

CEM (CEM): 1900.0

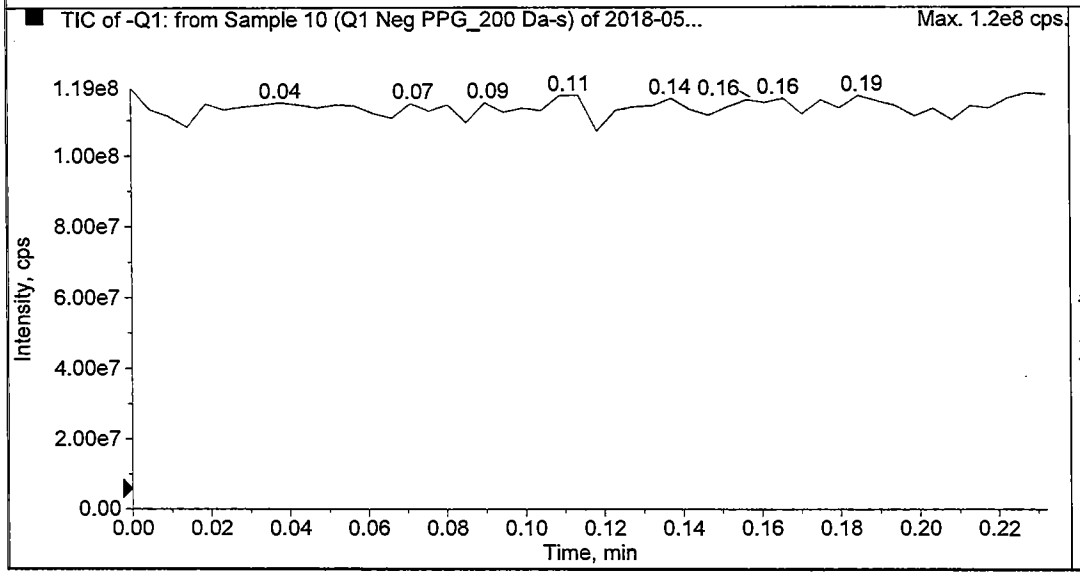
Mass Spectrometer Method Properties

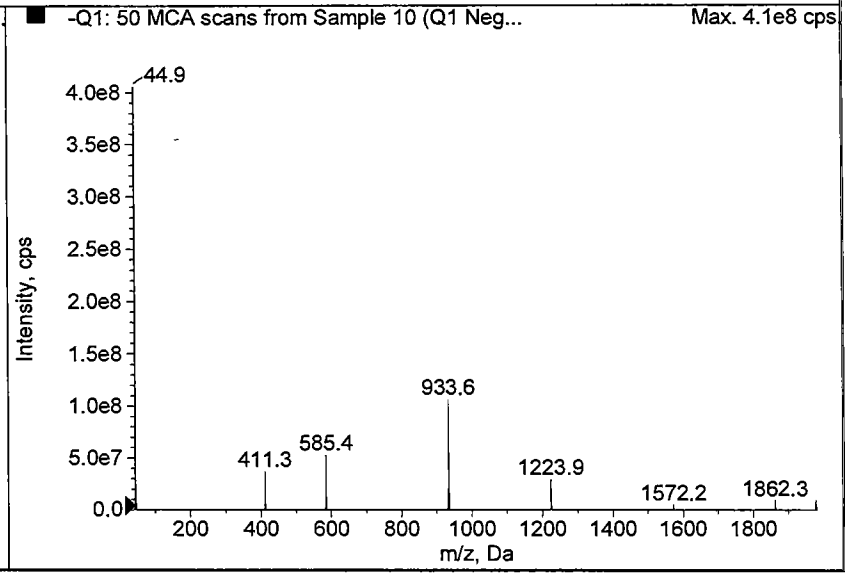
Period 1:

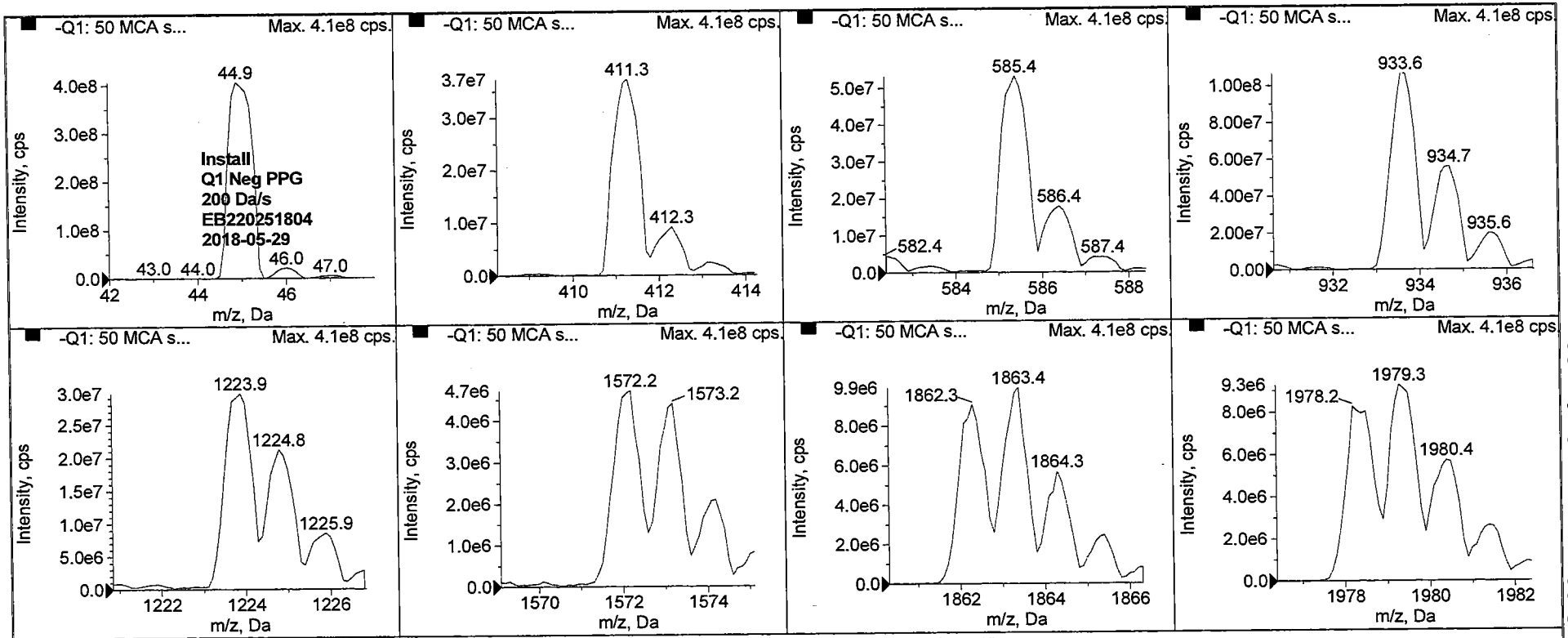
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for "-Q1: 50 MCA scans from Sample 10 (Q1 Neg PPG_200 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9900	4.0582e8	0.6493	8.0001e-3
2	411.2590	411.2621	3.7274e7	0.7276	-3.1008e-3
3	585.3850	585.3787	5.3084e7	0.7168	6.3372e-3
4	933.6360	933.6551	1.0649e8	0.6450	-0.0191
5	1223.8450	1223.8398	2.9712e7	0.7456	5.1659e-3
6	1572.0970	1572.1026	4.7160e6	0.7330	-5.5764e-3
7	1863.3060	1863.3085	9.9060e6	0.6832	-2.5396e-3
8	1979.3890	1979.3715	9.2680e6	0.7385	0.0175

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): -1.0

CEM (CEM): 1900.0

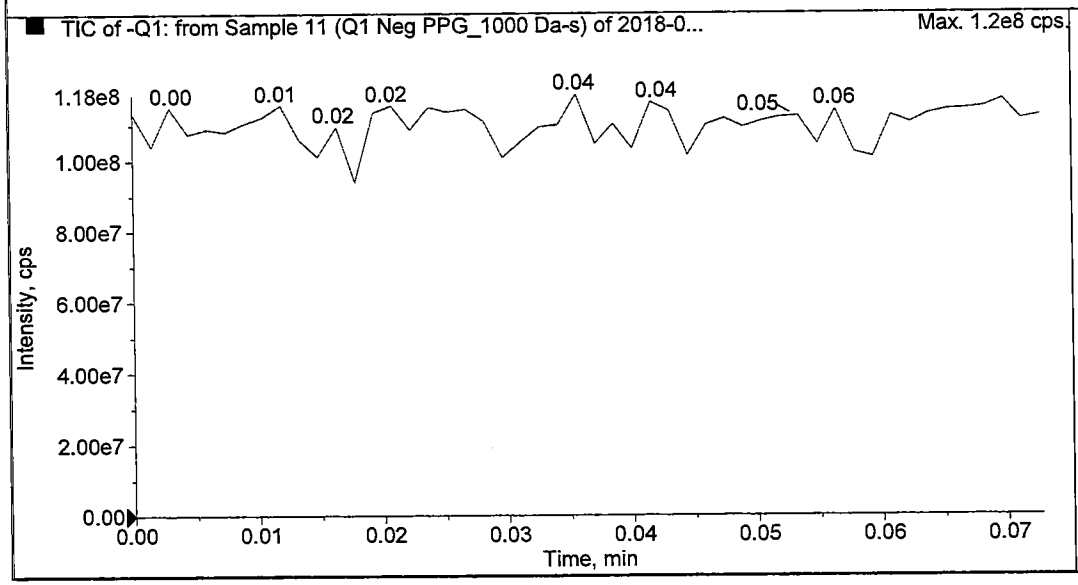
Mass Spectrometer Method Properties

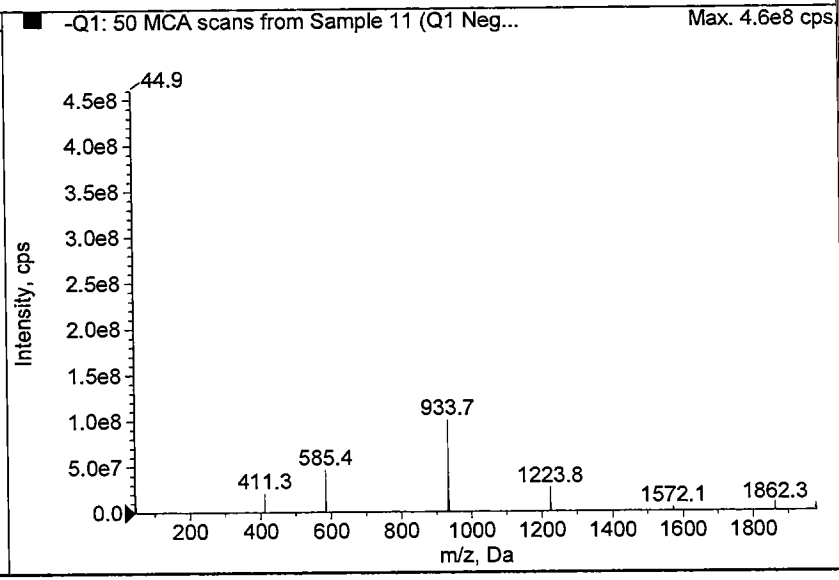
Period 1:

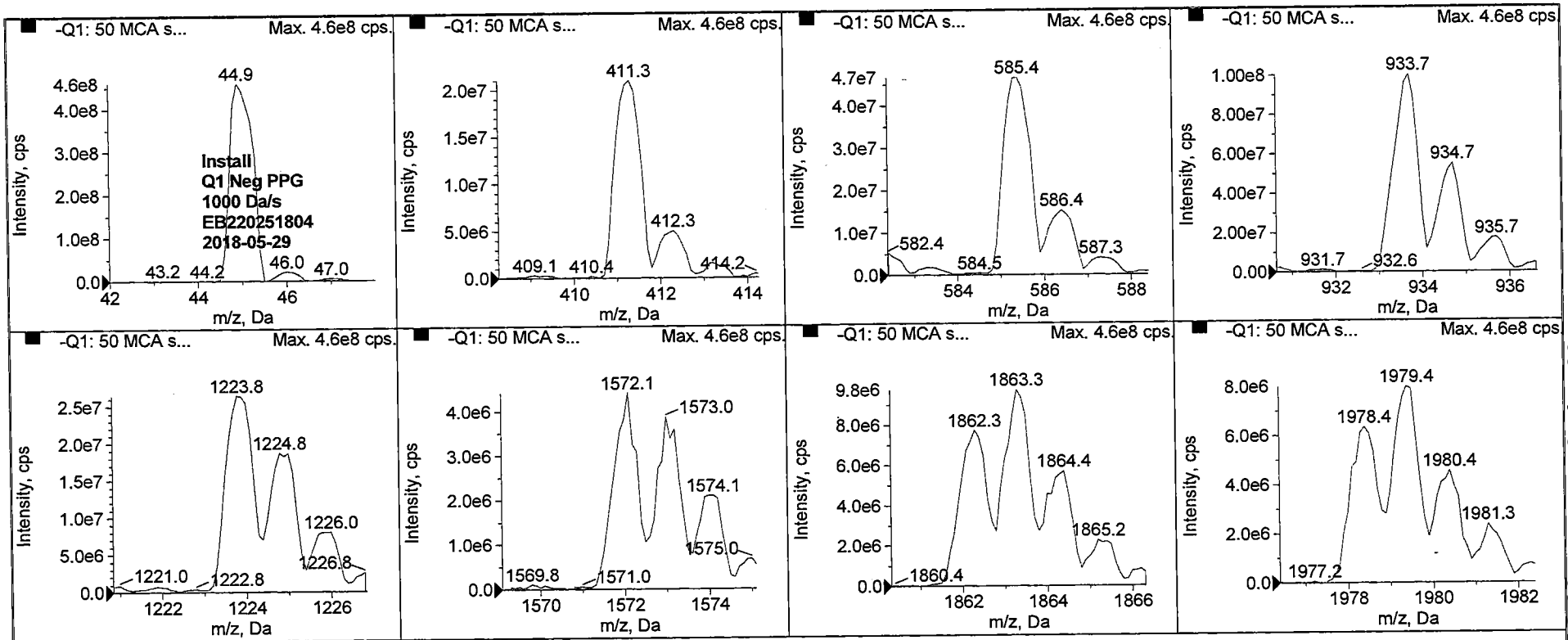
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for "-Q1: 50 MCA scans from Sample 11 (Q1 Neg PPG_1000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	45.0048	4.6001e8	0.6178	-6.8036e-3
2	411.2590	411.2622	2.1000e7	0.6966	-3.2270e-3
3	585.3850	585.3835	4.6680e7	0.7152	1.4984e-3
4	933.6360	933.6542	1.0040e8	0.6380	-0.0182
5	1223.8450	1223.8506	2.6440e7	0.7474	-5.6084e-3
6	1572.0970	1572.0547	4.4200e6	0.6569	0.0423
7	1863.3060	1863.3097	9.7600e6	0.7294	-3.6879e-3
8	1979.3890	1979.3736	7.9900e6	0.7077	0.0154

State Parameter Editor

Ion Source:	Turbo Spray
Ion Source Temperature Reached	
Curtain Gas (CUR):	10.0
IonSpray Voltage (IS):	-4500.0
Temperature (TEM):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Entrance Potential (EP):	-10.0
Q1 Resolution:	Unit
Ion Energy 1 (IE1):	-1.0
CEM (CEM):	1900.0

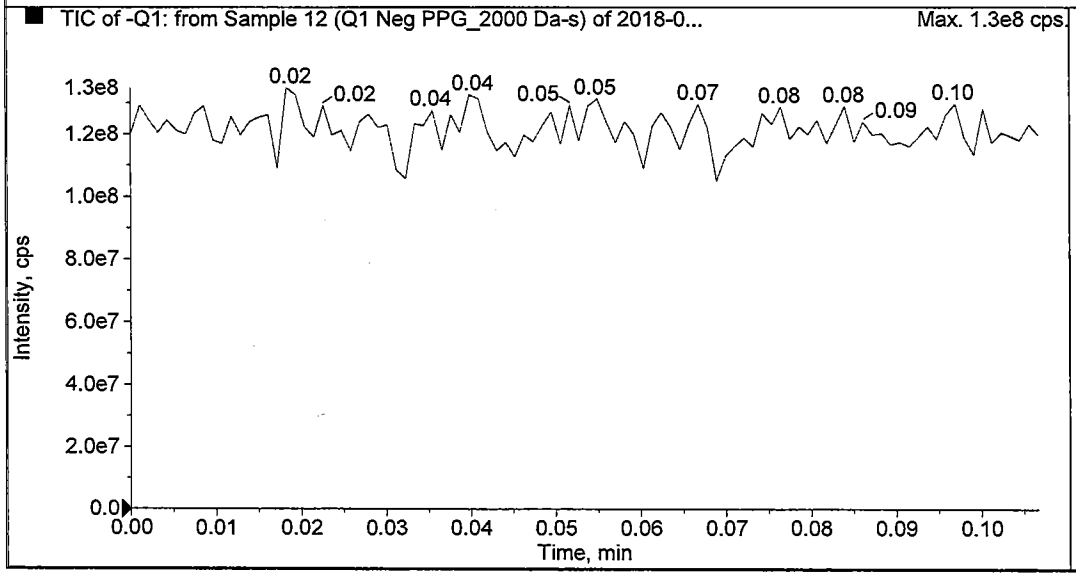
Mass Spectrometer Method Properties

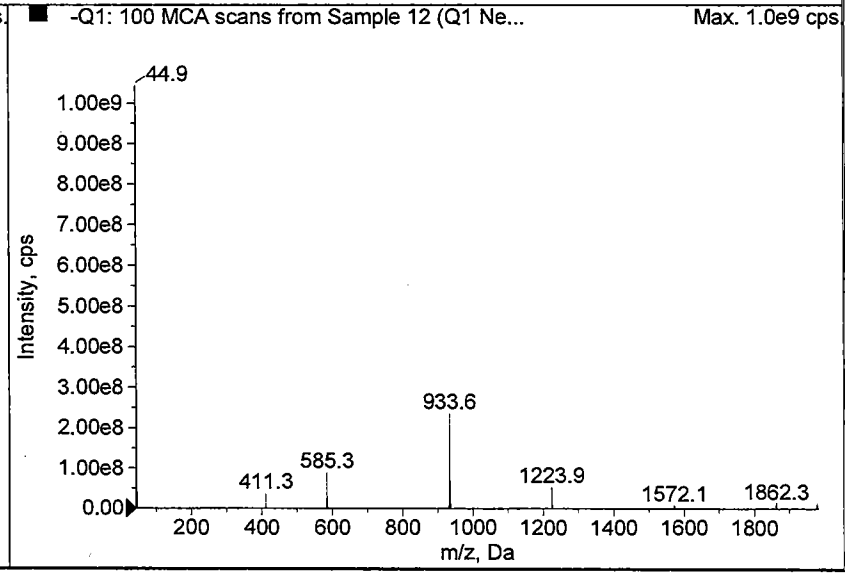
Period 1:

Scans in Period:	100
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

Period 1 Experiment 1:

Scan Type:	Q1 MS (Q1)
Polarity:	Negative
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q1:	Unit





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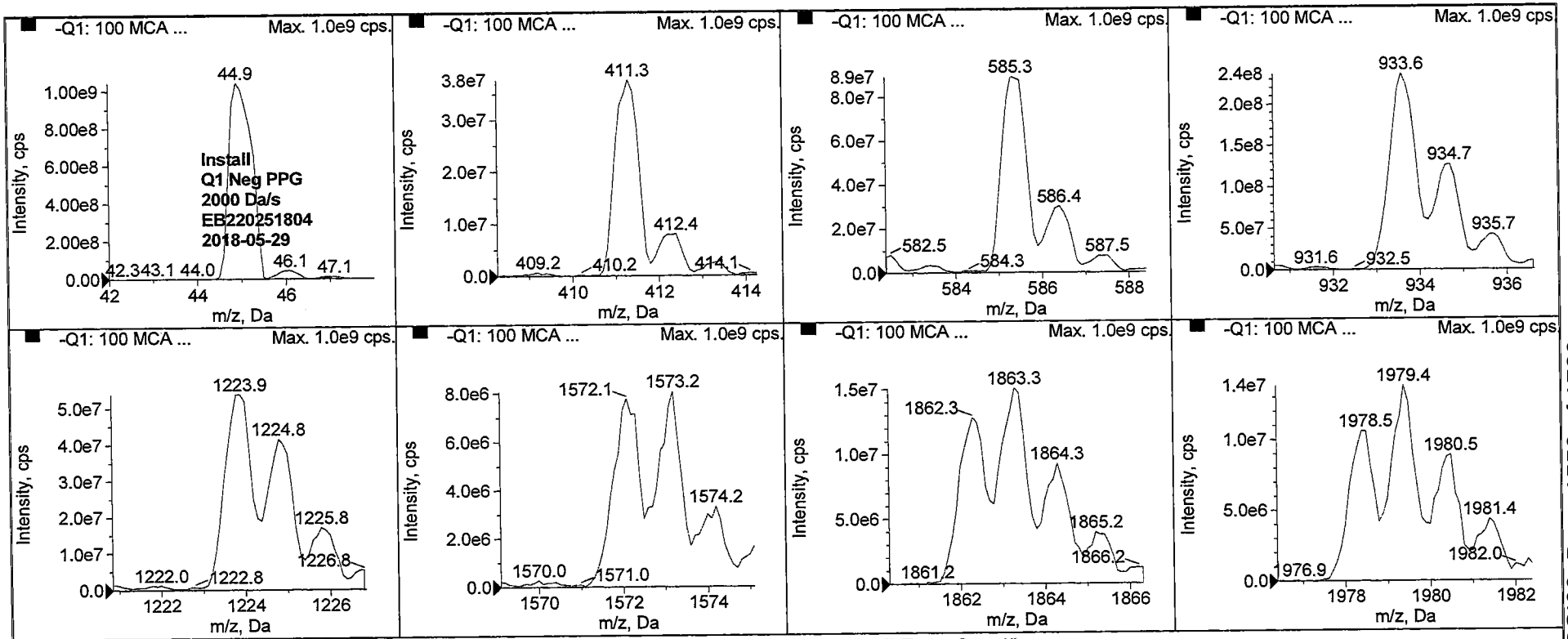


Peak List for "-Q1: 100 MCA scans from Sample 12 (Q1 Neg PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9988	1.0432e9	0.6290	-7.8776e-4
2	411.2590	411.2681	3.7700e7	0.6335	-9.0706e-3
3	585.3850	585.3670	8.9260e7	0.6465	0.0180
4	933.6360	933.6310	2.3632e8	0.6639	4.9633e-3
5	1223.8450	1223.8469	5.3740e7	0.7138	-1.8551e-3
6	1572.0970	1572.1139	7.7800e6	0.7223	-0.0169
7	1863.3060	1863.2638	1.5060e7	0.7553	0.0422
8	1979.3890	1979.3750	1.3800e7	0.6556	0.0140

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): -1.5

CEM (CEM): 1900.0

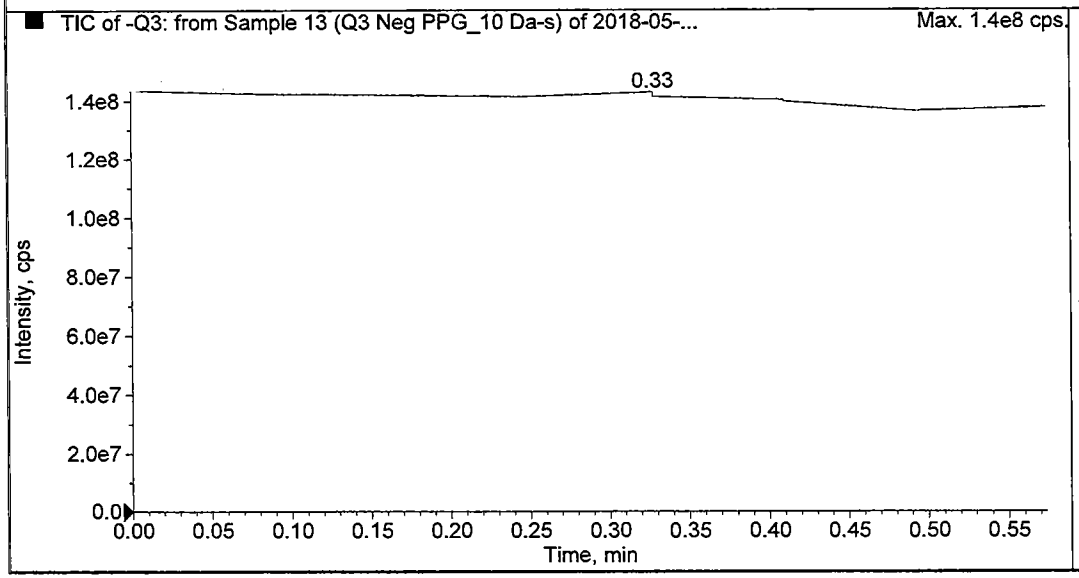
Mass Spectrometer Method Properties

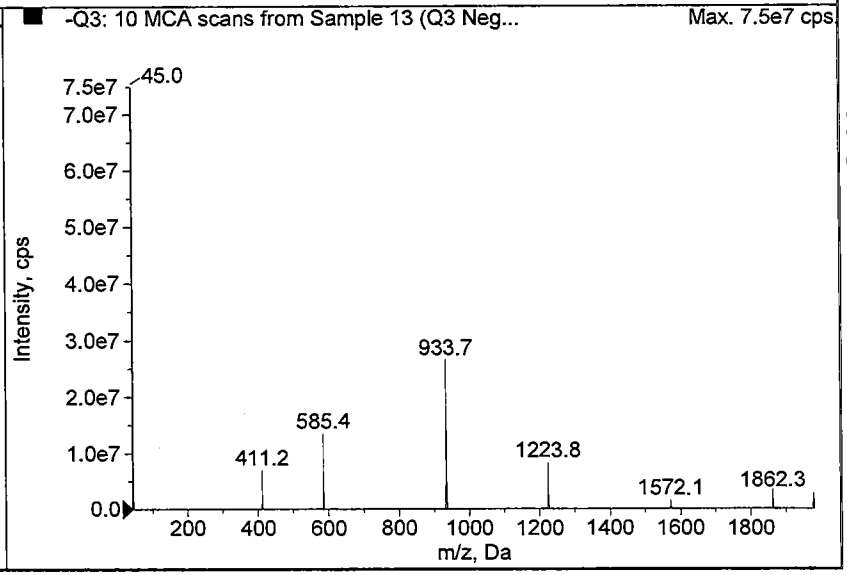
Period 1:

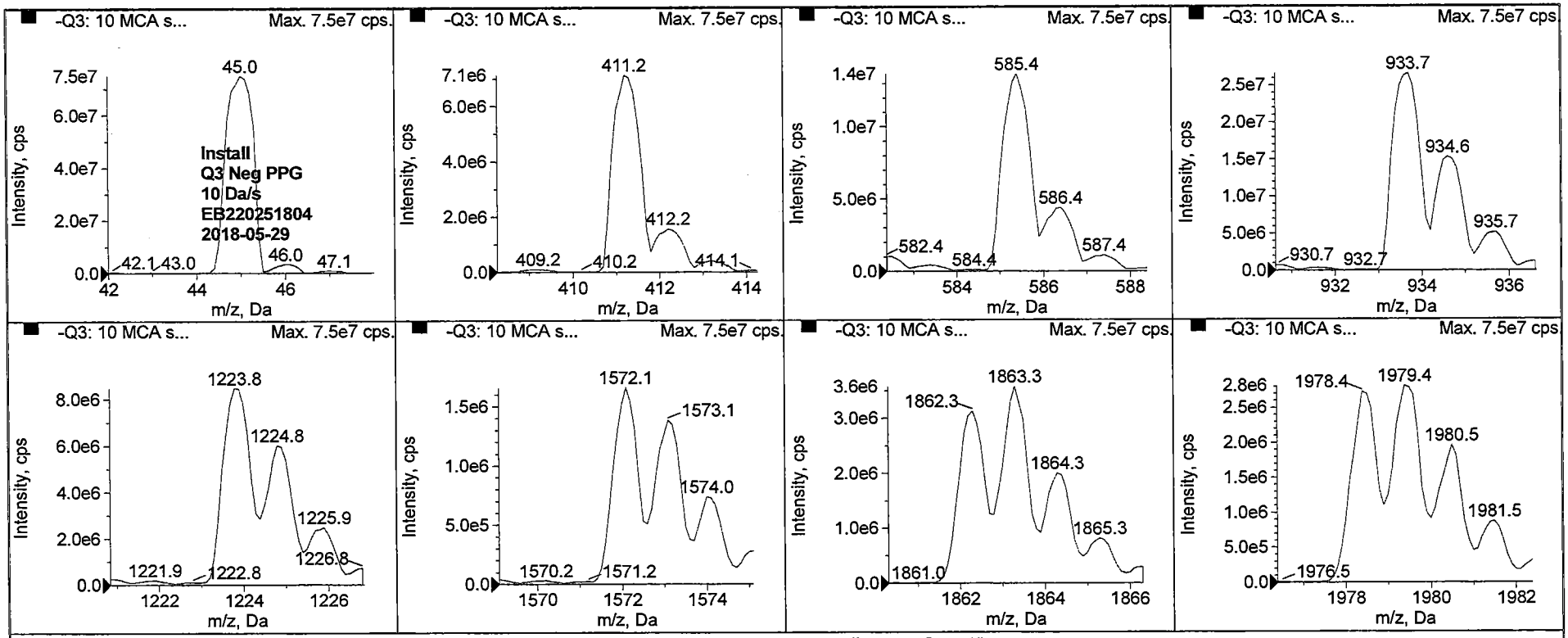
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for "-Q3: 10 MCA scans from Sample 13 (Q3 Neg PPG_10 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9972	7.5007e7	0.7320	7.7711e-4
2	411.2590	411.2344	7.1361e6	0.7370	0.0246
3	585.3850	585.3868	1.3657e7	0.7362	-1.8161e-3
4	933.6360	933.6384	2.6621e7	0.7288	-2.4244e-3
5	1223.8450	1223.8430	8.4746e6	0.7528	1.9856e-3
6	1572.0970	1572.0927	1.6606e6	0.6651	4.2840e-3
7	1863.3060	1863.3066	3.5734e6	0.7033	-6.4400e-4
8	1979.3890	1979.4384	2.8091e6	0.7513	-0.0494

State Parameter Editor

Ion Source:	Turbo Spray
Ion Source Temperature Reached	
Curtain Gas (CUR):	10.0
IonSpray Voltage (IS):	-4500.0
Temperature (TEM):	0.0
Ion Source Gas 1 (GS1):	17.0
Ion Source Gas 2 (GS2):	0.0
Entrance Potential (EP):	-10.0
Q3 Resolution:	Unit
Ion Energy 3 (IE3):	-1.5
CEM (CEM):	1900.0

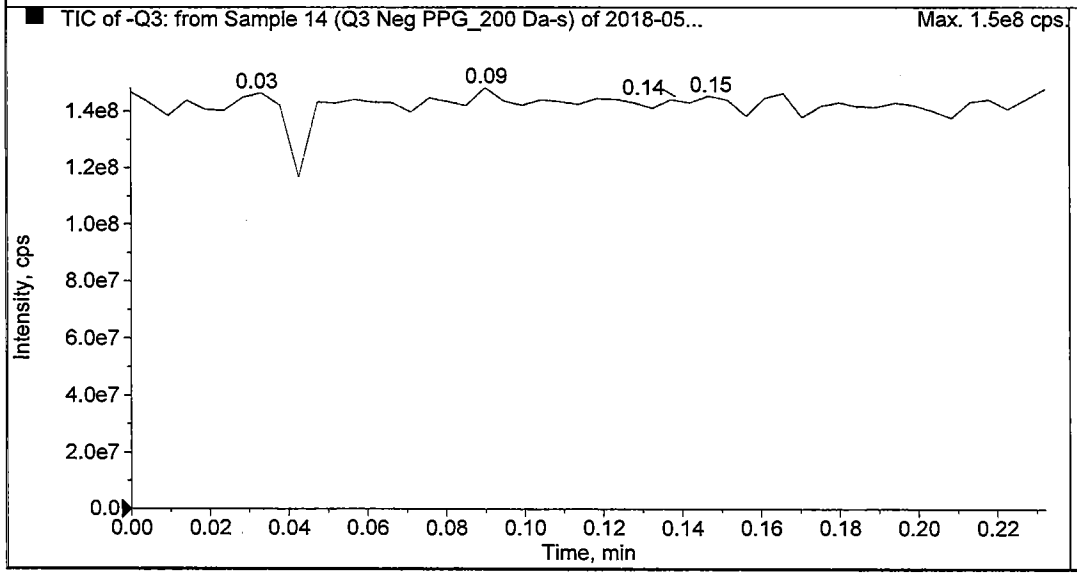
Mass Spectrometer Method Properties

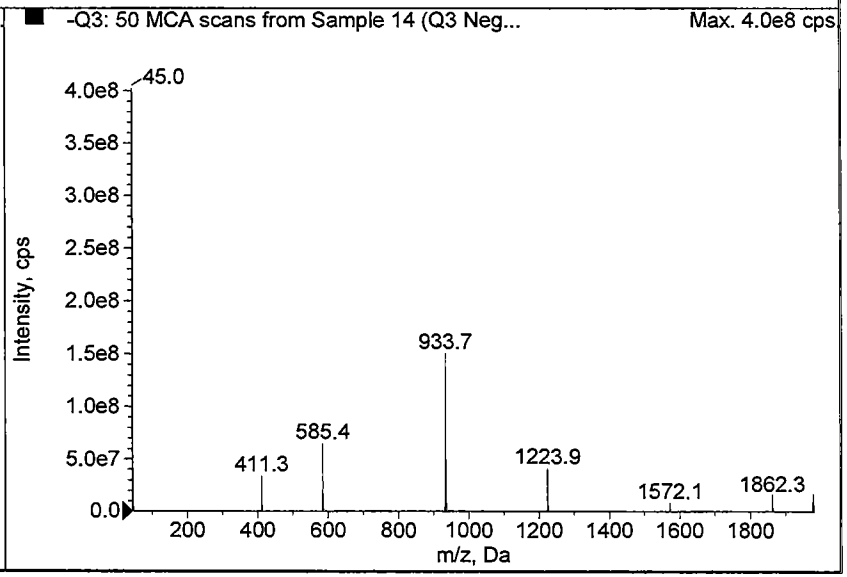
Period 1:

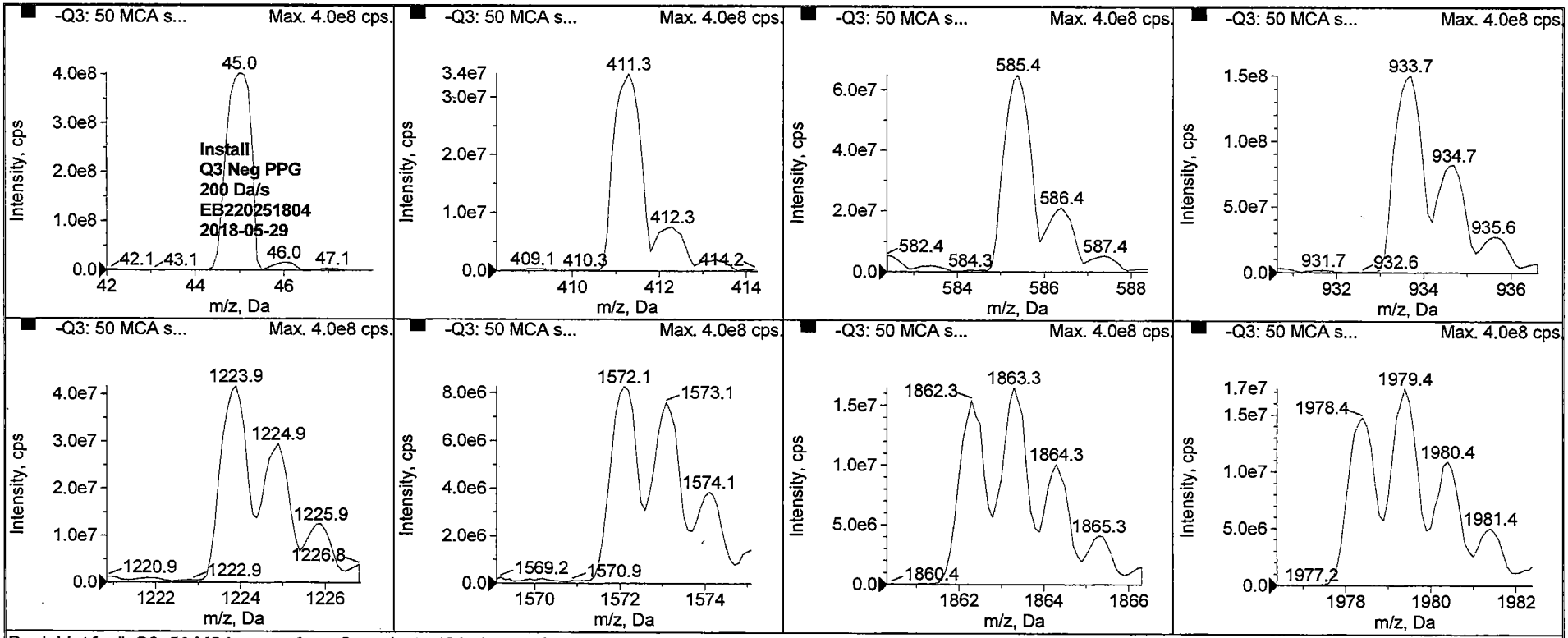
Scans in Period:	50
Relative Start Time:	0.00 msec
Scheduled Ionization:	Off
Experiments in Period:	1

Period 1 Experiment 1:

Scan Type:	Q3 MS (Q3)
Polarity:	Negative
Scan Mode:	Profile
Ion Source:	Turbo Spray
# Scans to Sum:	1
Resolution Q3:	Unit







Peak List for "-Q3: 50 MCA scans from Sample 14 (Q3 Neg PPG_200 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9962	4.0241e8	0.6638	1.8369e-3
2	411.2590	411.2556	3.4052e7	0.7417	3.4492e-3
3	585.3850	585.3842	6.5036e7	0.7136	7.7195e-4
4	933.6360	933.6363	1.5056e8	0.7374	-3.0811e-4
5	1223.8450	1223.8530	4.1810e7	0.7279	-7.9656e-3
6	1572.0970	1572.1021	8.2680e6	0.7241	-5.0694e-3
7	1863.3060	1863.3199	1.6482e7	0.6755	-0.0139
8	1979.3890	1979.3879	1.7328e7	0.7116	1.1118e-3

Sate Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): -1.5

CEM (CEM): 1900.0

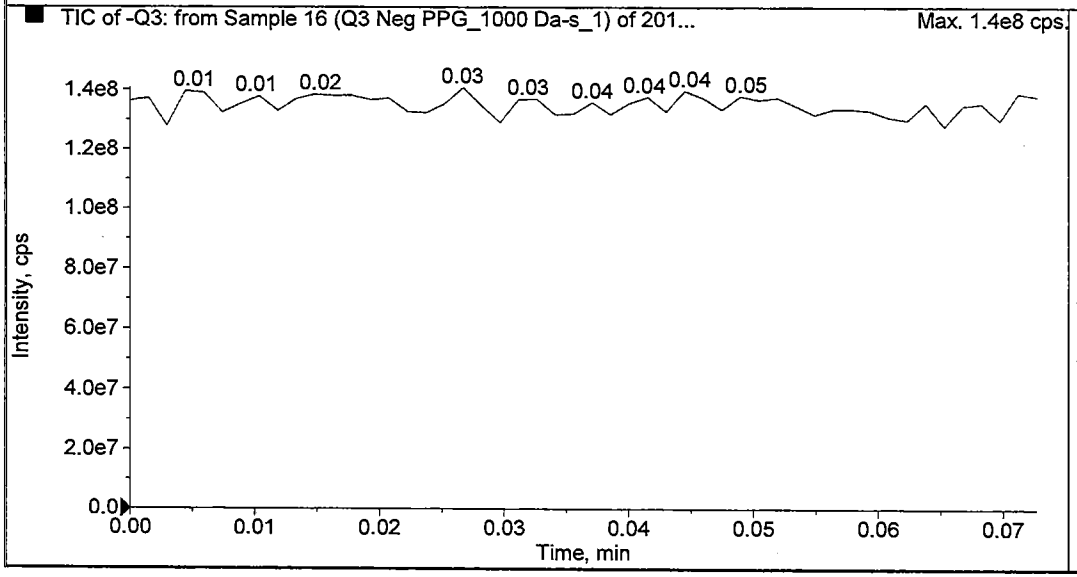
Mass Spectrometer Method Properties

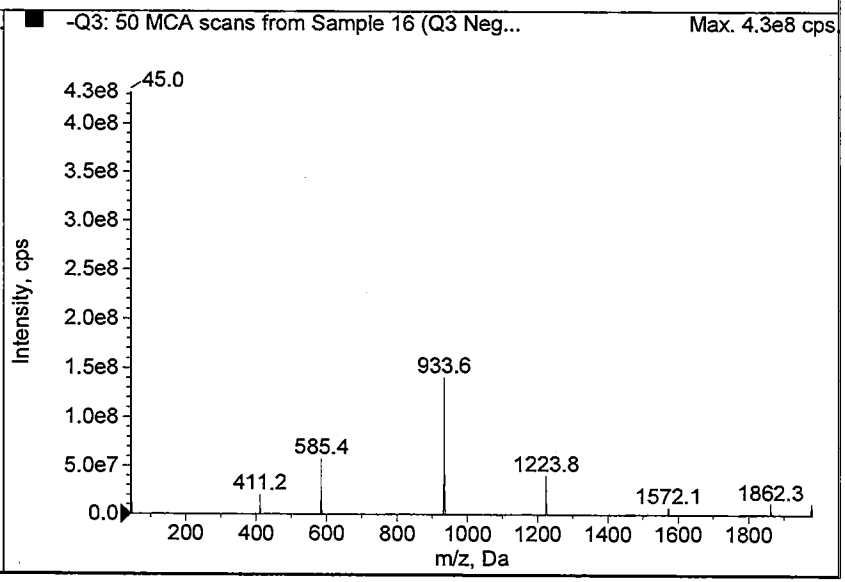
Period 1:

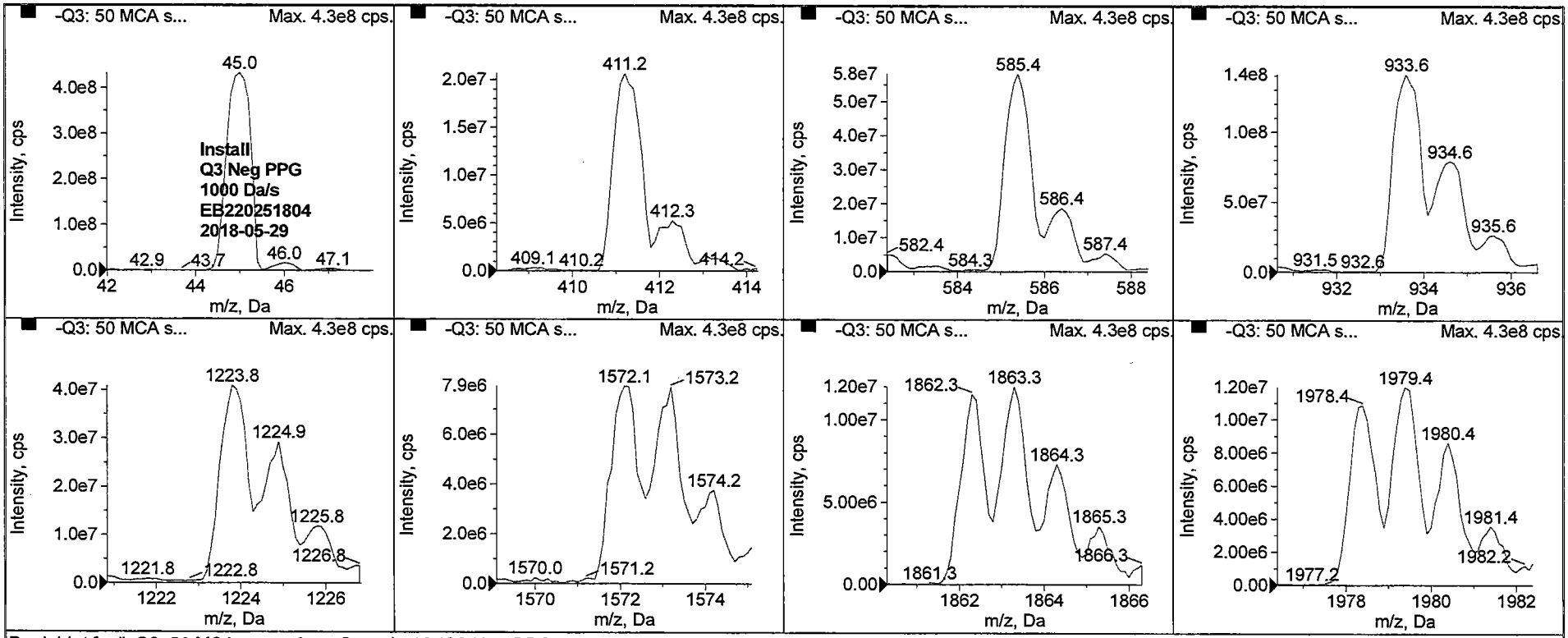
Scans in Period: 50
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for "-Q3: 50 MCA scans from Sample 16 (Q3 Neg PPG_1000 Da-s_1) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9825	4.3310e8	0.6384	0.0155
2	411.2590	411.2576	2.0660e7	0.7352	1.4357e-3
3	585.3850	585.3827	5.8190e7	0.6719	2.2702e-3
4	933.6360	933.6150	1.4107e8	0.7226	0.0210
5	1223.8450	1223.8394	4.0960e7	0.7336	5.6019e-3
6	1572.0970	1572.1001	7.9400e6	0.7950	-3.0523e-3
7	1863.3060	1863.2902	1.2010e7	0.6806	0.0158
8	1979.3890	1979.4012	1.1960e7	0.7138	-0.0122

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 10.0
IonSpray Voltage (IS): -4500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Entrance Potential (EP): -10.0

Q3 Resolution: Unit
Ion Energy 3 (IE3): -1.5

CEM (CEM): 1900.0

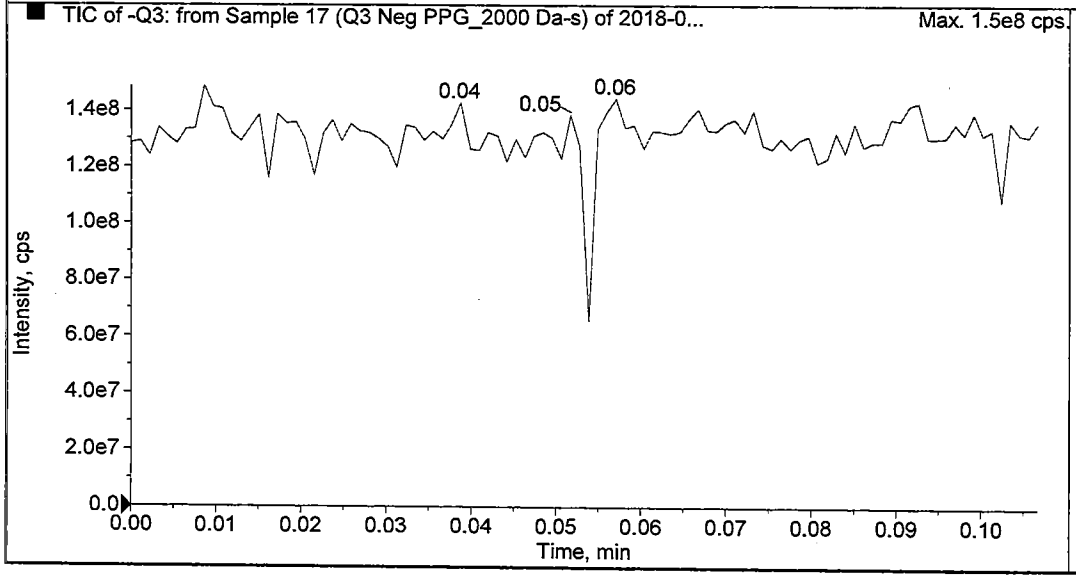
Mass Spectrometer Method Properties

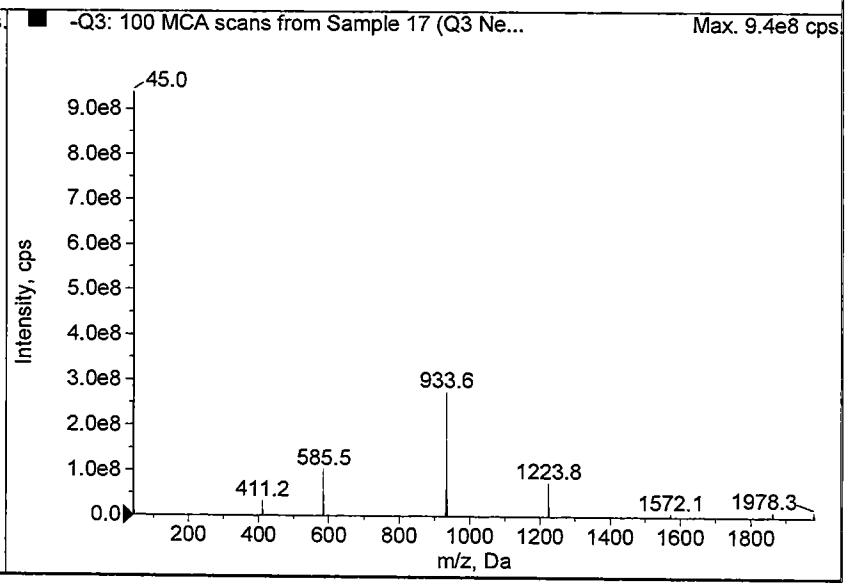
Period 1:

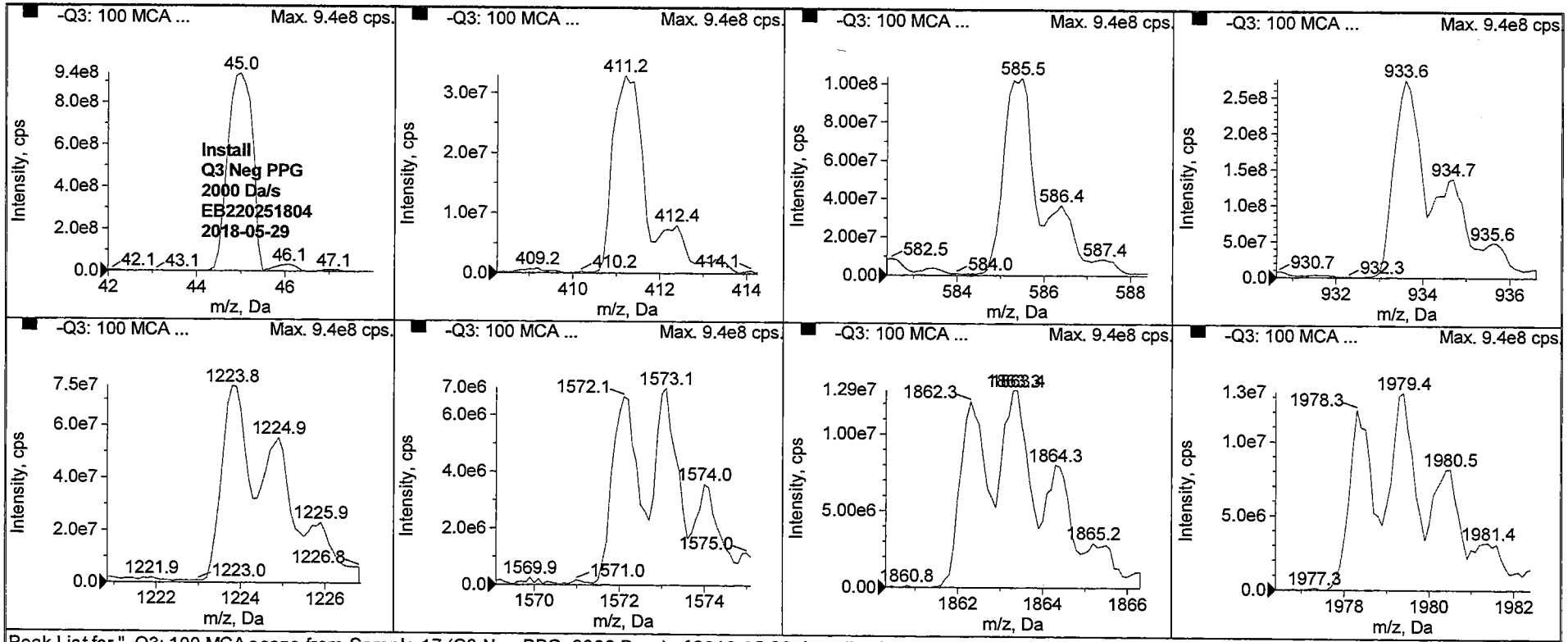
Scans in Period: 100
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q3 MS (Q3)
Polarity: Negative
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q3: Unit







Peak List for "-Q3: 100 MCA scans from Sample 17 (Q3 Neg PPG_2000 Da-s) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	44.9980	44.9950	9.3786e8	0.6643	2.9882e-3
2	411.2590	411.2370	3.2920e7	0.7732	0.0220
3	585.3850	585.3850	1.0332e8	0.6994	-4.8105e-6
4	933.6360	933.6288	2.7486e8	0.7105	7.2155e-3
5	1223.8450	1223.8546	7.5140e7	0.6946	-9.5568e-3
6	1572.0970	1572.1115	6.6600e6	0.6890	-0.0145
7	1863.3060	1863.3250	1.2880e7	0.7704	-0.0190
8	1979.3890	1979.3741	1.3320e7	0.6259	0.0149

Sate Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 28.0
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Declustering Potential (DP): 135.0
Entrance Potential (EP): 10.0

Q1 Resolution: Unit
Ion Energy 1 (IE1): 1.2

CEM (CEM): 1800.0

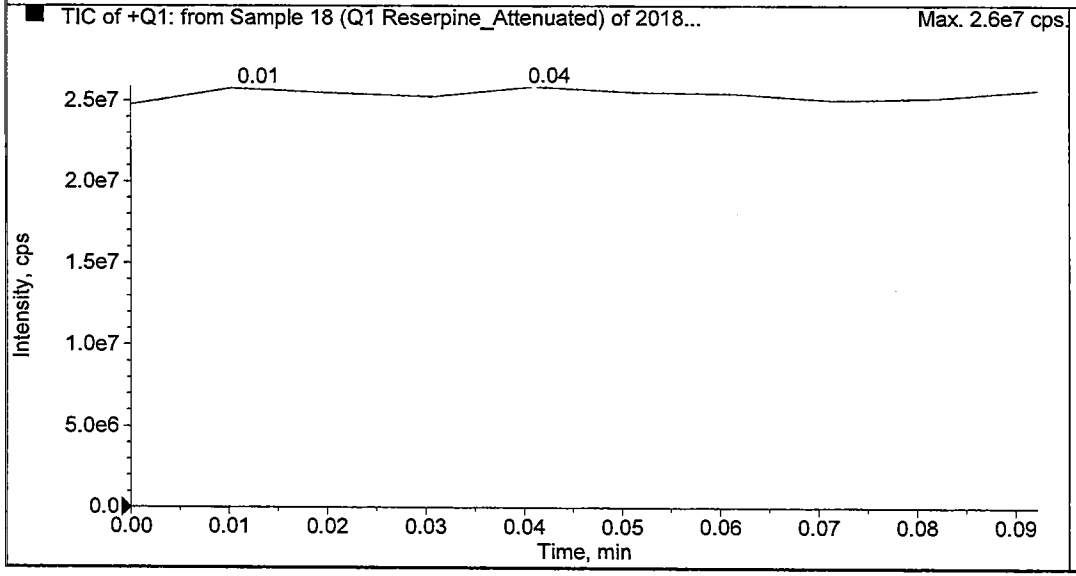
Mass Spectrometer Method Properties

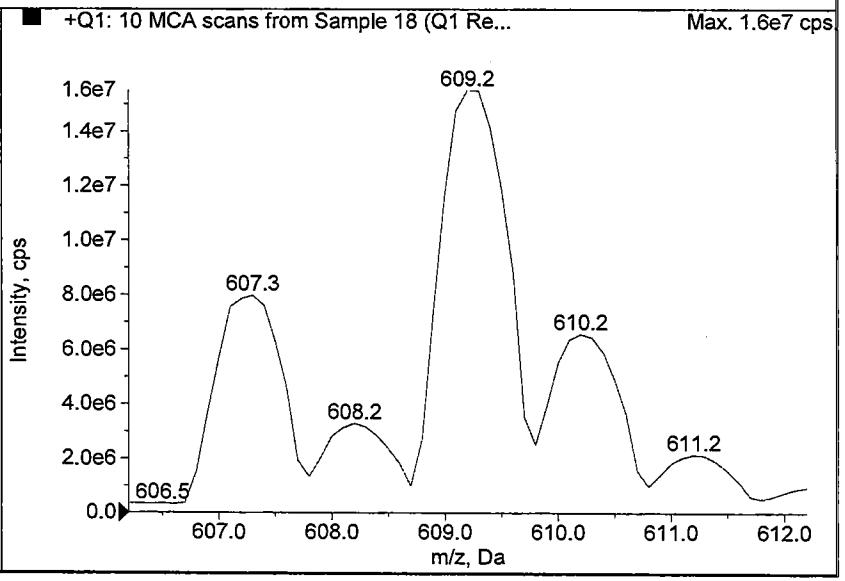
Period 1:

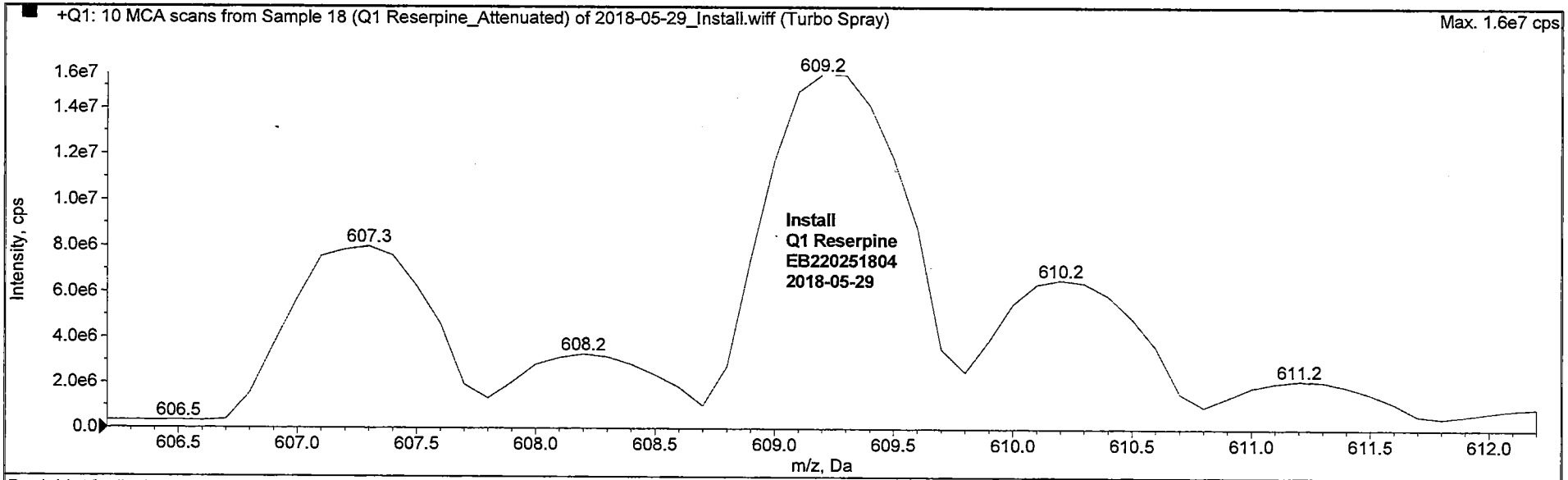
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Q1 MS (Q1)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Resolution Q1: Unit







Peak List for " +Q1: 10 MCA scans from Sample 18 (Q1 Reserpine_Attenuated) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	195.1000	n/a	n/a	n/a	n/a
2	609.2810	609.2580	1.5520e7	0.7138	0.0230

State Parameter Editor

Ion Source: Turbo Spray
Ion Source Temperature Reached
Curtain Gas (CUR): 28.0
Collision Gas (CAD): 9
IonSpray Voltage (IS): 5500.0
Temperature (TEM): 0.0
Ion Source Gas 1 (GS1): 17.0
Ion Source Gas 2 (GS2): 0.0

Declustering Potential (DP): 135.0
Entrance Potential (EP): 10.0
Collision Energy (CE): 44.5
Collision Cell Exit Potential (CXP): 6.2

Q1 Resolution: Unit Q3 Resolution: Unit
Ion Energy 1 (IE1): 1.2

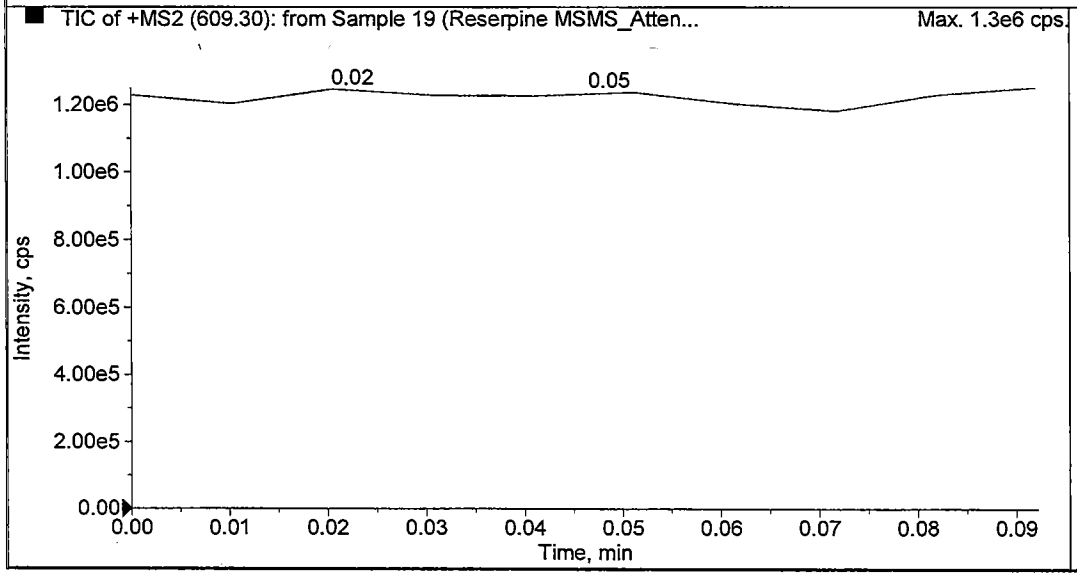
Mass Spectrometer Method Properties

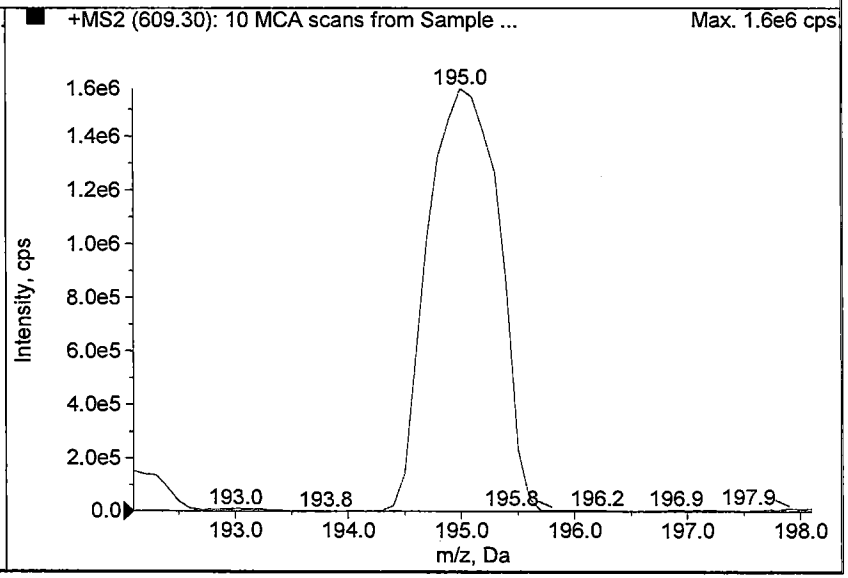
Period 1:

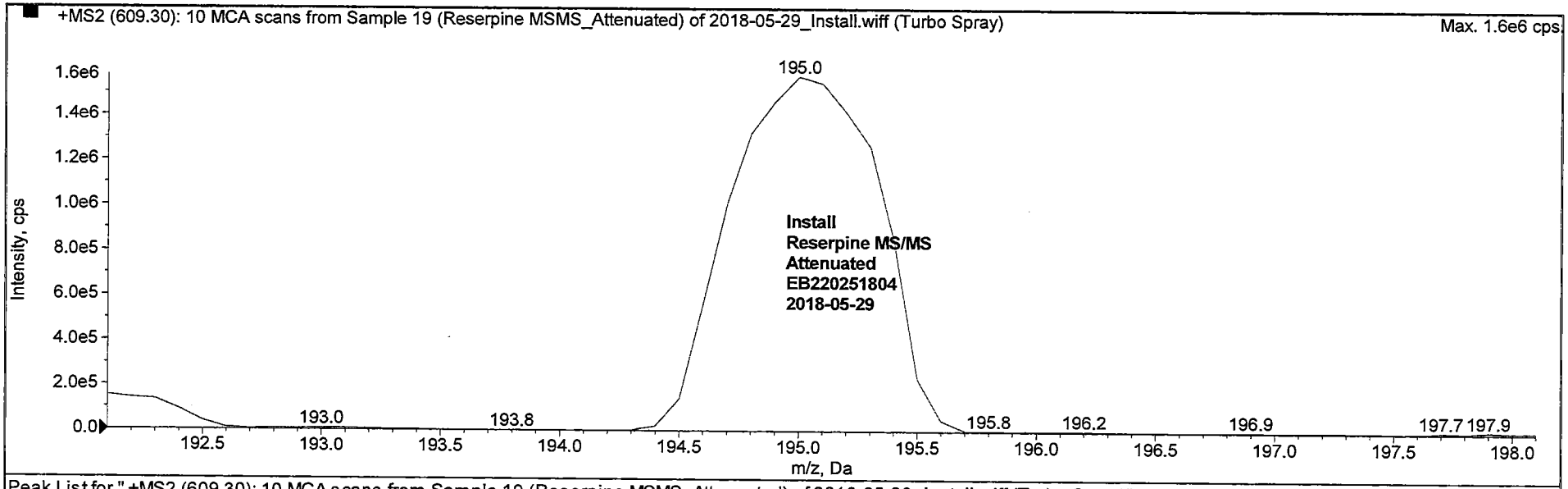
Scans in Period: 10
Relative Start Time: 0.00 msec
Scheduled Ionization: Off
Experiments in Period: 1

Period 1 Experiment 1:

Scan Type: Product Ion (MS2)
Polarity: Positive
Scan Mode: Profile
Ion Source: Turbo Spray
Scans to Sum: 1
Product Of: 609.30 Da







Peak List for "+MS2 (609.30): 10 MCA scans from Sample 19 (Reserpine MSMS_Attenuated) of 2018-05-29_Install.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	195.1000	195.0306	1.5772e6	0.7615	0.0694
2	609.2810	n/a	n/a	n/a	n/a

Raw QC Data

PFAS by LC/MS/MS

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	BLK309005			**Data File:**		18NOV07D-14.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005			**Acquis Date:**		2018-11-07T13:17:51
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	13			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	813265.8	730410.6	11	50	
13C2-PFOA	5.0	565629.7	524423.6	8	50	
13C4-PFOS	4.8	295029.3	274061.7	8	50	
13C2-PFDA	5.0	353255.9	311442.1	13	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	687712.9	13C3-PFBA	813265.8	0.846	10.000	7.827	78	50-150	
E13C5-PFPeA	705431.1	13C3-PFBA	813265.8	0.867	10.000	7.557	76	50-150	
E13C3-PFBS	366965.7	13C3-PFBA	813265.8	0.451	9.300	6.623	71	50-150	
E13C2-4:2-FTS	47546.0	13C2-PFOA	565629.7	0.084	9.340	7.586	81	50-150	
E13C5-PFHxA	607849.4	13C2-PFOA	565629.7	1.075	10.000	7.906	79	50-150	
E13C3-PFHxS	300122.6	13C2-PFOA	565629.7	0.531	9.460	7.618	81	50-150	
E13C4-PFHpA	479868.7	13C2-PFOA	565629.7	0.848	10.000	7.719	77	50-150	
E13C2-6:2-FTS	34660.3	13C2-PFOA	565629.7	0.061	9.500	8.172	86	50-150	
E13C8-PFOA	837045.3	13C2-PFOA	565629.7	1.480	10.000	8.254	83	50-150	
E13C8-PFOS	247398.7	13C4-PFOS	295029.3	0.839	9.560	7.416	78	50-150	
E13C9-PFNA	437366.8	13C4-PFOS	295029.3	1.482	10.000	8.099	81	50-150	
E13C6-PFDA	547845.7	13C2-PFDA	353255.9	1.551	10.000	7.800	78	50-150	
E13C2-8:2-FTS	23707.6	13C2-PFDA	353255.9	0.067	9.580	7.102	74	50-150	
E13C8-PFOSA	664608.5	13C2-PFDA	353255.9	1.881	10.000	8.211	82	50-150	
Ed3-NMeFOSAA	74292.7	13C2-PFDA	353255.9	0.210	10.000	7.822	78	50-150	
E13C7-PFUnDA	241073.9	13C2-PFDA	353255.9	0.682	10.000	7.874	79	50-150	
Ed5-NEtFOSAA	58510.9	13C2-PFDA	353255.9	0.166	10.000	7.666	77	50-150	
E13C2-PFDoDA	498314.2	13C2-PFDA	353255.9	1.411	10.000	7.606	76	50-150	
Ed7-NMePFOSAE	300545.6	13C2-PFDA	353255.9	0.851	10.000	7.913	79	50-150	
Ed3-NMePFOSA	73016.7	13C2-PFDA	353255.9	0.207	10.000	7.568	76	50-150	
Ed9-NEtPFOSAE	246567.2	13C2-PFDA	353255.9	0.698	10.000	7.972	80	50-150	
Ed5-NEtPFOSA	57009.4	13C2-PFDA	353255.9	0.161	10.000	7.474	75	50-150	
E13C2-PFTeDA	373196.2	13C2-PFDA	353255.9	1.056	10.000	7.606	76	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

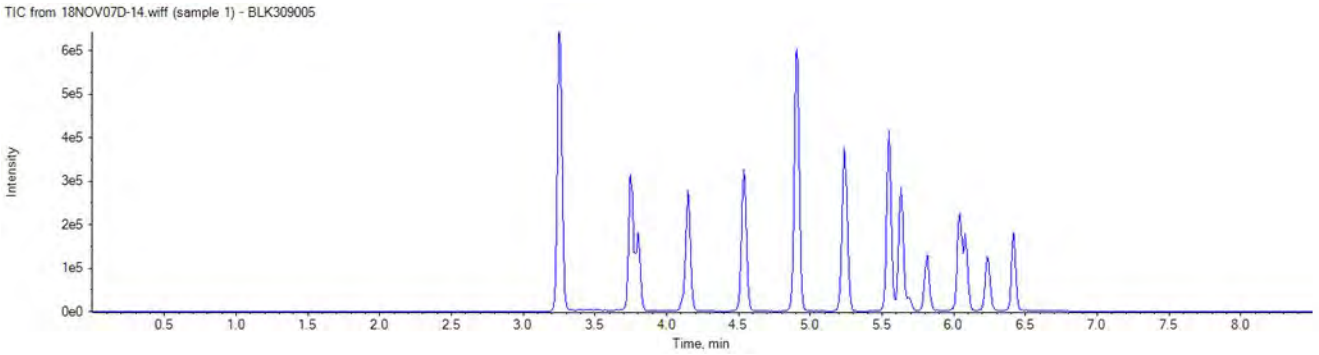
Analyte Quantitation Peak Table

Sample Name: BLK309005 **Instrument Name:** LM27631 **File Name:** 18NOV07D-14.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.25	687712.9	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.75	705431.1	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.80	366965.7	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.11	47546.0	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.15	607849.4	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.80	366965.7	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	300122.6	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	479868.7	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	34660.3	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.54	300122.6	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	837045.3	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.23	247398.7	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.25	437366.8	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.23	247398.7	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.55	547845.7	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.55	23707.6	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.63	664608.5	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.69	74292.7	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.23	247398.7	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.81	241073.9	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.82	58510.9	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	498314.2	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.55	23707.6	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.08	300545.6	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.09	73016.7	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.23	247398.7	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.23	246567.2	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.25	57009.4	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.04	498314.2	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	373196.2	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	373196.2	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.42	373196.2	N/A	

Total Ion Chromatogram

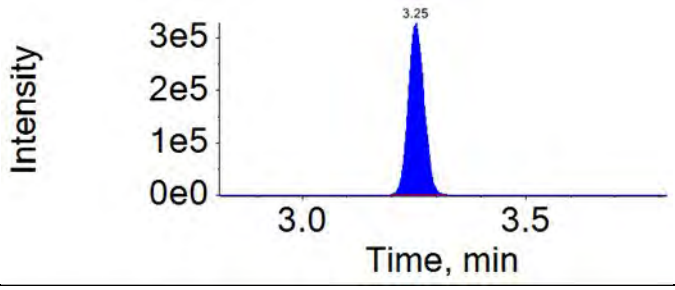


APPROVED
By MCD at 4:42 pm, 11/8/18

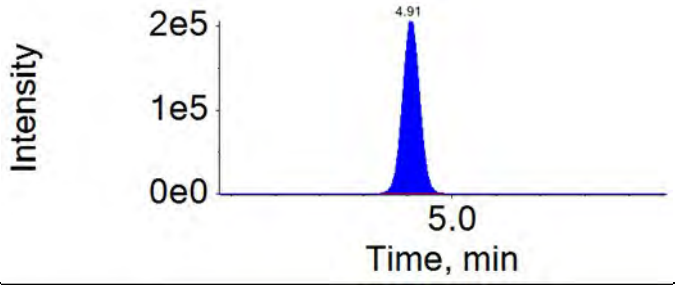
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

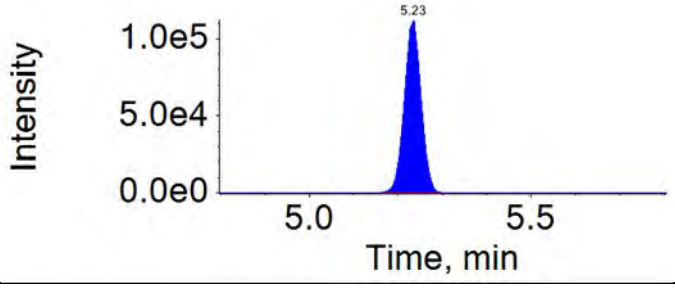
Injection Standard: 13C3-PFBA
216.0 / 172.0



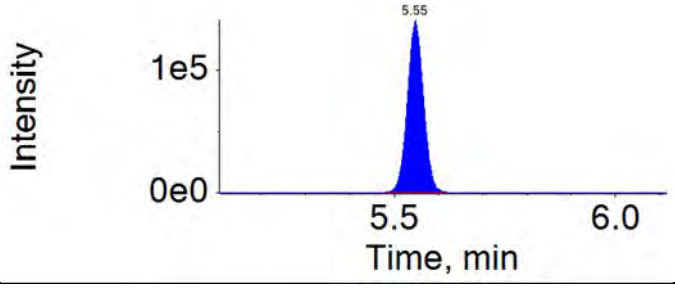
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



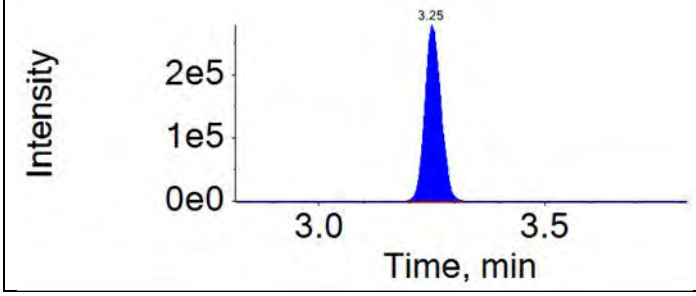
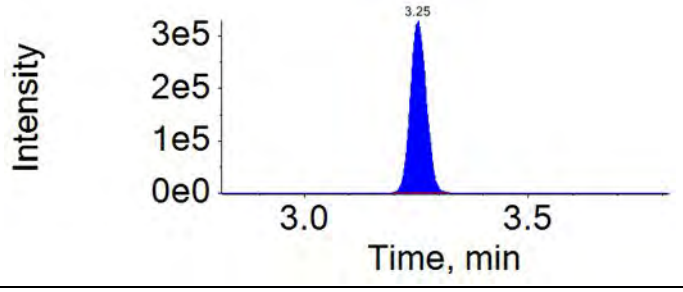
Injection Standard: 13C2-PFDA
515.0 / 470.0

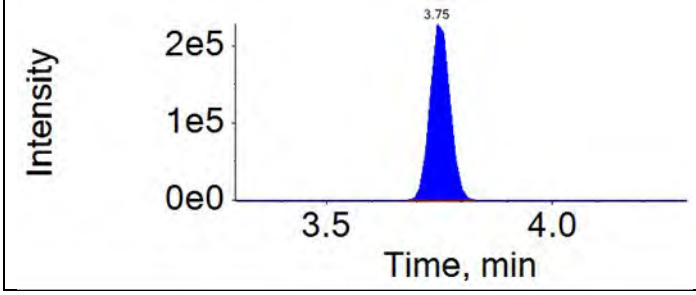
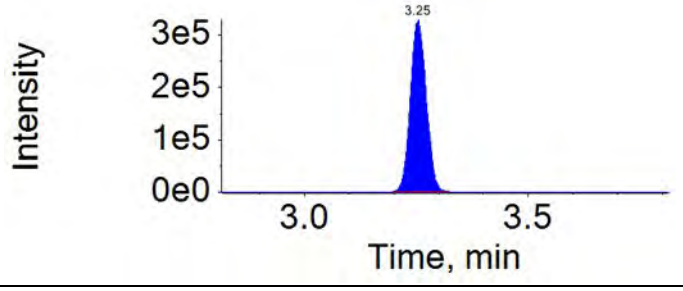


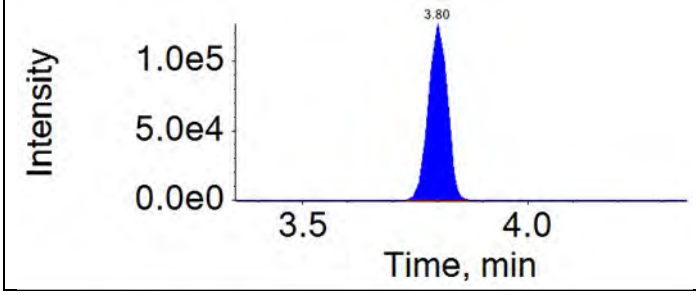
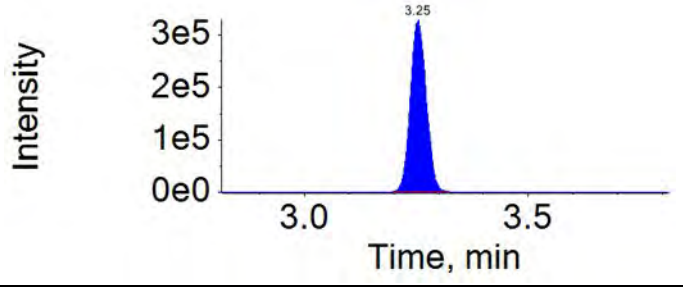
APPROVED
By MCD at 4:42 pm, 11/8/18

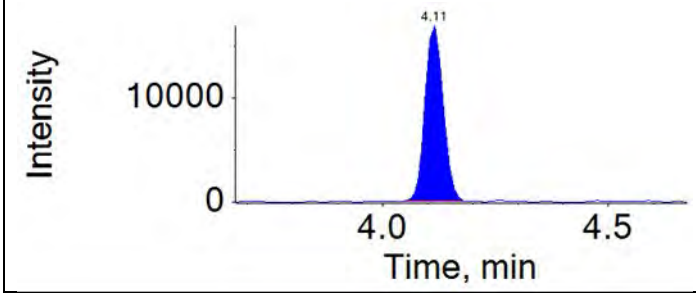
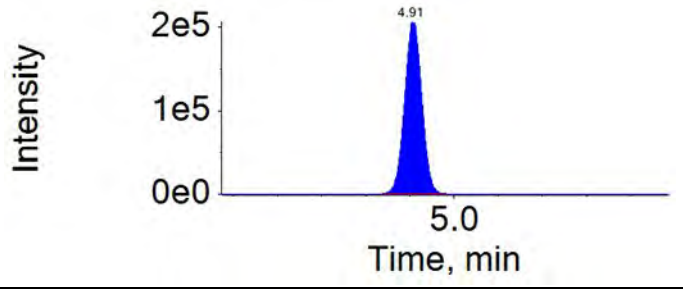
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

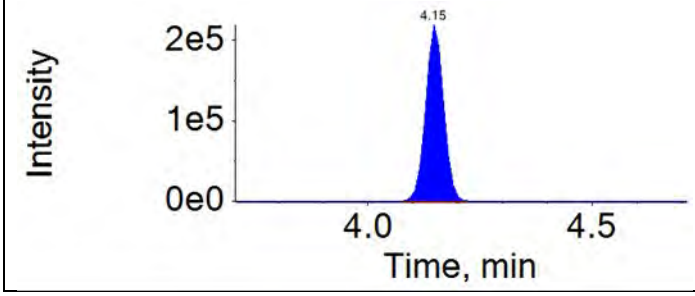
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

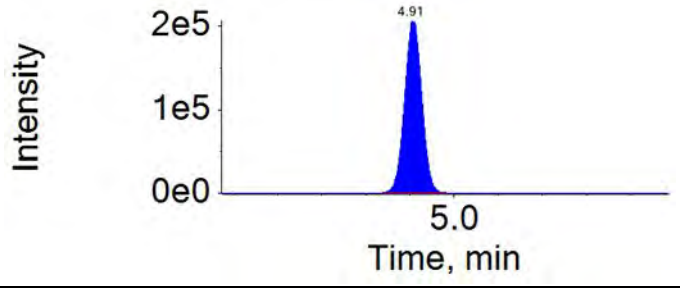
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

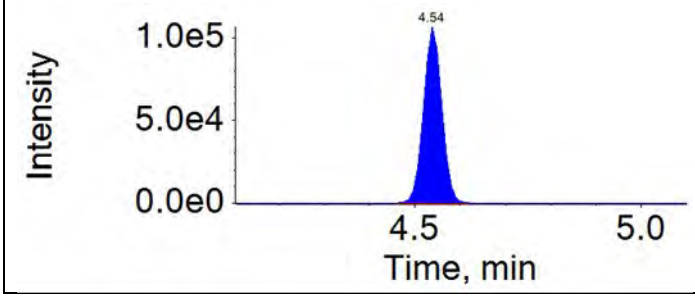
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

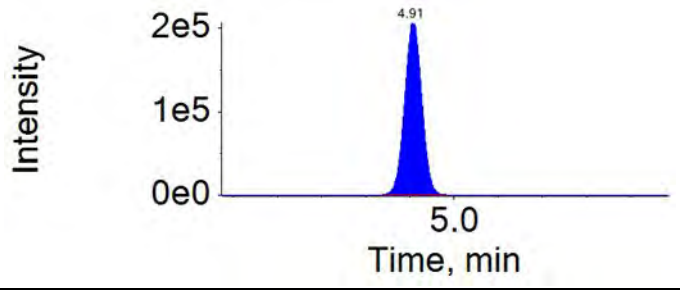
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



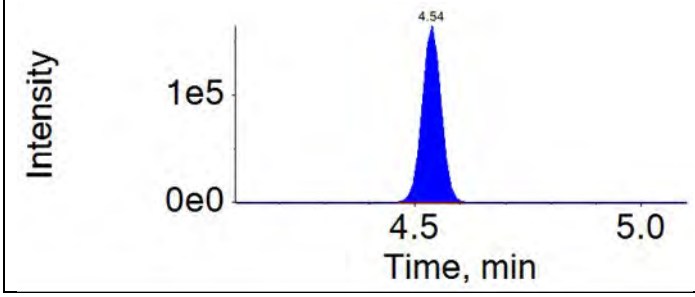


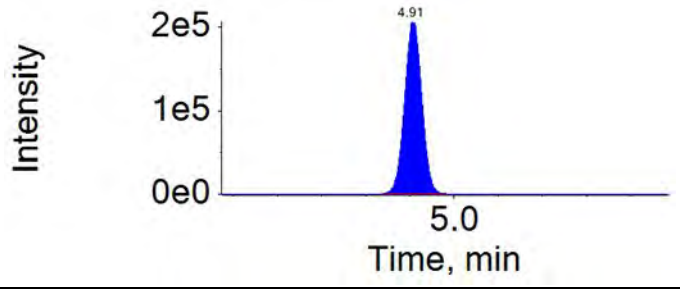
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



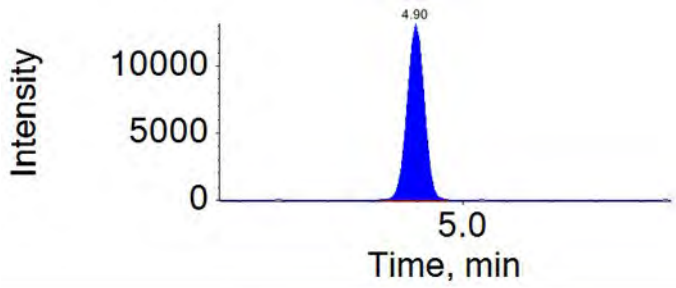


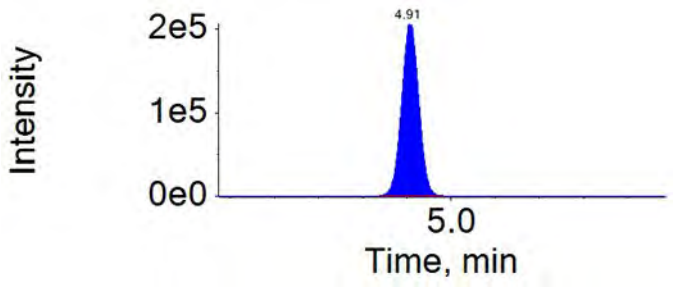
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

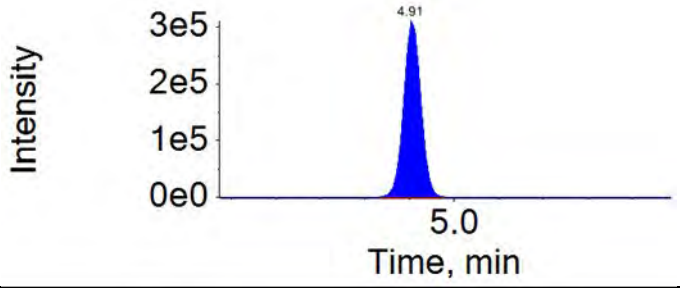
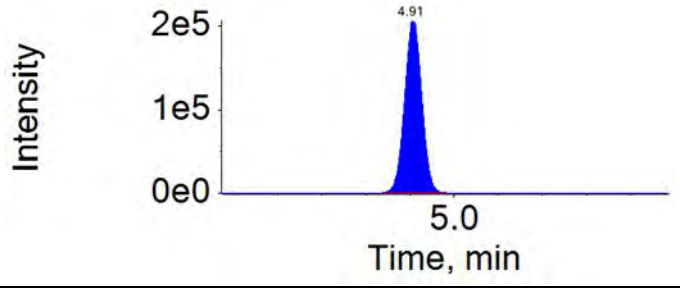


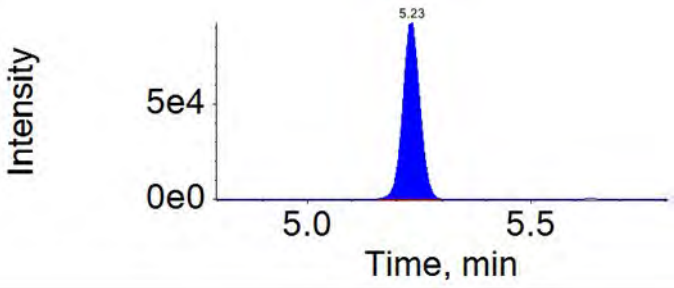
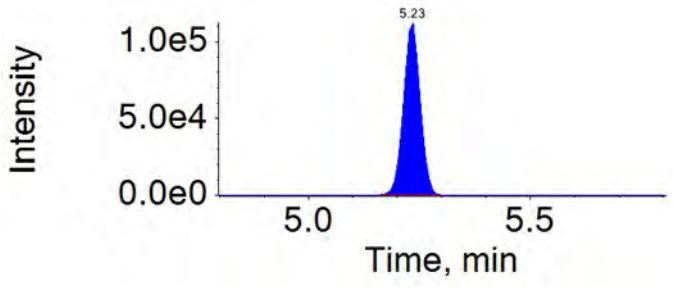


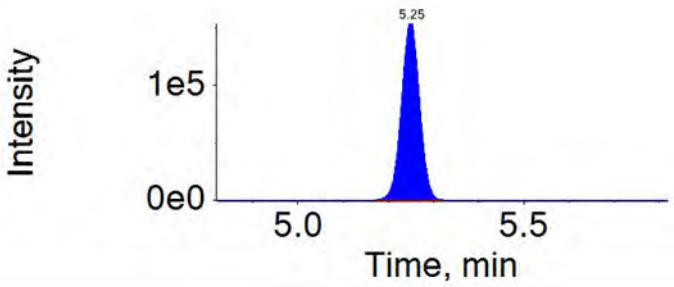
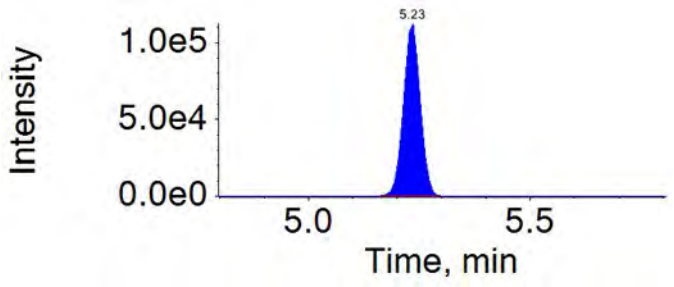
APPROVED
By MCD at 4:42 pm, 11/8/18

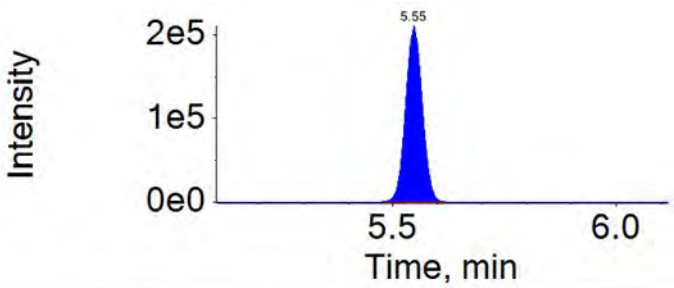
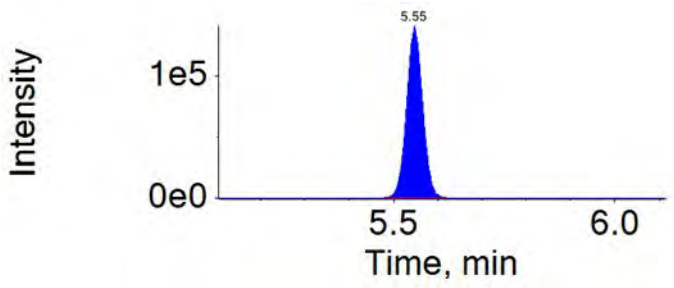
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

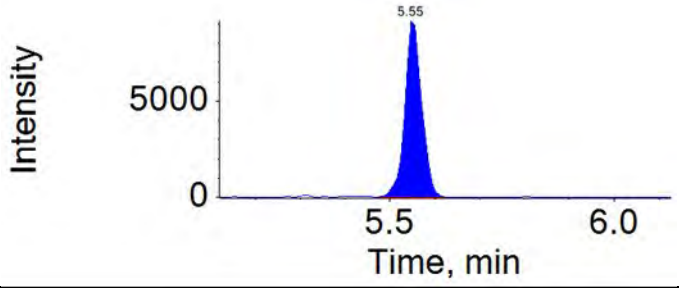
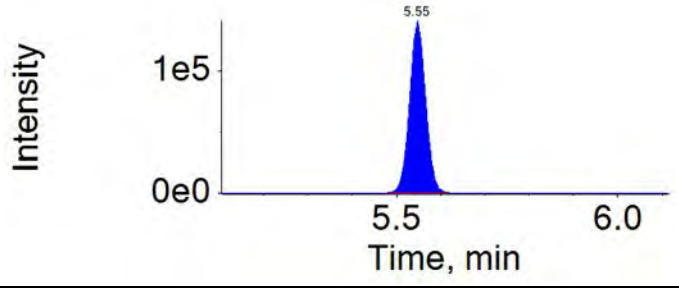
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

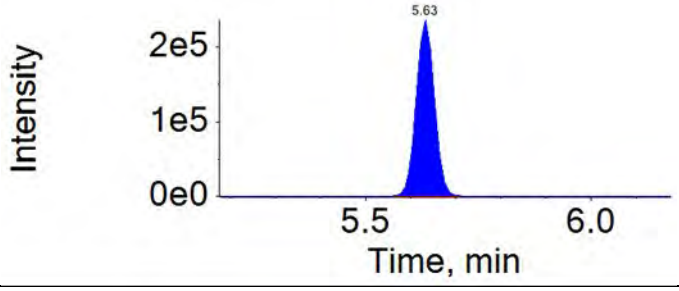
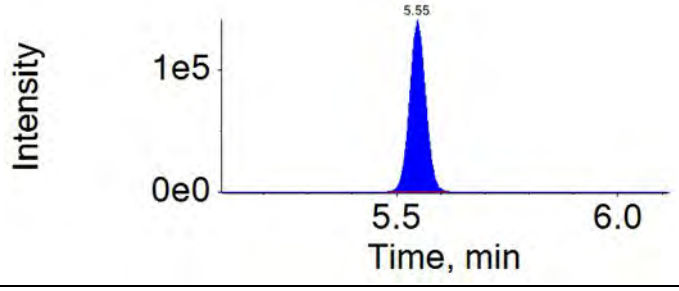
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

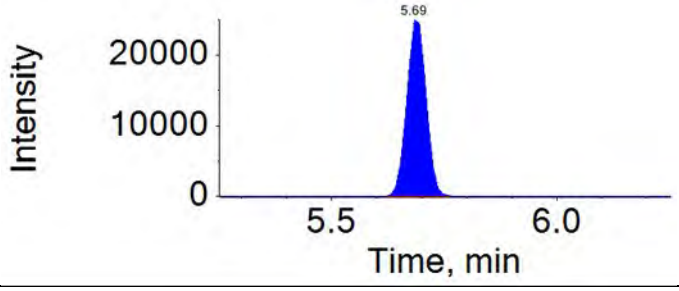
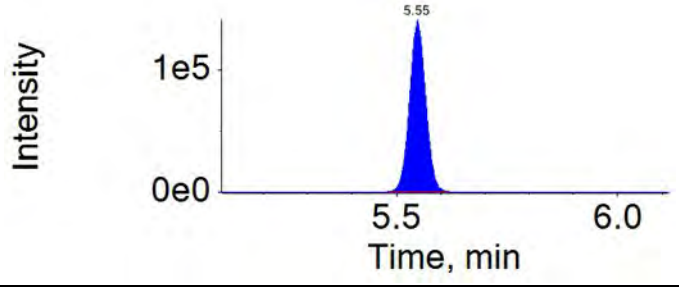
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

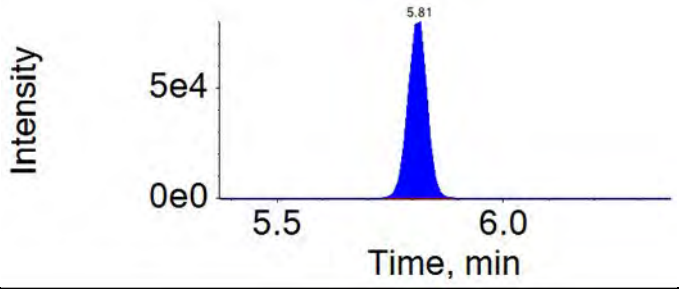
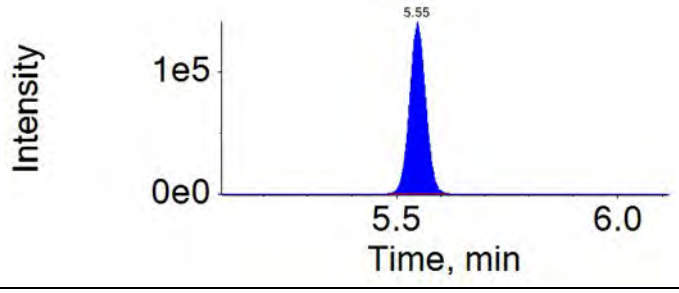
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

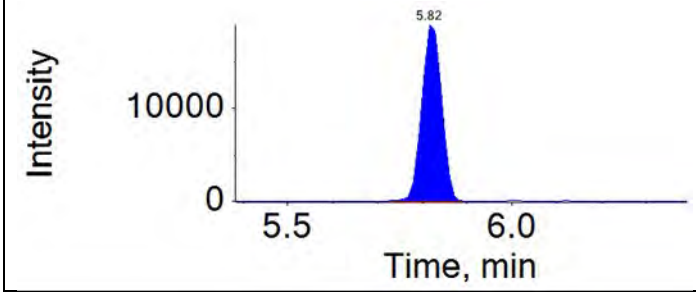
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

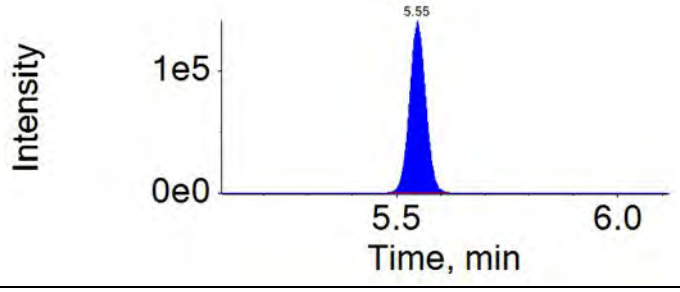
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

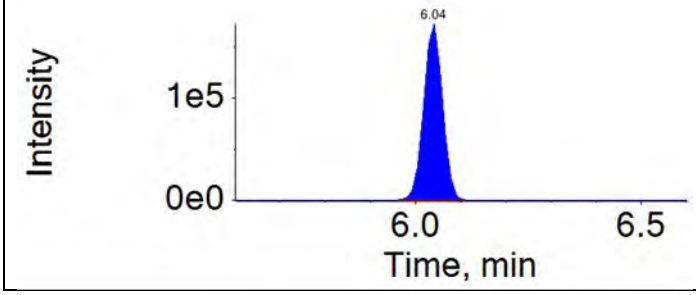
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

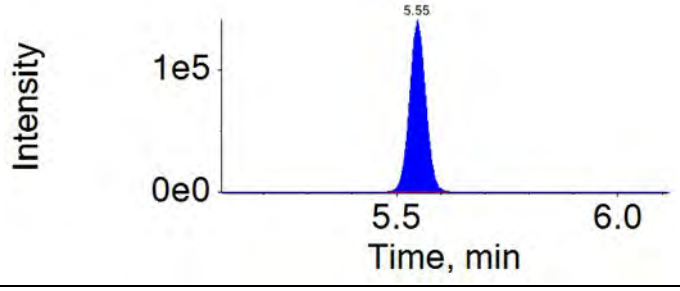
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



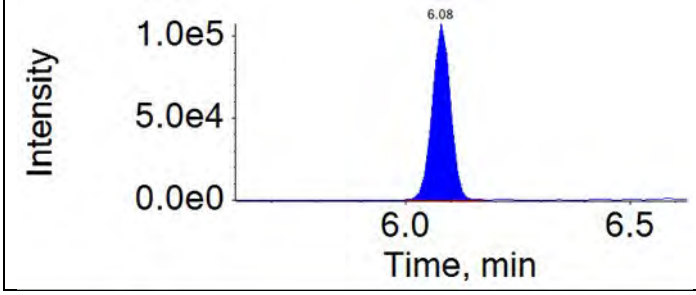


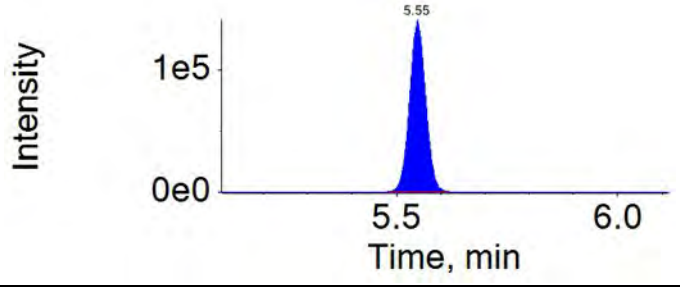
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



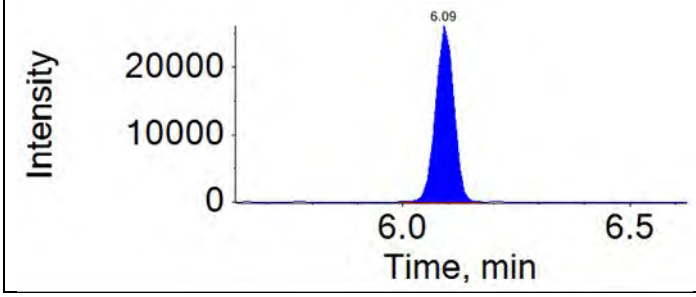


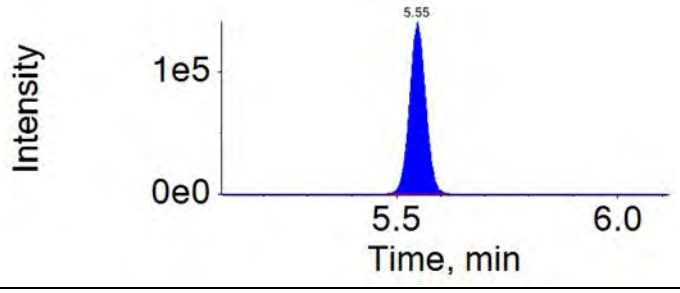
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





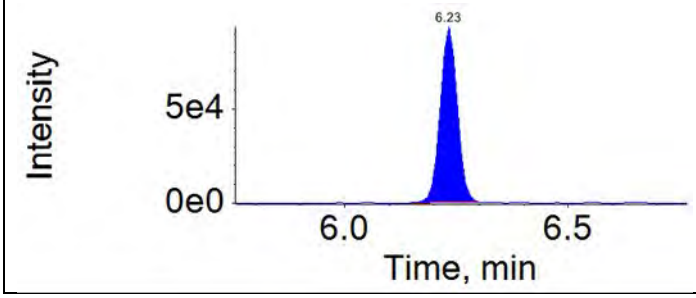
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

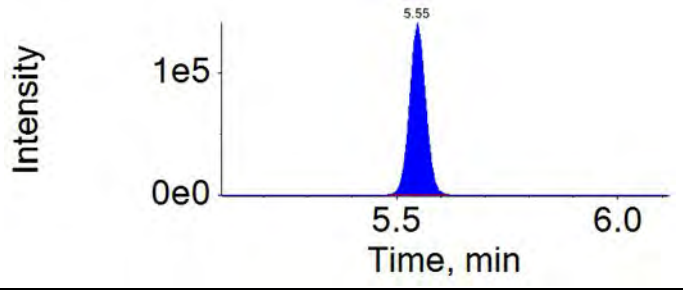




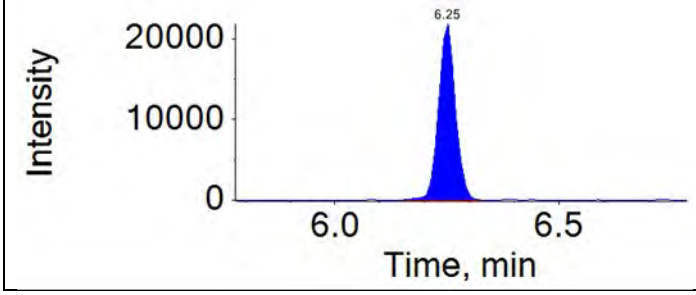
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

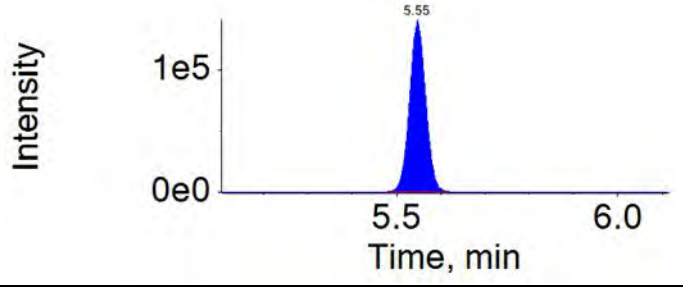
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



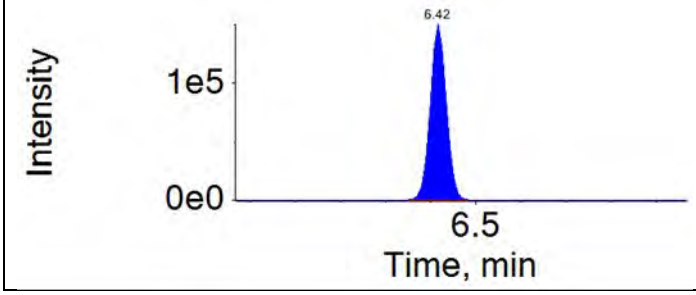


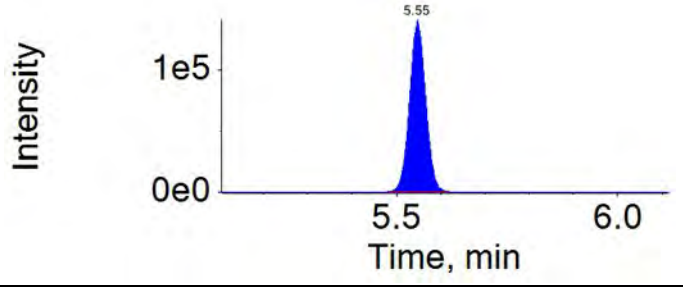
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



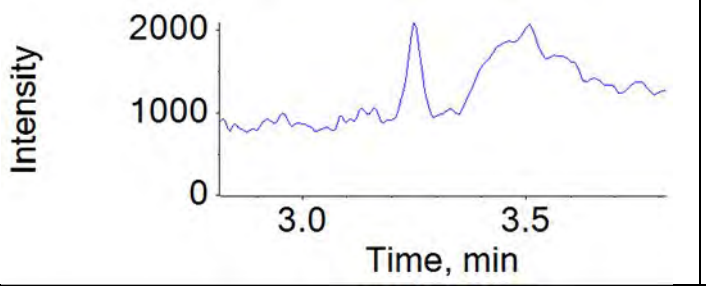


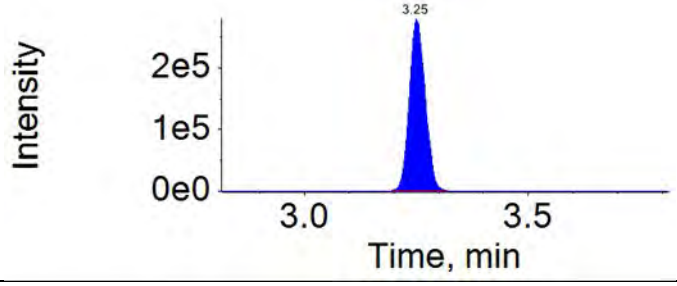
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

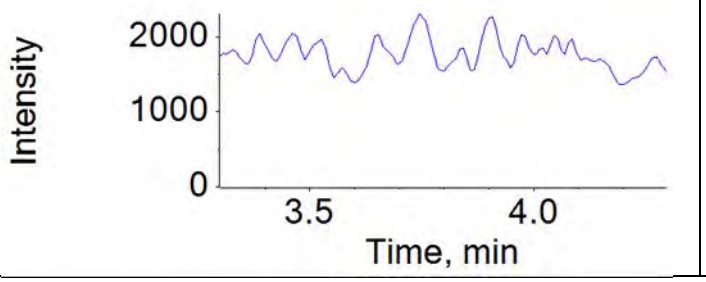
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

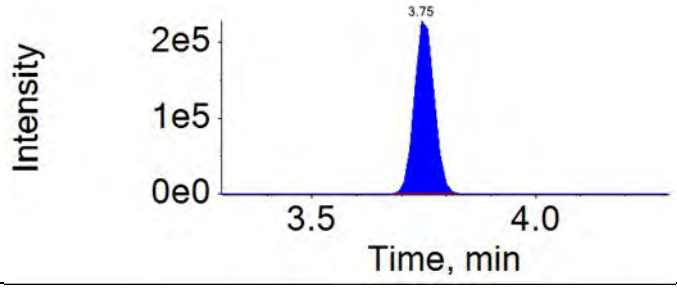
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



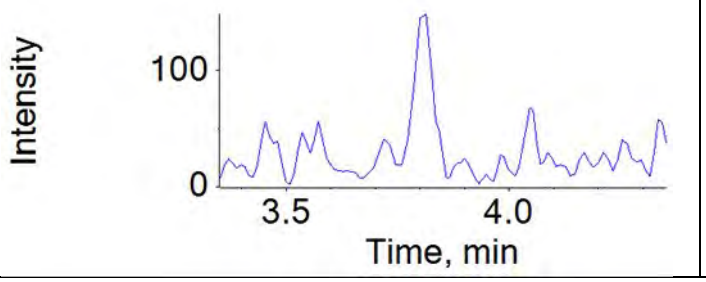


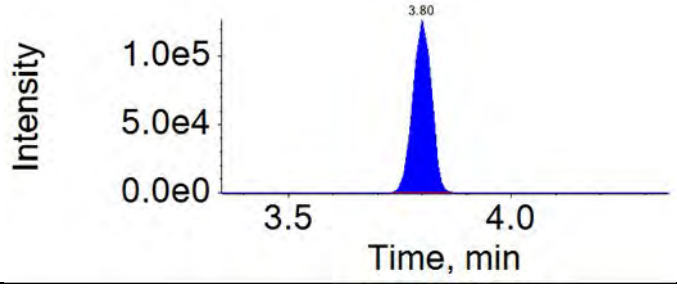
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



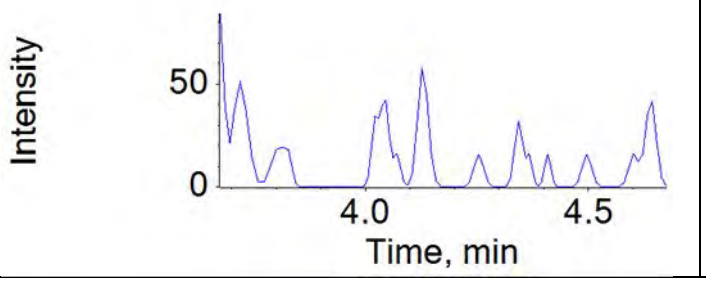


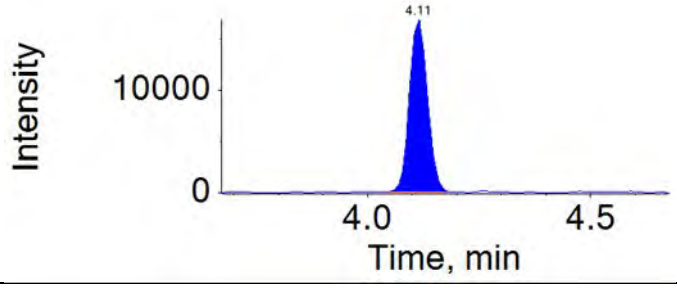
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



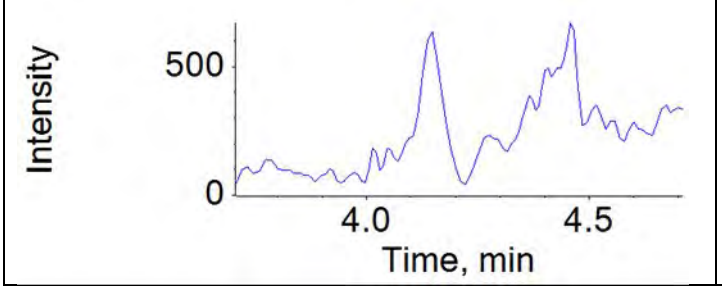


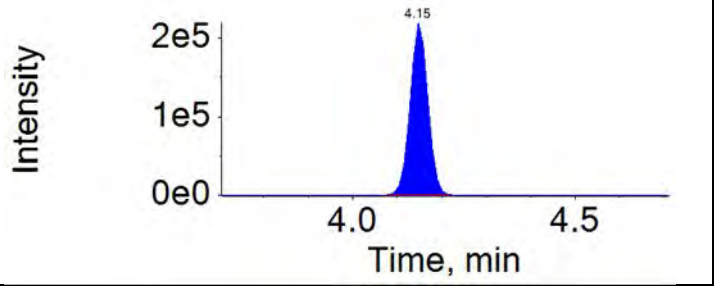
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

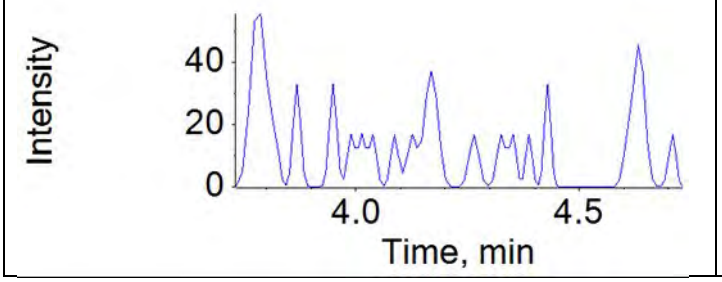
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

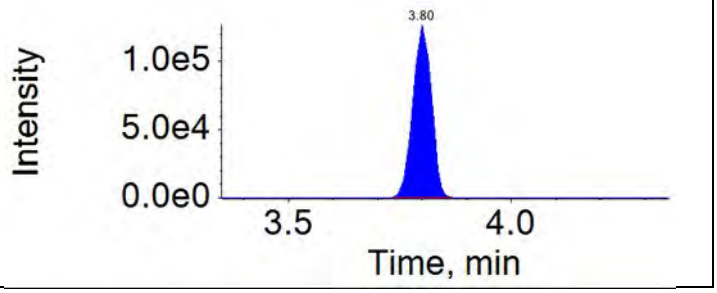
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



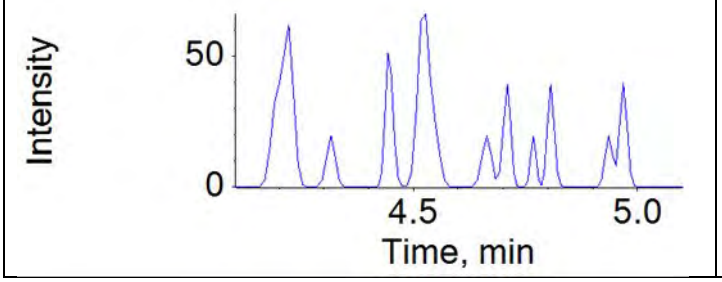


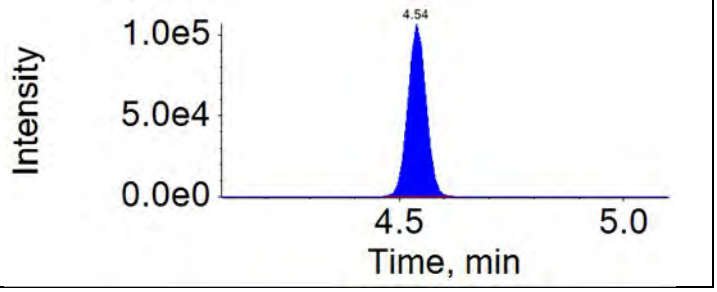
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



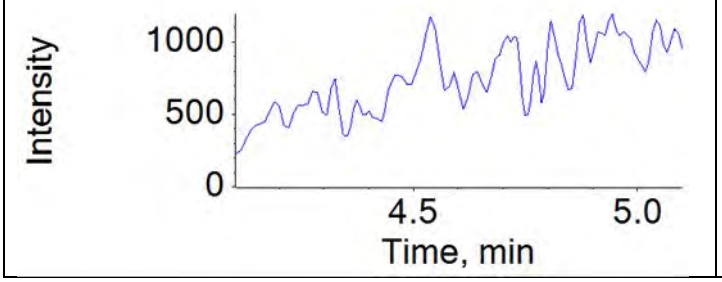


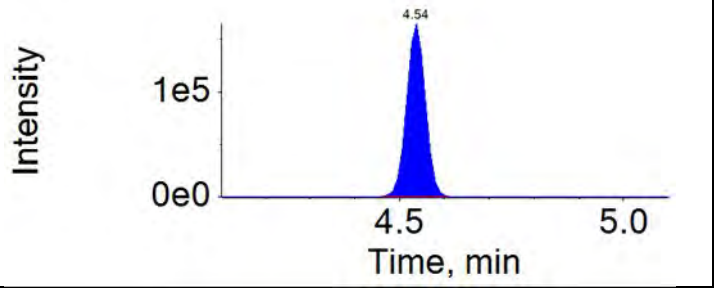
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0



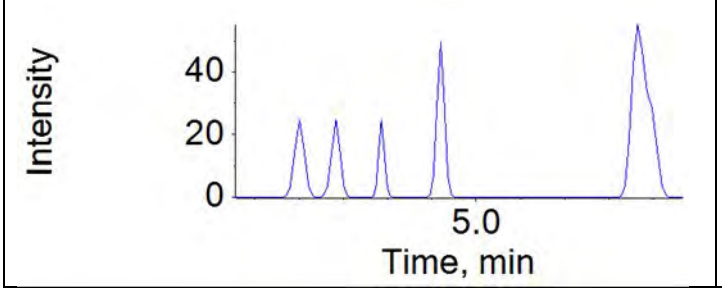


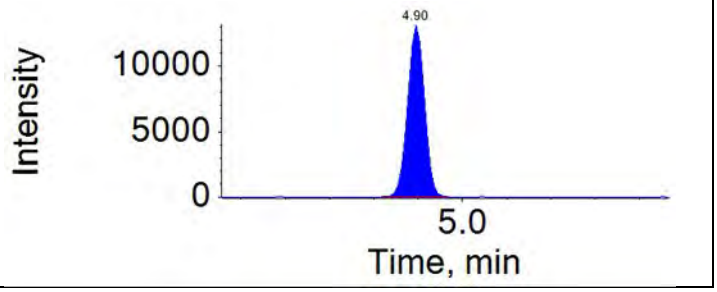
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

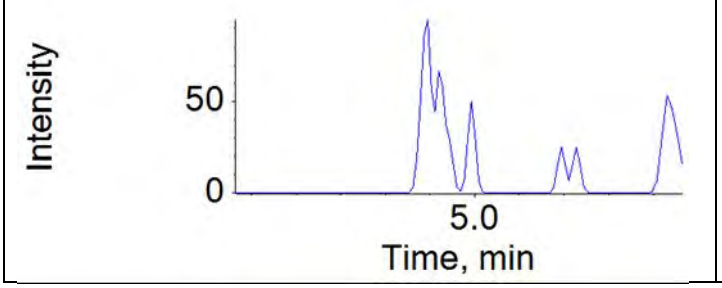
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

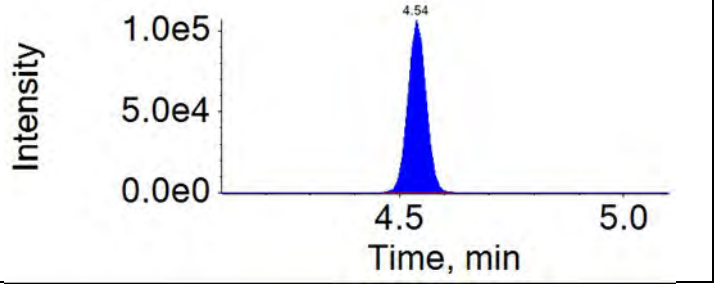
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



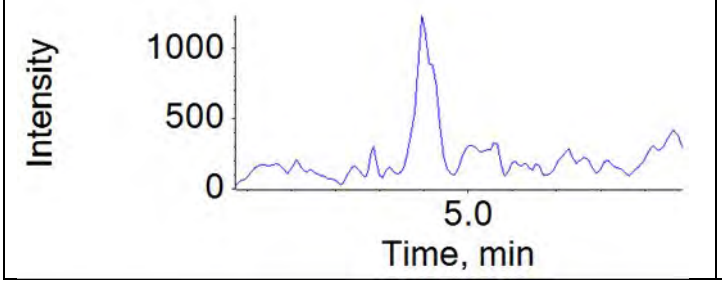


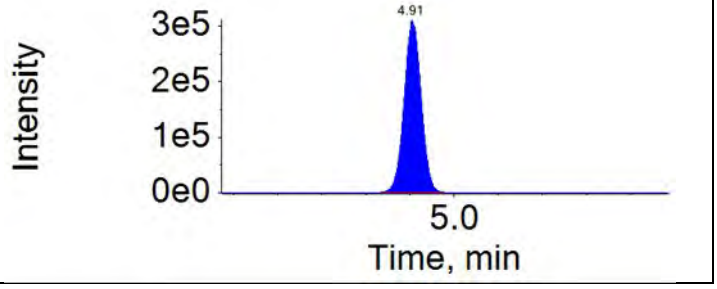
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



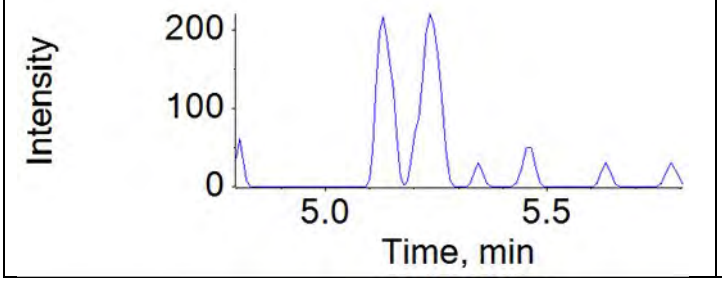


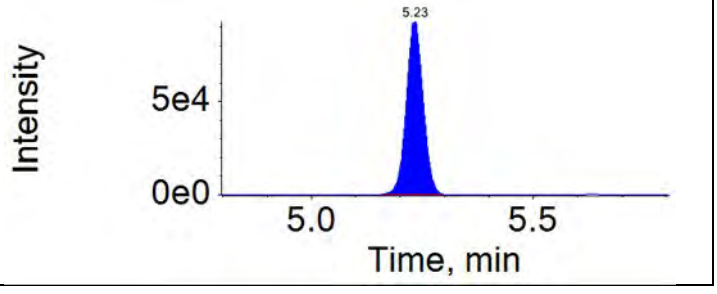
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0



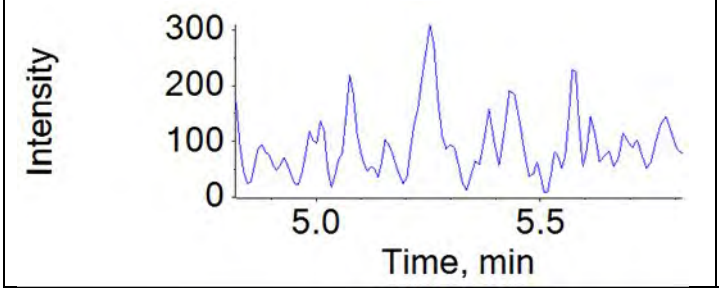


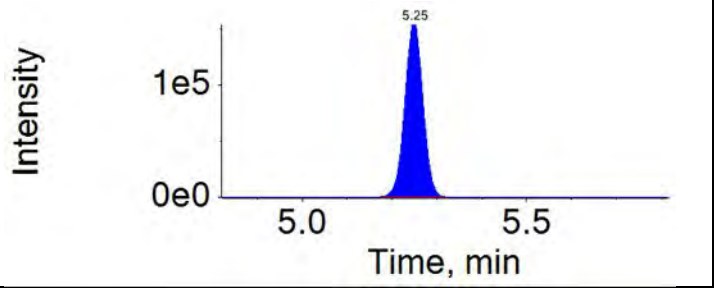
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

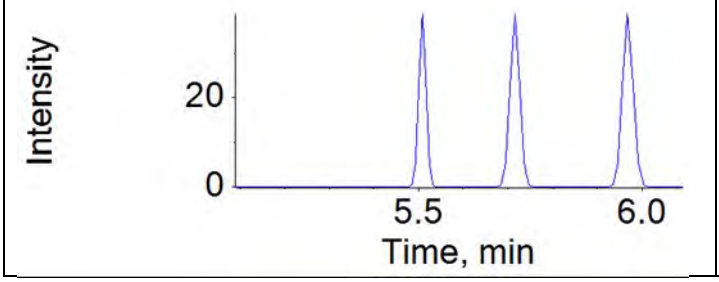
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

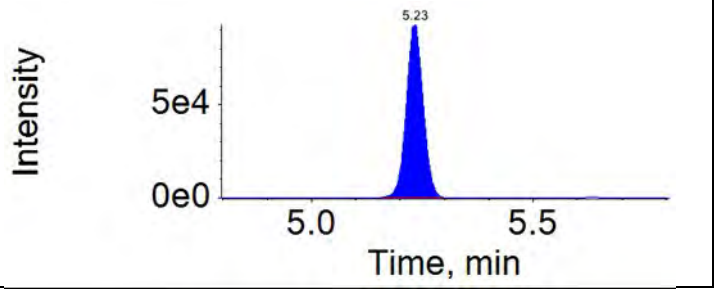
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



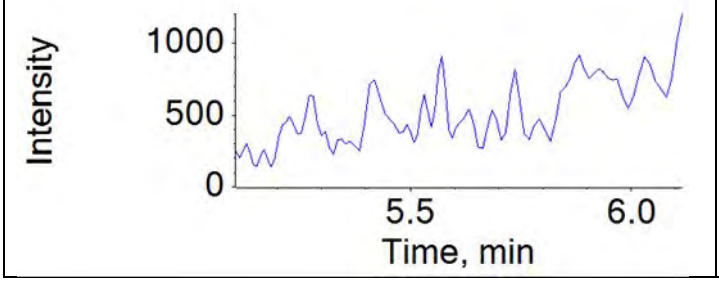


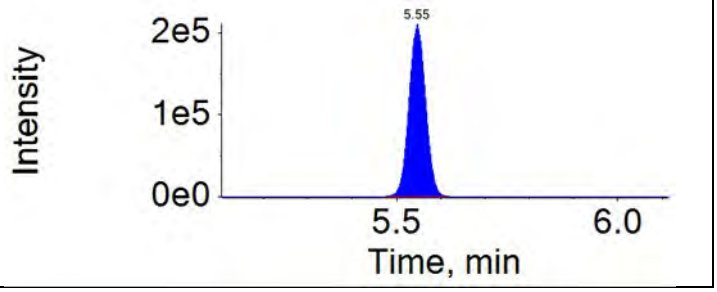
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



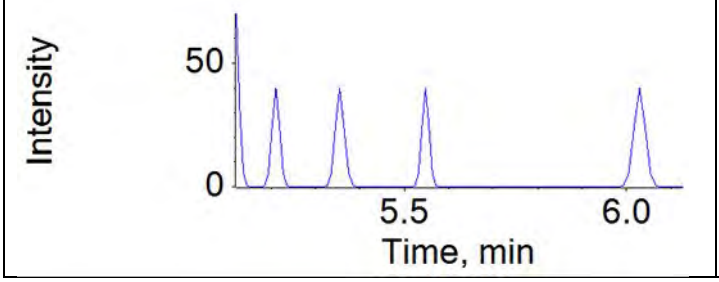


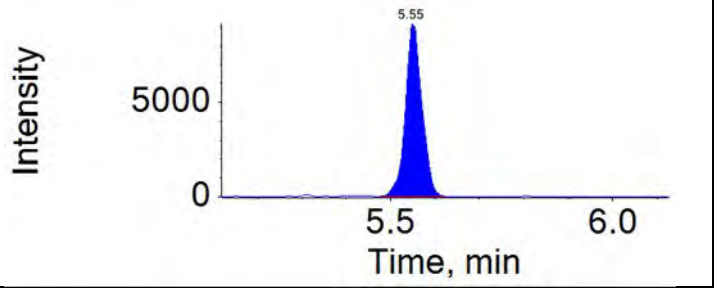
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



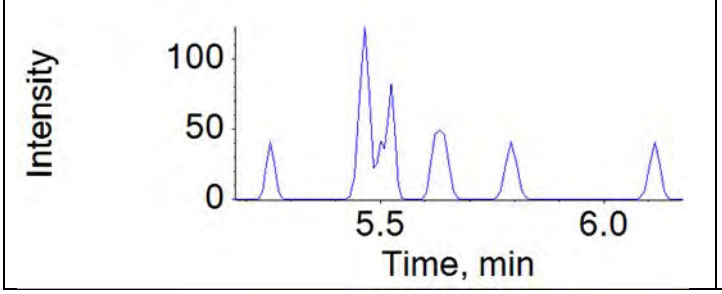


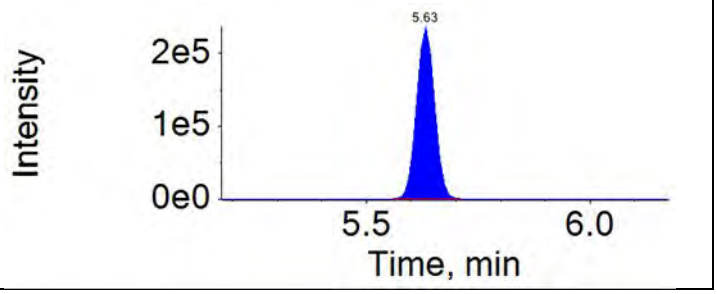
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

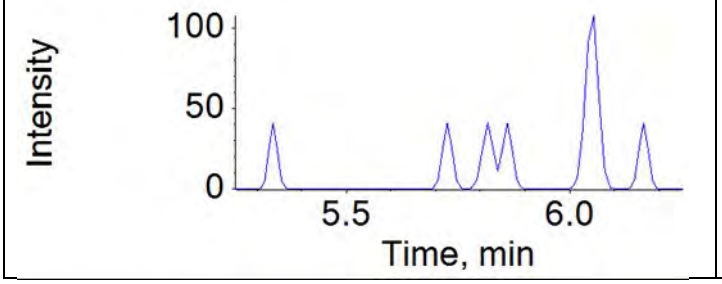
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

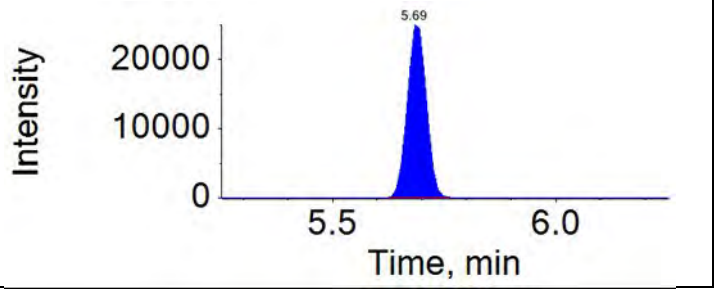
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



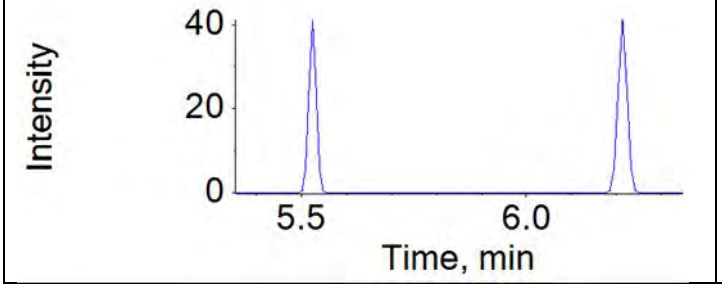


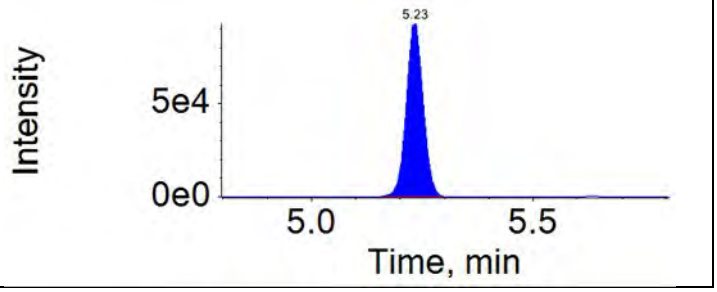
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



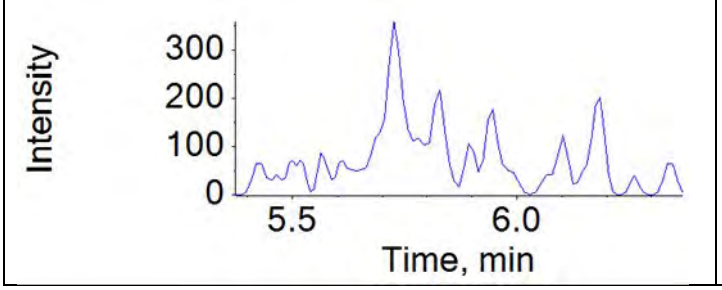


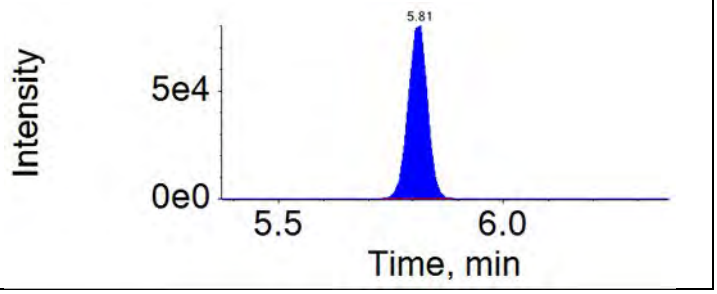
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



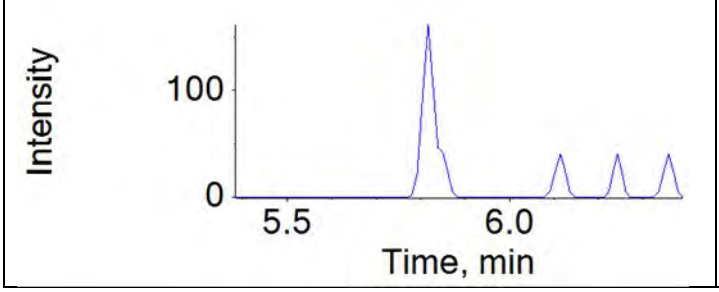


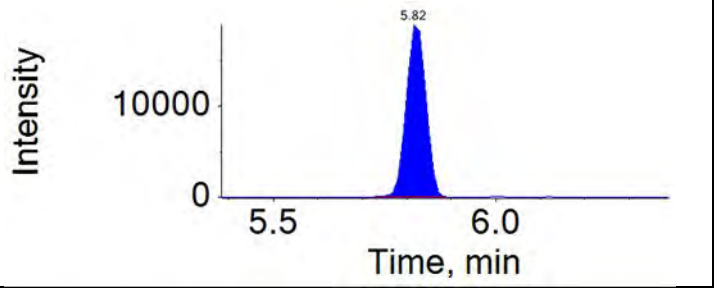
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

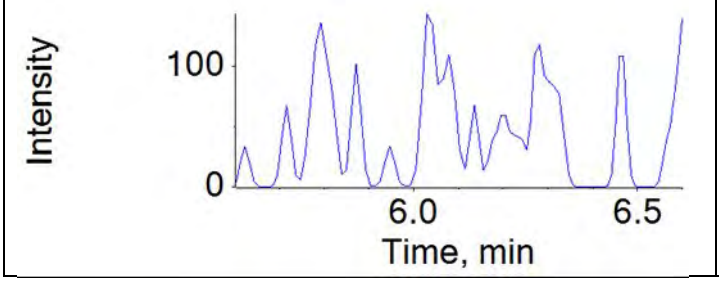
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

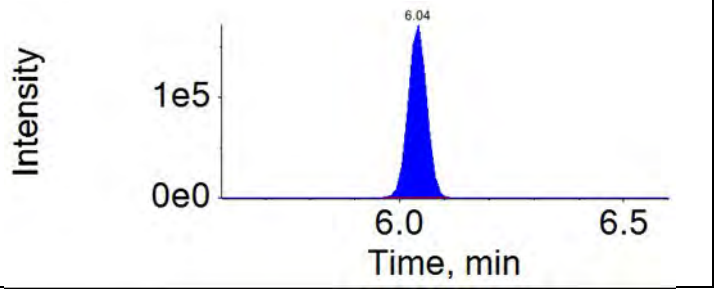
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



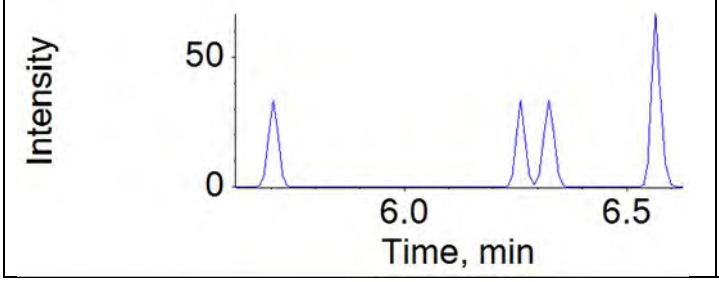


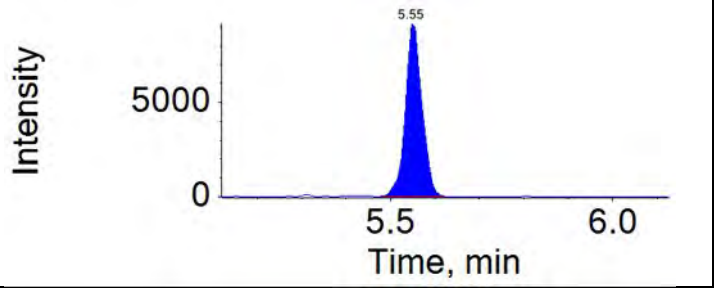
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



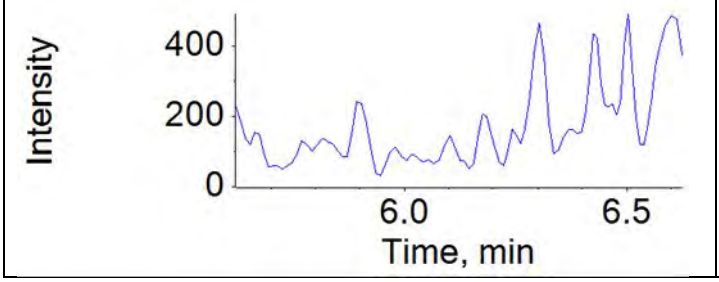


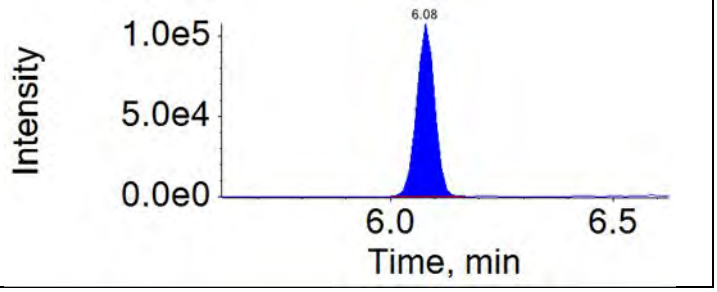
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



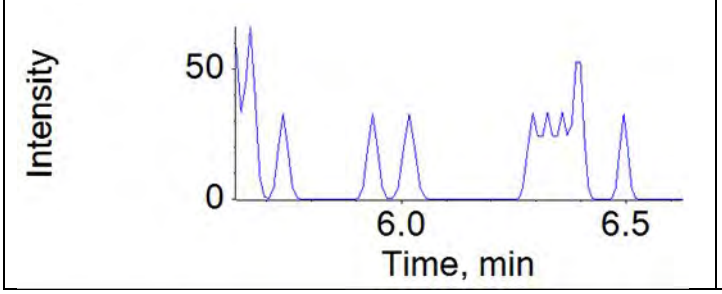


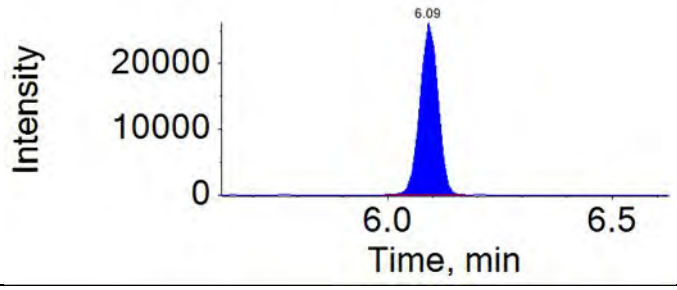
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

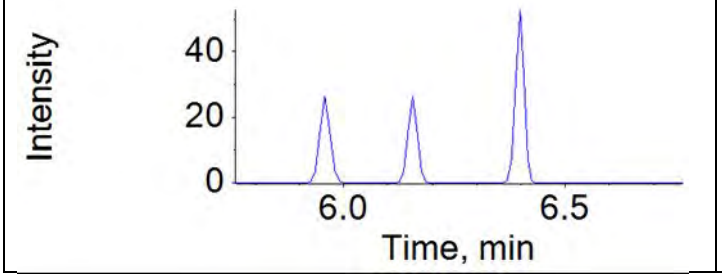
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

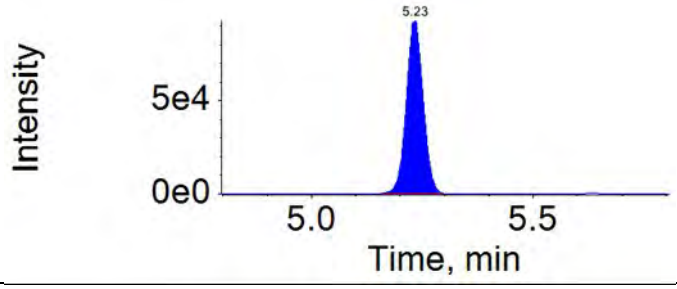
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



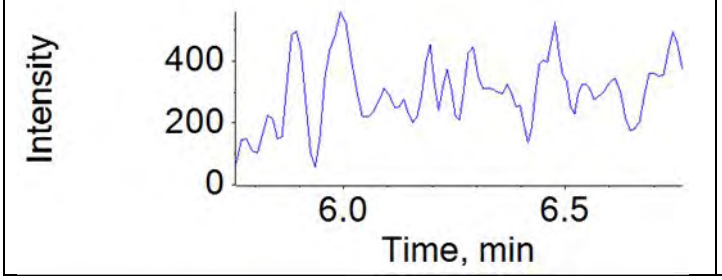


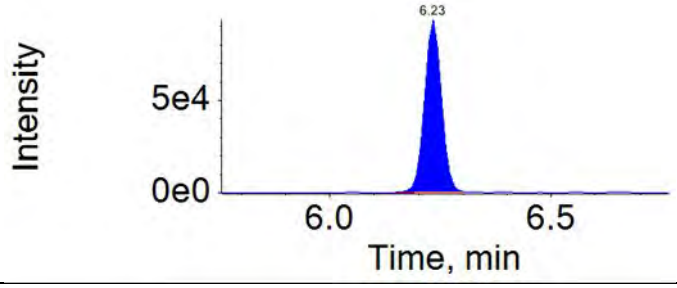
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



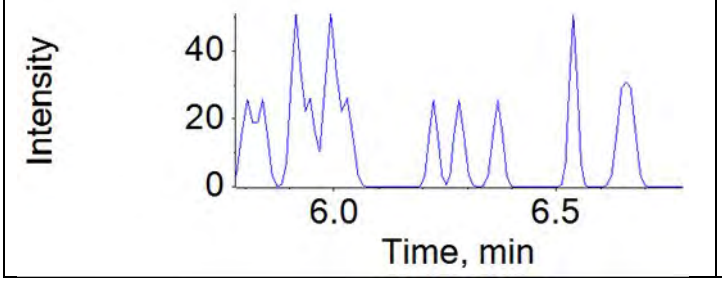


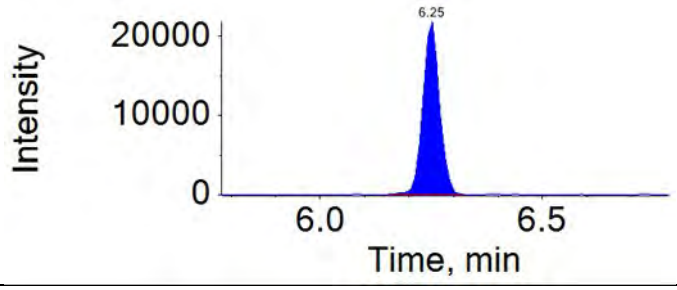
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

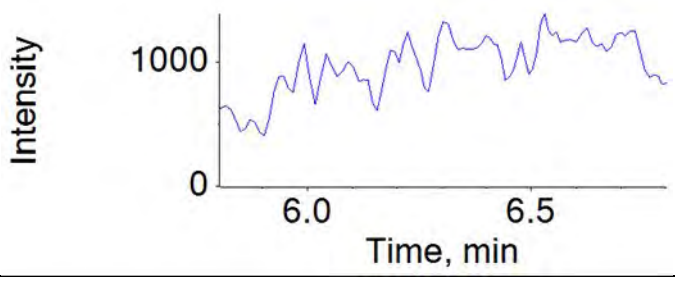
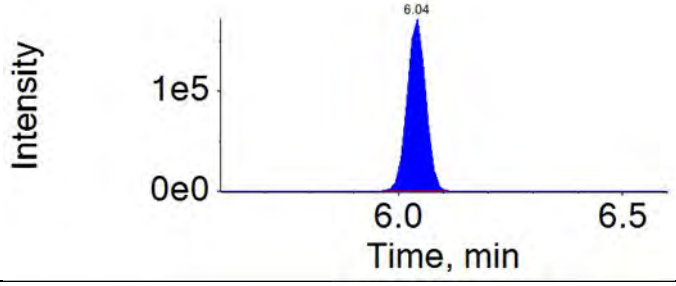


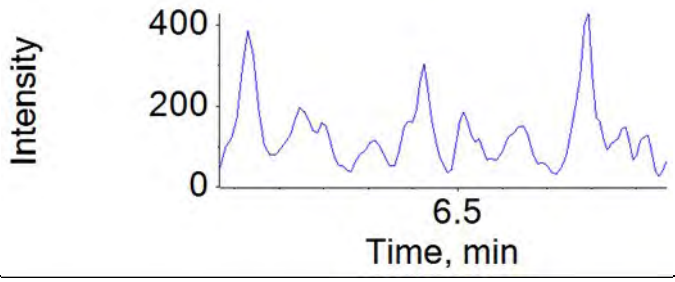
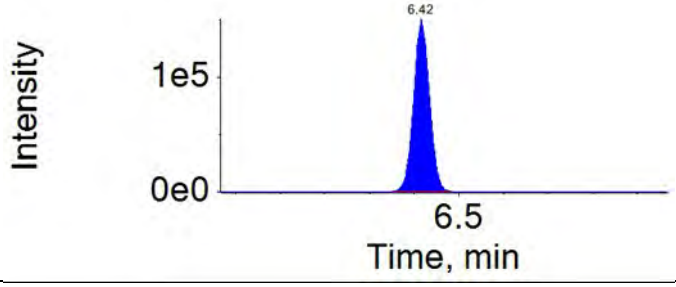


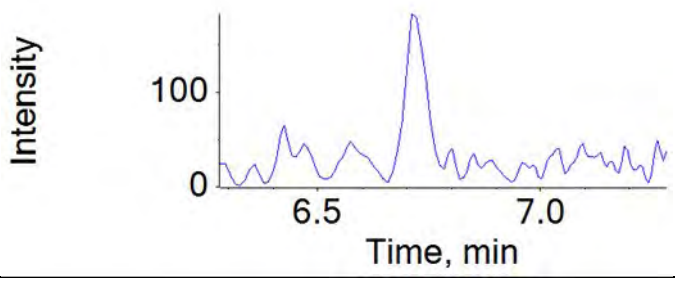
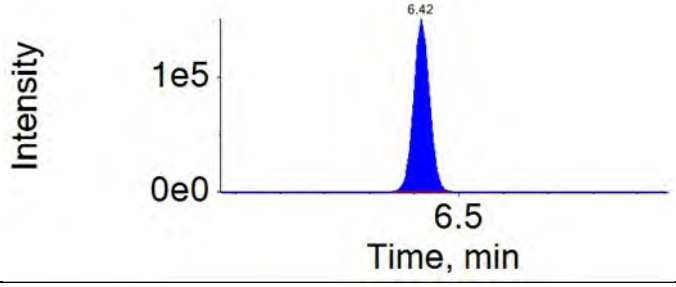
APPROVED
By MCD at 4:42 pm, 11/8/18

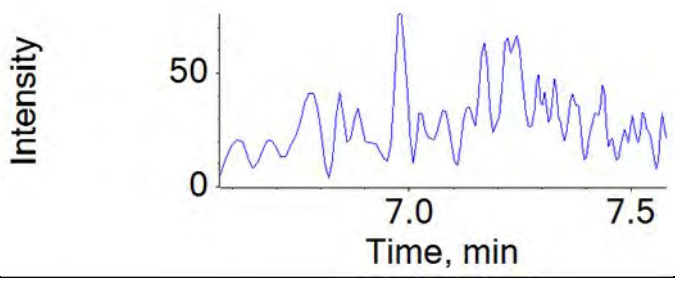
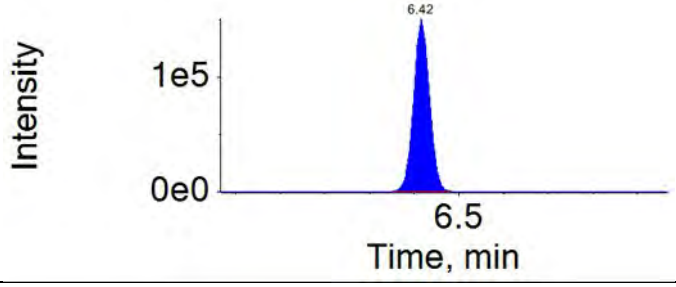
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Ion Ratio Report

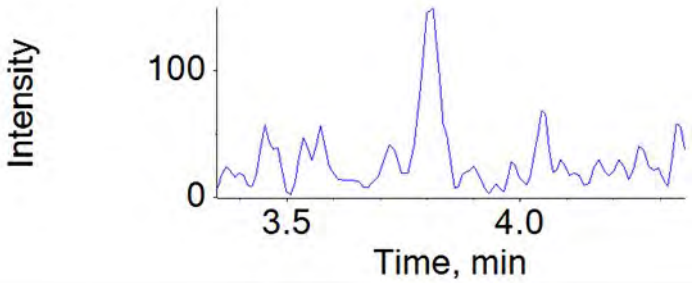
Sample Name: BLK309005 **Instrument Name:** LM27631 **File Name:** 18NOV07D-14.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

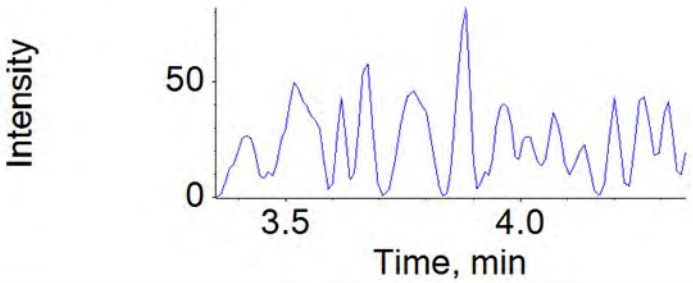
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

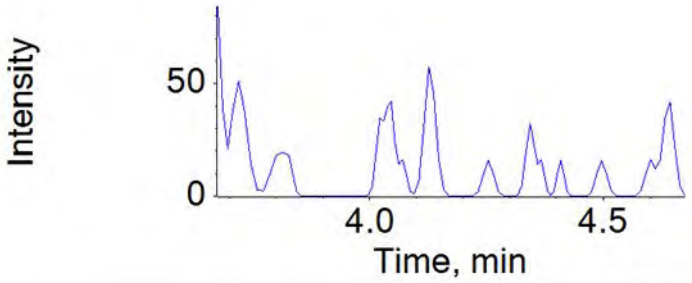
Component: PFBS
Primary Mass: 299.0 / 80.0



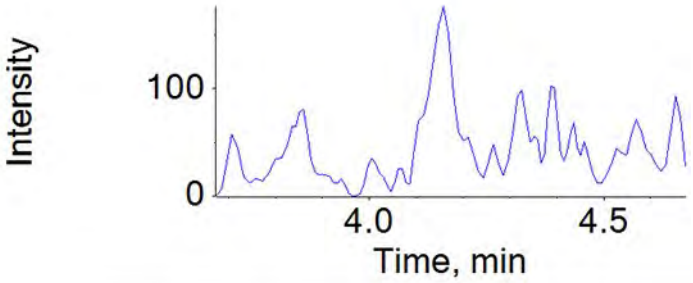
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



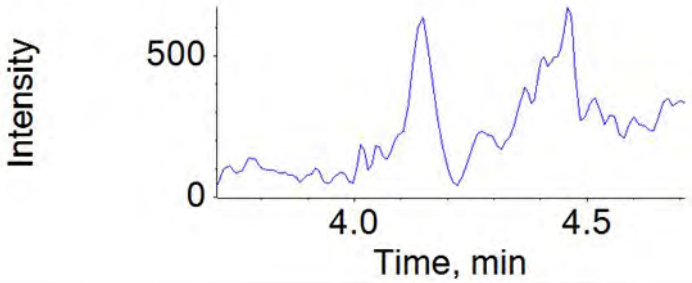
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



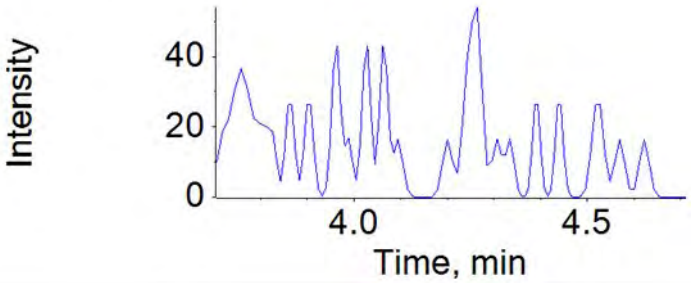
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



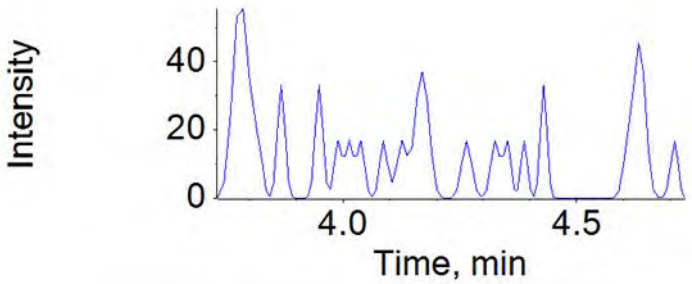
Component: PFHxA
Primary Mass: 313.0 / 269.0



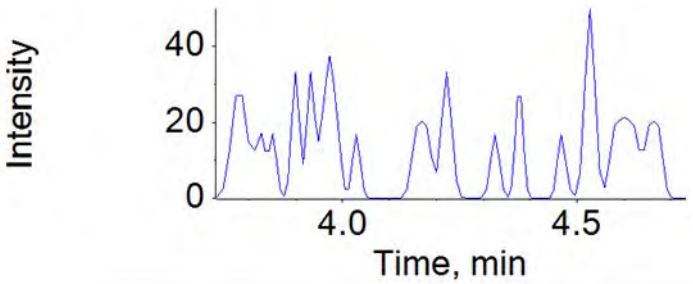
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



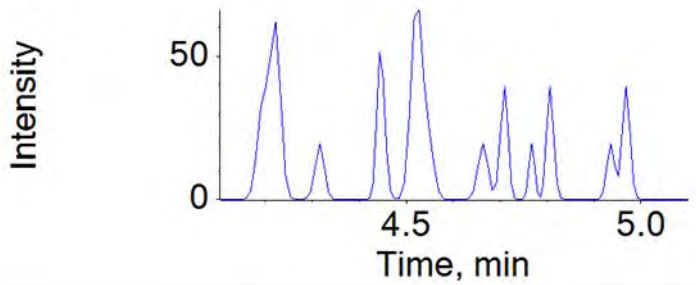
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



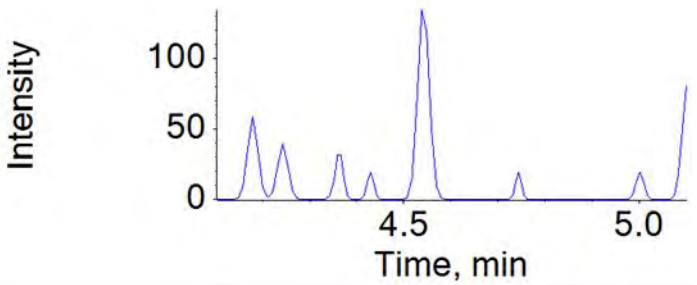
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

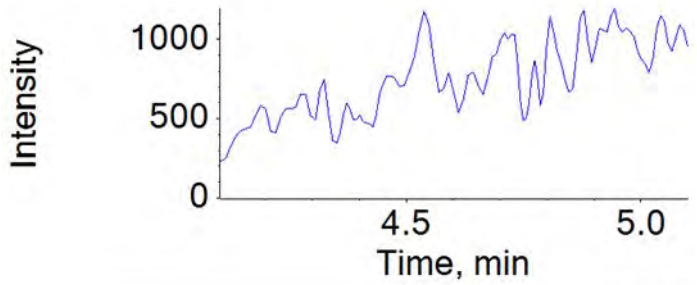
Component: PFHxS
Primary Mass: 399.0 / 80.0



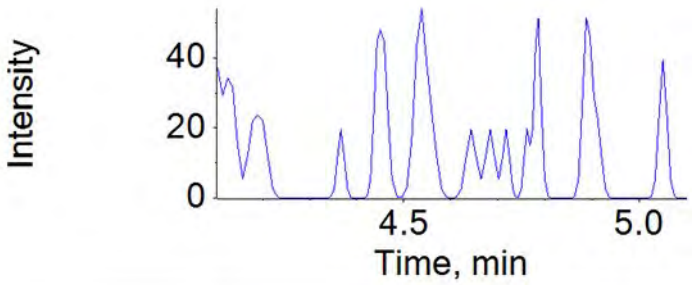
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



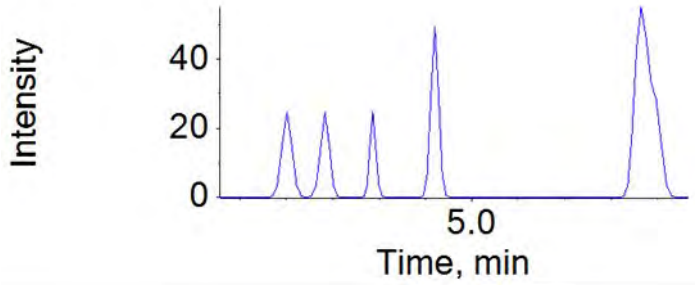
Component: PFHpA
Primary Mass: 363.0 / 319.0



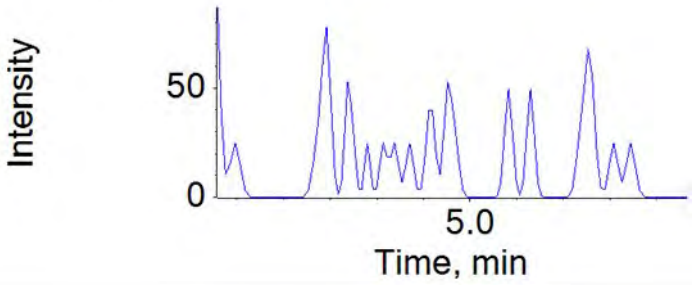
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



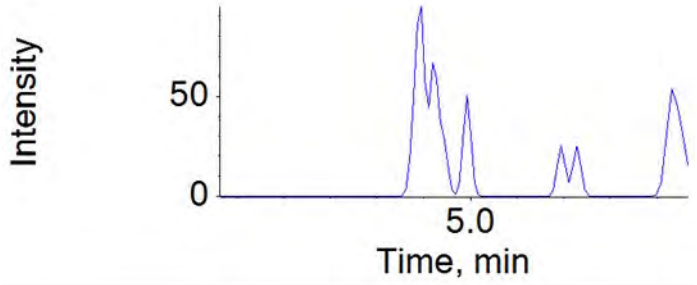
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



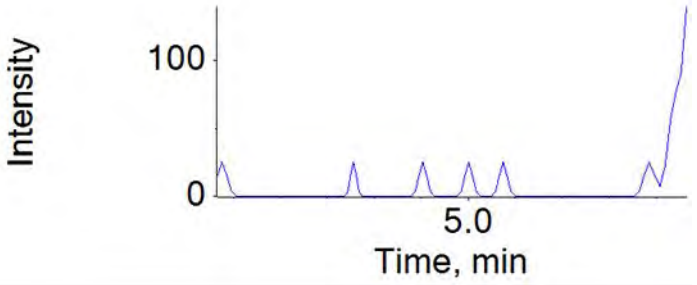
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



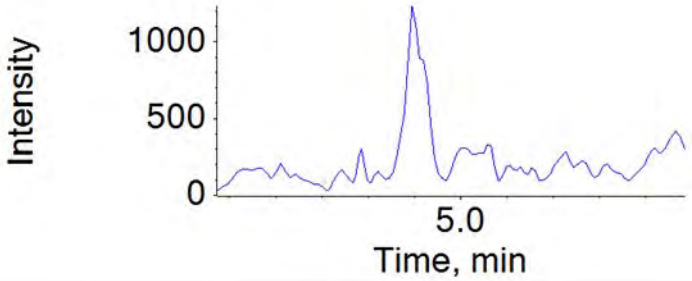
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



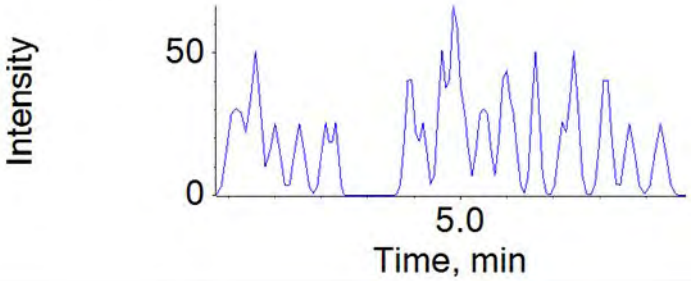
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

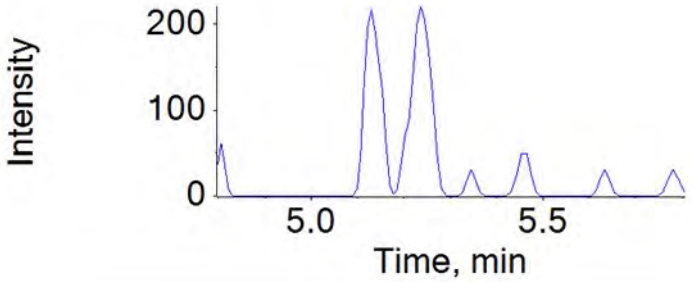
Component: PFOA
Primary Mass: 413.0 / 369.0



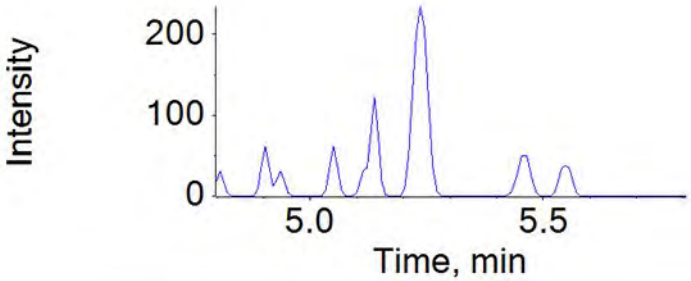
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



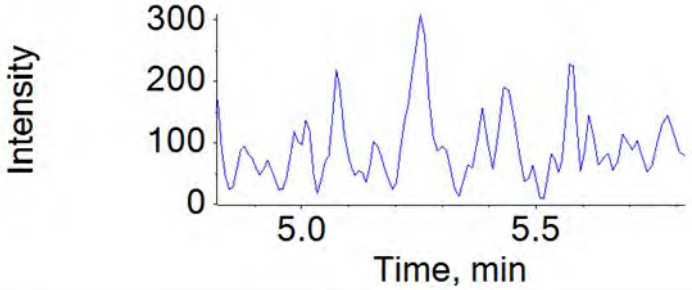
Component: PFOS
Primary Mass: 499.0 / 80.0



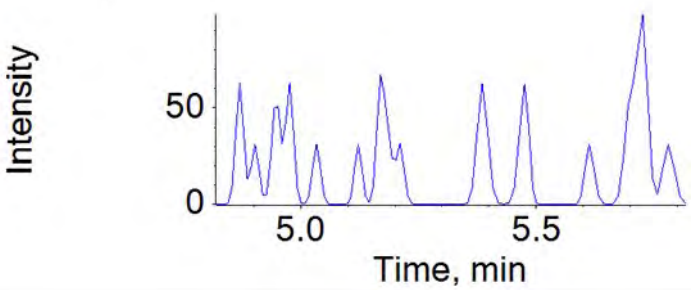
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



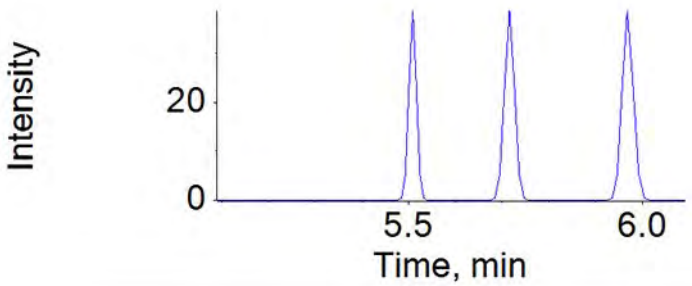
Component: PFNA
Primary Mass: 463.0 / 419.0



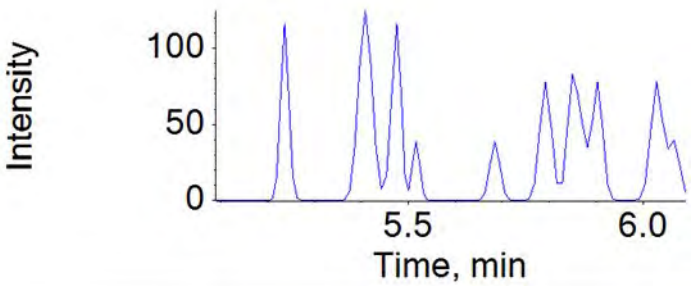
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



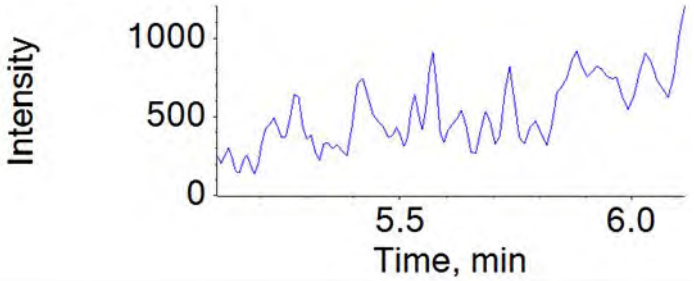
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



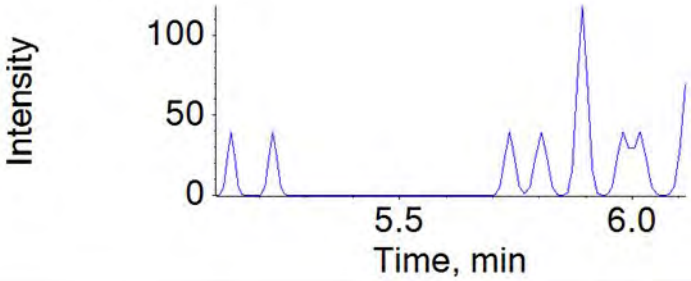
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

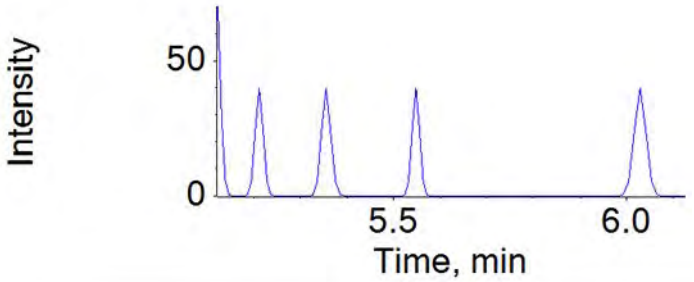
Component: PFDA
Primary Mass: 513.0 / 469.0



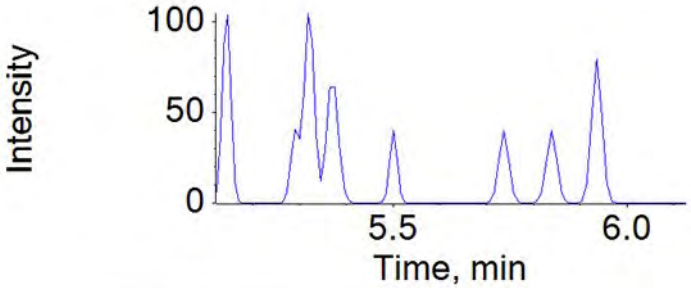
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



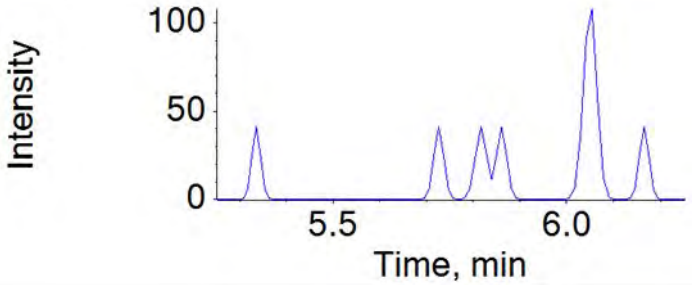
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



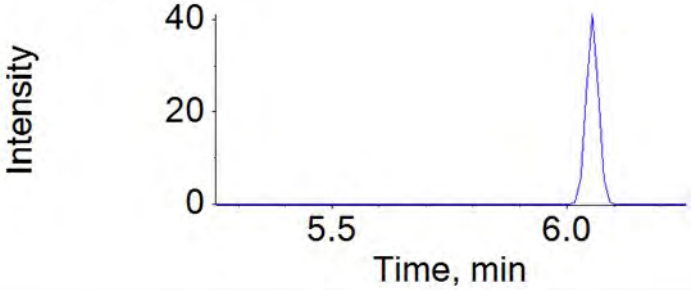
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



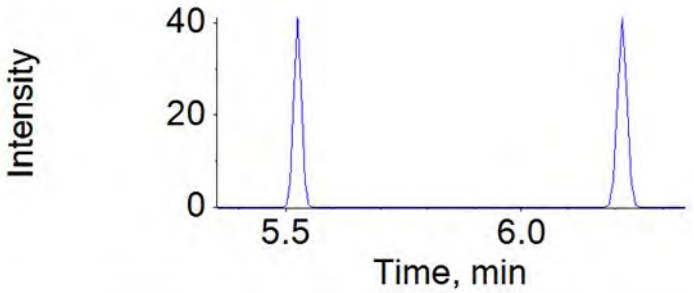
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



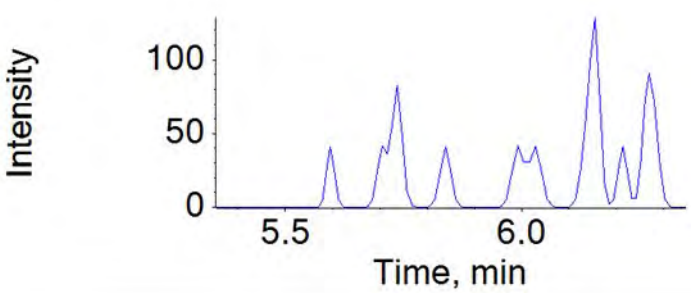
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



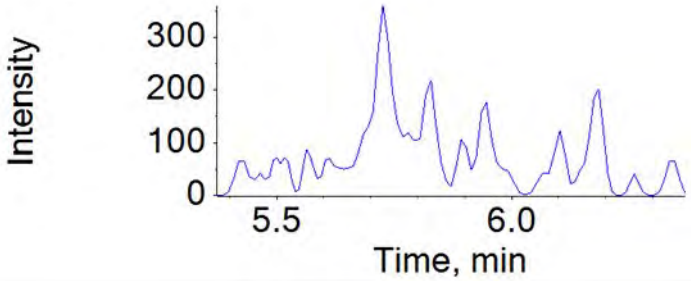
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



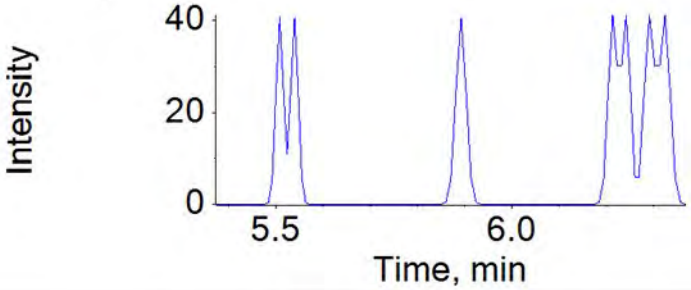
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

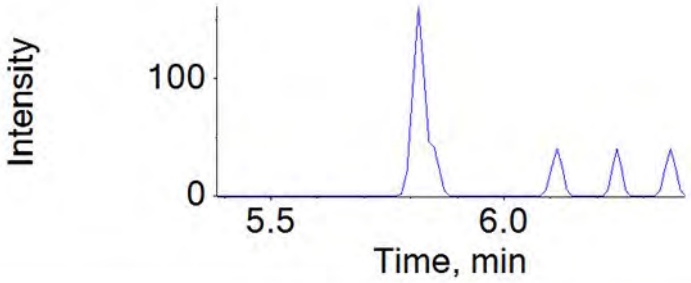
Component: PFUnDA
Primary Mass: 563.0 / 519.0



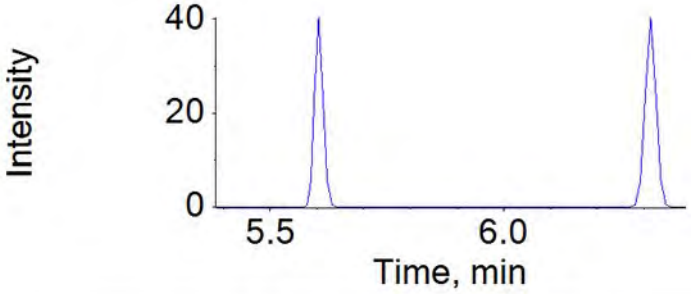
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



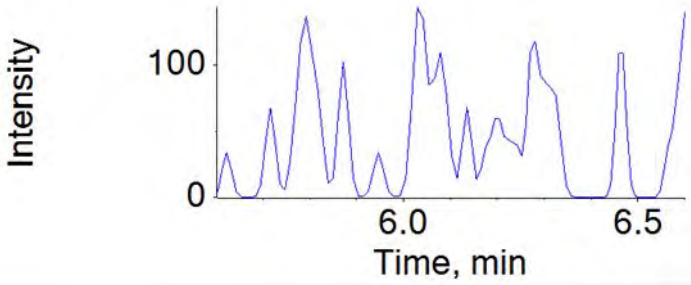
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



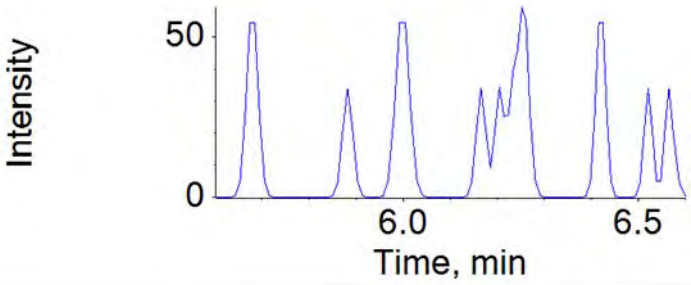
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



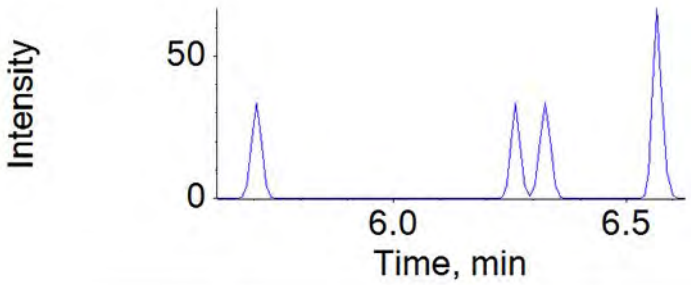
Component: PFDoDA
Primary Mass: 613.0 / 569.0



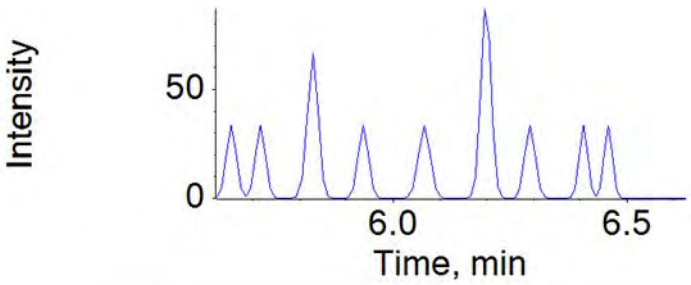
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



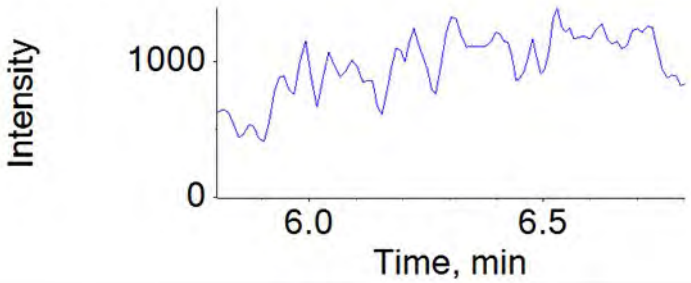
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



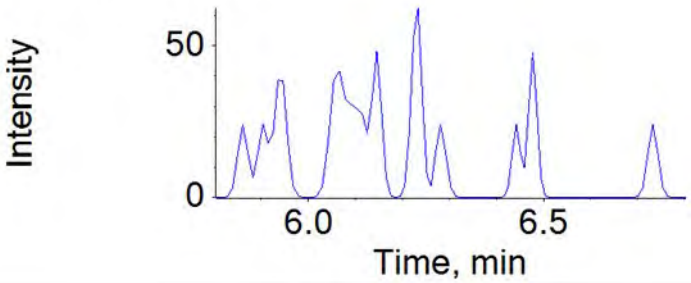
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

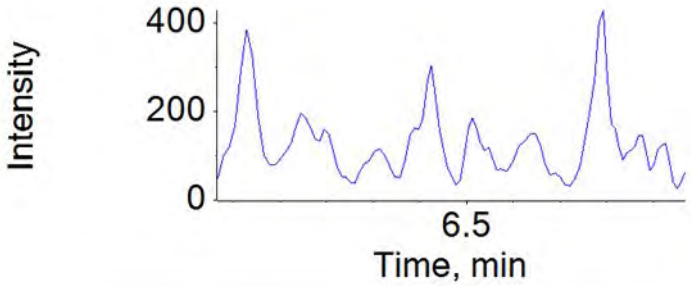
Component: PFTrDA
Primary Mass: 663.0 / 619.0



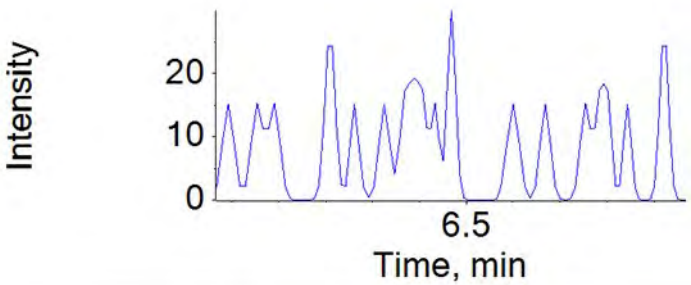
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



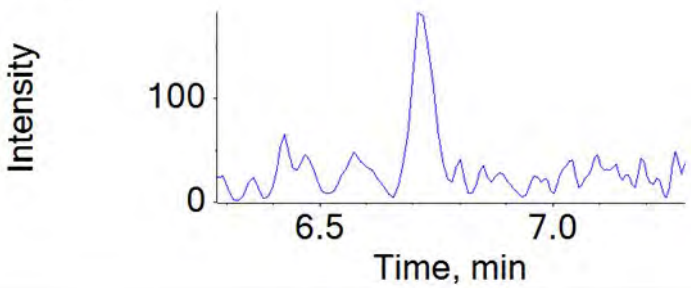
Component: PFTeDA
Primary Mass: 713.0 / 669.0



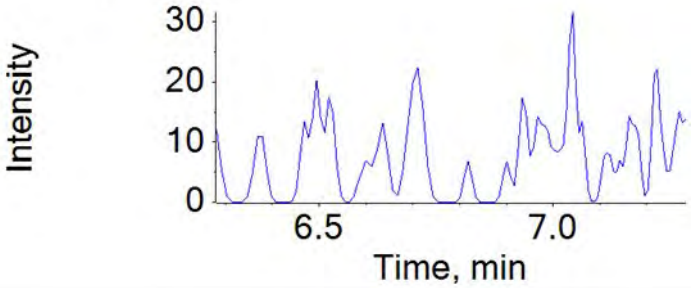
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



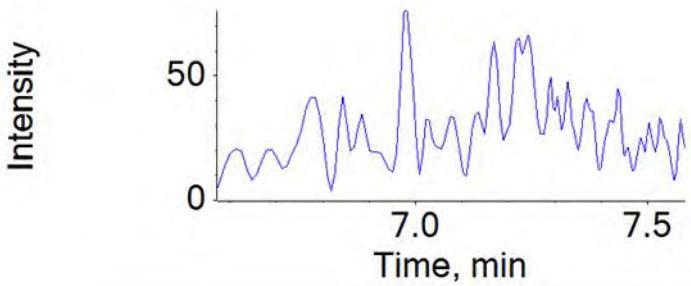
Component: PFHxDA
Primary Mass: 813.0 / 769.0



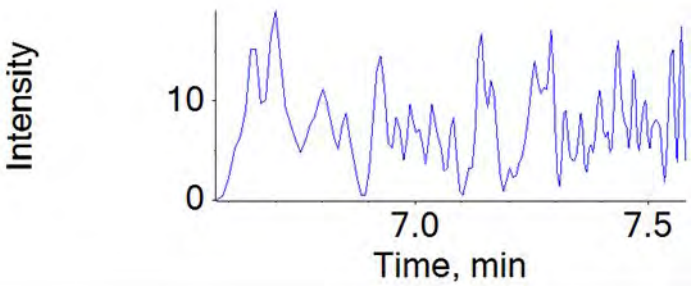
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	BLK331014			**Data File:**		18NOV29D-43.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18331014			**Acquis Date:**		2018-11-29T16:16:09
Sample Type:	Unknown			**Instrument:**		LM27631
Vial Position:	24			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18331014
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18331014			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1073404.3	906425.4	18	50	
13C2-PFOA	5.0	600068.5	495984.0	21	50	
13C4-PFOS	4.8	363158.6	296261.8	23	50	
13C2-PFDA	5.0	588840.2	451203.0	31	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	844382.7	13C3-PFBA	1073404.3	0.787	10.000	7.019	70	50-150	
E13C5-PFPeA	859260.5	13C3-PFBA	1073404.3	0.801	10.000	7.476	75	50-150	
E13C3-PFBS	372572.8	13C3-PFBA	1073404.3	0.347	9.300	6.623	71	50-150	
E13C2-4:2-FTS	71586.8	13C2-PFOA	600068.6	0.119	9.340	8.222	88	50-150	
E13C5-PFHxA	591717.5	13C2-PFOA	600068.6	0.986	10.000	7.244	72	50-150	
E13C3-PFHxS	308048.5	13C2-PFOA	600068.6	0.513	9.460	8.047	85	50-150	
E13C4-PFHpA	489515.9	13C2-PFOA	600068.6	0.816	10.000	7.497	75	50-150	
E13C2-6:2-FTS	65440.0	13C2-PFOA	600068.6	0.109	9.500	9.130	96	50-150	
E13C8-PFOA	902971.9	13C2-PFOA	600068.6	1.505	10.000	8.284	83	50-150	
E13C8-PFOS	307204.8	13C4-PFOS	363158.6	0.846	9.560	7.637	80	50-150	
E13C9-PFNA	607887.1	13C4-PFOS	363158.6	1.674	10.000	7.353	74	50-150	
E13C6-PFDA	776132.1	13C2-PFDA	588840.2	1.318	10.000	7.433	74	50-150	
E13C2-8:2-FTS	54281.4	13C2-PFDA	588840.2	0.092	9.580	7.924	83	50-150	
E13C8-PFOSA	20270.1	13C2-PFDA	588840.2	0.034	10.000	0.253	3	50-150	OOS
Ed3-NMeFOSAA	218297.4	13C2-PFDA	588840.2	0.371	10.000	9.414	94	50-150	
E13C7-PFUnDA	539051.1	13C2-PFDA	588840.2	0.915	10.000	7.738	77	50-150	
Ed5-NEtFOSAA	133107.7	13C2-PFDA	588840.2	0.226	10.000	8.054	81	50-150	
E13C2-PFDoDA	1056019.6	13C2-PFDA	588840.2	1.793	10.000	7.536	75	50-150	
Ed7-NMePFOSAE	13009.7	13C2-PFDA	588840.2	0.022	10.000	0.382	4	50-150	OOS
Ed3-NMePFOSA	853.6	13C2-PFDA	588840.2	0.001	10.000	0.078	1	50-150	OOS
Ed9-NEtPFOSAE	13133.4	13C2-PFDA	588840.2	0.022	10.000	0.452	5	50-150	OOS
Ed5-NEtPFOSA	803.8	13C2-PFDA	588840.2	0.001	10.000	0.095	1	50-150	OOS
E13C2-PFTeDA	748013.1	13C2-PFDA	588840.2	1.270	10.000	7.030	70	50-150	

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

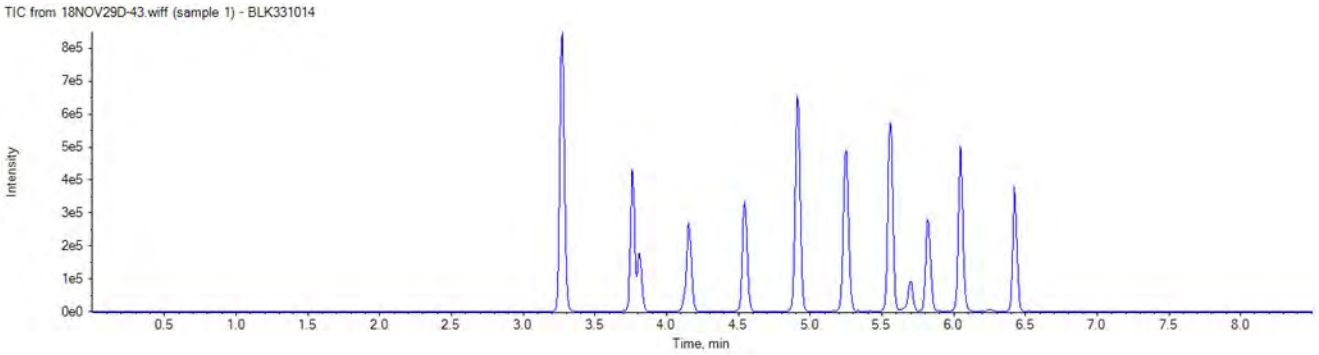
Analyte Quantitation Peak Table

Sample Name: BLK331014 **Instrument Name:** LM27631 **File Name:** 18NOV29D-43.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	N/A	N/A	N/A		A	13C4-PFBA	3.27	844382.7	N/A	
PFPeA	N/A	N/A	N/A		A	13C5-PFPeA	3.76	859260.5	N/A	
PFBS	N/A	N/A	N/A		A	13C3-PFBS	3.81	372572.8	N/A	
4:2-FTS	N/A	N/A	N/A		A	13C2-4:2-FTS	4.12	71586.8	N/A	
PFHxA	N/A	N/A	N/A		A	13C5-PFHxA	4.16	591717.5	N/A	
PFPeS	N/A	N/A	N/A		A	13C3-PFBS	3.81	372572.8	N/A	
PFHpA	N/A	N/A	N/A		A	13C4-PFHpA	4.54	489515.9	N/A	
PFHxS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	308048.5	N/A	
6:2-FTS	N/A	N/A	N/A		A	13C2-6:2-FTS	4.90	65440.0	N/A	
PFHpS	N/A	N/A	N/A		A	13C3-PFHxS	4.55	308048.5	N/A	
PFOA	N/A	N/A	N/A		A	13C8-PFOA	4.91	902971.9	N/A	
PFOS	N/A	N/A	N/A		A	13C8-PFOS	5.24	307204.8	N/A	
PFNA	N/A	N/A	N/A		A	13C9-PFNA	5.26	607887.1	N/A	
PFNS	N/A	N/A	N/A		A	13C8-PFOS	5.24	307204.8	N/A	
PFDA	N/A	N/A	N/A		A	13C6-PFDA	5.56	776132.1	N/A	
8:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	54281.4	N/A	
PFOSA	N/A	N/A	N/A		A	13C8-PFOSA	5.65	20270.1	N/A	
NMeFOSAA	N/A	N/A	N/A		A	d3-NMeFOSAA	5.70	218297.4	N/A	
PFDS	N/A	N/A	N/A		A	13C8-PFOS	5.24	307204.8	N/A	
PFUnDA	N/A	N/A	N/A		A	13C7-PFUnDA	5.82	539051.2	N/A	
NEtFOSAA	N/A	N/A	N/A		A	d5-NEtFOSAA	5.83	133107.7	N/A	
PFDoDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	1056019.6	N/A	
10:2-FTS	N/A	N/A	N/A		A	13C2-8:2-FTS	5.56	54281.4	N/A	
NMePFOSAE	N/A	N/A	N/A		A	d7-NMePFOSAE	6.10	13009.7	N/A	
NMePFOSA	N/A	N/A	N/A		A	d3-NMePFOSA	6.11	853.6	N/A	
PFDoS	N/A	N/A	N/A		A	13C8-PFOS	5.24	307204.8	N/A	
NEtPFOSAE	N/A	N/A	N/A		A	d9-NEtPFOSAE	6.25	13133.4	N/A	
NEtPFOSA	N/A	N/A	N/A		A	d5-NEtPFOSA	6.27	803.8	N/A	
PFTrDA	N/A	N/A	N/A		A	13C2-PFDoDA	6.05	1056019.6	N/A	
PFTeDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	748013.1	N/A	
PFHxDA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	748013.1	N/A	
PFODA	N/A	N/A	N/A		A	13C2-PFTeDA	6.43	748013.1	N/A	

Total Ion Chromatogram

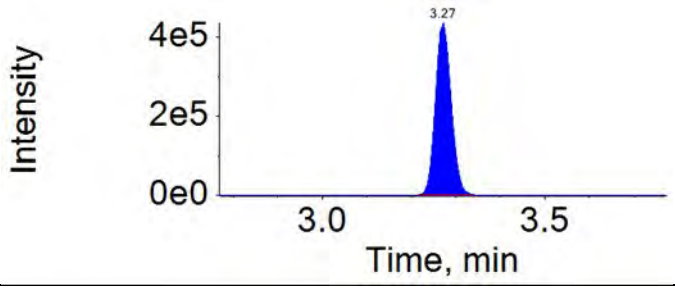


APPROVED
By MCD at 9:12 pm, 11/30/18

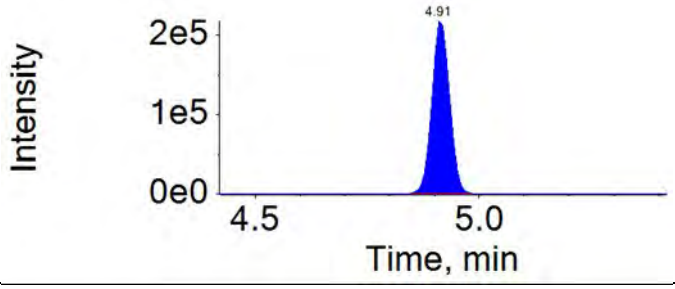
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

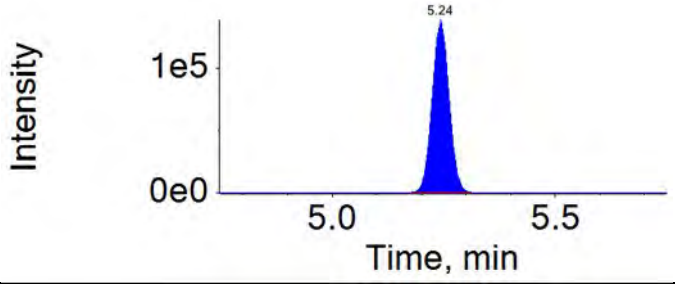
Injection Standard: 13C3-PFBA
216.0 / 172.0



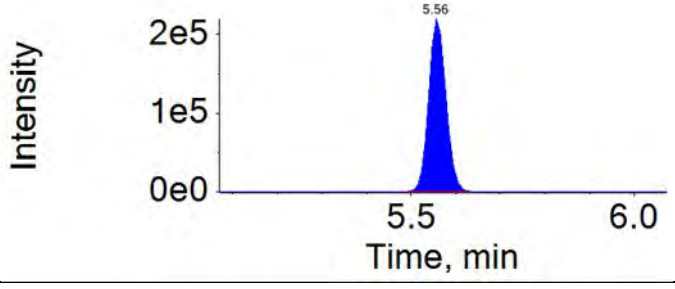
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



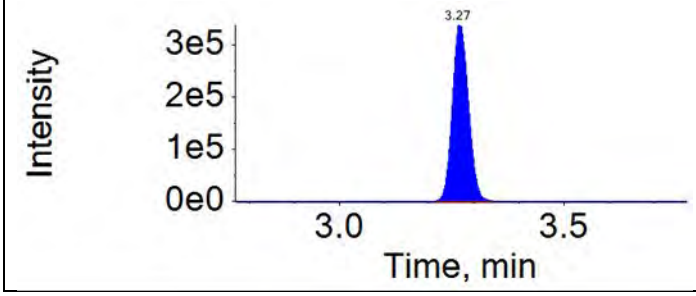
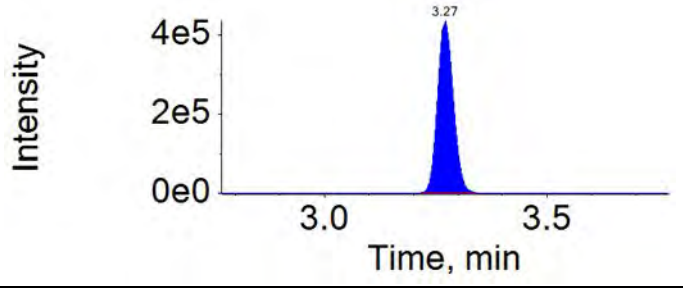
Injection Standard: 13C2-PFDA
515.0 / 470.0

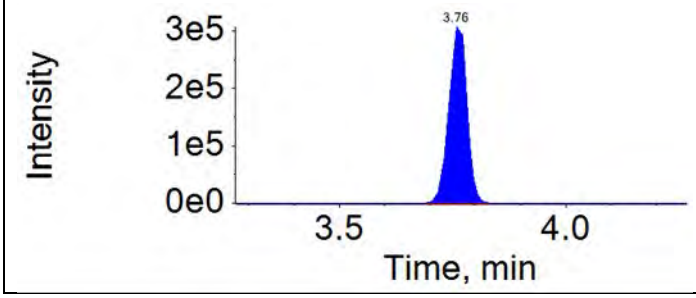
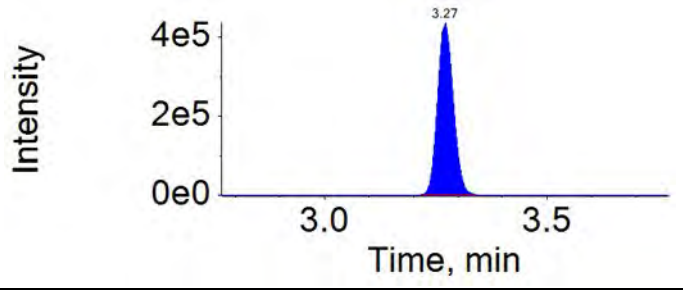


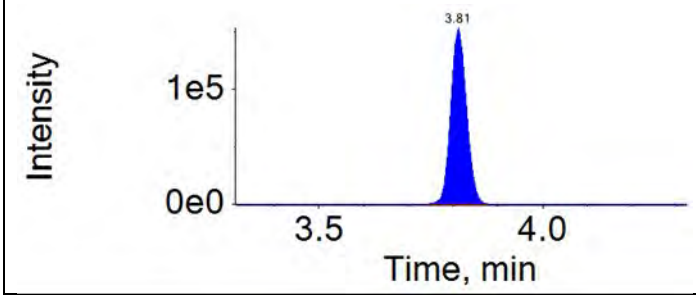
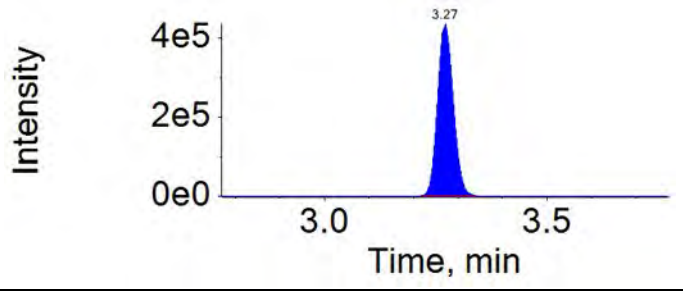
APPROVED
By MCD at 9:12 pm, 11/30/18

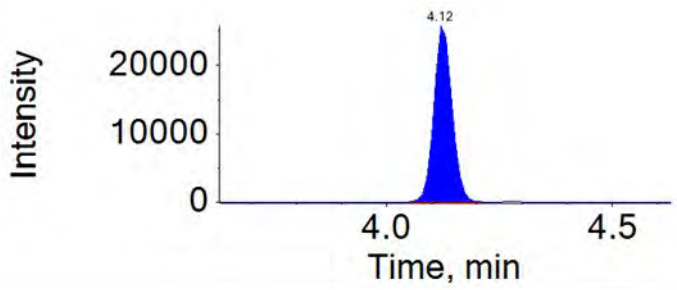
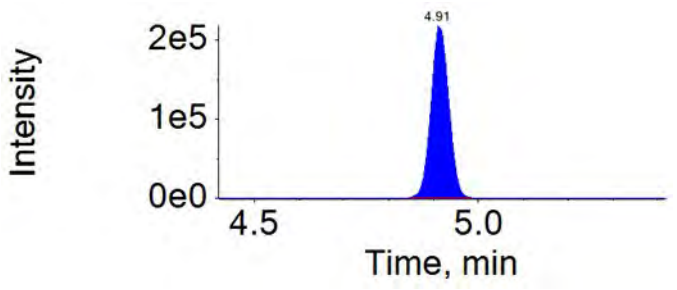
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

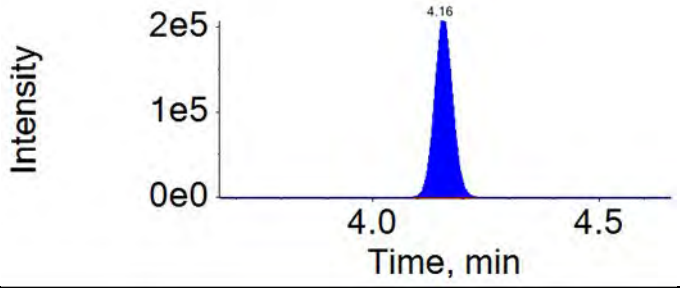
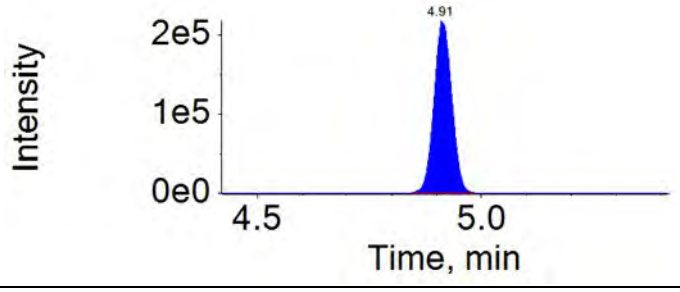
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

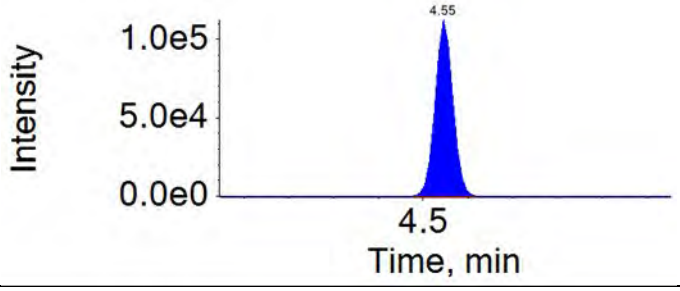
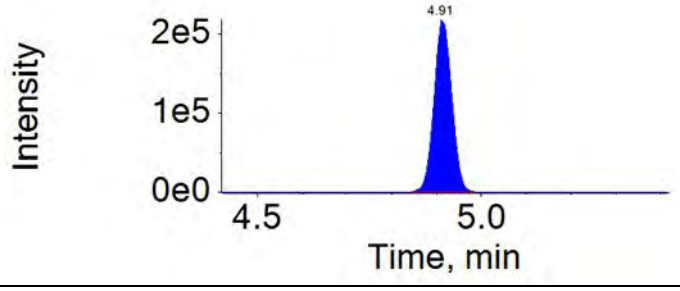
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

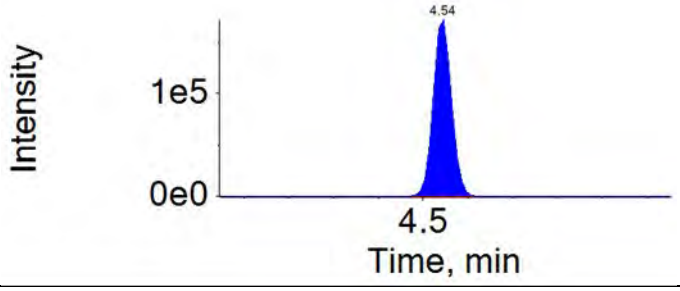
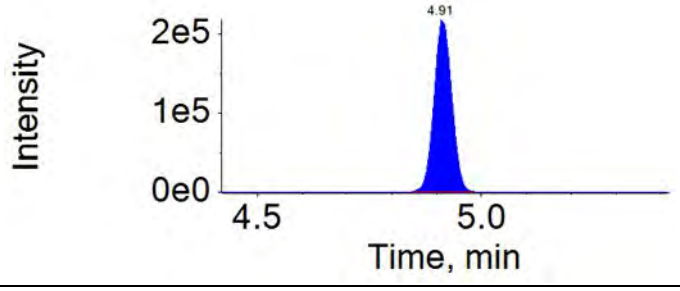
APPROVED
By MCD at 9:12 pm, 11/30/18

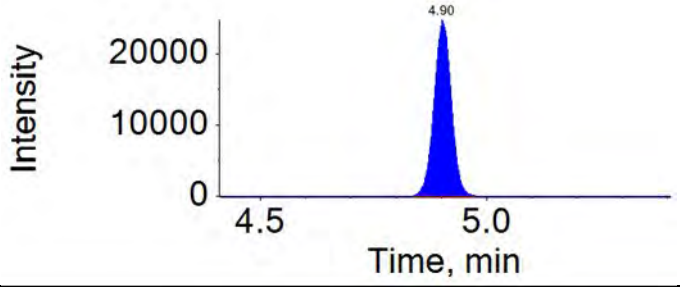
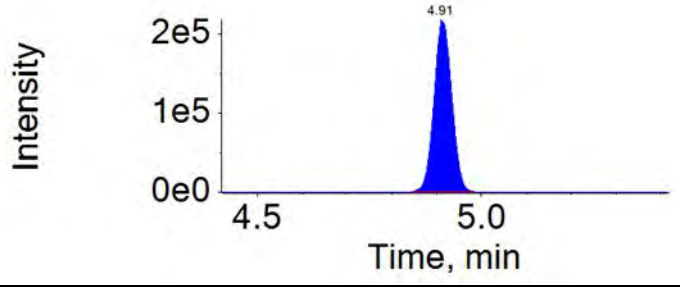
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0
	

Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0
	

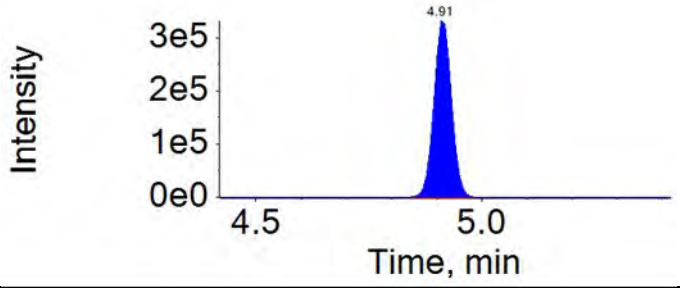
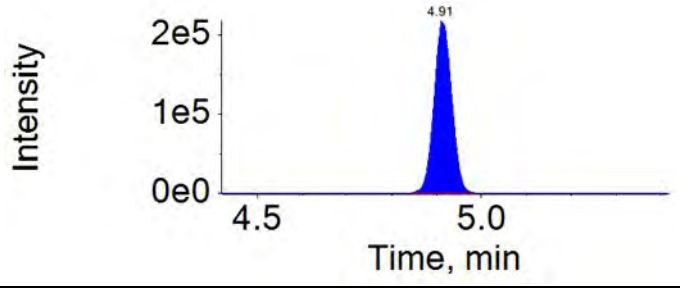
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0
	

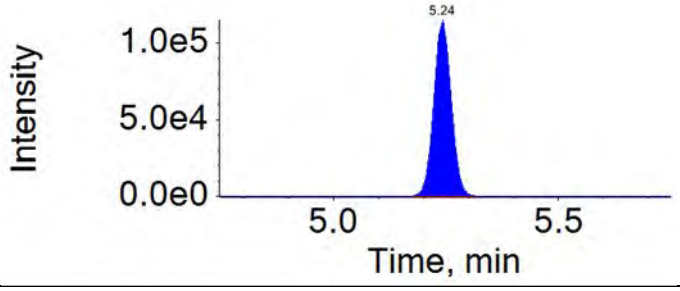
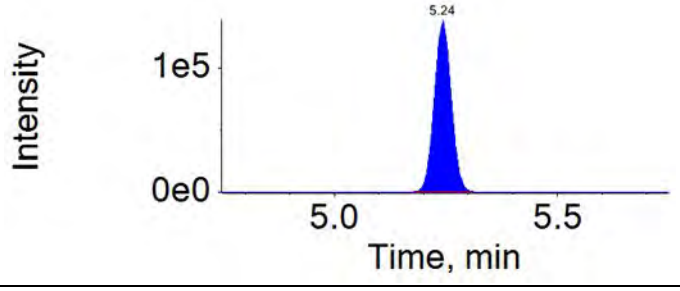
Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0
	

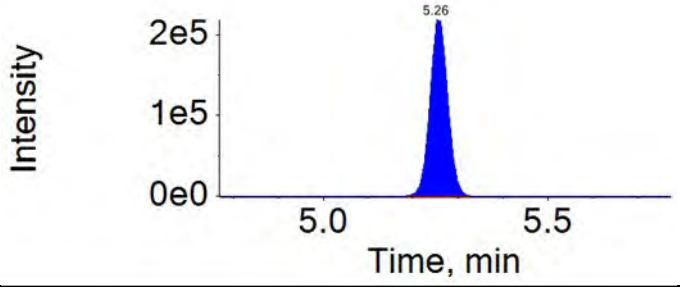
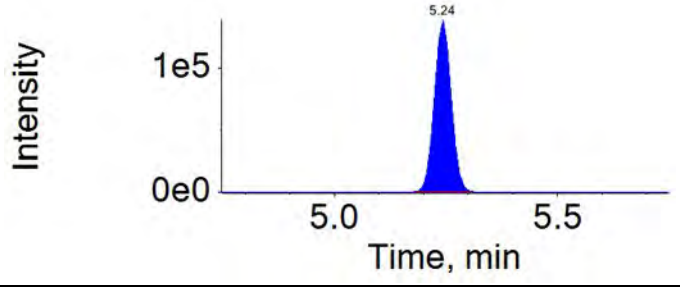
APPROVED
By MCD at 9:12 pm, 11/30/18

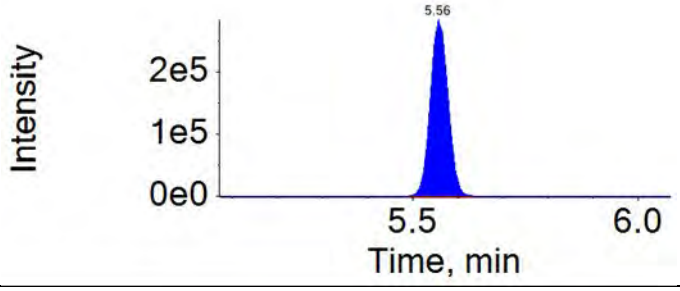
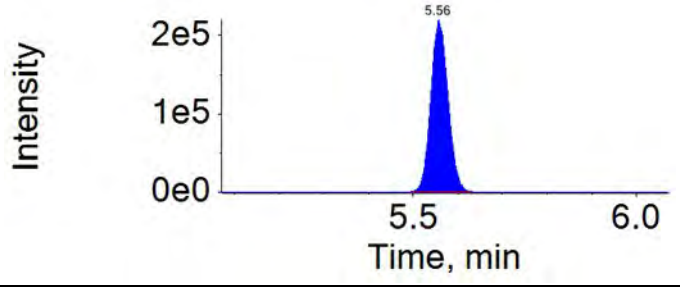
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

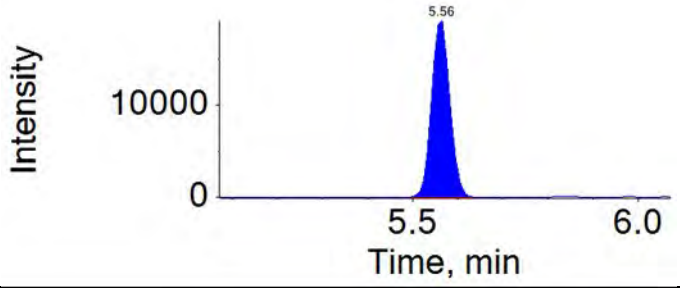
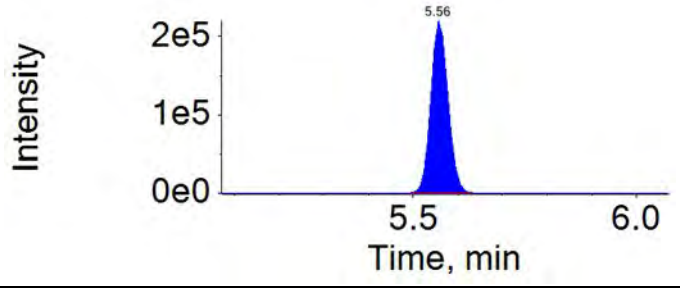
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

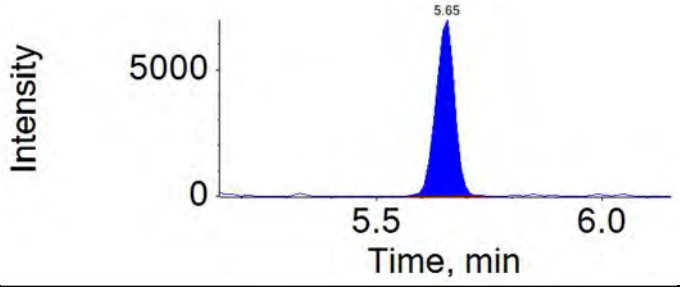
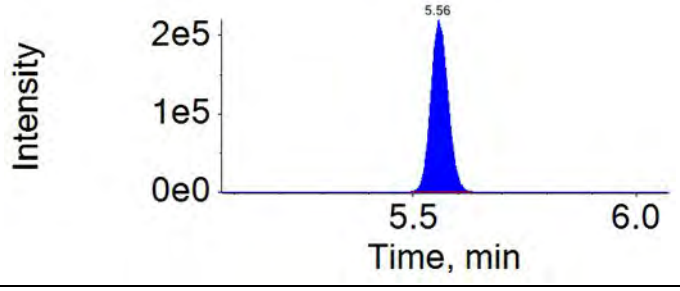
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

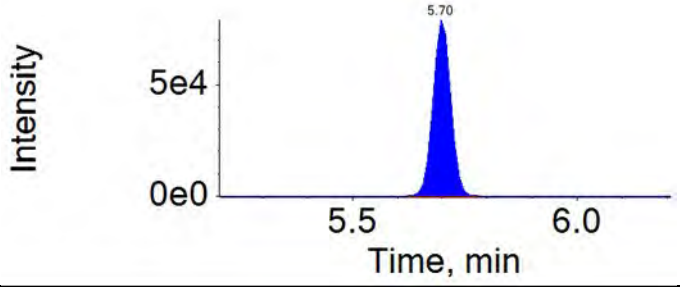
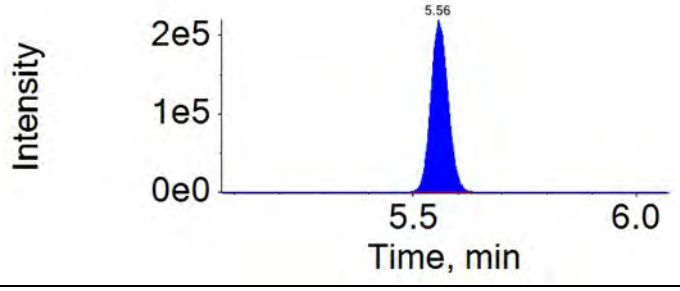
APPROVED
By MCD at 9:12 pm, 11/30/18

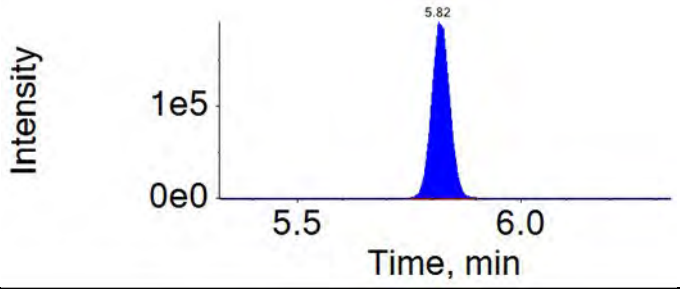
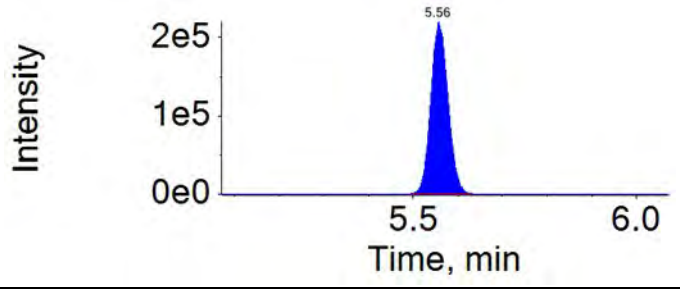
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

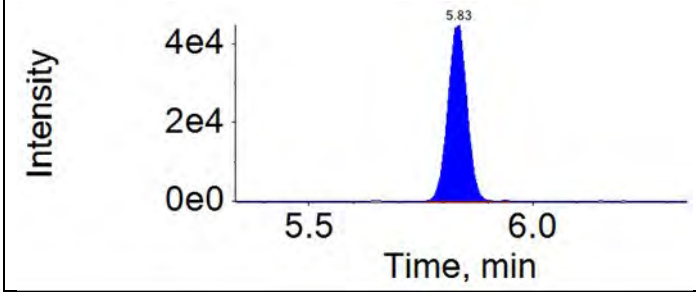
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

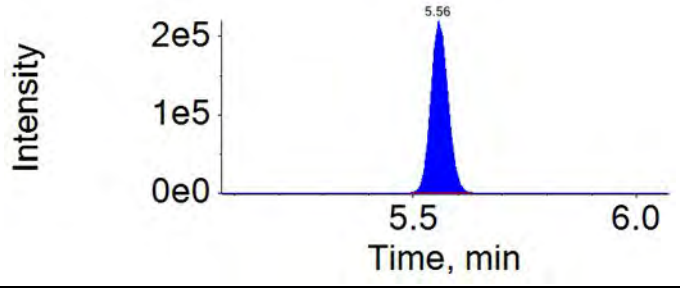
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

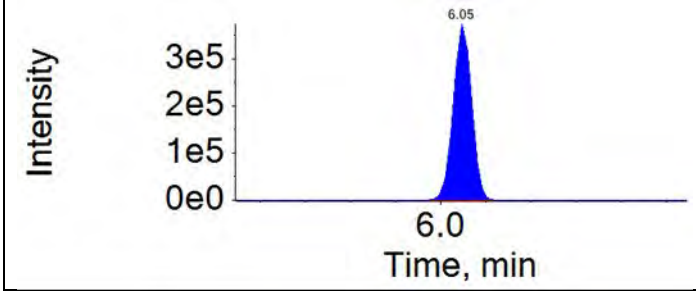
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

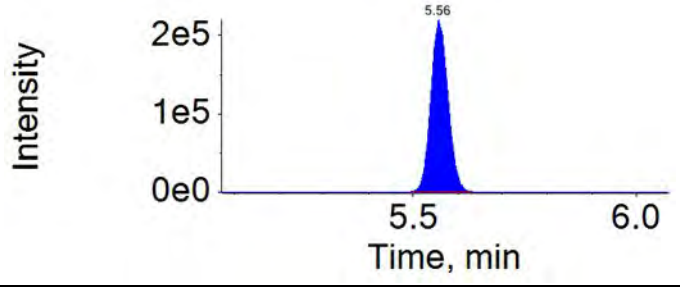
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



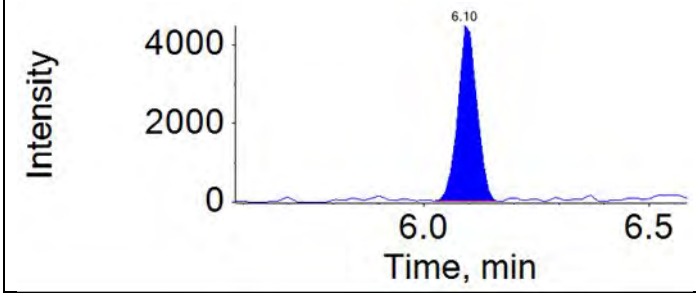


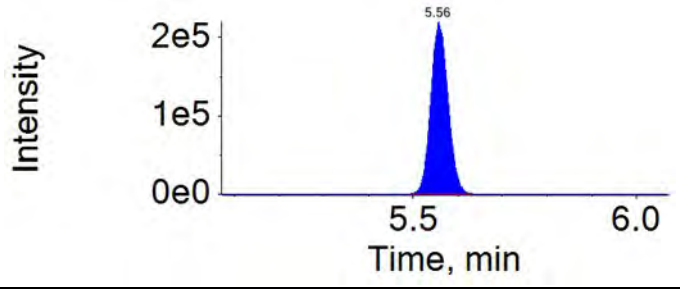
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



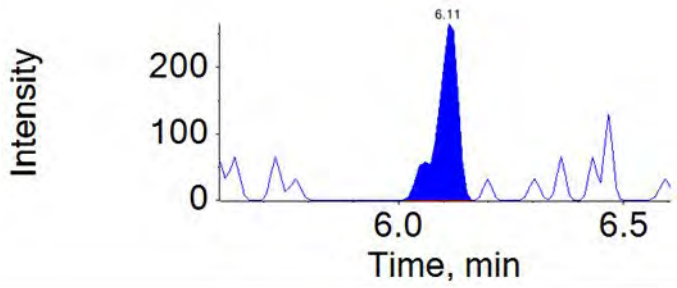


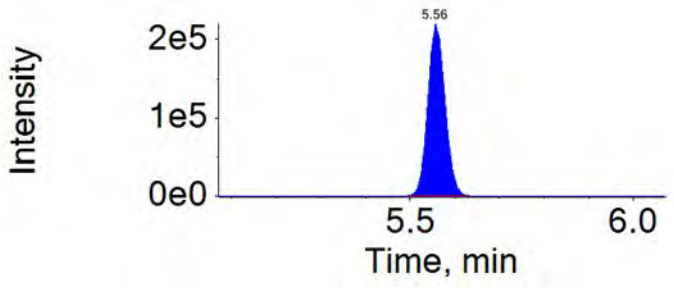
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



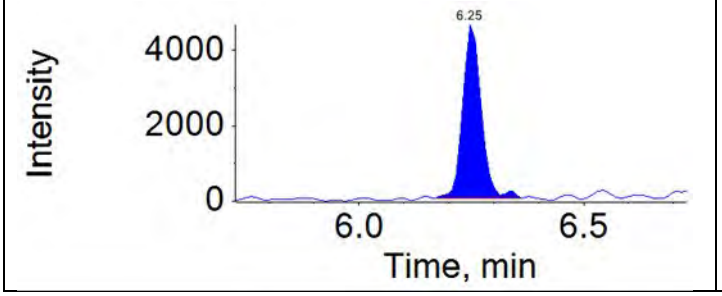


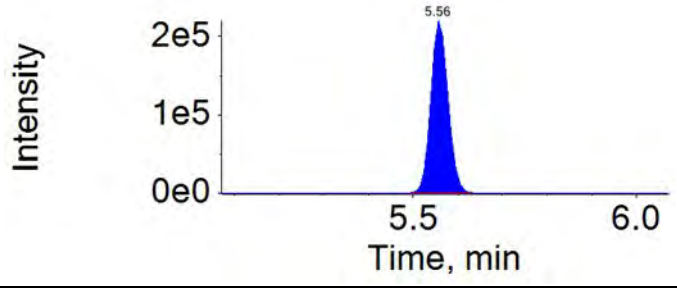
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

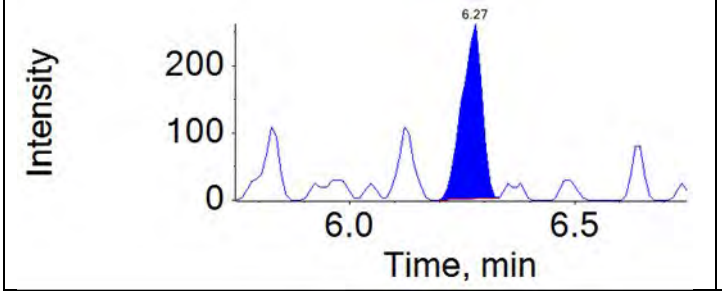
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

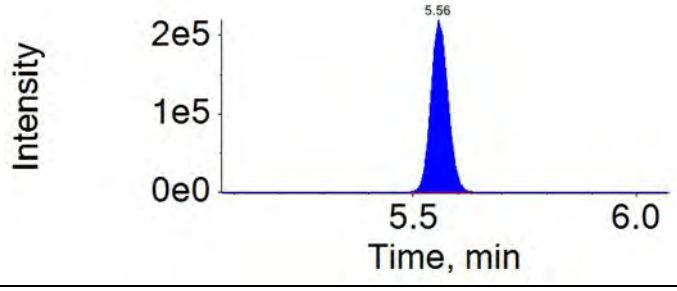
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



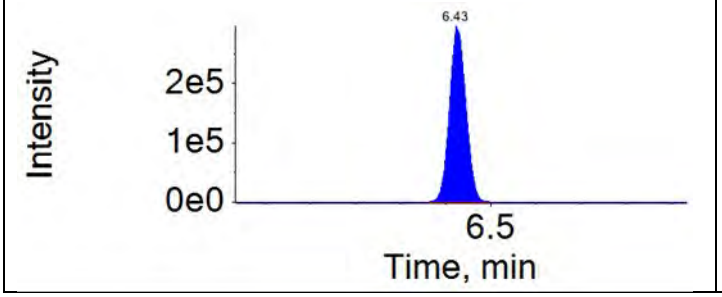


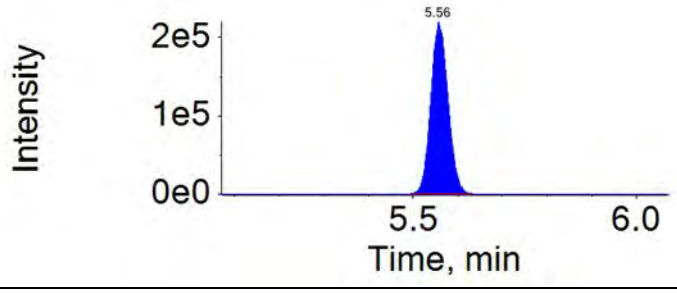
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



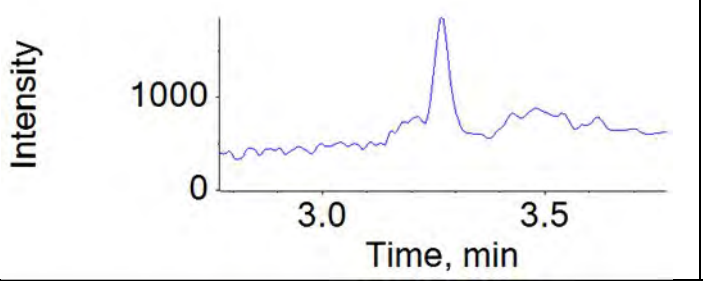


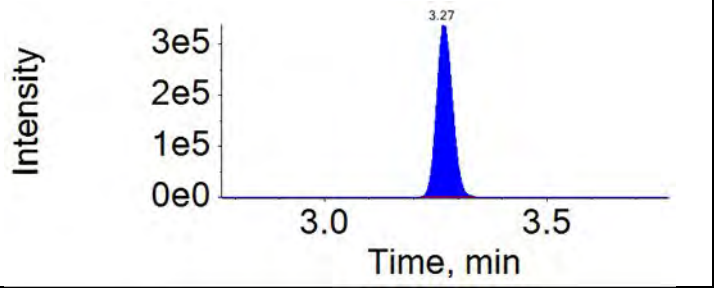
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

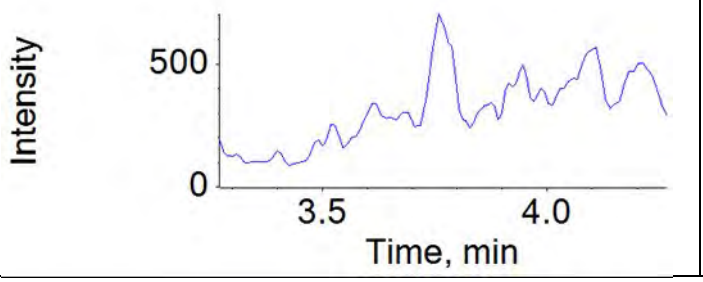
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

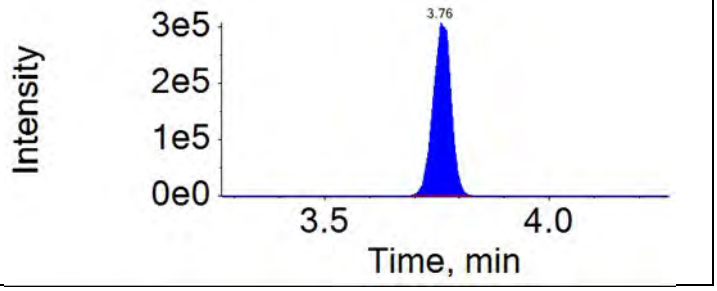
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



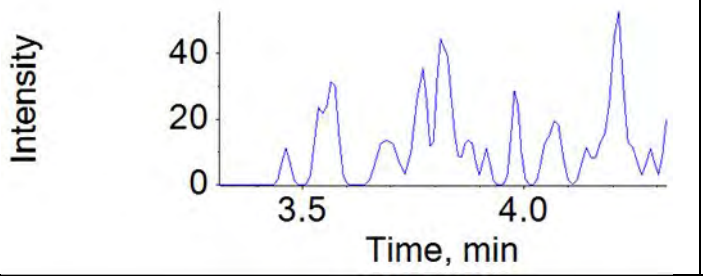


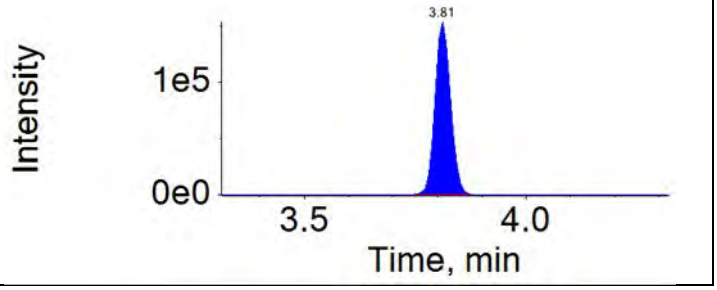
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



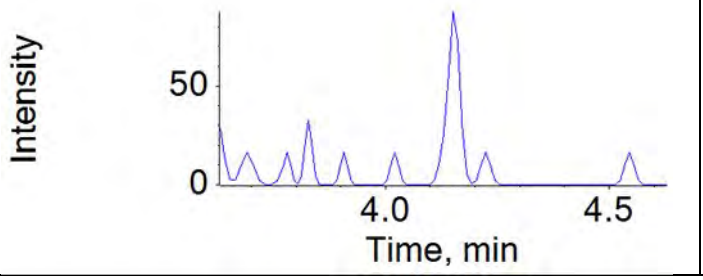


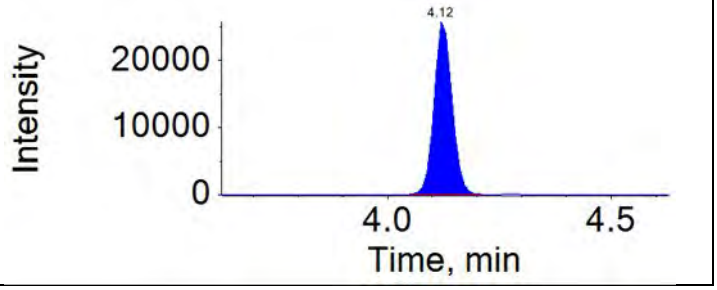
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



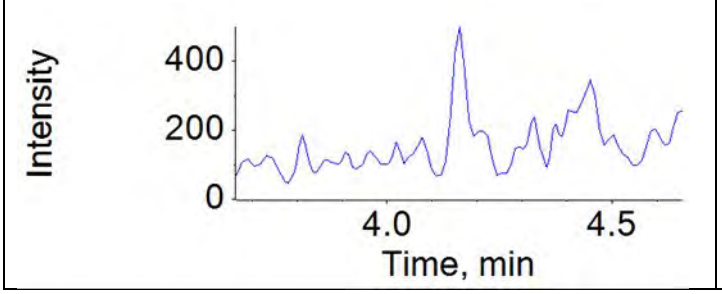


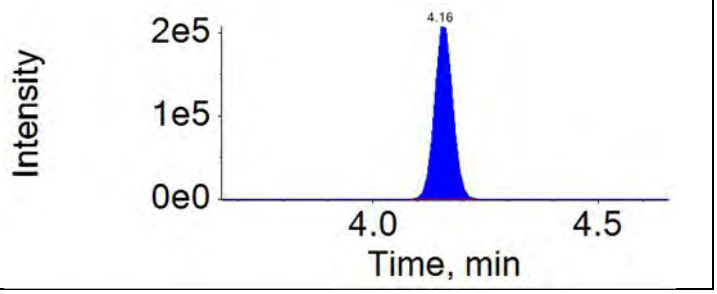
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

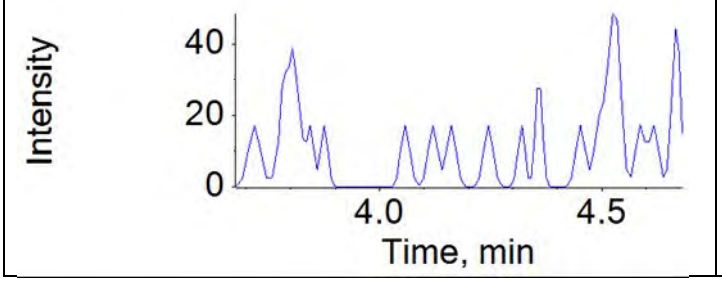
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

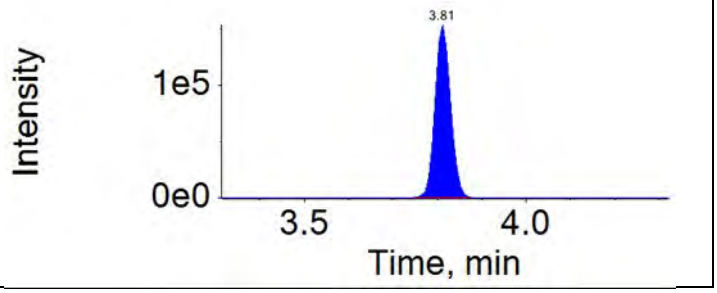
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



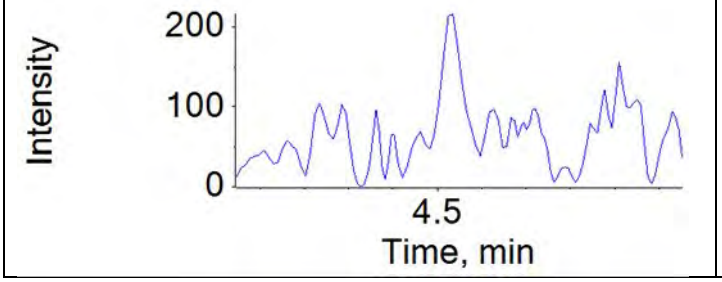


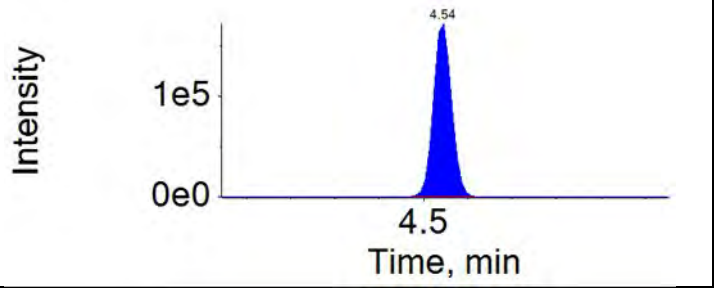
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



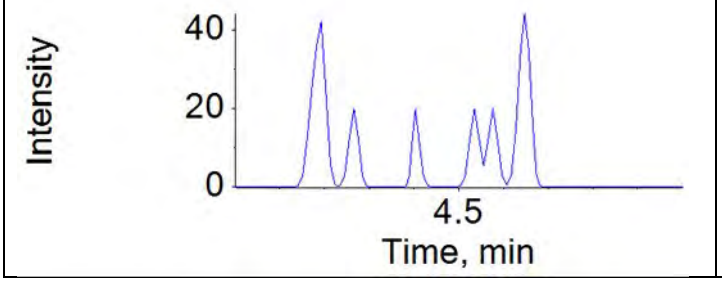


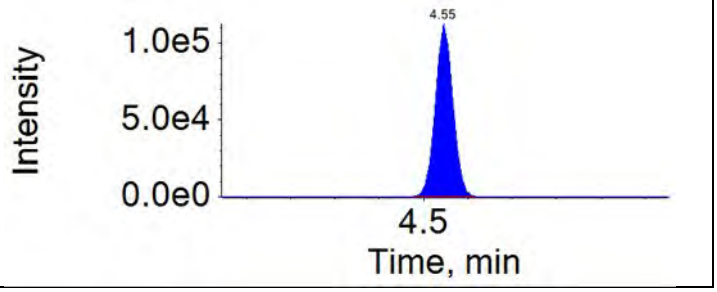
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0



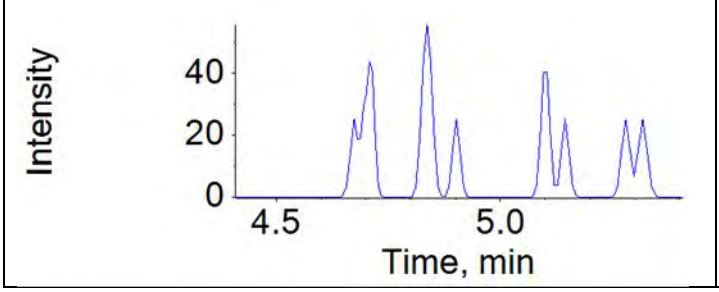


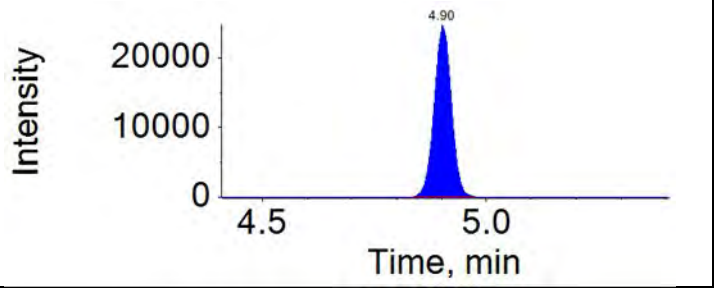
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

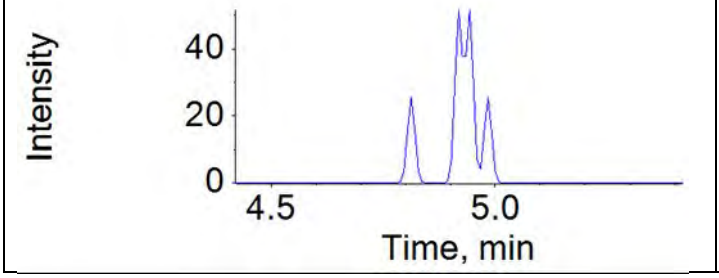
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

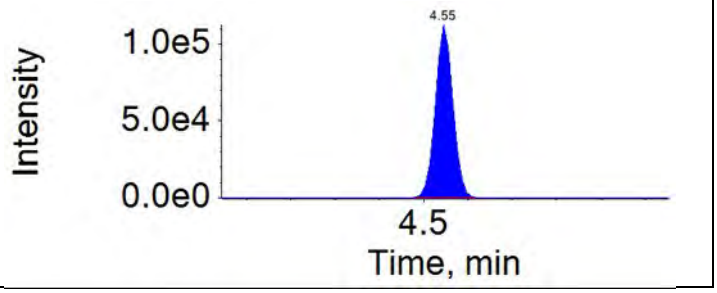
Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0



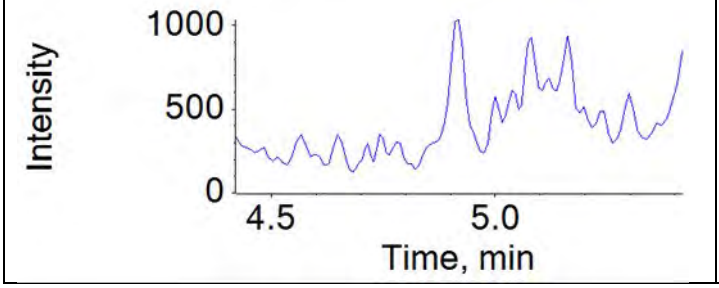


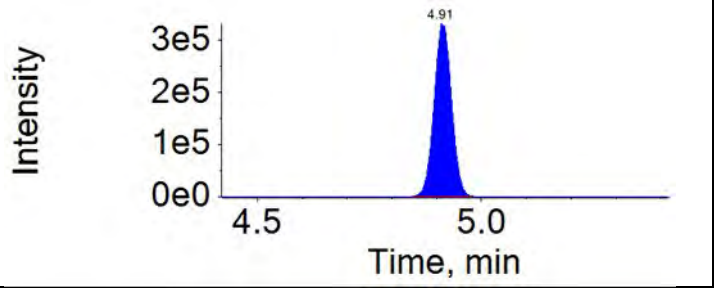
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0



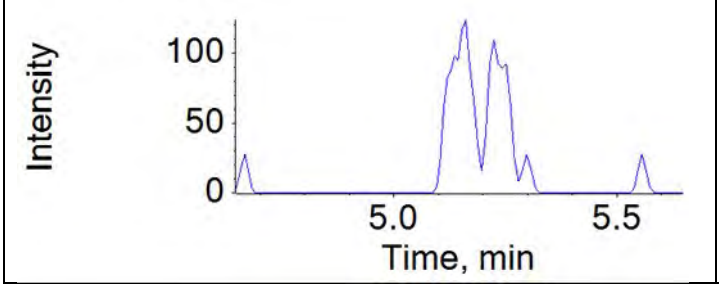


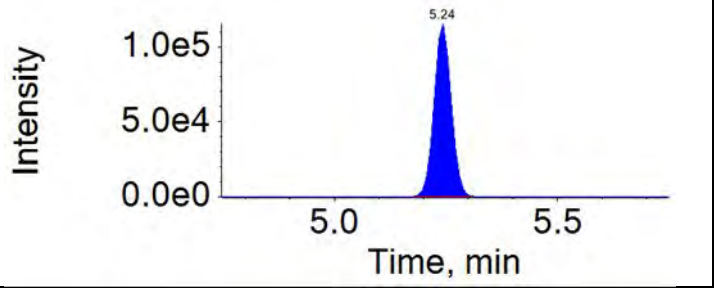
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0





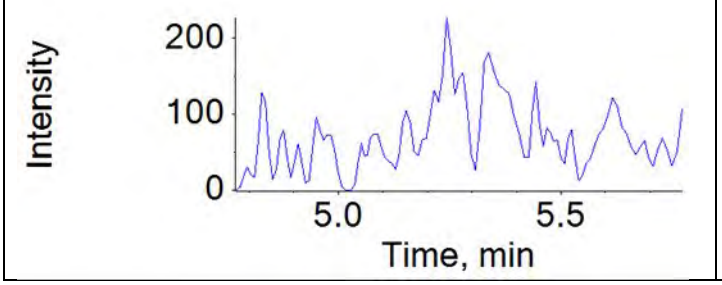
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0

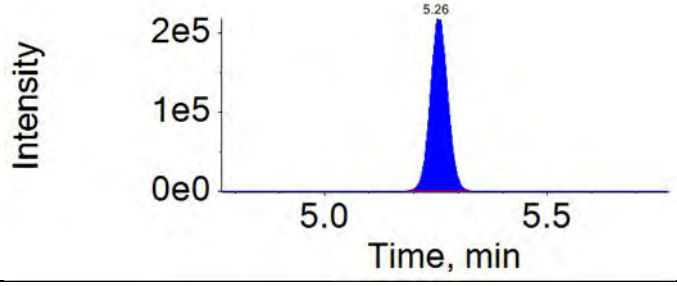




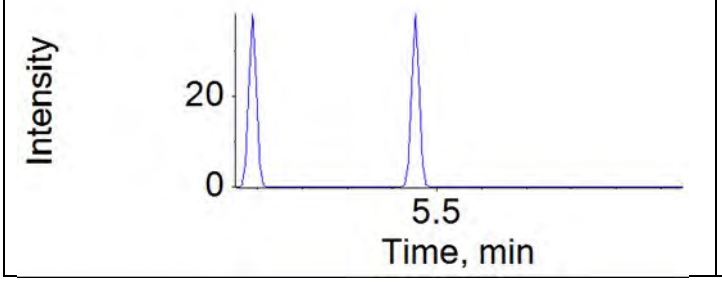
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

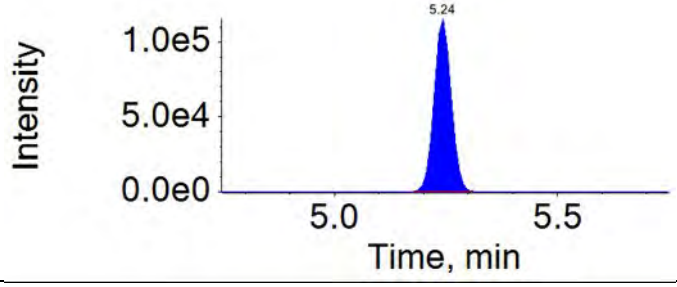
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



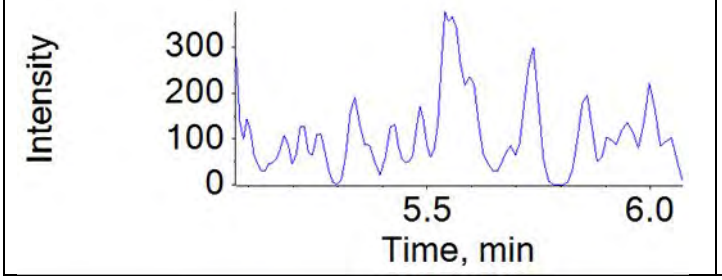


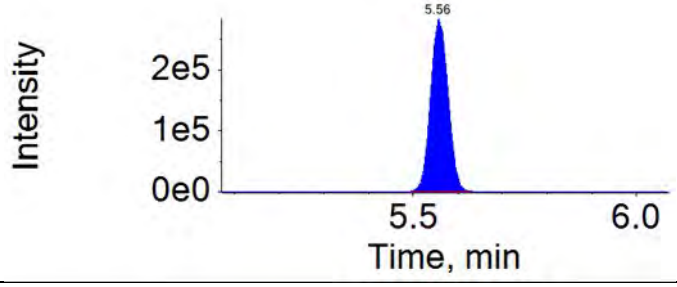
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



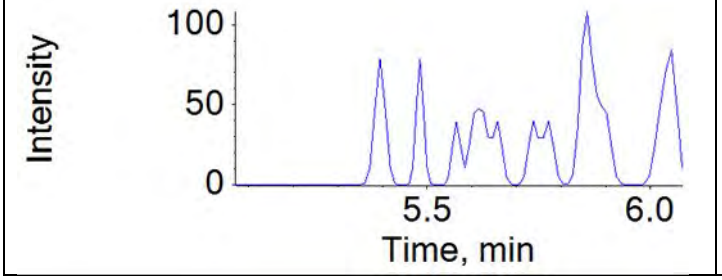


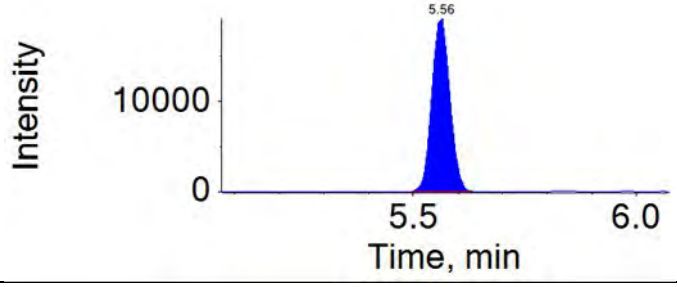
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



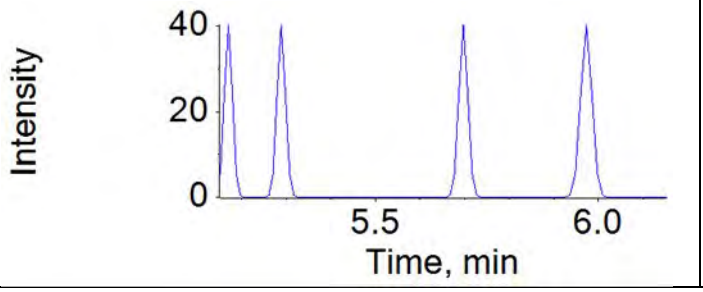


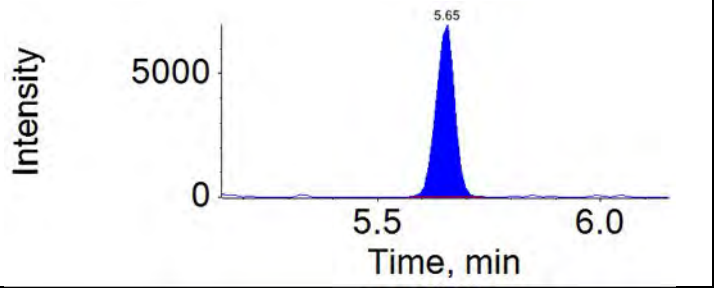
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

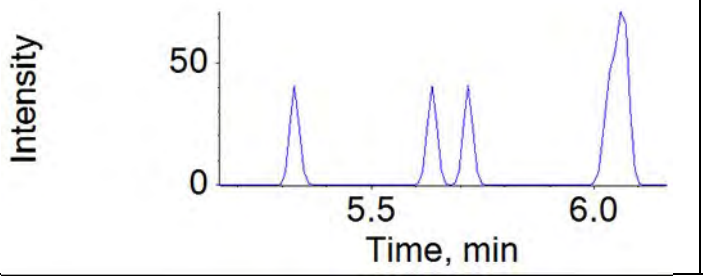
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

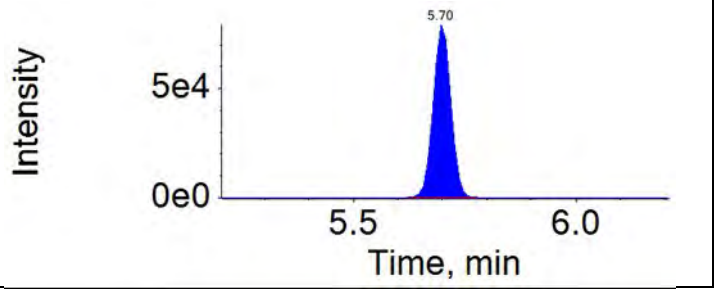
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



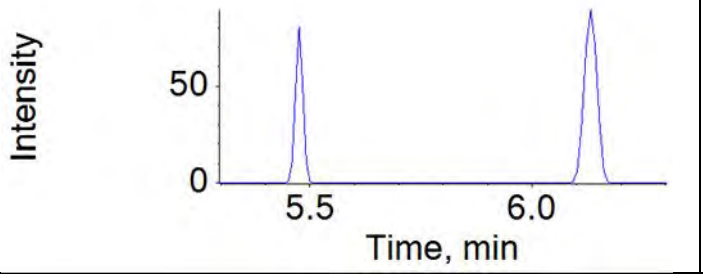


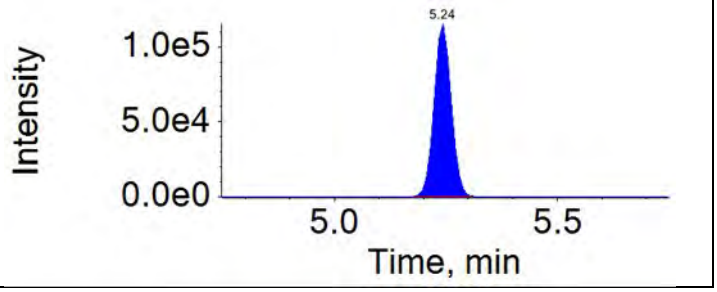
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



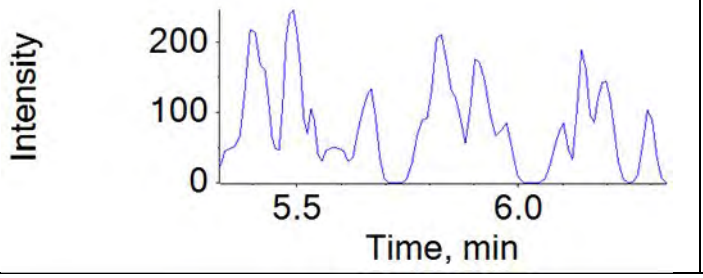


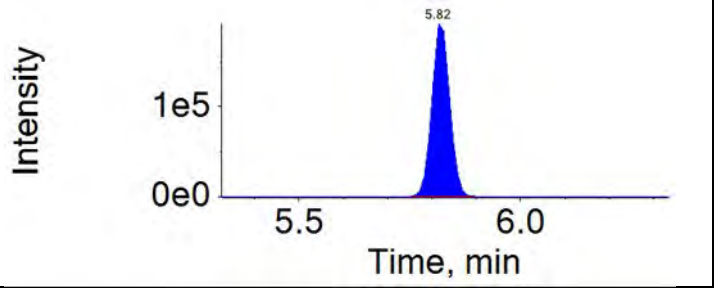
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0



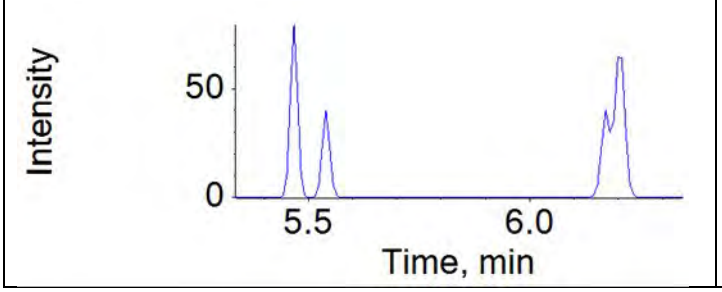


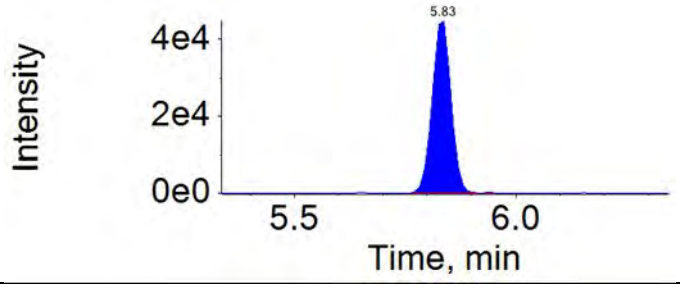
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

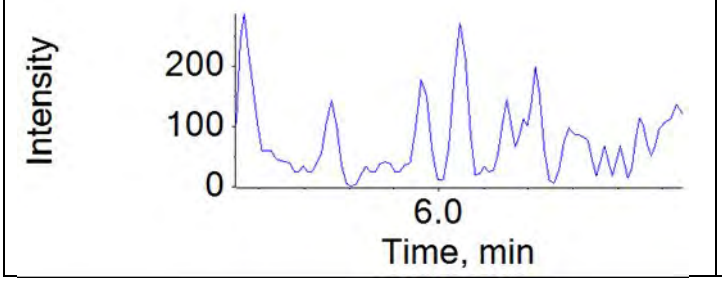
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

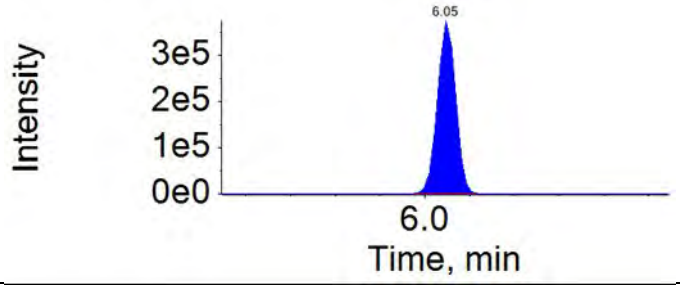
Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0



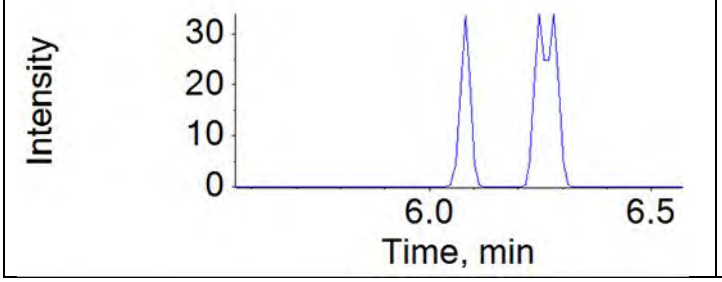


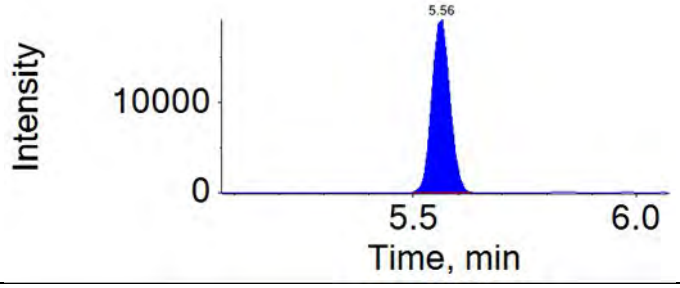
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0



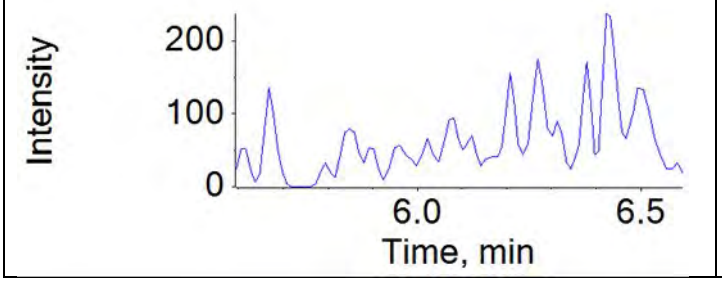


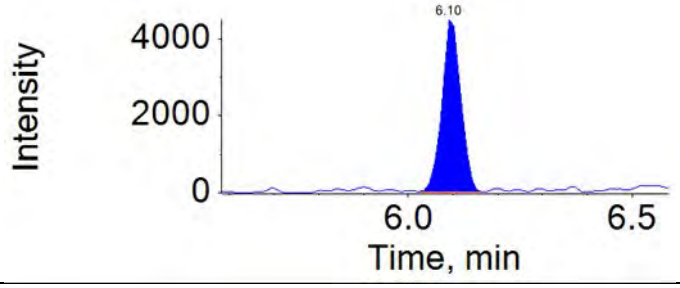
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0





Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0



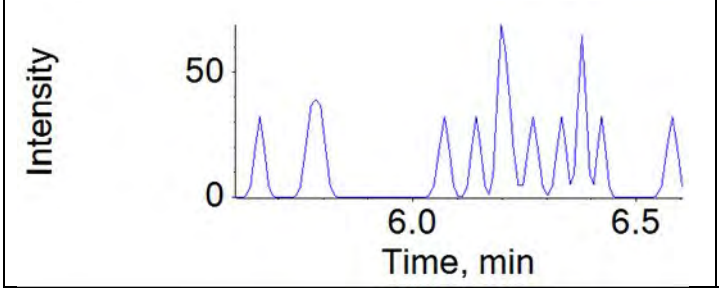


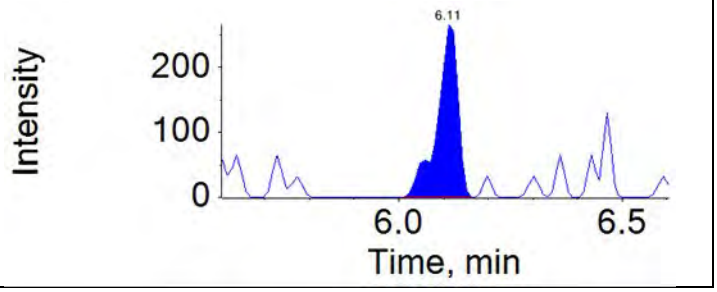
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

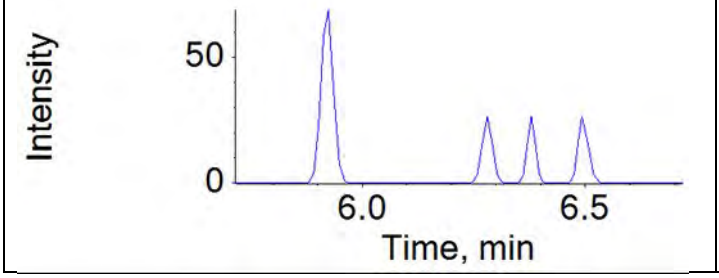
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

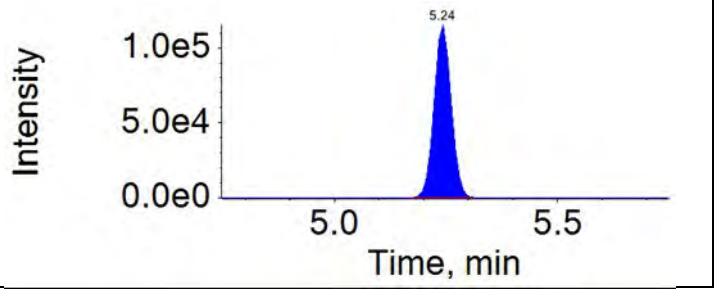
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



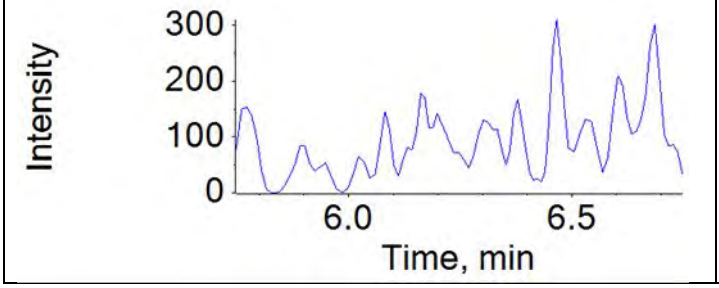


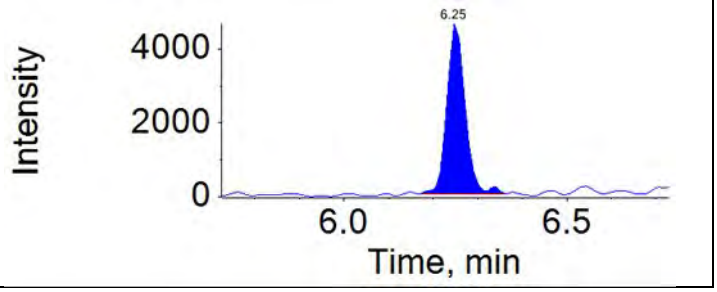
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



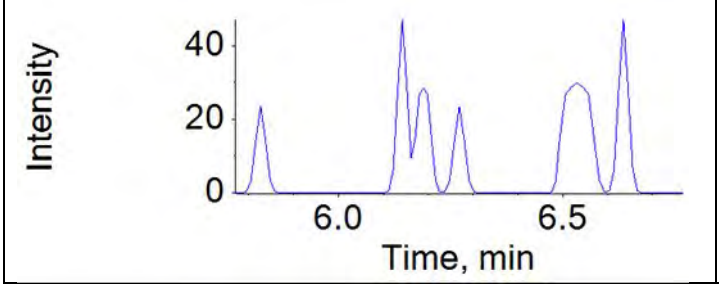


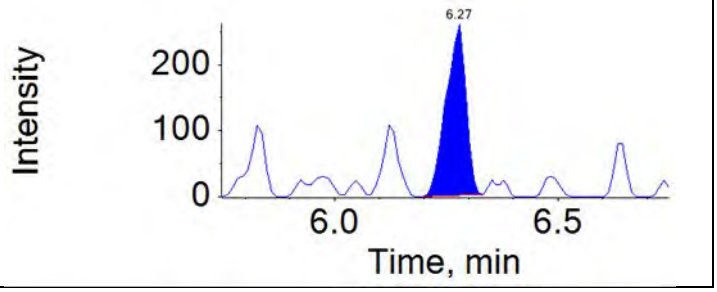
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0



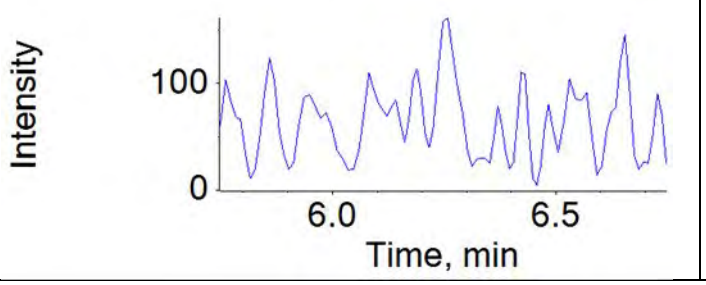


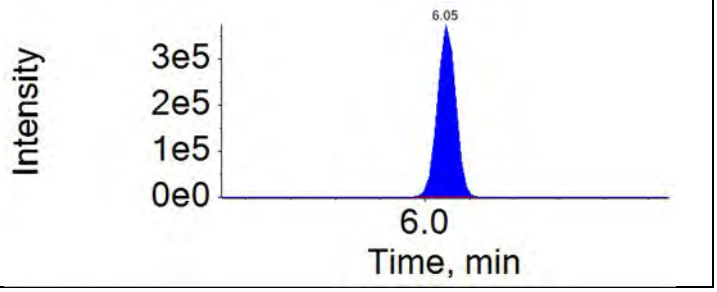
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

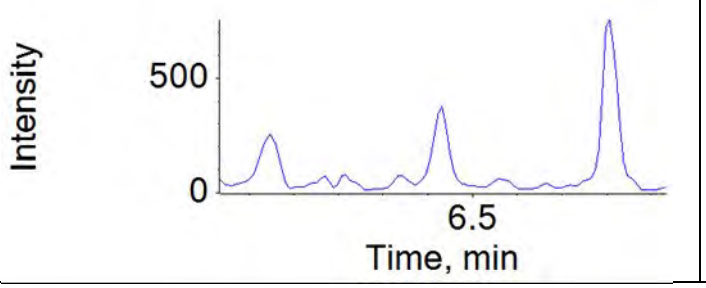
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

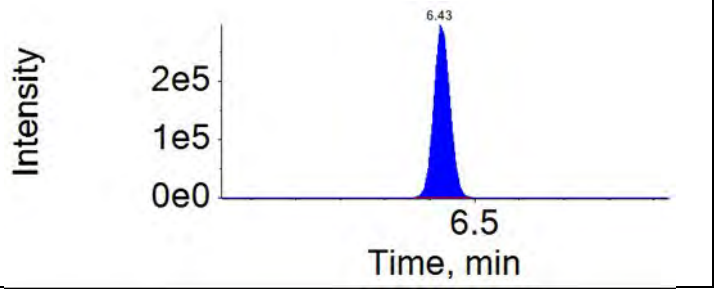
Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0



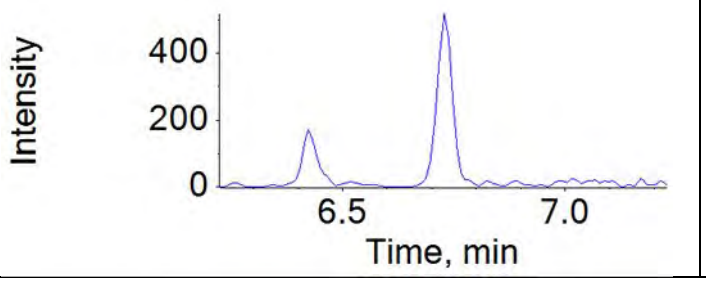


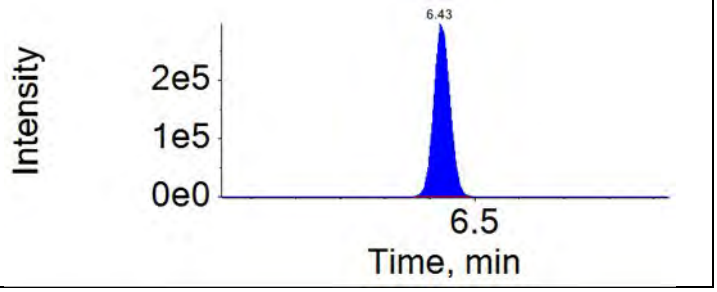
Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0



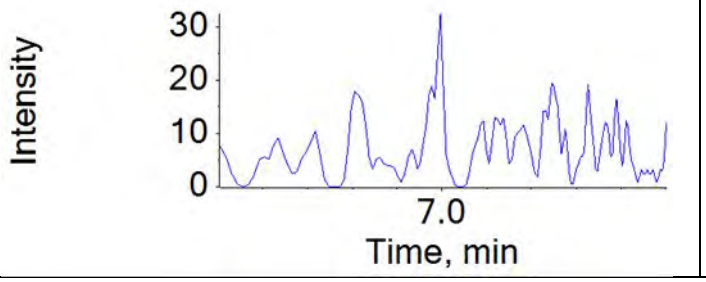


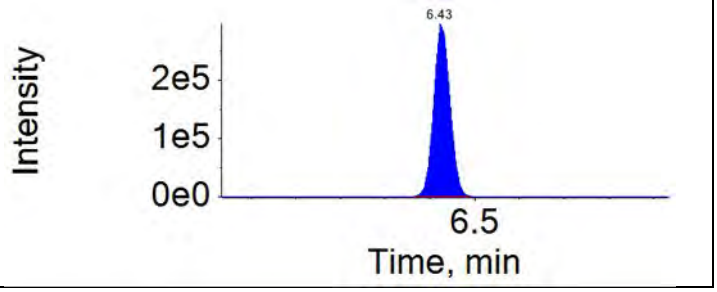
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0





Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0





APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Ion Ratio Report

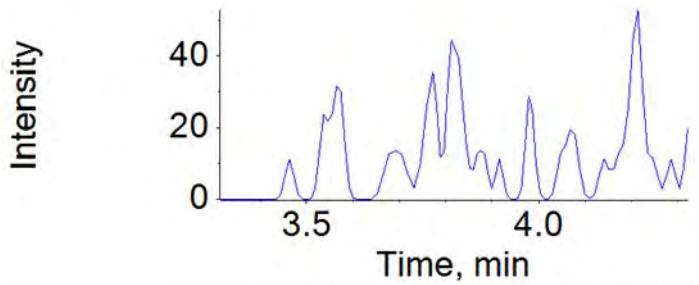
Sample Name: BLK331014 **Instrument Name:** LM27631 **File Name:** 18NOV29D-43.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	N/A	N/A	N/A	A	N/A	N/A			
PFBS_2	N/A	N/A	N/A	A	N/A	N/A		50	
4:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
4:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxA	N/A	N/A	N/A	A	N/A	N/A			
PFHxA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFPeS	N/A	N/A	N/A	A	N/A	N/A			
PFPeS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpA	N/A	N/A	N/A	A	N/A	N/A			
PFHpA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxS	N/A	N/A	N/A	A	N/A	N/A			
PFHxS_2	N/A	N/A	N/A	A	N/A	N/A		50	
6:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
6:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHpS	N/A	N/A	N/A	A	N/A	N/A			
PFHpS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOA	N/A	N/A	N/A	A	N/A	N/A			
PFOA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFOS	N/A	N/A	N/A	A	N/A	N/A			
PFOS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNA	N/A	N/A	N/A	A	N/A	N/A			
PFNA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFNS	N/A	N/A	N/A	A	N/A	N/A			
PFNS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDA	N/A	N/A	N/A	A	N/A	N/A			
PFDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
8:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
8:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
NMeFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NMeFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDS	N/A	N/A	N/A	A	N/A	N/A			
PFDS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFUnDA	N/A	N/A	N/A	A	N/A	N/A			
PFUnDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
NEtFOSAA	N/A	N/A	N/A	A	N/A	N/A			
NEtFOSAA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFDoDA	N/A	N/A	N/A	A	N/A	N/A			
PFDoDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
10:2-FTS	N/A	N/A	N/A	A	N/A	N/A			
10:2-FTS_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTrDA	N/A	N/A	N/A	A	N/A	N/A			
PFTrDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFTeDA	N/A	N/A	N/A	A	N/A	N/A			
PFTeDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFHxDA	N/A	N/A	N/A	A	N/A	N/A			
PFHxDA_2	N/A	N/A	N/A	A	N/A	N/A		50	
PFODA	N/A	N/A	N/A	A	N/A	N/A			
PFODA_2	N/A	N/A	N/A	A	N/A	N/A		50	

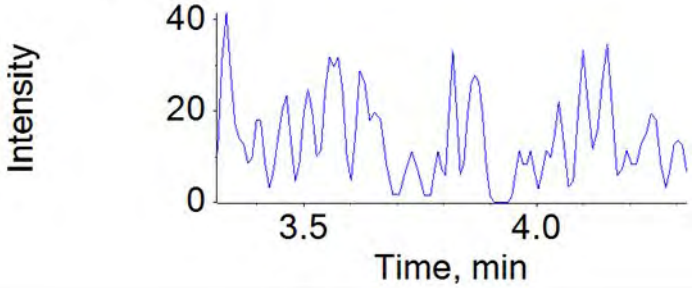
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

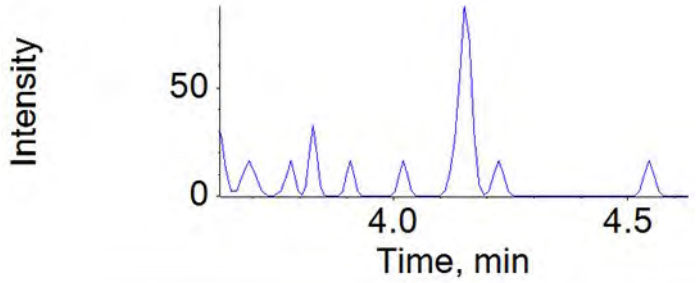
Component: PFBS
Primary Mass: 299.0 / 80.0



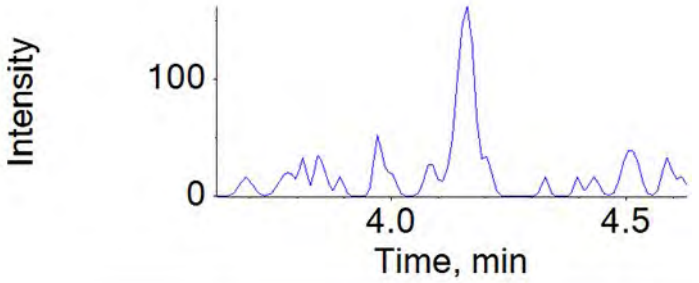
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



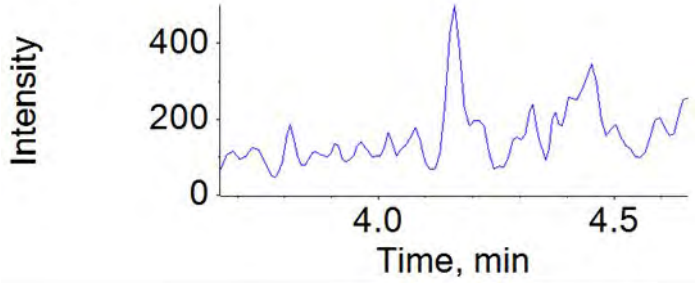
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



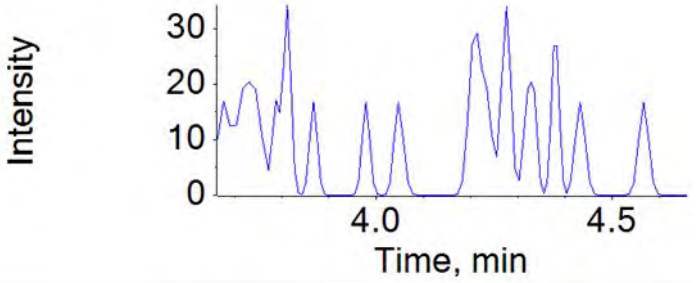
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



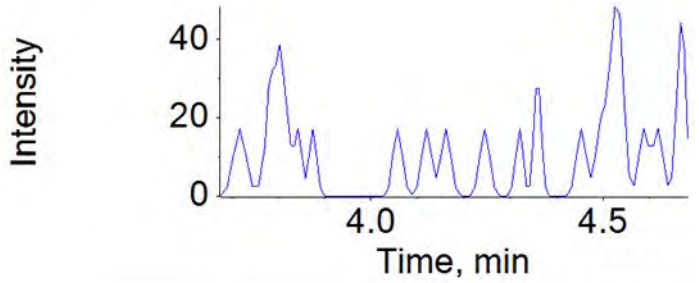
Component: PFHxA
Primary Mass: 313.0 / 269.0



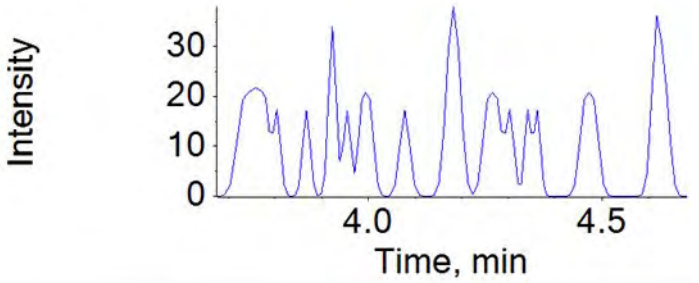
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



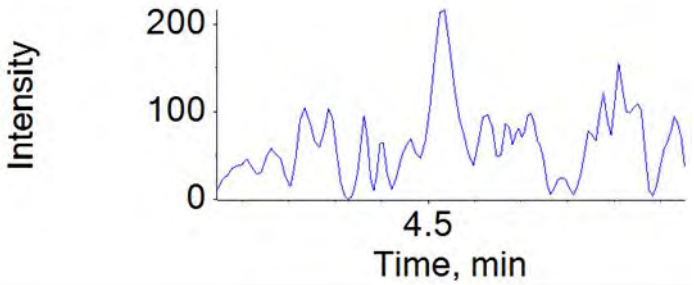
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



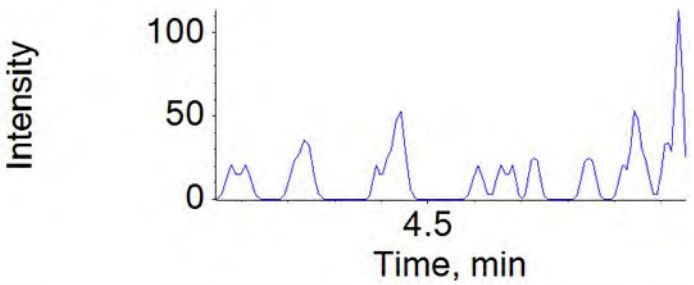
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

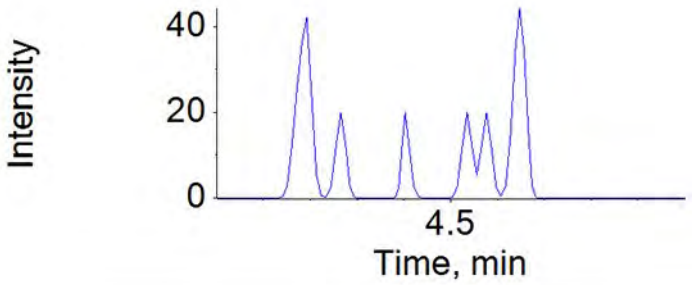
Component: PFHpA
Primary Mass: 363.0 / 319.0



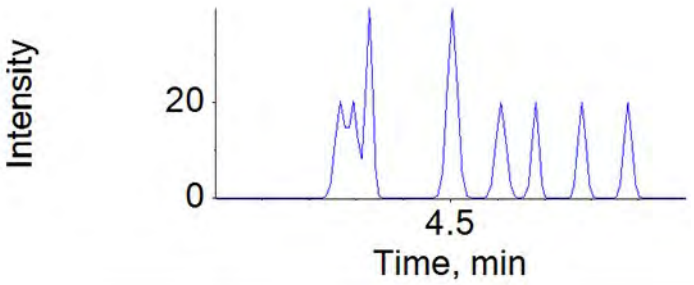
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



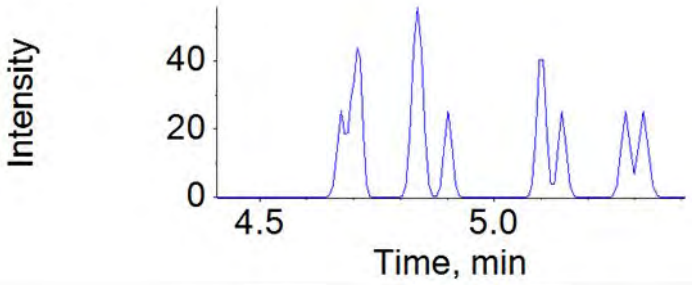
Component: PFHxS
Primary Mass: 399.0 / 80.0



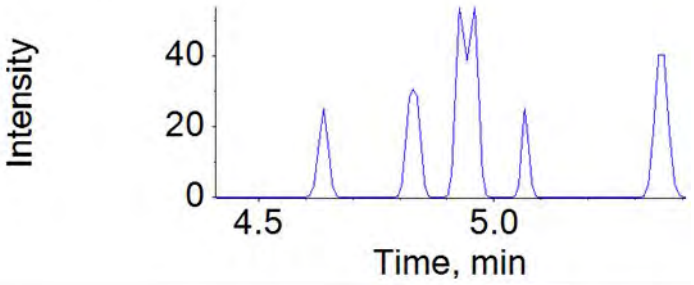
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



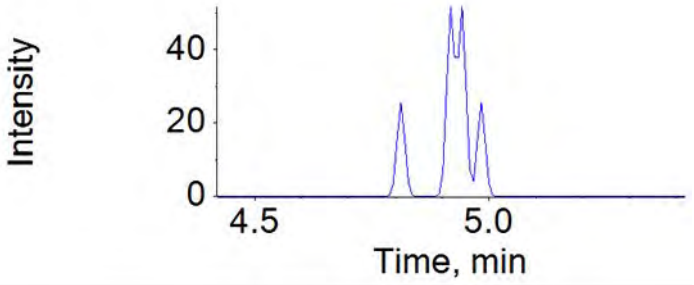
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



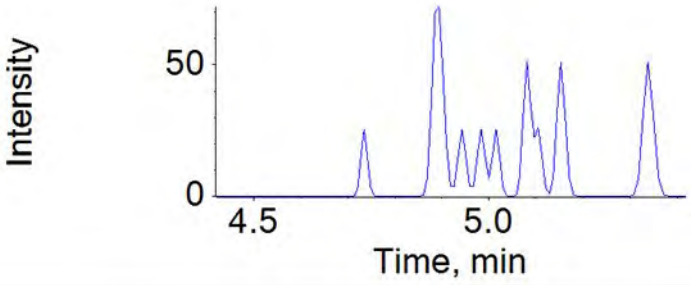
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



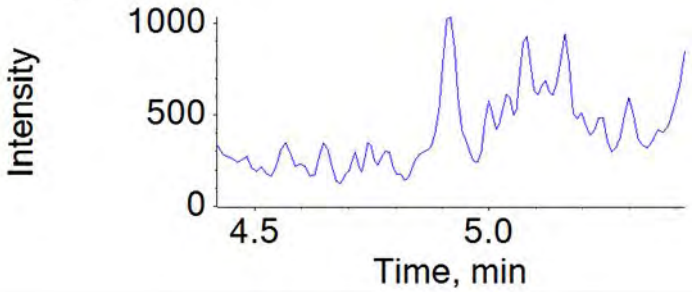
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



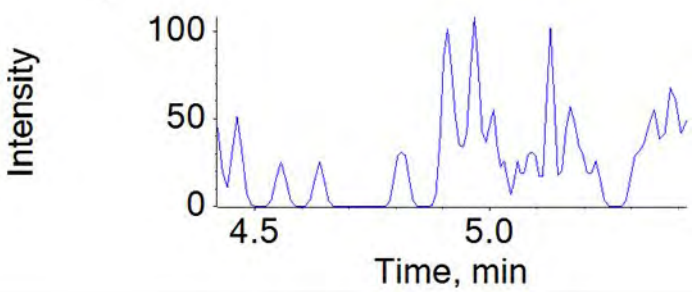
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

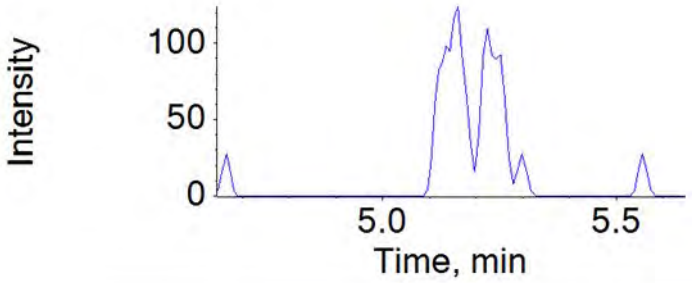
Component: PFOA
Primary Mass: 413.0 / 369.0



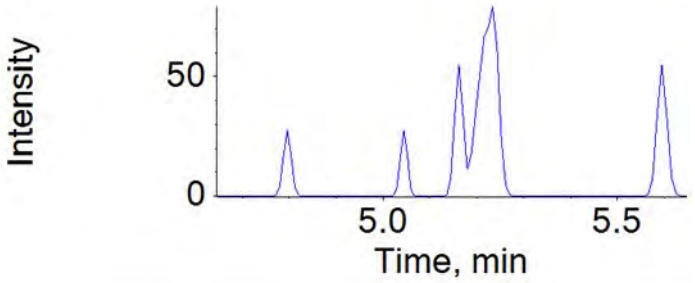
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



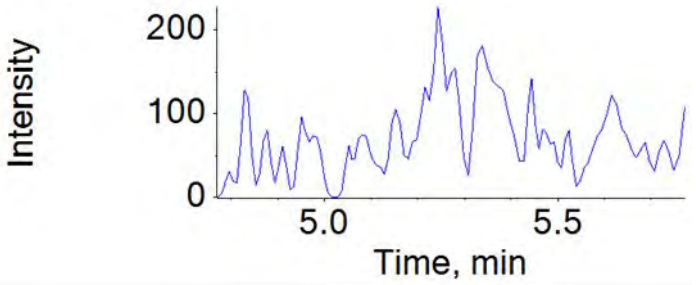
Component: PFOS
Primary Mass: 499.0 / 80.0



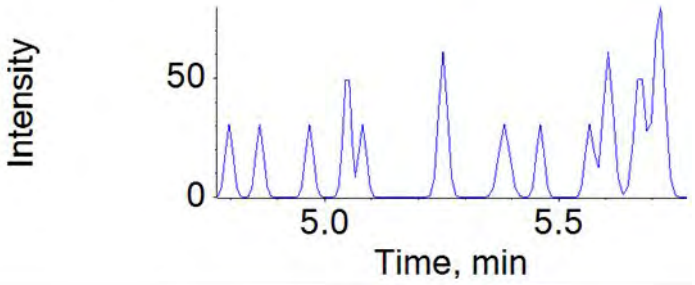
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



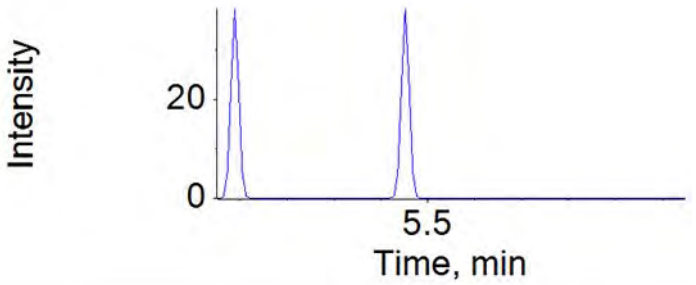
Component: PFNA
Primary Mass: 463.0 / 419.0



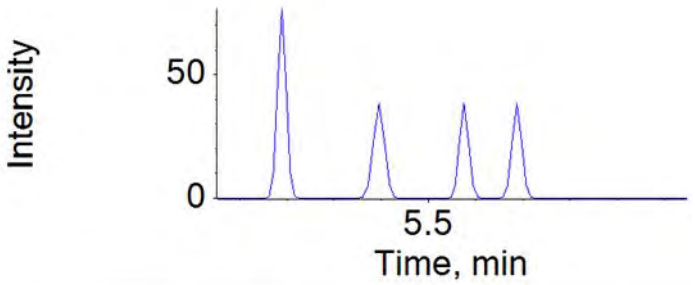
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



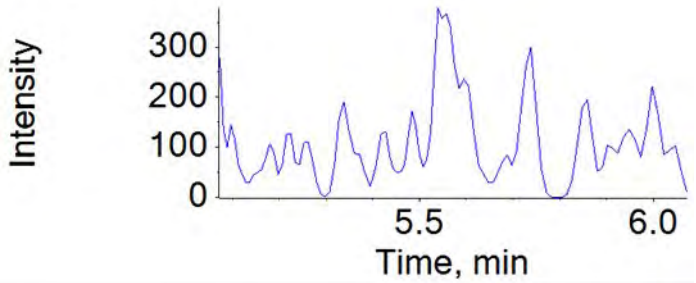
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



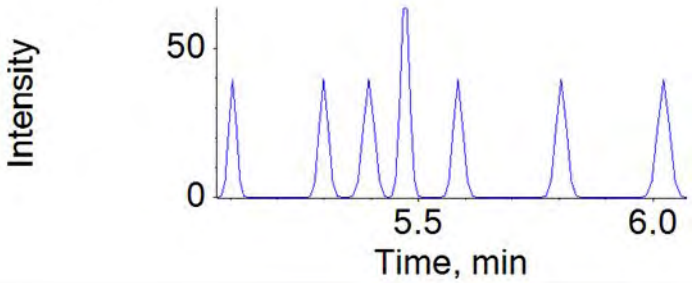
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

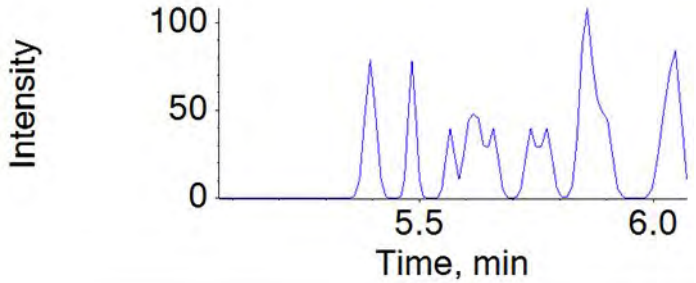
Component: PFDA
Primary Mass: 513.0 / 469.0



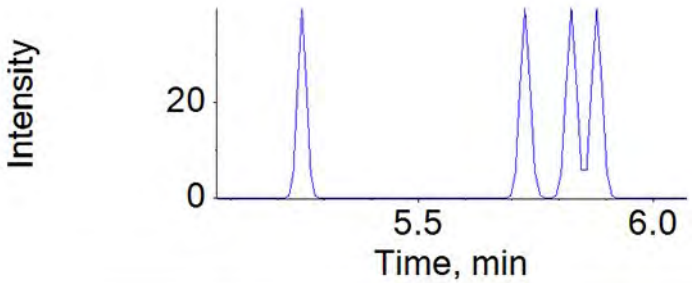
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



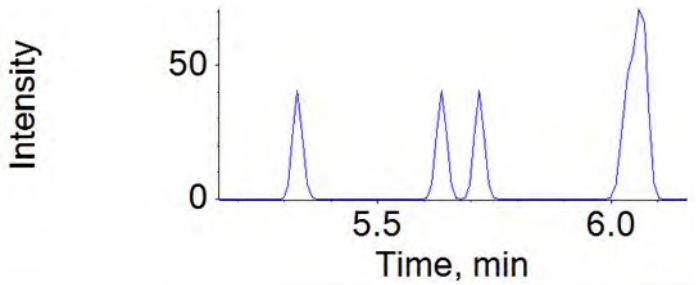
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



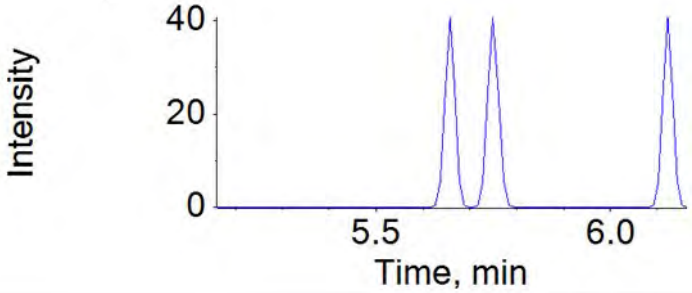
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



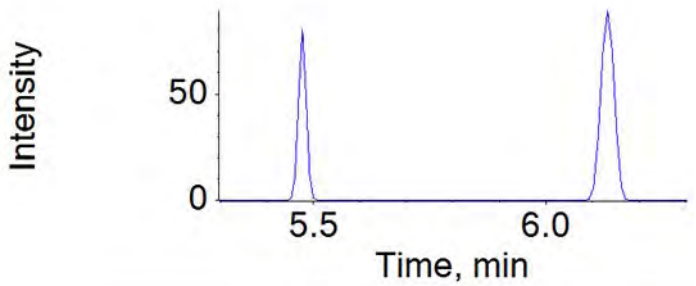
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



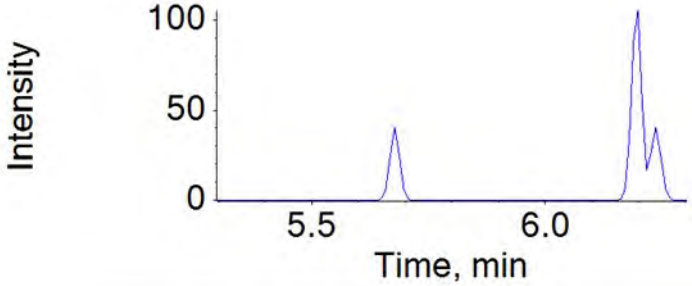
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



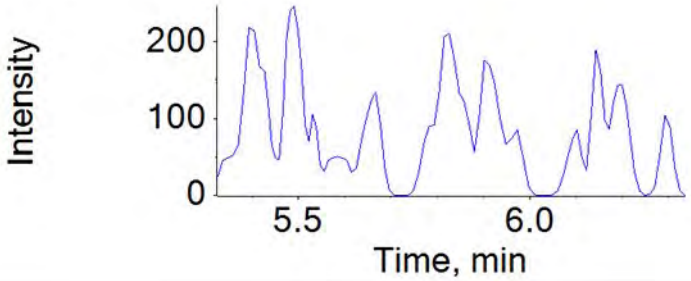
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



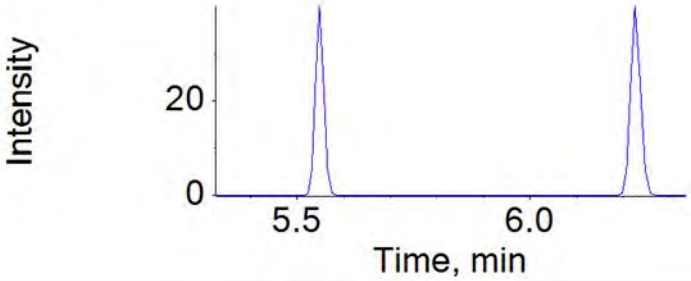
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

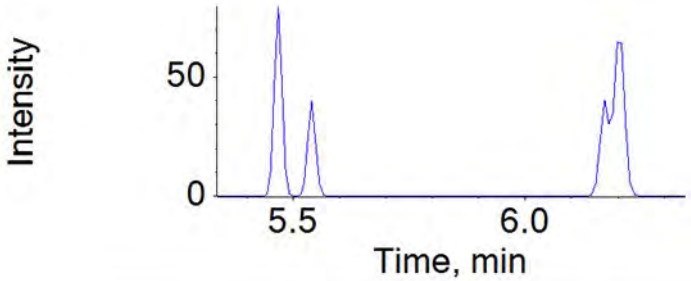
Component: PFUnDA
Primary Mass: 563.0 / 519.0



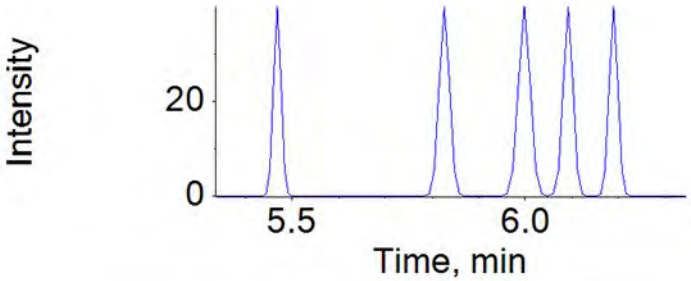
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



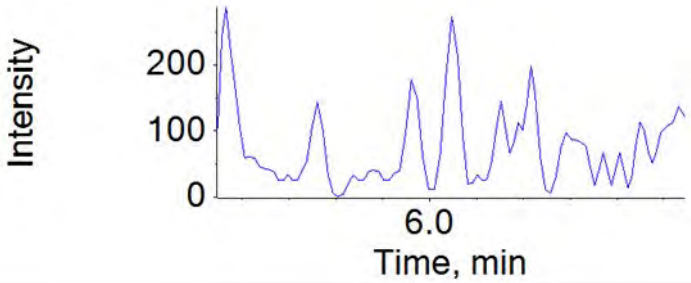
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



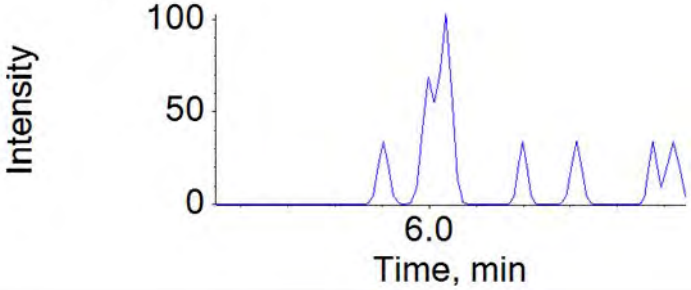
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



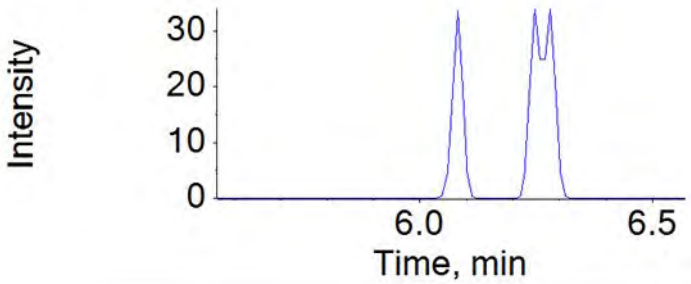
Component: PFDoDA
Primary Mass: 613.0 / 569.0



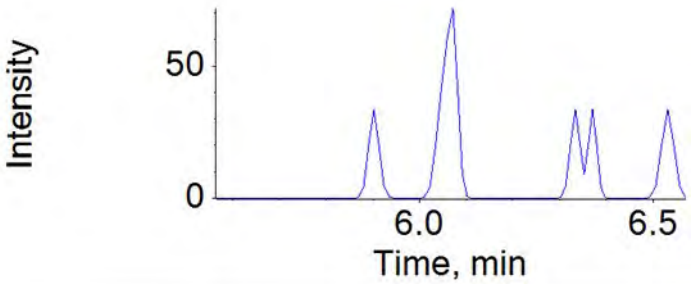
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



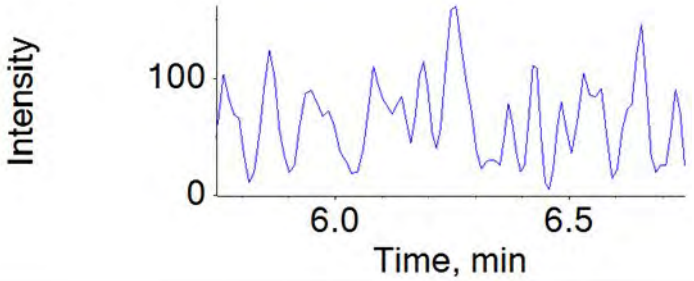
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



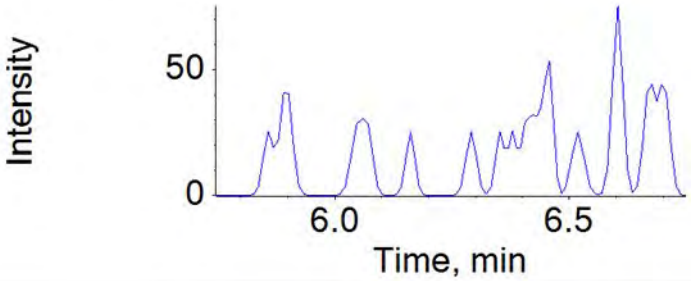
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

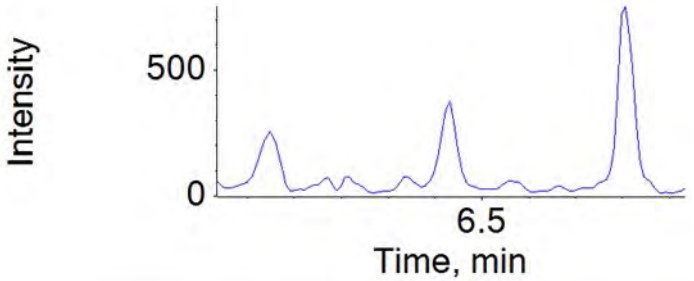
Component: PFTrDA
Primary Mass: 663.0 / 619.0



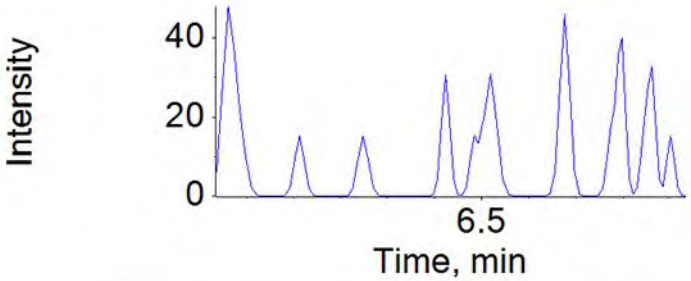
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



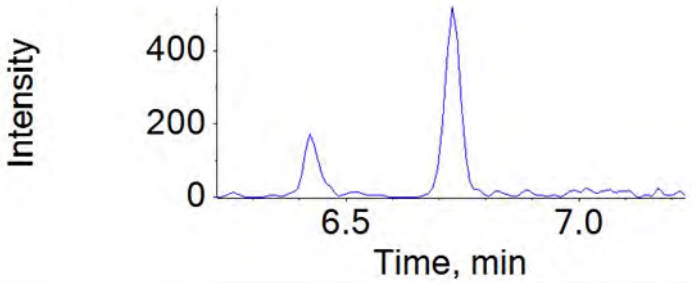
Component: PFTeDA
Primary Mass: 713.0 / 669.0



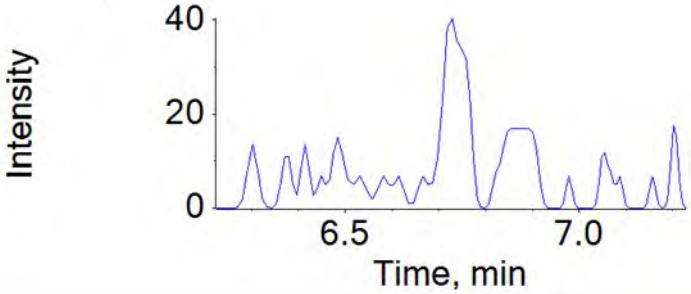
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



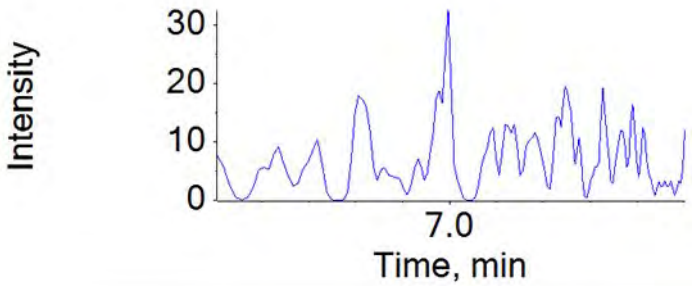
Component: PFHxDA
Primary Mass: 813.0 / 769.0



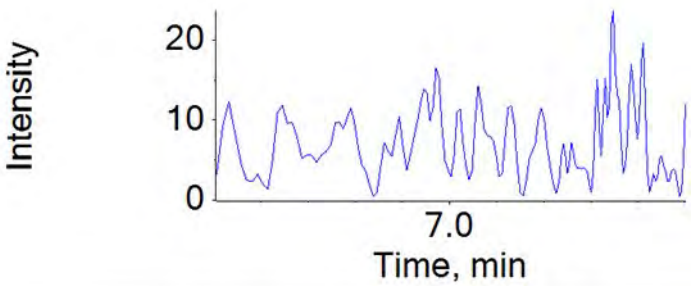
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



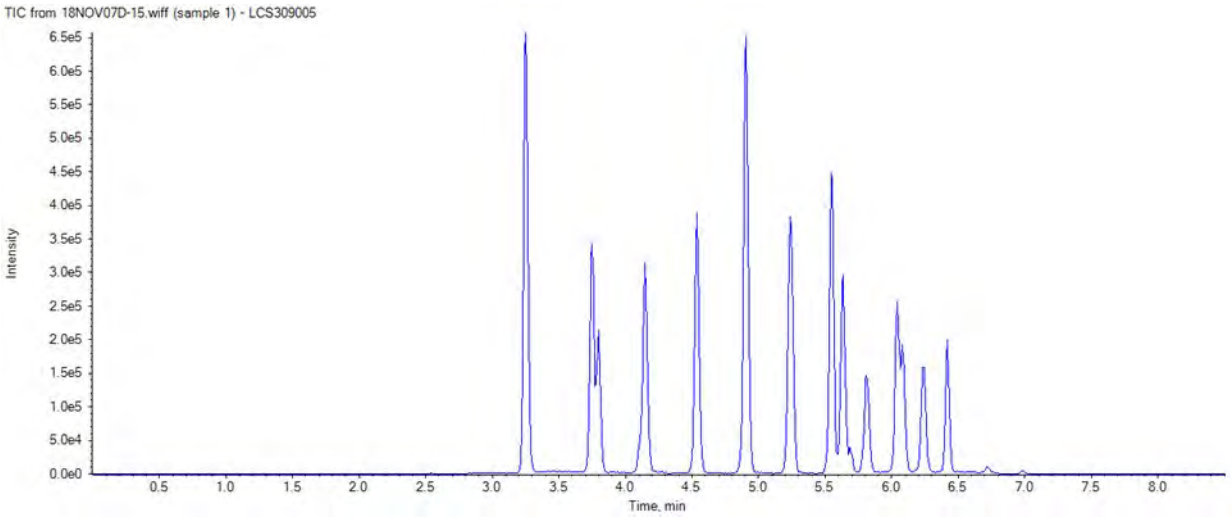
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:31:36 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS309005	EPA 537 mod QSM 5.1 table B-15 18309005	18NOV07D-15.wiff	2018-11-07T13:26:54



Injection Standard Area Reference File**:** 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	775986.5	730410.6	6	50	
13C2-PFOA	5.00	555051.6	524423.6	6	50	
13C4-PFOS	4.78	284083.0	274061.7	4	50	
13C2-PFDA	5.00	354733.0	311442.1	14	50	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:31:36 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS309005	EPA 537 mod QSM 5.1 table B-15 18309005	18NOV07D-15.wiff	2018-11-07T13:26:54

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	82236.0	633632.5	0.130	1.360	1.519	112	70-130	
PFPeA	84055.2	689144.4	0.122	1.360	1.450	107	70-130	
PFBS	45887.6	356355.1	0.129	1.202	1.298	108	70-130	
4:2-FTS	30487.2	48026.9	0.635	3.736	3.413	91	70-130	
PFHxA	97729.7	560540.4	0.174	1.360	1.495	110	70-130	
PFPeS	24539.1	356355.1	0.069	1.276	1.358	106	70-130	
PFHxS	37255.6	272536.2	0.137	1.286	1.386	108	70-130	
PFHpA	104785.0	457909.3	0.229	1.360	1.539	113	70-130	
6:2-FTS	24451.6	31096.8	0.786	3.792	3.923	103	70-130	
PFHpS	35174.7	272536.2	0.129	1.294	1.350	104	70-130	
PFOA	101588.4	766475.9	0.133	1.360	1.493	110	70-130	
PFOS	31319.4	231844.2	0.135	1.300	1.401	108	70-130	
PFNA	85971.3	401862.2	0.214	1.360	1.599	118	70-130	
PFNS	18204.9	231844.2	0.079	1.306	1.245	95	70-130	
PFDA	65460.7	529435.8	0.124	1.360	1.360	100	70-130	
8:2-FTS	22250.7	25492.1	0.873	3.832	3.935	103	70-130	
PFOSA	76908.1	603447.3	0.127	1.360	1.378	101	70-130	
NMeFOSAA	9283.3	68796.0	0.135	1.360	1.389	102	70-130	
PFDS	17711.6	231844.2	0.076	1.310	1.460	111	70-130	
PFUnDA	56345.9	238817.7	0.236	1.360	1.353	100	70-130	
NEtFOSAA	6993.7	52869.0	0.132	1.360	1.137	84	70-130	
PFDoDA	59022.0	478747.2	0.123	1.360	1.336	98	70-130	
10:2-FTS	13728.3	25492.1	0.539	3.856	3.354	87	70-130	
NMePFOSAE	47322.3	295387.3	0.160	1.360	1.436	106	70-130	
NMePFOSA	8364.6	67141.6	0.125	1.360	1.395	103	70-130	
PFDoS	6950.3	231844.2	0.030	1.316	1.157	88	70-130	
NEtPFOSAE	47432.7	234558.7	0.202	1.360	1.297	95	70-130	
NEtPFOSA	7758.3	60188.7	0.129	1.360	1.135	83	70-130	
PFTrDA	53802.0	478747.2	0.112	1.360	1.417	104	70-130	
PFTeDA	41507.4	348723.1	0.119	1.360	1.398	103	70-130	
PFHxDA	18562.0	348723.1	0.053	1.360	1.321	97	70-130	
PFODA	10342.3	348723.1	0.030	1.360	0.850	62	70-130	OOS

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:31:36 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	LCS309005			**Data File:**		18NOV07D-15.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005			**Acquis Date:**		2018-11-07T13:26:54
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	14			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	775986.5	730410.6	6	50	
13C2-PFOA	5.0	555051.6	524423.6	6	50	
13C4-PFOS	4.8	284083.0	274061.7	4	50	
13C2-PFDA	5.0	354733.0	311442.1	14	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	633632.5	13C3-PFBA	775986.5	0.817	10.000	7.557	76	50-150	
E13C5-PFPeA	689144.4	13C3-PFBA	775986.5	0.888	10.000	7.738	77	50-150	
E13C3-PFBS	356355.1	13C3-PFBA	775986.5	0.459	9.300	6.741	72	50-150	
E13C2-4:2-FTS	48026.9	13C2-PFOA	555051.6	0.087	9.340	7.809	84	50-150	
E13C5-PFHxA	560540.4	13C2-PFOA	555051.6	1.010	10.000	7.430	74	50-150	
E13C3-PFHxS	272536.2	13C2-PFOA	555051.6	0.491	9.460	7.050	75	50-150	
E13C4-PFHpA	457909.3	13C2-PFOA	555051.6	0.825	10.000	7.506	75	50-150	
E13C2-6:2-FTS	31096.8	13C2-PFOA	555051.6	0.056	9.500	7.472	79	50-150	
E13C8-PFOA	766475.9	13C2-PFOA	555051.6	1.381	10.000	7.702	77	50-150	
E13C8-PFOS	231844.2	13C4-PFOS	284083.0	0.816	9.560	7.217	75	50-150	
E13C9-PFNA	401862.2	13C4-PFOS	284083.0	1.415	10.000	7.728	77	50-150	
E13C6-PFDA	529435.8	13C2-PFDA	354733.0	1.492	10.000	7.507	75	50-150	
E13C2-8:2-FTS	25492.1	13C2-PFDA	354733.0	0.072	9.580	7.605	79	50-150	
E13C8-PFOSA	603447.3	13C2-PFDA	354733.0	1.701	10.000	7.424	74	50-150	
Ed3-NMeFOSAA	68796.0	13C2-PFDA	354733.0	0.194	10.000	7.213	72	50-150	
E13C7-PFUnDA	238817.7	13C2-PFDA	354733.0	0.673	10.000	7.767	78	50-150	
Ed5-NEtFOSAA	52869.0	13C2-PFDA	354733.0	0.149	10.000	6.898	69	50-150	
E13C2-PFDoDA	478747.2	13C2-PFDA	354733.0	1.350	10.000	7.277	73	50-150	
Ed7-NMePFOSAE	295387.3	13C2-PFDA	354733.0	0.833	10.000	7.745	77	50-150	
Ed3-NMePFOSA	67141.6	13C2-PFDA	354733.0	0.189	10.000	6.930	69	50-150	
Ed9-NEtPFOSAE	234558.7	13C2-PFDA	354733.0	0.661	10.000	7.552	76	50-150	
Ed5-NEtPFOSA	60188.7	13C2-PFDA	354733.0	0.170	10.000	7.857	79	50-150	
E13C2-PFTeDA	348723.1	13C2-PFDA	354733.0	0.983	10.000	7.078	71	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

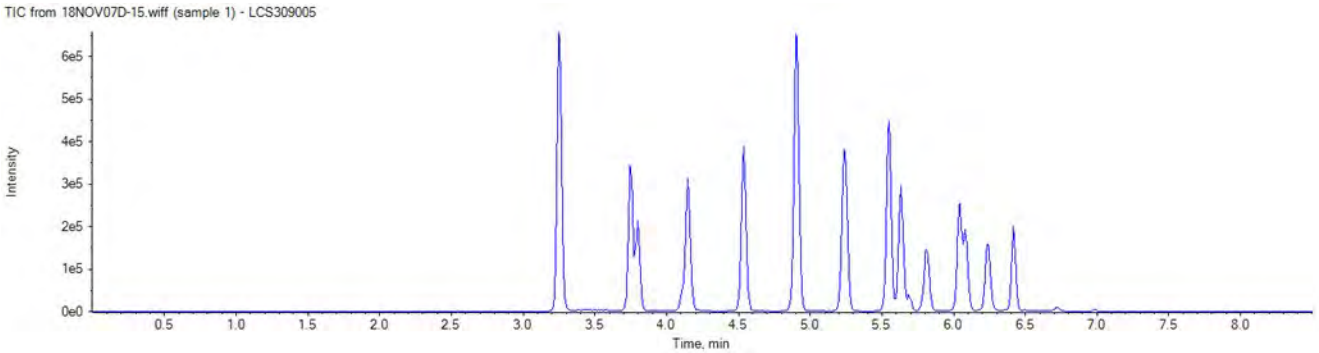
Analyte Quantitation Peak Table

Sample Name: LCS309005 **Instrument Name:** LM27631 **File Name:** 18NOV07D-15.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	82236.0		A	13C4-PFBA	3.25	633632.5	0.130	1.519
PFPeA	3.75	1.000	84055.2		A	13C5-PFPeA	3.75	689144.4	0.122	1.450
PFBS	3.80	1.000	45887.6		A	13C3-PFBS	3.80	356355.1	0.129	1.298
4:2-FTS	4.11	1.000	30487.2		A	13C2-4:2-FTS	4.11	48026.9	0.635	3.413
PFHxA	4.15	1.000	97729.7		A	13C5-PFHxA	4.15	560540.4	0.174	1.495
PFPeS	4.17	1.100	24539.1		A	13C3-PFBS	3.80	356355.1	0.069	1.358
PFHxS	4.54	1.000	37255.6		A	13C3-PFHxS	4.54	272536.2	0.137	1.386
PFHpA	4.54	1.000	104785.0		A	13C4-PFHpA	4.54	457909.3	0.229	1.539
6:2-FTS	4.90	1.000	24451.6		A	13C2-6:2-FTS	4.89	31096.8	0.786	3.923
PFHpS	4.90	1.080	35174.7		A	13C3-PFHxS	4.54	272536.2	0.129	1.350
PFOA	4.90	1.000	101588.4		A	13C8-PFOA	4.90	766475.9	0.133	1.493
PFOS	5.23	1.000	31319.4		A	13C8-PFOS	5.23	231844.2	0.135	1.401
PFNA	5.25	1.000	85971.3		A	13C9-PFNA	5.25	401862.2	0.214	1.599
PFNS	5.53	1.060	18204.9		A	13C8-PFOS	5.23	231844.2	0.079	1.245
PFDA	5.55	1.000	65460.7		A	13C6-PFDA	5.55	529435.8	0.124	1.360
8:2-FTS	5.55	1.000	22250.7		A	13C2-8:2-FTS	5.55	25492.1	0.873	3.935
PFOSA	5.63	1.000	76908.1		A	13C8-PFOSA	5.63	603447.3	0.127	1.378
NMeFOSAA	5.69	1.000	9283.3		A	d3-NMeFOSAA	5.69	68796.0	0.135	1.389
PFDS	5.78	1.110	17711.6		A	13C8-PFOS	5.23	231844.2	0.076	1.460
PFUnDA	5.81	1.000	56345.9		A	13C7-PFUnDA	5.81	238817.7	0.236	1.353
NEtFOSAA	5.83	1.000	6993.7		M	d5-NEtFOSAA	5.82	52869.0	0.132	1.137
PFDoDA	6.04	1.000	59022.0		A	13C2-PFDoDA	6.04	478747.2	0.123	1.336
10:2-FTS	6.05	1.090	13728.3		A	13C2-8:2-FTS	5.55	25492.1	0.539	3.354
NMePFOSAE	6.09	1.000	47322.3		A	d7-NMePFOSAE	6.08	295387.3	0.160	1.436
NMePFOSA	6.10	1.000	8364.6		M	d3-NMePFOSA	6.09	67141.6	0.125	1.395
PFDoS	6.21	1.190	6950.3		A	13C8-PFOS	5.23	231844.2	0.030	1.157
NEtPFOSAE	6.25	1.000	47432.7		M	d9-NEtPFOSAE	6.23	234558.7	0.202	1.297
NEtPFOSA	6.26	1.000	7758.3		M	d5-NEtPFOSA	6.25	60188.7	0.129	1.135
PFTrDA	6.24	1.030	53802.0		A	13C2-PFDoDA	6.04	478747.2	0.112	1.417
PFTeDA	6.42	1.000	41507.4		A	13C2-PFTeDA	6.42	348723.1	0.119	1.398
PFHxDA	6.72	1.050	18562.0		A	13C2-PFTeDA	6.42	348723.1	0.053	1.321
PFODA	6.98	1.090	10342.3		A	13C2-PFTeDA	6.42	348723.1	0.030	0.850

Total Ion Chromatogram

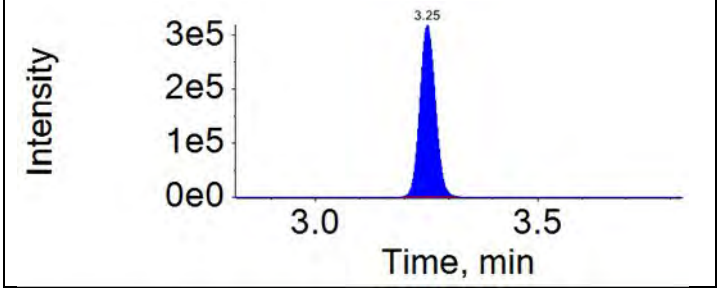


APPROVED
By MCD at 4:42 pm, 11/8/18

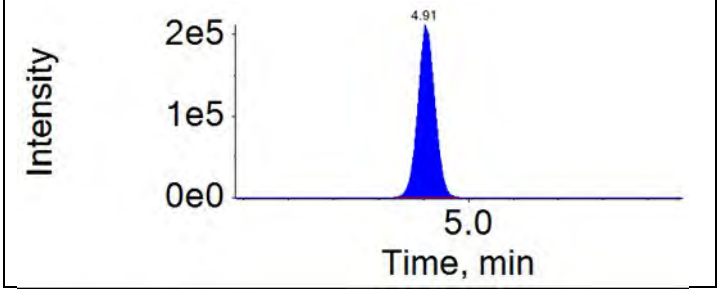
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

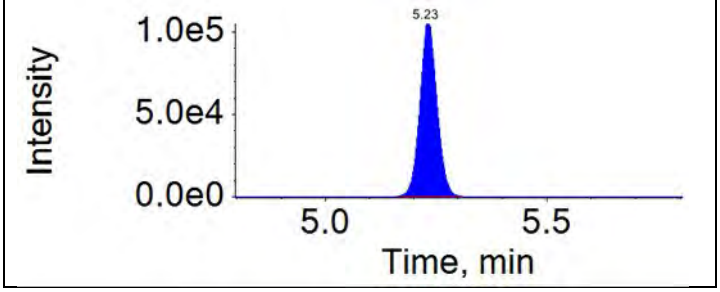
Injection Standard: 13C3-PFBA
216.0 / 172.0



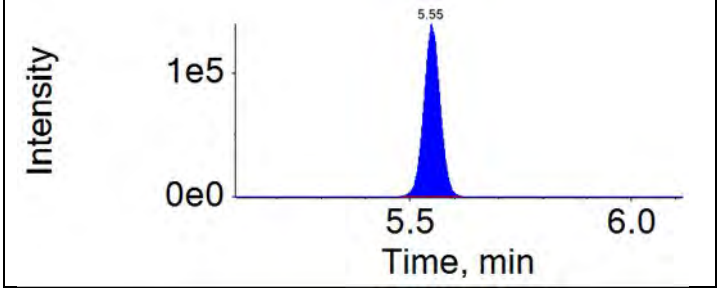
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



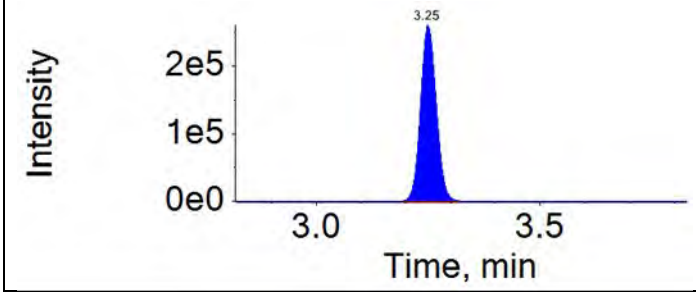
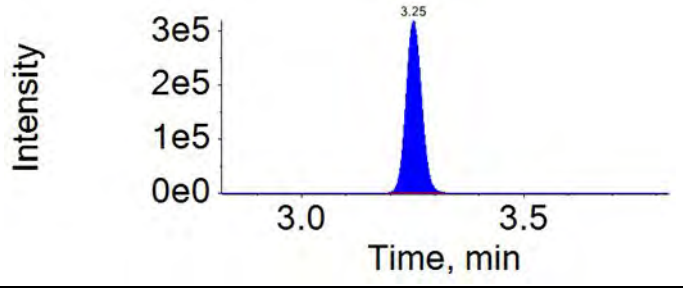
Injection Standard: 13C2-PFDA
515.0 / 470.0

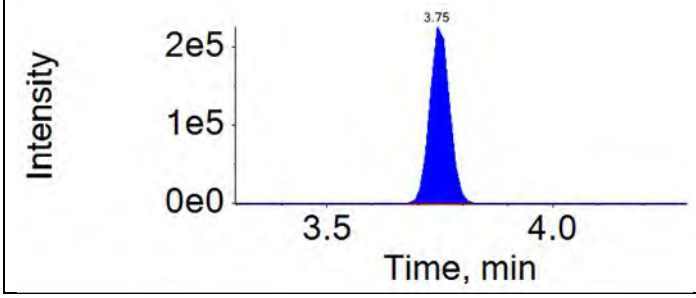
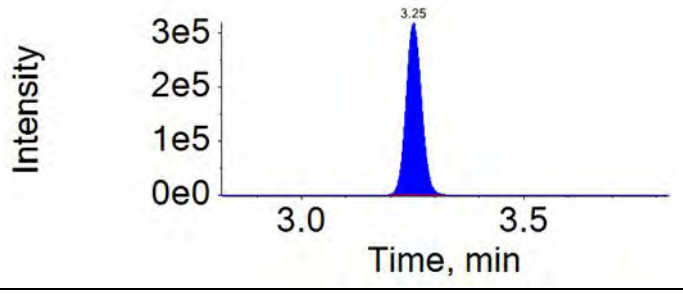


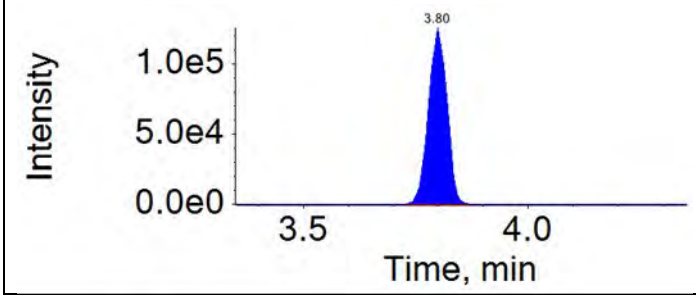
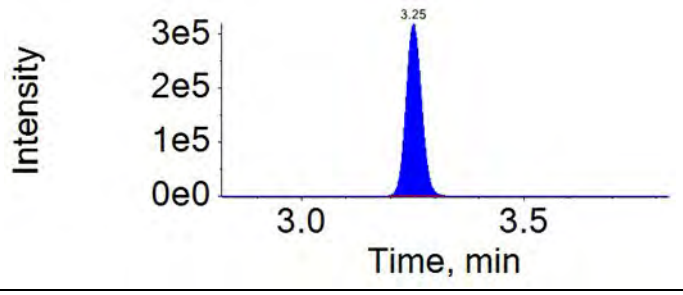
APPROVED
By MCD at 4:42 pm, 11/8/18

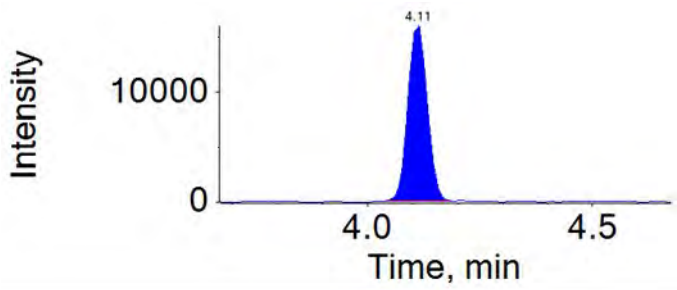
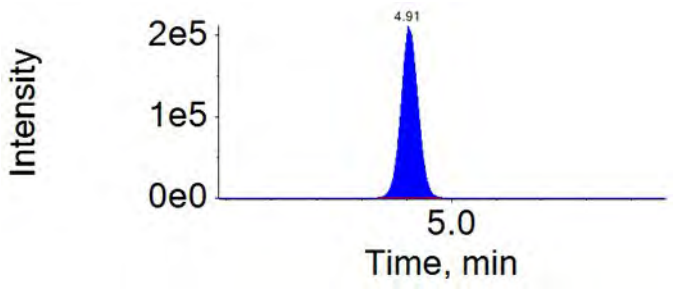
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

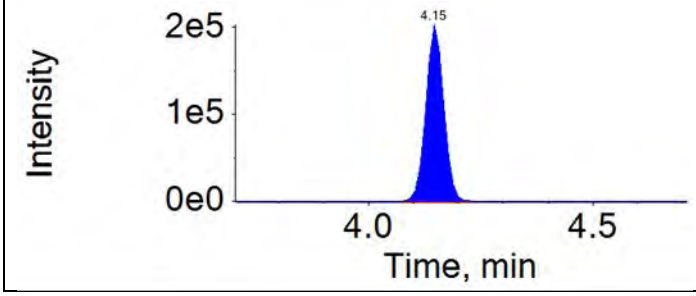
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

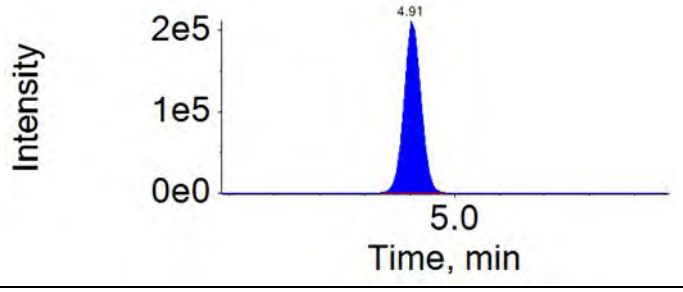
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

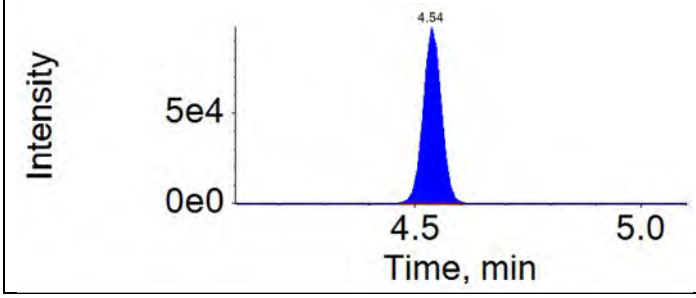
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

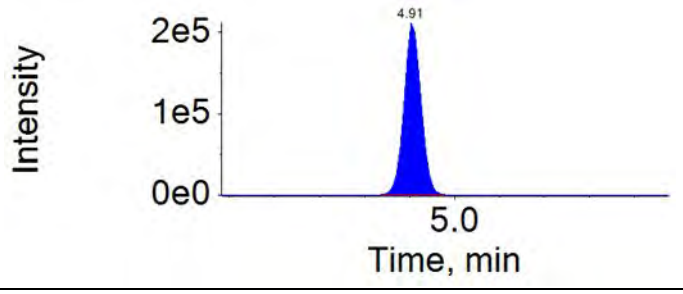
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



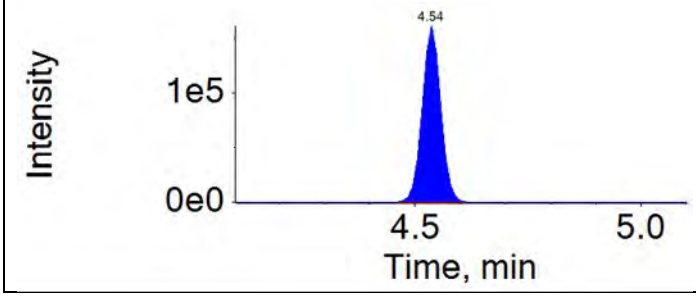


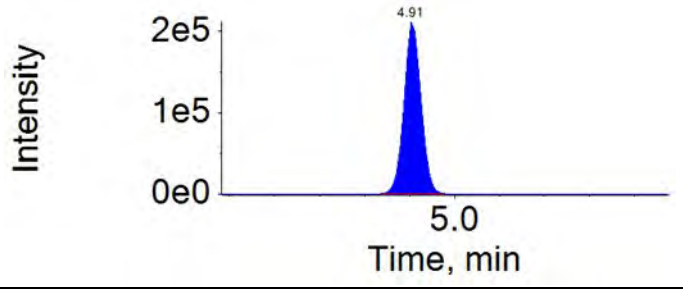
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



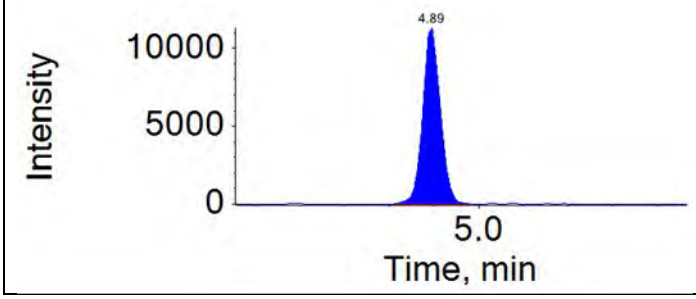


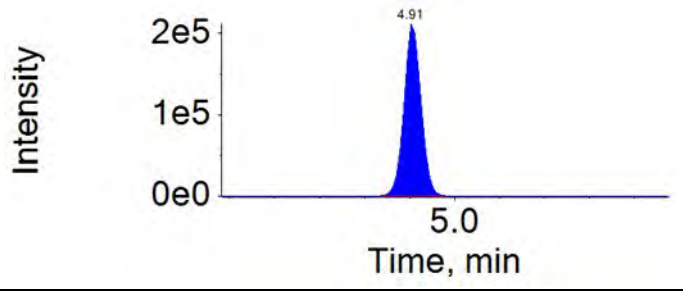
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

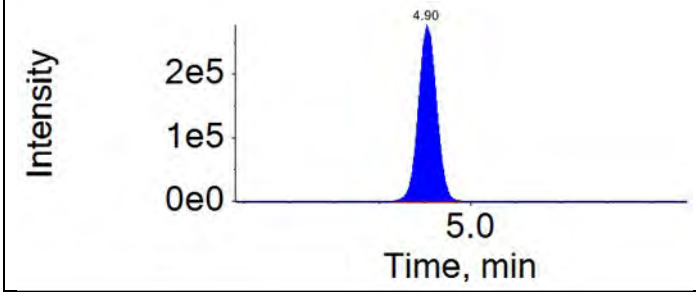
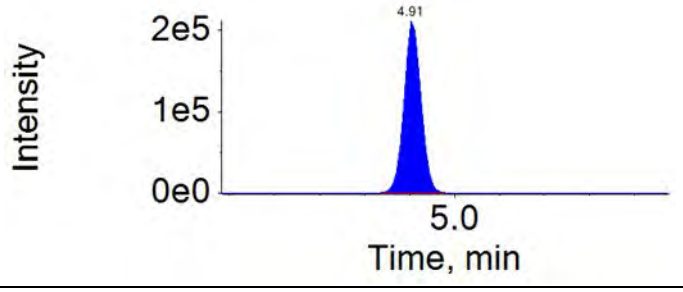


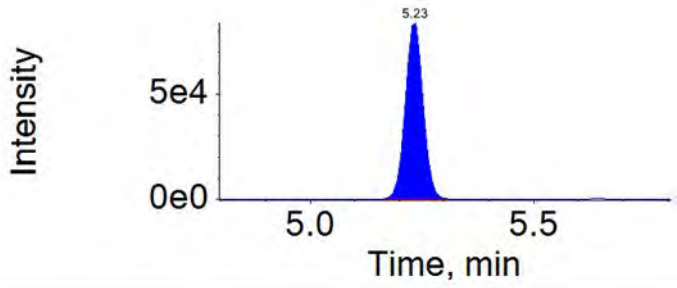
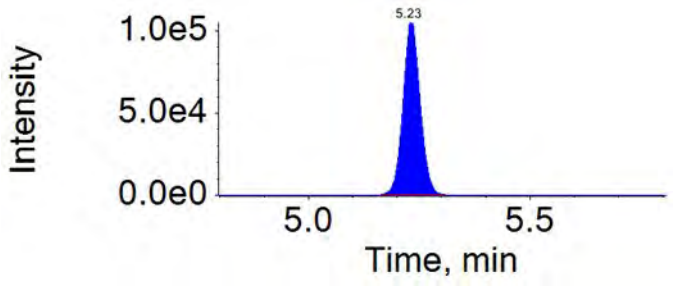


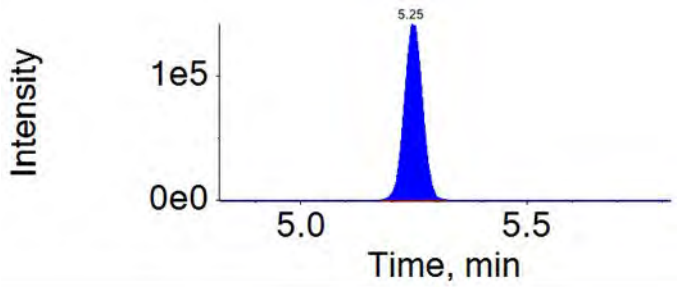
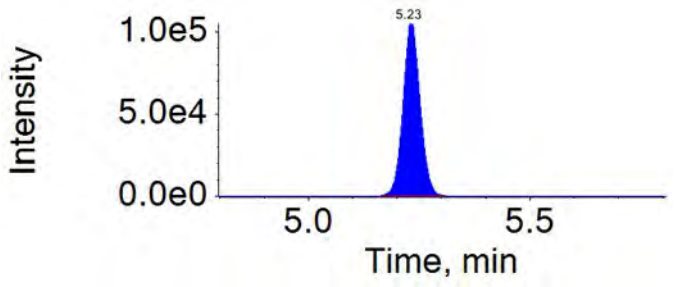
APPROVED
By MCD at 4:42 pm, 11/8/18

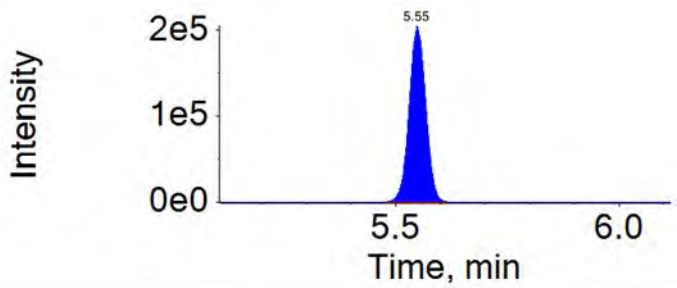
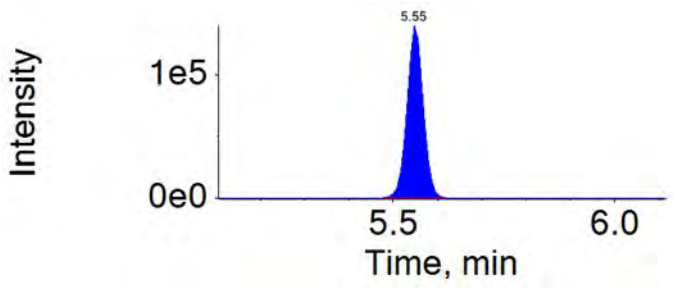
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

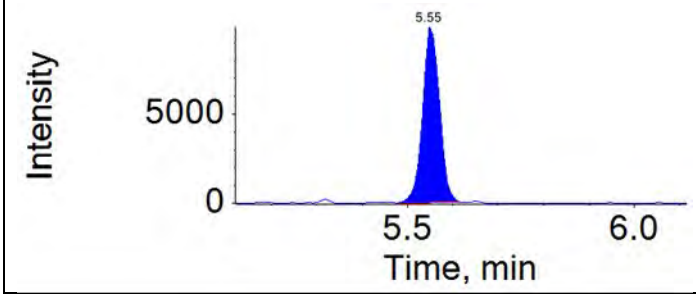
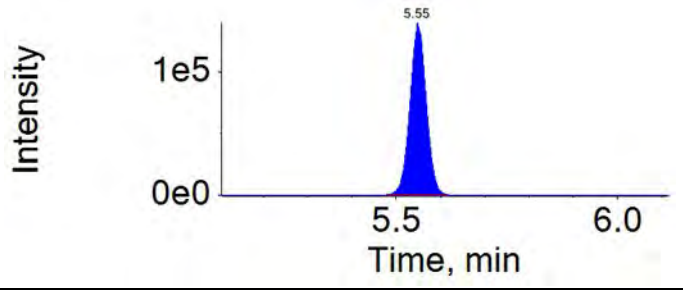
Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

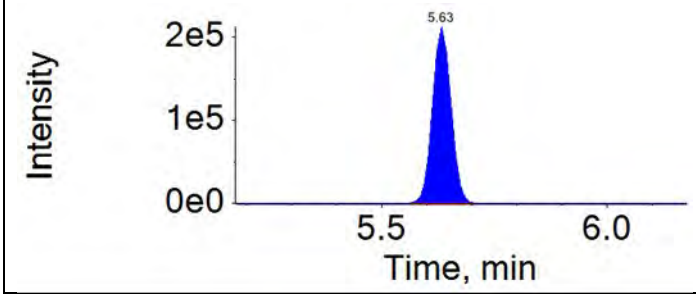
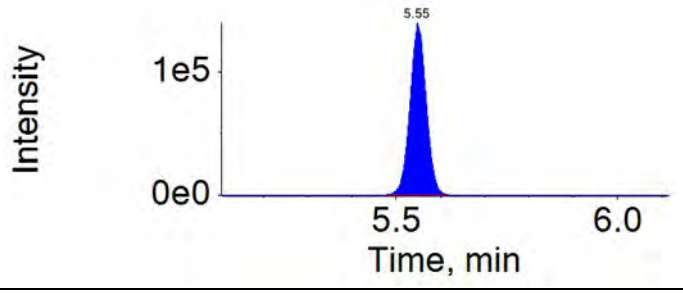
Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

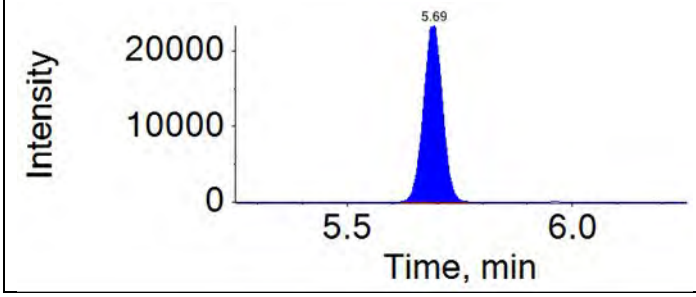
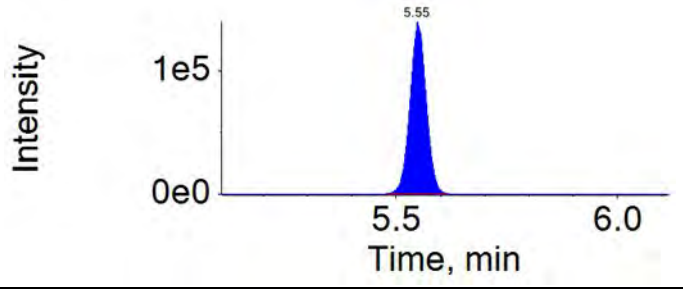
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

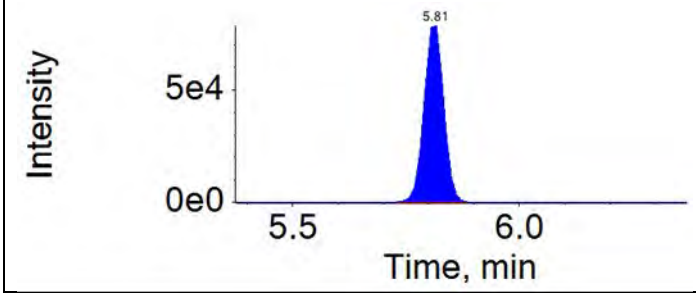
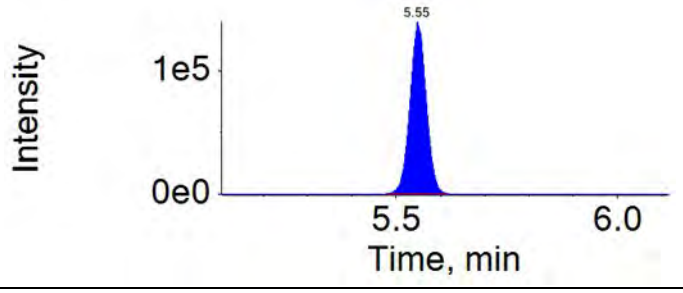
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

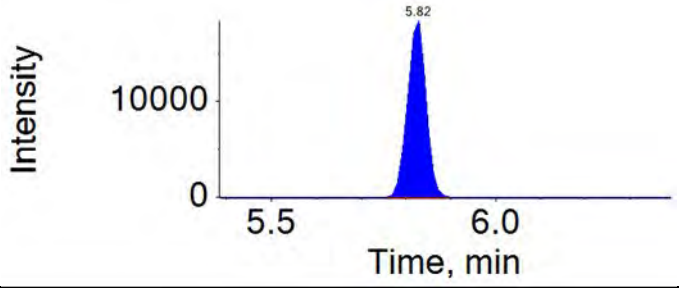
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

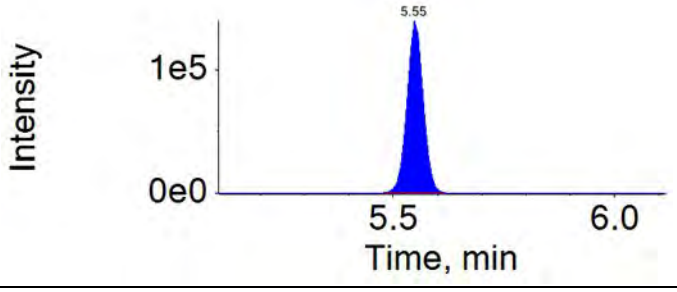
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

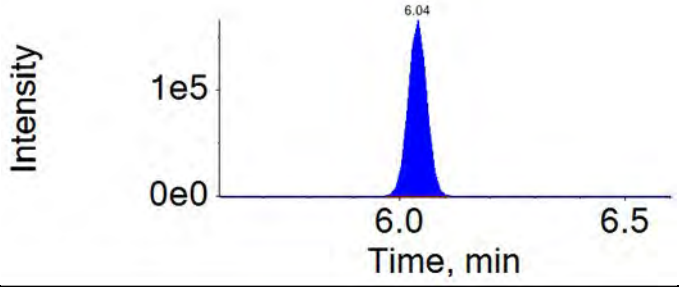
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

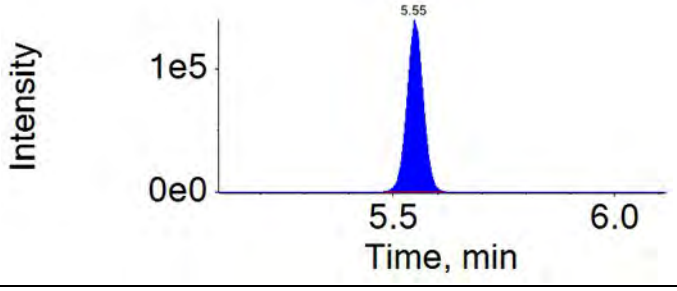
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



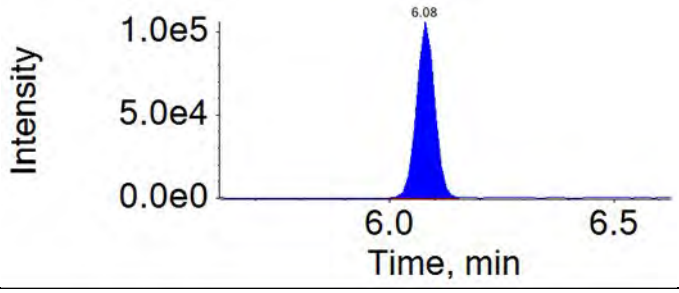


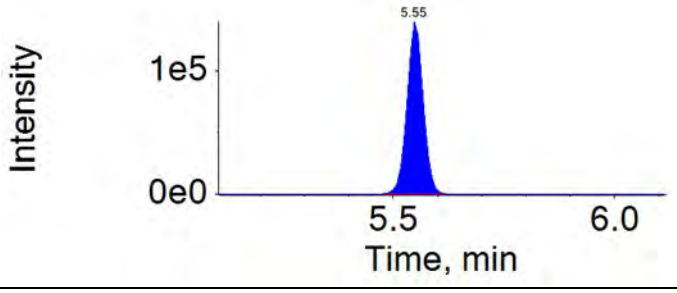
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



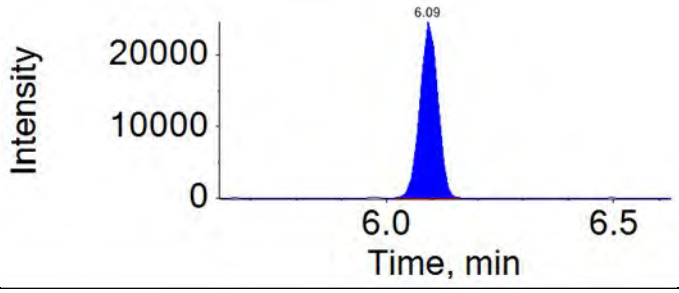


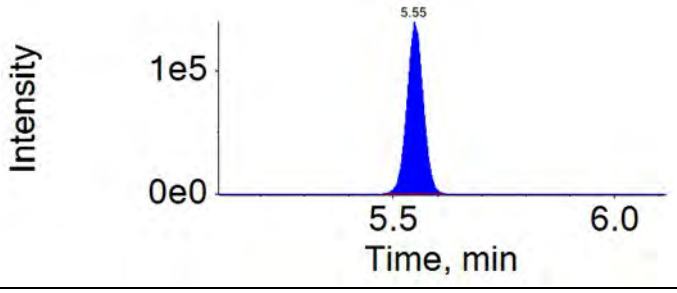
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



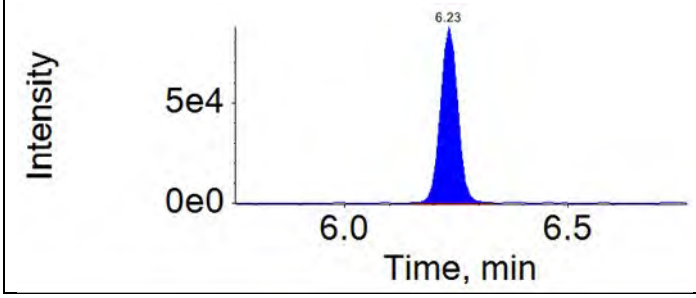


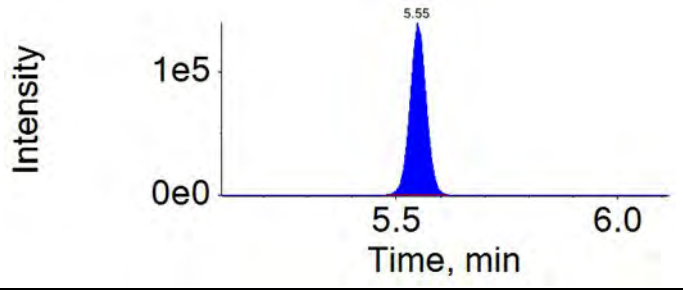
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

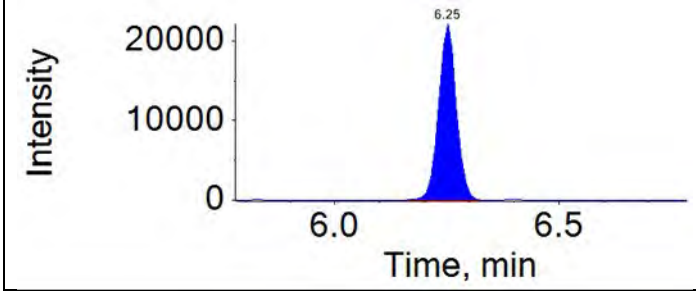
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

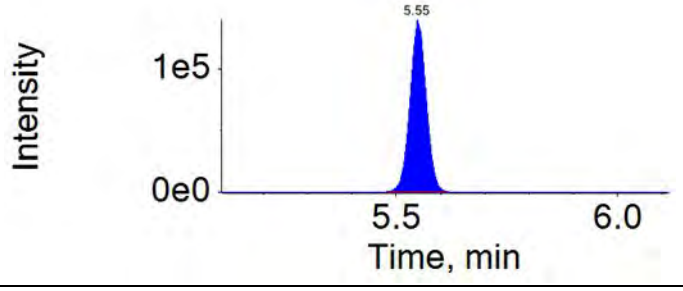
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



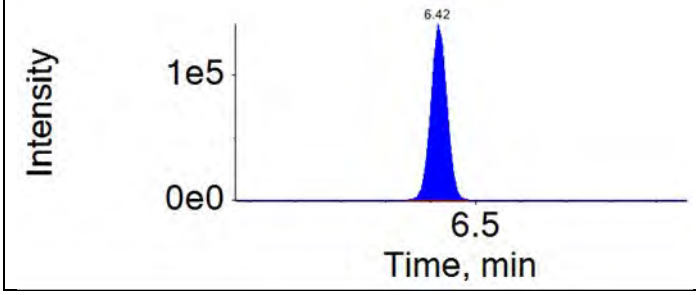


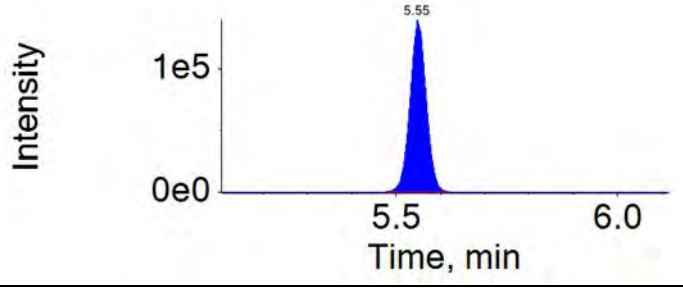
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

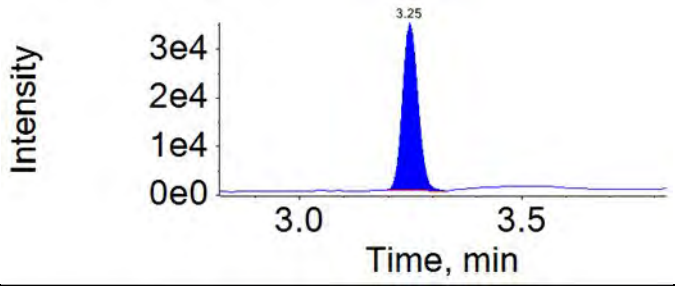
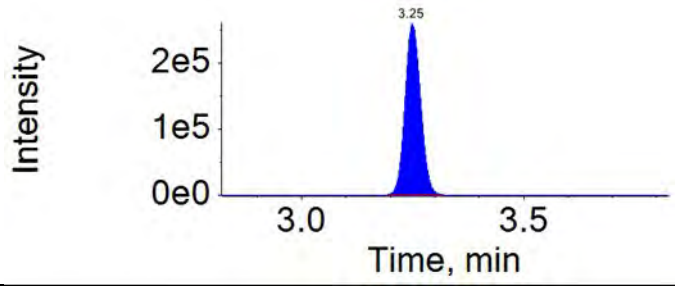


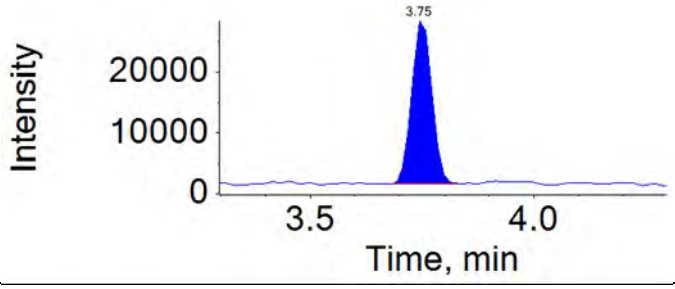
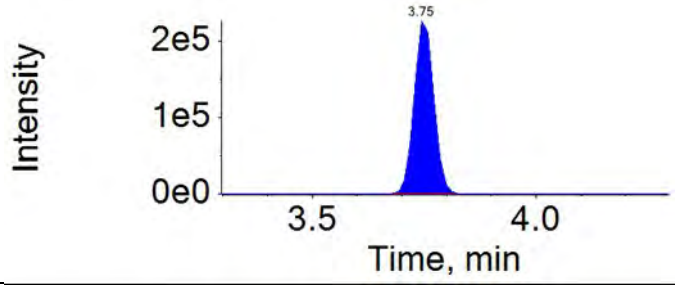


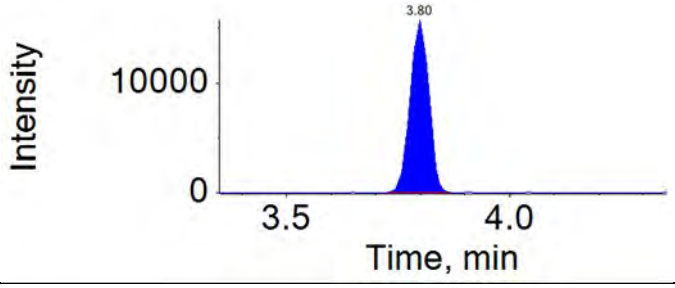
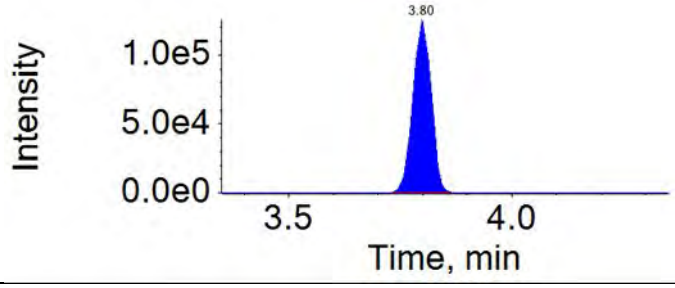
APPROVED
By MCD at 4:42 pm, 11/8/18

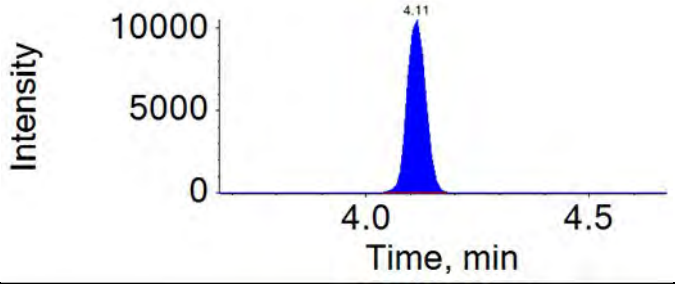
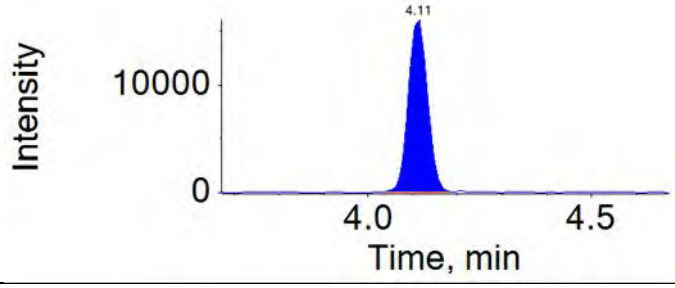
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

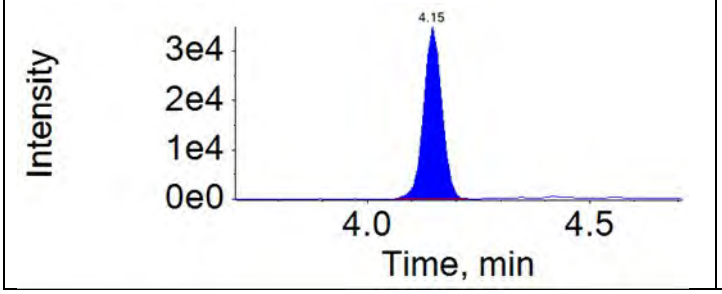
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

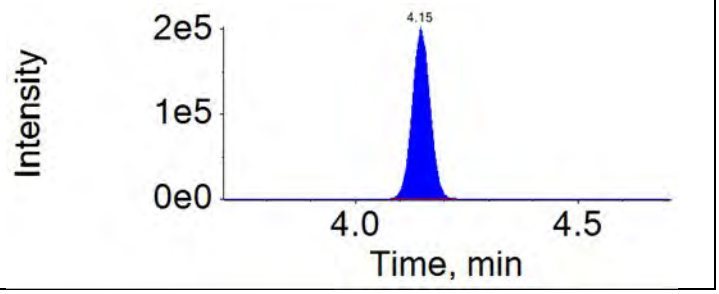
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

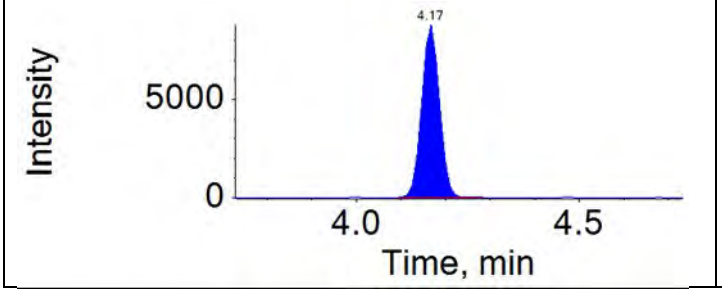
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

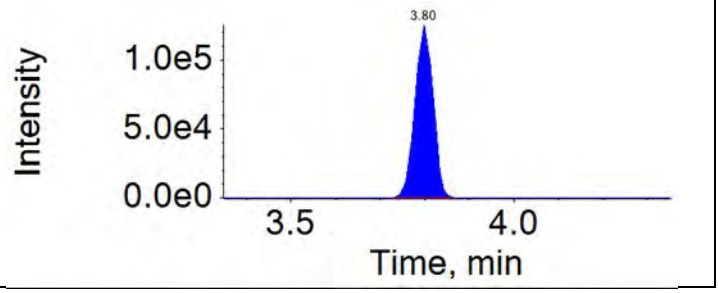
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



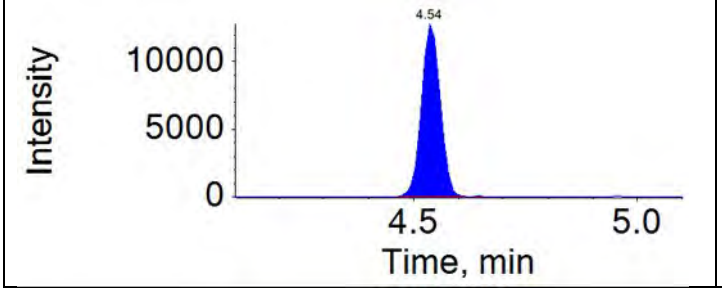


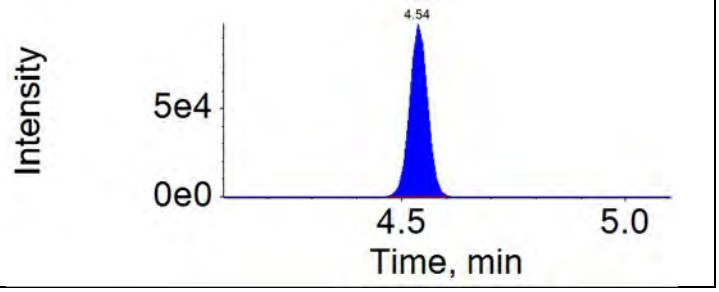
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



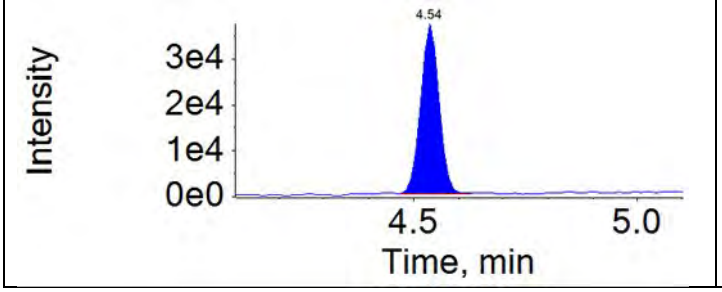


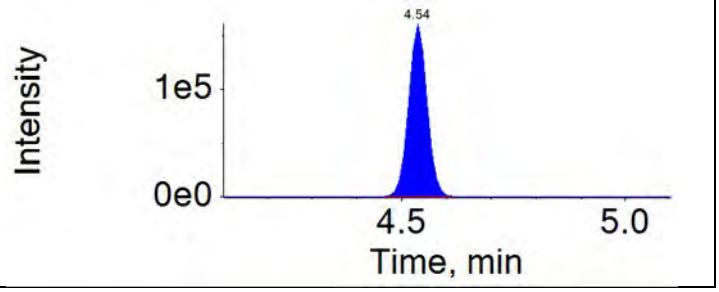
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

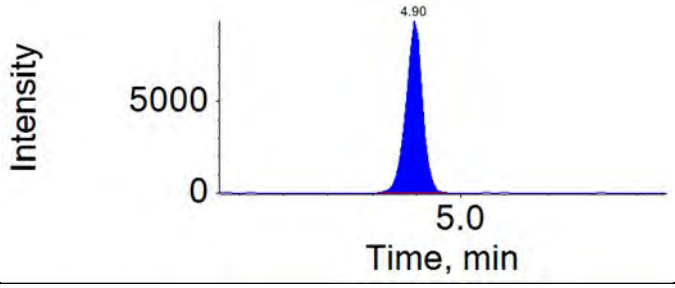
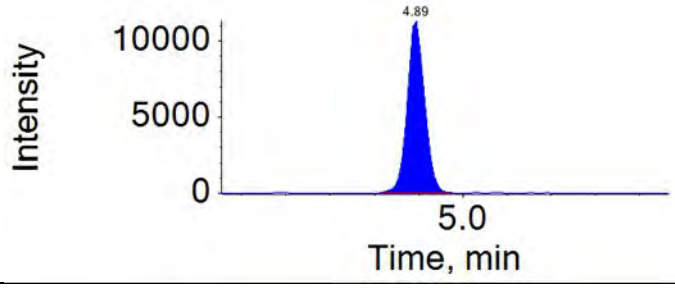


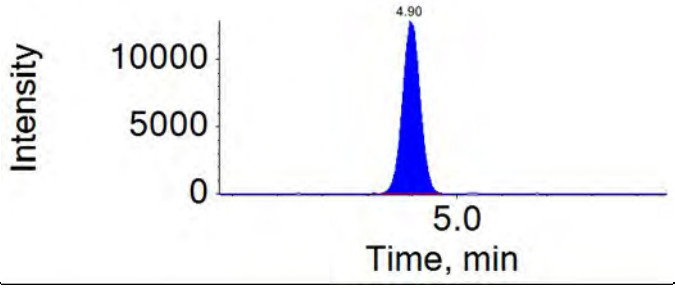
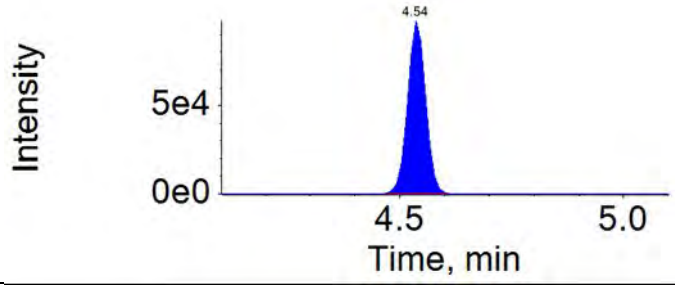


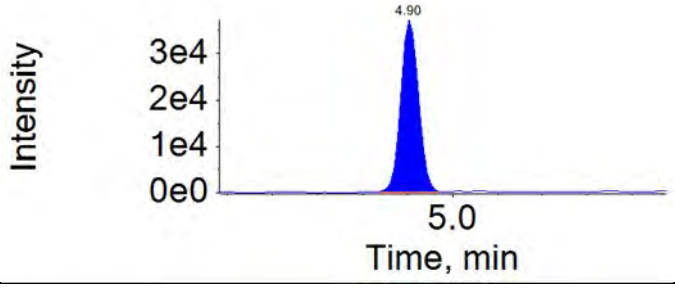
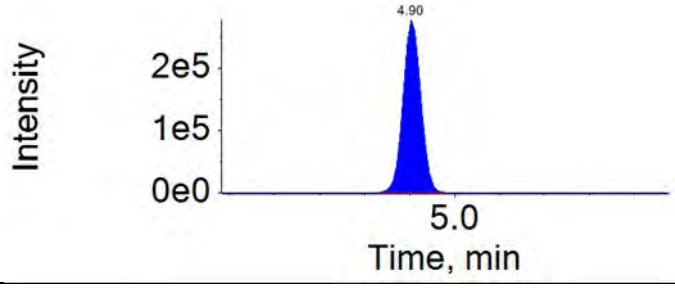
APPROVED
By MCD at 4:42 pm, 11/8/18

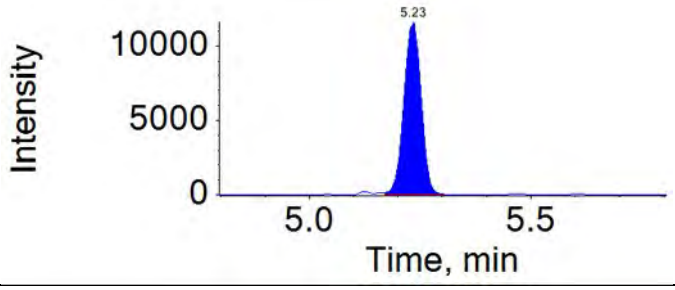
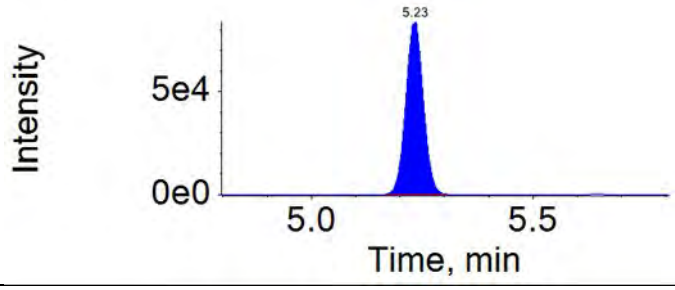
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

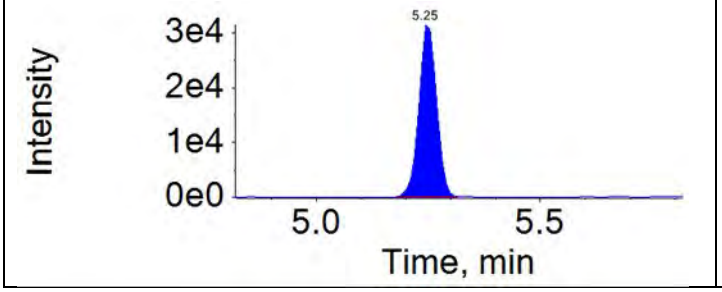
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

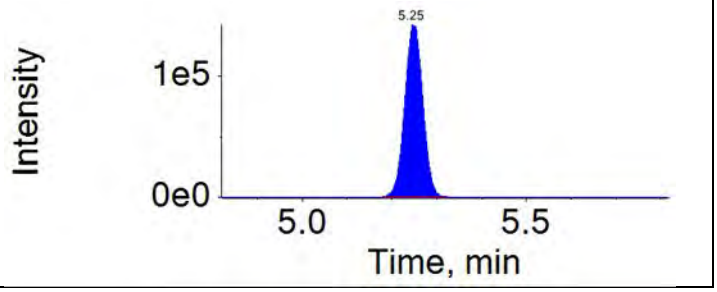
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

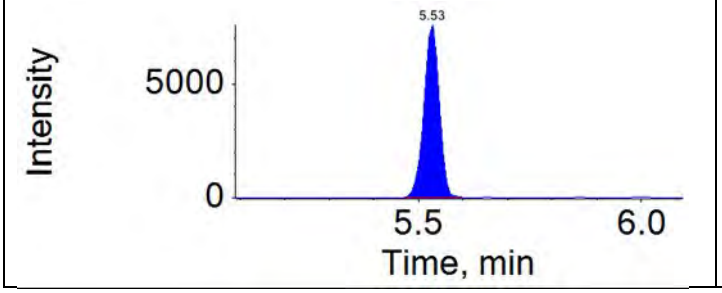
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

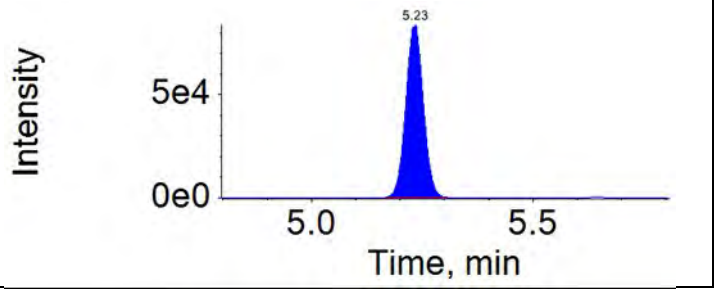
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



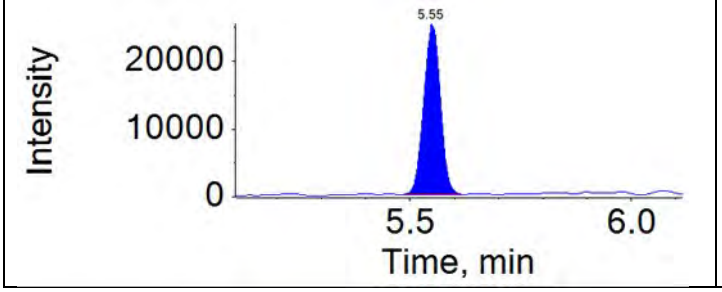


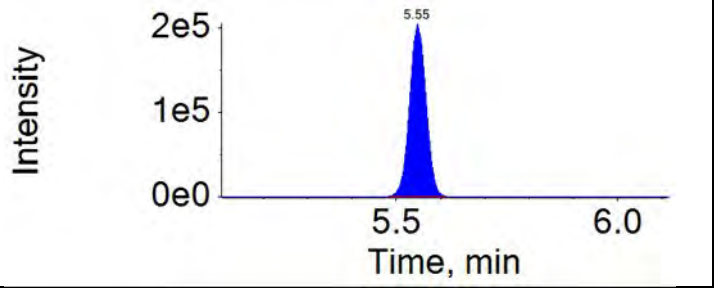
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



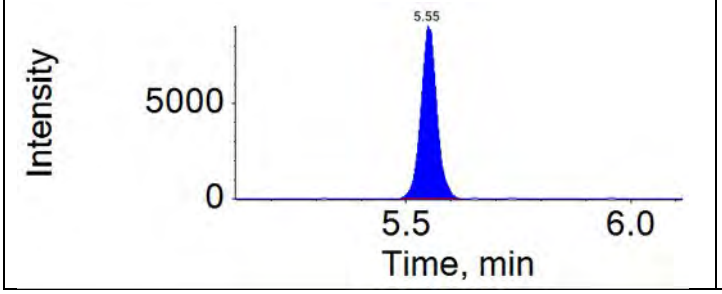


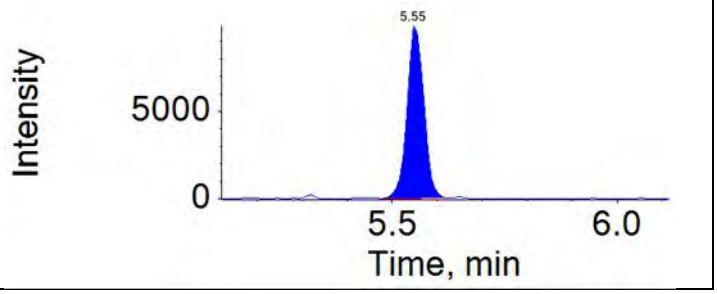
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

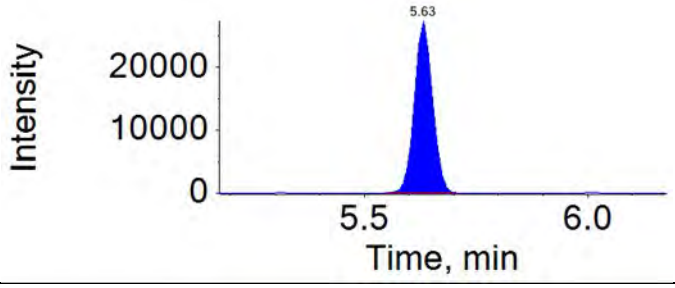
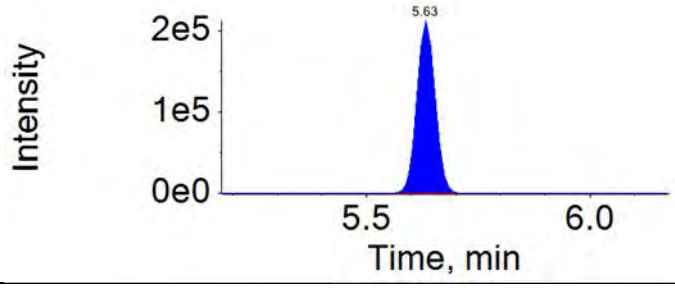


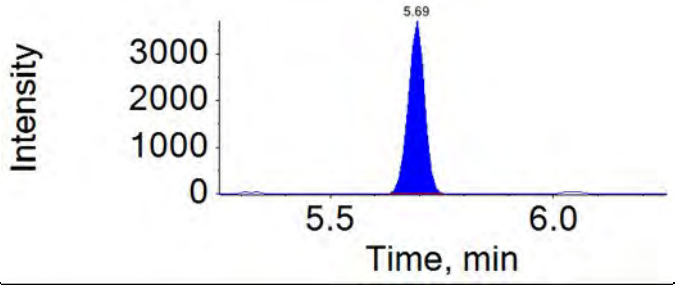
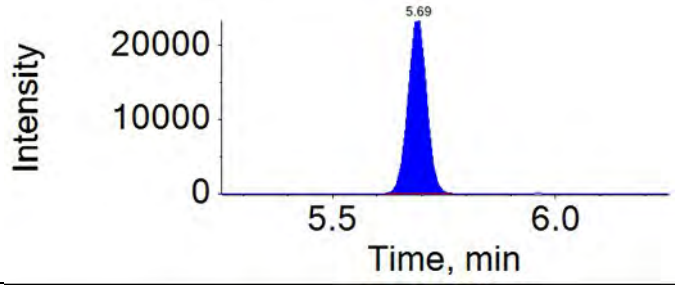


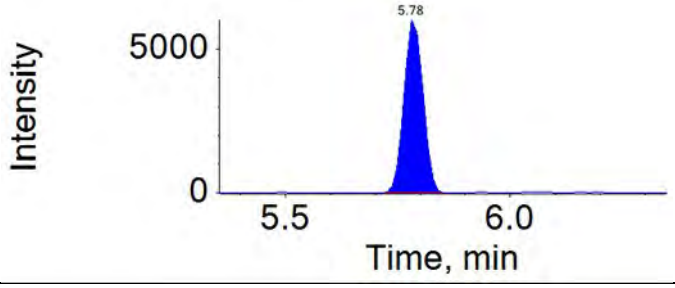
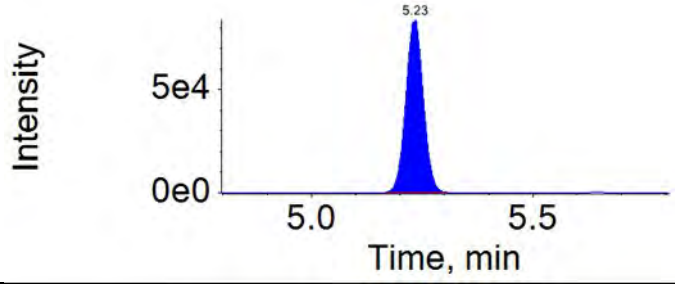
APPROVED
By MCD at 4:42 pm, 11/8/18

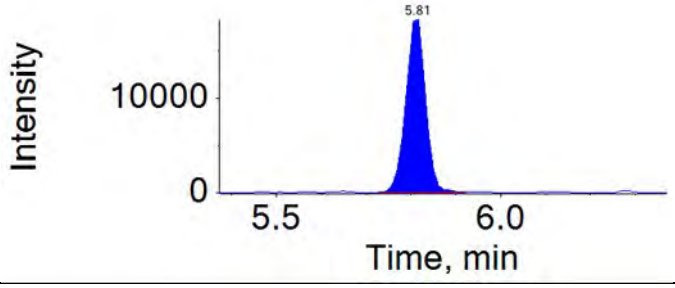
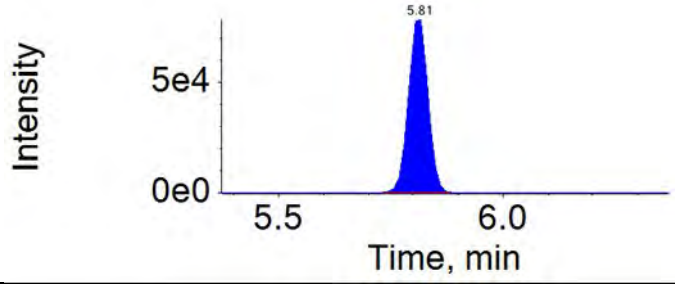
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

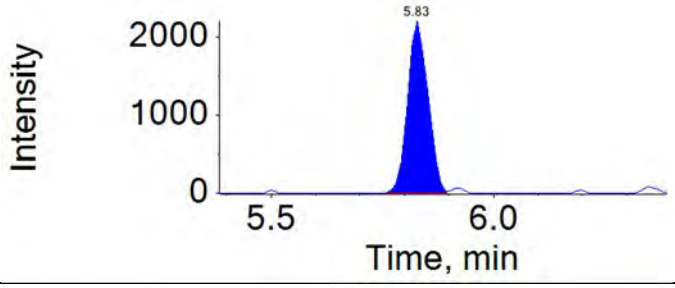
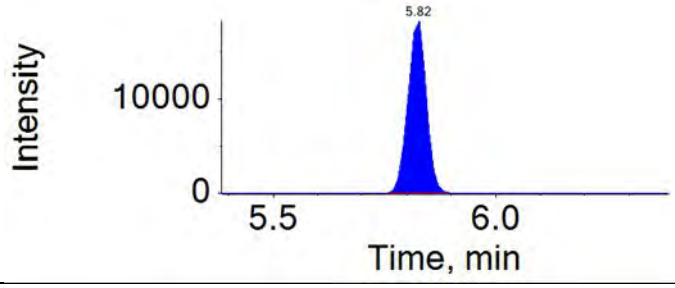
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

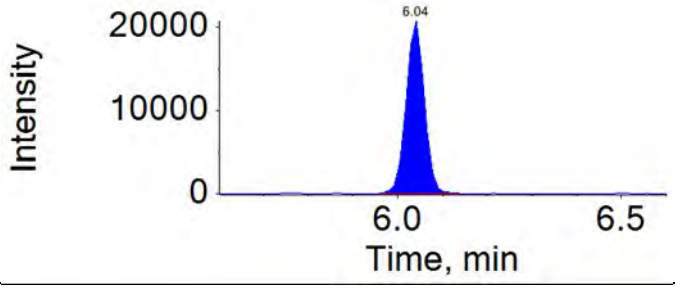
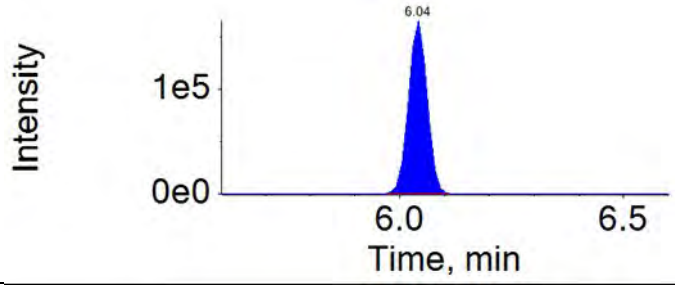
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

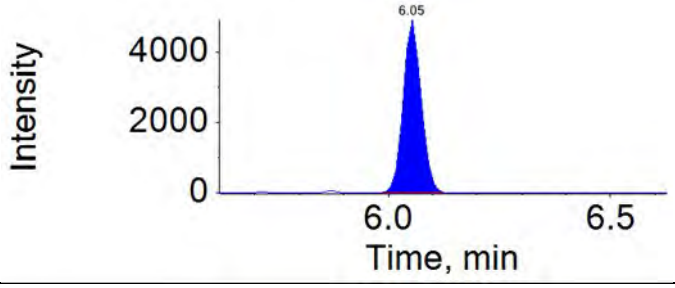
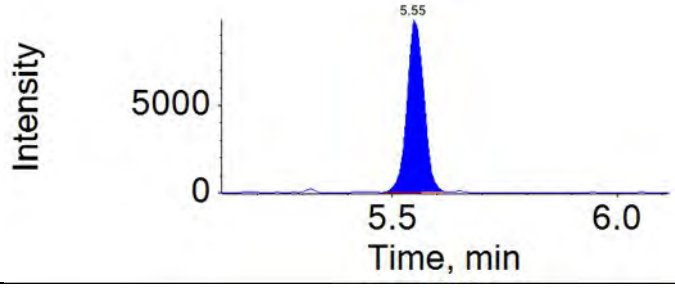
APPROVED
By MCD at 4:42 pm, 11/8/18

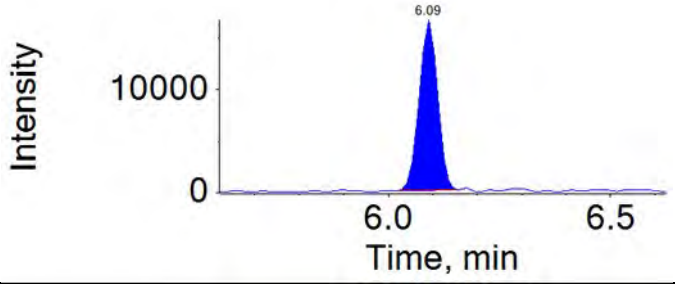
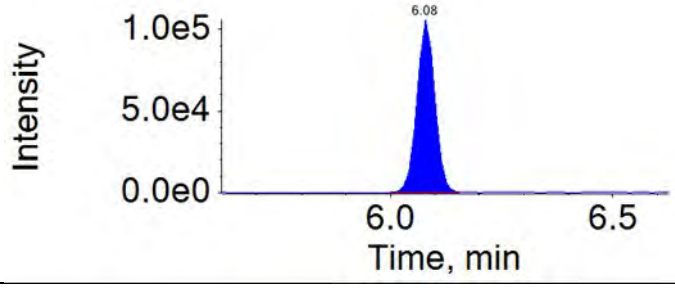
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

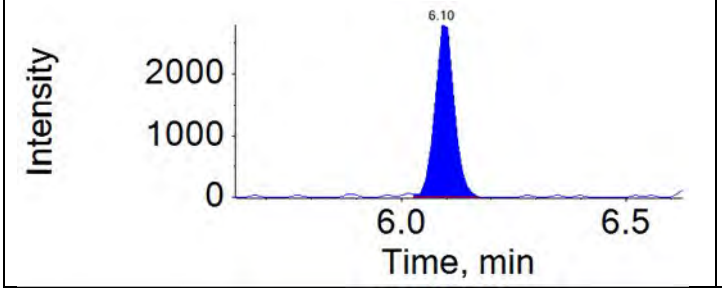
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

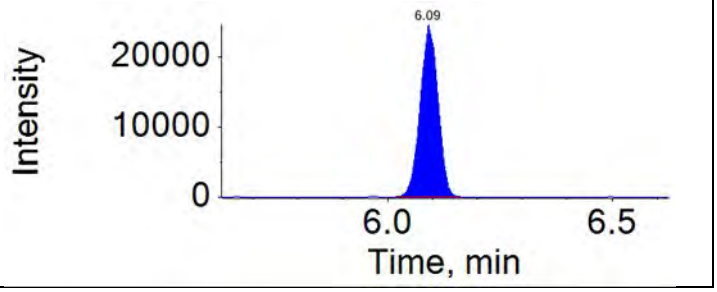
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

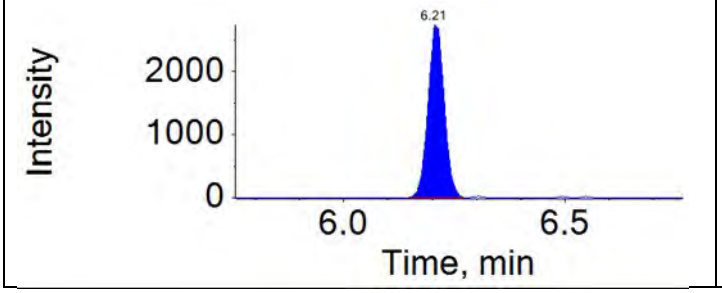
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

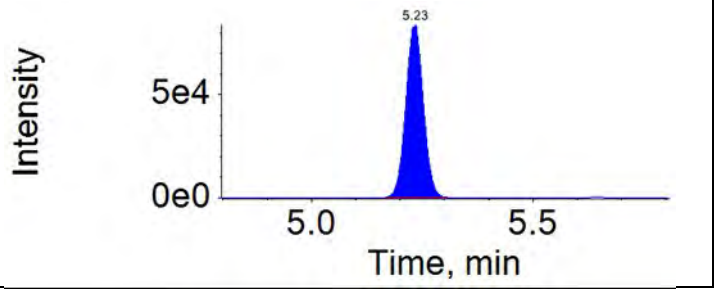
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



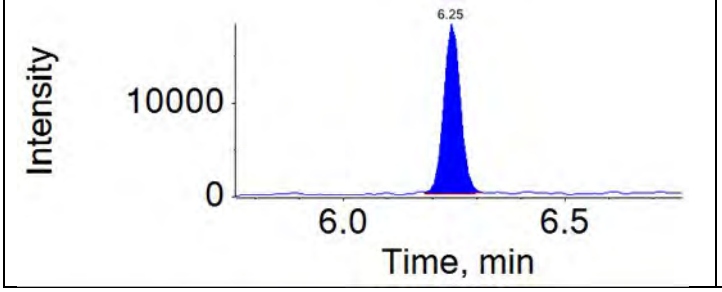


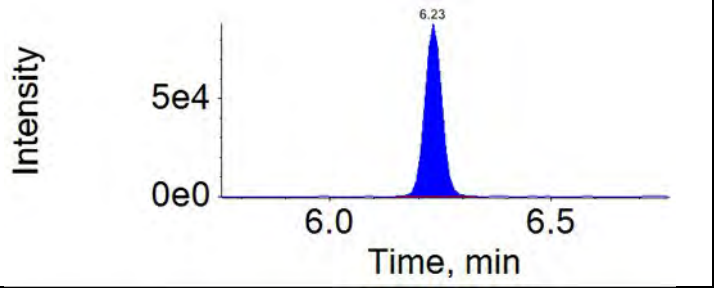
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



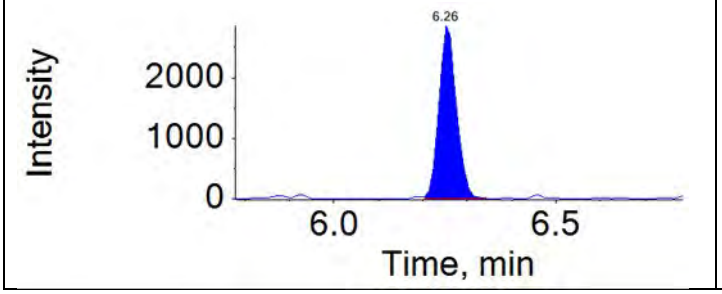


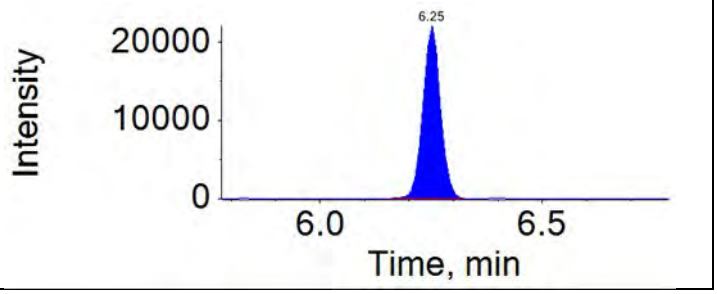
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

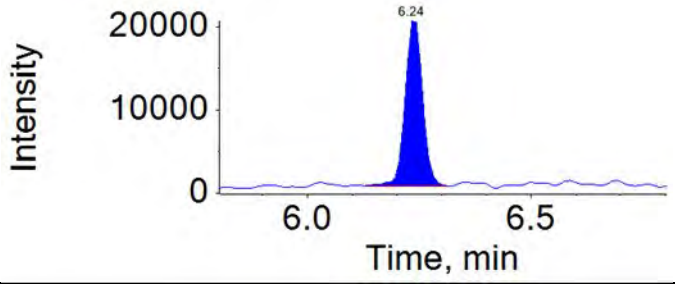
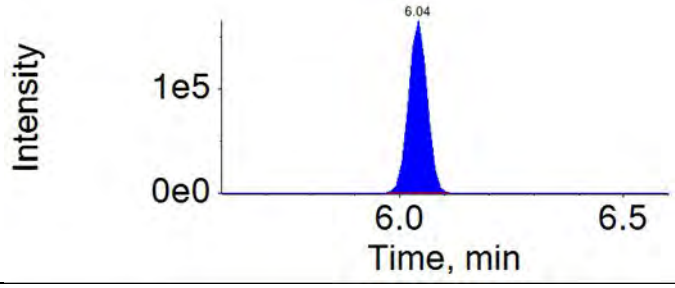


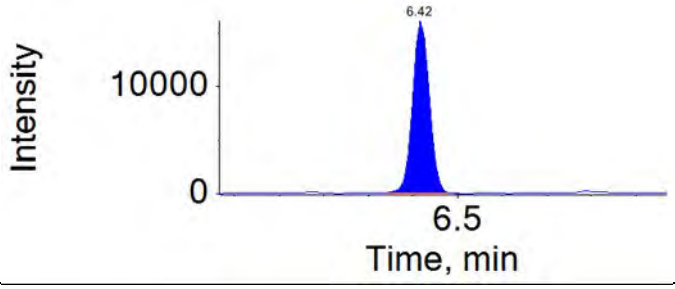
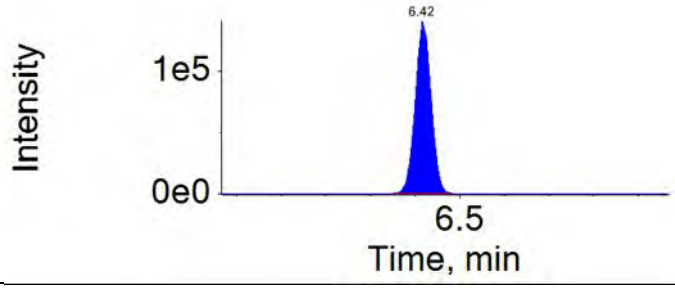


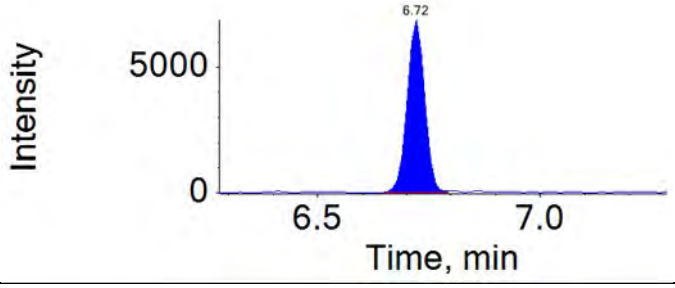
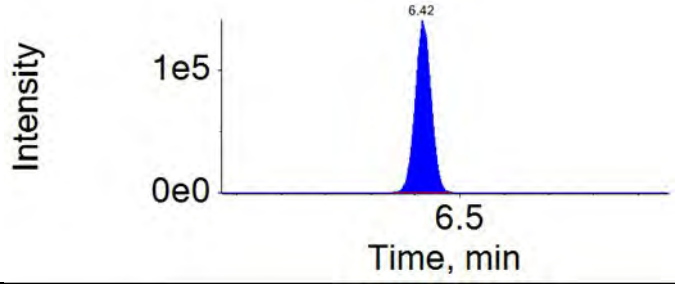
APPROVED
By MCD at 4:42 pm, 11/8/18

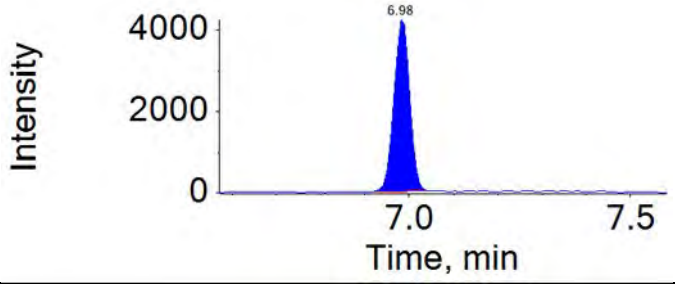
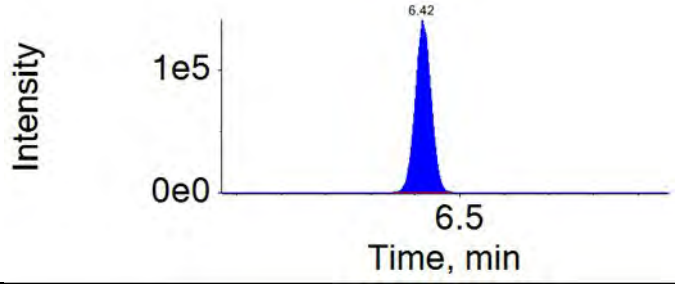
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

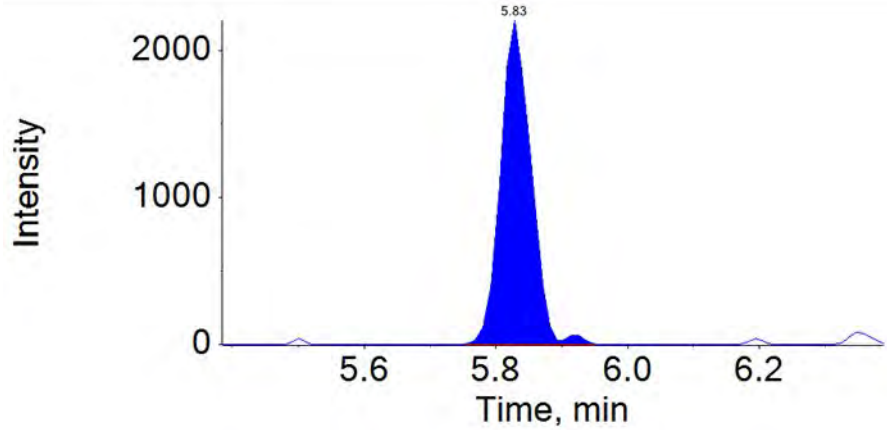
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

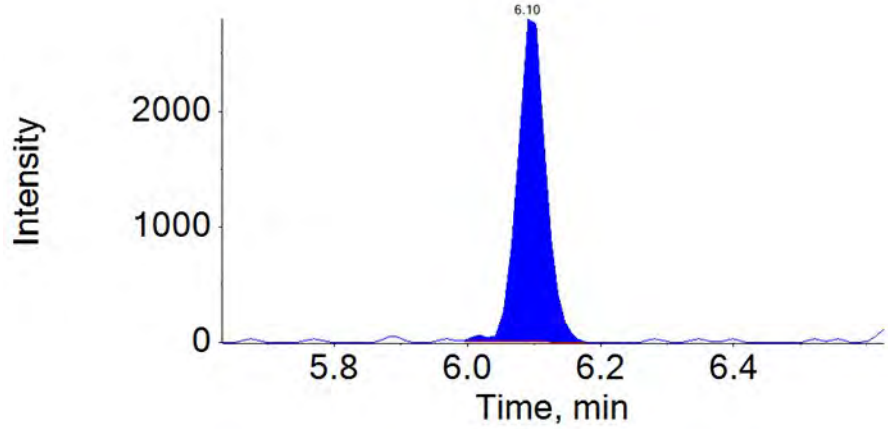
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
7126.3
Mass Range:
584.0 / 419.0
File Name:
18NOV07D-15.wiff
Sample Name:
LCS309005



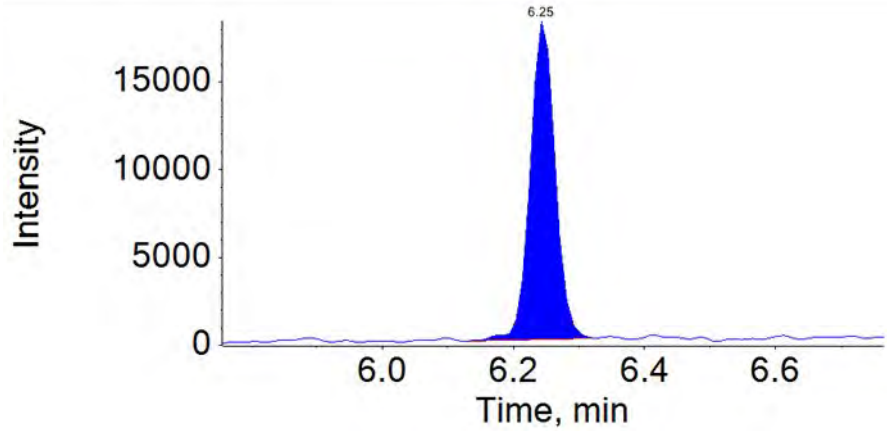
Integration Comment: incorrect integration

Component Name:
NMePFOSA
RT (min.):
6.10
Peak Area:
8380.9
Mass Range:
512.0 / 169.0
File Name:
18NOV07D-15.wiff
Sample Name:
LCS309005



Integration Comment: incorrect integration

Component Name:
NEtPFOSAE
RT (min.):
6.25
Peak Area:
47855.4
Mass Range:
630.0 / 59.0
File Name:
18NOV07D-15.wiff
Sample Name:
LCS309005



Integration Comment: incorrect integration

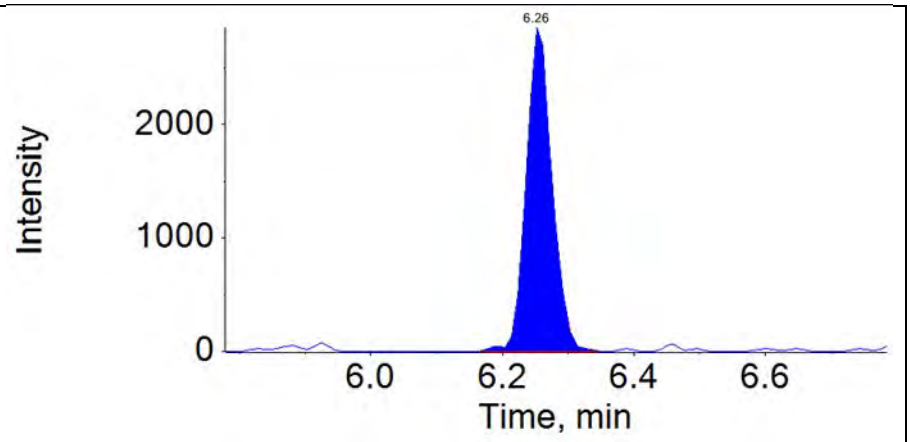
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
NEtPFOSA
RT (min.):
6.26
Peak Area:
7825.0
Mass Range:
526.0 / 169.0
File Name:
18NOV07D-15.wiff
Sample Name:
LCS309005



Integration Comment: incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Ion Ratio Report

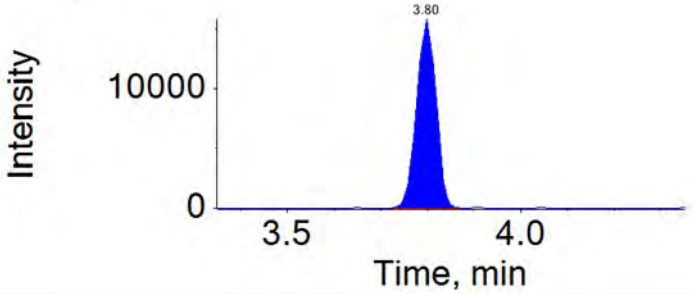
Sample Name: LCS309005 **Instrument Name:** LM27631 **File Name:** 18NOV07D-15.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	45887.6	A	N/A	0.3545			
PFBS_2	3.80	1.00	16265.9	A	N/A	0.3545	0	50	
4:2-FTS	4.11	1.00	30487.2	A	N/A	0.6053			
4:2-FTS_2	4.11	1.00	18453.8	A	N/A	0.6053	-6	50	
PFHxA	4.15	1.00	97729.7	A	N/A	0.0132			
PFHxA_2	4.15	1.00	1290.2	A	N/A	0.0132	17	50	
PFPeS	4.17	1.10	24539.1	A	N/A	0.5411			
PFPeS_2	4.17	1.10	13278.2	A	N/A	0.5411	0	50	
PFHxS	4.54	1.00	37255.6	A	N/A	0.3498			
PFHxS_2	4.54	1.00	13031.9	A	N/A	0.3498	-2	50	
PFHpA	4.54	1.00	104785.0	A	N/A	0.0587			
PFHpA_2	4.54	1.00	6152.5	A	N/A	0.0587	2	50	
6:2-FTS	4.90	1.00	24451.6	A	N/A	0.6690			
6:2-FTS_2	4.89	1.00	16359.3	A	N/A	0.6690	-2	50	
PFHpS	4.90	1.08	35174.7	A	N/A	0.3602			
PFHpS_2	4.90	1.08	12669.5	A	N/A	0.3602	-9	50	
PFOA	4.90	1.00	101588.4	A	N/A	0.0526			
PFOA_2	4.91	1.00	5344.7	A	N/A	0.0526	-18	50	
PFOS	5.23	1.00	31319.4	A	N/A	0.3790			
PFOS_2	5.24	1.00	11871.1	A	N/A	0.3790	8	50	
PFNA	5.25	1.00	85971.3	A	N/A	0.0216			
PFNA_2	5.25	1.00	1854.7	A	N/A	0.0216	5	50	
PFNS	5.53	1.06	18204.9	A	N/A	0.5016			
PFNS_2	5.53	1.06	9131.8	A	N/A	0.5016	3	50	
PFDA	5.55	1.00	65460.7	A	N/A	0.0078			
PFDA_2	5.56	1.00	512.3	A	N/A	0.0078	44	50	
8:2-FTS	5.55	1.00	22250.7	A	N/A	0.5618			
8:2-FTS_2	5.55	1.00	12501.5	A	N/A	0.5618	-10	50	
NMeFOSAA	5.69	1.00	9283.3	A	N/A	0.1807			
NMeFOSAA_2	5.69	1.00	1677.9	A	N/A	0.1807	-17	50	
PFDS	5.78	1.11	17711.6	A	N/A	0.4358			
PFDS_2	5.78	1.10	7719.3	A	N/A	0.4358	-5	50	
PFUnDA	5.81	1.00	56345.9	A	N/A	0.0013			
PFUnDA_2	5.81	1.00	73.9	A	N/A	0.0013	-57	50	OOS
NEtFOSAA	5.83	1.00	6993.7	M	N/A	0.7144			
NEtFOSAA_2	5.83	1.00	4996.3	A	N/A	0.7144	18	50	
PFDoDA	6.04	1.00	59022.0	A	N/A	0.0156			
PFDoDA_2	6.05	1.00	920.8	A	N/A	0.0156	49	50	
10:2-FTS	6.05	1.09	13728.3	A	N/A	0.5862			
10:2-FTS_2	6.06	1.09	8047.2	A	N/A	0.5862	-18	50	
PFTrDA	6.24	1.03	53802.0	A	N/A	0.0085			
PFTrDA_2	6.25	1.03	459.3	A	N/A	0.0085	-11	50	
PFTeDA	6.42	1.00	41507.4	A	N/A	0.0093			
PFTeDA_2	6.42	1.00	384.4	A	N/A	0.0093	72	50	OOS
PFHxDA	6.72	1.05	18562.0	A	N/A	0.0611			
PFHxDA_2	6.72	1.05	1134.2	A	N/A	0.0611	3	50	
PFODA	6.98	1.09	10342.3	A	N/A	0.0257			
PFODA_2	6.98	1.09	266.2	A	N/A	0.0257	1	50	

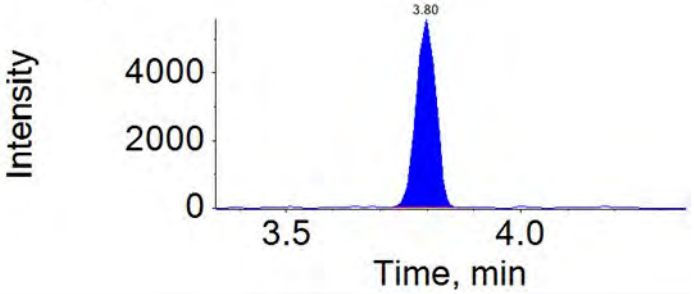
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

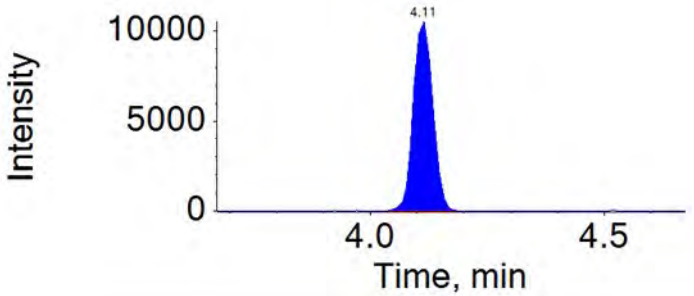
Component: PFBS
Primary Mass: 299.0 / 80.0



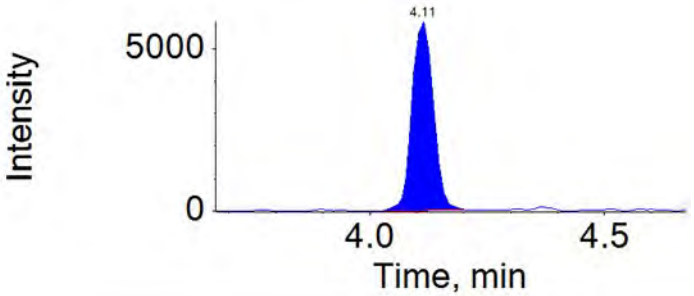
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



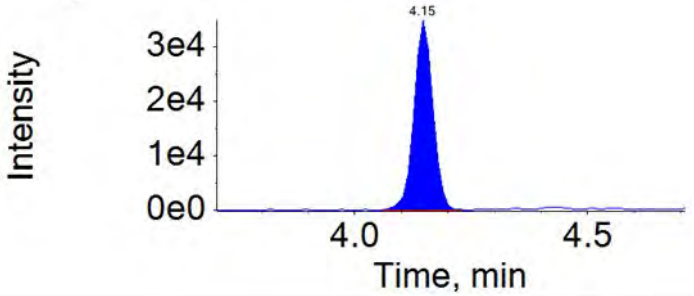
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



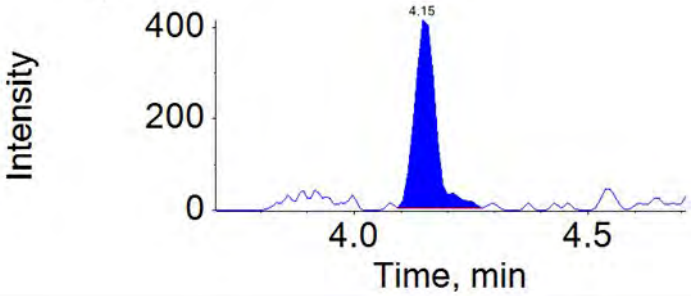
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



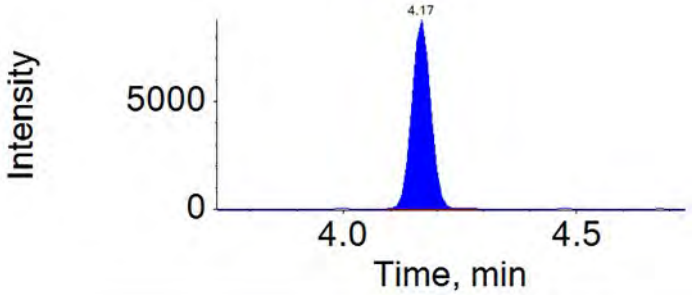
Component: PFHxA
Primary Mass: 313.0 / 269.0



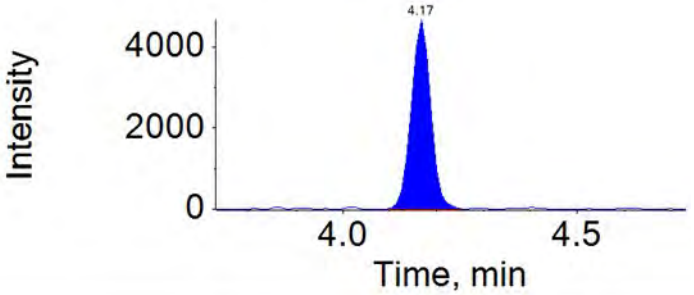
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



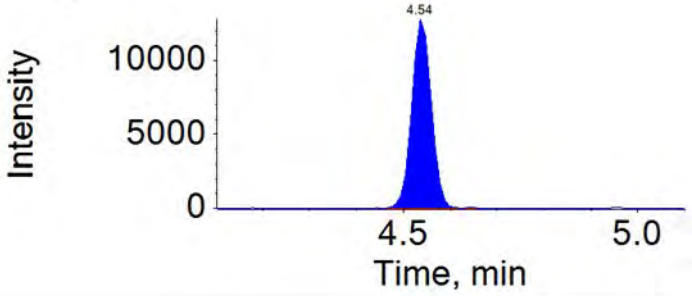
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



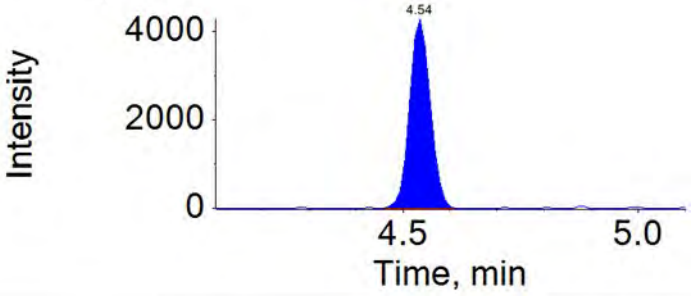
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

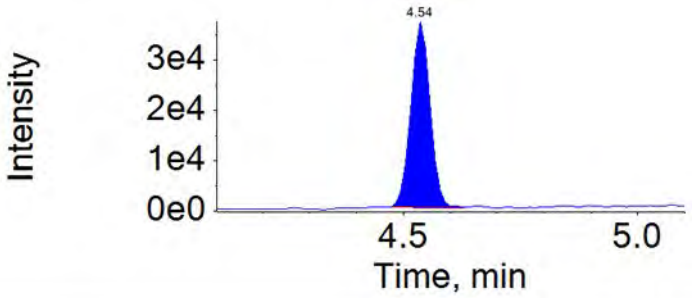
Component: PFHxS
Primary Mass: 399.0 / 80.0



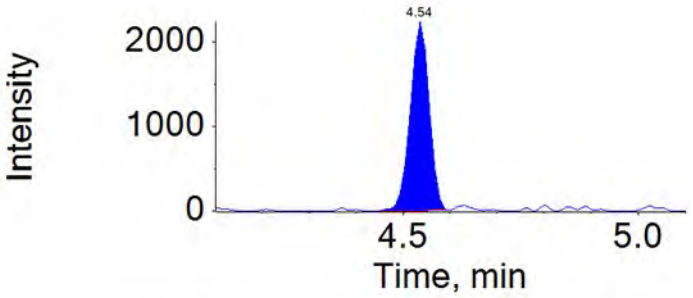
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



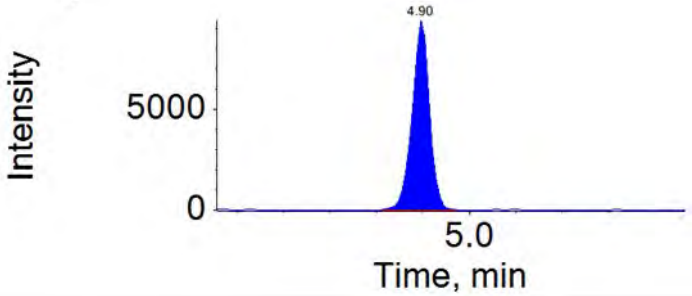
Component: PFHpA
Primary Mass: 363.0 / 319.0



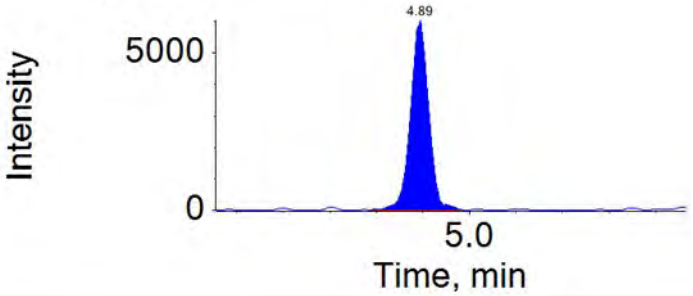
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



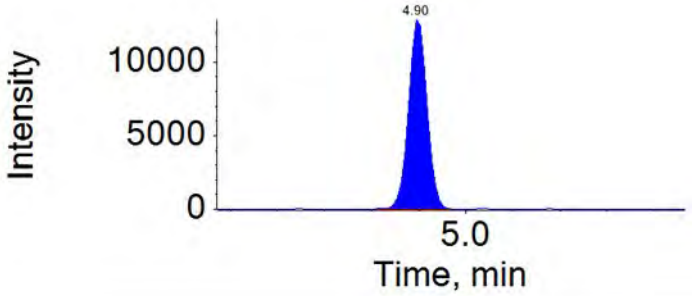
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



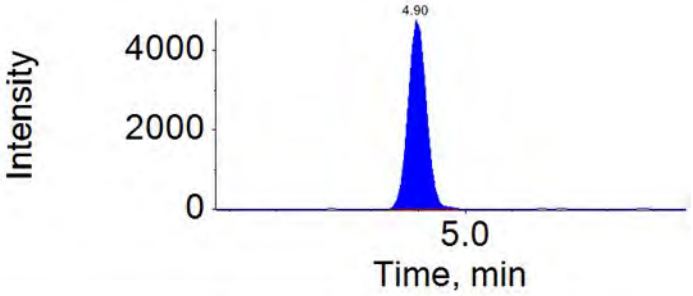
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



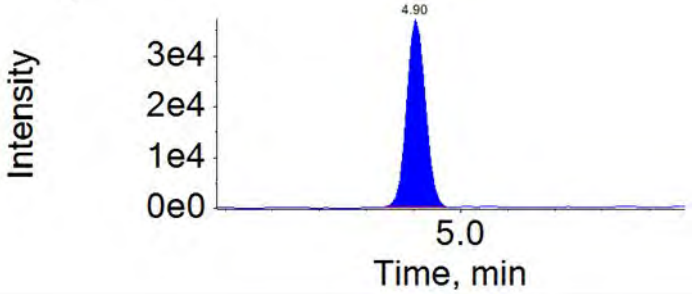
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



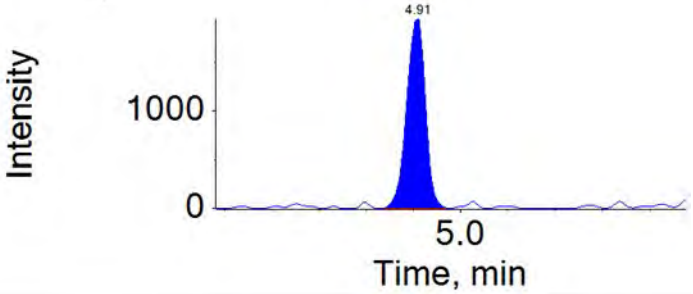
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

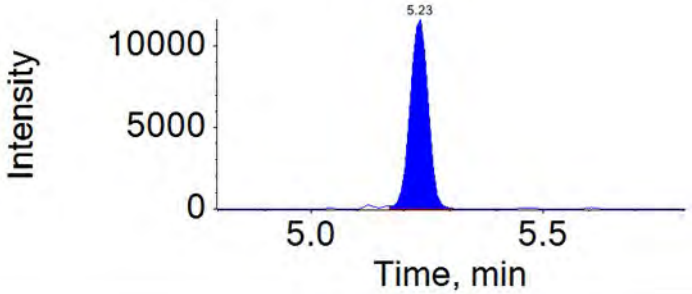
Component: PFOA
Primary Mass: 413.0 / 369.0



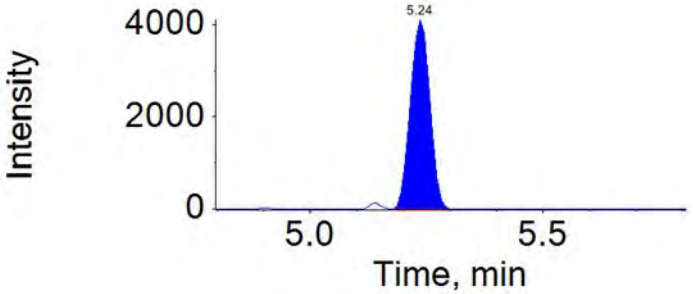
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



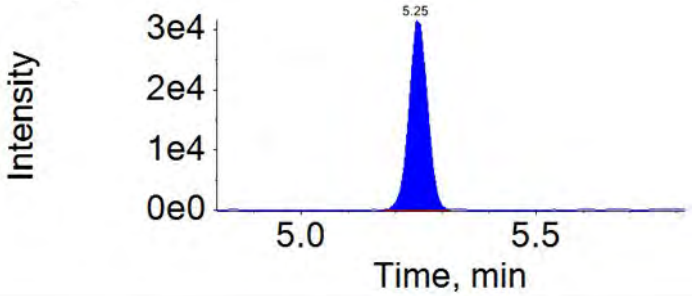
Component: PFOS
Primary Mass: 499.0 / 80.0



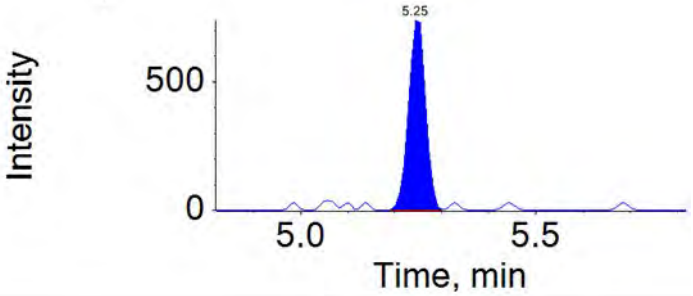
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



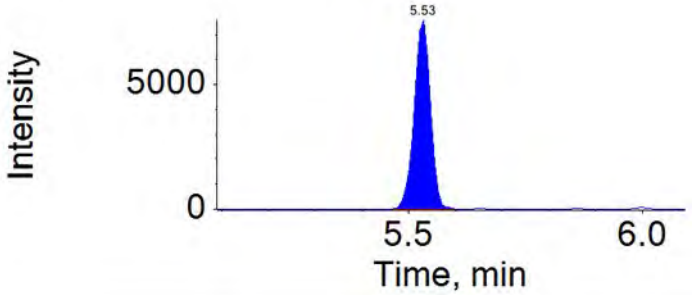
Component: PFNA
Primary Mass: 463.0 / 419.0



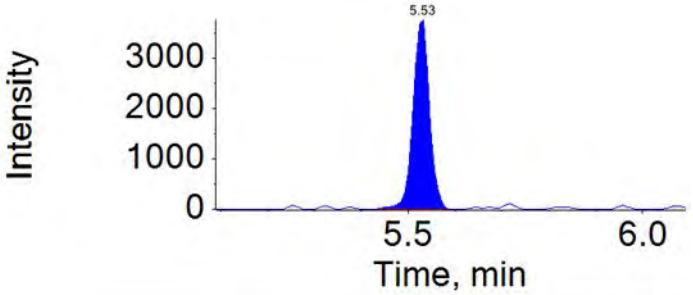
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



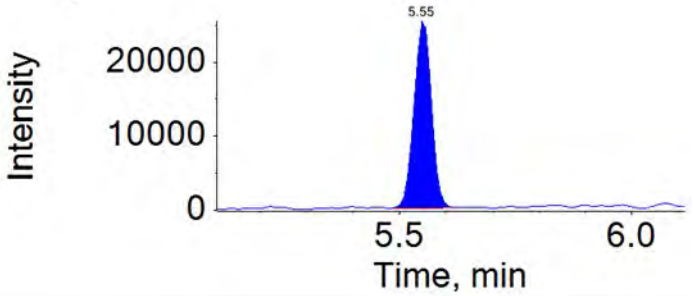
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



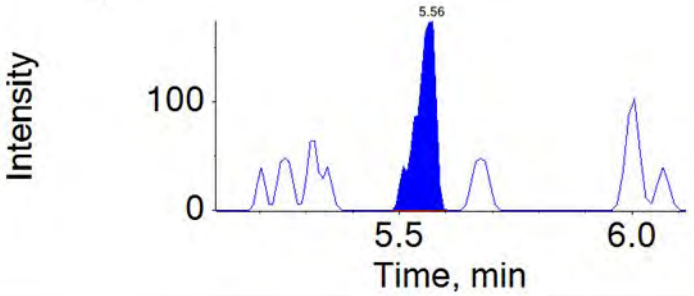
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

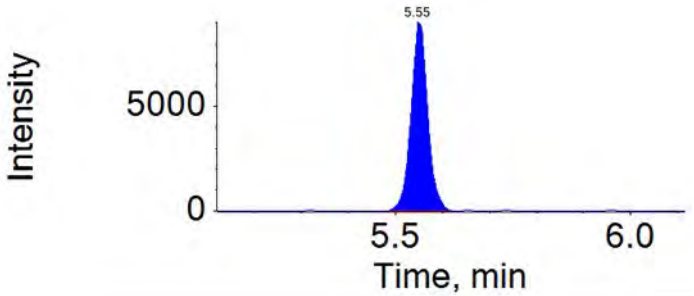
Component: PFDA
Primary Mass: 513.0 / 469.0



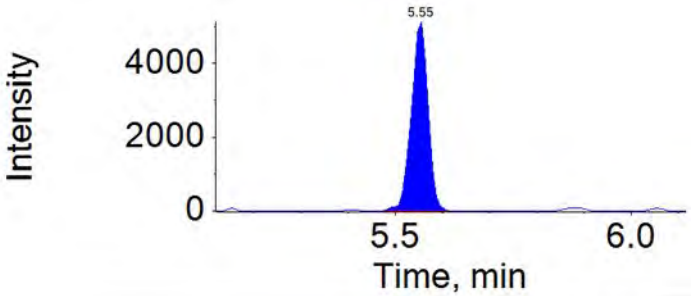
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



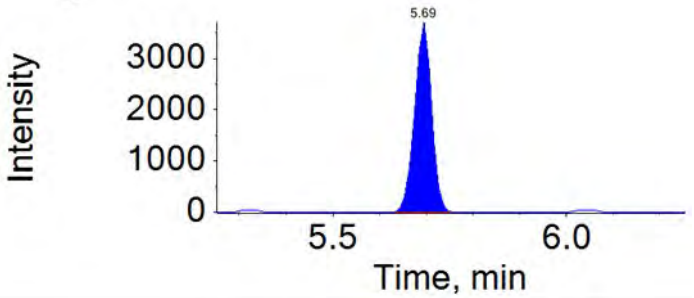
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



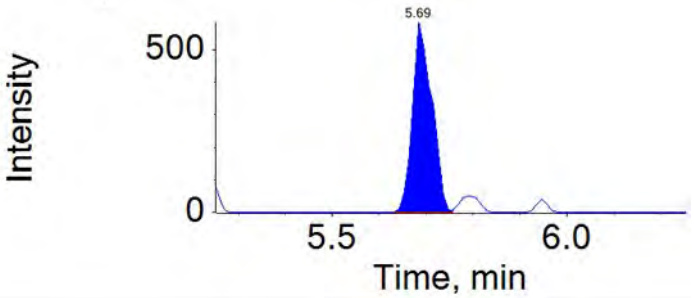
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



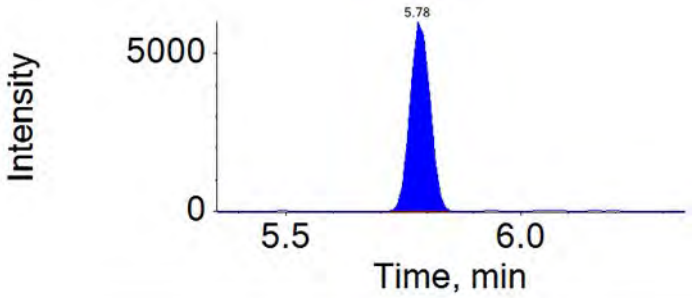
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



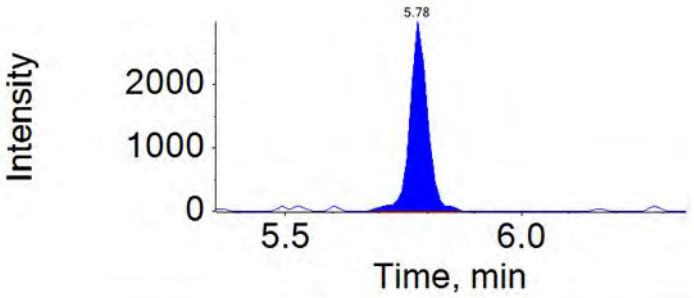
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



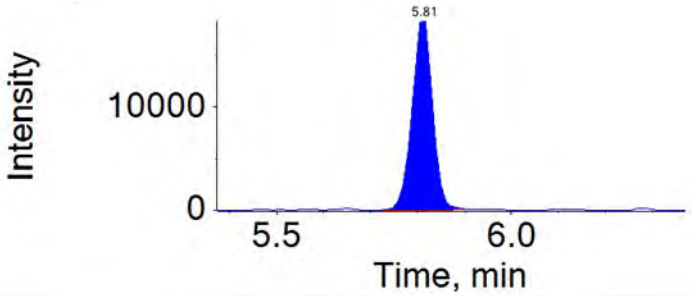
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



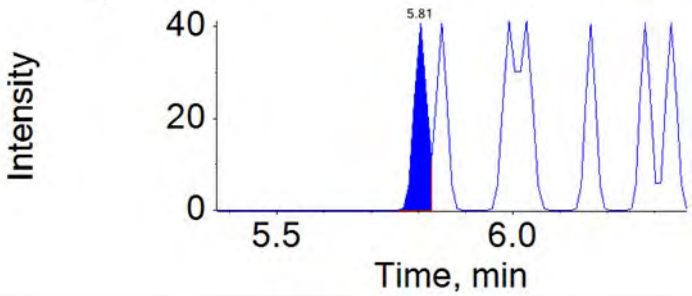
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

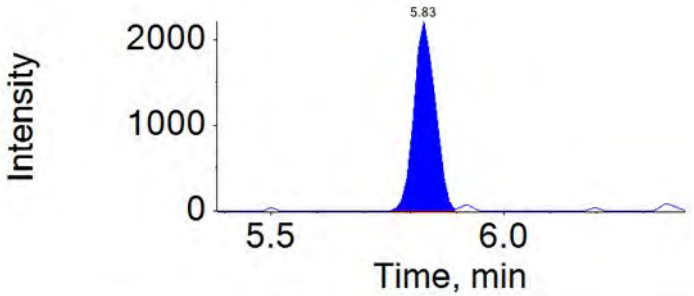
Component: PFUnDA
Primary Mass: 563.0 / 519.0



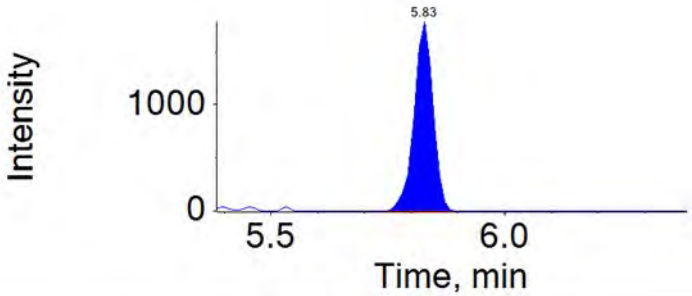
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



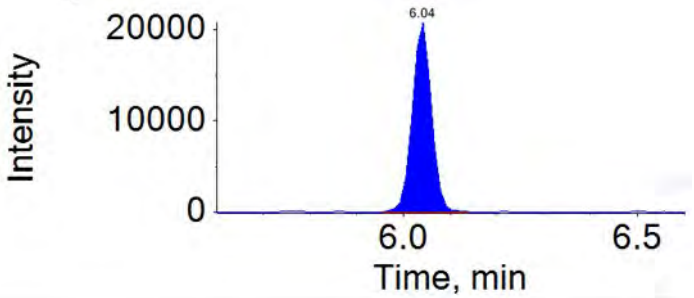
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



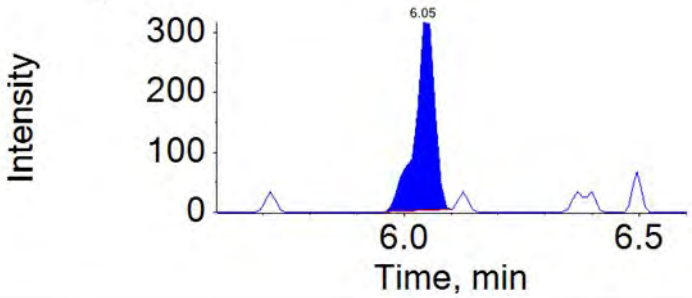
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



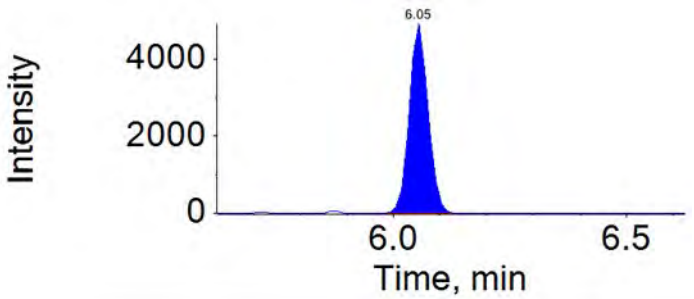
Component: PFDoDA
Primary Mass: 613.0 / 569.0



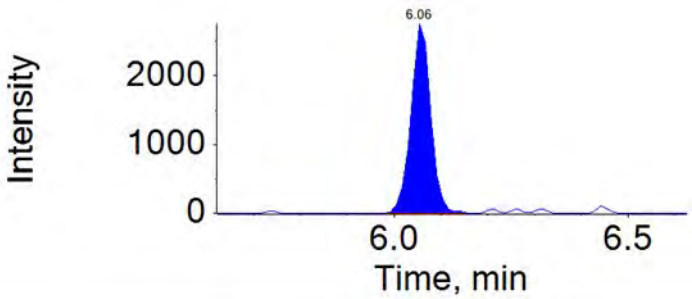
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



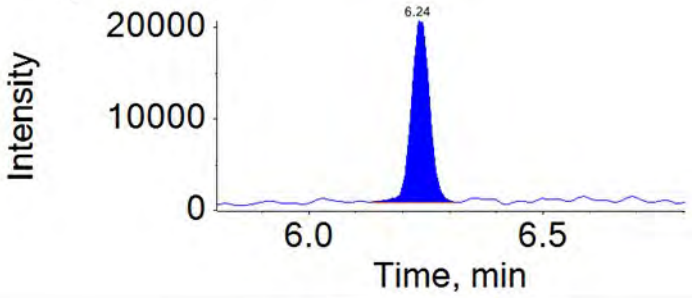
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



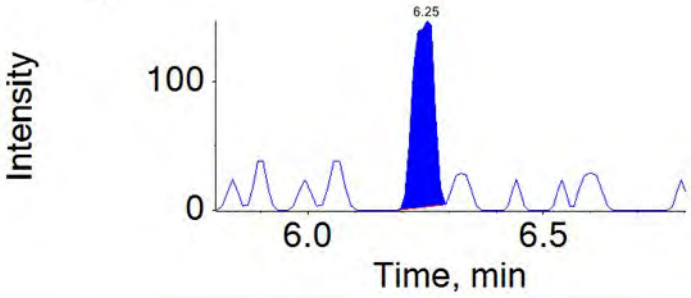
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

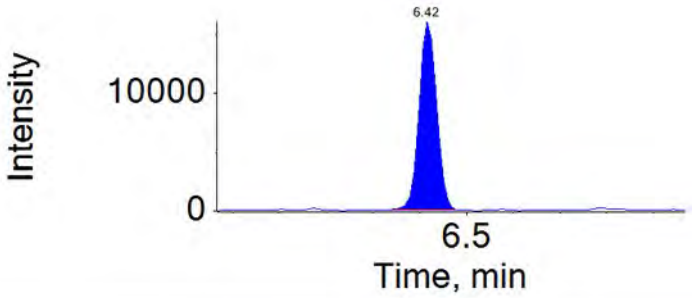
Component: PFTrDA
Primary Mass: 663.0 / 619.0



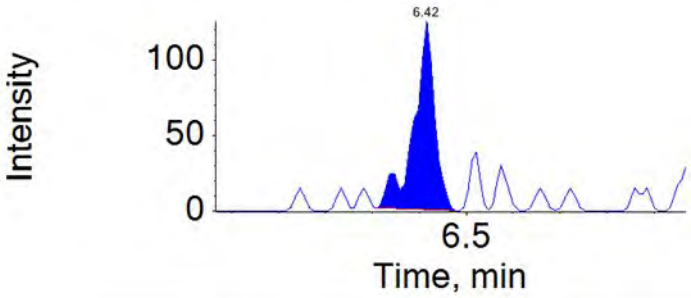
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



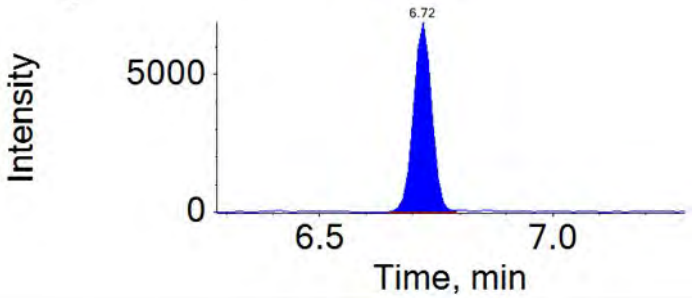
Component: PFTeDA
Primary Mass: 713.0 / 669.0



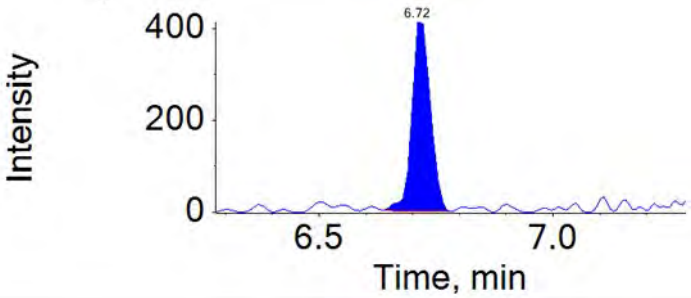
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



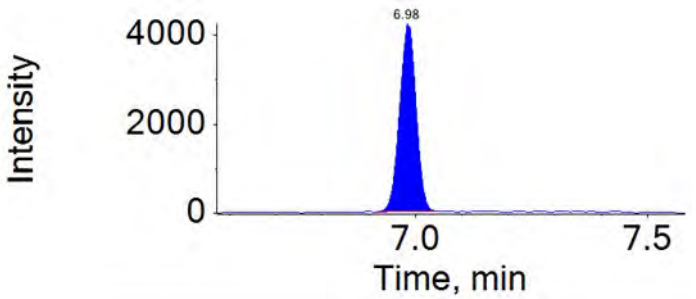
Component: PFHxDA
Primary Mass: 813.0 / 769.0



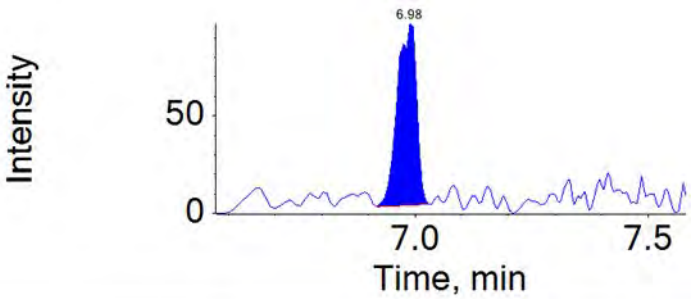
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



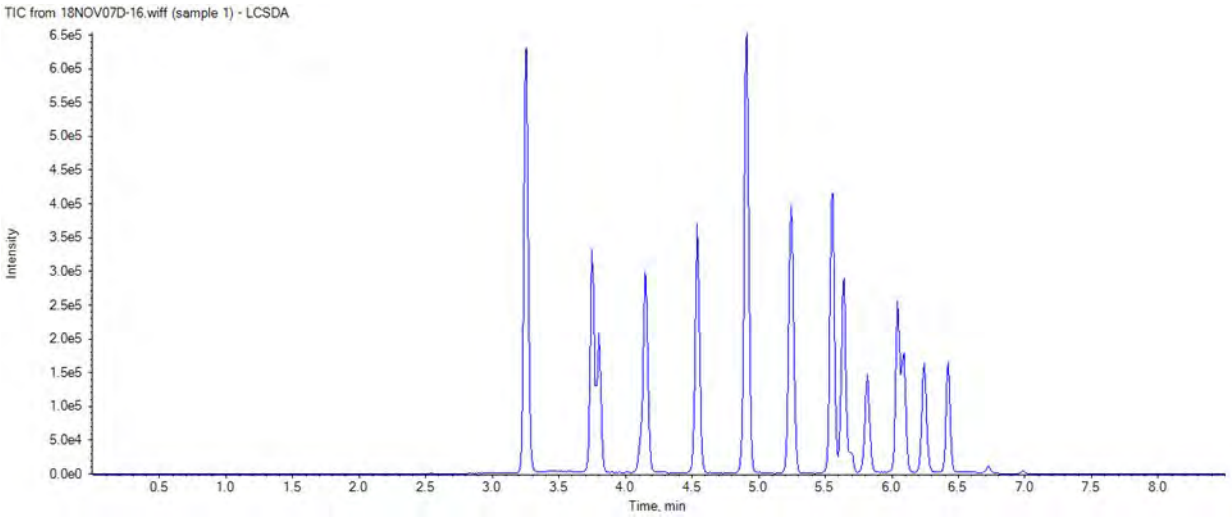
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:31:36 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCSDA	EPA 537 mod QSM 5.1 table B-15 18309005	18NOV07D-16.wiff	2018-11-07T13:35:57



Injection Standard Area Reference File**:** 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	766560.4	730410.6	5	50	
13C2-PFOA	5.00	565667.6	524423.6	8	50	
13C4-PFOS	4.78	288518.9	274061.7	5	50	
13C2-PFDA	5.00	382065.3	311442.1	23	50	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:31:36 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCSDA	EPA 537 mod QSM 5.1 table B-15 18309005	18NOV07D-16.wiff	2018-11-07T13:35:57

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	80694.8	602358.0	0.134	1.360	1.568	115	70-130	
PFPeA	88908.0	640601.5	0.139	1.360	1.650	121	70-130	
PFBS	44349.7	335681.8	0.132	1.202	1.332	111	70-130	
4:2-FTS	32701.6	44517.5	0.735	3.736	3.950	106	70-130	
PFHxA	102075.9	549252.4	0.186	1.360	1.594	117	70-130	
PFPeS	24375.5	335681.8	0.073	1.276	1.432	112	70-130	
PFHxS	36956.8	258647.1	0.143	1.286	1.449	113	70-130	
PFHpA	102237.8	419500.8	0.244	1.360	1.639	121	70-130	
6:2-FTS	24918.3	29008.2	0.859	3.792	4.286	113	70-130	
PFHpS	33529.9	258647.1	0.130	1.294	1.356	105	70-130	
PFOA	116400.2	760240.8	0.153	1.360	1.724	127	70-130	
PFOS	32818.4	226181.7	0.145	1.300	1.505	116	70-130	
PFNA	85945.4	403692.8	0.213	1.360	1.591	117	70-130	
PFNS	17505.3	226181.7	0.077	1.306	1.227	94	70-130	
PFDA	68655.3	476396.2	0.144	1.360	1.586	117	70-130	
8:2-FTS	19233.3	21649.8	0.888	3.832	4.005	105	70-130	
PFOSA	82098.0	598347.5	0.137	1.360	1.483	109	70-130	
NMeFOSAA	7928.5	63310.4	0.125	1.360	1.289	95	70-130	
PFDS	17149.3	226181.7	0.076	1.310	1.449	111	70-130	
PFUnDA	61560.5	209262.3	0.294	1.360	1.687	124	70-130	
NEtFOSAA	7820.8	50983.3	0.153	1.360	1.318	97	70-130	
PFDoDA	62639.7	461231.7	0.136	1.360	1.472	108	70-130	
10:2-FTS	12286.1	21649.8	0.567	3.856	3.534	92	70-130	
NMePFOSAE	48747.2	277030.8	0.176	1.360	1.577	116	70-130	
NMePFOSA	9061.1	69846.6	0.130	1.360	1.452	107	70-130	
PFDoS	7218.5	226181.7	0.032	1.316	1.232	94	70-130	
NEtPFOSAE	51520.8	230073.7	0.224	1.360	1.436	106	70-130	
NEtPFOSA	7427.8	56251.6	0.132	1.360	1.163	86	70-130	
PFTrDA	54877.3	461231.7	0.119	1.360	1.501	110	70-130	
PFTeDA	40196.8	311877.3	0.129	1.360	1.514	111	70-130	
PFHxDA	19040.7	311877.3	0.061	1.360	1.516	111	70-130	
PFODA	9759.1	311877.3	0.031	1.360	0.897	66	70-130	OOS

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:31:36 PM
Acquisition Method: 18AUG13_3uL.dam

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL
QMethod Name: MQ4-18AUG13
Result Table: 18309005 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam

Sample Name:	LCSDA			**Data File:**		18NOV07D-16.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18309005			**Acquis Date:**		2018-11-07T13:35:57
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	15			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18309005
QMethod File:	MQ4-18AUG13			**ICAL Name:**		18NOV07DCAL
Batch Number:	18309005			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV07DCAL-12

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	766560.4	730410.6	5	50	
13C2-PFOA	5.0	565667.6	524423.6	8	50	
13C4-PFOS	4.8	288518.9	274061.7	5	50	
13C2-PFDA	5.0	382065.3	311442.1	23	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	602358.0	13C3-PFBA	766560.4	0.786	10.000	7.273	73	50-150	
E13C5-PFPeA	640601.5	13C3-PFBA	766560.4	0.836	10.000	7.281	73	50-150	
E13C3-PFBS	335681.8	13C3-PFBA	766560.4	0.438	9.300	6.428	69	50-150	
E13C2-4:2-FTS	44517.5	13C2-PFOA	565667.6	0.079	9.340	7.102	76	50-150	
E13C5-PFHxA	549252.4	13C2-PFOA	565667.6	0.971	10.000	7.143	71	50-150	
E13C3-PFHxS	258647.1	13C2-PFOA	565667.6	0.457	9.460	6.565	69	50-150	
E13C4-PFHpA	419500.8	13C2-PFOA	565667.6	0.742	10.000	6.747	67	50-150	
E13C2-6:2-FTS	29008.2	13C2-PFOA	565667.6	0.051	9.500	6.839	72	50-150	
E13C8-PFOA	760240.8	13C2-PFOA	565667.6	1.344	10.000	7.496	75	50-150	
E13C8-PFOS	226181.7	13C4-PFOS	288518.9	0.784	9.560	6.933	73	50-150	
E13C9-PFNA	403692.8	13C4-PFOS	288518.9	1.399	10.000	7.644	76	50-150	
E13C6-PFDA	476396.2	13C2-PFDA	382065.3	1.247	10.000	6.271	63	50-150	
E13C2-8:2-FTS	21649.8	13C2-PFDA	382065.3	0.057	9.580	5.997	63	50-150	
E13C8-PFOSA	598347.4	13C2-PFDA	382065.3	1.566	10.000	6.835	68	50-150	
Ed3-NMeFOSAA	63310.4	13C2-PFDA	382065.3	0.166	10.000	6.163	62	50-150	
E13C7-PFUnDA	209262.3	13C2-PFDA	382065.3	0.548	10.000	6.319	63	50-150	
Ed5-NEtFOSAA	50983.3	13C2-PFDA	382065.3	0.133	10.000	6.176	62	50-150	
E13C2-PFDoDA	461231.7	13C2-PFDA	382065.3	1.207	10.000	6.509	65	50-150	
Ed7-NMePFOSAE	277030.8	13C2-PFDA	382065.3	0.725	10.000	6.744	67	50-150	
Ed3-NMePFOSA	69846.6	13C2-PFDA	382065.3	0.183	10.000	6.694	67	50-150	
Ed9-NEtPFOSAE	230073.7	13C2-PFDA	382065.3	0.602	10.000	6.878	69	50-150	
Ed5-NEtPFOSA	56251.6	13C2-PFDA	382065.3	0.147	10.000	6.818	68	50-150	
E13C2-PFTeDA	311877.3	13C2-PFDA	382065.3	0.816	10.000	5.877	59	50-150	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

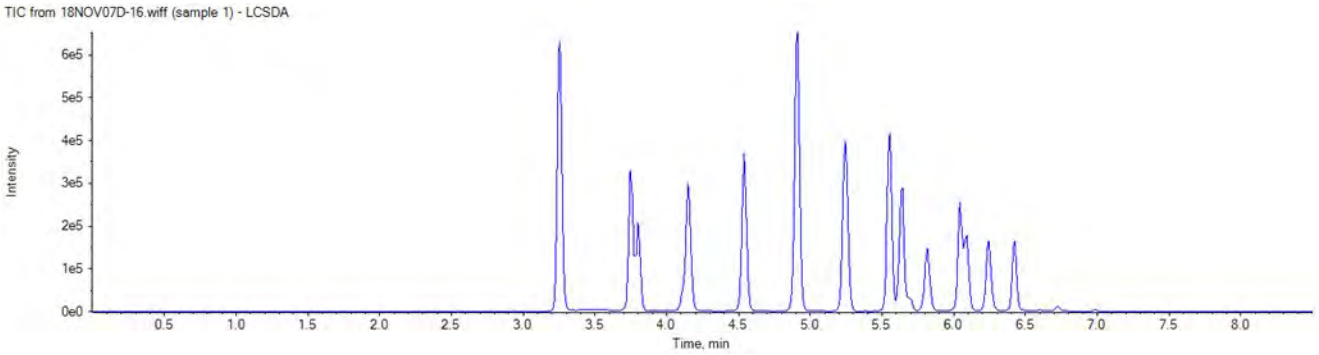
Analyte Quantitation Peak Table

Sample Name: LCSDA **Instrument Name:** LM27631 **File Name:** 18NOV07D-16.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.25	1.000	80694.8		A	13C4-PFBA	3.25	602358.0	0.134	1.568
PFPeA	3.75	1.000	88908.0		A	13C5-PFPeA	3.75	640601.5	0.139	1.650
PFBS	3.80	1.000	44349.7		A	13C3-PFBS	3.80	335681.8	0.132	1.332
4:2-FTS	4.11	1.000	32701.6		A	13C2-4:2-FTS	4.11	44517.5	0.735	3.950
PFHxA	4.15	1.000	102075.9		A	13C5-PFHxA	4.15	549252.4	0.186	1.594
PFPeS	4.17	1.100	24375.5		A	13C3-PFBS	3.80	335681.8	0.073	1.432
PFHxS	4.54	1.000	36956.8		A	13C3-PFHxS	4.54	258647.1	0.143	1.449
PFHpA	4.54	1.000	102237.8		A	13C4-PFHpA	4.54	419500.8	0.244	1.639
6:2-FTS	4.90	1.000	24918.3		A	13C2-6:2-FTS	4.90	29008.2	0.859	4.286
PFHpS	4.90	1.080	33529.9		A	13C3-PFHxS	4.54	258647.1	0.130	1.356
PFOA	4.91	1.000	116400.2		A	13C8-PFOA	4.91	760240.8	0.153	1.724
PFOS	5.24	1.000	32818.4		M	13C8-PFOS	5.24	226181.7	0.145	1.505
PFNA	5.25	1.000	85945.4		A	13C9-PFNA	5.25	403692.8	0.213	1.591
PFNS	5.53	1.060	17505.3		A	13C8-PFOS	5.24	226181.7	0.077	1.227
PFDA	5.55	1.000	68655.3		A	13C6-PFDA	5.55	476396.2	0.144	1.586
8:2-FTS	5.56	1.000	19233.3		A	13C2-8:2-FTS	5.55	21649.8	0.888	4.005
PFOSA	5.64	1.000	82098.0		A	13C8-PFOSA	5.64	598347.5	0.137	1.483
NMeFOSAA	5.70	1.000	7928.5		M	d3-NMeFOSAA	5.69	63310.4	0.125	1.289
PFDS	5.79	1.110	17149.3		A	13C8-PFOS	5.24	226181.7	0.076	1.449
PFUnDA	5.82	1.000	61560.5		A	13C7-PFUnDA	5.81	209262.3	0.294	1.687
NEtFOSAA	5.83	1.000	7820.8		M	d5-NEtFOSAA	5.83	50983.3	0.153	1.318
PFDoDA	6.04	1.000	62639.7		A	13C2-PFDoDA	6.04	461231.7	0.136	1.472
10:2-FTS	6.06	1.090	12286.1		M	13C2-8:2-FTS	5.55	21649.8	0.567	3.534
NMePFOSAE	6.09	1.000	48747.2		A	d7-NMePFOSAE	6.09	277030.8	0.176	1.577
NMePFOSA	6.10	1.000	9061.1		A	d3-NMePFOSA	6.10	69846.6	0.130	1.452
PFDoS	6.22	1.190	7218.5		A	13C8-PFOS	5.24	226181.7	0.032	1.232
NEtPFOSAE	6.25	1.000	51520.8		A	d9-NEtPFOSAE	6.24	230073.7	0.224	1.436
NEtPFOSA	6.27	1.000	7427.8		A	d5-NEtPFOSA	6.26	56251.6	0.132	1.163
PFTrDA	6.24	1.030	54877.3		A	13C2-PFDoDA	6.04	461231.7	0.119	1.501
PFTeDA	6.42	1.000	40196.8		A	13C2-PFTeDA	6.42	311877.3	0.129	1.514
PFHxDA	6.73	1.050	19040.7		A	13C2-PFTeDA	6.42	311877.3	0.061	1.516
PFODA	6.99	1.090	9759.1		A	13C2-PFTeDA	6.42	311877.3	0.031	0.897

Total Ion Chromatogram

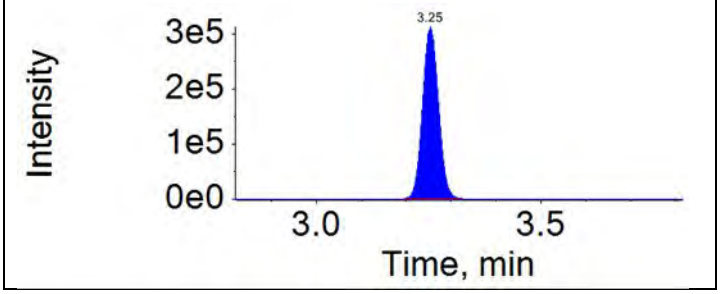


APPROVED
By MCD at 4:42 pm, 11/8/18

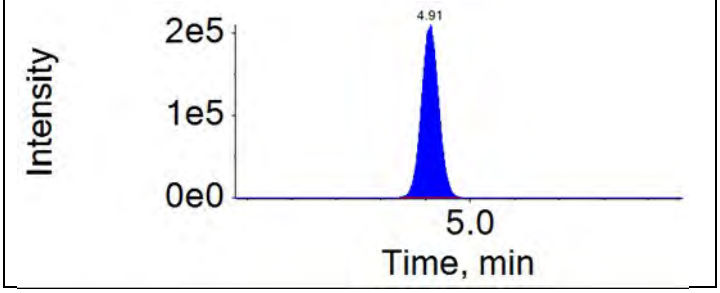
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

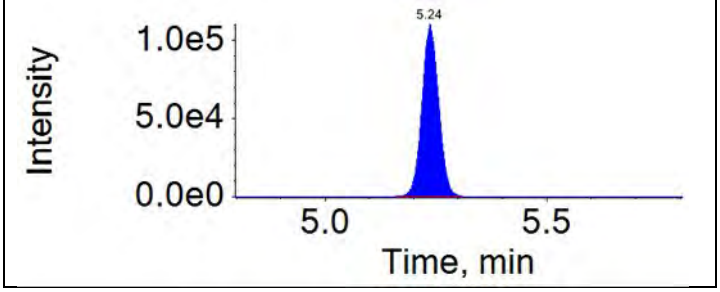
Injection Standard: 13C3-PFBA
216.0 / 172.0



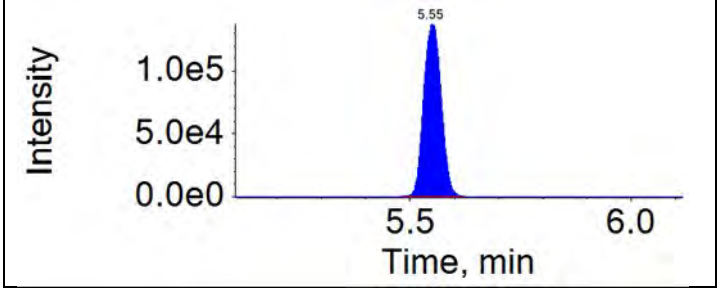
Injection Standard: 13C2-PFOA
415.0 / 370.0



Injection Standard: 13C4-PFOS
503.0 / 80.0



Injection Standard: 13C2-PFDA
515.0 / 470.0

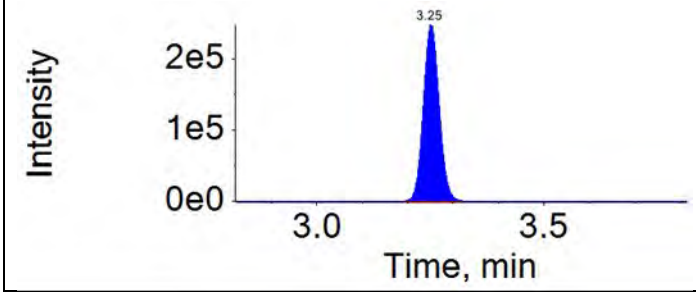


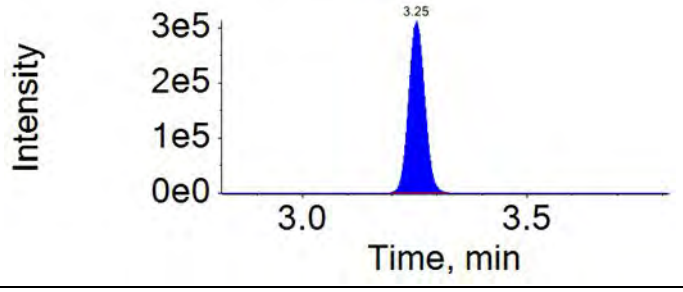
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

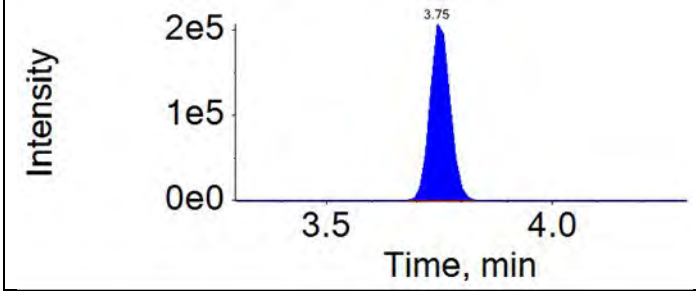
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

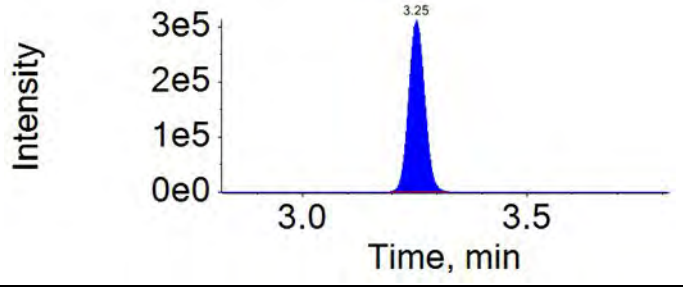
Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0



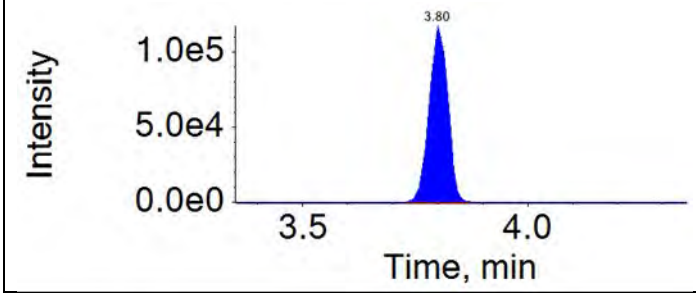


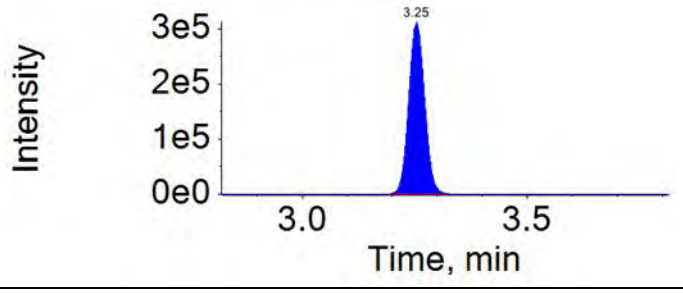
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0



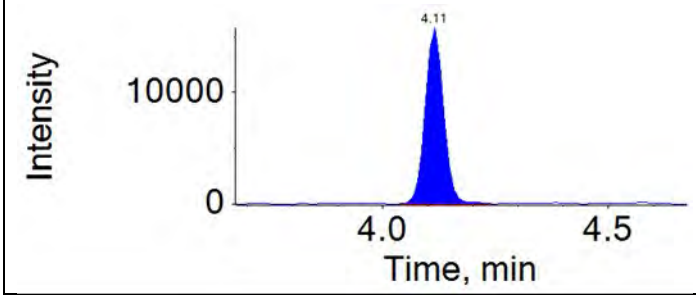


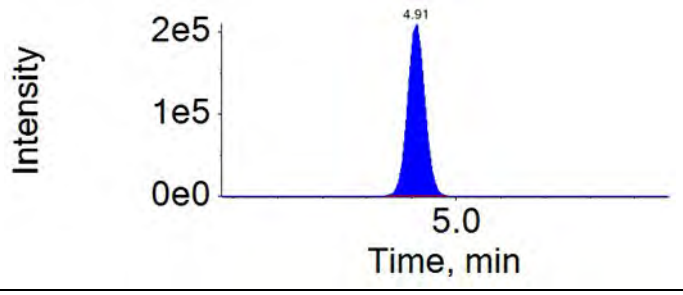
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0





Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0



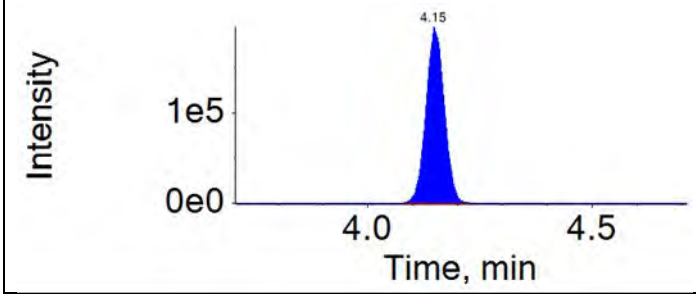


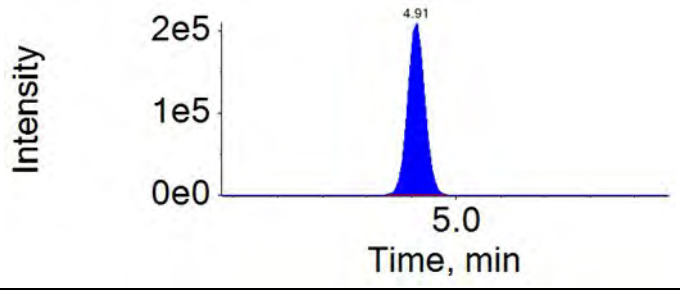
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

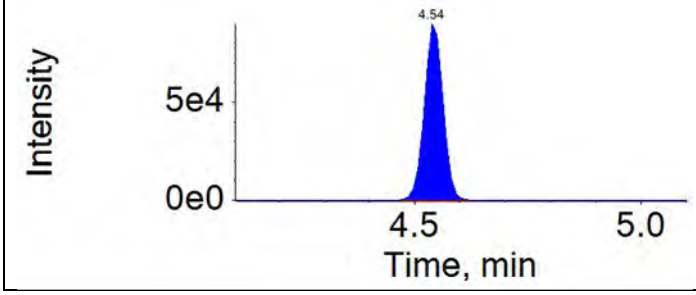
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

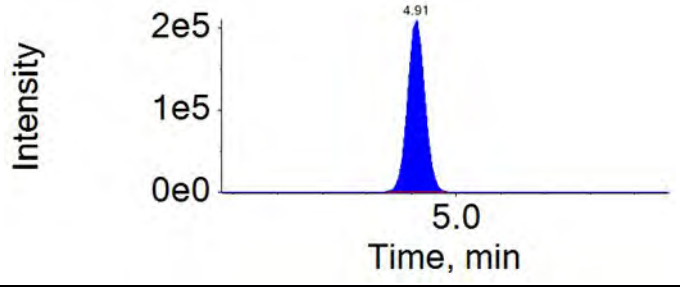
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



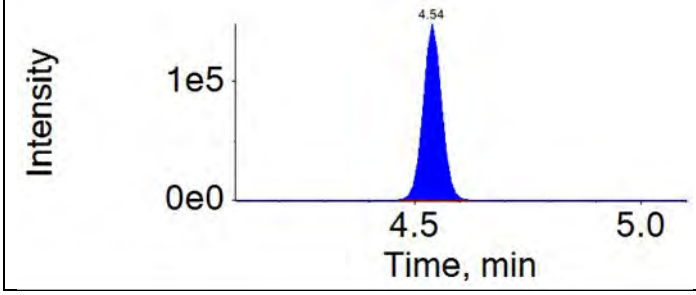


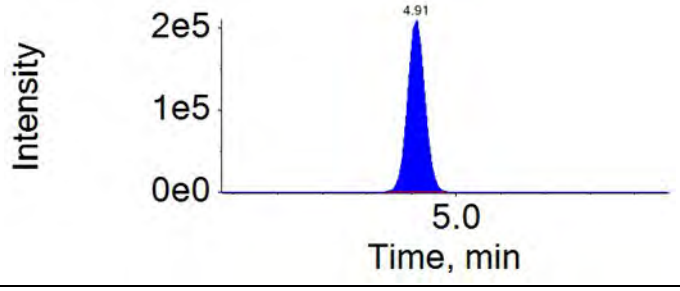
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



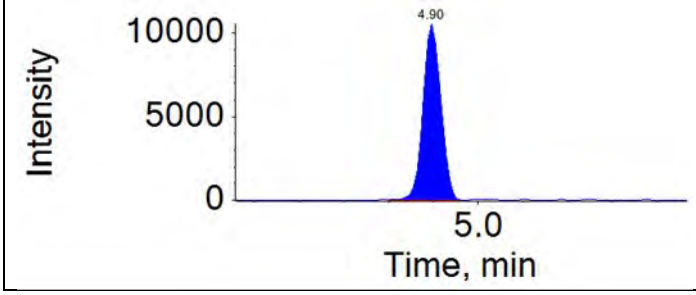


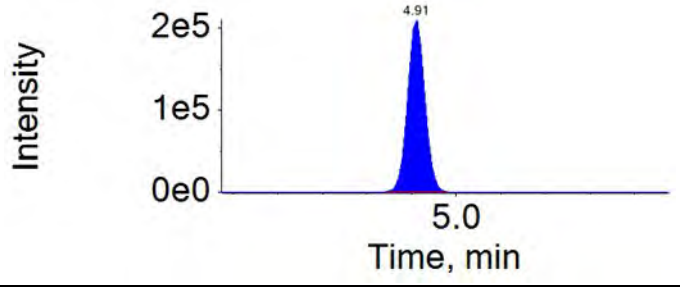
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

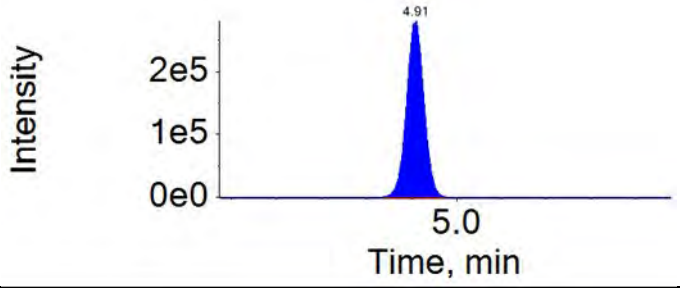
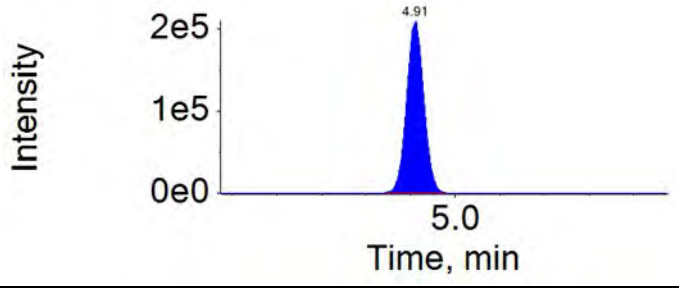


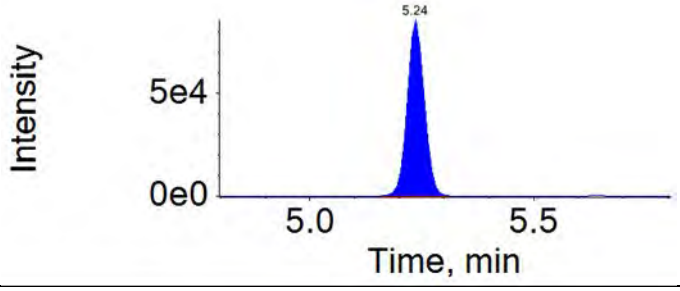
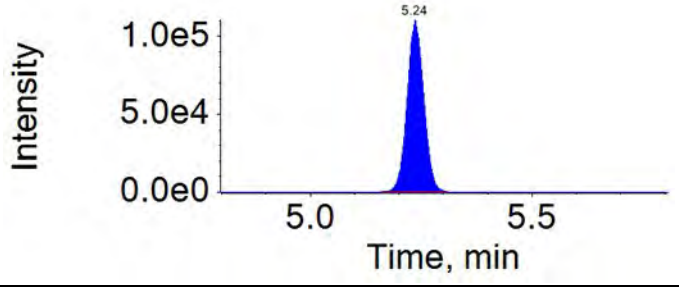


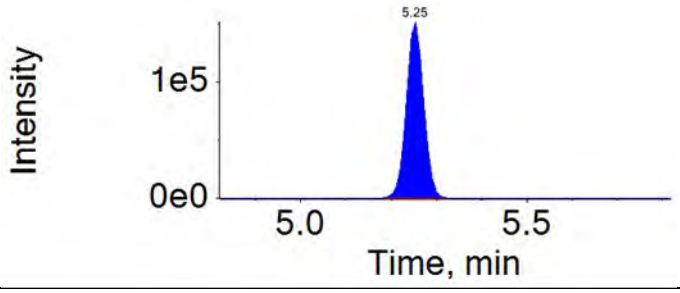
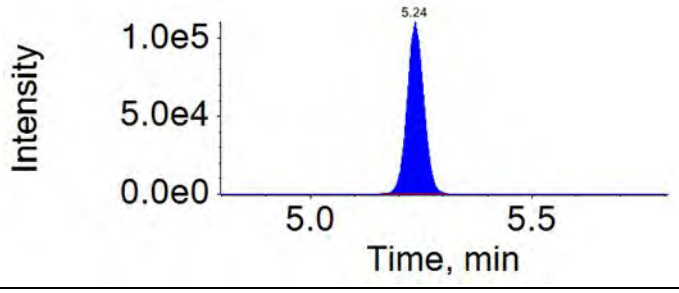
APPROVED
By MCD at 4:42 pm, 11/8/18

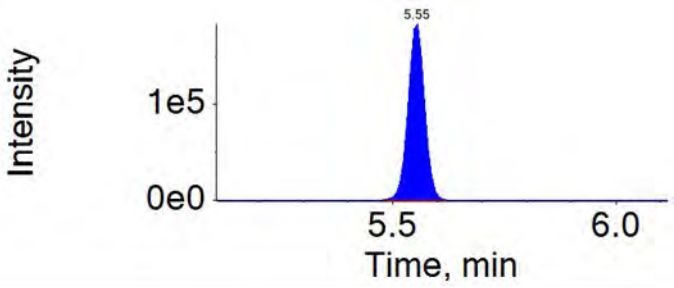
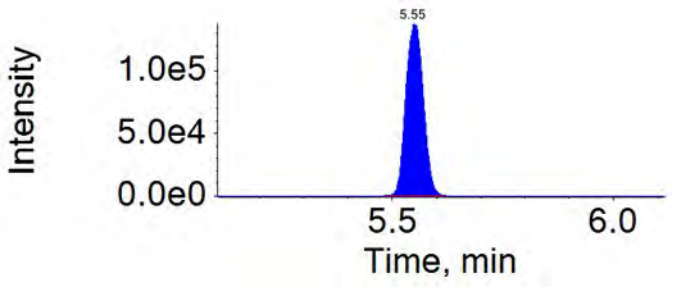
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

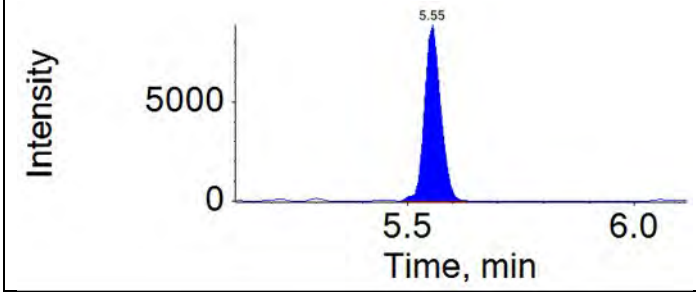
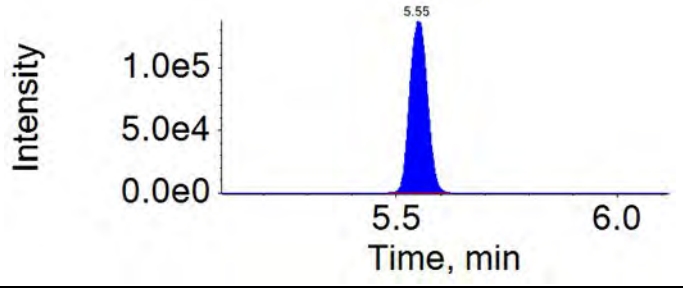
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

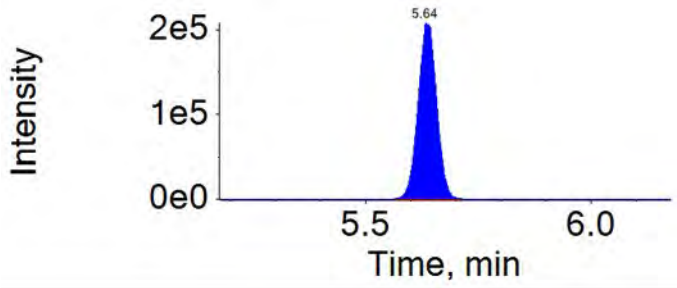
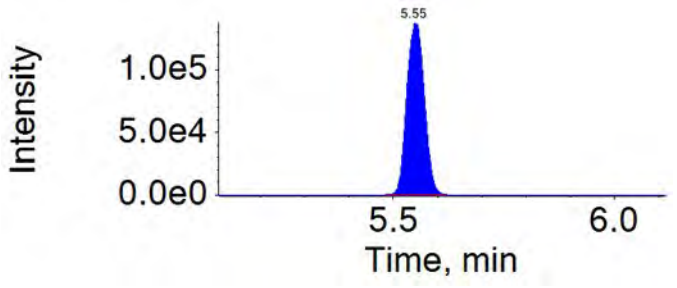
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

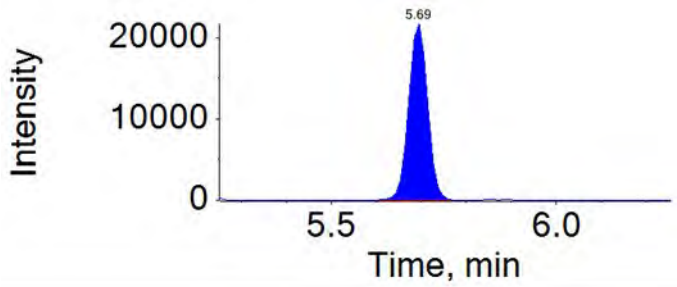
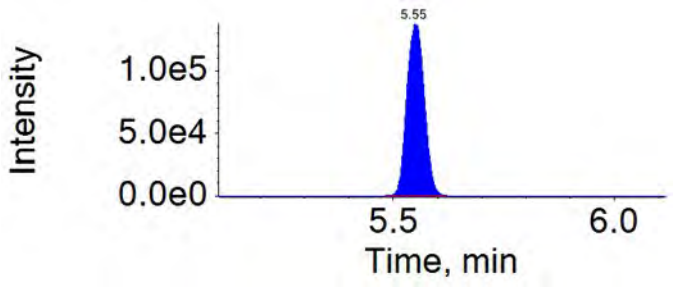
APPROVED
By MCD at 4:42 pm, 11/8/18

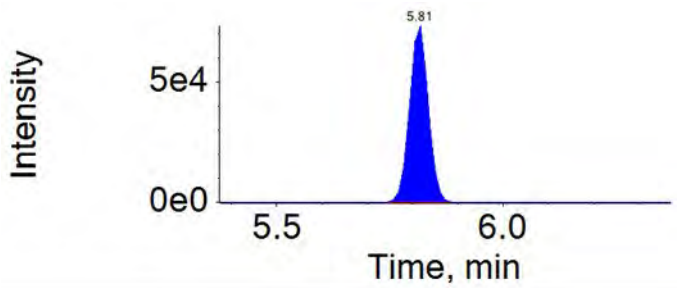
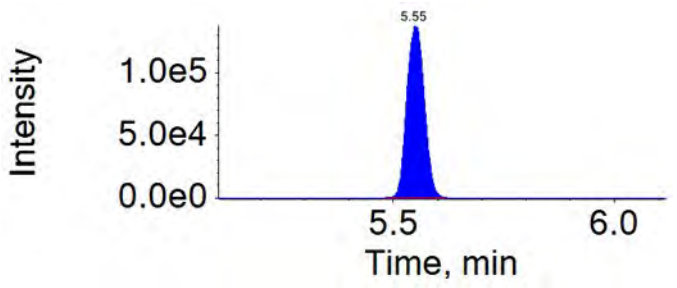
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

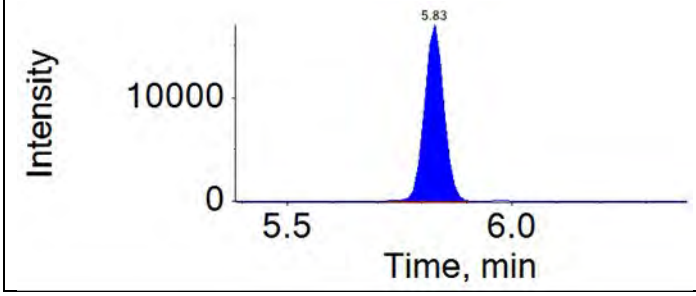
Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

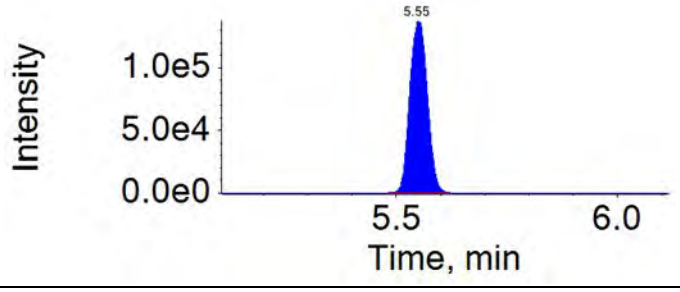
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

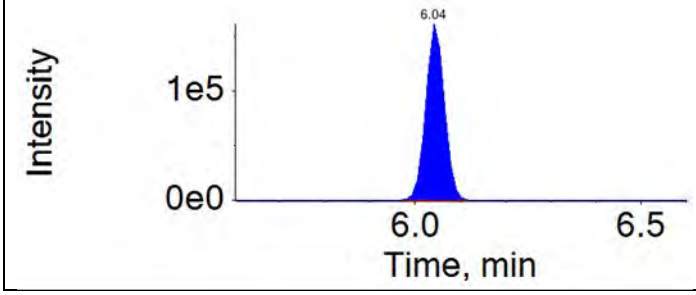
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

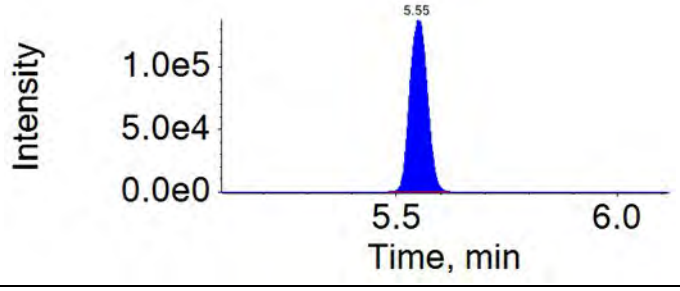
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



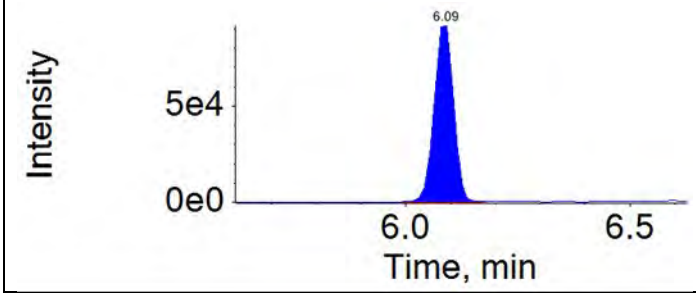


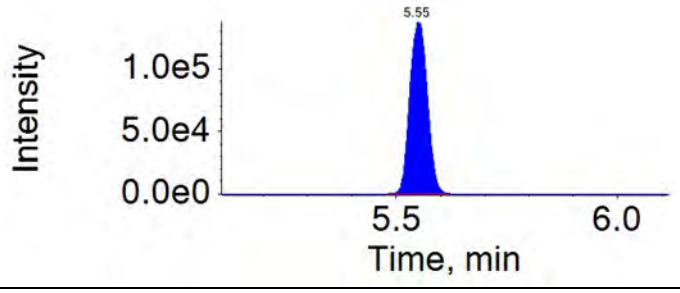
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



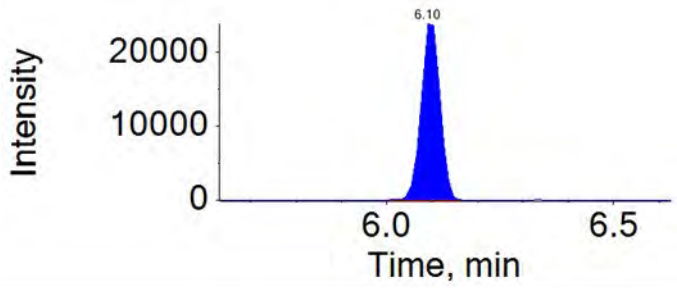


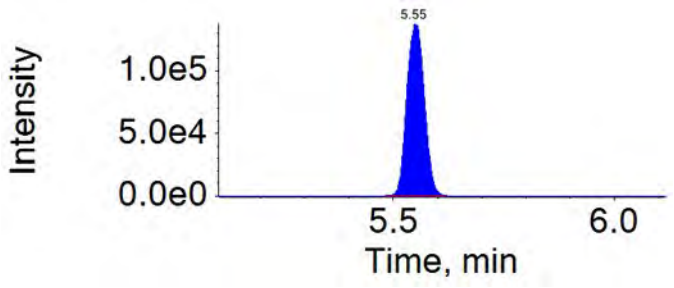
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0



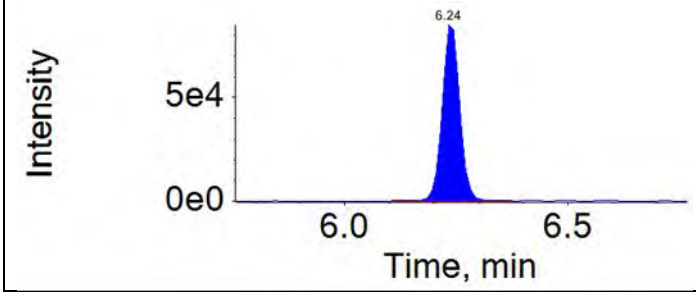


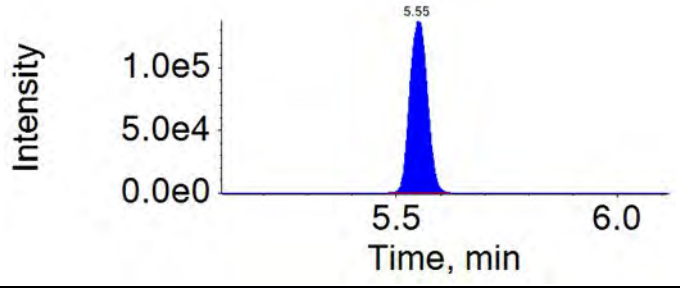
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

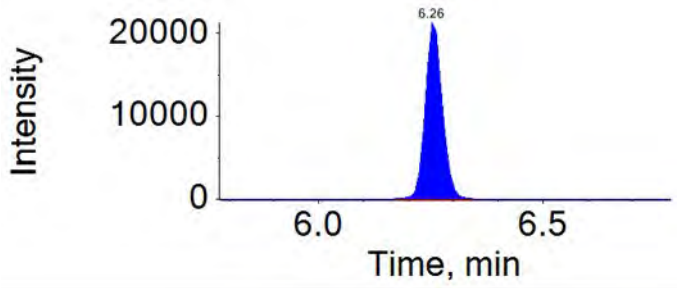
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

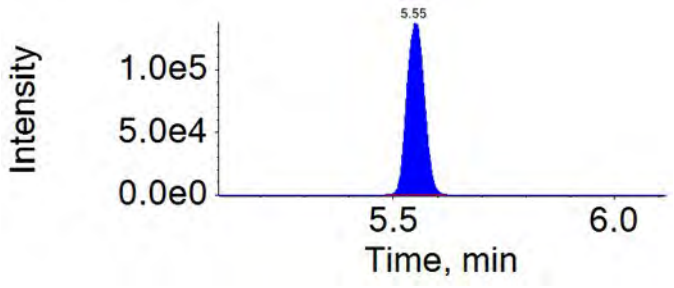
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



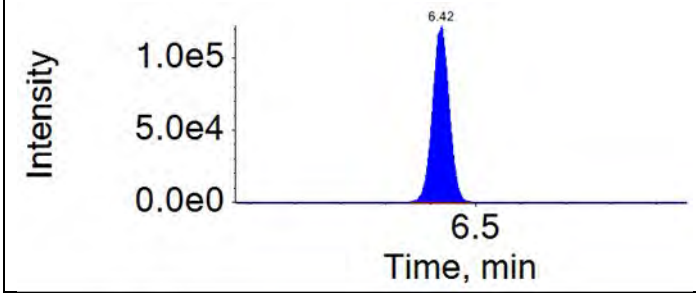


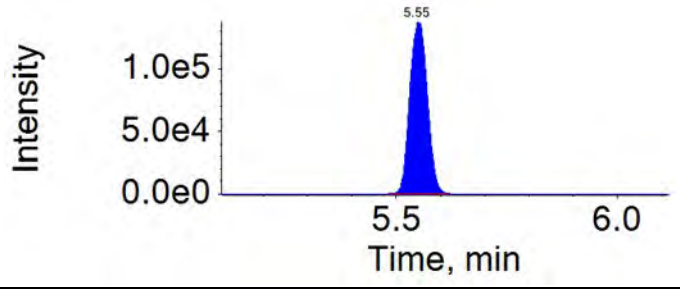
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

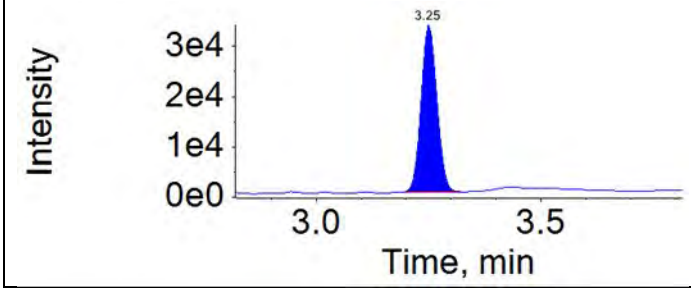
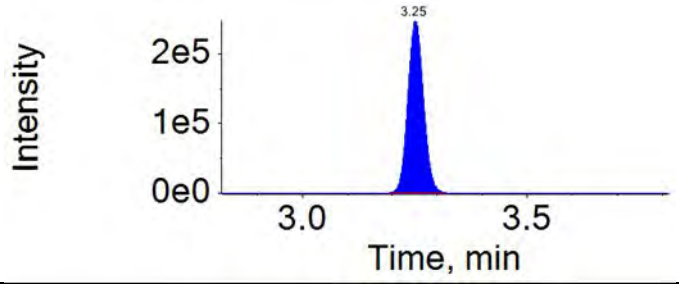


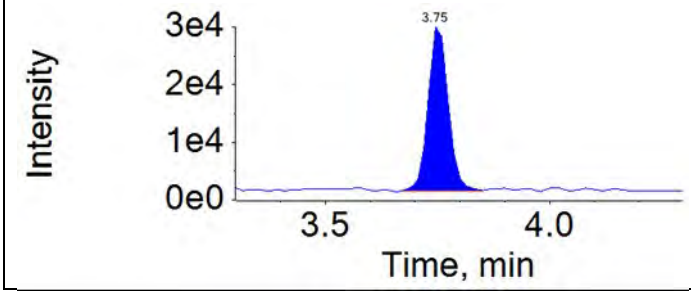
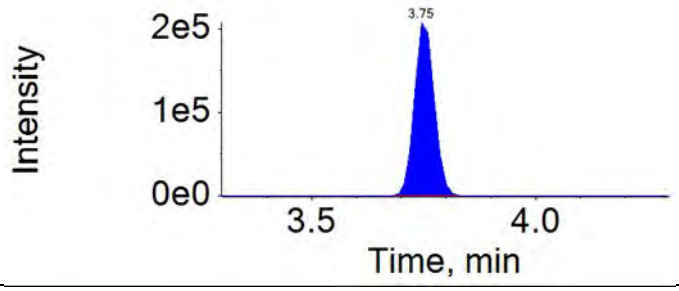


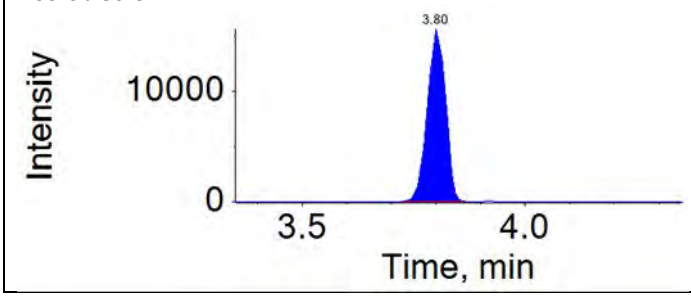
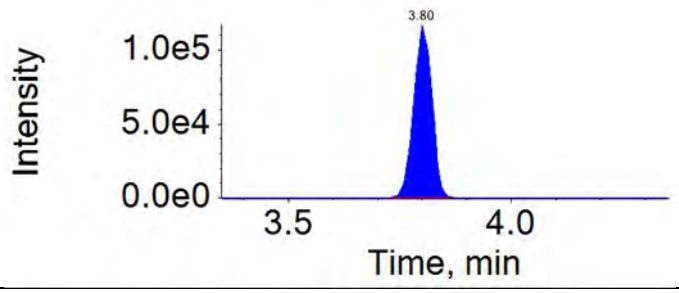
APPROVED
By MCD at 4:42 pm, 11/8/18

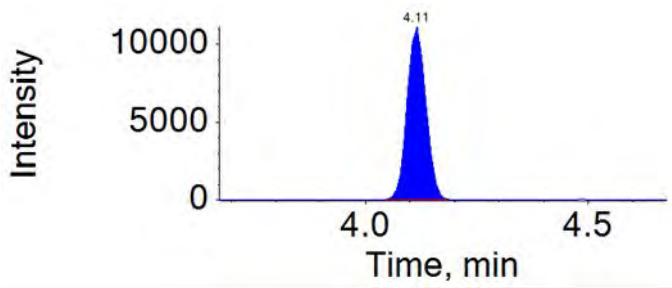
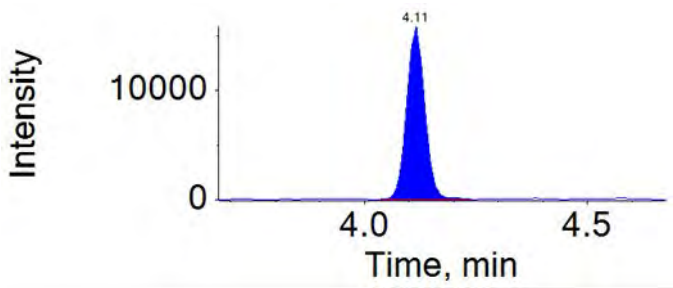
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0
	

Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0
	

Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0
	

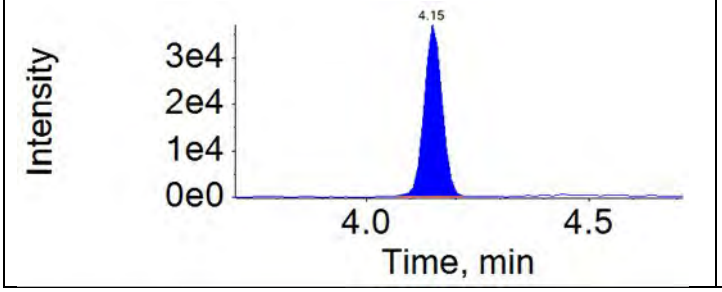
Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0
	

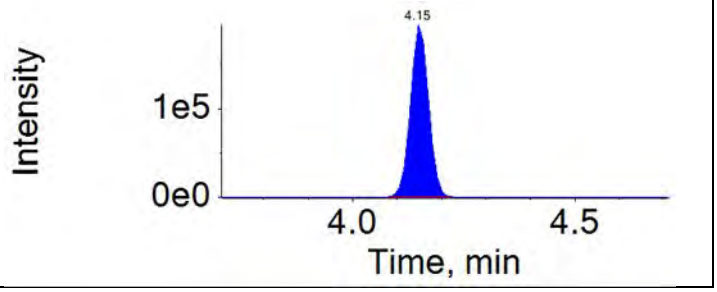
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

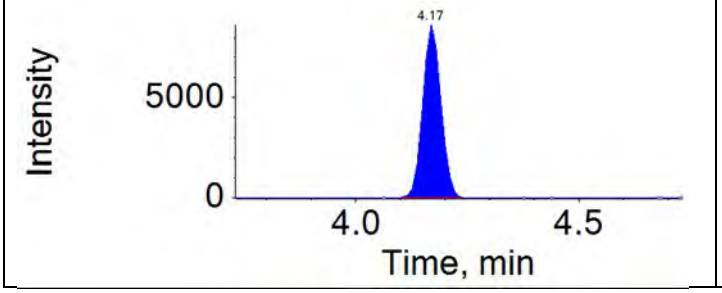
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

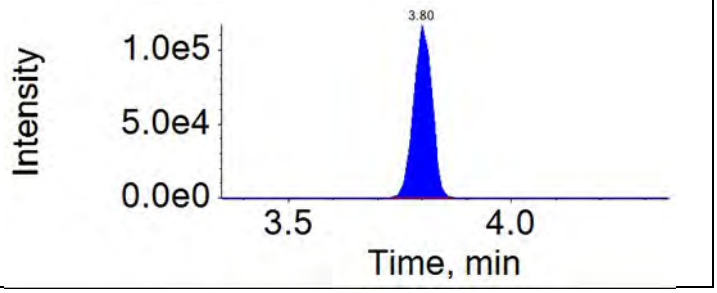
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



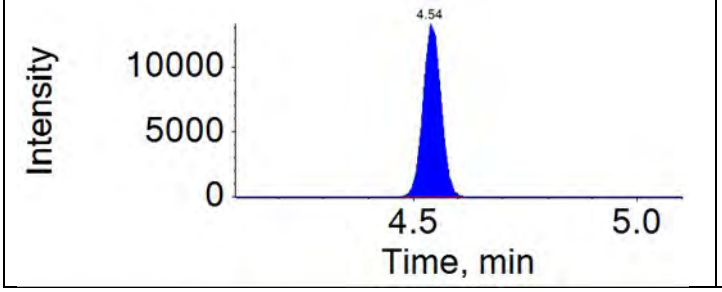


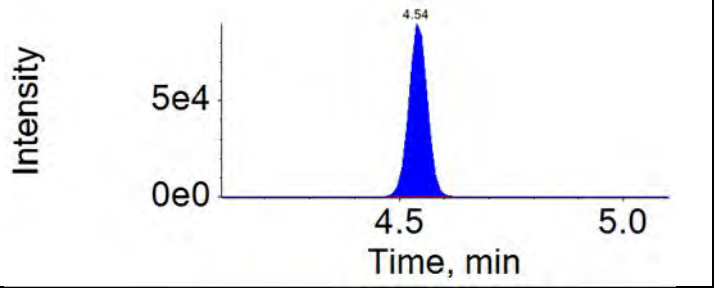
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



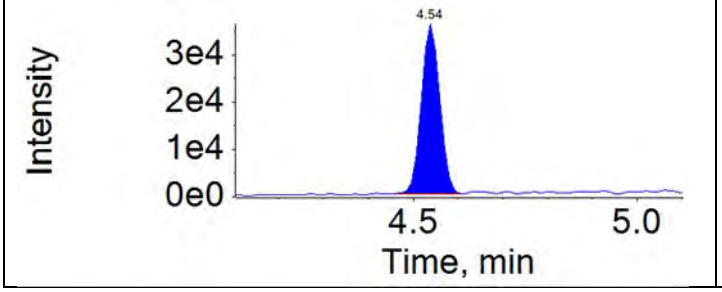


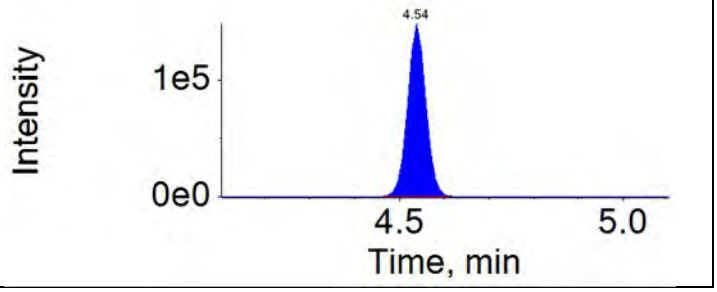
Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0





Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0

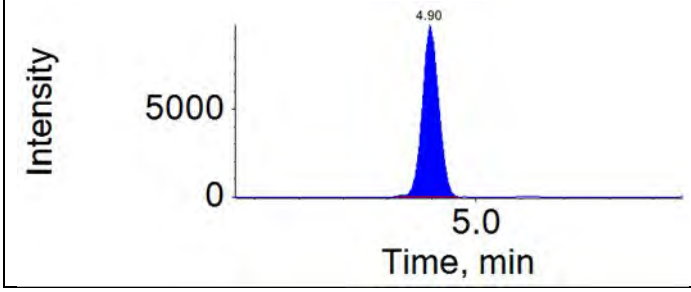
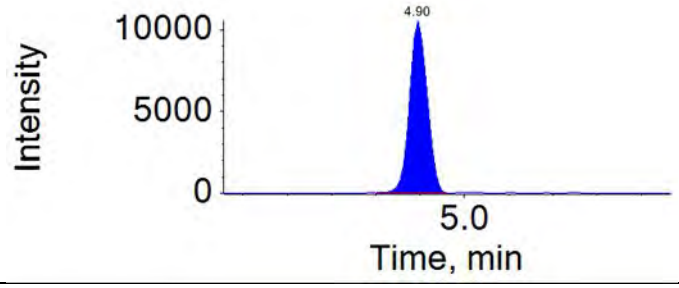


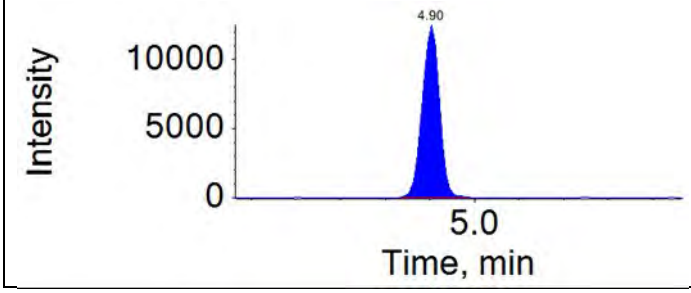
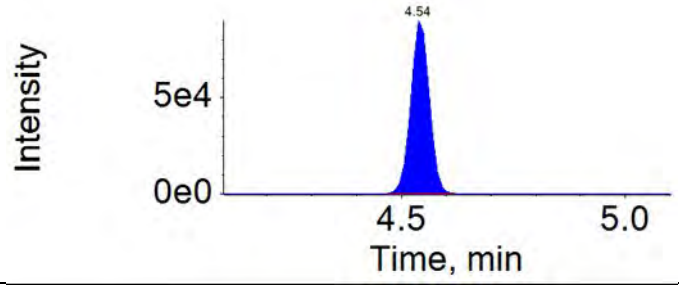


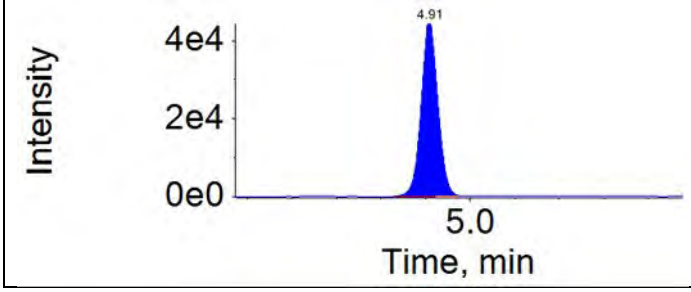
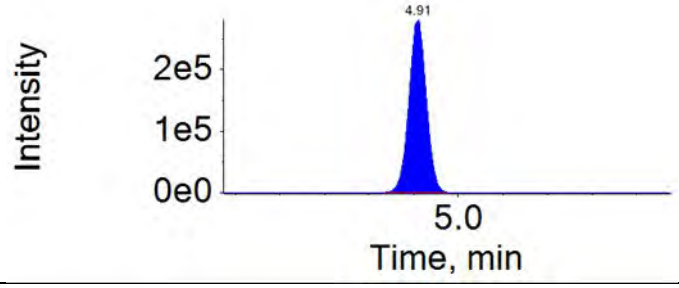
APPROVED
By MCD at 4:42 pm, 11/8/18

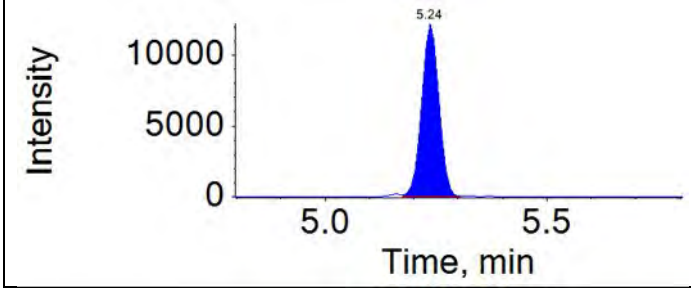
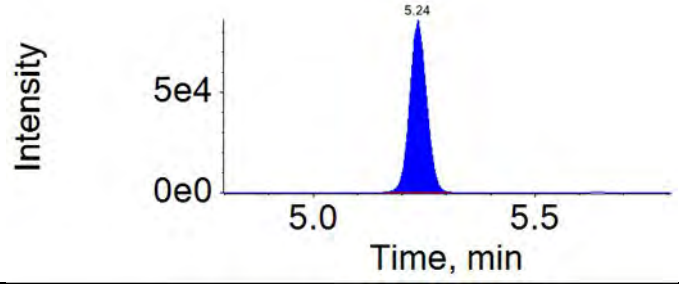
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

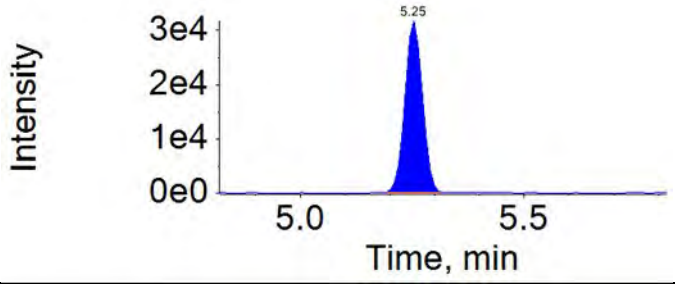
Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

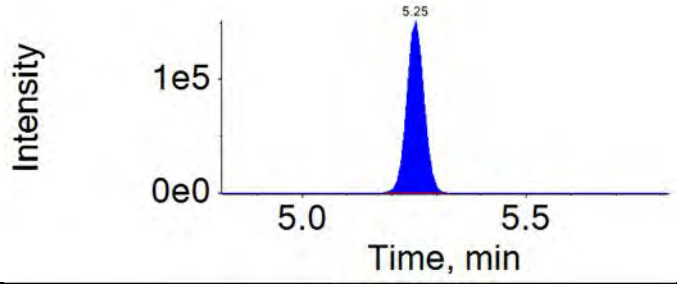
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

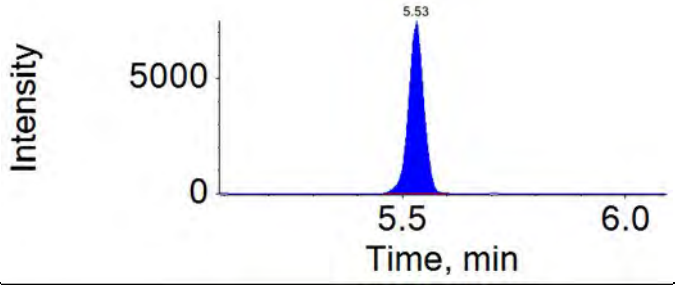
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

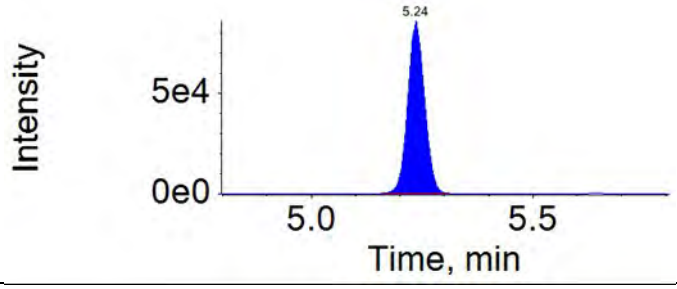
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



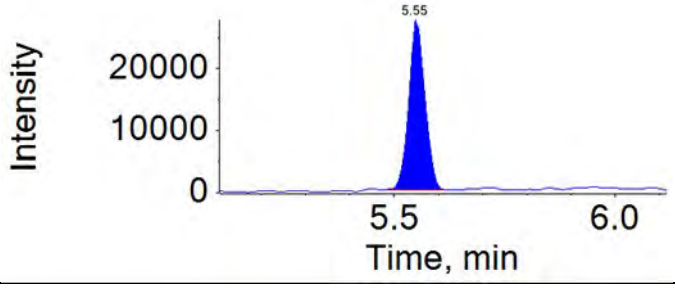


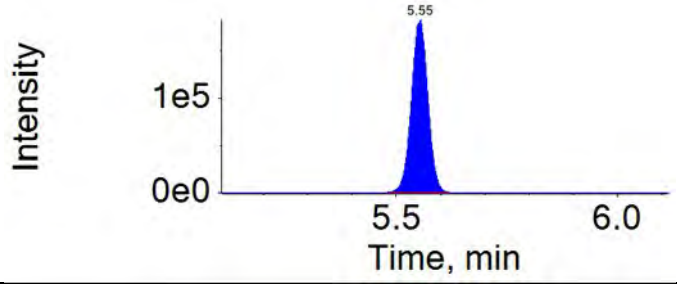
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



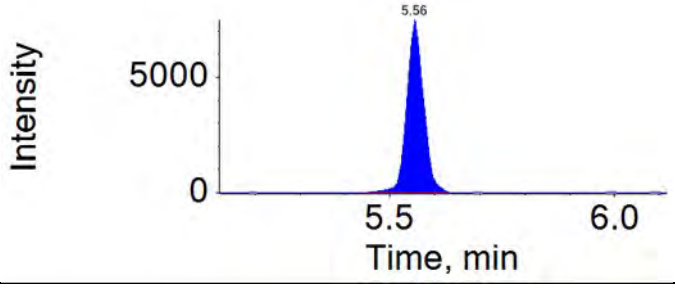


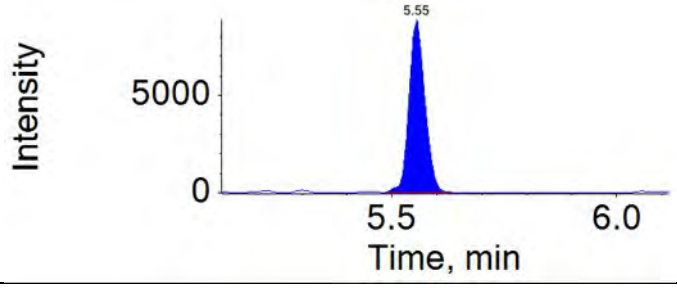
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0

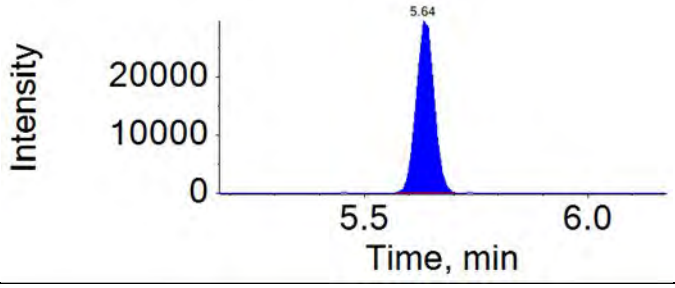
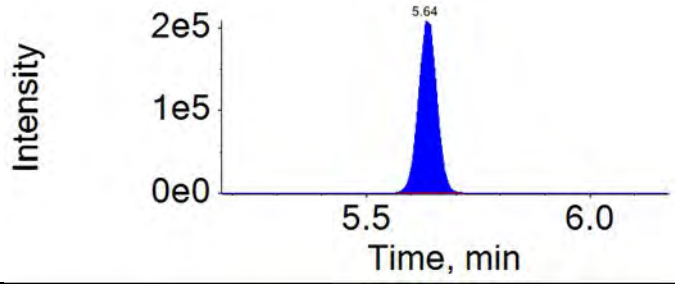


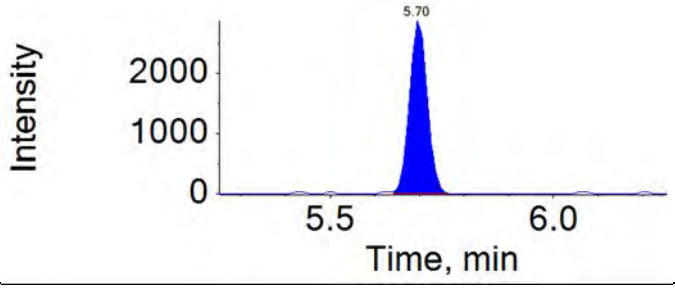
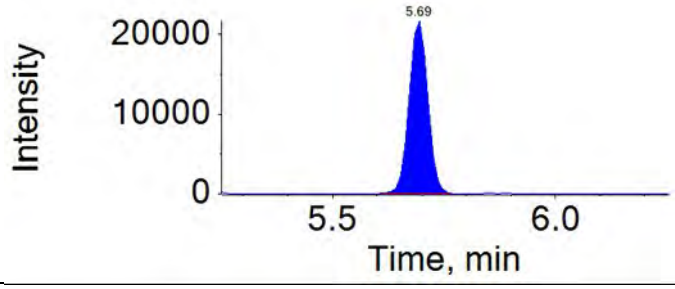


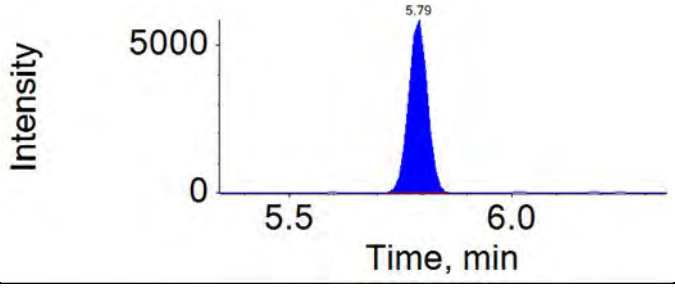
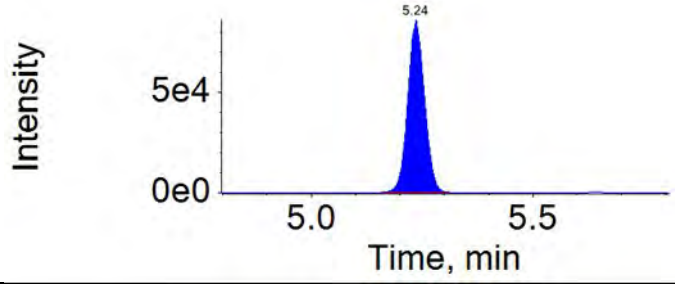
APPROVED
By MCD at 4:42 pm, 11/8/18

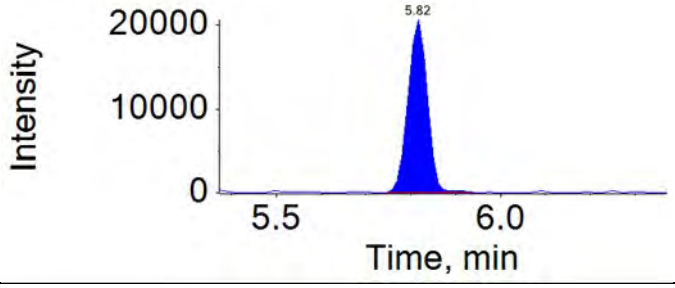
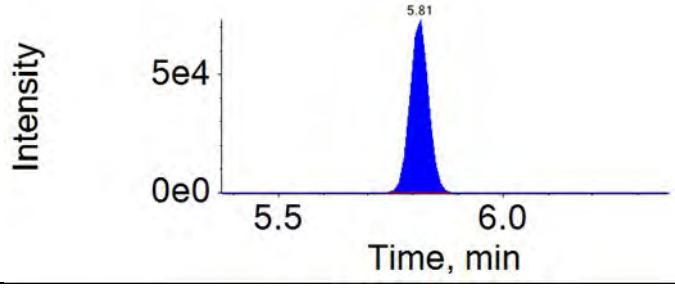
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0
	

Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0
	

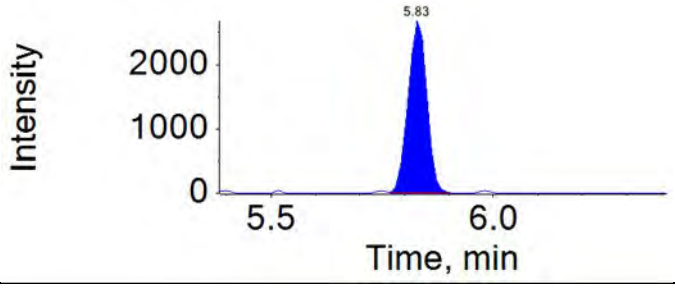
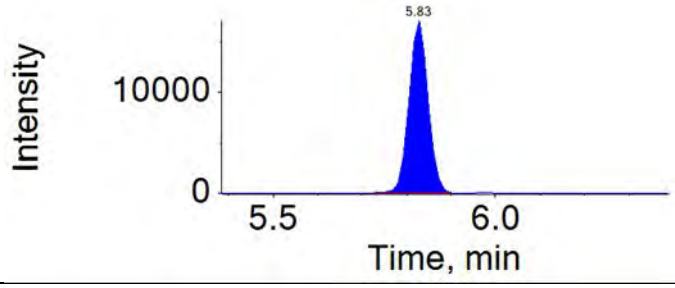
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0
	

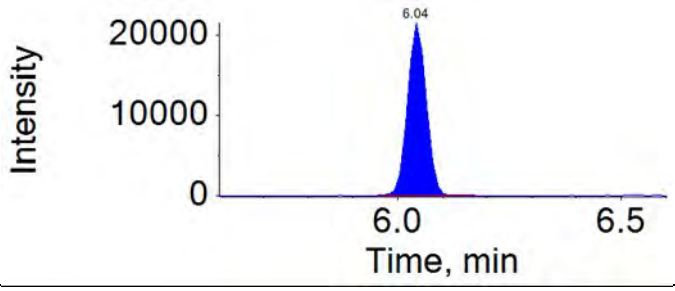
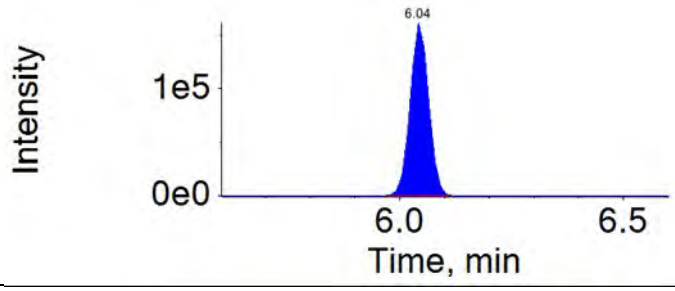
Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0
	

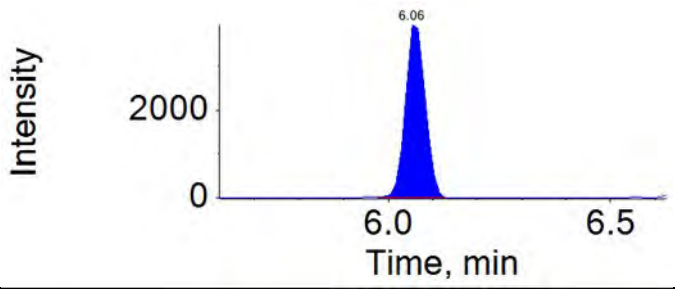
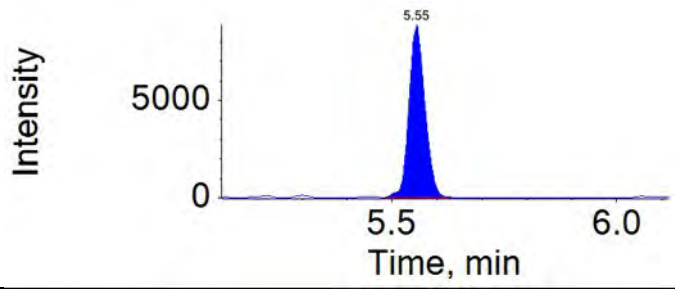
APPROVED
By MCD at 4:42 pm, 11/8/18

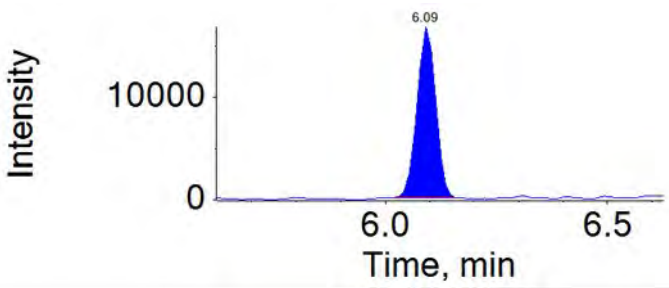
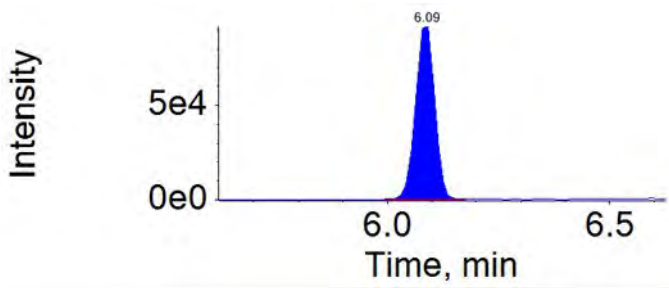
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

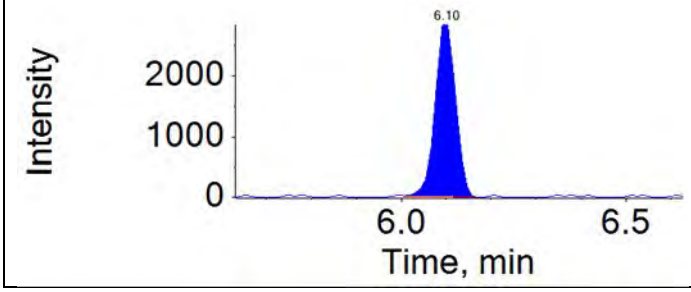
Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

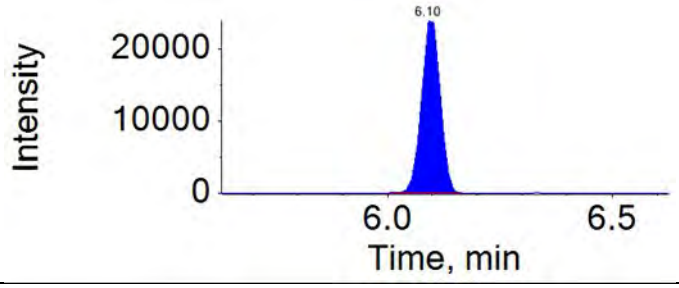
Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

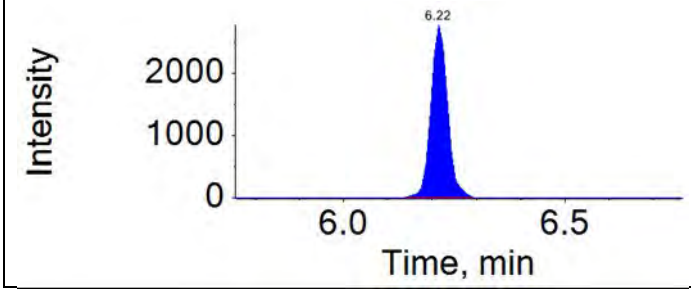
ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

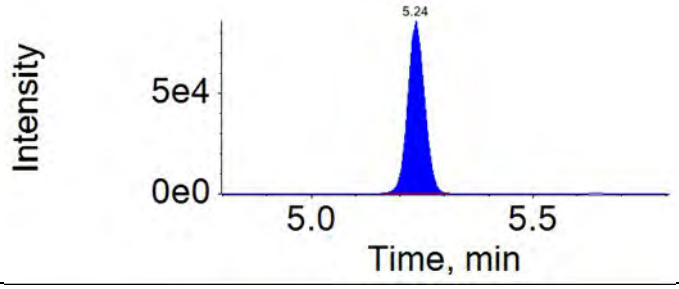
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



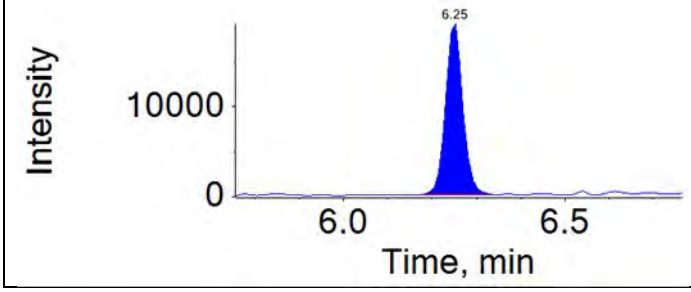


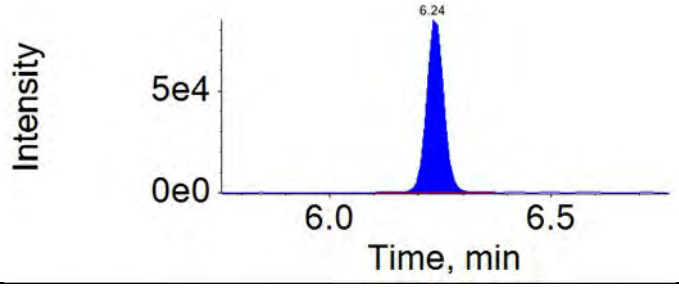
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



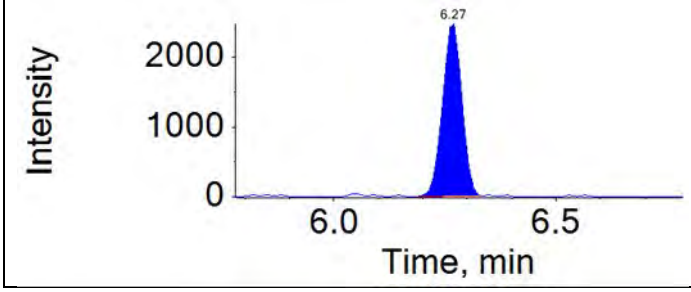


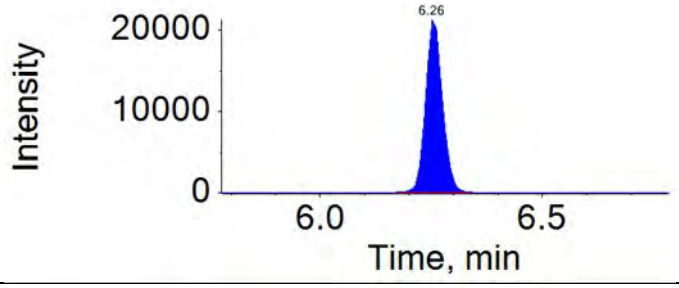
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

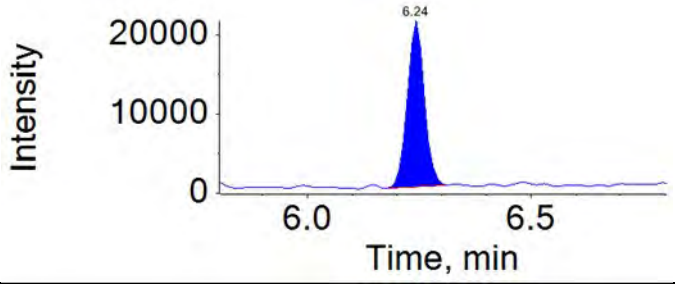
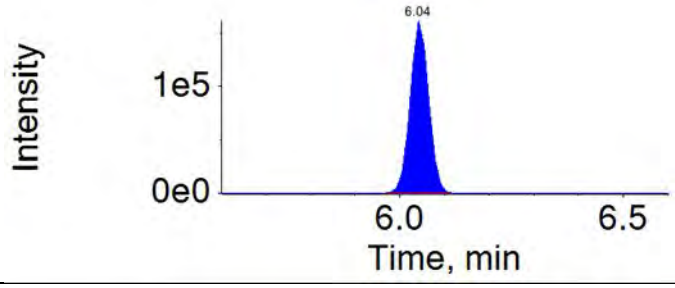


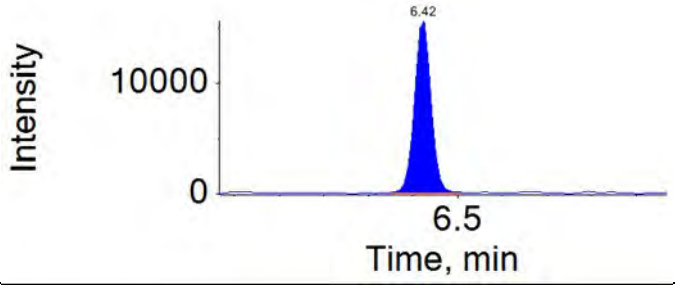
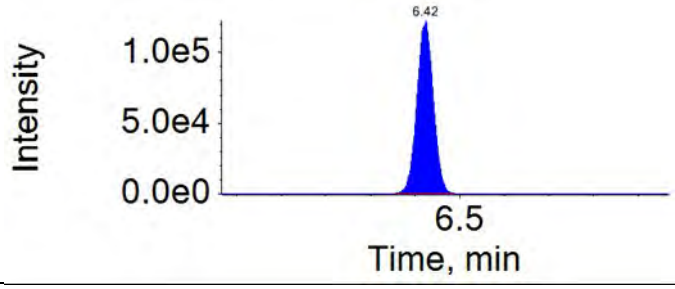


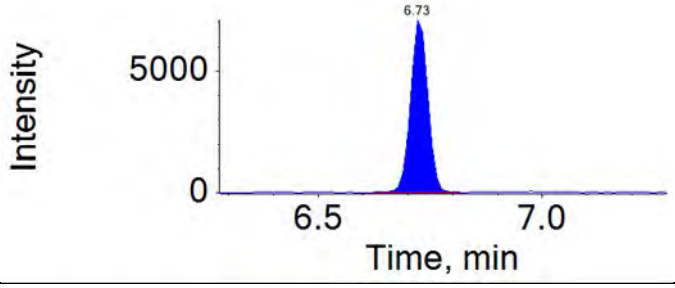
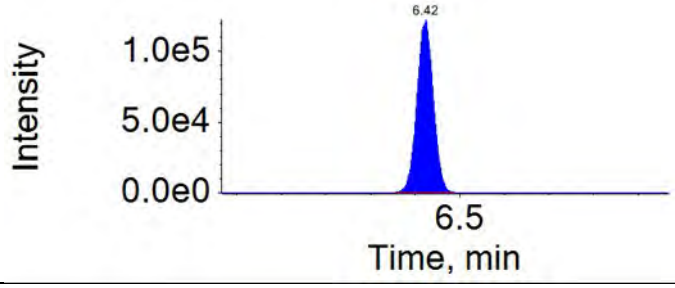
APPROVED
By MCD at 4:42 pm, 11/8/18

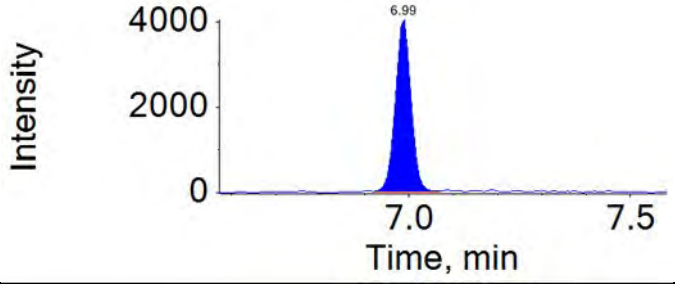
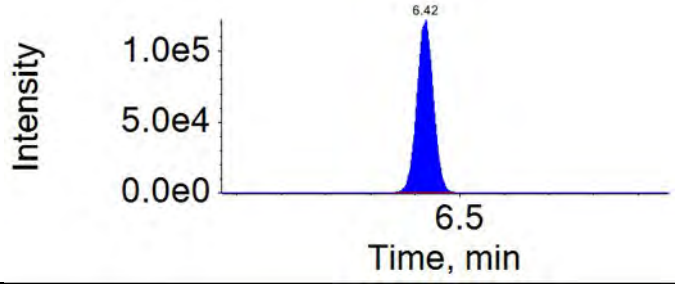
REVIEWED
By umar at 2:36 pm, 11/12/18

ICAL Name: 18NOV07DCAL **Result Table:** 18309005 11/8/2018 4:33:00 PM
QMethod Name: MQ4-18AUG13 **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

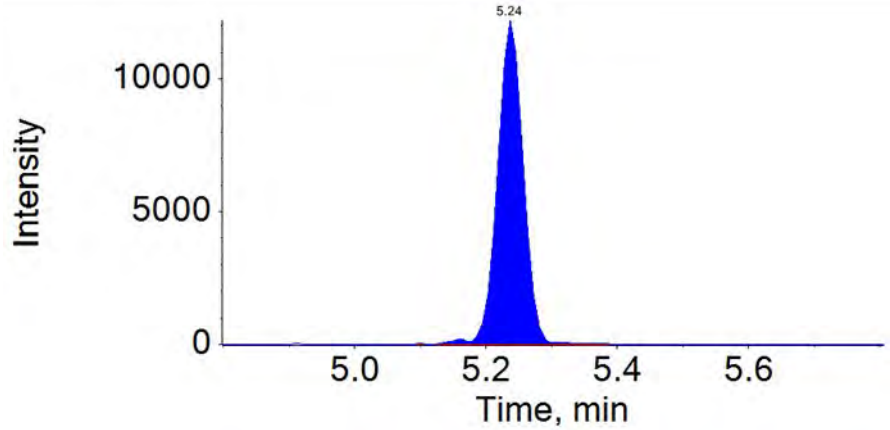
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

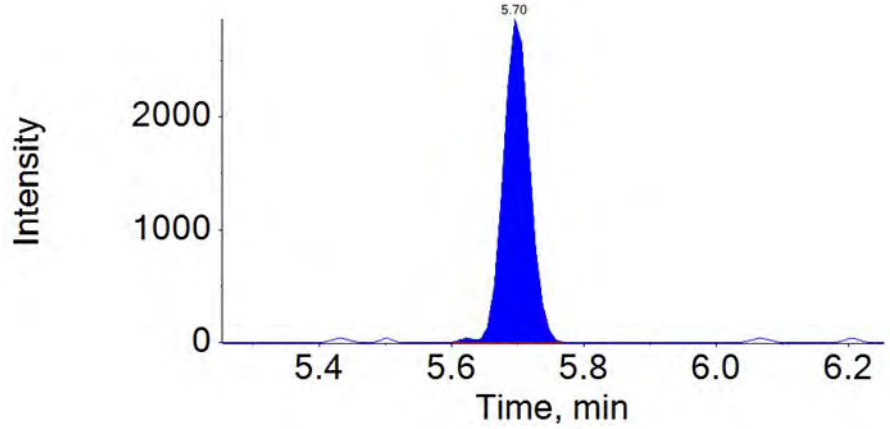
Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name:
PFOS
RT (min.):
5.24
Peak Area:
33469.9
Mass Range:
499.0 / 80.0
File Name:
18NOV07D-16.wiff
Sample Name:
LCSDA



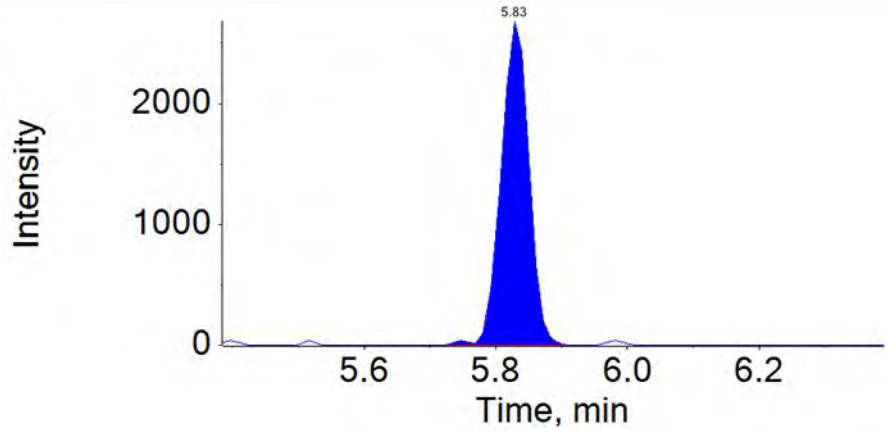
Integration Comment: incorrect integration

Component Name:
NMeFOSAA
RT (min.):
5.70
Peak Area:
7992.6
Mass Range:
570.0 / 419.0
File Name:
18NOV07D-16.wiff
Sample Name:
LCSDA



Integration Comment: incorrect integration

Component Name:
NEtFOSAA
RT (min.):
5.83
Peak Area:
7886.5
Mass Range:
584.0 / 419.0
File Name:
18NOV07D-16.wiff
Sample Name:
LCSDA

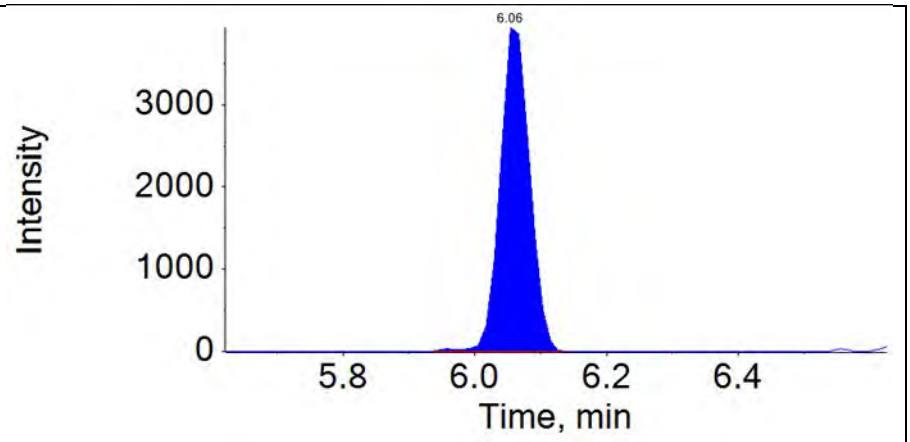


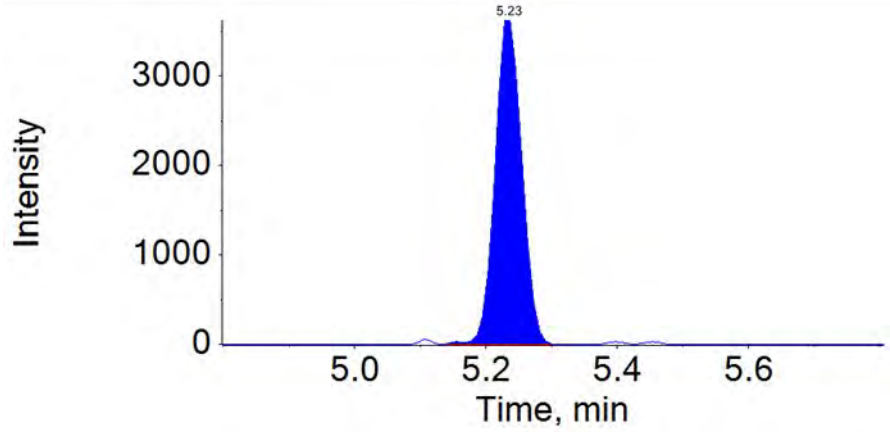
Integration Comment: incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

Component Name: 10:2-FTS **RT (min.):** 6.06 **Peak Area:** 12345.4 **Mass Range:** 627.0 / 607.0 **File Name:** 18NOV07D-16.wiff **Sample Name:** LCSDA	 **Integration Comment:** incorrect integration

Component Name: PFOS_2 **RT (min.):** 5.23 **Peak Area:** 10360.8 **Mass Range:** 499.0 / 99.0 **File Name:** 18NOV07D-16.wiff **Sample Name:** LCSDA	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Results Table Name: 18309005
Results Table Date: 11/8/2018 4:33:00 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: MQ4-18AUG13

APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Ion Ratio Report

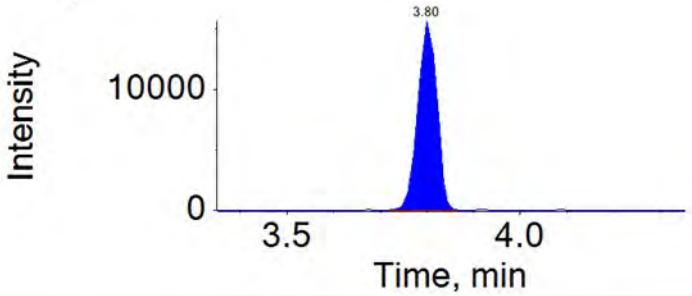
Sample Name: LCSDA **Instrument Name:** LM27631 **File Name:** 18NOV07D-16.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.80	1.00	44349.7	A	N/A	0.3782			
PFBS_2	3.80	1.00	16775.1	A	N/A	0.3782	6	50	
4:2-FTS	4.11	1.00	32701.6	A	N/A	0.5801			
4:2-FTS_2	4.11	1.00	18971.1	A	N/A	0.5801	-10	50	
PFHxA	4.15	1.00	102075.9	A	N/A	0.0120			
PFHxA_2	4.15	1.00	1225.1	A	N/A	0.0120	6	50	
PFPeS	4.17	1.10	24375.5	A	N/A	0.4415			
PFPeS_2	4.17	1.10	10763.0	A	N/A	0.4415	-19	50	
PFHxS	4.54	1.00	36956.8	A	N/A	0.3250			
PFHxS_2	4.54	1.00	12009.9	A	N/A	0.3250	-9	50	
PFHpA	4.54	1.00	102237.8	A	N/A	0.0563			
PFHpA_2	4.53	1.00	5755.7	A	N/A	0.0563	-2	50	
6:2-FTS	4.90	1.00	24918.3	A	N/A	0.6816			
6:2-FTS_2	4.90	1.00	16984.2	A	N/A	0.6816	0	50	
PFHpS	4.90	1.08	33529.9	A	N/A	0.3986			
PFHpS_2	4.90	1.08	13366.2	A	N/A	0.3986	1	50	
PFOA	4.91	1.00	116400.2	A	N/A	0.0528			
PFOA_2	4.91	1.00	6146.0	A	N/A	0.0528	-17	50	
PFOS	5.24	1.00	32818.4	M	N/A	0.3148			
PFOS_2	5.23	1.00	10331.9	M	N/A	0.3148	-11	50	
PFNA	5.25	1.00	85945.4	A	N/A	0.0223			
PFNA_2	5.25	1.00	1919.4	A	N/A	0.0223	9	50	
PFNS	5.53	1.06	17505.3	A	N/A	0.5491			
PFNS_2	5.53	1.06	9612.2	A	N/A	0.5491	12	50	
PFDA	5.55	1.00	68655.3	A	N/A	0.0061			
PFDA_2	5.55	1.00	418.7	A	N/A	0.0061	12	50	
8:2-FTS	5.56	1.00	19233.3	A	N/A	0.6292			
8:2-FTS_2	5.56	1.00	12101.6	A	N/A	0.6292	1	50	
NMeFOSAA	5.70	1.00	7928.5	M	N/A	0.2277			
NMeFOSAA_2	5.70	1.00	1805.4	A	N/A	0.2277	5	50	
PFDS	5.79	1.11	17149.3	A	N/A	0.4897			
PFDS_2	5.79	1.11	8398.0	A	N/A	0.4897	7	50	
PFUnDA	5.82	1.00	61560.5	A	N/A	0.0047			
PFUnDA_2	5.80	1.00	288.4	A	N/A	0.0047	54	50	OOS
NEtFOSAA	5.83	1.00	7820.8	M	N/A	0.7619			
NEtFOSAA_2	5.83	1.00	5958.8	A	N/A	0.7619	26	50	
PFDoDA	6.04	1.00	62639.7	A	N/A	0.0170			
PFDoDA_2	6.04	1.00	1065.2	A	N/A	0.0170	62	50	OOS
10:2-FTS	6.06	1.09	12286.1	M	N/A	0.6905			
10:2-FTS_2	6.06	1.09	8484.0	A	N/A	0.6905	-3	50	
PFTrDA	6.24	1.03	54877.3	A	N/A	0.0099			
PFTrDA_2	6.25	1.03	541.7	A	N/A	0.0099	3	50	
PFTeDA	6.42	1.00	40196.8	A	N/A	0.0063			
PFTeDA_2	6.41	1.00	252.1	A	N/A	0.0063	16	50	
PFHxDA	6.73	1.05	19040.7	A	N/A	0.0708			
PFHxDA_2	6.72	1.05	1347.9	A	N/A	0.0708	20	50	
PFODA	6.99	1.09	9759.1	A	N/A	0.0260			
PFODA_2	6.99	1.09	253.7	A	N/A	0.0260	2	50	

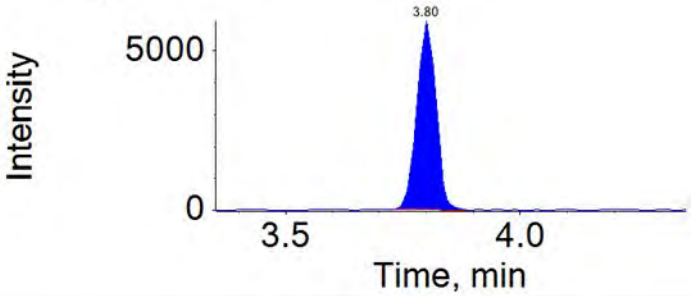
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

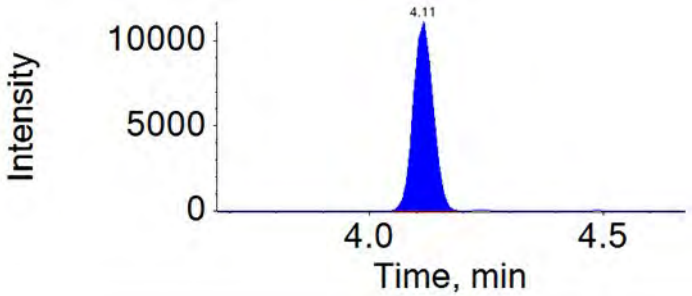
Component: PFBS
Primary Mass: 299.0 / 80.0



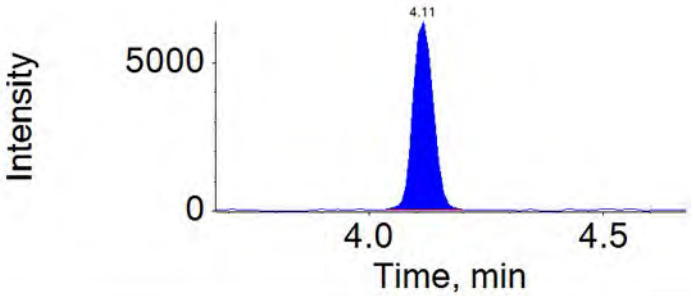
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



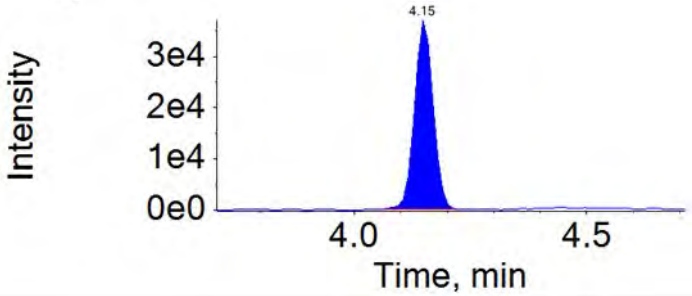
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



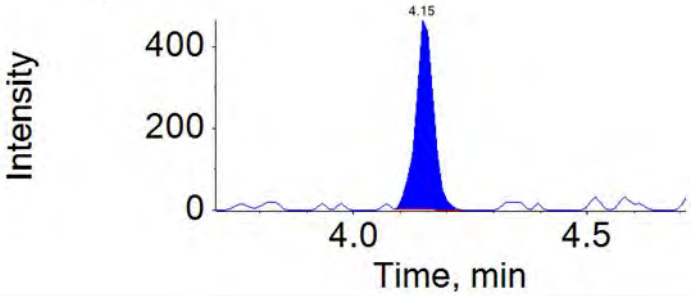
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



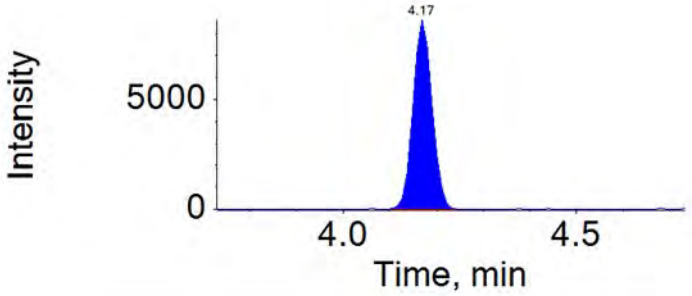
Component: PFHxA
Primary Mass: 313.0 / 269.0



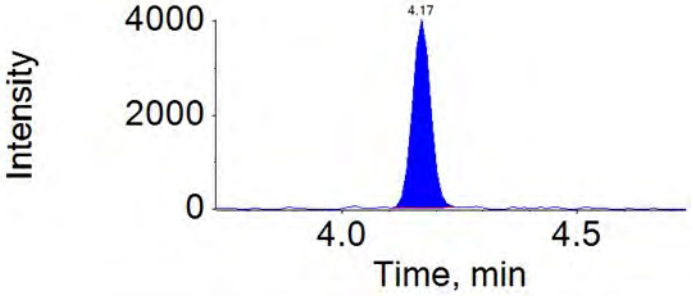
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



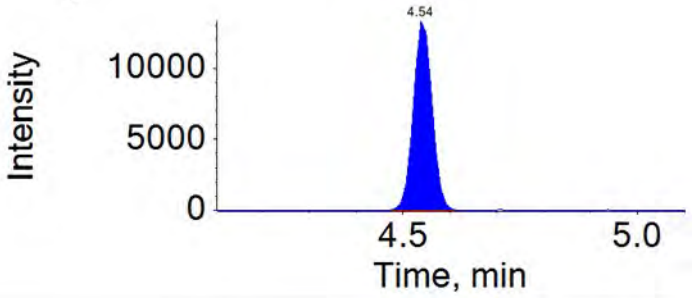
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



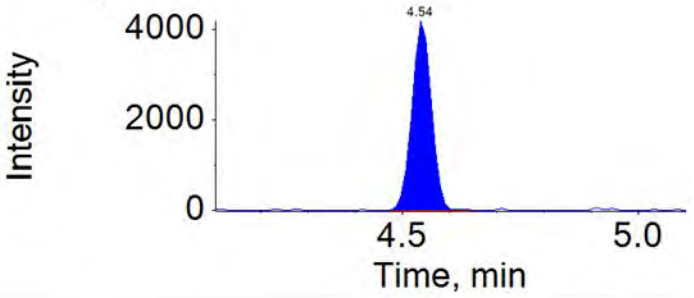
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

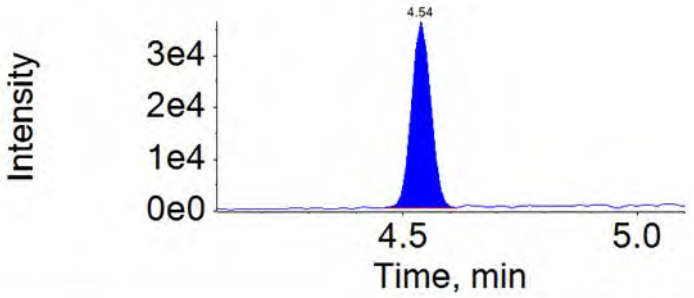
Component: PFHxS
Primary Mass: 399.0 / 80.0



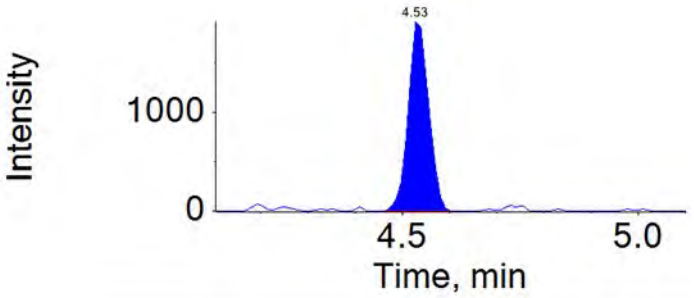
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



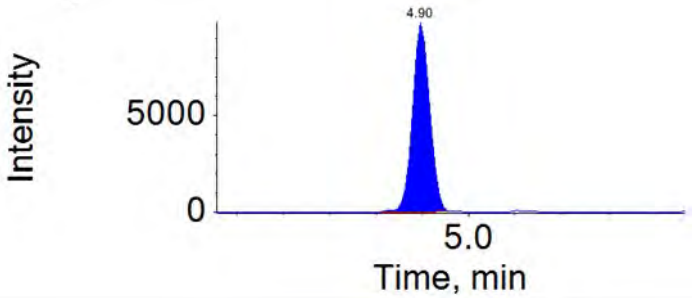
Component: PFHpA
Primary Mass: 363.0 / 319.0



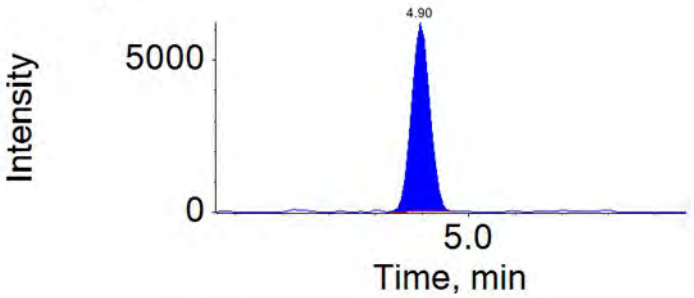
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



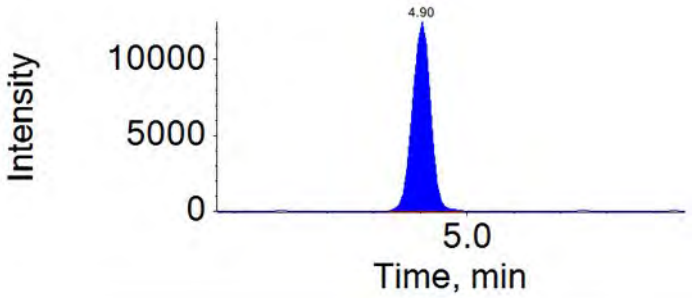
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



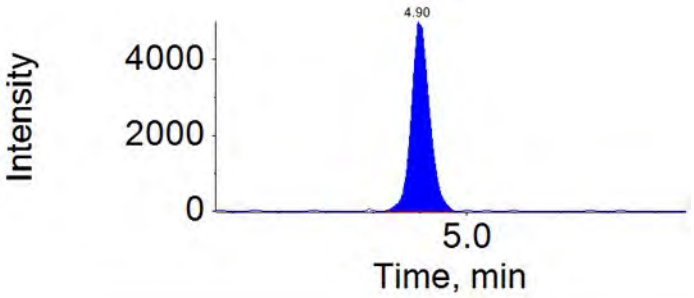
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



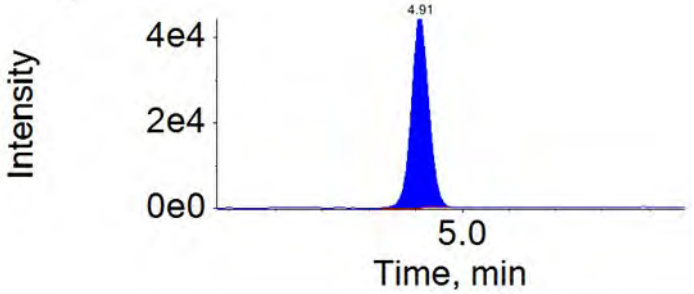
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



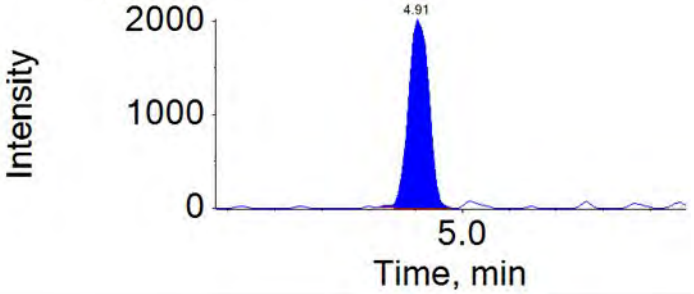
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

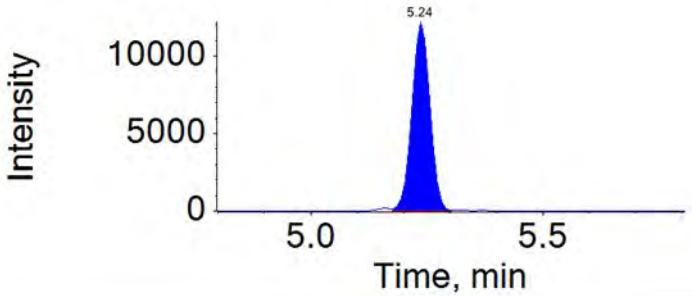
Component: PFOA
Primary Mass: 413.0 / 369.0



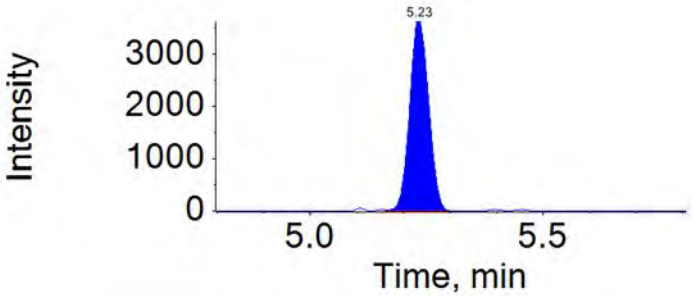
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



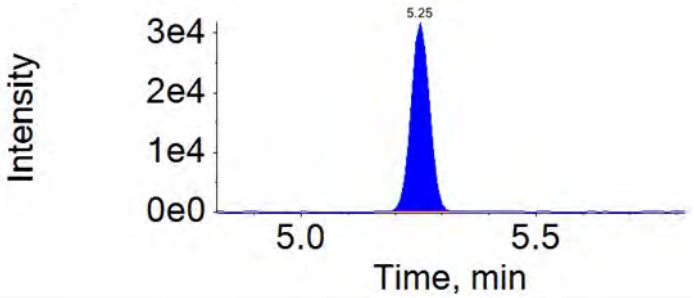
Component: PFOS
Primary Mass: 499.0 / 80.0



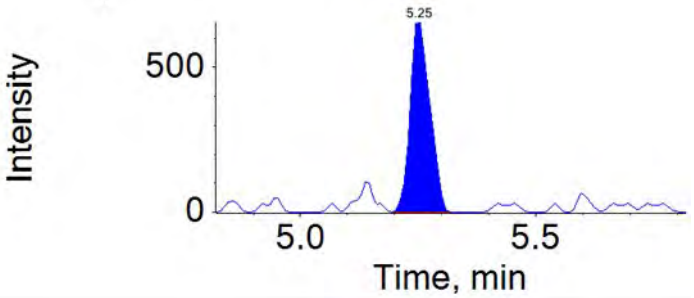
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



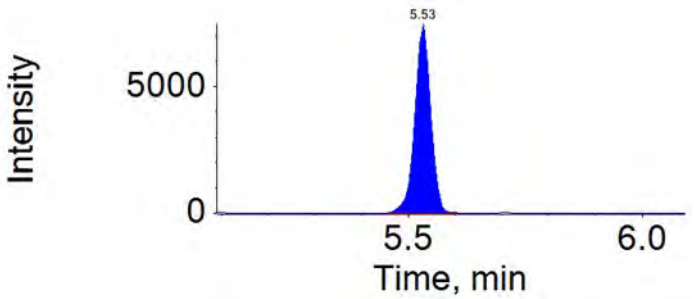
Component: PFNA
Primary Mass: 463.0 / 419.0



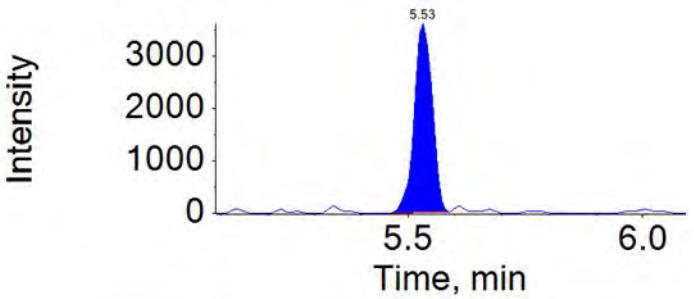
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



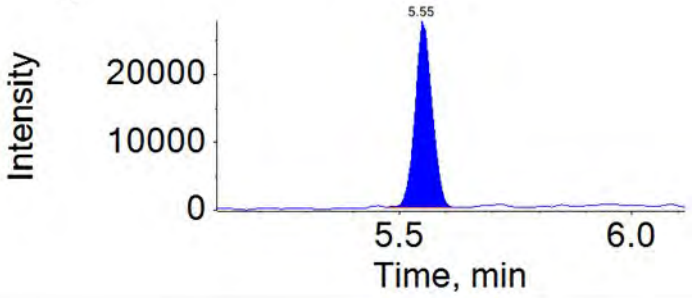
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



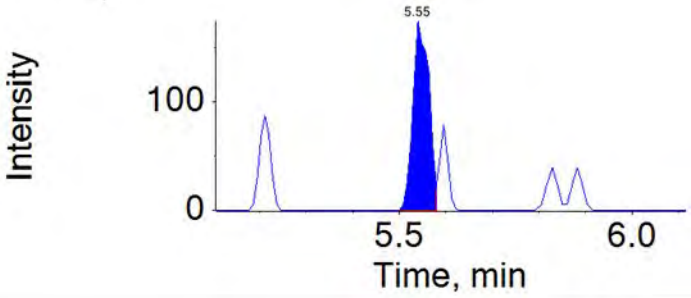
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

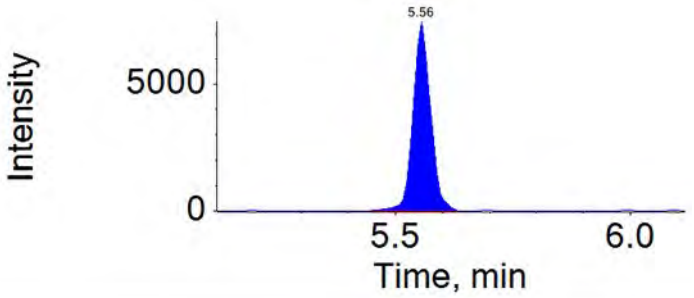
Component: PFDA
Primary Mass: 513.0 / 469.0



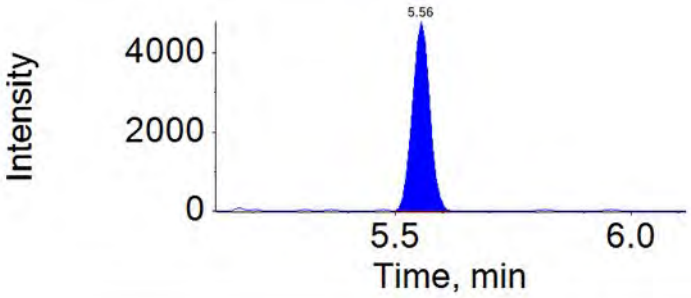
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



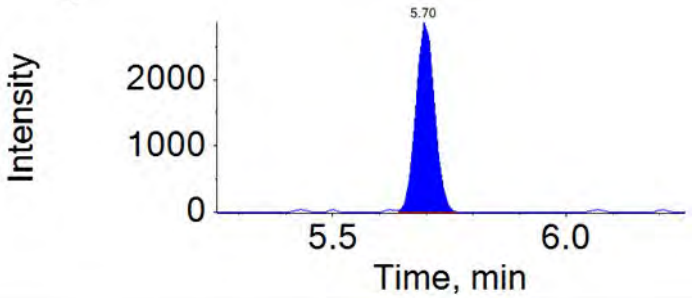
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



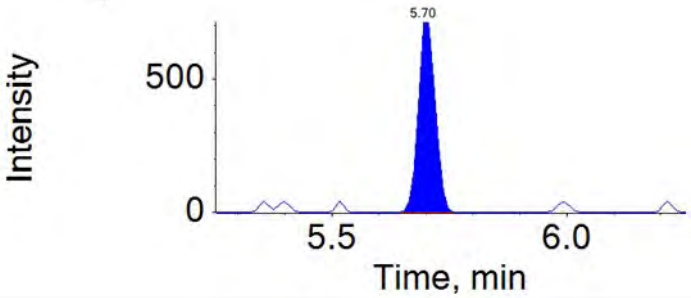
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



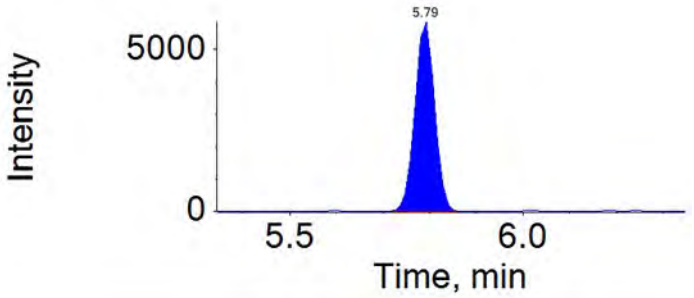
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



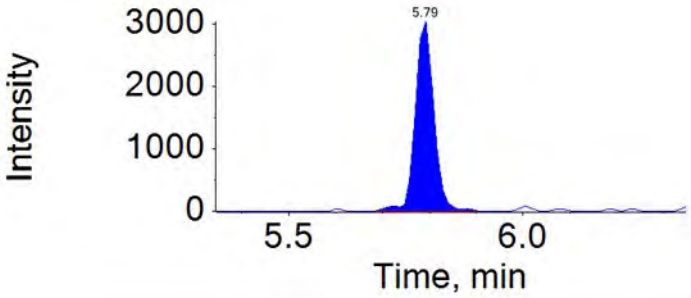
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



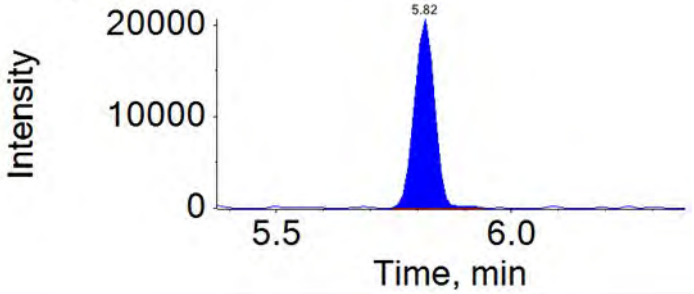
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



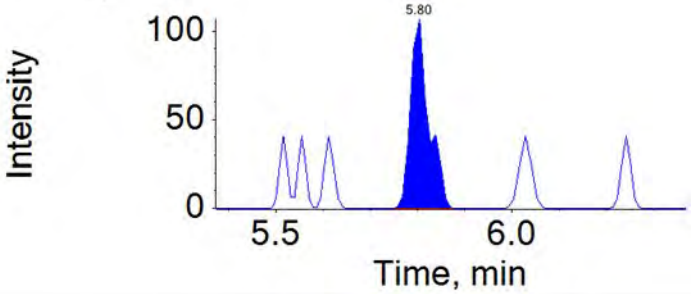
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

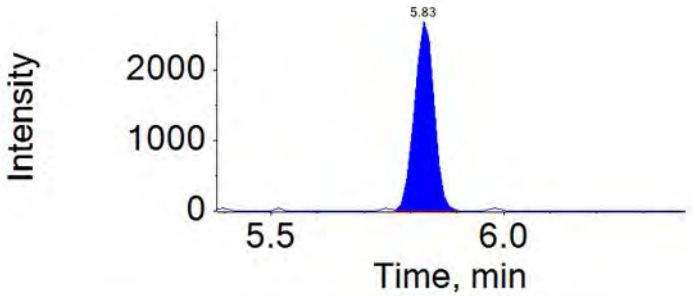
Component: PFUnDA
Primary Mass: 563.0 / 519.0



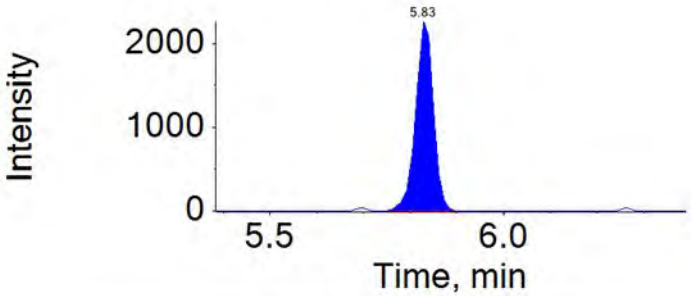
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



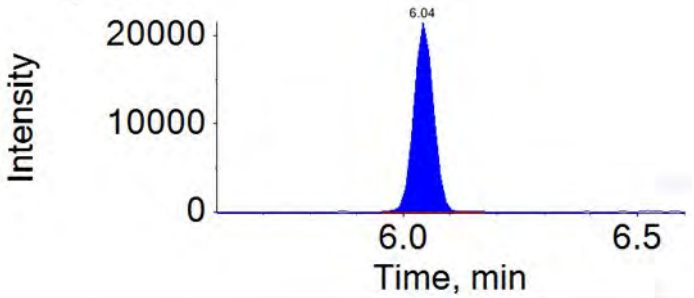
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



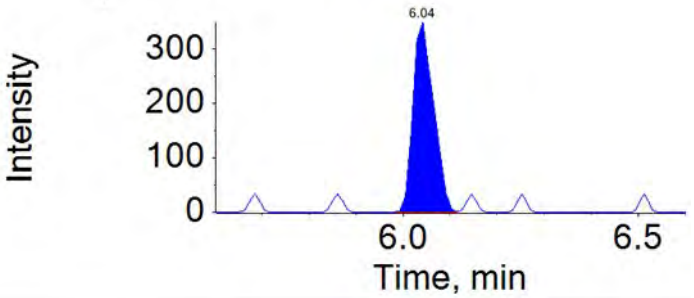
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



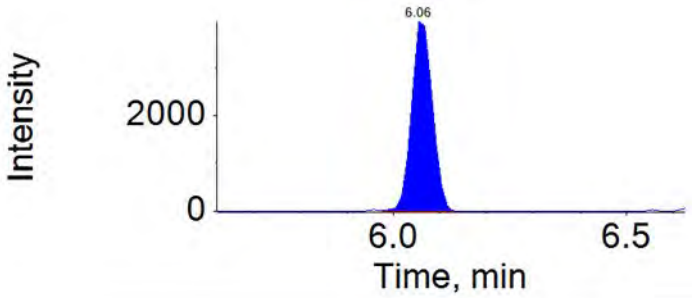
Component: PFDoDA
Primary Mass: 613.0 / 569.0



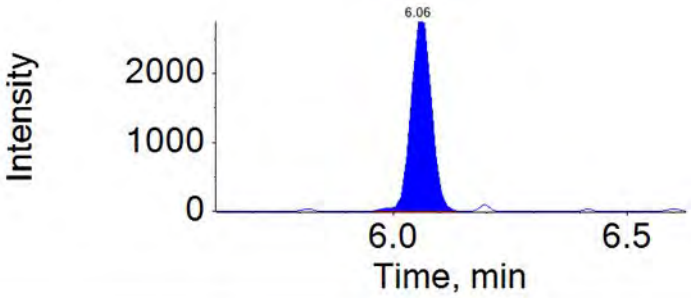
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



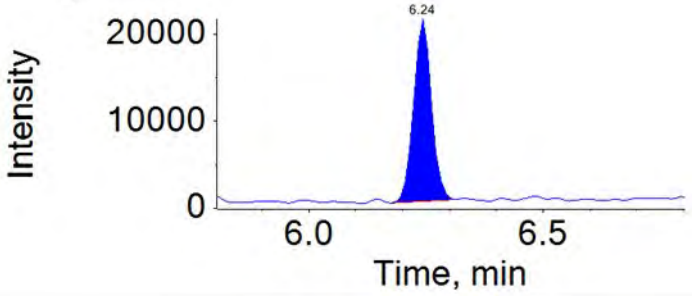
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



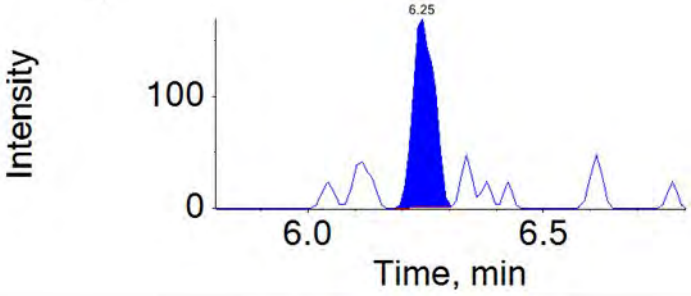
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



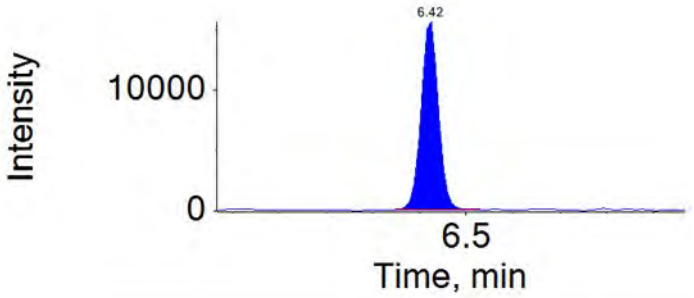
Component: PFTrDA
Primary Mass: 663.0 / 619.0



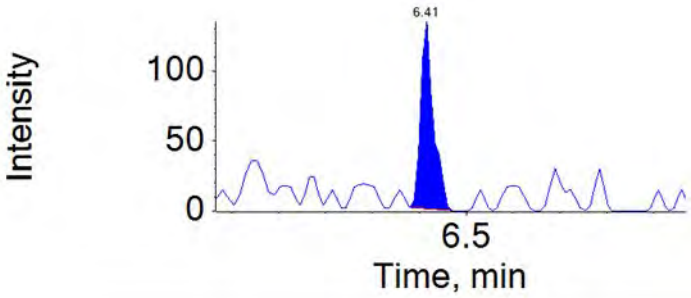
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



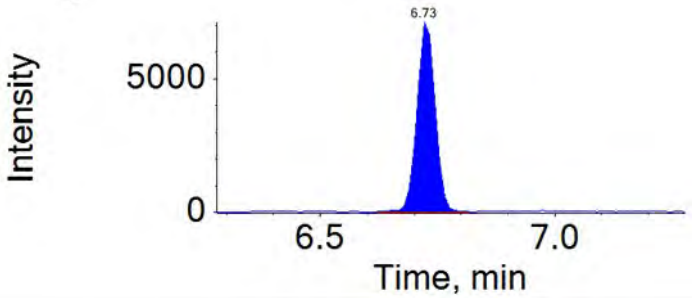
Component: PFTeDA
Primary Mass: 713.0 / 669.0



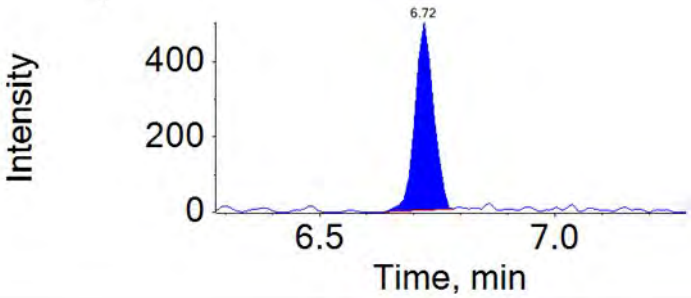
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



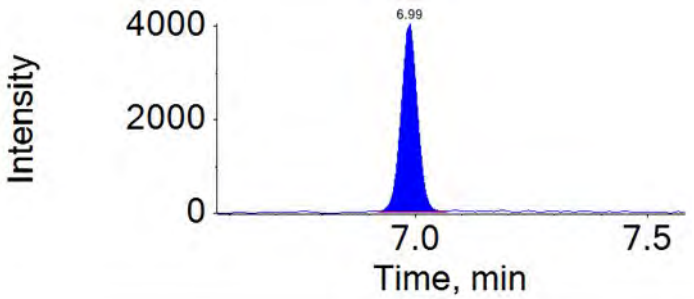
Component: PFHxDA
Primary Mass: 813.0 / 769.0



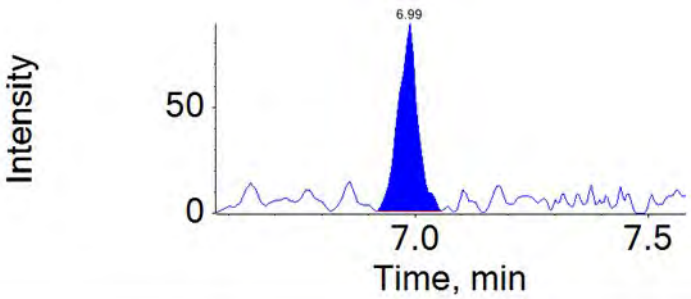
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



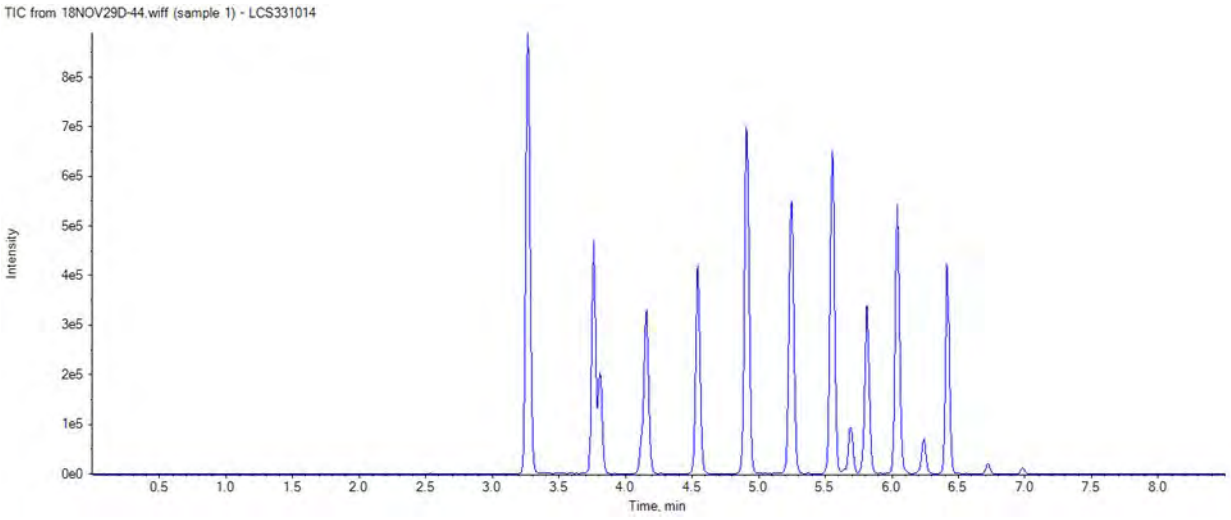
APPROVED
By MCD at 4:42 pm, 11/8/18

REVIEWED
By umar at 2:36 pm, 11/12/18

Lab Control Sample Recovery

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18331014 11/30/2018 9:00:55 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS331014	EPA 537 mod QSM 5.1 table B-15 18331014	18NOV29D-44.wiff	2018-11-29T16:25:12



Injection Standard Area Reference File**:** 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	1082784.7	906425.4	19	50	
13C2-PFOA	5.00	590901.3	495984.0	19	50	
13C4-PFOS	4.78	363339.1	296261.8	23	50	
13C2-PFDA	5.00	576158.7	451203.0	28	50	

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Lab Control Sample Recovery

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:00:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCS331014	EPA 537 mod QSM 5.1 table B-15 18331014	18NOV29D-44.wiff	2018-11-29T16:25:12

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	108492.9	836326.6	0.130	1.360	1.422	105	70-130	
PFPeA	108567.3	840636.4	0.129	1.360	1.267	93	70-130	
PFBS	47193.4	375199.9	0.126	1.204	1.221	101	70-130	
4:2-FTS	43232.8	69109.9	0.626	3.736	3.349	90	70-130	
PFHxA	110092.7	590839.4	0.186	1.360	1.496	110	70-130	
PFPeS	26111.8	375199.9	0.070	1.276	1.408	110	70-130	
PFHpA	109840.5	486519.9	0.226	1.360	1.394	102	70-130	
PFHxS	38238.8	295143.9	0.130	1.286	1.213	94	70-130	
6:2-FTS	47356.4	61945.1	0.764	3.792	3.989	105	70-130	
PFHpS	36650.1	295143.9	0.124	1.294	1.239	96	70-130	
PFOA	107511.3	817083.9	0.132	1.360	1.360	100	70-130	
PFOS	36242.3	290650.6	0.125	1.300	1.046	80	70-130	
PFNA	116993.5	599339.5	0.195	1.360	1.496	110	70-130	
PFNS	27791.7	290650.6	0.096	1.306	1.207	92	70-130	
PFDA	87236.0	750714.9	0.116	1.360	1.315	97	70-130	
8:2-FTS	49828.7	50089.7	0.995	3.832	3.752	98	70-130	
PFOSA	2343.1	15091.0	0.155	1.360	1.573	116	70-130	
NMeFOSAA	19918.5	205086.3	0.097	1.360	1.239	91	70-130	
PFDS	21352.4	290650.6	0.073	1.310	1.165	89	70-130	
PFUnDA	102263.4	501134.3	0.204	1.360	1.459	107	70-130	
NEtFOSAA	18008.4	124274.5	0.145	1.360	1.411	104	70-130	
PFDoDA	142363.3	999479.3	0.142	1.360	1.560	115	70-130	
10:2-FTS	45198.4	50089.7	0.902	3.856	3.980	103	70-130	
NMePFOSAE	2427.4	11467.7	0.212	1.360	1.782	131	70-130	OOS
NMePFOSA	53.5	524.5	0.102	1.360	1.080	79	70-130	
PFDoS	11509.6	290650.6	0.040	1.316	1.137	86	70-130	
NEtPFOSAE	2626.5	12722.9	0.206	1.360	1.485	109	70-130	
NEtPFOSA	99.1	314.8	0.315	1.360	2.821	207	70-130	OOS
PFTrDA	134783.7	999479.3	0.135	1.360	1.626	120	70-130	
PFTeDA	92920.8	756103.5	0.123	1.360	1.393	102	70-130	
PFHxDA	42113.2	756103.5	0.056	1.360	1.273	94	70-130	
PFODA	24359.9	756103.5	0.032	1.360	0.858	63	70-130	OOS

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Lab Control Sample Recovery

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18331014 11/30/2018 9:00:55 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	LCS331014			**Data File:**		18NOV29D-44.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18331014			**Acquis Date:**		2018-11-29T16:25:12
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	25			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18331014
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18331014			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1082784.7	906425.4	19	50	
13C2-PFOA	5.0	590901.3	495984.0	19	50	
13C4-PFOS	4.8	363339.1	296261.8	23	50	
13C2-PFDA	5.0	576158.7	451203.0	28	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	836326.6	13C3-PFBA	1082784.7	0.772	10.000	6.892	69	50-150	
E13C5-PFPeA	840636.4	13C3-PFBA	1082784.7	0.776	10.000	7.251	73	50-150	
E13C3-PFBS	375199.9	13C3-PFBA	1082784.7	0.347	9.300	6.612	71	50-150	
E13C2-4:2-FTS	69109.9	13C2-PFOA	590901.3	0.117	9.340	8.061	86	50-150	
E13C5-PFHxA	590839.4	13C2-PFOA	590901.3	1.000	10.000	7.345	73	50-150	
E13C3-PFHxS	295143.9	13C2-PFOA	590901.3	0.499	9.460	7.830	83	50-150	
E13C4-PFHpA	486519.9	13C2-PFOA	590901.3	0.823	10.000	7.566	76	50-150	
E13C2-6:2-FTS	61945.1	13C2-PFOA	590901.3	0.105	9.500	8.777	92	50-150	
E13C8-PFOA	817083.9	13C2-PFOA	590901.3	1.383	10.000	7.612	76	50-150	
E13C8-PFOS	290650.6	13C4-PFOS	363339.1	0.800	9.560	7.222	76	50-150	
E13C9-PFNA	599339.5	13C4-PFOS	363339.1	1.650	10.000	7.246	72	50-150	
E13C6-PFDA	750714.9	13C2-PFDA	576158.7	1.303	10.000	7.347	73	50-150	
E13C2-8:2-FTS	50089.7	13C2-PFDA	576158.7	0.087	9.580	7.473	78	50-150	
E13C8-PFOSA	15091.0	13C2-PFDA	576158.7	0.026	10.000	0.192	2	50-150	OOS
Ed3-NMeFOSAA	205086.3	13C2-PFDA	576158.7	0.356	10.000	9.039	90	50-150	
E13C7-PFUnDA	501134.3	13C2-PFDA	576158.7	0.870	10.000	7.352	74	50-150	
Ed5-NEtFOSAA	124274.5	13C2-PFDA	576158.7	0.216	10.000	7.685	77	50-150	
E13C2-PFDoDA	999479.3	13C2-PFDA	576158.7	1.735	10.000	7.290	73	50-150	
Ed7-NMePFOSAE	11467.7	13C2-PFDA	576158.7	0.020	10.000	0.344	3	50-150	OOS
Ed3-NMePFOSA	524.5	13C2-PFDA	576158.7	0.001	10.000	0.049	0	50-150	OOS
Ed9-NEtPFOSAE	12722.9	13C2-PFDA	576158.7	0.022	10.000	0.448	4	50-150	OOS
Ed5-NEtPFOSA	314.8	13C2-PFDA	576158.7	0.001	10.000	0.038	0	50-150	OOS
E13C2-PFTeDA	756103.5	13C2-PFDA	576158.7	1.312	10.000	7.263	73	50-150	

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

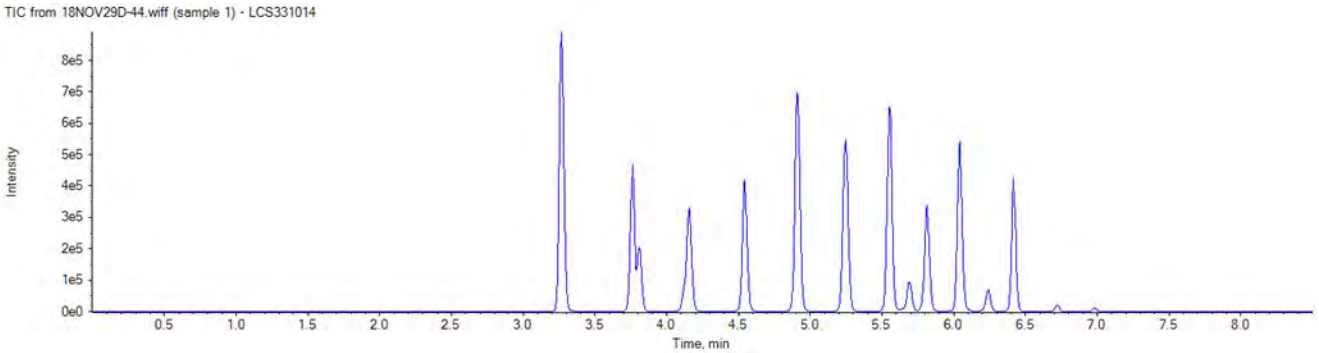
Analyte Quantitation Peak Table

Sample Name: LCS331014 **Instrument Name:** LM27631 **File Name:** 18NOV29D-44.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.26	1.000	108492.9		A	13C4-PFBA	3.27	836326.6	0.130	1.422
PFPeA	3.76	1.000	108567.3		A	13C5-PFPeA	3.76	840636.4	0.129	1.267
PFBS	3.81	1.000	47193.4		A	13C3-PFBS	3.81	375199.9	0.126	1.221
4:2-FTS	4.12	1.000	43232.8		A	13C2-4:2-FTS	4.12	69109.9	0.626	3.349
PFHxA	4.16	1.000	110092.7		A	13C5-PFHxA	4.16	590839.4	0.186	1.496
PFPeS	4.18	1.100	26111.8		A	13C3-PFBS	3.81	375199.9	0.070	1.408
PFHpA	4.54	1.000	109840.5		A	13C4-PFHpA	4.54	486519.9	0.226	1.394
PFHxS	4.55	1.000	38238.8		A	13C3-PFHxS	4.55	295143.9	0.130	1.213
6:2-FTS	4.90	1.000	47356.4		A	13C2-6:2-FTS	4.90	61945.1	0.764	3.989
PFHpS	4.91	1.080	36650.1		A	13C3-PFHxS	4.55	295143.9	0.124	1.239
PFOA	4.91	1.000	107511.3		M	13C8-PFOA	4.91	817083.9	0.132	1.360
PFOS	5.24	1.000	36242.3		A	13C8-PFOS	5.24	290650.6	0.125	1.046
PFNA	5.25	1.000	116993.5		A	13C9-PFNA	5.25	599339.5	0.195	1.496
PFNS	5.53	1.060	27791.7		A	13C8-PFOS	5.24	290650.6	0.096	1.207
PFDA	5.55	1.000	87236.0		A	13C6-PFDA	5.55	750714.9	0.116	1.315
8:2-FTS	5.56	1.000	49828.7		A	13C2-8:2-FTS	5.56	50089.7	0.995	3.752
PFOSA	5.64	1.000	2343.1		A	13C8-PFOSA	5.64	15091.0	0.155	1.573
NMeFOSAA	5.69	1.000	19918.5		A	d3-NMeFOSAA	5.69	205086.3	0.097	1.239
PFDS	5.79	1.100	21352.4		A	13C8-PFOS	5.24	290650.6	0.073	1.165
PFUnDA	5.81	1.000	102263.4		A	13C7-PFUnDA	5.81	501134.3	0.204	1.459
NEtFOSAA	5.83	1.000	18008.4		M	d5-NEtFOSAA	5.82	124274.5	0.145	1.411
PFDoDA	6.04	1.000	142363.3		A	13C2-PFDoDA	6.04	999479.3	0.142	1.560
10:2-FTS	6.06	1.090	45198.4		A	13C2-8:2-FTS	5.56	50089.7	0.902	3.980
NMePFOSAE	6.10	1.000	2427.4		A	d7-NMePFOSAE	6.09	11467.7	0.212	1.782
NMePFOSA	6.08	0.990	53.5		A	d3-NMePFOSA	6.11	524.5	0.102	1.080
PFDoS	6.21	1.190	11509.6		A	13C8-PFOS	5.24	290650.6	0.040	1.137
NEtPFOSAE	6.26	1.000	2626.5		A	d9-NEtPFOSAE	6.24	12722.9	0.206	1.485
NEtPFOSA	6.24	1.000	99.1		A	d5-NEtPFOSA	6.27	314.8	0.315	2.821
PFTrDA	6.24	1.030	134783.7		A	13C2-PFDoDA	6.04	999479.3	0.135	1.626
PFTeDA	6.42	1.000	92920.8		A	13C2-PFTeDA	6.42	756103.5	0.123	1.393
PFHxDA	6.72	1.050	42113.2		A	13C2-PFTeDA	6.42	756103.5	0.056	1.273
PFODA	6.98	1.090	24359.9		A	13C2-PFTeDA	6.42	756103.5	0.032	0.858

Total Ion Chromatogram

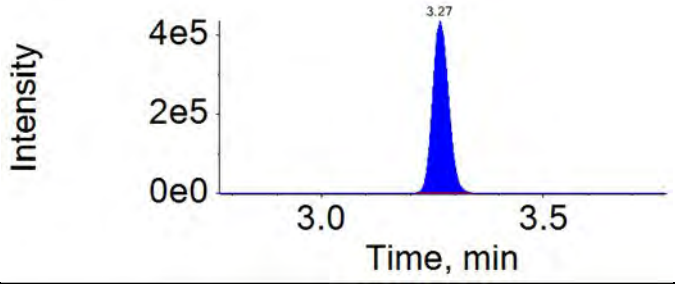


APPROVED
By MCD at 9:12 pm, 11/30/18

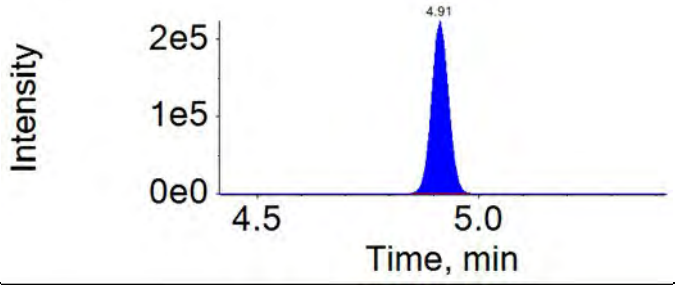
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

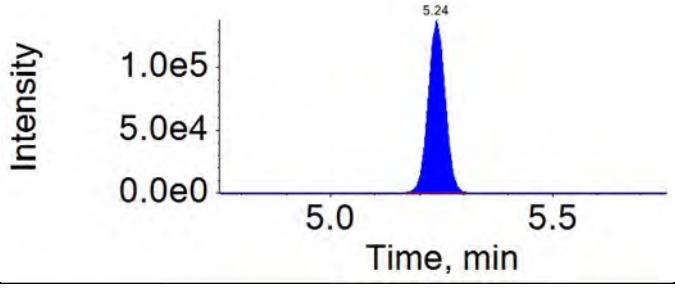
Injection Standard: 13C3-PFBA
216.0 / 172.0



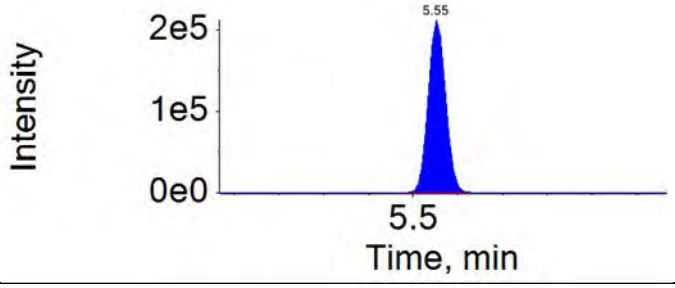
Injection Standard: 13C2-PFOA
415.0 / 370.0



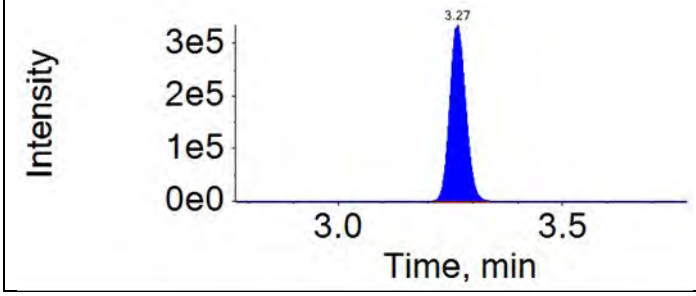
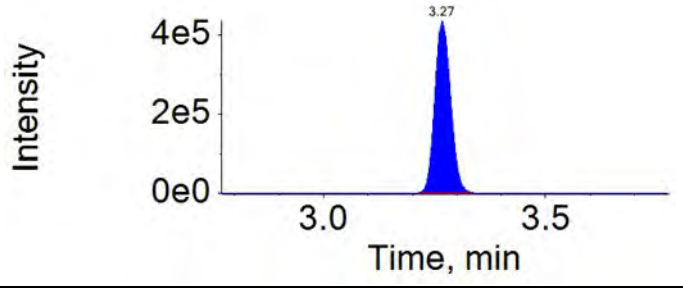
Injection Standard: 13C4-PFOS
503.0 / 80.0

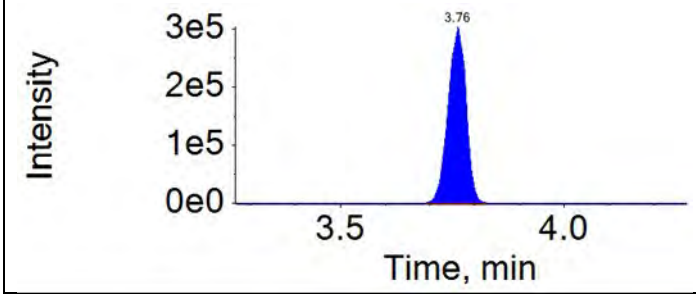
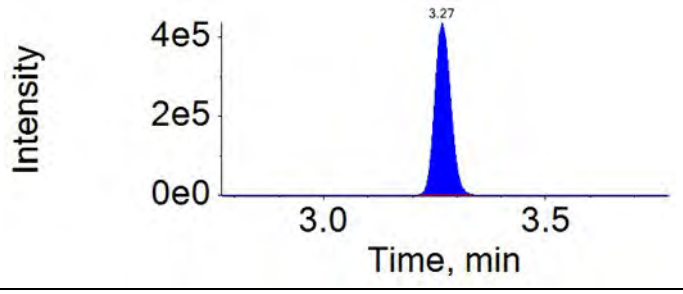


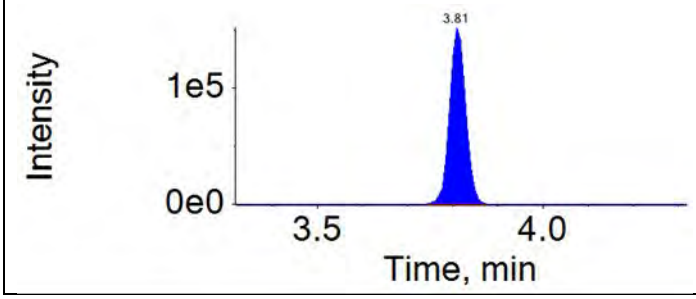
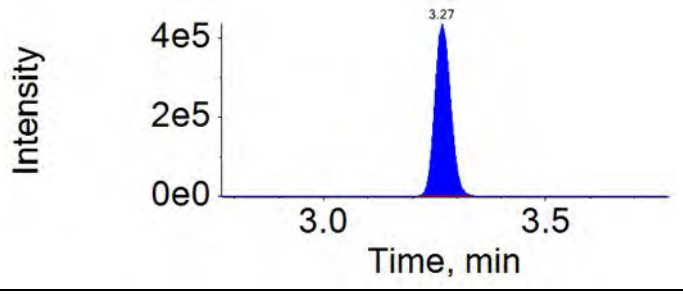
Injection Standard: 13C2-PFDA
515.0 / 470.0

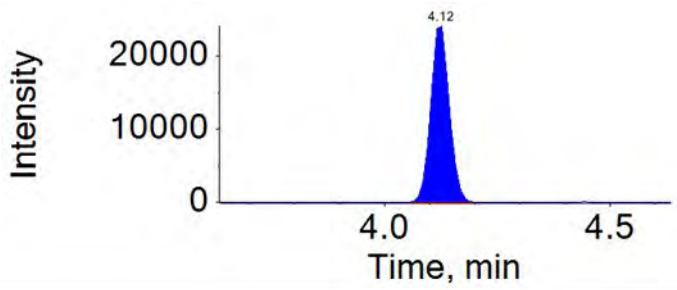
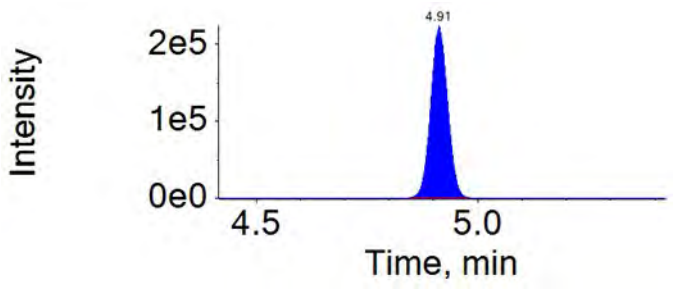


ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

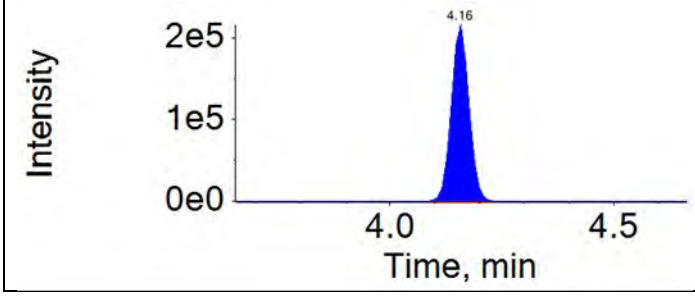
Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

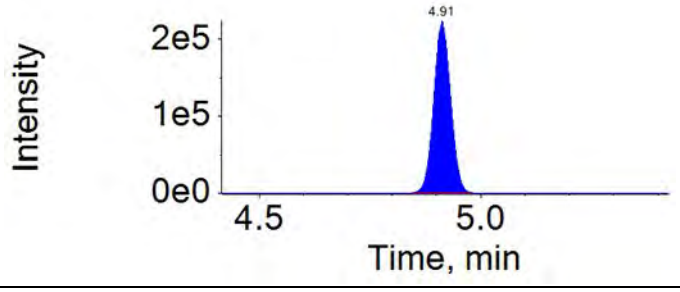
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

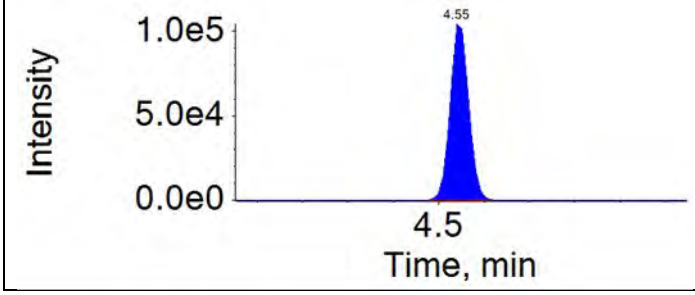
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

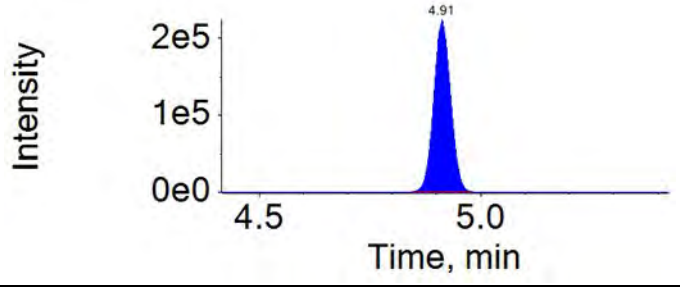
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



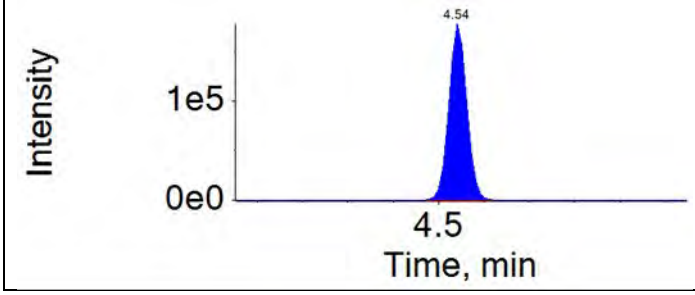


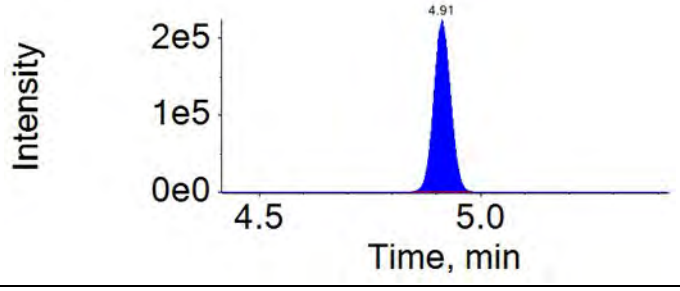
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



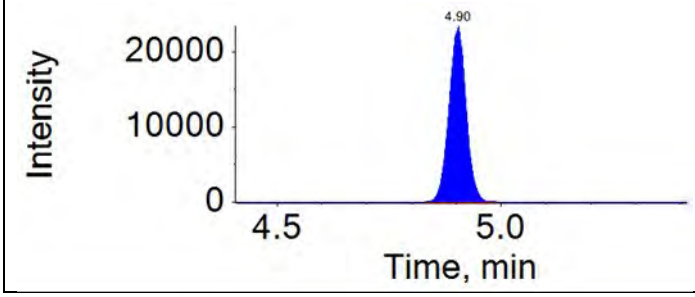


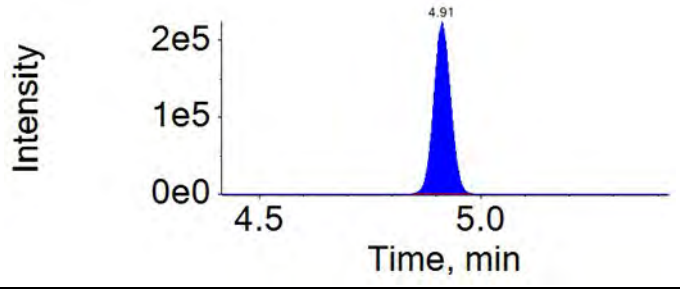
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

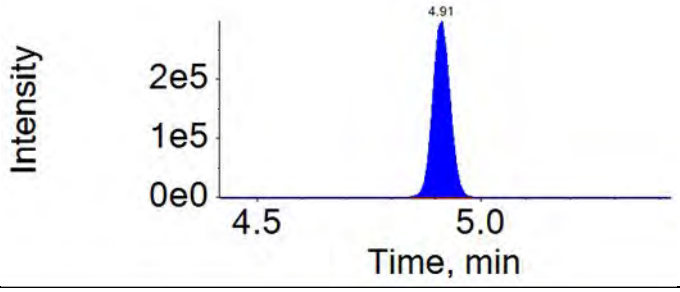
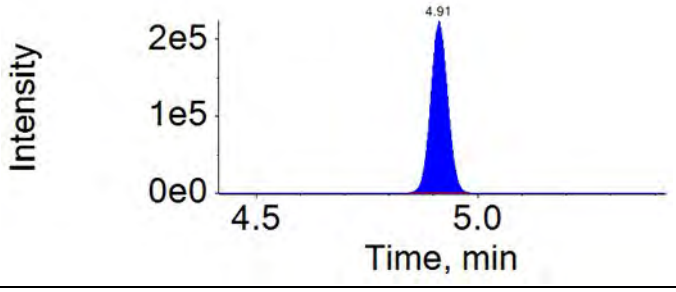


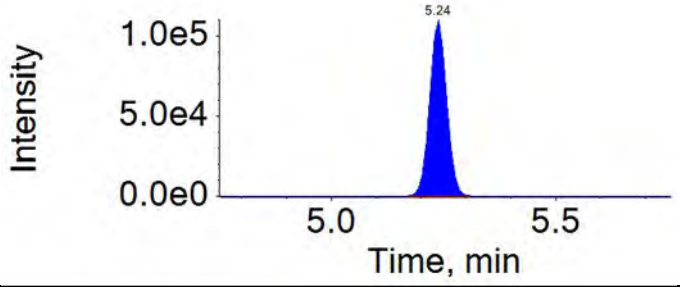
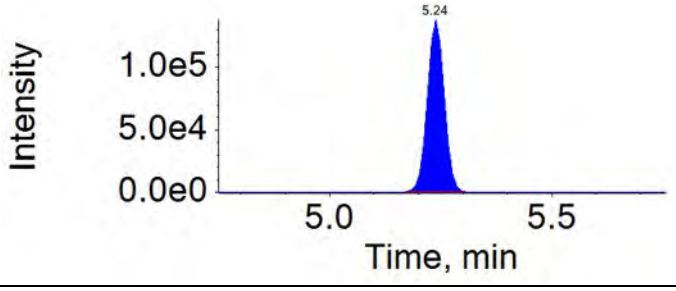


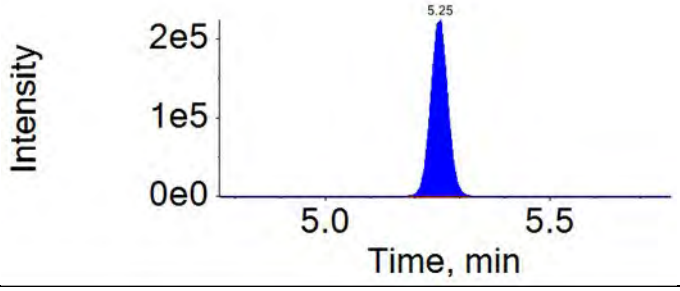
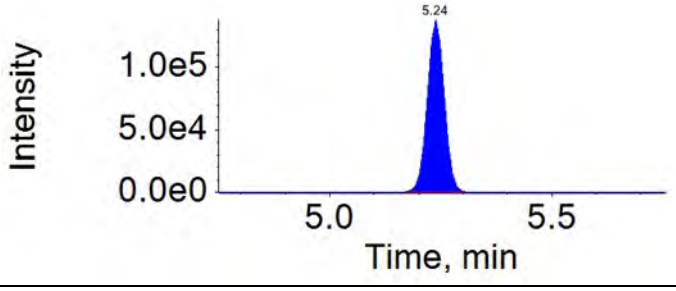
APPROVED
By MCD at 9:12 pm, 11/30/18

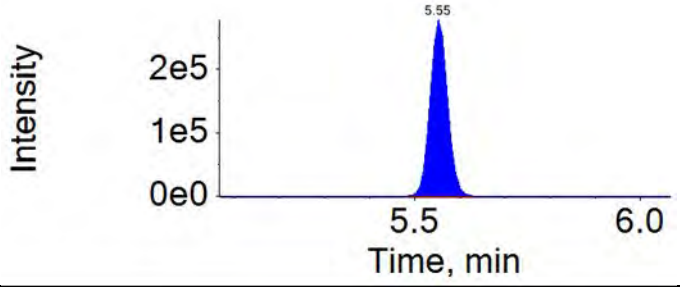
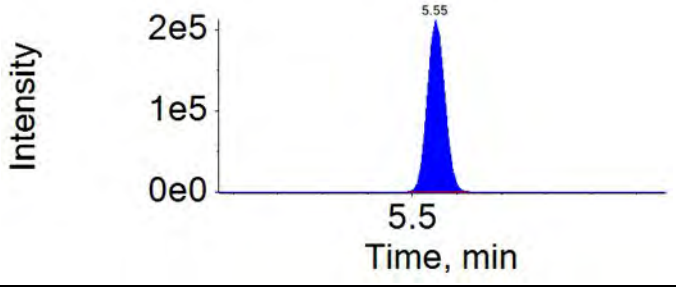
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

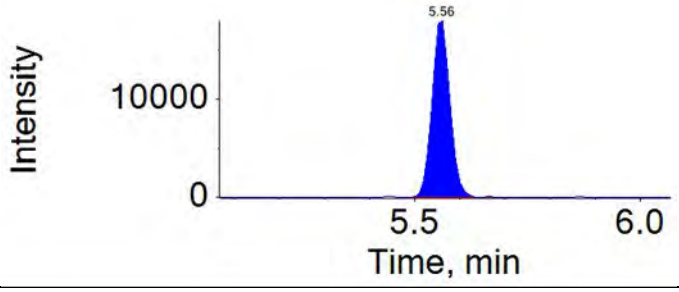
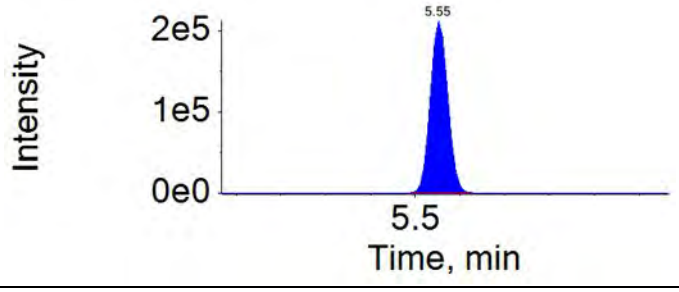
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

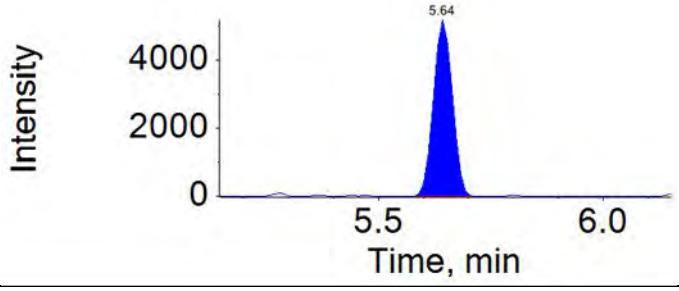
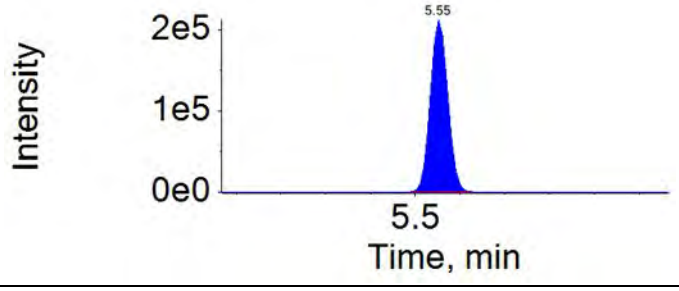
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

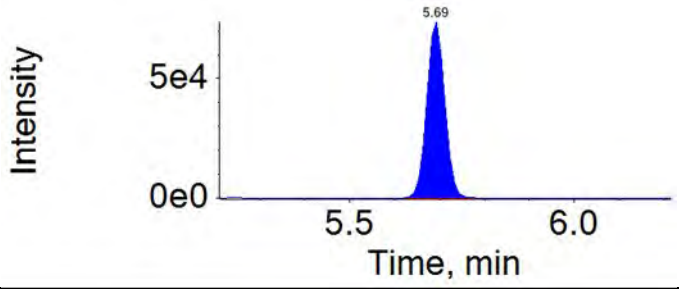
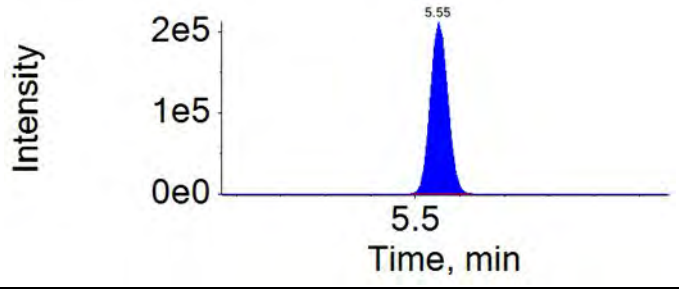
APPROVED
By MCD at 9:12 pm, 11/30/18

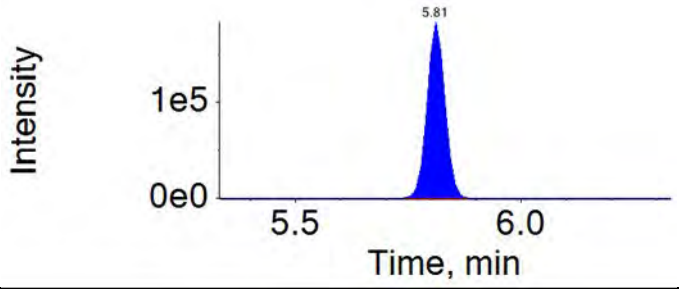
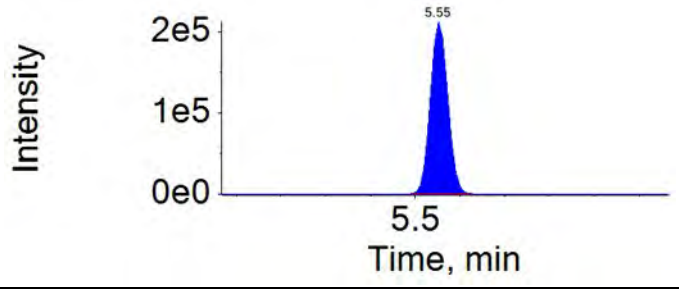
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

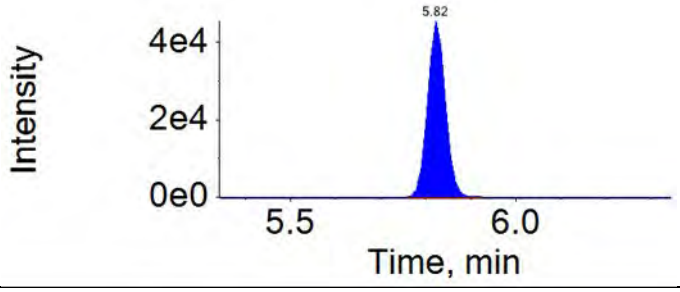
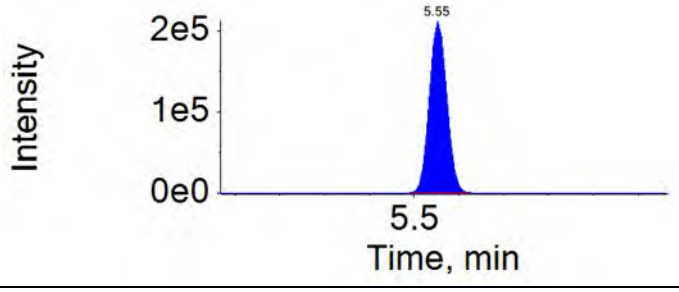
Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

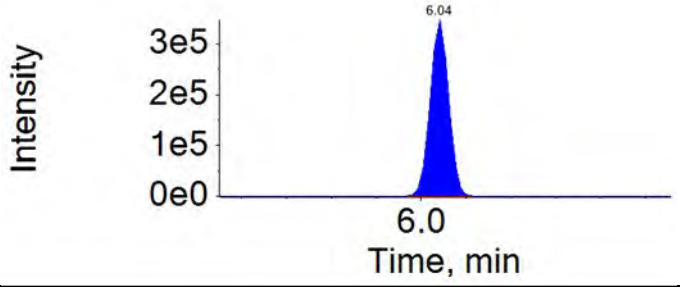
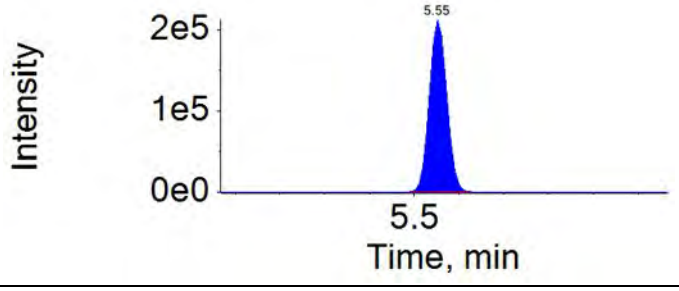
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

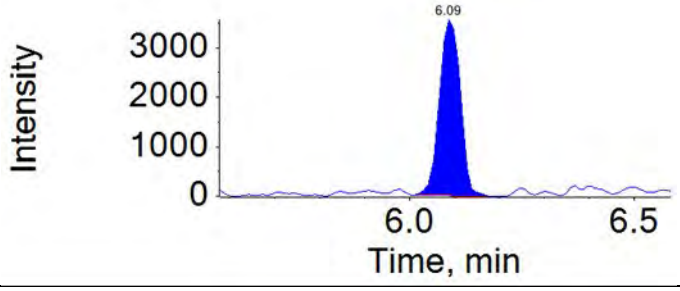
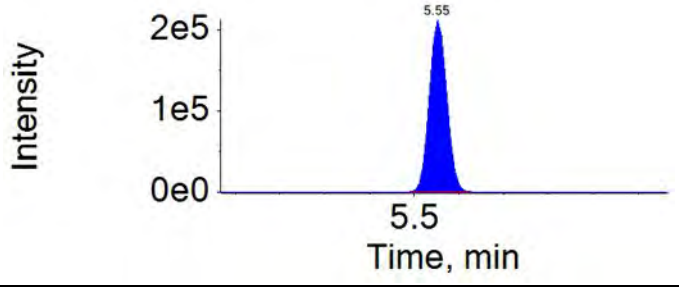
APPROVED
By MCD at 9:12 pm, 11/30/18

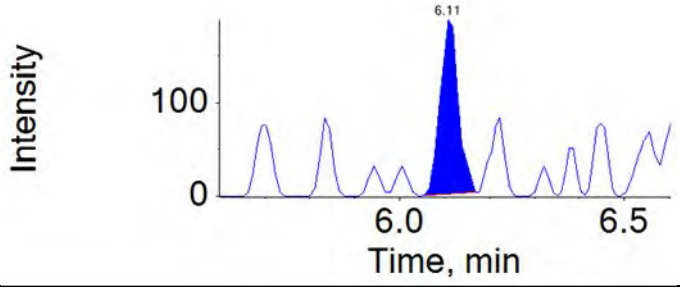
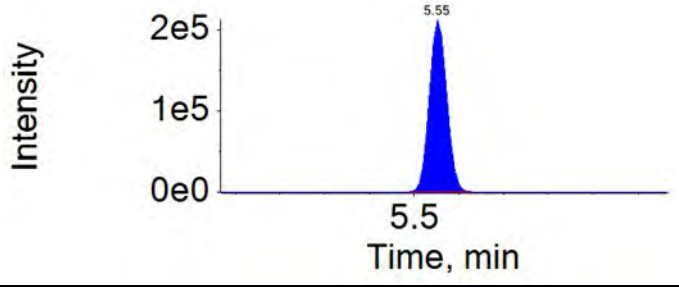
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0
	

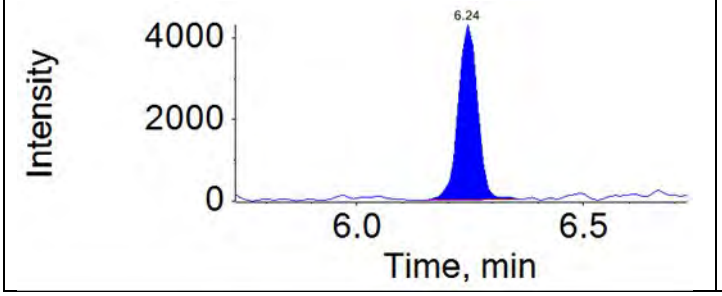
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0
	

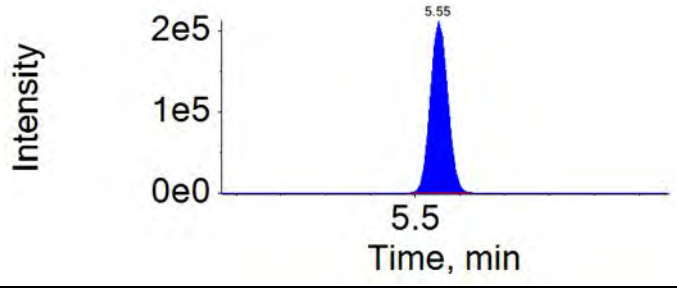
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0
	

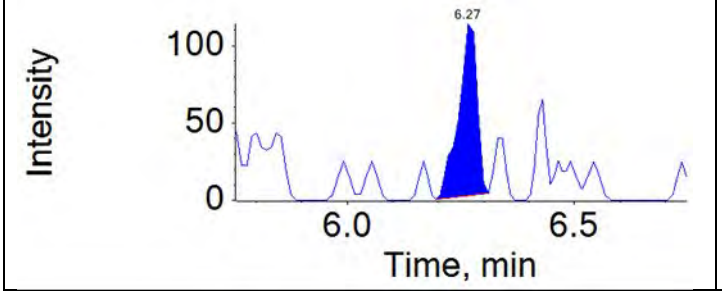
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

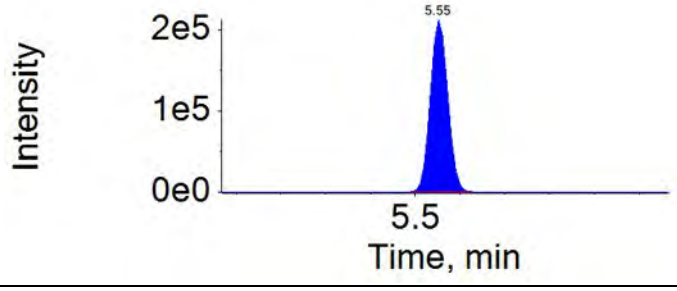
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



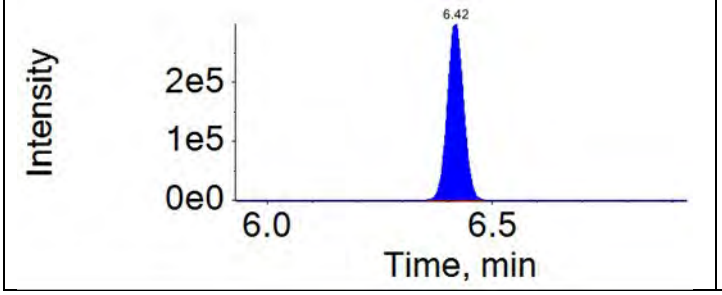


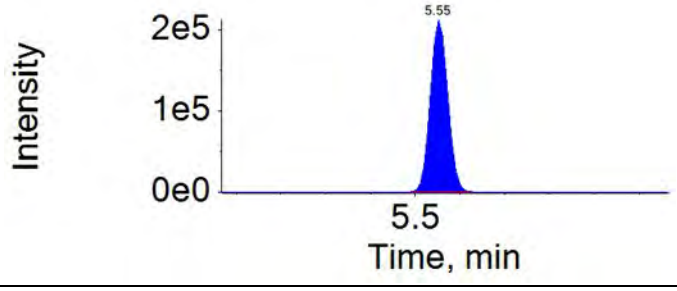
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





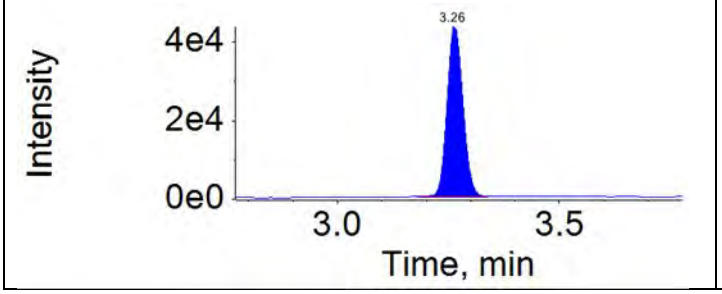
Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0

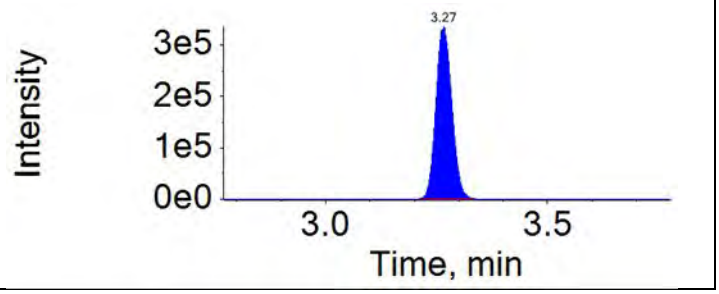




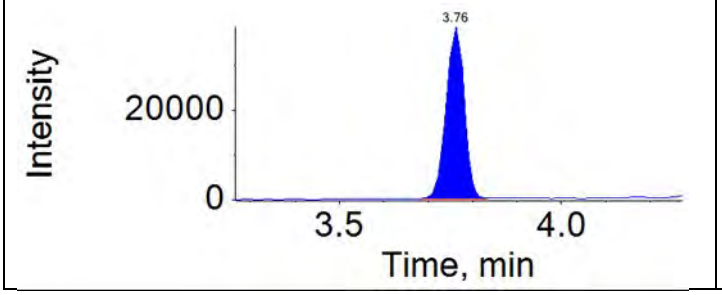
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

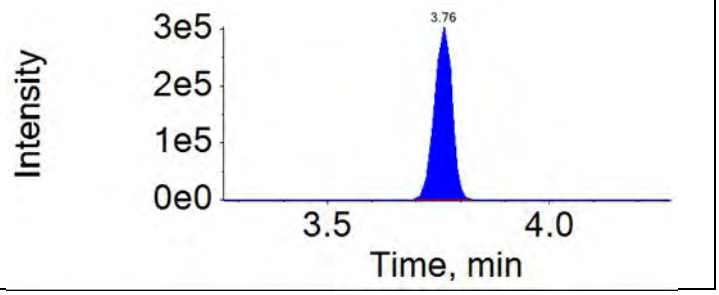
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



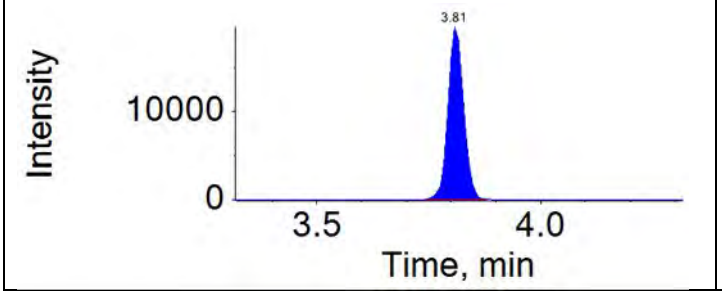


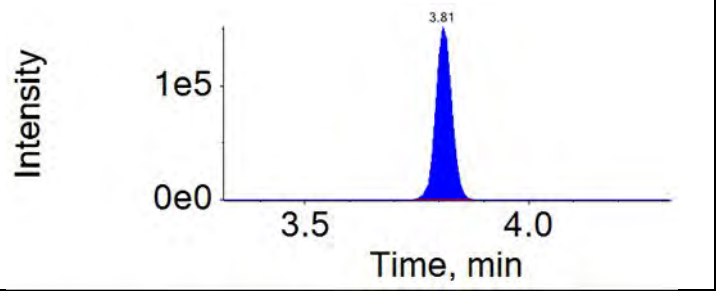
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



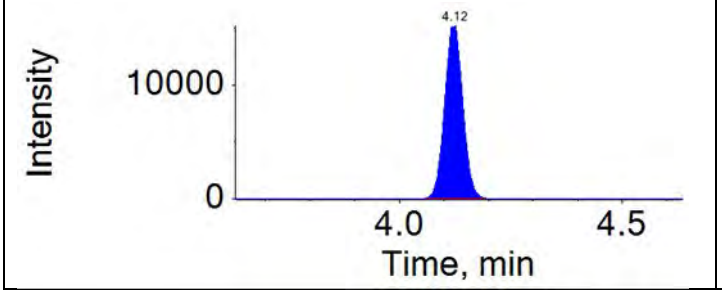


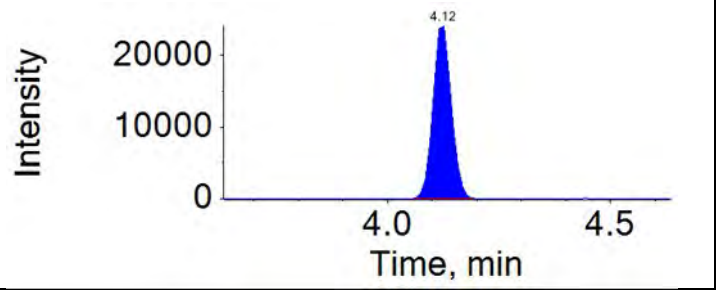
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



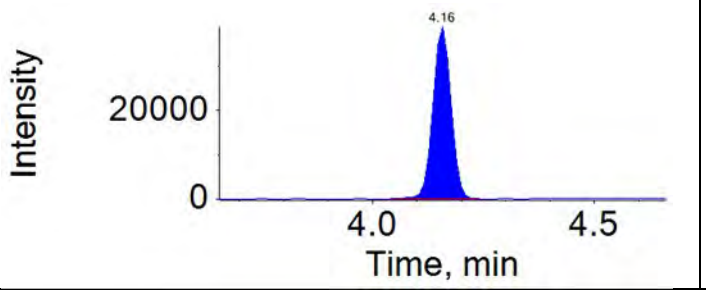


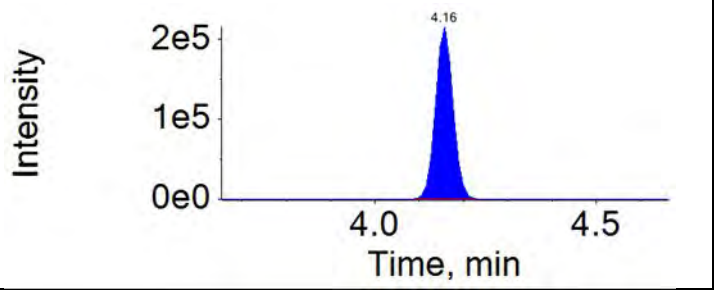
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

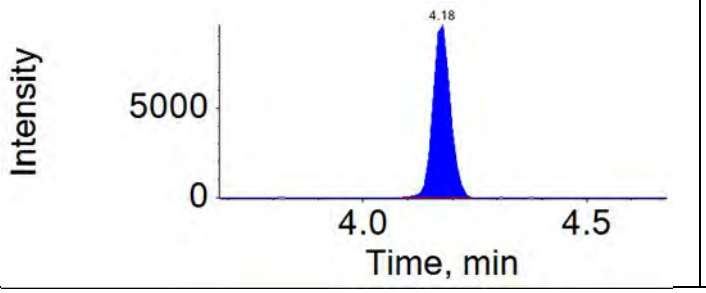
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

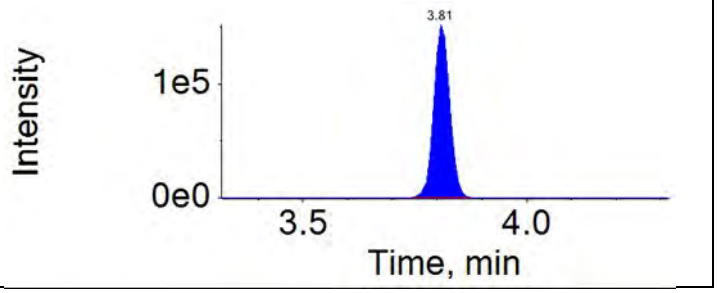
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



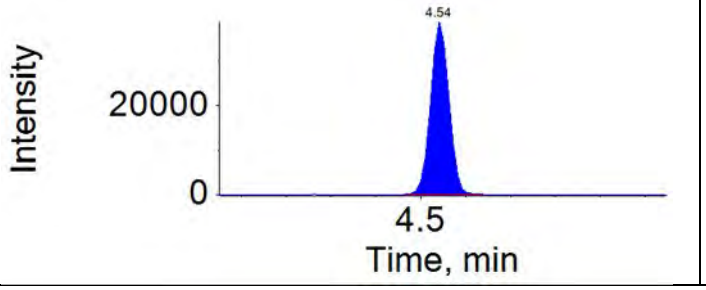


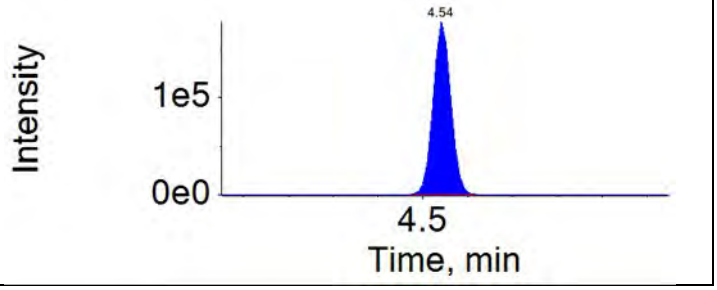
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



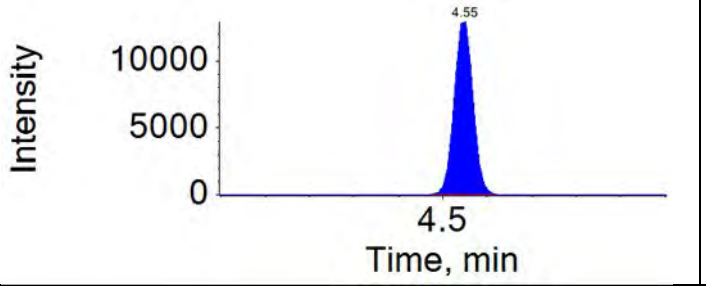


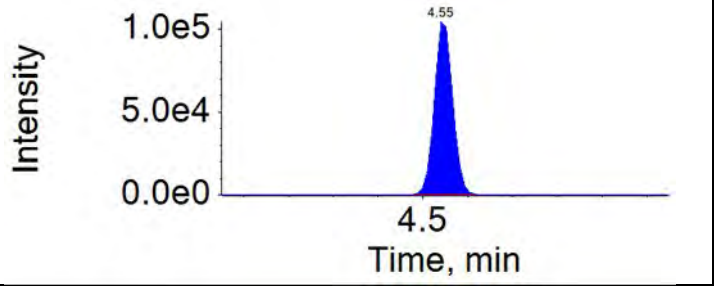
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

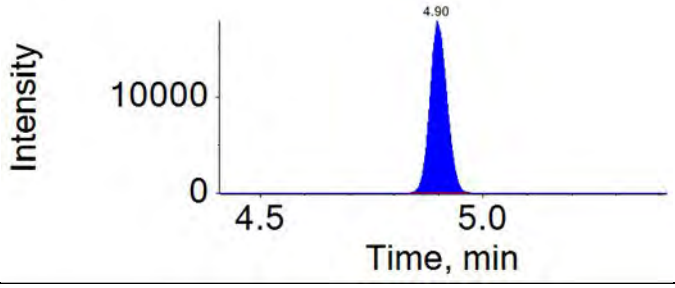
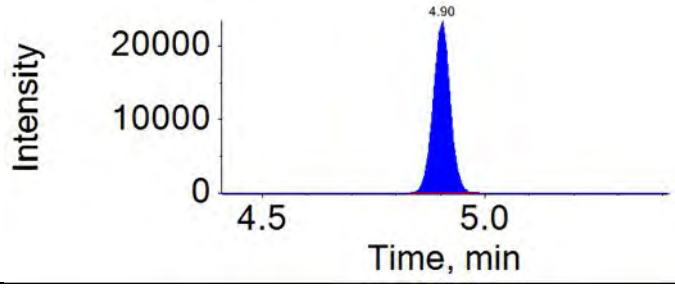


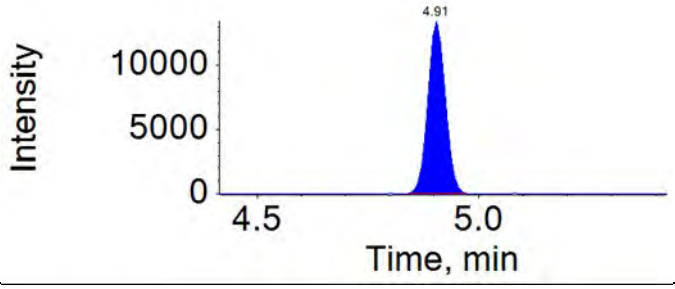
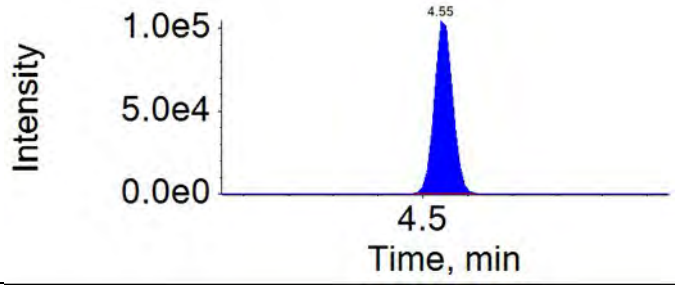


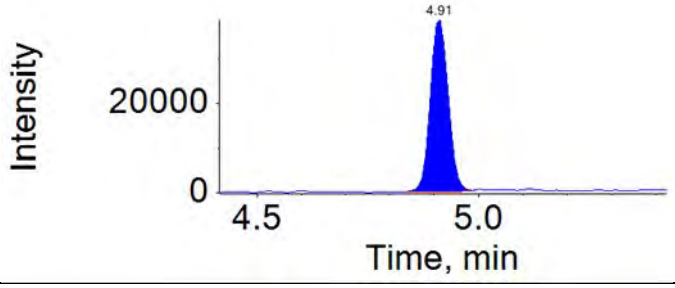
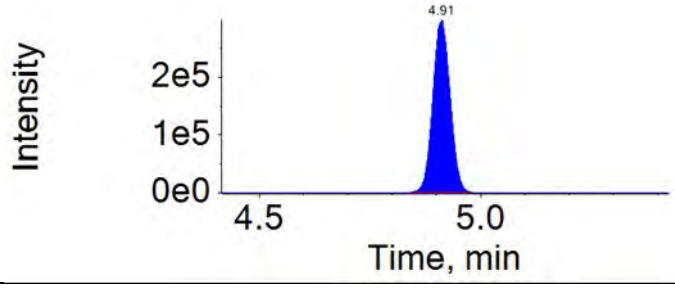
APPROVED
By MCD at 9:12 pm, 11/30/18

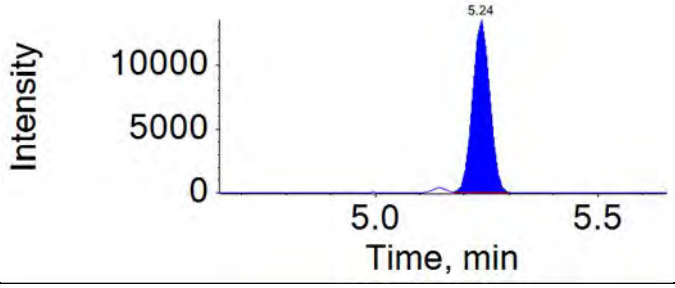
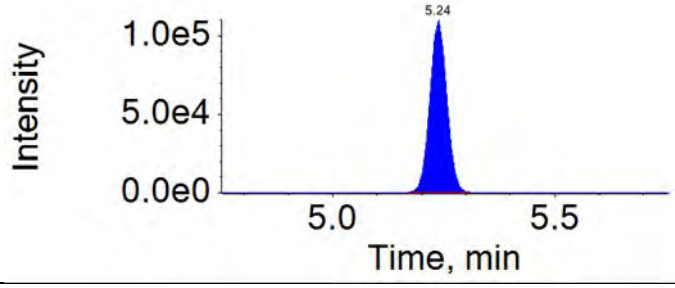
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

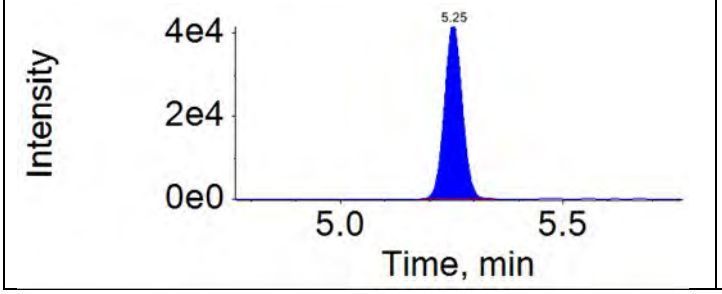
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

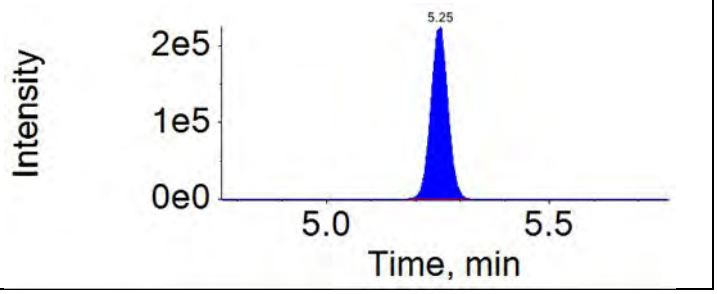
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

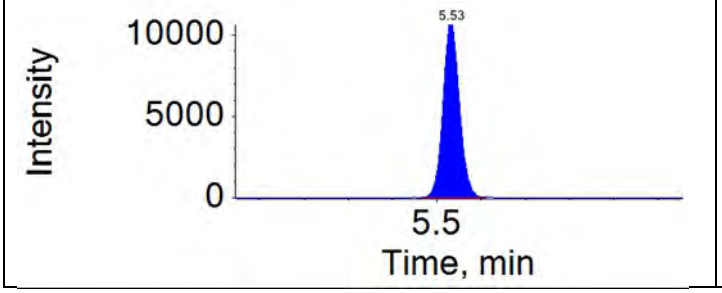
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

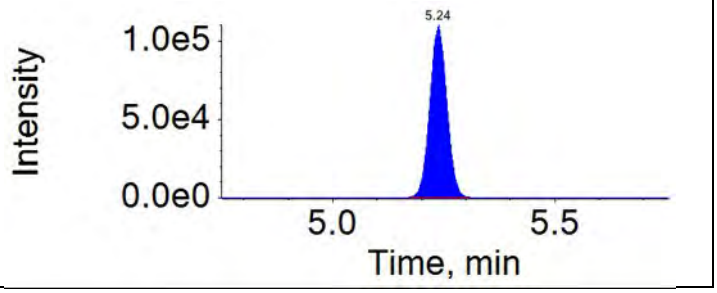
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



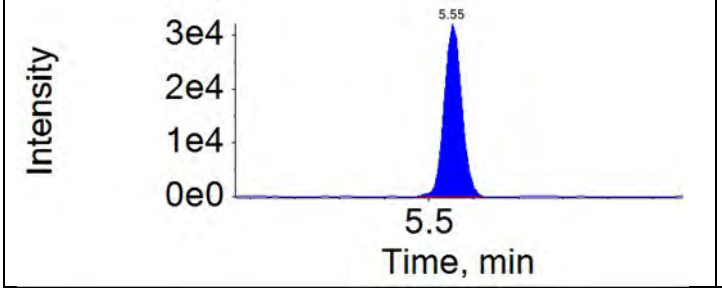


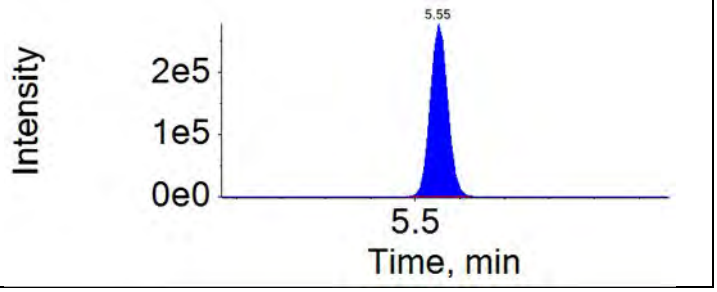
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



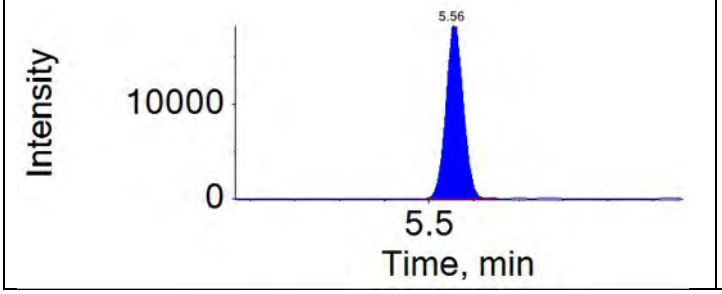


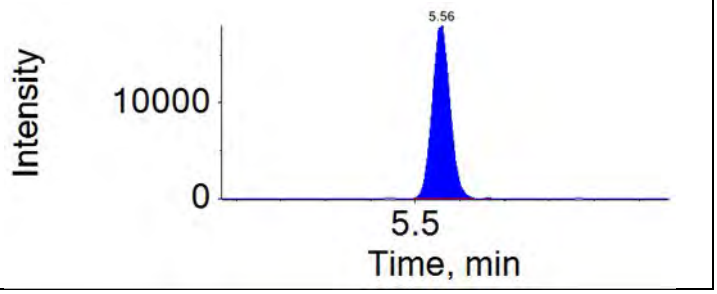
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



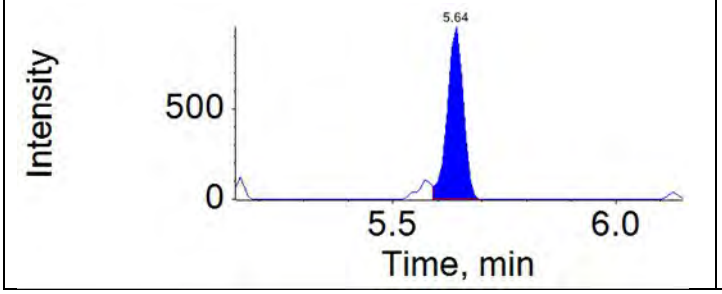


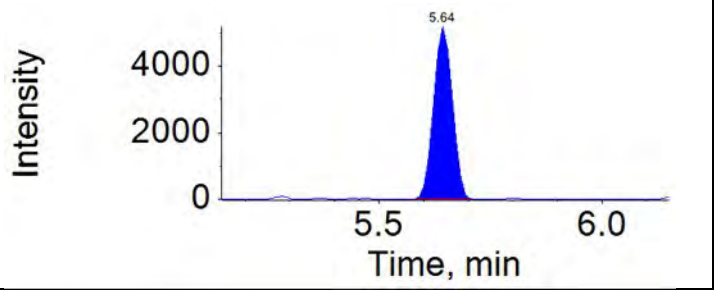
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

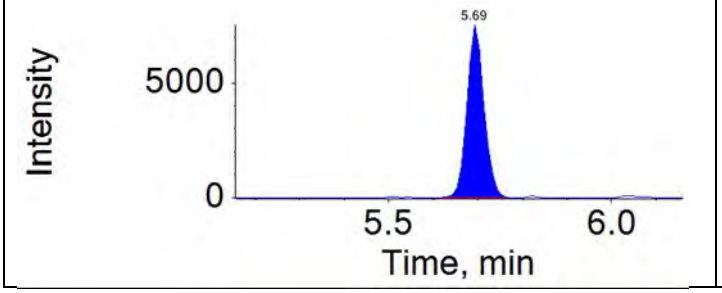
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

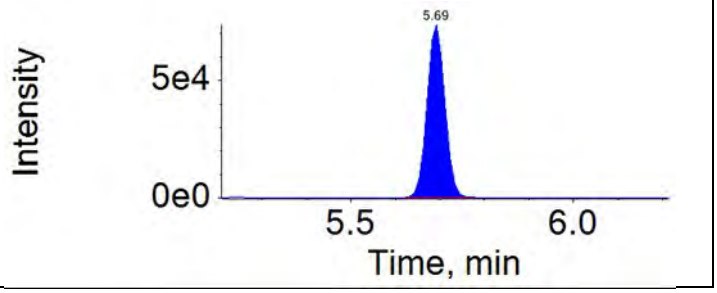
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



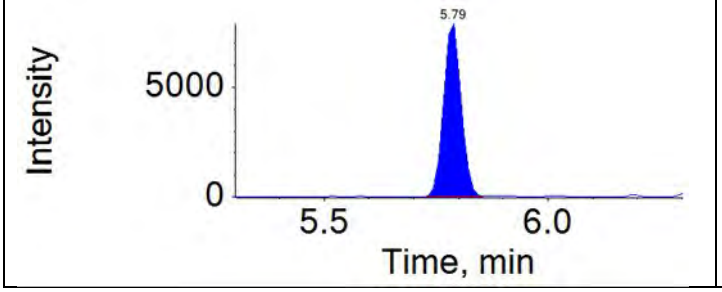


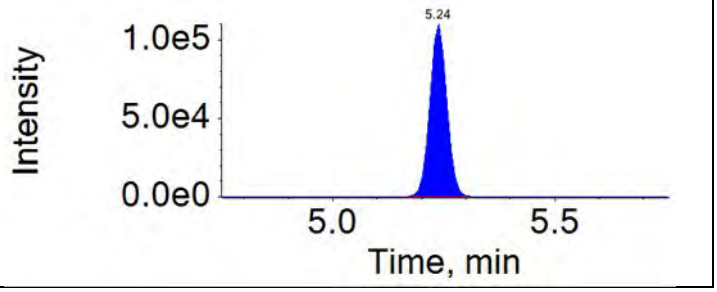
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



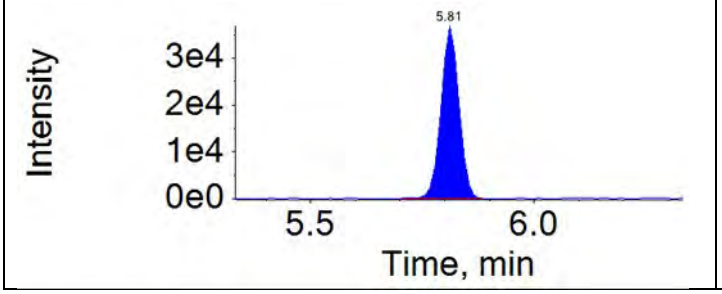


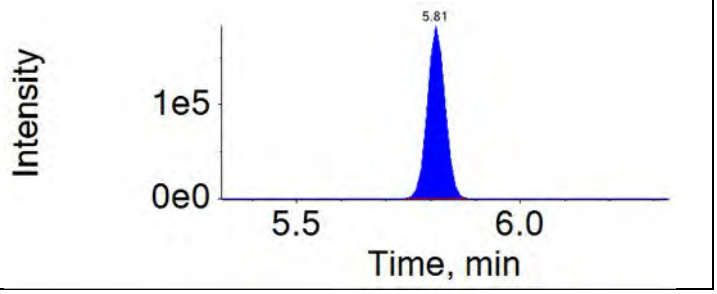
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

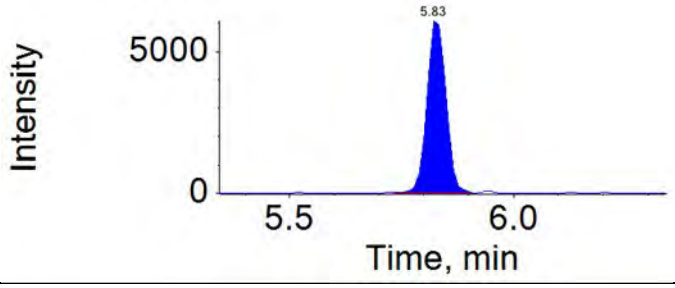
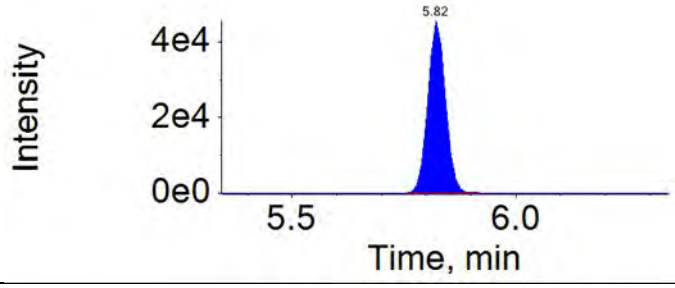


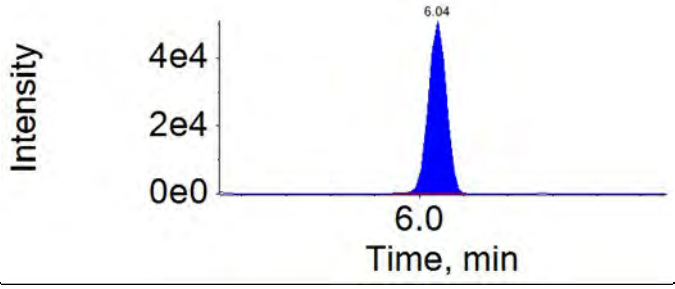
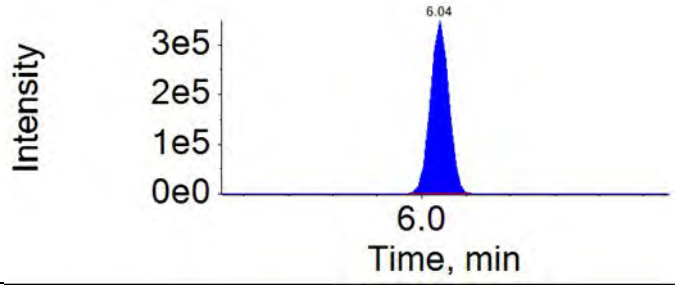


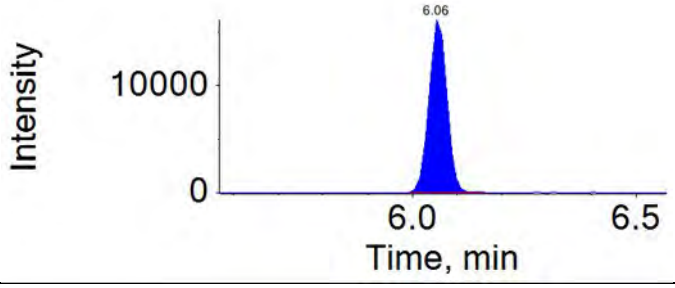
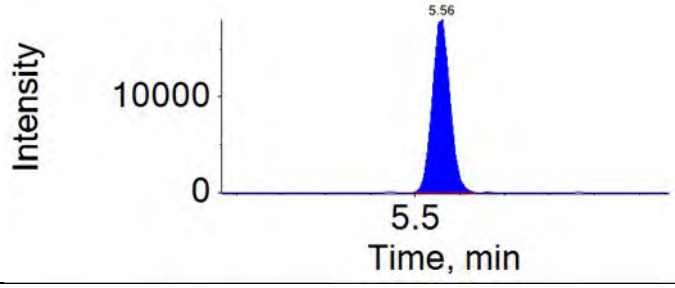
APPROVED
By MCD at 9:12 pm, 11/30/18

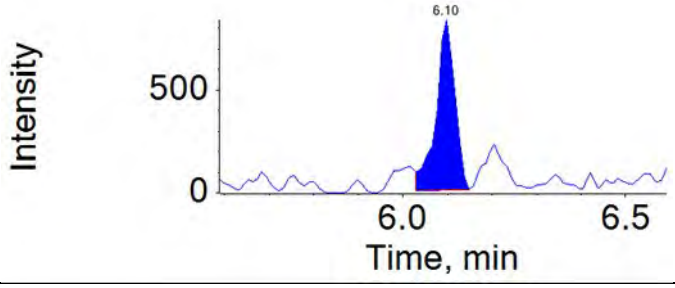
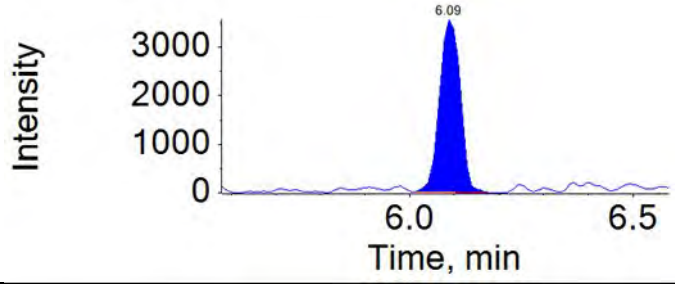
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

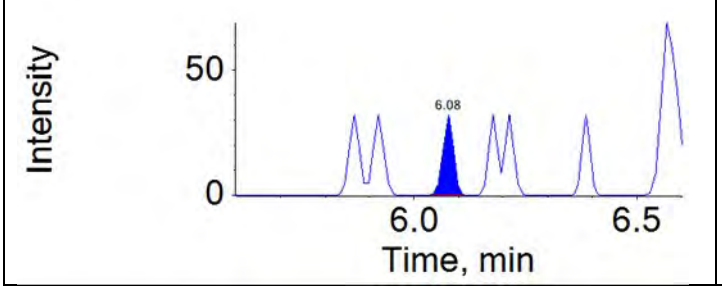
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

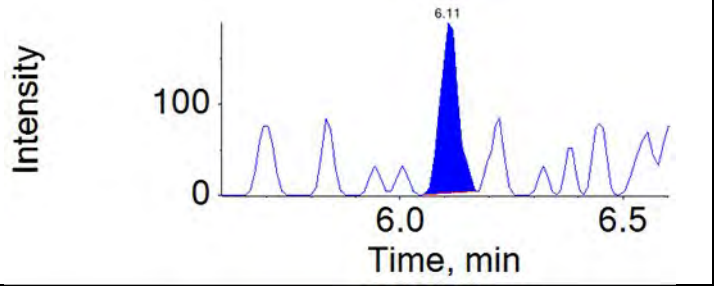
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

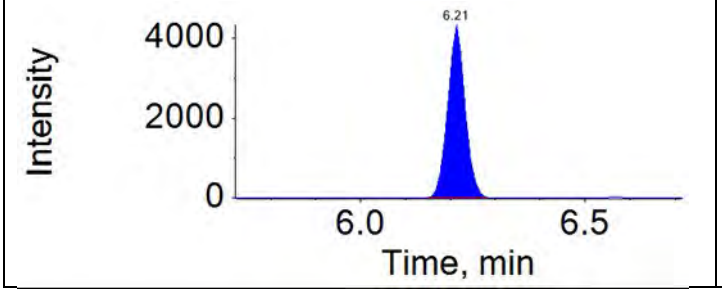
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

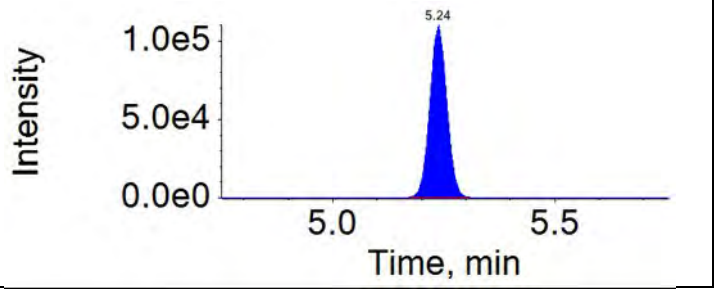
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



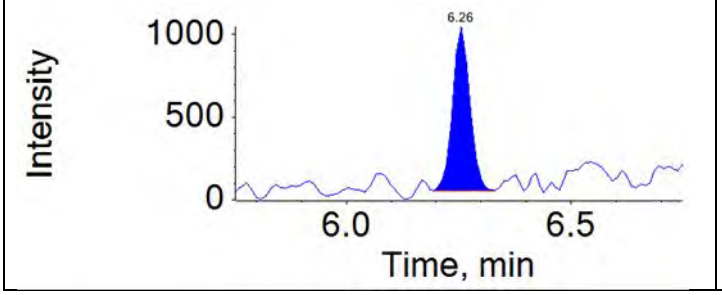


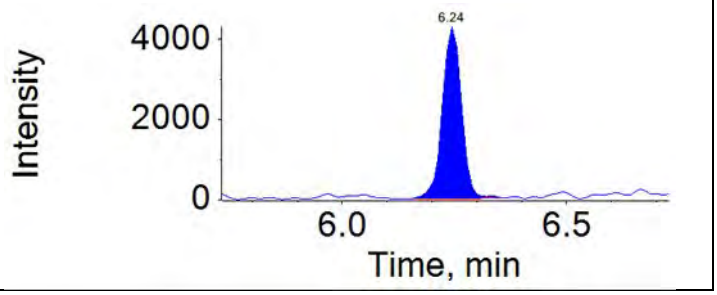
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



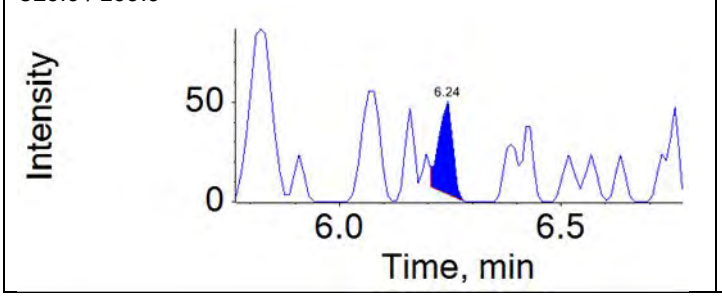


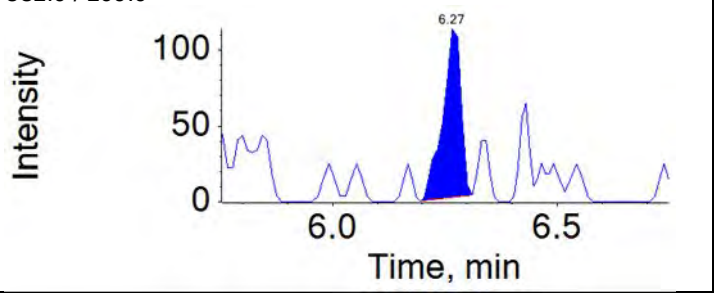
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

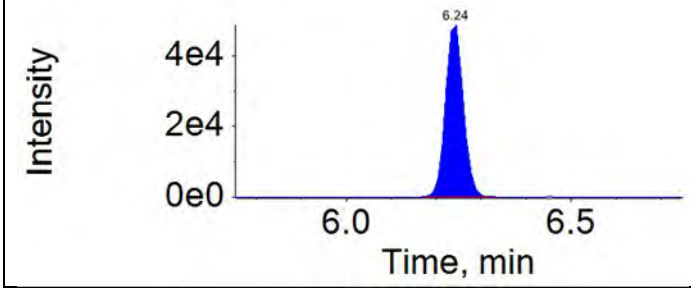
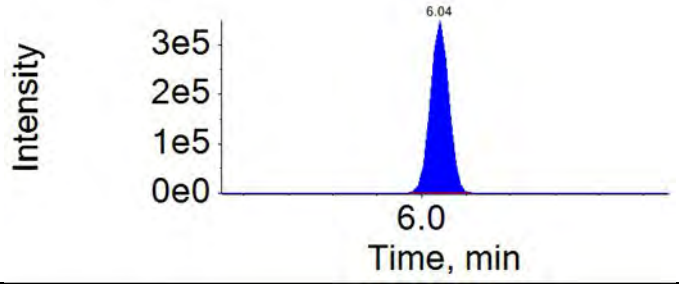


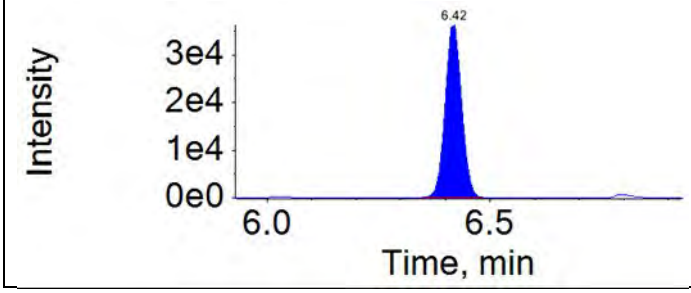
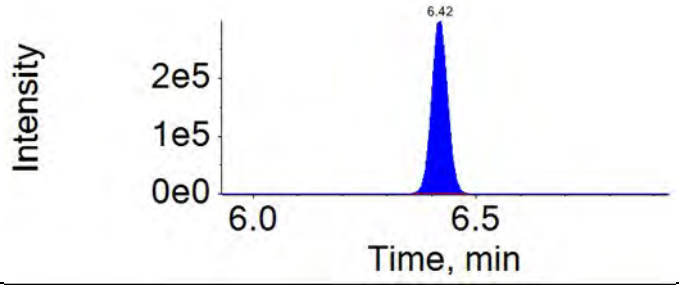


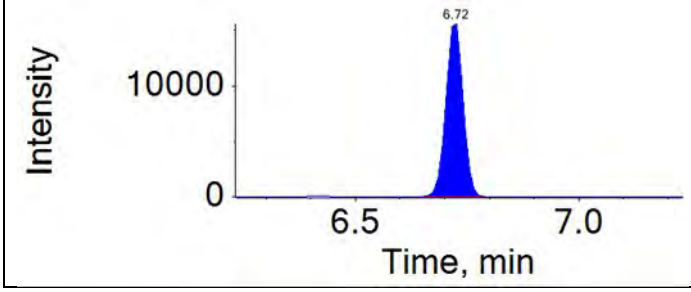
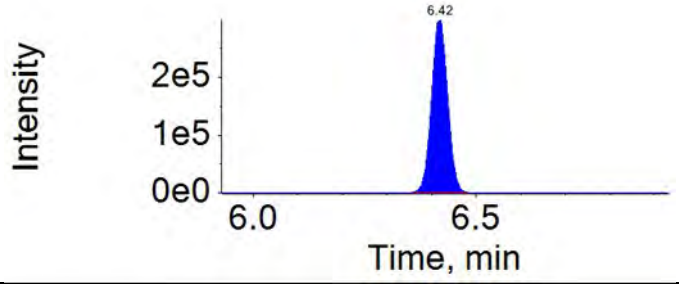
APPROVED
By MCD at 9:12 pm, 11/30/18

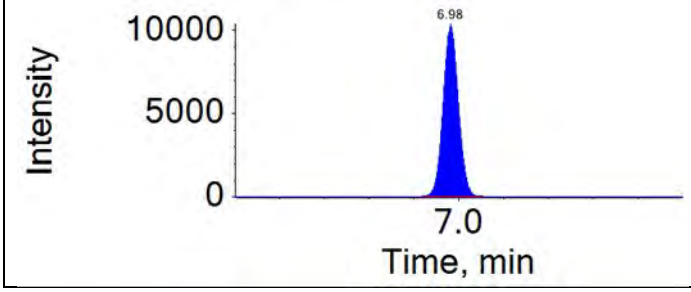
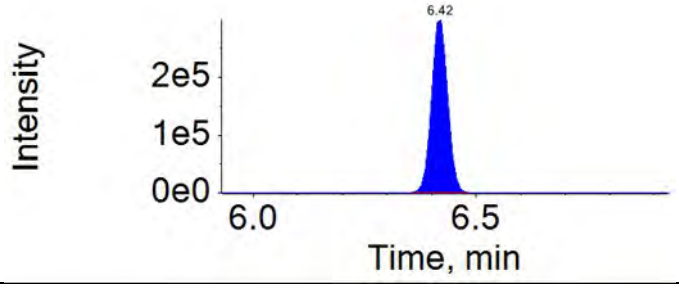
REVIEWED
By HMK at 1:39 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

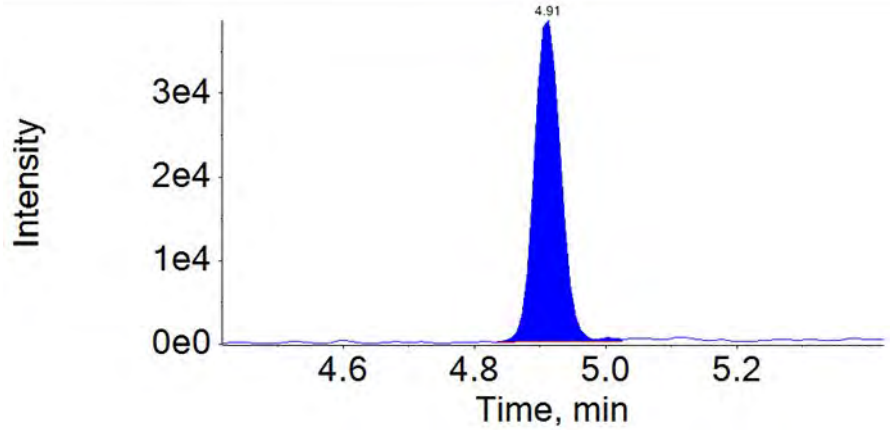
Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

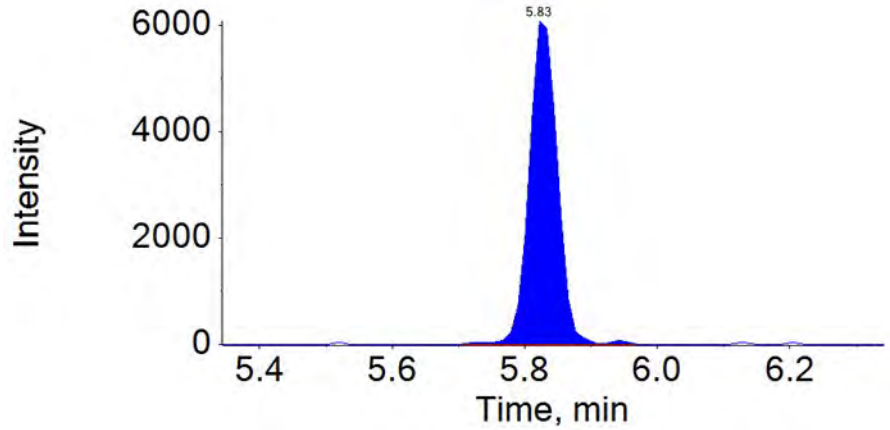
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

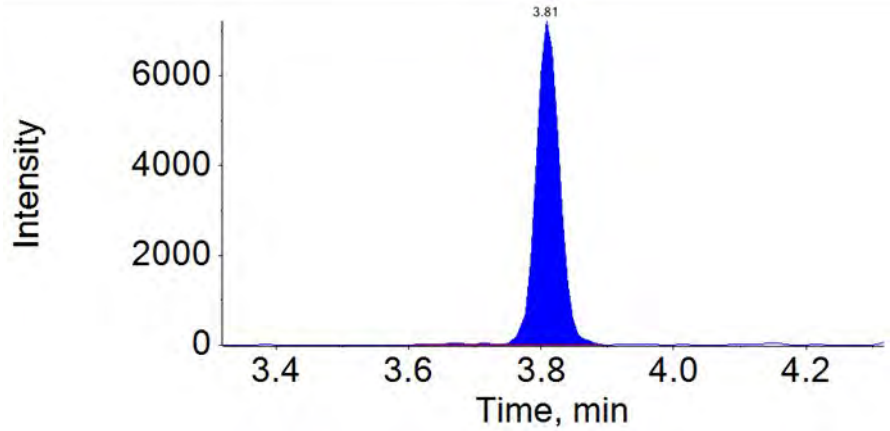
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Results Table Name: 18331014
Results Table Date: 11/30/2018 9:03:58 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFOA **RT (min.):** 4.91 **Peak Area:** 108239.6 **Mass Range:** 413.0 / 369.0 **File Name:** 18NOV29D-44.wiff **Sample Name:** LCS331014	 **Integration Comment:** incorrect integration

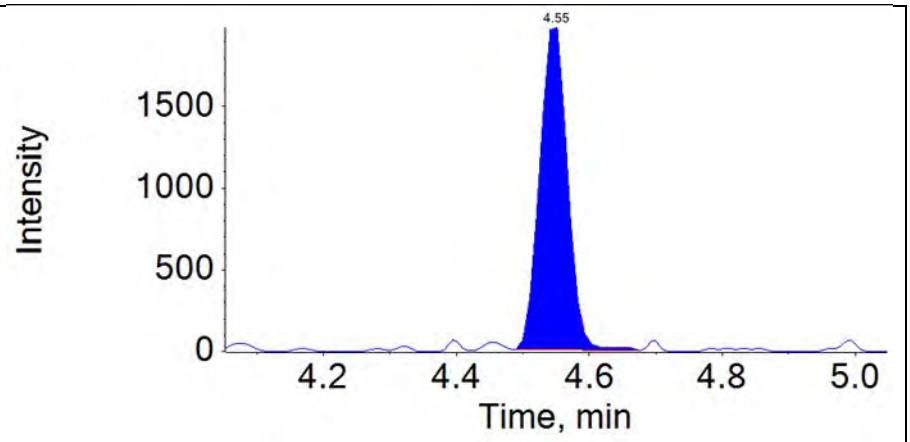
Component Name: NEtFOSAA **RT (min.):** 5.83 **Peak Area:** 18198.1 **Mass Range:** 584.0 / 419.0 **File Name:** 18NOV29D-44.wiff **Sample Name:** LCS331014	 **Integration Comment:** incorrect integration

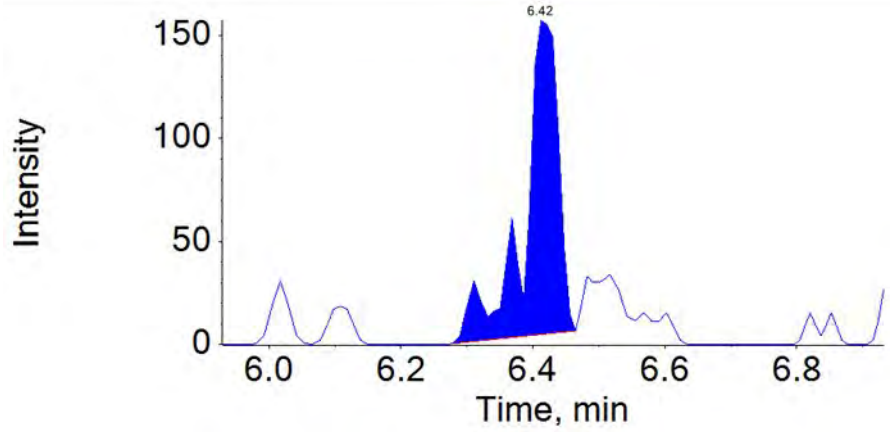
Component Name: PFBS_2 **RT (min.):** 3.81 **Peak Area:** 17863.3 **Mass Range:** 299.0 / 99.0 **File Name:** 18NOV29D-44.wiff **Sample Name:** LCS331014	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Results Table Name: 18331014
Results Table Date: 11/30/2018 9:03:58 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name: PFHpA_2 **RT (min.):** 4.55 **Peak Area:** 5787.8 **Mass Range:** 363.0 / 169.0 **File Name:** 18NOV29D-44.wiff **Sample Name:** LCS331014	 **Integration Comment:** incorrect integration

Component Name: PFTeDA_2 **RT (min.):** 6.42 **Peak Area:** 555.9 **Mass Range:** 713.0 / 169.0 **File Name:** 18NOV29D-44.wiff **Sample Name:** LCS331014	 **Integration Comment:** incorrect integration

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Results Table Name: 18331014
Results Table Date: 11/30/2018 9:03:58 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Ion Ratio Report

Sample Name: LCS331014 **Instrument Name:** LM27631 **File Name:** 18NOV29D-44.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	47193.4	A	N/A	0.3752			
PFBS_2	3.81	1.00	17708.7	M	N/A	0.3752	3	50	
4:2-FTS	4.12	1.00	43232.8	A	N/A	0.7011			
4:2-FTS_2	4.12	1.00	30309.8	A	N/A	0.7011	10	50	
PFHxA	4.16	1.00	110092.7	A	N/A	0.0088			
PFHxA_2	4.16	1.00	966.0	A	N/A	0.0088	-15	50	
PFPeS	4.18	1.10	26111.8	A	N/A	0.5118			
PFPeS_2	4.17	1.10	13363.5	A	N/A	0.5118	3	50	
PFHpA	4.54	1.00	109840.5	A	N/A	0.0523			
PFHpA_2	4.55	1.00	5748.2	M	N/A	0.0523	-6	50	
PFHxS	4.55	1.00	38238.8	A	N/A	0.3540			
PFHxS_2	4.55	1.00	13537.2	A	N/A	0.3540	-4	50	
6:2-FTS	4.90	1.00	47356.4	A	N/A	0.5890			
6:2-FTS_2	4.90	1.00	27890.8	A	N/A	0.5890	-11	50	
PFHpS	4.91	1.08	36650.1	A	N/A	0.3994			
PFHpS_2	4.90	1.08	14637.9	A	N/A	0.3994	2	50	
PFOA	4.91	1.00	107511.3	M	N/A	0.0630			
PFOA_2	4.91	1.00	6769.7	A	N/A	0.0630	10	50	
PFOS	5.24	1.00	36242.3	A	N/A	0.3514			
PFOS_2	5.24	1.00	12736.0	A	N/A	0.3514	19	50	
PFNA	5.25	1.00	116993.5	A	N/A	0.0128			
PFNA_2	5.26	1.00	1500.0	A	N/A	0.0128	-36	50	
PFNS	5.53	1.06	27791.7	A	N/A	0.4459			
PFNS_2	5.53	1.06	12392.5	A	N/A	0.4459	-7	50	
PFDA	5.55	1.00	87236.0	A	N/A	0.0090			
PFDA_2	5.55	1.00	784.9	A	N/A	0.0090	20	50	
8:2-FTS	5.56	1.00	49828.7	A	N/A	0.5492			
8:2-FTS_2	5.56	1.00	27368.1	A	N/A	0.5492	2	50	
NMeFOSAA	5.69	1.00	19918.5	A	N/A	0.2175			
NMeFOSAA_2	5.70	1.00	4331.9	A	N/A	0.2175	-6	50	
PFDS	5.79	1.10	21352.4	A	N/A	0.5180			
PFDS_2	5.78	1.10	11060.9	A	N/A	0.5180	-3	50	
PFUnDA	5.81	1.00	102263.4	A	N/A	0.0032			
PFUnDA_2	5.83	1.00	325.4	A	N/A	0.0032	-16	50	
NEtFOSAA	5.83	1.00	18008.4	M	N/A	0.6252			
NEtFOSAA_2	5.83	1.00	11258.7	A	N/A	0.6252	-15	50	
PFDoDA	6.04	1.00	142363.3	A	N/A	0.0110			
PFDoDA_2	6.04	1.00	1560.2	A	N/A	0.0110	-16	50	
10:2-FTS	6.06	1.09	45198.4	A	N/A	0.7155			
10:2-FTS_2	6.06	1.09	32338.8	A	N/A	0.7155	2	50	
PFTrDA	6.24	1.03	134783.7	A	N/A	0.0098			
PFTrDA_2	6.24	1.03	1321.4	A	N/A	0.0098	9	50	
PFTeDA	6.42	1.00	92920.8	A	N/A	0.0055			
PFTeDA_2	6.42	1.00	509.2	M	N/A	0.0055	-2	50	
PFHxDA	6.72	1.05	42113.2	A	N/A	0.0728			
PFHxDA_2	6.72	1.05	3065.9	A	N/A	0.0728	13	50	
PFODA	6.98	1.09	24359.9	A	N/A	0.0295			
PFODA_2	6.98	1.09	718.5	A	N/A	0.0295	12	50	

APPROVED
By MCD at 9:12 pm, 11/30/18

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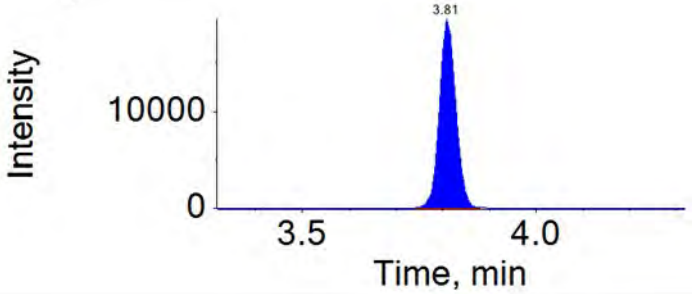
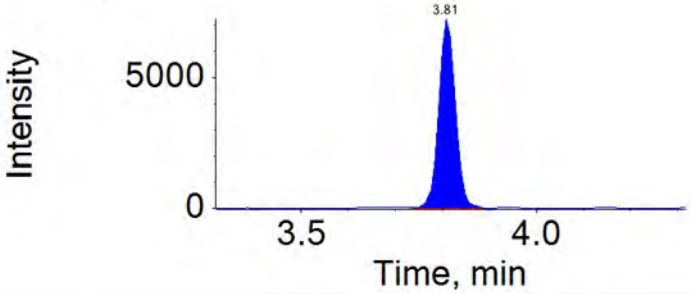
By HMK at 1:39 pm, 12/6/18

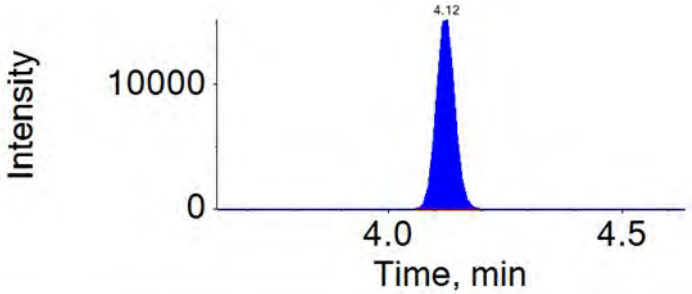
Component: PFBS
Primary Mass: 299.0 / 80.0



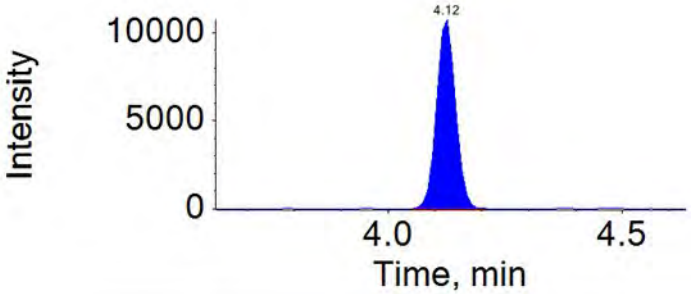
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



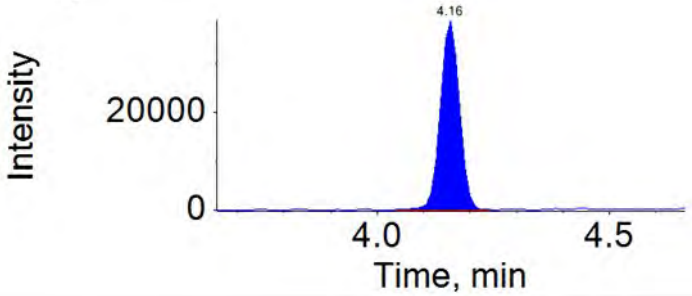
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



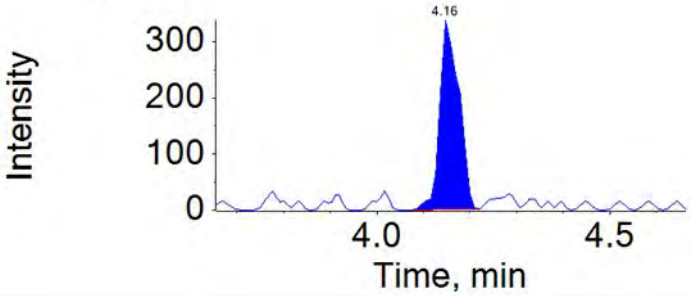
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



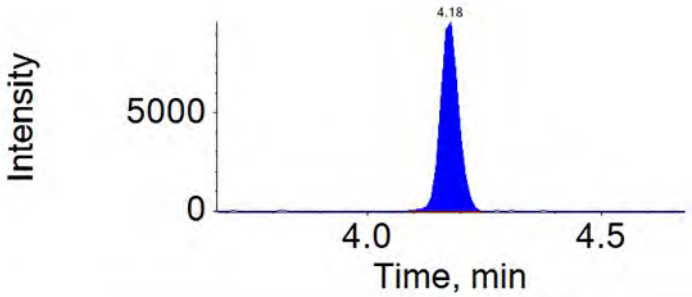
Component: PFHxA
Primary Mass: 313.0 / 269.0



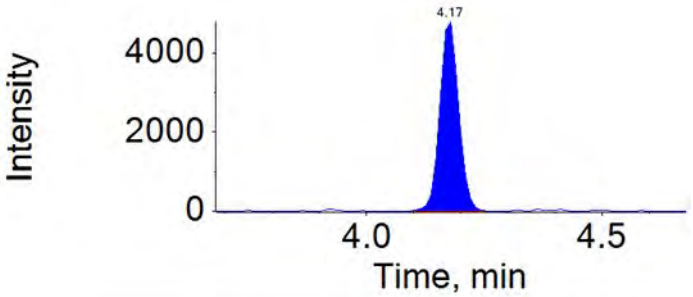
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



APPROVED
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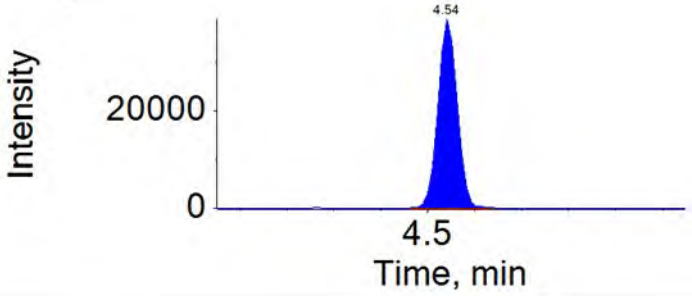
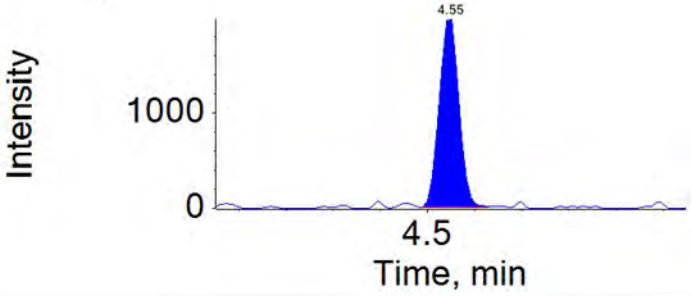
By HMK at 1:39 pm, 12/6/18

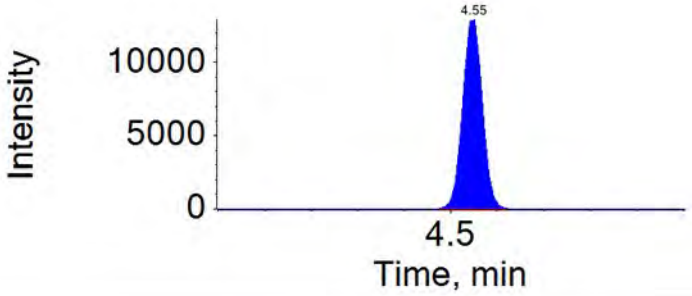
Component: PFHpA
Primary Mass: 363.0 / 319.0



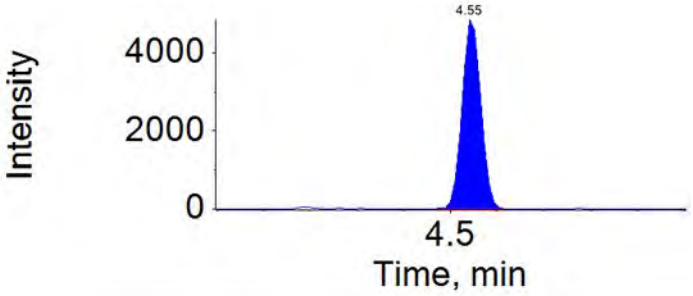
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



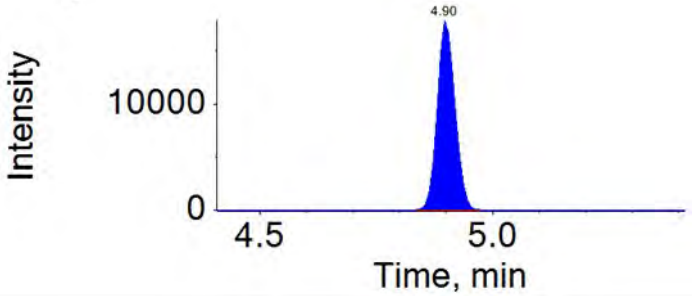
Component: PFHxS
Primary Mass: 399.0 / 80.0



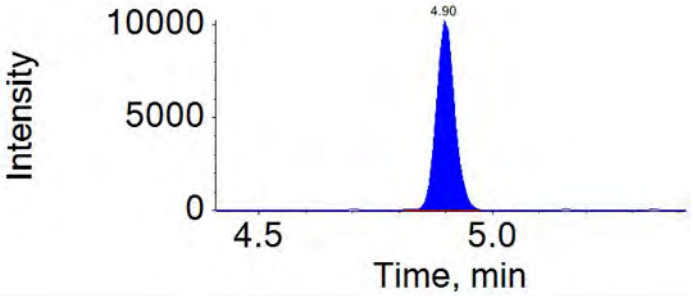
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



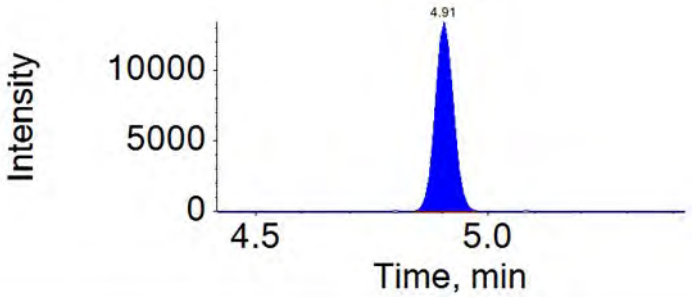
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



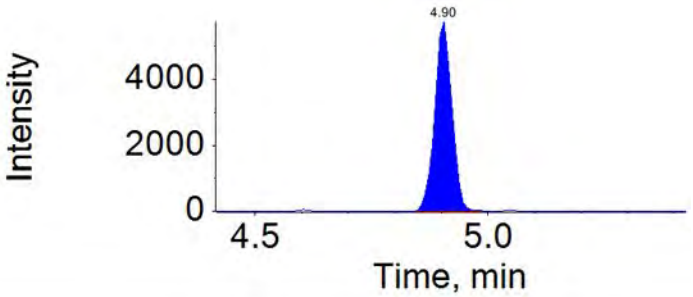
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



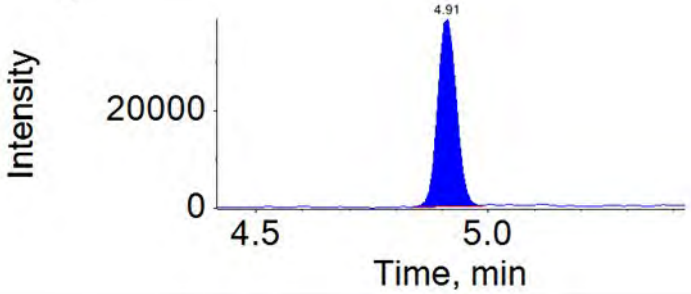
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



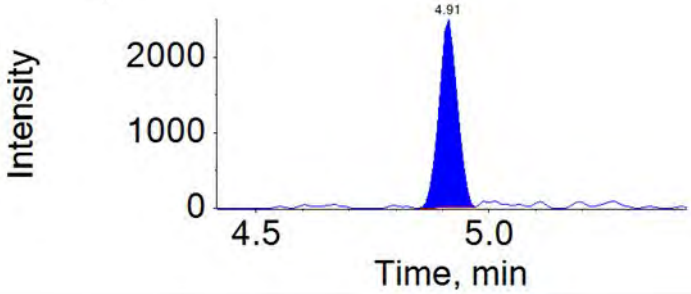
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

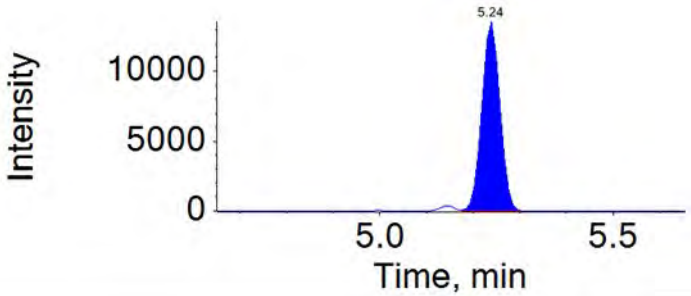
Component: PFOA
Primary Mass: 413.0 / 369.0



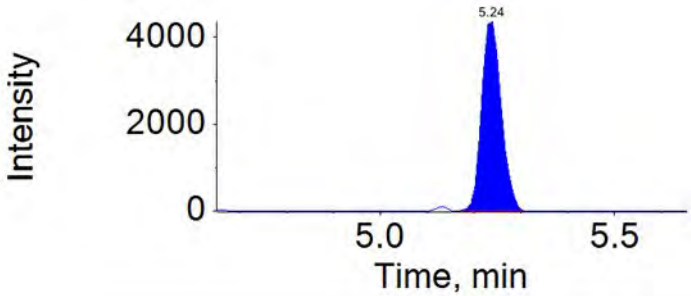
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



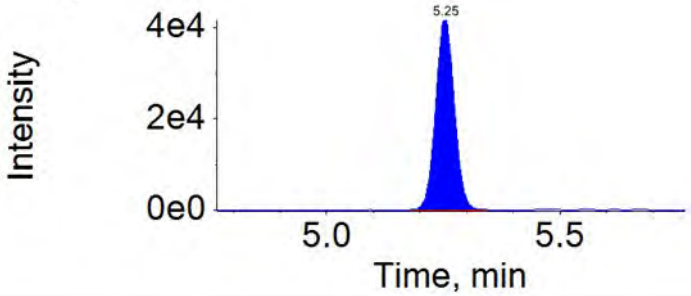
Component: PFOS
Primary Mass: 499.0 / 80.0



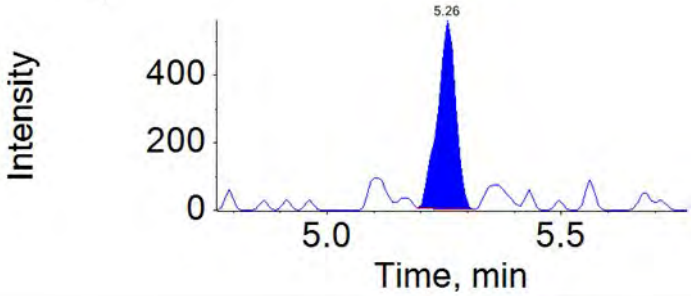
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



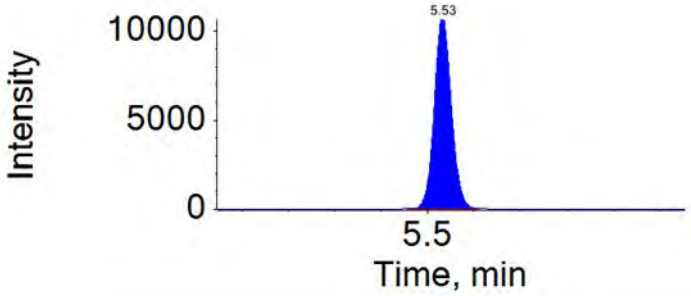
Component: PFNA
Primary Mass: 463.0 / 419.0



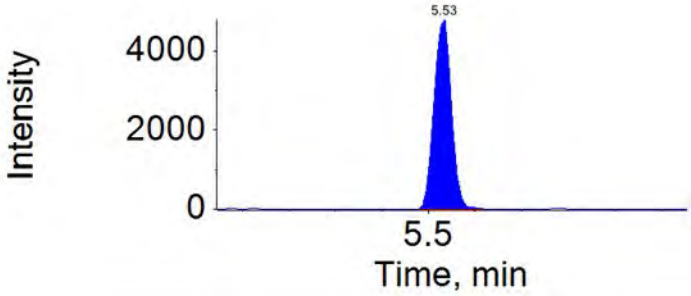
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



Component: PFNS_2
Secondary Mass: 549.0 / 99.0



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By MCD at 9:12 pm, 11/30/18

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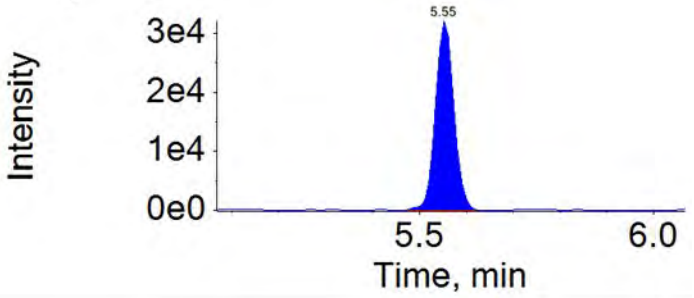
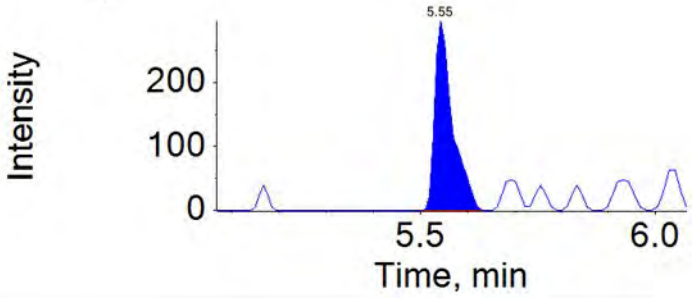
By HMK at 1:39 pm, 12/6/18

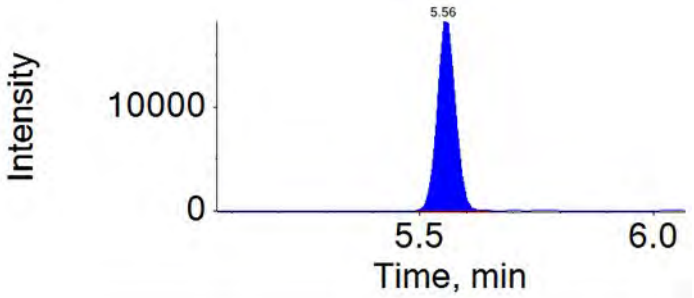
Component: PFDA
Primary Mass: 513.0 / 469.0



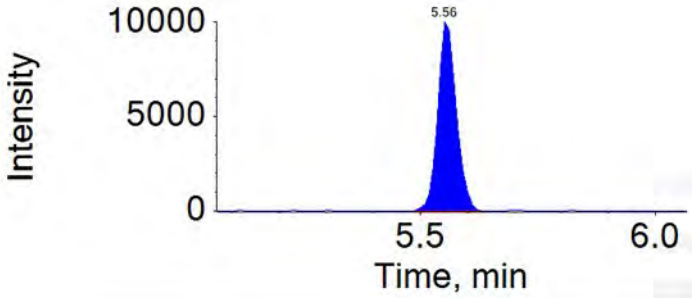
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



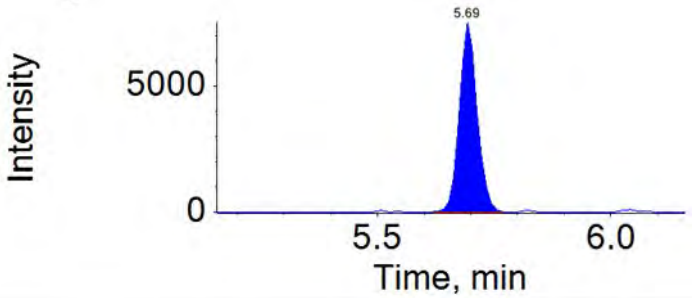
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



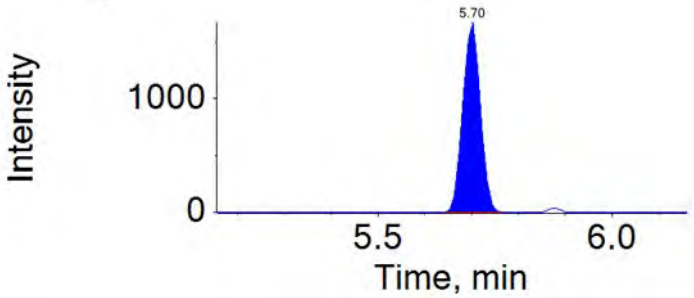
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



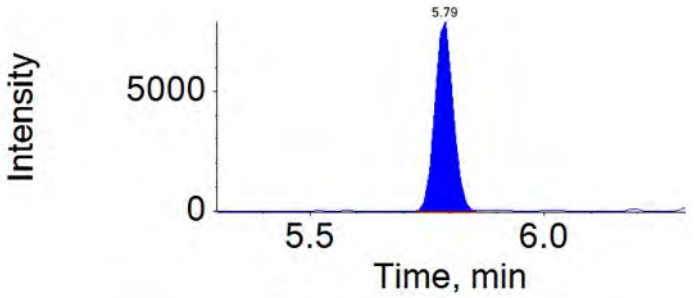
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



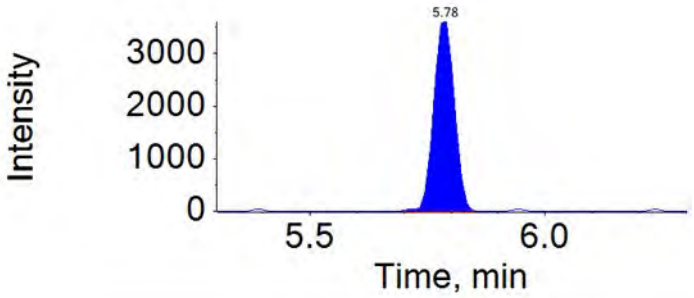
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



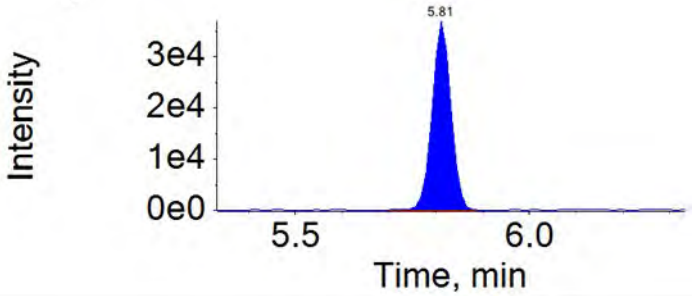
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



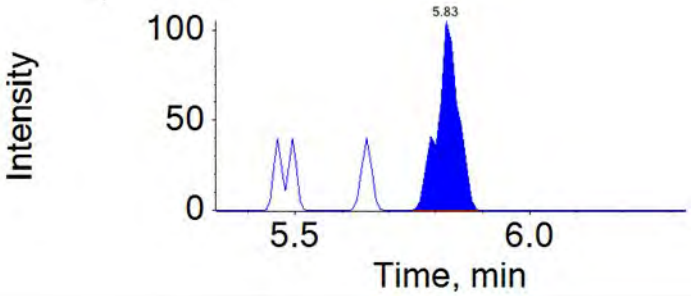
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

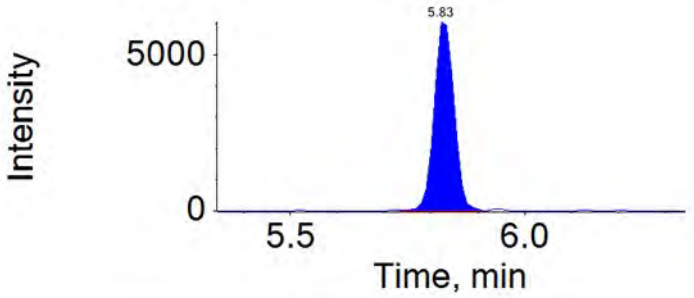
Component: PFUnDA
Primary Mass: 563.0 / 519.0



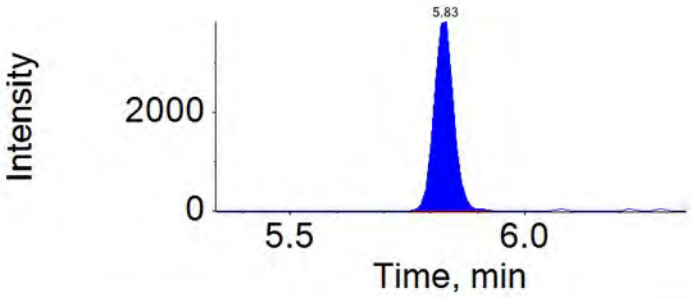
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



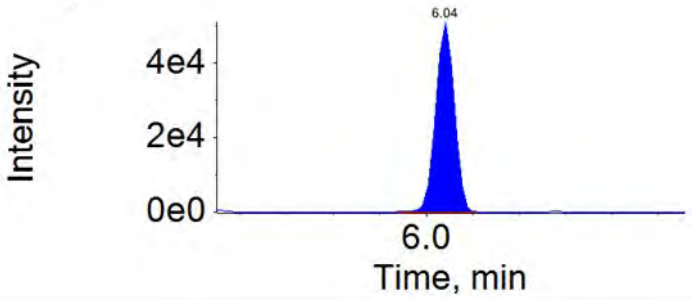
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



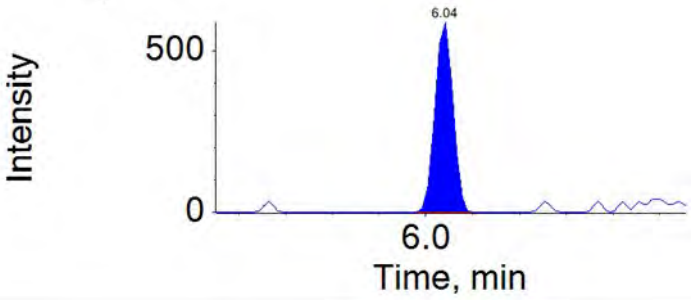
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



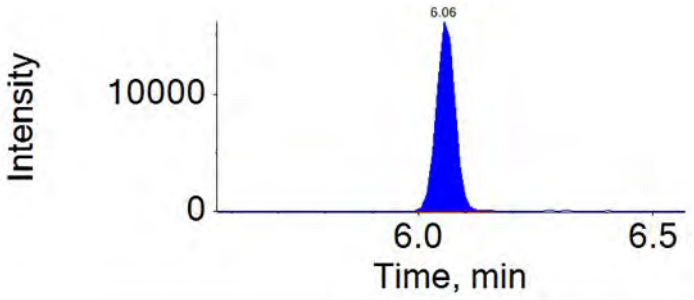
Component: PFDoDA
Primary Mass: 613.0 / 569.0



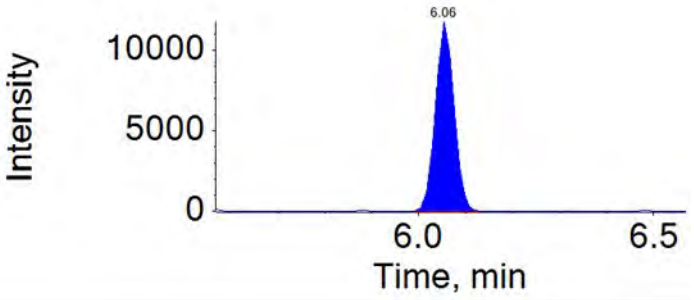
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



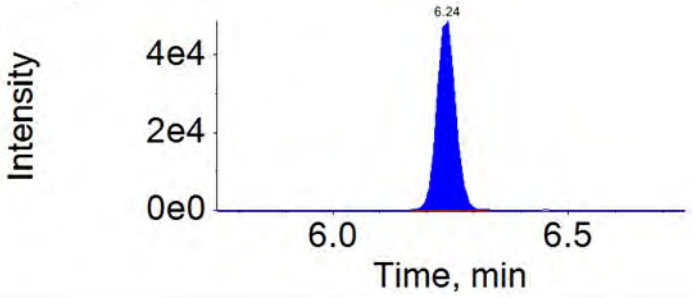
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



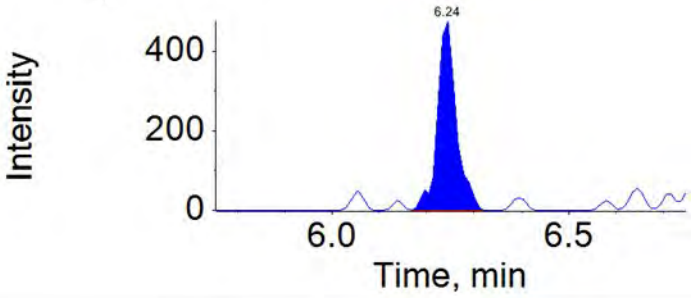
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

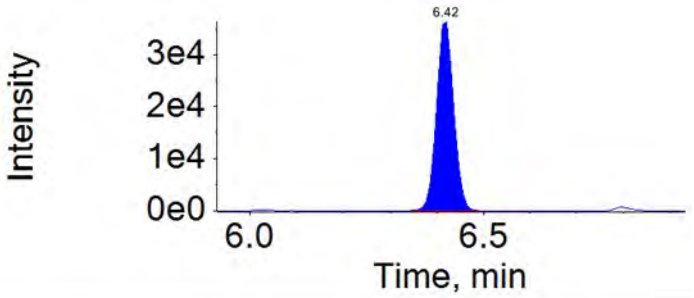
Component: PFTrDA
Primary Mass: 663.0 / 619.0



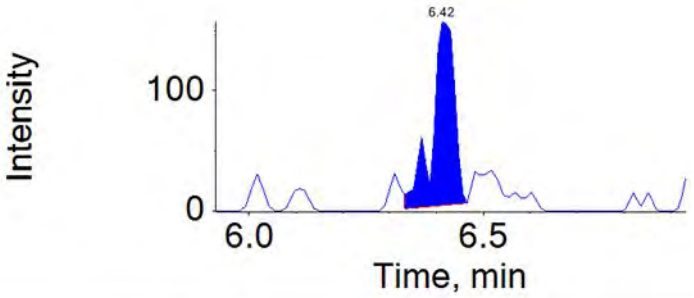
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



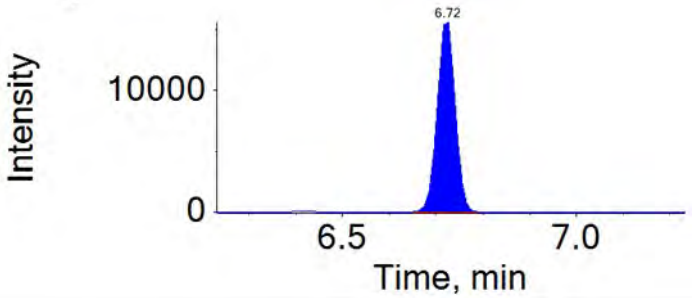
Component: PFTeDA
Primary Mass: 713.0 / 669.0



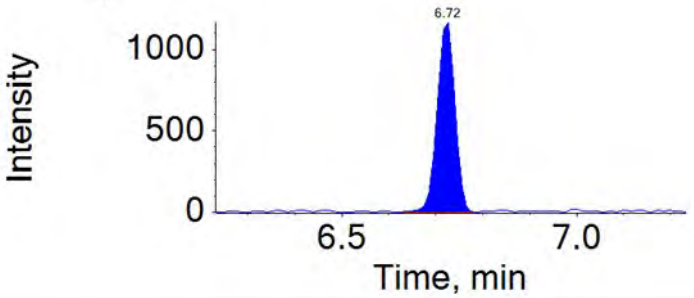
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



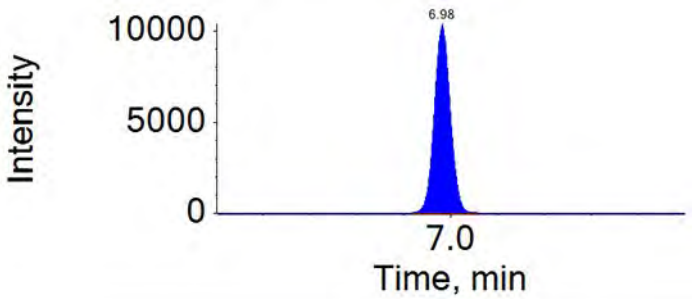
Component: PFHxDA
Primary Mass: 813.0 / 769.0



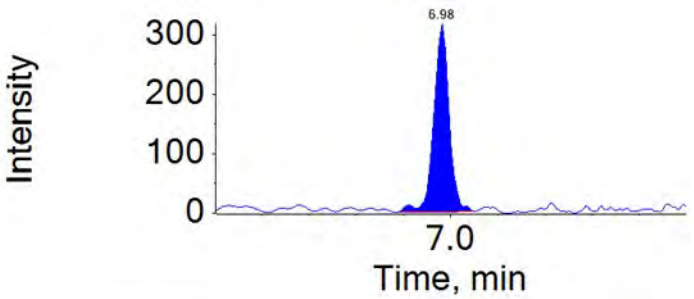
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



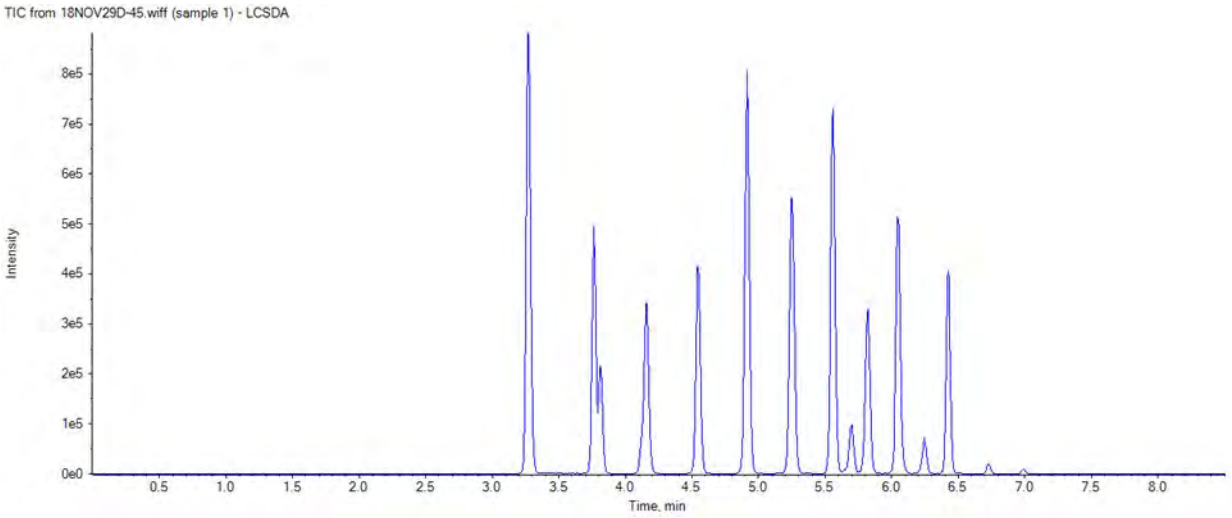
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Lab Control Sample Recovery

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18331014 11/30/2018 9:00:55 PM
Acquisition Method: 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCSDA	EPA 537 mod QSM 5.1 table B-15 18331014	18NOV29D-45.wiff	2018-11-29T16:34:15



Injection Standard Area Reference File**:** 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Reference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.00	1065182.2	906425.4	18	50	
13C2-PFOA	5.00	575370.6	495984.0	16	50	
13C4-PFOS	4.78	363729.1	296261.8	23	50	
13C2-PFDA	5.00	599889.5	451203.0	33	50	

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Lab Control Sample Recovery

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:00:55 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM27631	LCSDA	EPA 537 mod QSM 5.1 table B-15 18331014	18NOV29D-45.wiff	2018-11-29T16:34:15

Analyte Name	Analyte Area	Ext Std Area	Area Ratio	Adj Actual Conc	Sample Result	%REC	% REC Limit	%REC OOS
PFBA	110591.6	862029.5	0.128	1.360	1.407	103	70-130	
PFPeA	108013.0	870347.8	0.124	1.360	1.218	90	70-130	
PFBS	49781.2	386493.5	0.129	1.204	1.250	104	70-130	
4:2-FTS	48924.6	71414.3	0.685	3.736	3.668	98	70-130	
PFHxA	106900.4	616512.3	0.173	1.360	1.392	102	70-130	
PFPeS	27066.4	386493.5	0.070	1.276	1.417	111	70-130	
PFHpA	112858.7	506827.7	0.223	1.360	1.374	101	70-130	
PFHxS	37570.2	311893.7	0.120	1.286	1.128	88	70-130	
6:2-FTS	45504.0	66356.4	0.686	3.792	3.579	94	70-130	
PFHpS	38669.9	311893.7	0.124	1.294	1.238	96	70-130	
PFOA	123547.5	942248.8	0.131	1.360	1.355	100	70-130	
PFOS	38351.7	304507.5	0.126	1.300	1.057	81	70-130	
PFNA	108408.8	619242.4	0.175	1.360	1.342	99	70-130	
PFNS	29144.6	304507.5	0.096	1.306	1.209	93	70-130	
PFDA	99969.2	855310.9	0.117	1.360	1.323	97	70-130	
8:2-FTS	48549.9	54093.1	0.898	3.832	3.385	88	70-130	
PFOSA	1673.4	14608.9	0.115	1.360	1.161	85	70-130	
NMeFOSAA	20878.6	213753.3	0.098	1.360	1.246	92	70-130	
PFDS	22696.3	304507.5	0.075	1.310	1.182	90	70-130	
PFUnDA	112294.4	525505.4	0.214	1.360	1.528	112	70-130	
NEtFOSAA	18947.9	129862.5	0.146	1.360	1.421	105	70-130	
PFDoDA	132188.5	1021598.7	0.129	1.360	1.418	104	70-130	
10:2-FTS	45626.4	54093.1	0.843	3.856	3.720	96	70-130	
NMePFOSAE	1514.2	11319.0	0.134	1.360	1.126	83	70-130	
NMePFOSA	53.4	458.0	0.116	1.360	1.235	91	70-130	
PFDoS	12498.4	304507.5	0.041	1.316	1.179	90	70-130	
NEtPFOSAE	1381.0	10145.3	0.136	1.360	0.979	72	70-130	
NEtPFOSA	38.8	149.2	0.260	1.360	2.333	172	70-130	OOS
PFTrDA	136358.7	1021598.7	0.133	1.360	1.609	118	70-130	
PFTeDA	93619.8	766342.1	0.122	1.360	1.384	102	70-130	
PFHxDA	40806.0	766342.1	0.053	1.360	1.217	90	70-130	
PFODA	20412.9	766342.1	0.027	1.360	0.710	52	70-130	OOS

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:39 pm, 12/6/18

Lab Control Sample Recovery

ICAL Name: 18NOV28DCAL
QMethod Name: 18AUG20QM
Result Table: 18331014 11/30/2018 9:00:55 PM
Acquisition Method: 18AUG13_3uL.dam

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Sample Name:	LCSDA			**Data File:**		18NOV29D-45.wiff
Sample ID:	EPA 537 mod QSM 5.1 table B-15 18331014			**Acquis Date:**		2018-11-29T16:34:15
Sample Type:	Quality Control			**Instrument:**		LM27631
Vial Position:	26			**Acquis Method:**		18AUG13_3uL.dam
Injection Vol:	3.00			**Result Table:**		18331014
QMethod File:	18AUG20QM			**ICAL Name:**		18NOV28DCAL
Batch Number:	18331014			**Operator:**		MCD7824
Sample Wt.:	1.00000			**Dilution Factor:**		1.00
Sample Vol.:	1.000			**Prep Factor:**		2.000

Injection Standard Peak Table

Injection Standard Area Reference File: 18NOV29D-05

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	Rreference Injection Standard Area	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
13C3-PFBA	5.0	1065182.2	906425.4	18	50	
13C2-PFOA	5.0	575370.6	495984.0	16	50	
13C4-PFOS	4.8	363729.1	296261.8	23	50	
13C2-PFDA	5.0	599889.5	451203.0	33	50	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	862029.5	13C3-PFBA	1065182.2	0.809	10.000	7.221	72	50-150	
E13C5-PFPeA	870347.8	13C3-PFBA	1065182.2	0.817	10.000	7.631	76	50-150	
E13C3-PFBS	386493.5	13C3-PFBA	1065182.2	0.363	9.300	6.923	74	50-150	
E13C2-4:2-FTS	71414.3	13C2-PFOA	575370.6	0.124	9.340	8.555	92	50-150	
E13C5-PFHxA	616512.3	13C2-PFOA	575370.6	1.072	10.000	7.871	79	50-150	
E13C3-PFHxS	311893.7	13C2-PFOA	575370.6	0.542	9.460	8.497	90	50-150	
E13C4-PFHpA	506827.7	13C2-PFOA	575370.6	0.881	10.000	8.095	81	50-150	
E13C2-6:2-FTS	66356.4	13C2-PFOA	575370.6	0.115	9.500	9.655	102	50-150	
E13C8-PFOA	942248.8	13C2-PFOA	575370.6	1.638	10.000	9.015	90	50-150	
E13C8-PFOS	304507.5	13C4-PFOS	363729.1	0.837	9.560	7.558	79	50-150	
E13C9-PFNA	619242.4	13C4-PFOS	363729.1	1.702	10.000	7.479	75	50-150	
E13C6-PFDA	855310.9	13C2-PFDA	599889.5	1.426	10.000	8.040	80	50-150	
E13C2-8:2-FTS	54093.1	13C2-PFDA	599889.5	0.090	9.580	7.751	81	50-150	
E13C8-PFOSA	14608.9	13C2-PFDA	599889.5	0.024	10.000	0.179	2	50-150	OOS
Ed3-NMeFOSAA	213753.3	13C2-PFDA	599889.5	0.356	10.000	9.048	90	50-150	
E13C7-PFUnDA	525505.4	13C2-PFDA	599889.5	0.876	10.000	7.405	74	50-150	
Ed5-NEtFOSAA	129862.5	13C2-PFDA	599889.5	0.216	10.000	7.713	77	50-150	
E13C2-PFDoDA	1021598.7	13C2-PFDA	599889.5	1.703	10.000	7.156	72	50-150	
Ed7-NMePFOSAE	11319.0	13C2-PFDA	599889.5	0.019	10.000	0.326	3	50-150	OOS
Ed3-NMePFOSA	458.0	13C2-PFDA	599889.5	0.001	10.000	0.041	0	50-150	OOS
Ed9-NEtPFOSAE	10145.3	13C2-PFDA	599889.5	0.017	10.000	0.343	3	50-150	OOS
Ed5-NEtPFOSA	149.2	13C2-PFDA	599889.5	0.000	10.000	0.017	0	50-150	OOS
E13C2-PFTeDA	766342.1	13C2-PFDA	599889.5	1.277	10.000	7.070	71	50-150	

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

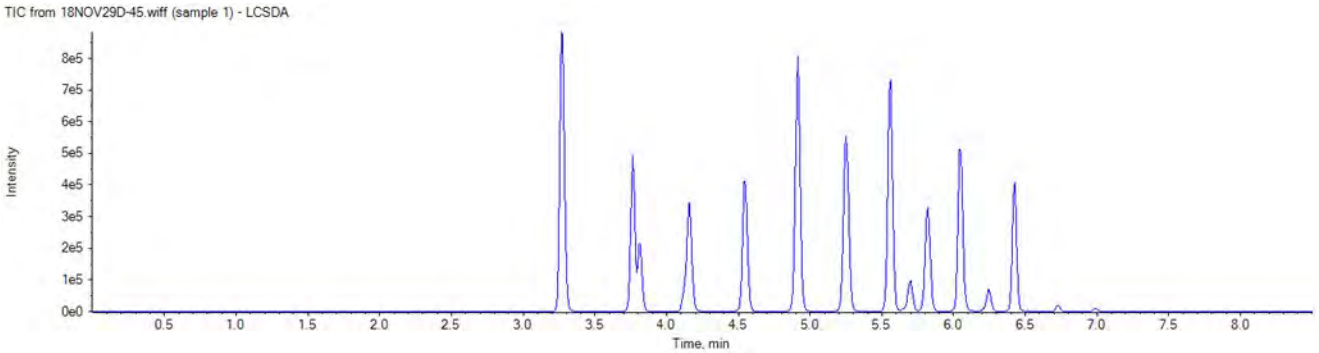
Analyte Quantitation Peak Table

Sample Name: LCSDA **Instrument Name:** LM27631 **File Name:** 18NOV29D-45.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	2.000

Analyte Name	RT	RRT	Analyte Area Response	E	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBA	3.27	1.000	110591.6		A	13C4-PFBA	3.27	862029.5	0.128	1.407
PFPeA	3.77	1.000	108013.0		A	13C5-PFPeA	3.76	870347.8	0.124	1.218
PFBS	3.81	1.000	49781.2		A	13C3-PFBS	3.81	386493.5	0.129	1.250
4:2-FTS	4.13	1.000	48924.6		A	13C2-4:2-FTS	4.13	71414.3	0.685	3.668
PFHxA	4.16	1.000	106900.4		A	13C5-PFHxA	4.16	616512.3	0.173	1.392
PFPeS	4.18	1.100	27066.4		A	13C3-PFBS	3.81	386493.5	0.070	1.417
PFHpA	4.55	1.000	112858.7		A	13C4-PFHpA	4.55	506827.7	0.223	1.374
PFHxS	4.55	1.000	37570.2		A	13C3-PFHxS	4.55	311893.7	0.120	1.128
6:2-FTS	4.90	1.000	45504.0		A	13C2-6:2-FTS	4.90	66356.4	0.686	3.579
PFHpS	4.91	1.080	38669.9		A	13C3-PFHxS	4.55	311893.7	0.124	1.238
PFOA	4.92	1.000	123547.5		A	13C8-PFOA	4.91	942248.8	0.131	1.355
PFOS	5.24	1.000	38351.7		A	13C8-PFOS	5.24	304507.5	0.126	1.057
PFNA	5.26	1.000	108408.8		A	13C9-PFNA	5.26	619242.4	0.175	1.342
PFNS	5.54	1.060	29144.6		A	13C8-PFOS	5.24	304507.5	0.096	1.209
PFDA	5.56	1.000	99969.2		A	13C6-PFDA	5.56	855310.9	0.117	1.323
8:2-FTS	5.56	1.000	48549.9		A	13C2-8:2-FTS	5.56	54093.1	0.898	3.385
PFOSA	5.65	1.000	1673.4		A	13C8-PFOSA	5.65	14608.9	0.115	1.161
NMeFOSAA	5.70	1.000	20878.6		A	d3-NMeFOSAA	5.70	213753.3	0.098	1.246
PFDS	5.79	1.100	22696.3		A	13C8-PFOS	5.24	304507.5	0.075	1.182
PFUnDA	5.82	1.000	112294.4		A	13C7-PFUnDA	5.82	525505.4	0.214	1.528
NEtFOSAA	5.83	1.000	18947.9		A	d5-NEtFOSAA	5.83	129862.5	0.146	1.421
PFDoDA	6.05	1.000	132188.5		A	13C2-PFDoDA	6.05	1021598.7	0.129	1.418
10:2-FTS	6.06	1.090	45626.4		A	13C2-8:2-FTS	5.56	54093.1	0.843	3.720
NMePFOSAE	6.11	1.000	1514.2		A	d7-NMePFOSAE	6.09	11319.0	0.134	1.126
NMePFOSA	6.08	1.000	53.4		A	d3-NMePFOSA	6.10	458.0	0.116	1.235
PFDoS	6.22	1.190	12498.4		A	13C8-PFOS	5.24	304507.5	0.041	1.179
NEtPFOSAE	6.26	1.000	1381.0		A	d9-NEtPFOSAE	6.25	10145.3	0.136	0.979
NEtPFOSA	6.29	1.010	38.8		A	d5-NEtPFOSA	6.25	149.2	0.260	2.333
PFTrDA	6.25	1.030	136358.7		A	13C2-PFDoDA	6.05	1021598.7	0.133	1.609
PFTeDA	6.42	1.000	93619.8		A	13C2-PFTeDA	6.42	766342.1	0.122	1.384
PFHxDA	6.73	1.050	40806.0		A	13C2-PFTeDA	6.42	766342.1	0.053	1.217
PFODA	6.99	1.090	20412.9		A	13C2-PFTeDA	6.42	766342.1	0.027	0.710

Total Ion Chromatogram

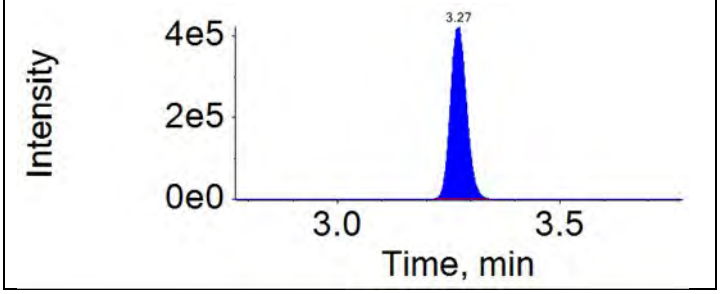


APPROVED
By MCD at 9:12 pm, 11/30/18

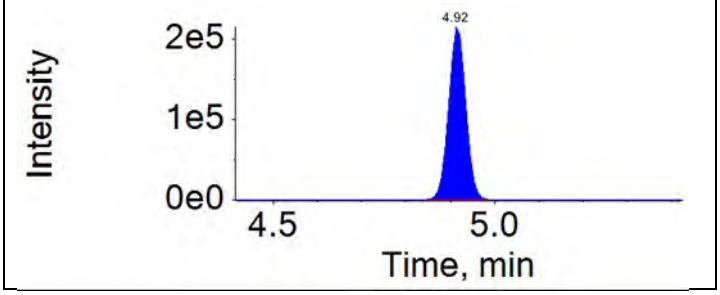
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

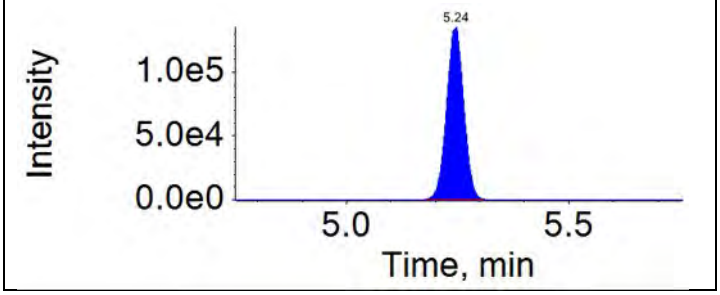
Injection Standard: 13C3-PFBA
216.0 / 172.0



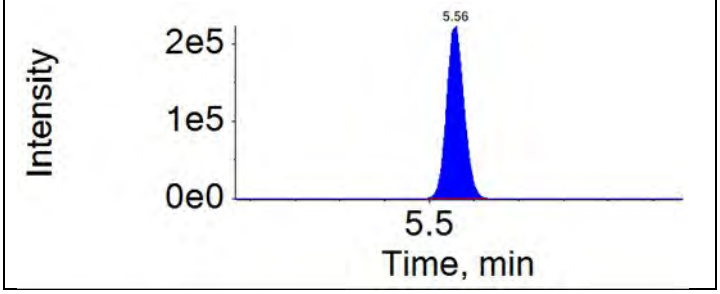
Injection Standard: 13C2-PFOA
415.0 / 370.0



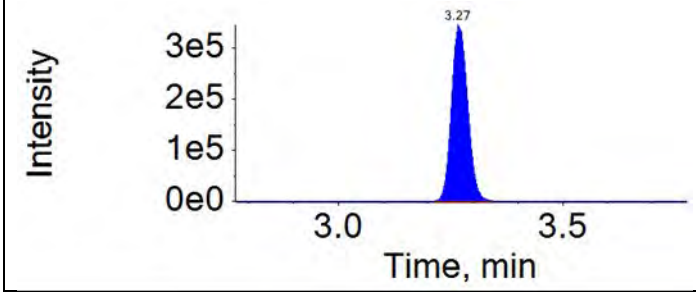
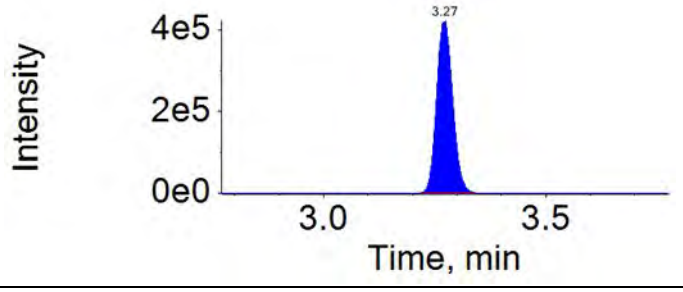
Injection Standard: 13C4-PFOS
503.0 / 80.0

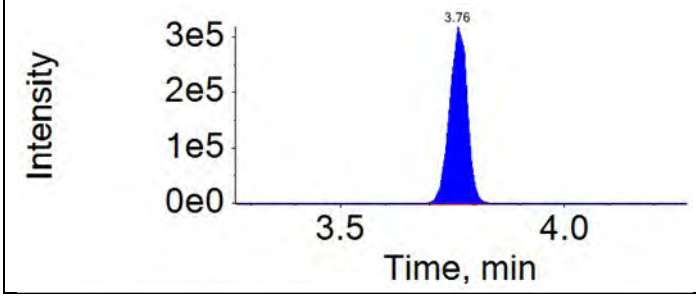
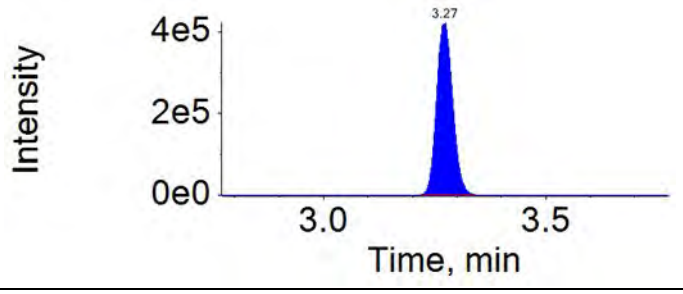


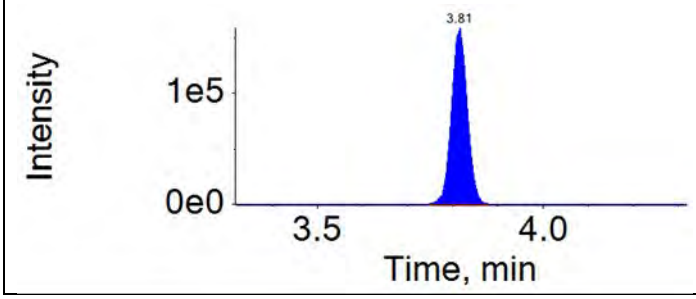
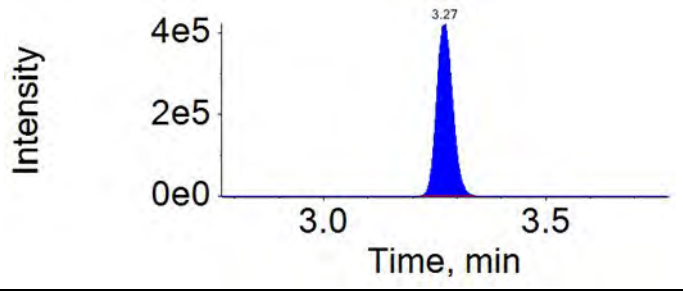
Injection Standard: 13C2-PFDA
515.0 / 470.0

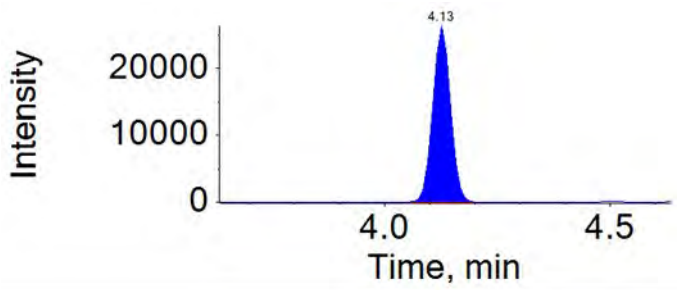
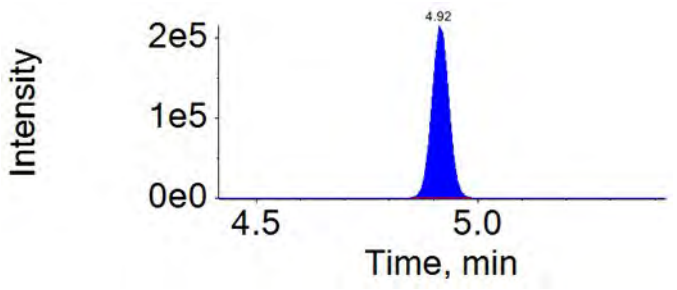


ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C4-PFBA	Injection Standard: 13C3-PFBA
217.0 / 172.0	216.0 / 172.0
	

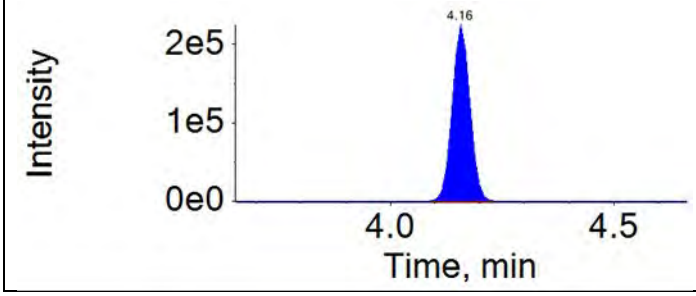
Extraction Standard: E13C5-PFPeA	Injection Standard: 13C3-PFBA
268.0 / 223.0	216.0 / 172.0
	

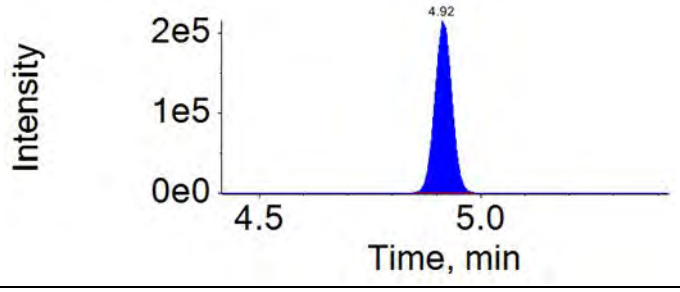
Extraction Standard: E13C3-PFBS	Injection Standard: 13C3-PFBA
302.0 / 80.0	216.0 / 172.0
	

Extraction Standard: E13C2-4:2-FTS	Injection Standard: 13C2-PFOA
329.0 / 81.0	415.0 / 370.0
	

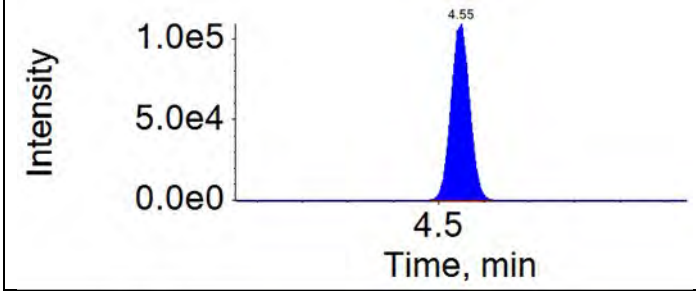
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

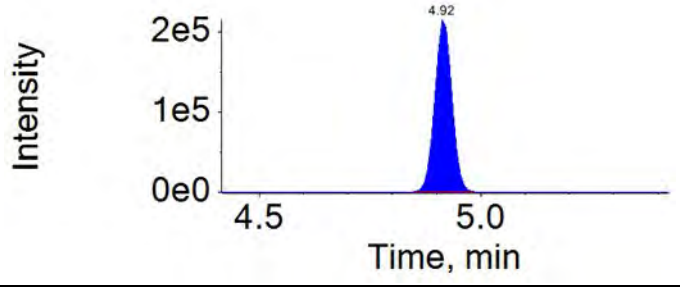
Extraction Standard: E13C5-PFHxA	Injection Standard: 13C2-PFOA
318.0 / 273.0	415.0 / 370.0



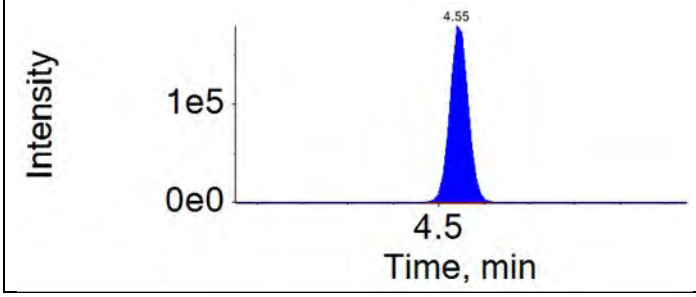


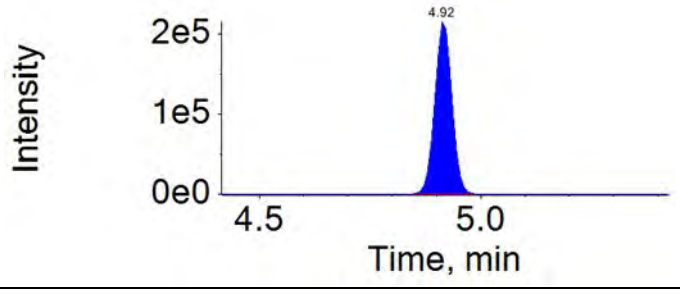
Extraction Standard: E13C3-PFHxS	Injection Standard: 13C2-PFOA
402.0 / 80.0	415.0 / 370.0



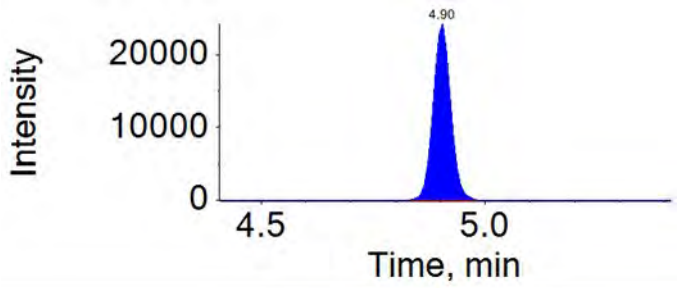


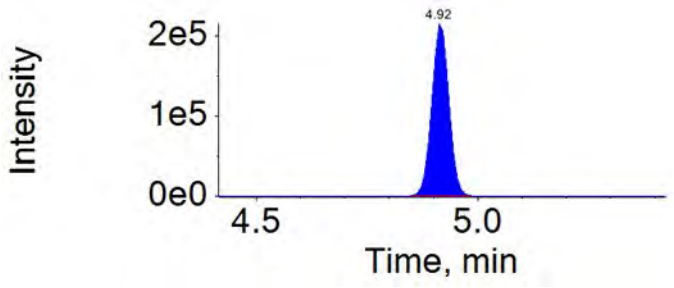
Extraction Standard: E13C4-PFHpA	Injection Standard: 13C2-PFOA
367.0 / 322.0	415.0 / 370.0





Extraction Standard: E13C2-6:2-FTS	Injection Standard: 13C2-PFOA
429.0 / 81.0	415.0 / 370.0

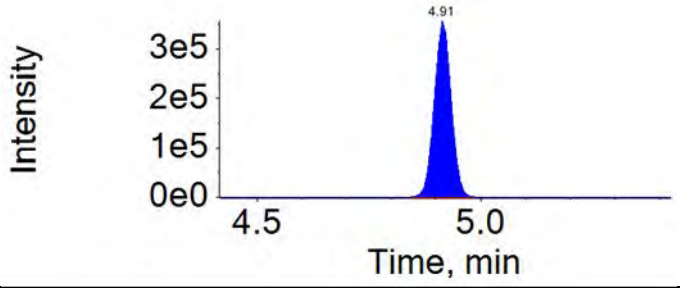
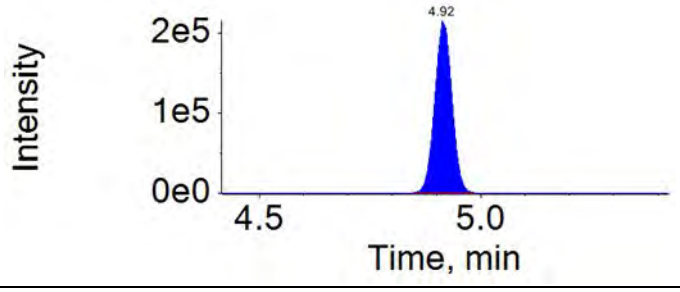


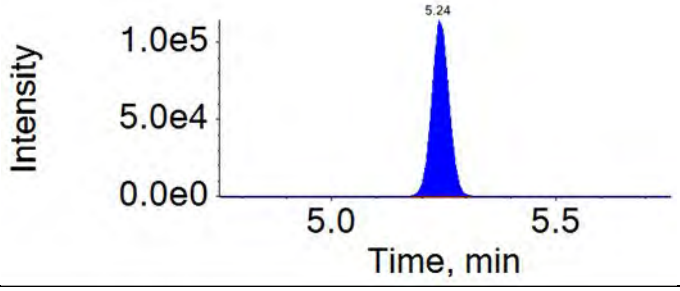
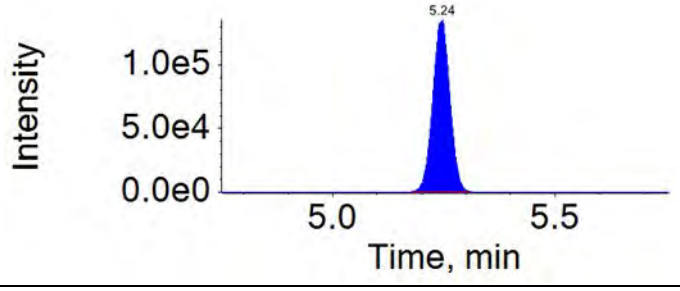


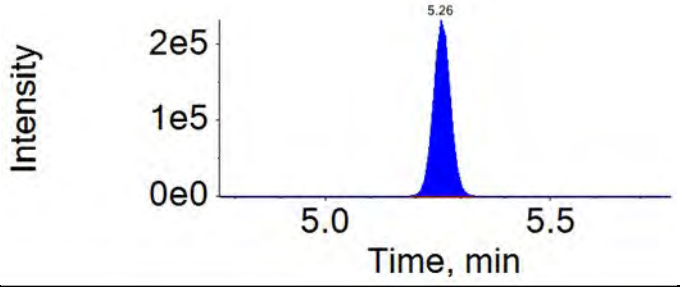
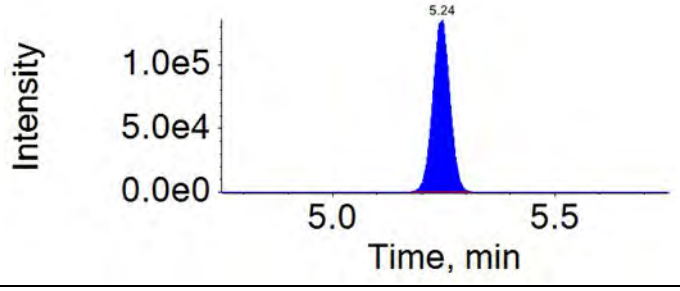
APPROVED
By MCD at 9:12 pm, 11/30/18

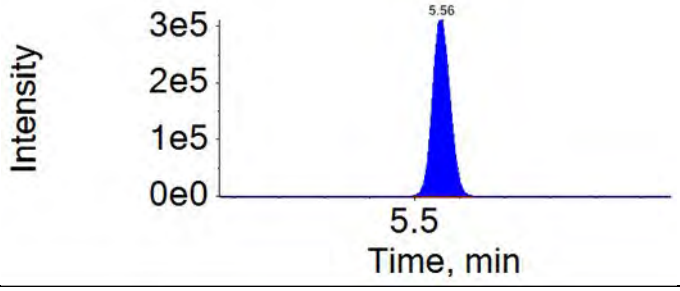
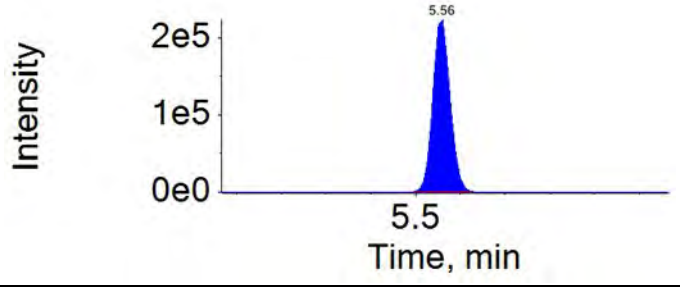
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C8-PFOA	Injection Standard: 13C2-PFOA
421.0 / 376.0	415.0 / 370.0
	

Extraction Standard: E13C8-PFOS	Injection Standard: 13C4-PFOS
507.0 / 80.0	503.0 / 80.0
	

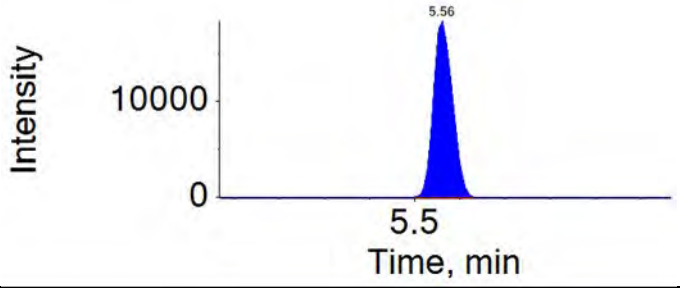
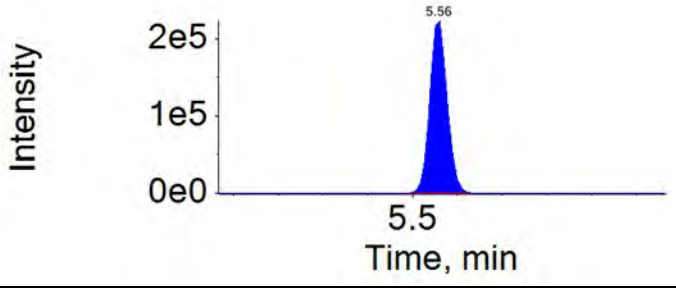
Extraction Standard: E13C9-PFNA	Injection Standard: 13C4-PFOS
472.0 / 427.0	503.0 / 80.0
	

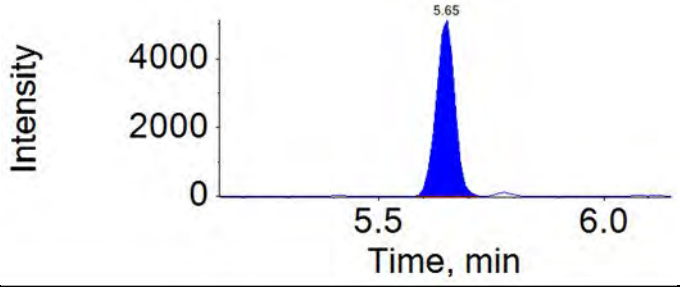
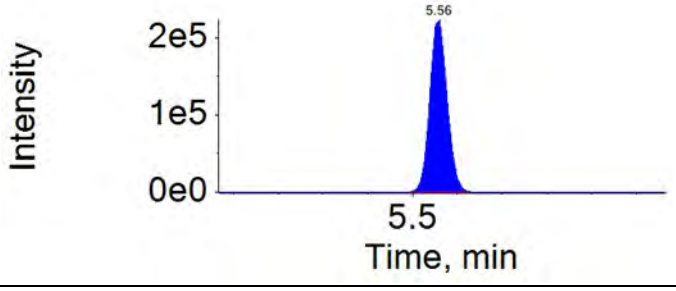
Extraction Standard: E13C6-PFDA	Injection Standard: 13C2-PFDA
519.0 / 474.0	515.0 / 470.0
	

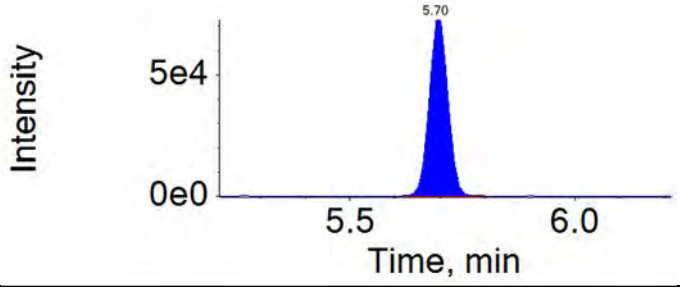
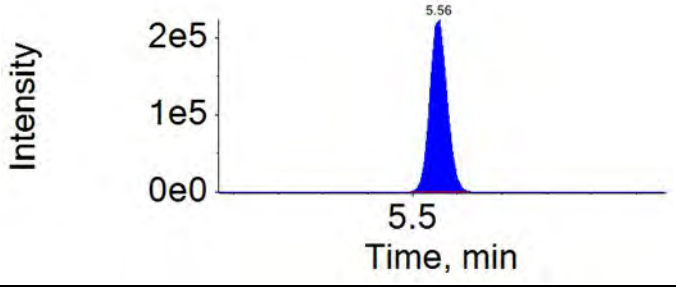
APPROVED
By MCD at 9:12 pm, 11/30/18

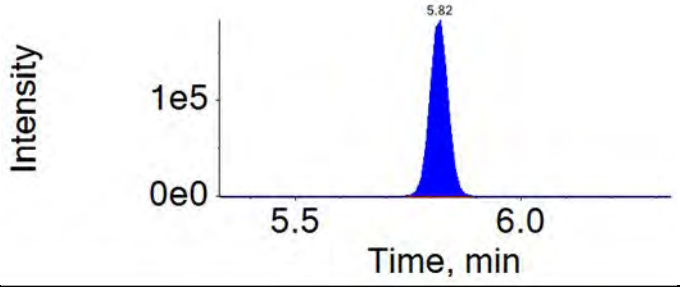
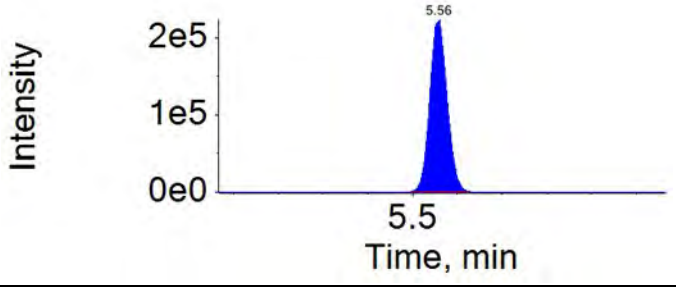
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Extraction Standard: E13C2-8:2-FTS	Injection Standard: 13C2-PFDA
529.0 / 81.0	515.0 / 470.0
	

Extraction Standard: E13C8-PFOSA	Injection Standard: 13C2-PFDA
506.0 / 78.0	515.0 / 470.0
	

Extraction Standard: Ed3-NMeFOSAA	Injection Standard: 13C2-PFDA
573.0 / 419.0	515.0 / 470.0
	

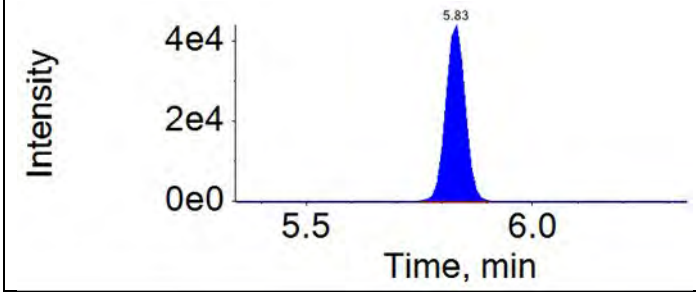
Extraction Standard: E13C7-PFUnDA	Injection Standard: 13C2-PFDA
570.0 / 525.0	515.0 / 470.0
	

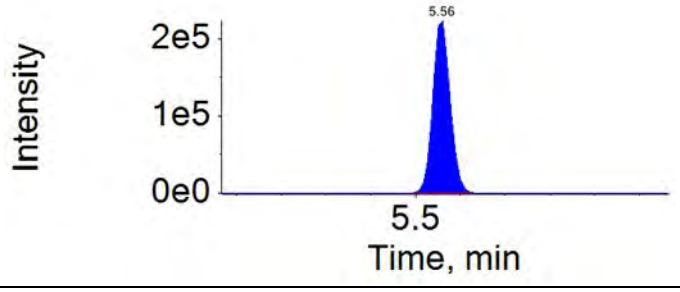
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

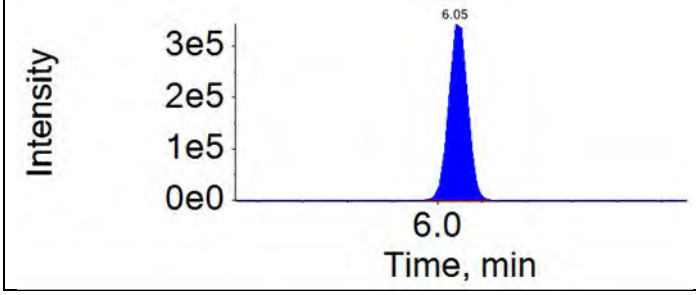
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

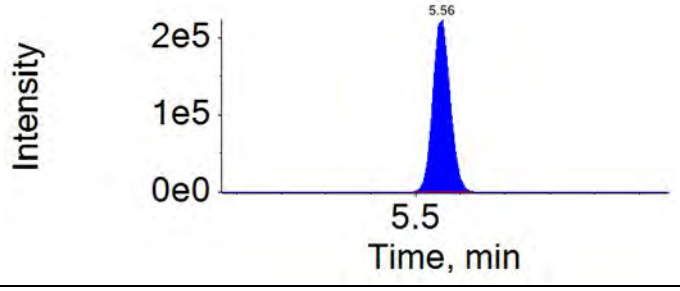
Extraction Standard: Ed5-NEtFOSAA	Injection Standard: 13C2-PFDA
589.0 / 419.0	515.0 / 470.0



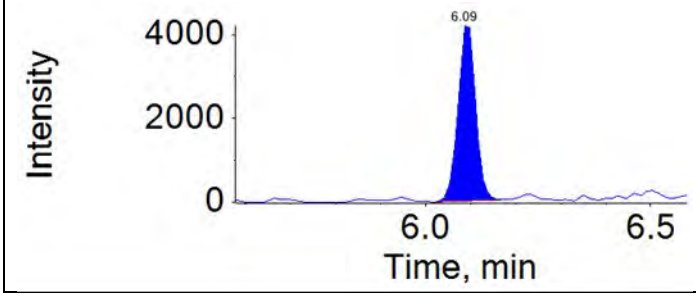


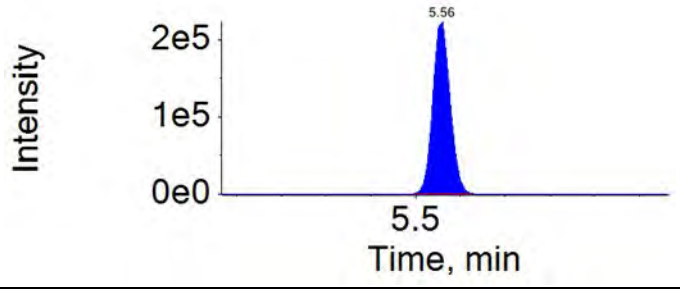
Extraction Standard: E13C2-PFDoDA	Injection Standard: 13C2-PFDA
615.0 / 570.0	515.0 / 470.0



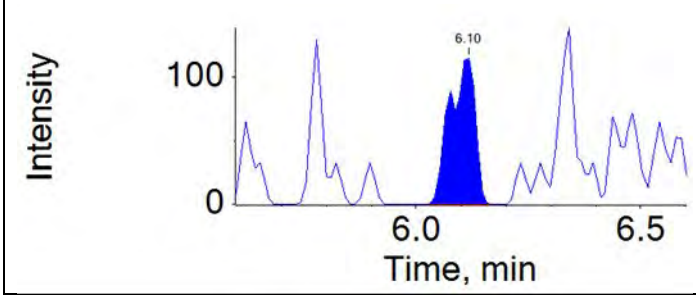


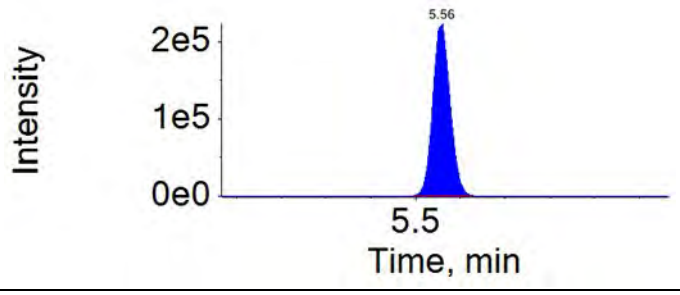
Extraction Standard: Ed7-NMePFOSAE	Injection Standard: 13C2-PFDA
623.0 / 59.0	515.0 / 470.0





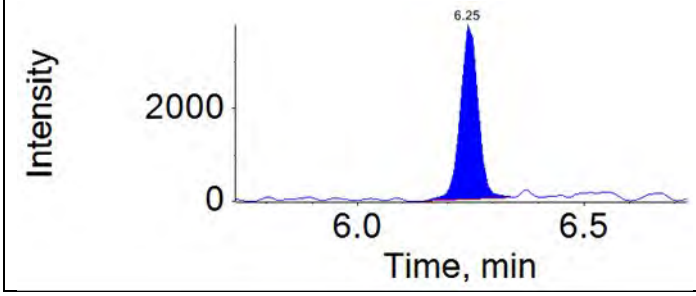
Extraction Standard: Ed3-NMePFOSA	Injection Standard: 13C2-PFDA
515.0 / 169.0	515.0 / 470.0

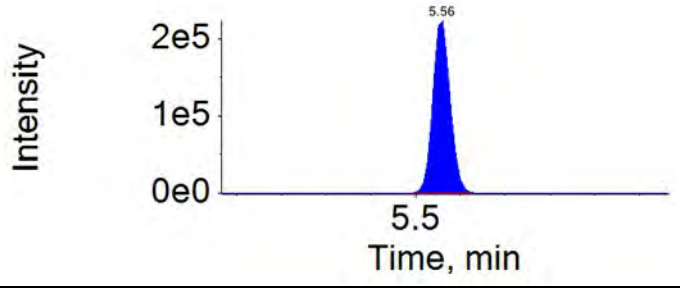




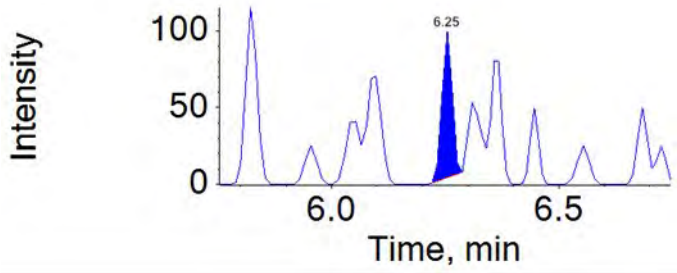
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

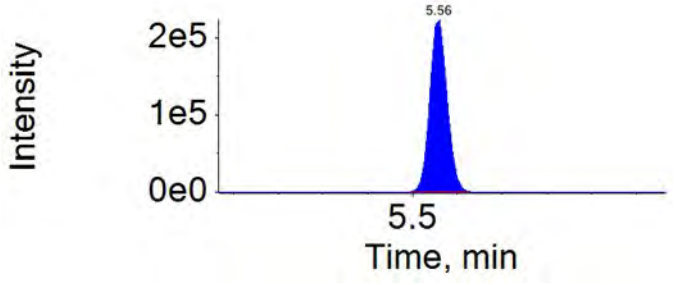
Extraction Standard: Ed9-NEtPFOSAE	Injection Standard: 13C2-PFDA
639.0 / 59.0	515.0 / 470.0



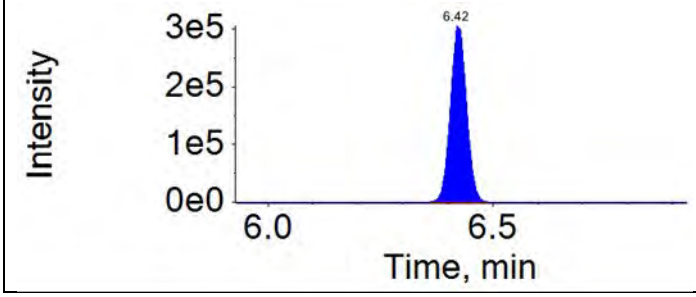


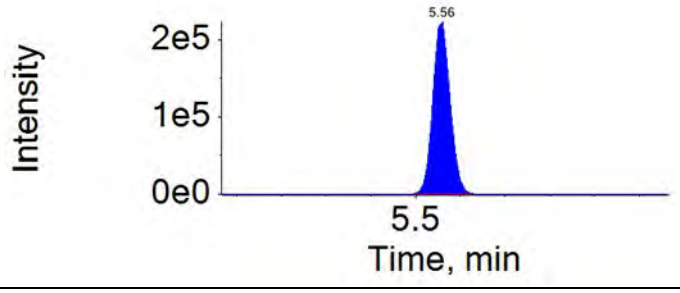
Extraction Standard: Ed5-NEtPFOSA	Injection Standard: 13C2-PFDA
531.0 / 169.0	515.0 / 470.0





Extraction Standard: E13C2-PFTeDA	Injection Standard: 13C2-PFDA
715.0 / 670.0	515.0 / 470.0



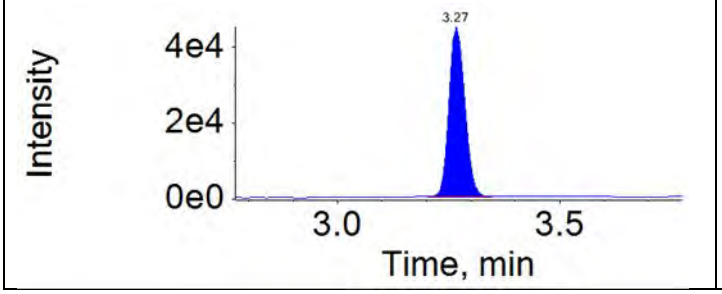


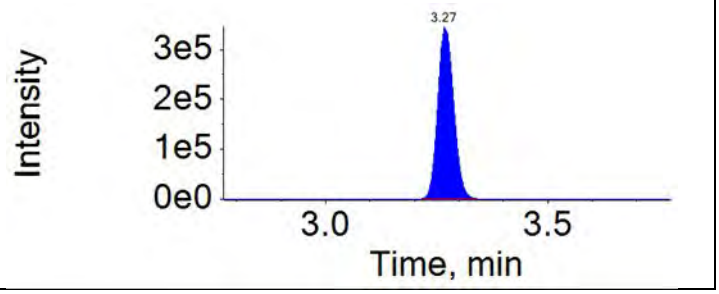
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

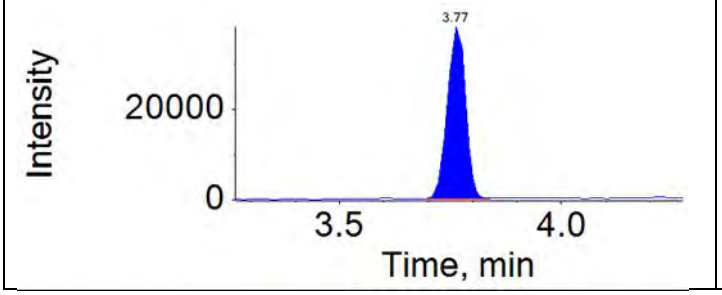
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

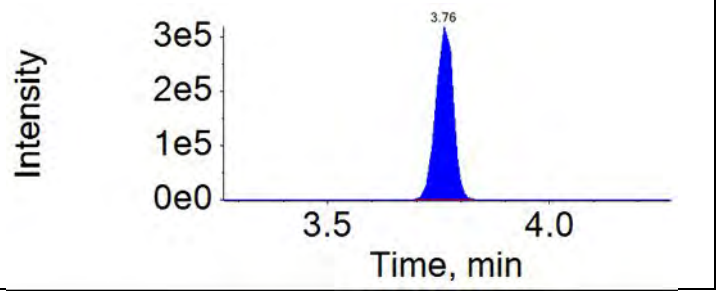
Analyte: PFBA	Extraction Standard: 13C4-PFBA
213.0 / 169.0	217.0 / 172.0



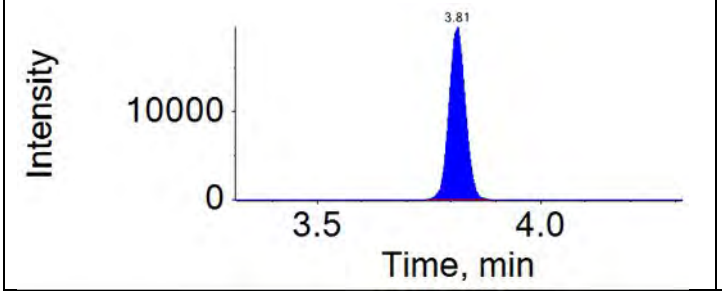


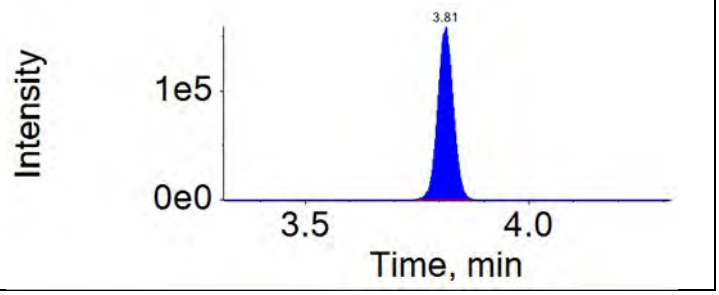
Analyte: PFPeA	Extraction Standard: 13C5-PFPeA
263.0 / 219.0	268.0 / 223.0



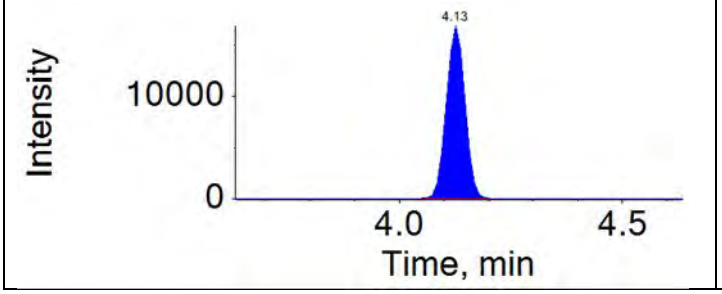


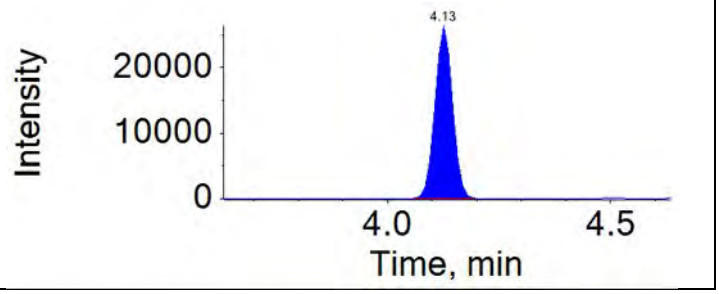
Analyte: PFBS	Extraction Standard: 13C3-PFBS
299.0 / 80.0	302.0 / 80.0





Analyte: 4:2-FTS	Extraction Standard: 13C2-4:2-FTS
327.0 / 307.0	329.0 / 81.0



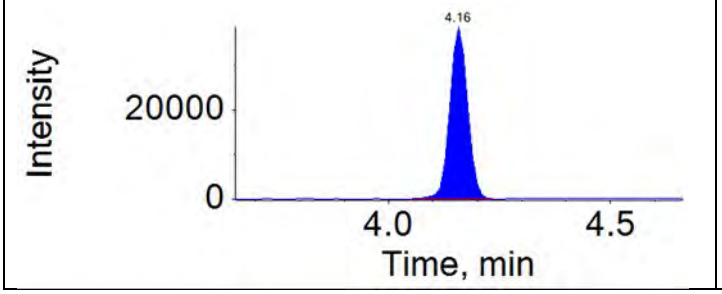


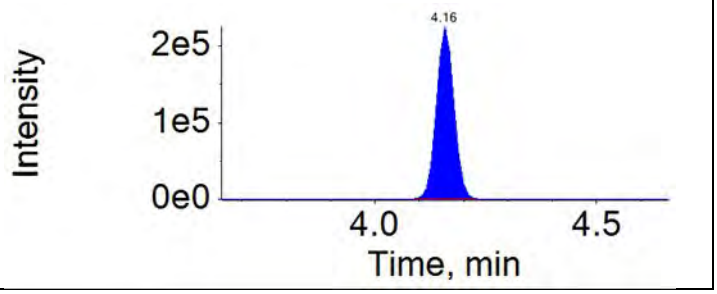
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

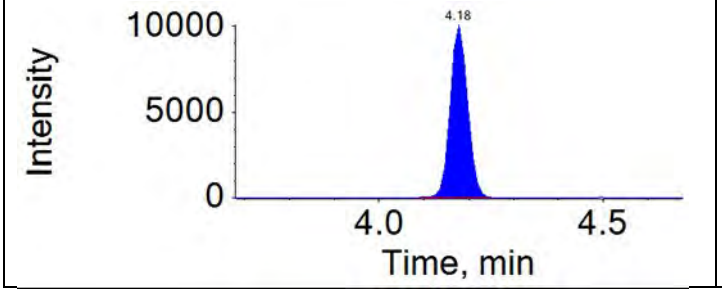
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

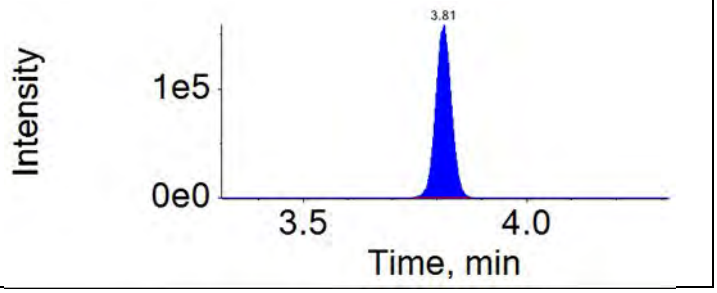
Analyte: PFHxA	Extraction Standard: 13C5-PFHxA
313.0 / 269.0	318.0 / 273.0



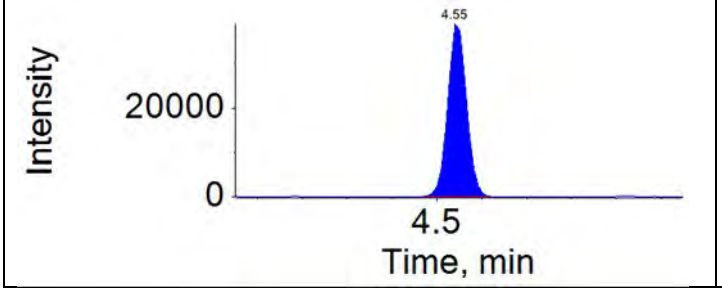


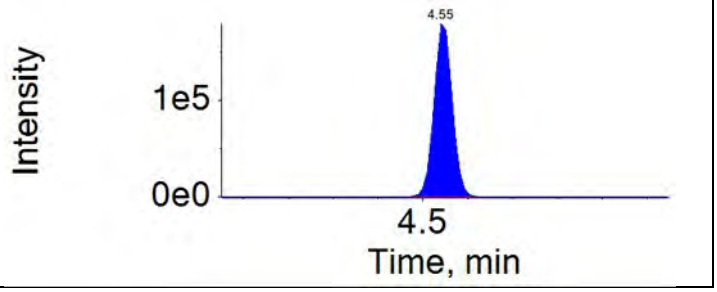
Analyte: PFPeS	Extraction Standard: 13C3-PFBS
349.0 / 80.0	302.0 / 80.0



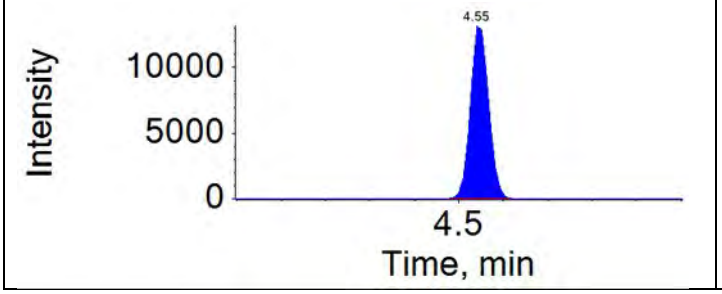


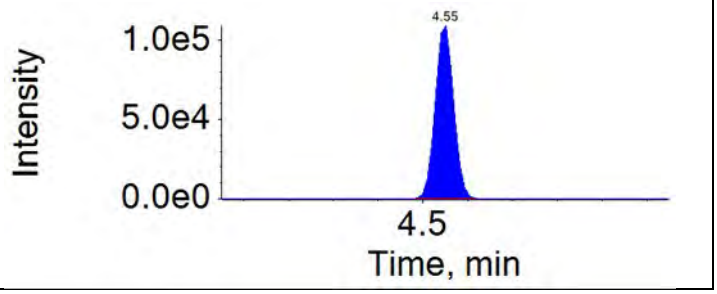
Analyte: PFHpA	Extraction Standard: 13C4-PFHpA
363.0 / 319.0	367.0 / 322.0





Analyte: PFHxS	Extraction Standard: 13C3-PFHxS
399.0 / 80.0	402.0 / 80.0

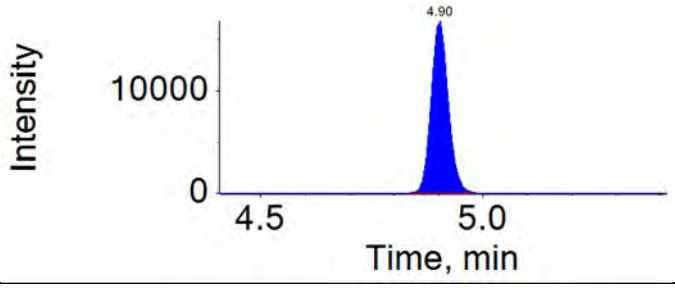
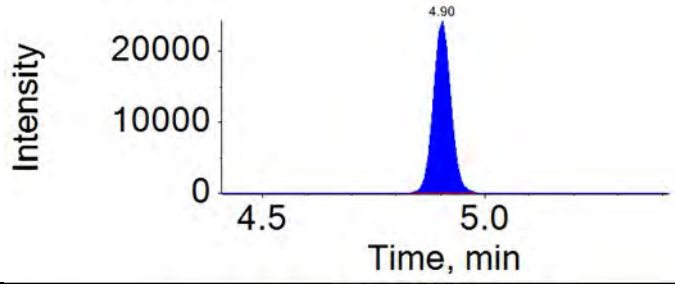


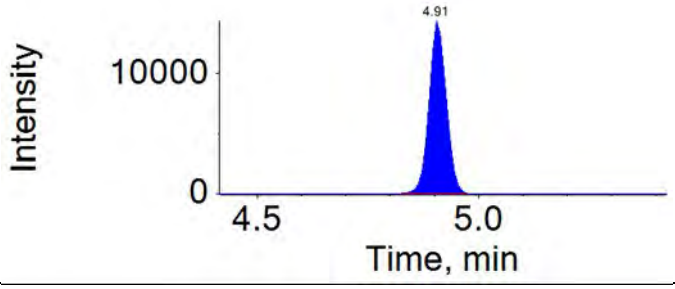
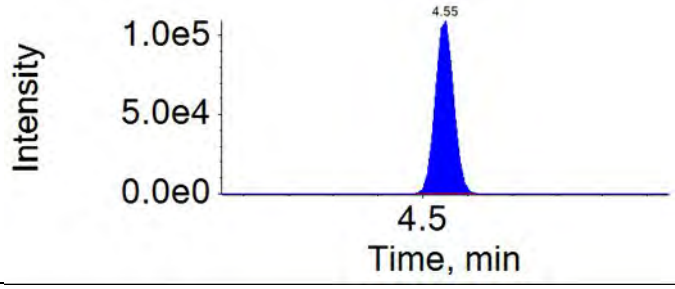


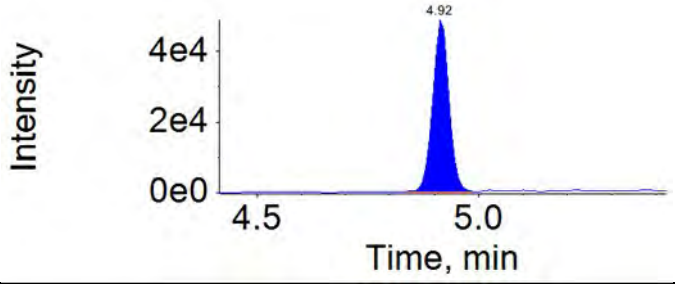
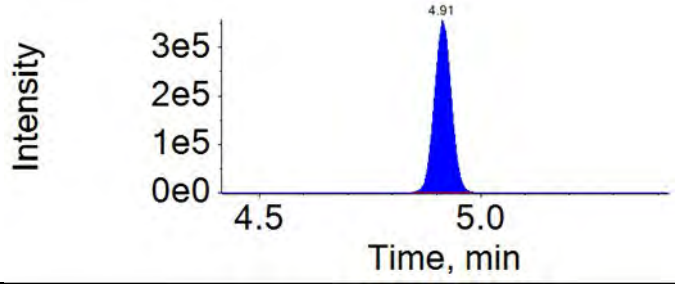
APPROVED
By MCD at 9:12 pm, 11/30/18

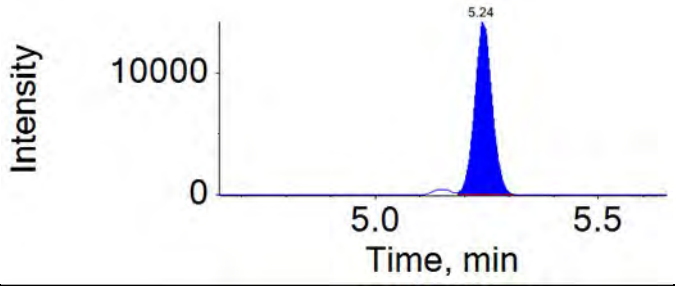
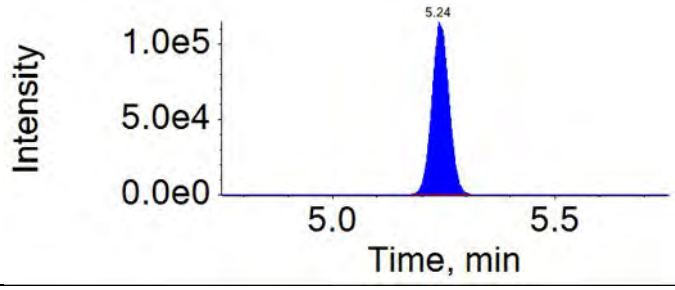
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: 6:2-FTS	Extraction Standard: 13C2-6:2-FTS
427.0 / 407.0	429.0 / 81.0
	

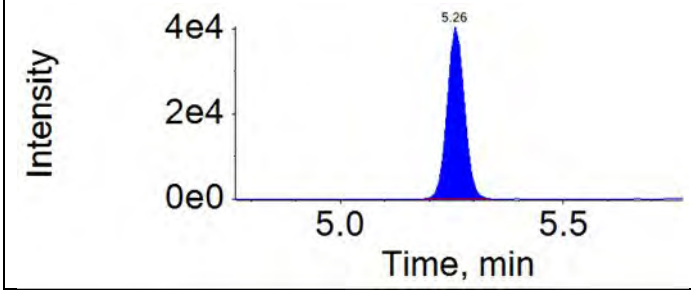
Analyte: PFHpS	Extraction Standard: 13C3-PFHxS
449.0 / 80.0	402.0 / 80.0
	

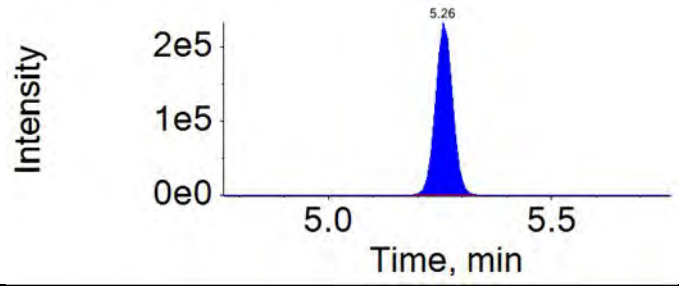
Analyte: PFOA	Extraction Standard: 13C8-PFOA
413.0 / 369.0	421.0 / 376.0
	

Analyte: PFOS	Extraction Standard: 13C8-PFOS
499.0 / 80.0	507.0 / 80.0
	

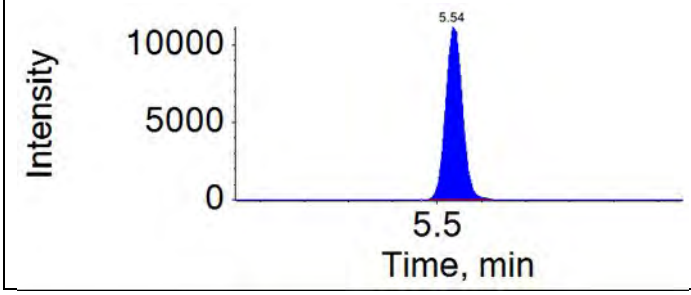
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

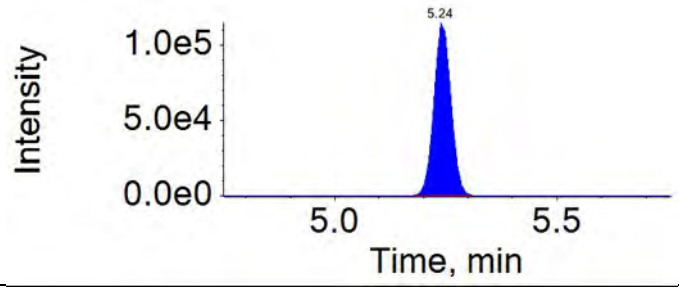
Analyte: PFNA	Extraction Standard: 13C9-PFNA
463.0 / 419.0	472.0 / 427.0



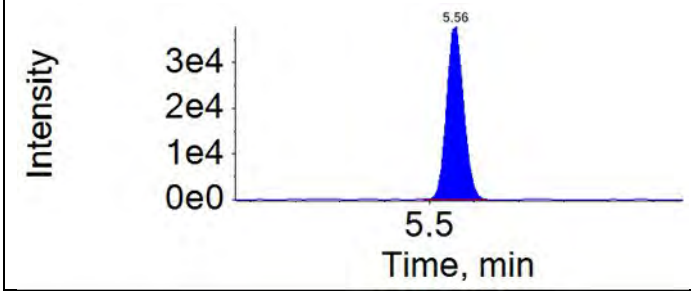


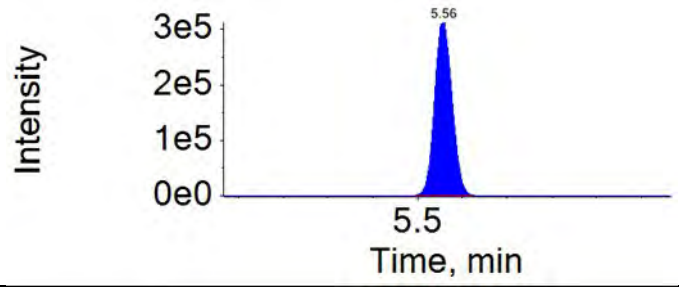
Analyte: PFNS	Extraction Standard: 13C8-PFOS
549.0 / 80.0	507.0 / 80.0



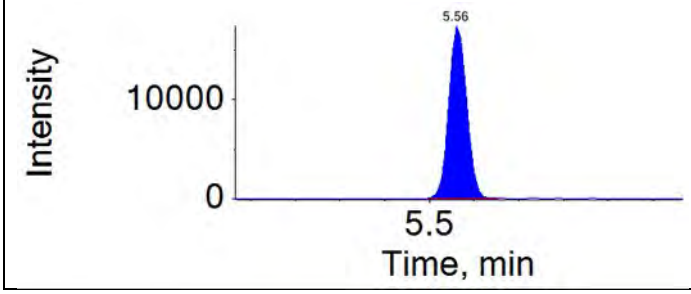


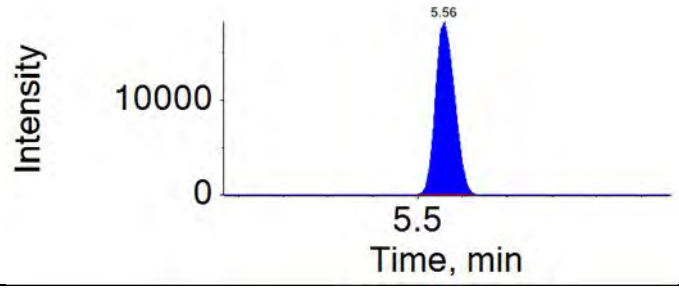
Analyte: PFDA	Extraction Standard: 13C6-PFDA
513.0 / 469.0	519.0 / 474.0





Analyte: 8:2-FTS	Extraction Standard: 13C2-8:2-FTS
527.0 / 507.0	529.0 / 81.0



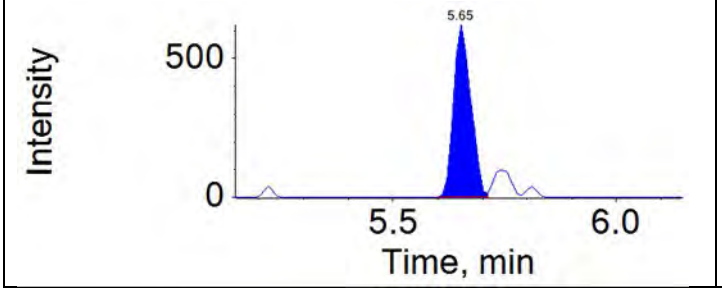


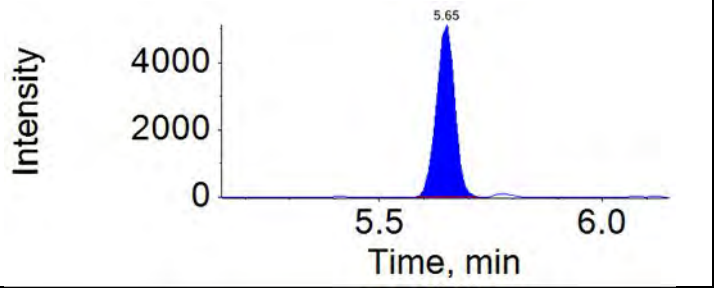
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

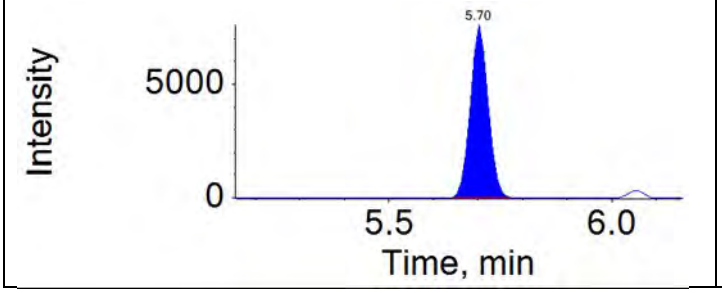
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

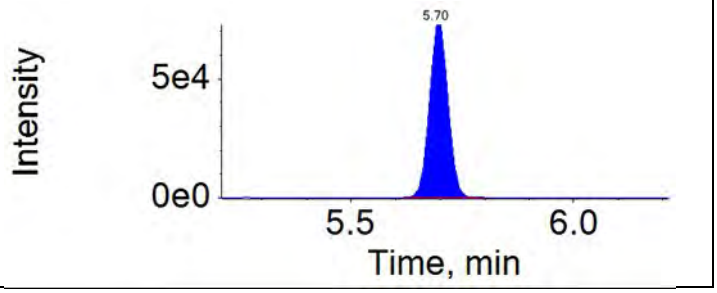
Analyte: PFOSA	Extraction Standard: 13C8-PFOSA
498.0 / 78.0	506.0 / 78.0



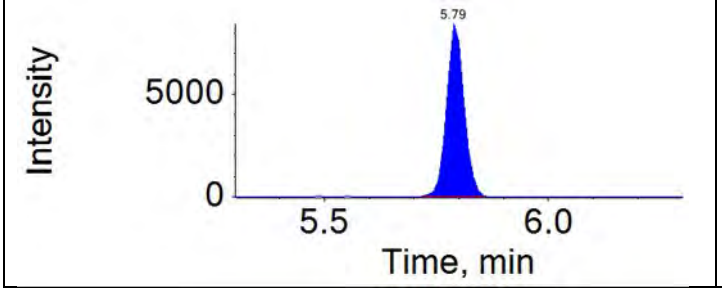


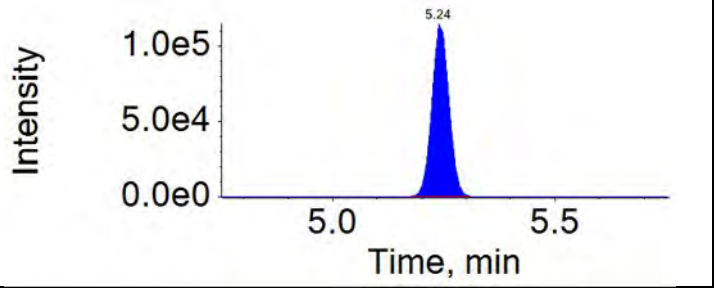
Analyte: NMeFOSAA	Extraction Standard: d3-NMeFOSAA
570.0 / 419.0	573.0 / 419.0



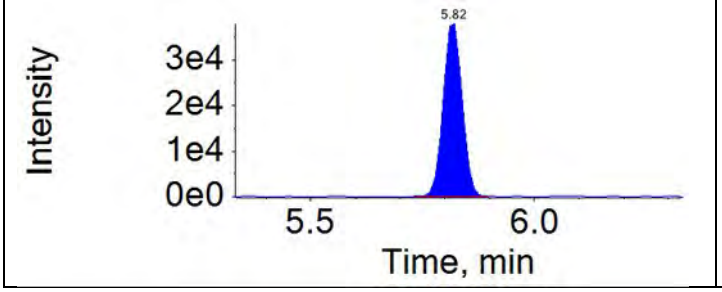


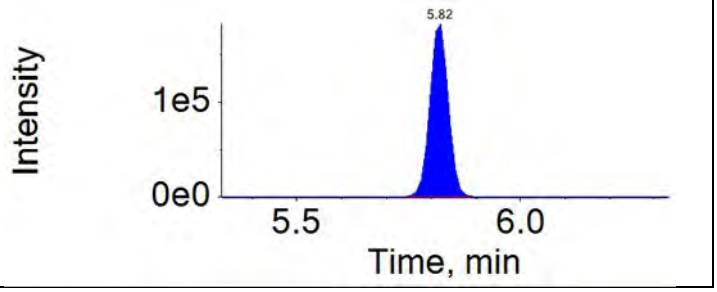
Analyte: PFDS	Extraction Standard: 13C8-PFOS
599.0 / 80.0	507.0 / 80.0





Analyte: PFUnDA	Extraction Standard: 13C7-PFUnDA
563.0 / 519.0	570.0 / 525.0

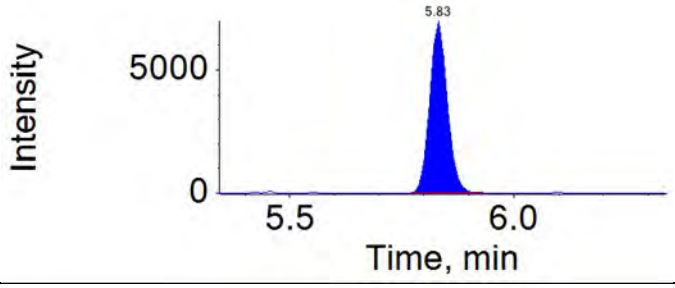
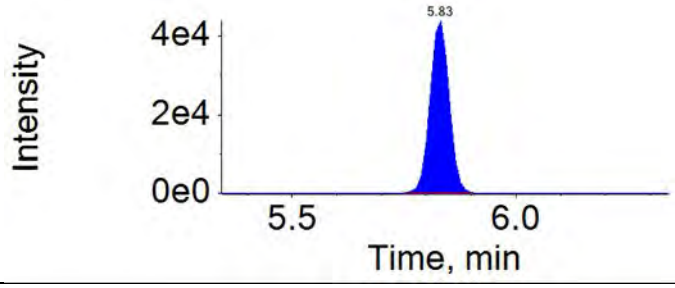


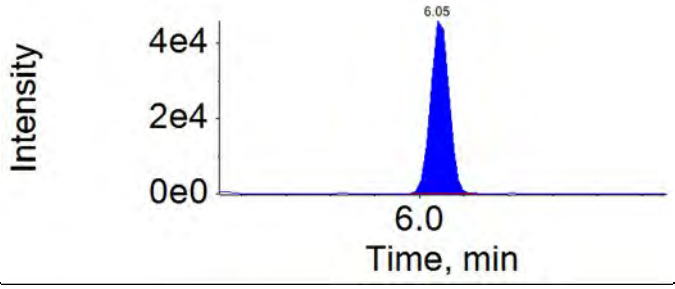
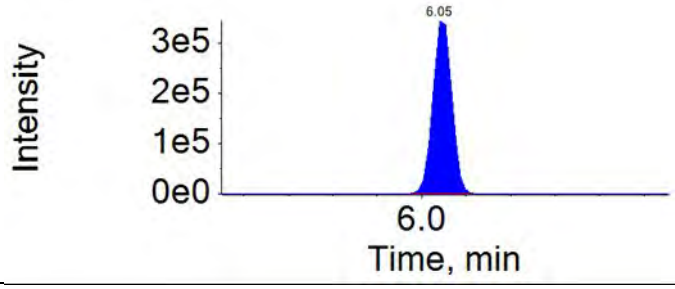


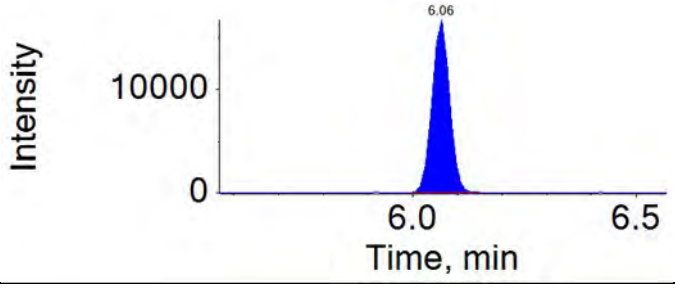
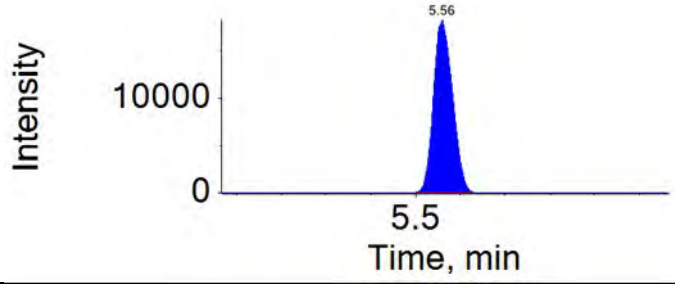
APPROVED
By MCD at 9:12 pm, 11/30/18

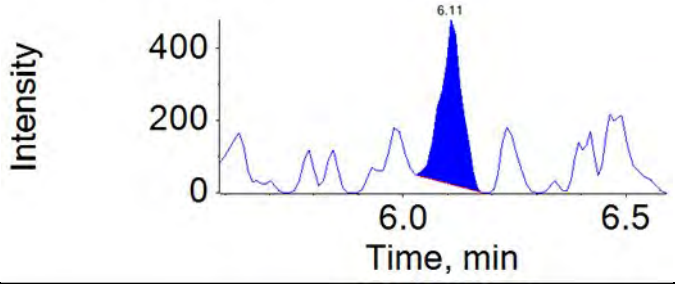
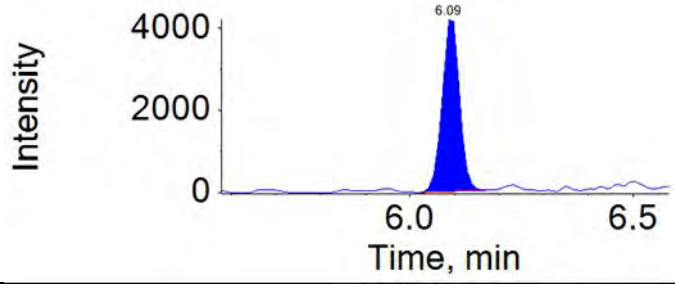
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: NEtFOSAA	Extraction Standard: d5-NEtFOSAA
584.0 / 419.0	589.0 / 419.0
	

Analyte: PFDoDA	Extraction Standard: 13C2-PFDoDA
613.0 / 569.0	615.0 / 570.0
	

Analyte: 10:2-FTS	Extraction Standard: 13C2-8:2-FTS
627.0 / 607.0	529.0 / 81.0
	

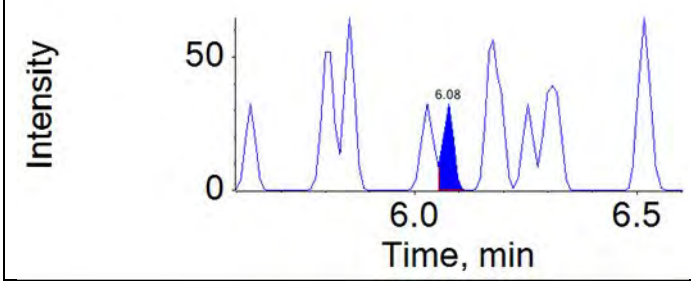
Analyte: NMePFOSAE	Extraction Standard: d7-NMePFOSAE
616.0 / 59.0	623.0 / 59.0
	

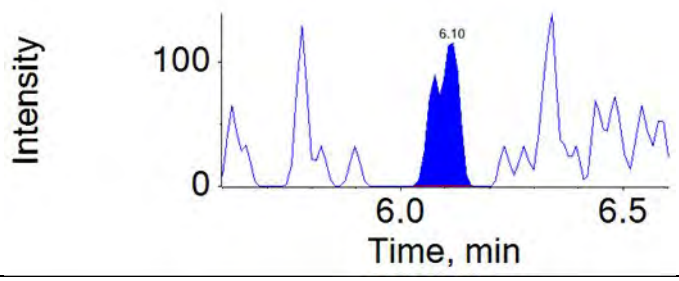
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

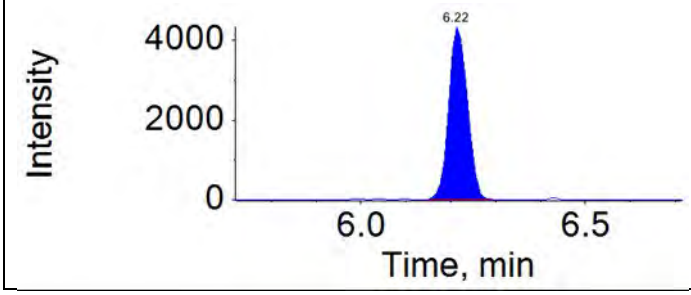
ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

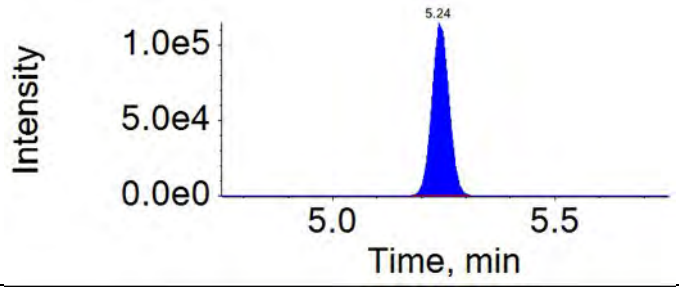
Analyte: NMePFOSA	Extraction Standard: d3-NMePFOSA
512.0 / 169.0	515.0 / 169.0



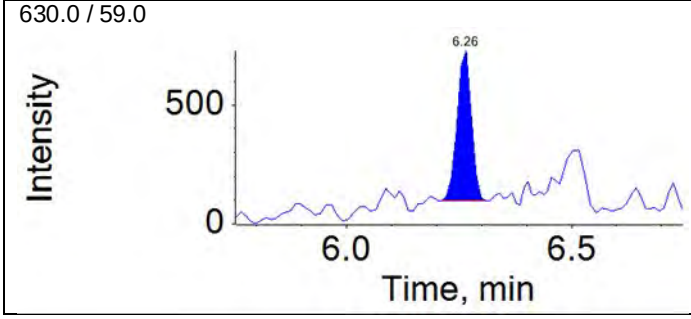


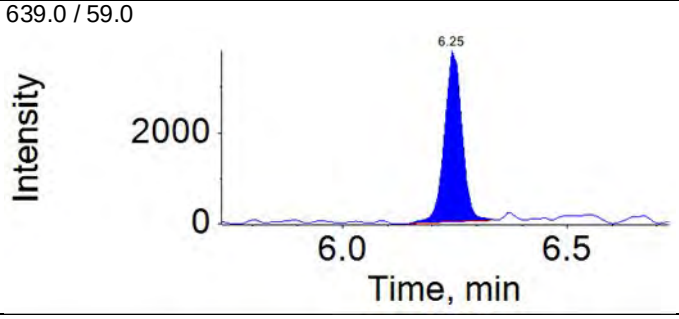
Analyte: PFDoS	Extraction Standard: 13C8-PFOS
699.0 / 80.0	507.0 / 80.0



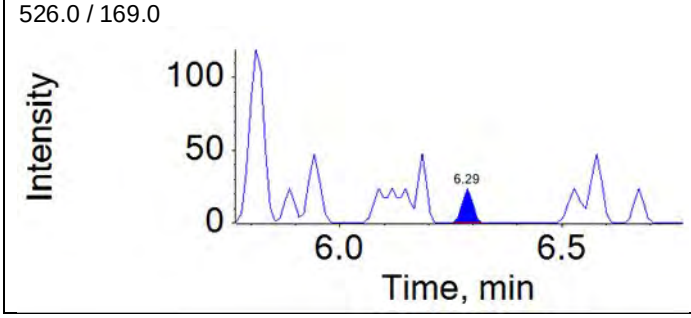


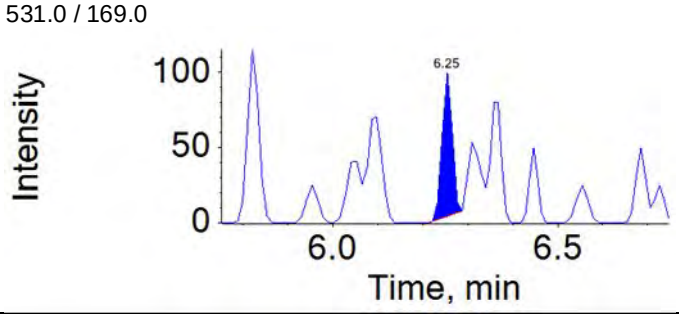
Analyte: NEtPFOSAE	Extraction Standard: d9-NEtPFOSAE
630.0 / 59.0	639.0 / 59.0





Analyte: NEtPFOSA	Extraction Standard: d5-NEtPFOSA
526.0 / 169.0	531.0 / 169.0

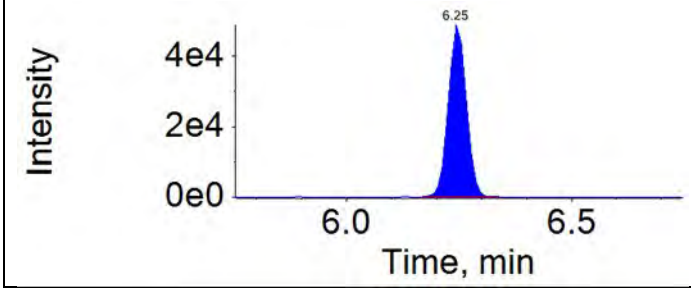
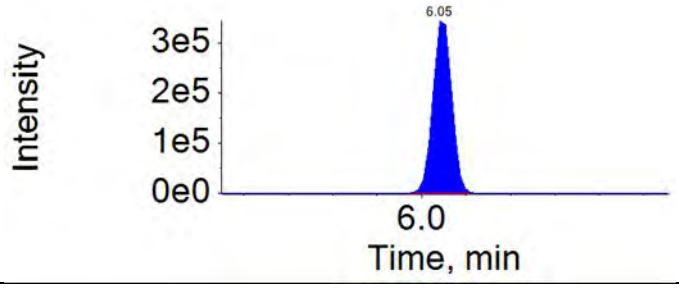


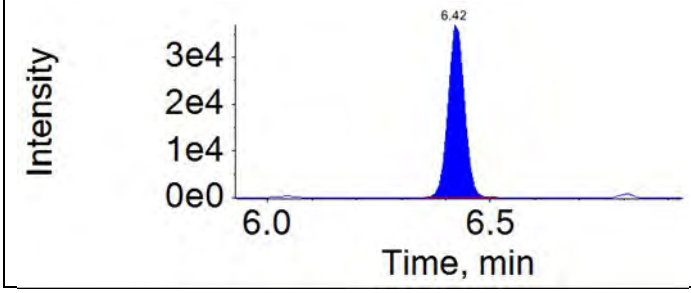
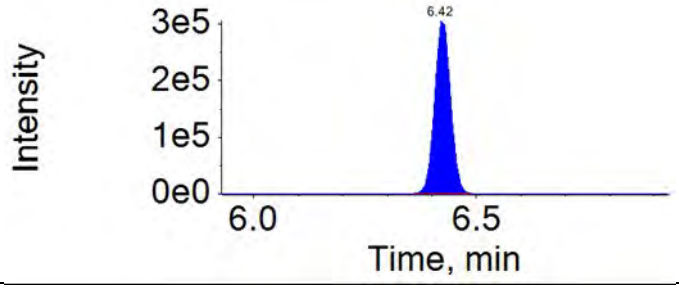


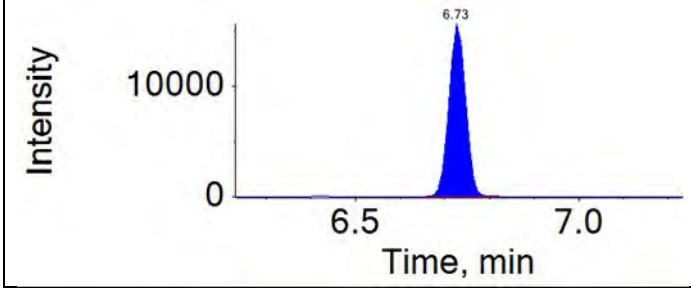
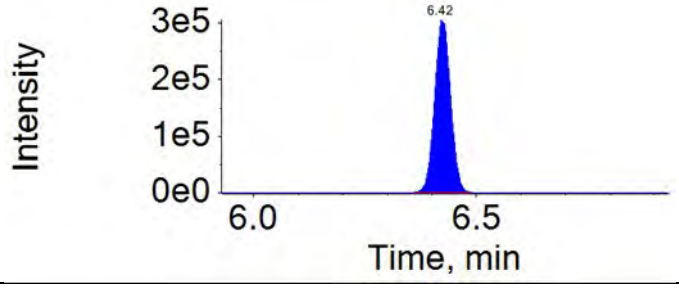
APPROVED
By MCD at 9:12 pm, 11/30/18

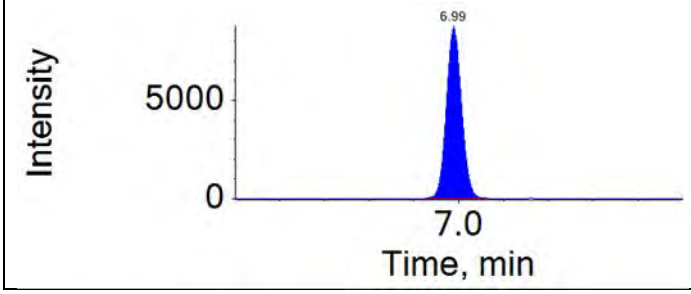
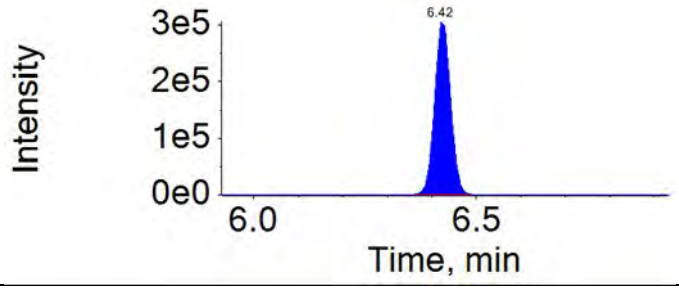
REVIEWED
By HMK at 1:40 pm, 12/6/18

ICAL Name: 18NOV28DCAL **Result Table:** 18331014 11/30/2018 9:03:58 PM
QMethod Name: 18AUG20QM **Acquisition Method:** 18AUG13_3uL.dam

Analyte: PFTrDA	Extraction Standard: 13C2-PFDoDA
663.0 / 619.0	615.0 / 570.0
	

Analyte: PFTeDA	Extraction Standard: 13C2-PFTeDA
713.0 / 669.0	715.0 / 670.0
	

Analyte: PFHxDA	Extraction Standard: 13C2-PFTeDA
813.0 / 769.0	715.0 / 670.0
	

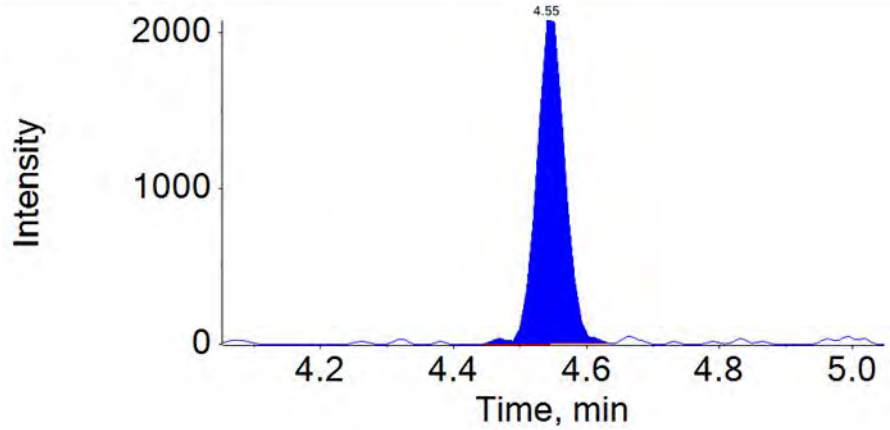
Analyte: PFODA	Extraction Standard: 13C2-PFTeDA
913.0 / 869.0	715.0 / 670.0
	

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

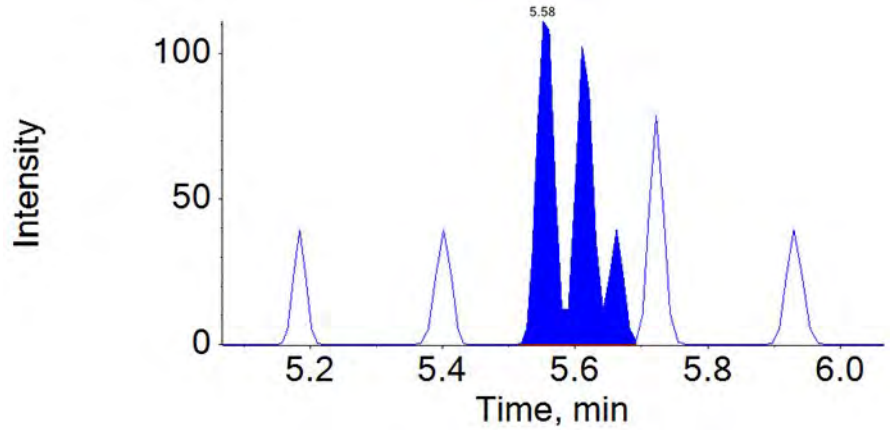
Results Table Name: 18331014
Results Table Date: 11/30/2018 9:03:58 PM
Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFHpA_2
RT (min.):
4.55
Peak Area:
6207.2
Mass Range:
363.0 / 169.0
File Name:
18NOV29D-45.wiff
Sample Name:
LCSDA



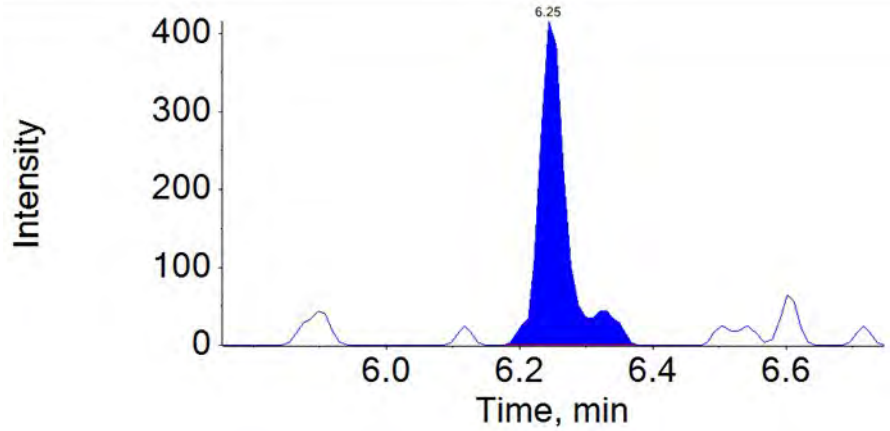
Integration Comment: incorrect integration

Component Name:
PFDA_2
RT (min.):
5.58
Peak Area:
455.9
Mass Range:
513.0 / 169.0
File Name:
18NOV29D-45.wiff
Sample Name:
LCSDA



Integration Comment: incorrect integration

Component Name:
PFTrDA_2
RT (min.):
6.25
Peak Area:
1210.1
Mass Range:
663.0 / 169.0
File Name:
18NOV29D-45.wiff
Sample Name:
LCSDA



Integration Comment: incorrect integration

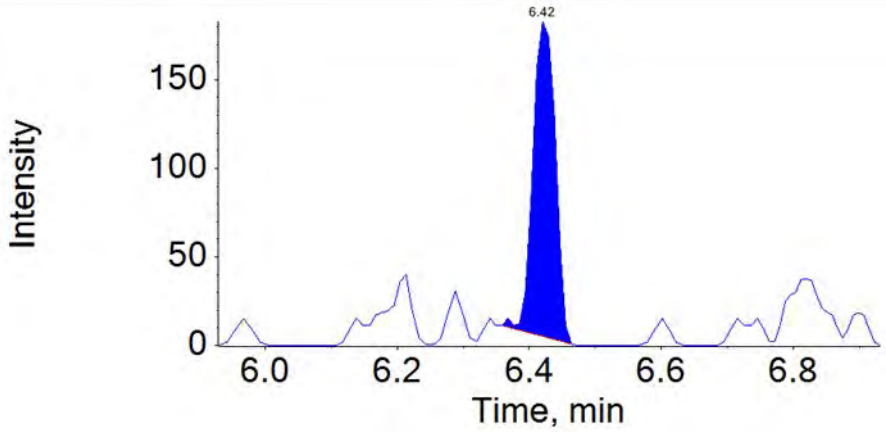
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

Results Table Name: 18331014
Results Table Date: 11/30/2018 9:03:58 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

Component Name:
PFTeDA_2
RT (min.):
6.42
Peak Area:
420.8
Mass Range:
713.0 / 169.0
File Name:
18NOV29D-45.wiff
Sample Name:
LCSDA



Integration Comment: incorrect integration

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

Results Table Name: 18331014
Results Table Date: 11/30/2018 9:03:58 PM

Acquisition Method: 18AUG13_3uL.dam
QMethod File: 18AUG20QM

APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

Ion Ratio Report

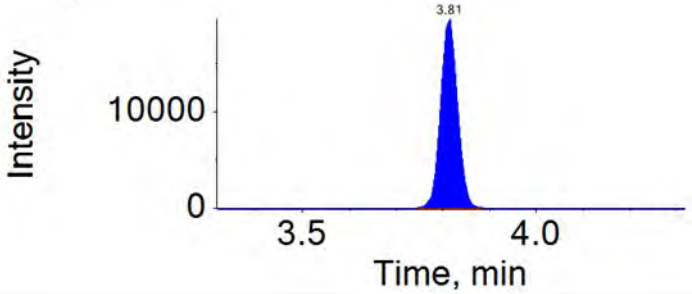
Sample Name: LCSDA **Instrument Name:** LM27631 **File Name:** 18NOV29D-45.wiff

Component Name	RT	RRT	Analyte Area Response	Int Typ	Expected Ion Ratio	Ion Ratio	Ion Ratio % Diff	Ion Ratio Limit	Ion Ratio OOS
PFBS	3.81	1.00	49781.2	A	N/A	0.3703			
PFBS_2	3.81	1.00	18432.9	A	N/A	0.3703	1	50	
4:2-FTS	4.13	1.00	48924.6	A	N/A	0.6049			
4:2-FTS_2	4.12	1.00	29595.7	A	N/A	0.6049	-5	50	
PFHxA	4.16	1.00	106900.4	A	N/A	0.0113			
PFHxA_2	4.15	1.00	1211.9	A	N/A	0.0113	10	50	
PFPeS	4.18	1.10	27066.4	A	N/A	0.5331			
PFPeS_2	4.18	1.10	14429.2	A	N/A	0.5331	7	50	
PFHpA	4.55	1.00	112858.7	A	N/A	0.0544			
PFHpA_2	4.55	1.00	6145.0	M	N/A	0.0544	-2	50	
PFHxS	4.55	1.00	37570.2	A	N/A	0.3693			
PFHxS_2	4.55	1.00	13876.3	A	N/A	0.3693	0	50	
6:2-FTS	4.90	1.00	45504.0	A	N/A	0.6819			
6:2-FTS_2	4.90	1.00	31029.3	A	N/A	0.6819	3	50	
PFHpS	4.91	1.08	38669.9	A	N/A	0.3930			
PFHpS_2	4.91	1.08	15197.3	A	N/A	0.3930	0	50	
PFOA	4.92	1.00	123547.5	A	N/A	0.0564			
PFOA_2	4.92	1.00	6966.7	A	N/A	0.0564	-2	50	
PFOS	5.24	1.00	38351.7	A	N/A	0.3371			
PFOS_2	5.24	1.00	12926.7	A	N/A	0.3371	14	50	
PFNA	5.26	1.00	108408.8	A	N/A	0.0168			
PFNA_2	5.26	1.00	1823.6	A	N/A	0.0168	-16	50	
PFNS	5.54	1.06	29144.6	A	N/A	0.4089			
PFNS_2	5.54	1.06	11916.4	A	N/A	0.4089	-15	50	
PFDA	5.56	1.00	99969.2	A	N/A	0.0021			
PFDA_2	5.55	1.00	213.3	M	N/A	0.0021	-71	50	OOS
8:2-FTS	5.56	1.00	48549.9	A	N/A	0.6516			
8:2-FTS_2	5.56	1.00	31634.1	A	N/A	0.6516	21	50	
NMeFOSAA	5.70	1.00	20878.6	A	N/A	0.2135			
NMeFOSAA_2	5.70	1.00	4457.3	A	N/A	0.2135	-7	50	
PFDS	5.79	1.10	22696.3	A	N/A	0.5494			
PFDS_2	5.80	1.11	12470.2	A	N/A	0.5494	3	50	
PFUnDA	5.82	1.00	112294.4	A	N/A	0.0069			
PFUnDA_2	5.83	1.00	778.9	A	N/A	0.0069	82	50	OOS
NEtFOSAA	5.83	1.00	18947.9	A	N/A	0.6211			
NEtFOSAA_2	5.83	1.00	11768.6	A	N/A	0.6211	-16	50	
PFDoDA	6.05	1.00	132188.5	A	N/A	0.0114			
PFDoDA_2	6.05	1.00	1505.3	A	N/A	0.0114	-13	50	
10:2-FTS	6.06	1.09	45626.4	A	N/A	0.7760			
10:2-FTS_2	6.06	1.09	35404.1	A	N/A	0.7760	11	50	
PFTrDA	6.25	1.03	136358.7	A	N/A	0.0081			
PFTrDA_2	6.25	1.03	1105.9	M	N/A	0.0081	-10	50	
PFTeDA	6.42	1.00	93619.8	A	N/A	0.0050			
PFTeDA_2	6.42	1.00	463.7	M	N/A	0.0050	-12	50	
PFHxDA	6.73	1.05	40806.0	A	N/A	0.0564			
PFHxDA_2	6.73	1.05	2301.4	A	N/A	0.0564	-13	50	
PFODA	6.99	1.09	20412.9	A	N/A	0.0251			
PFODA_2	6.99	1.09	511.4	A	N/A	0.0251	-5	50	

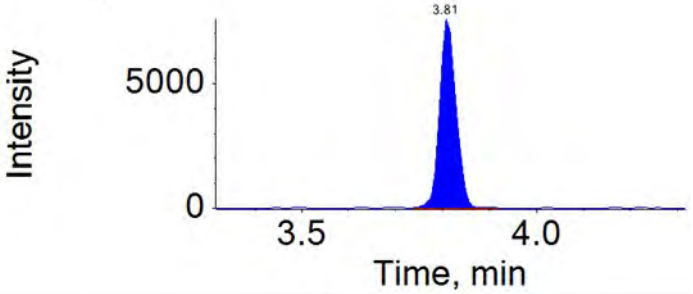
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

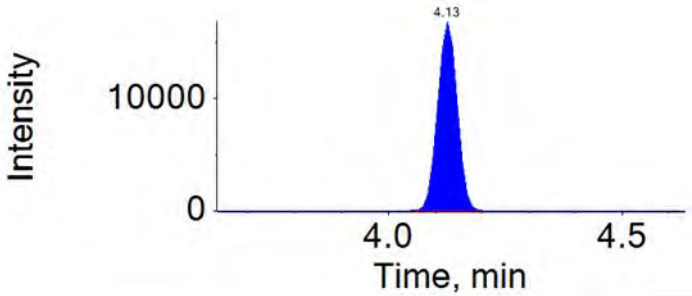
Component: PFBS
Primary Mass: 299.0 / 80.0



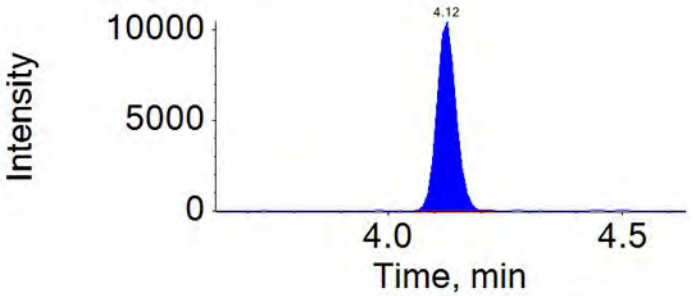
Component: PFBS_2
Secondary Mass: 299.0 / 99.0



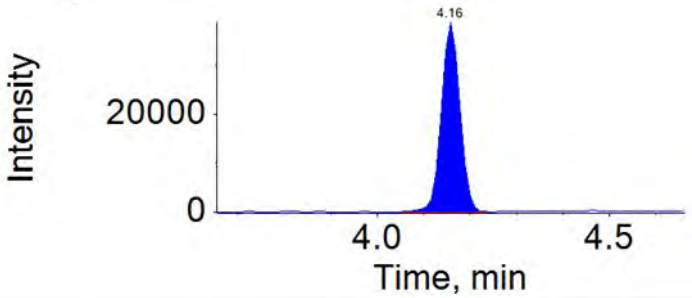
Component: 4:2-FTS
Primary Mass: 327.0 / 307.0



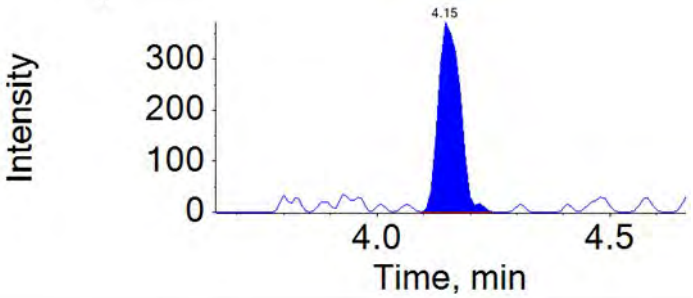
Component: 4:2-FTS_2
Secondary Mass: 327.0 / 81.0



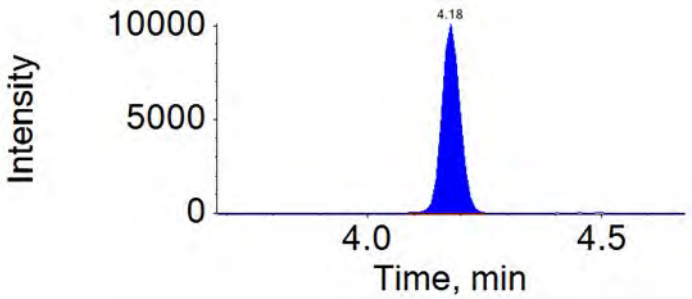
Component: PFHxA
Primary Mass: 313.0 / 269.0



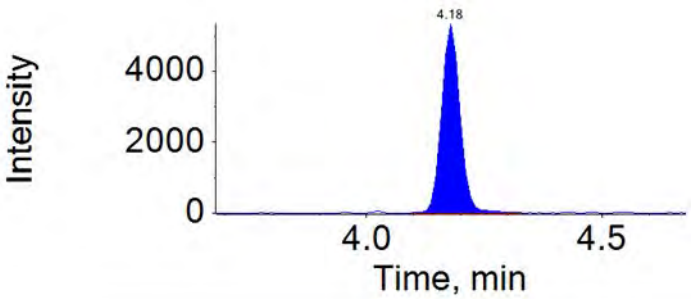
Component: PFHxA_2
Secondary Mass: 313.0 / 119.0



Component: PFPeS
Primary Mass: 349.0 / 80.0



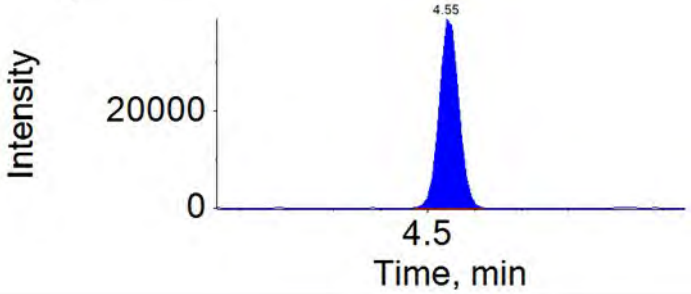
Component: PFPeS_2
Secondary Mass: 349.0 / 99.0



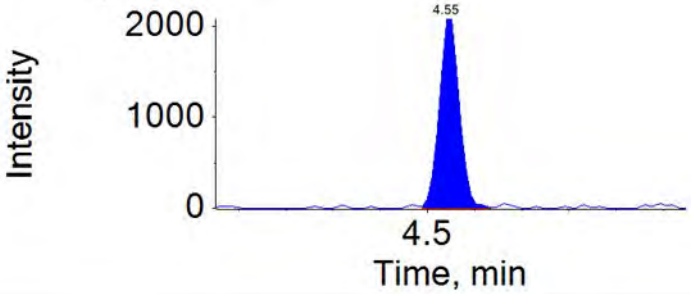
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

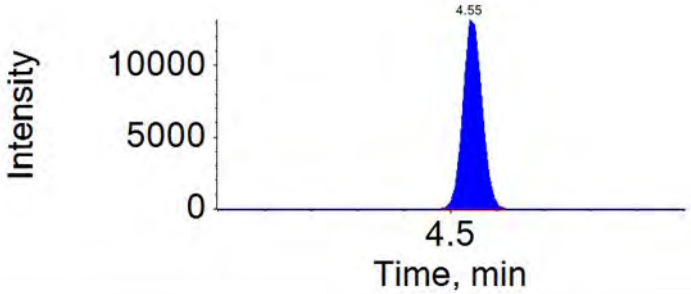
Component: PFHpA
Primary Mass: 363.0 / 319.0



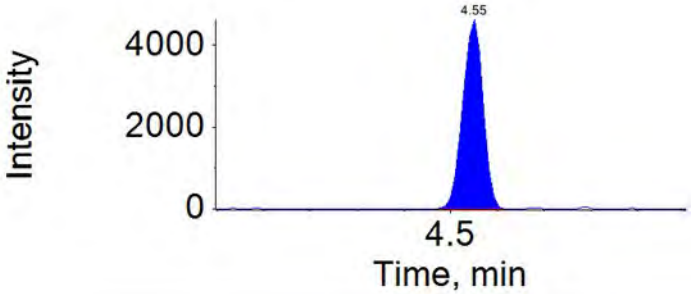
Component: PFHpA_2
Secondary Mass: 363.0 / 169.0



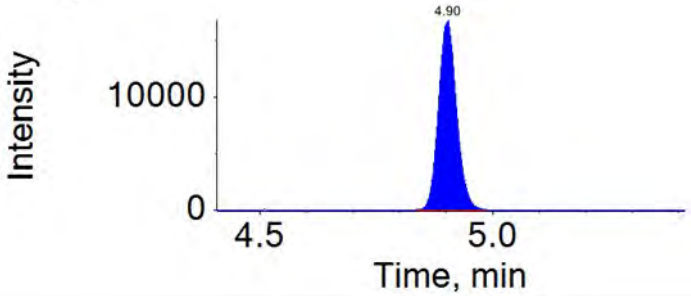
Component: PFHxS
Primary Mass: 399.0 / 80.0



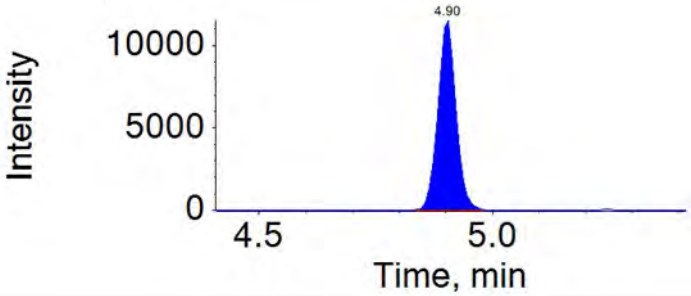
Component: PFHxS_2
Secondary Mass: 399.0 / 99.0



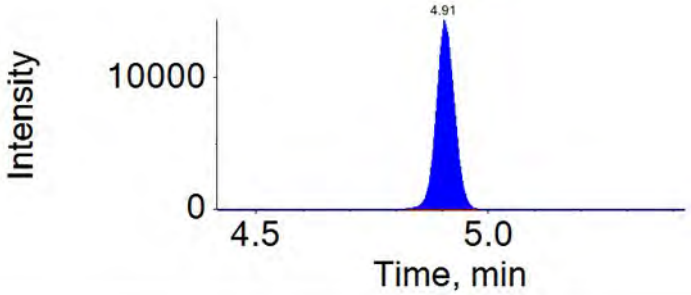
Component: 6:2-FTS
Primary Mass: 427.0 / 407.0



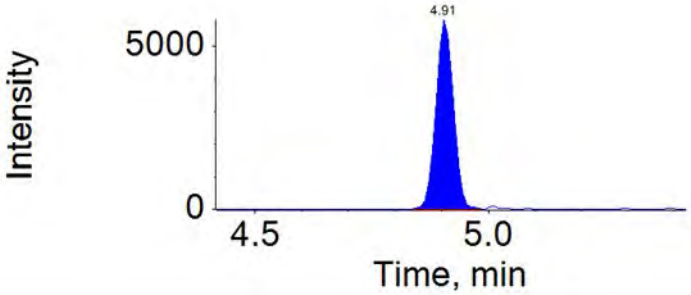
Component: 6:2-FTS_2
Secondary Mass: 427.0 / 81.0



Component: PFHpS
Primary Mass: 449.0 / 80.0



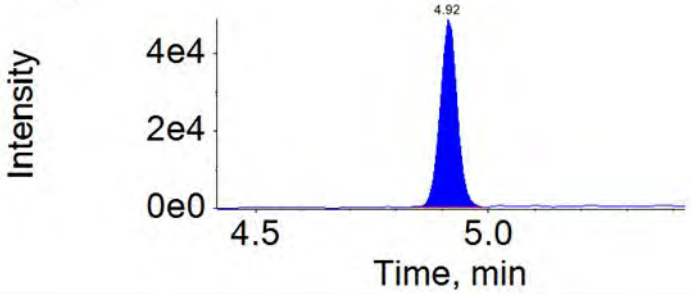
Component: PFHpS_2
Secondary Mass: 449.0 / 99.0



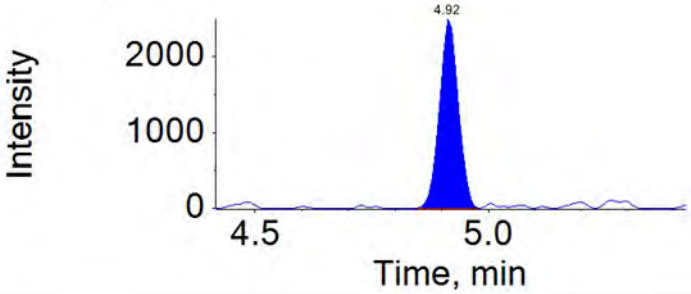
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

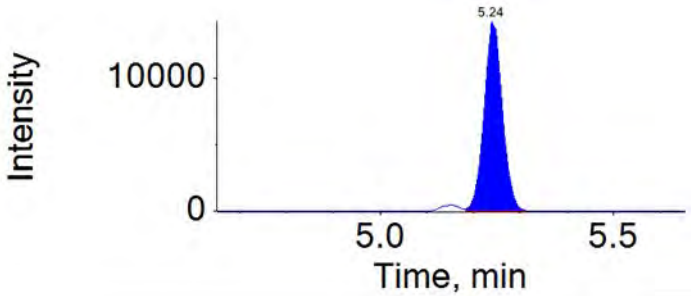
Component: PFOA
Primary Mass: 413.0 / 369.0



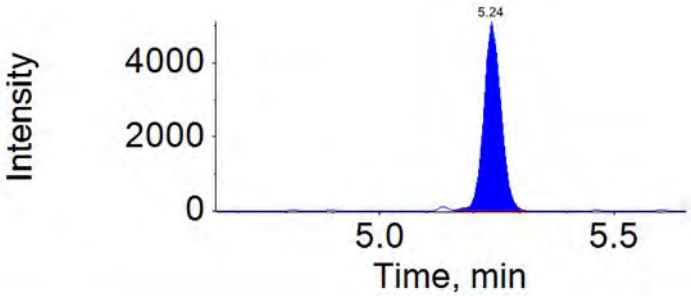
Component: PFOA_2
Secondary Mass: 413.0 / 169.0



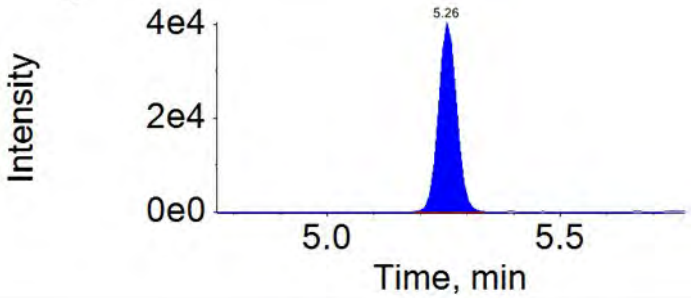
Component: PFOS
Primary Mass: 499.0 / 80.0



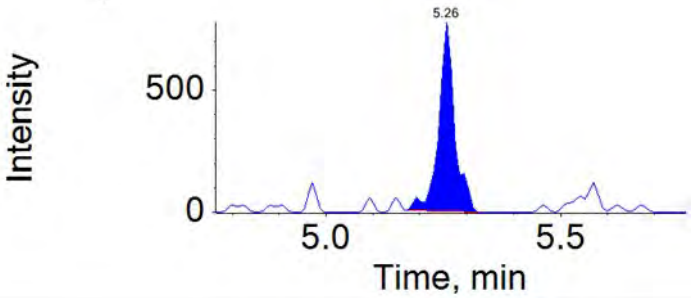
Component: PFOS_2
Secondary Mass: 499.0 / 99.0



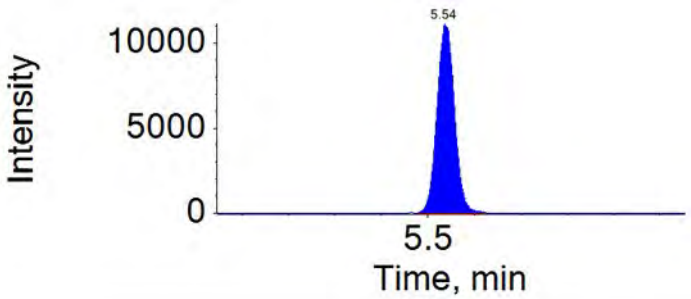
Component: PFNA
Primary Mass: 463.0 / 419.0



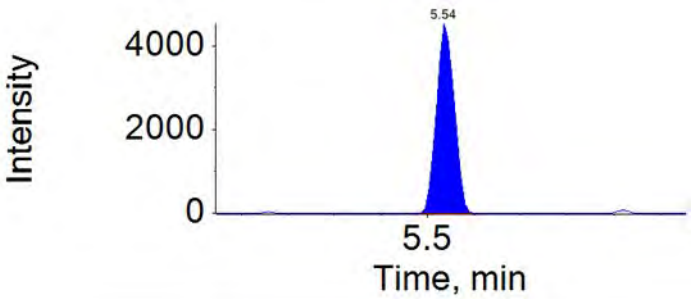
Component: PFNA_2
Secondary Mass: 463.0 / 169.0



Component: PFNS
Primary Mass: 549.0 / 80.0



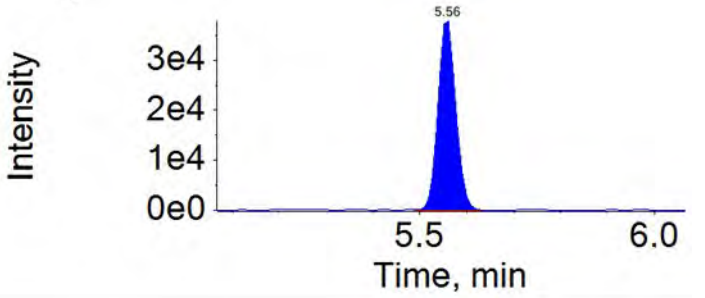
Component: PFNS_2
Secondary Mass: 549.0 / 99.0



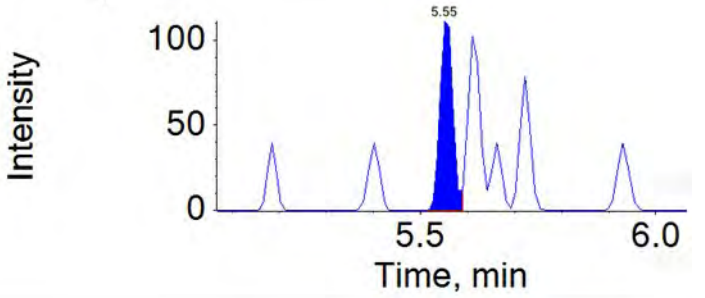
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

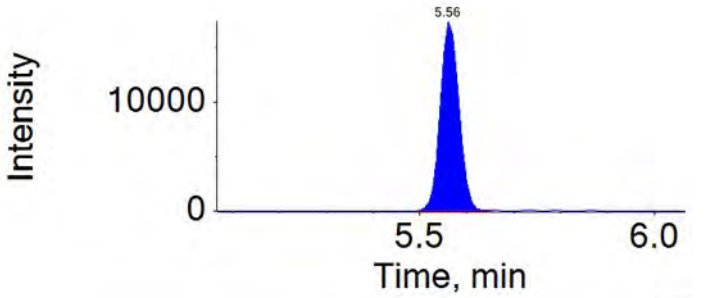
Component: PFDA
Primary Mass: 513.0 / 469.0



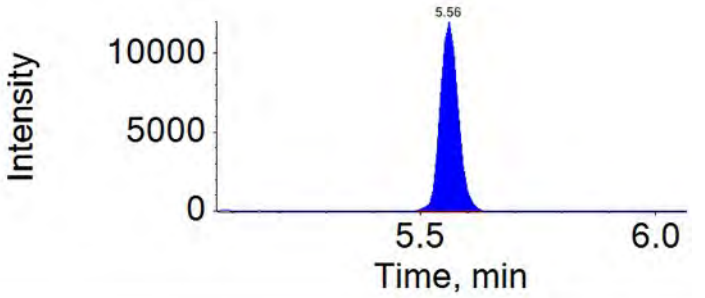
Component: PFDA_2
Secondary Mass: 513.0 / 169.0



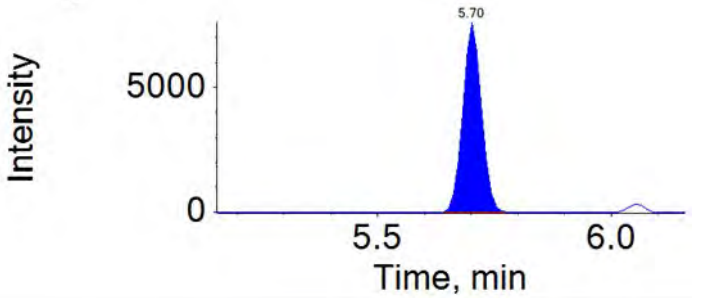
Component: 8:2-FTS
Primary Mass: 527.0 / 507.0



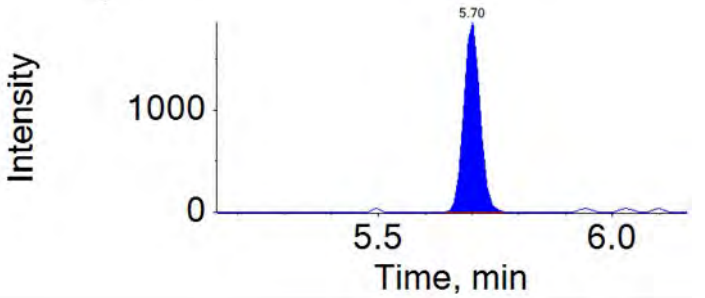
Component: 8:2-FTS_2
Secondary Mass: 527.0 / 81.0



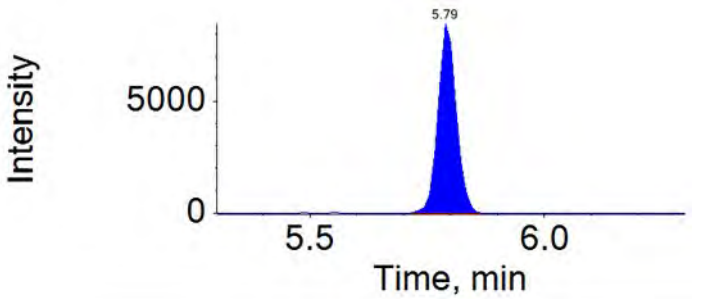
Component: NMeFOSAA
Primary Mass: 570.0 / 419.0



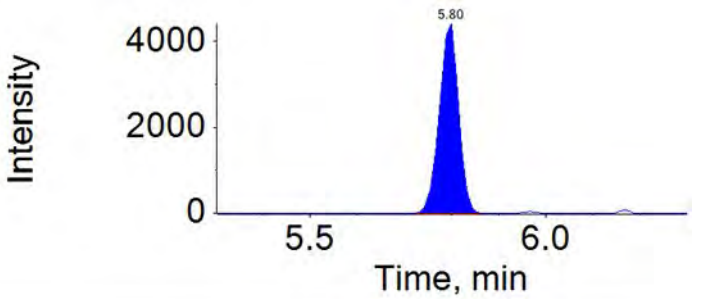
Component: NMeFOSAA_2
Secondary Mass: 570.0 / 483.0



Component: PFDS
Primary Mass: 599.0 / 80.0



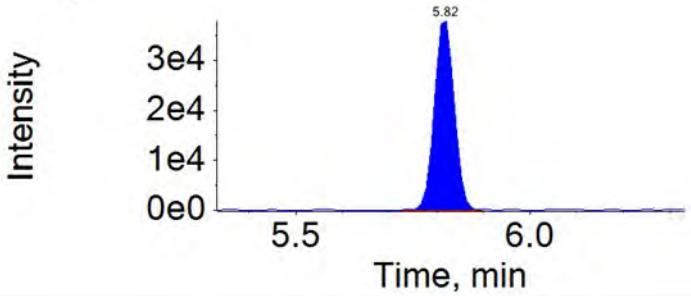
Component: PFDS_2
Secondary Mass: 599.0 / 99.0



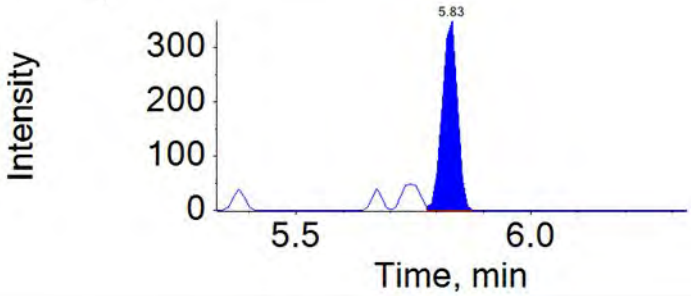
APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

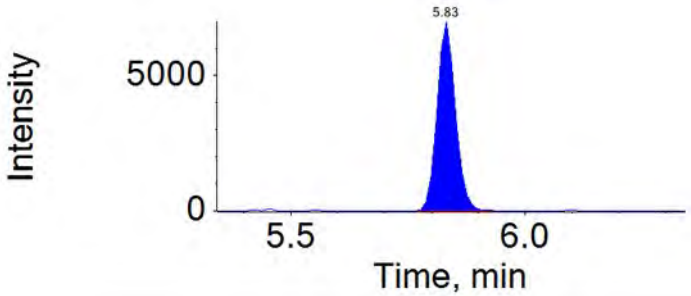
Component: PFUnDA
Primary Mass: 563.0 / 519.0



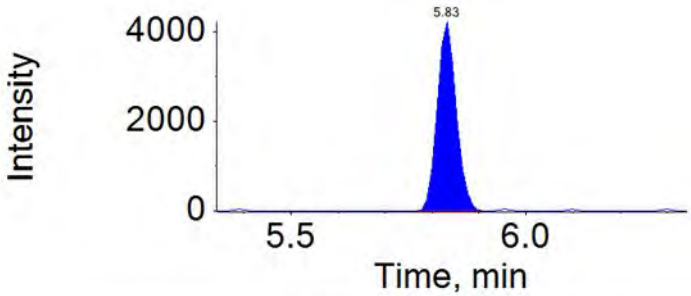
Component: PFUnDA_2
Secondary Mass: 563.0 / 169.0



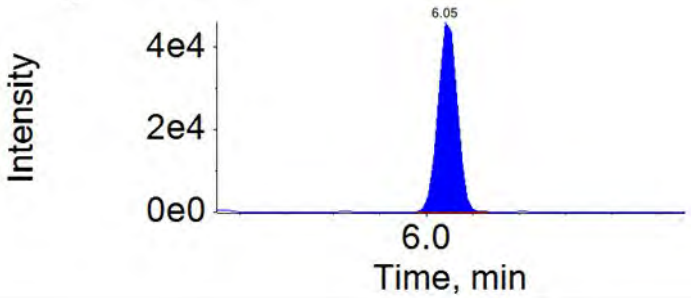
Component: NEtFOSAA
Primary Mass: 584.0 / 419.0



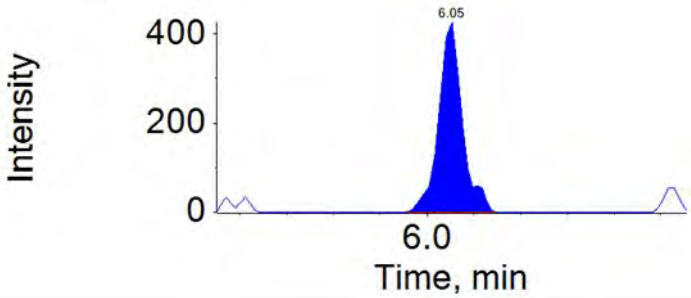
Component: NEtFOSAA_2
Secondary Mass: 584.0 / 526.0



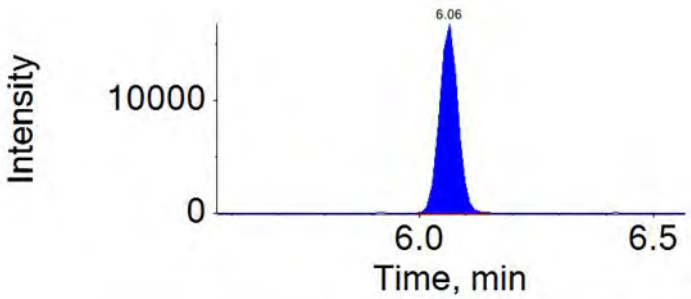
Component: PFDoDA
Primary Mass: 613.0 / 569.0



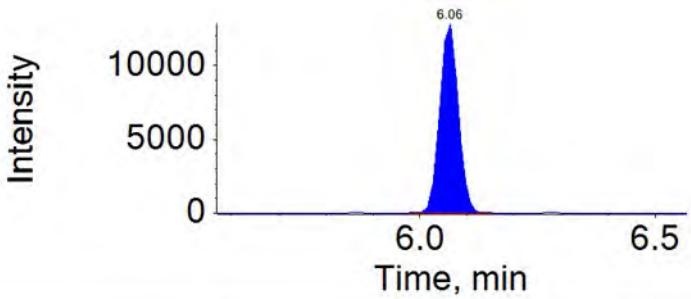
Component: PFDoDA_2
Secondary Mass: 613.0 / 169.0



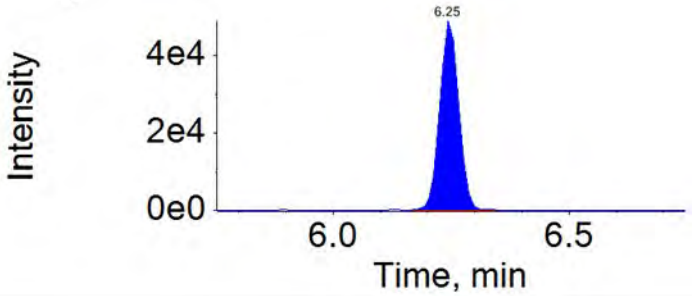
Component: 10:2-FTS
Primary Mass: 627.0 / 607.0



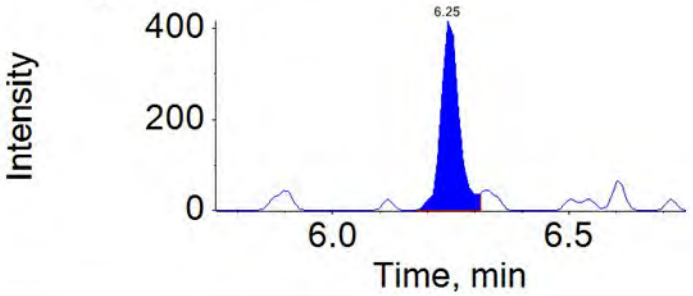
Component: 10:2-FTS_2
Secondary Mass: 627.0 / 81.0



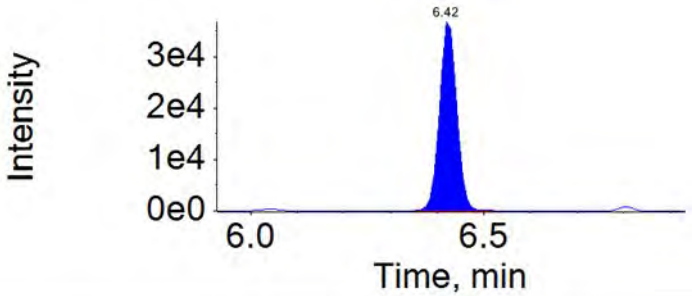
Component: PFTrDA
Primary Mass: 663.0 / 619.0



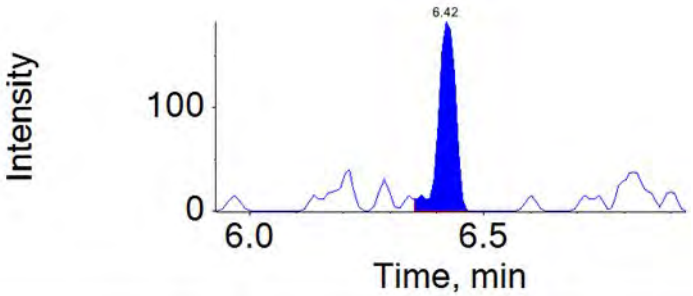
Component: PFTrDA_2
Secondary Mass: 663.0 / 169.0



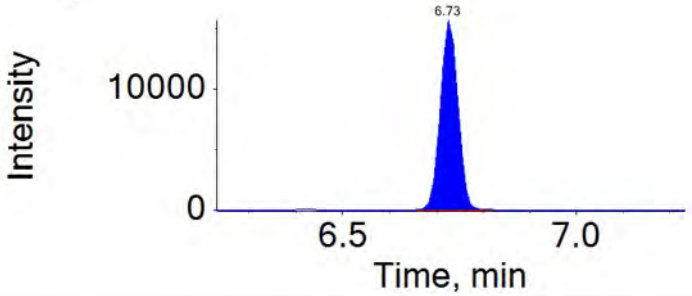
Component: PFTeDA
Primary Mass: 713.0 / 669.0



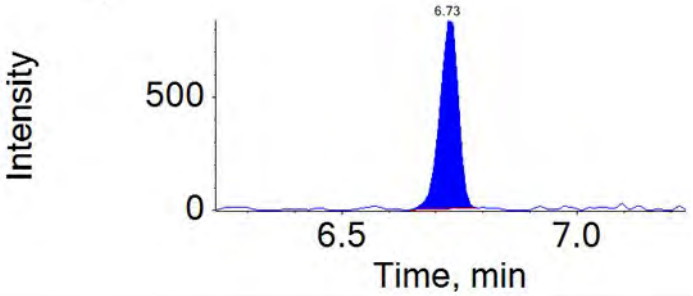
Component: PFTeDA_2
Secondary Mass: 713.0 / 169.0



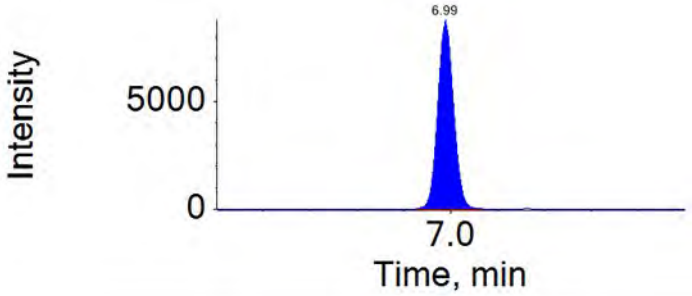
Component: PFHxDA
Primary Mass: 813.0 / 769.0



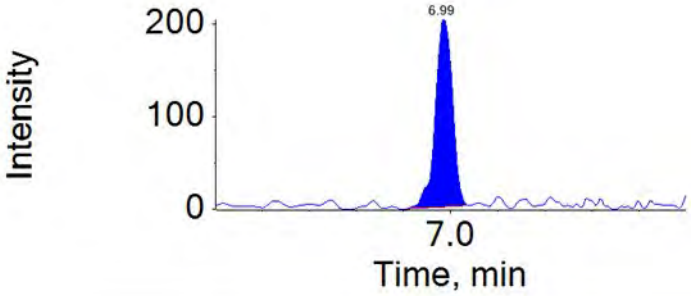
Component: PFHxDA_2
Secondary Mass: 813.0 / 169.0



Component: PFODA
Primary Mass: 913.0 / 869.0



Component: PFODA_2
Secondary Mass: 913.0 / 169.0



APPROVED
By MCD at 9:12 pm, 11/30/18

REVIEWED
By HMK at 1:40 pm, 12/6/18

Preparation Logs

PFAS by LC/MS/MS

Organic Extraction Batchlog Assigned to: 12698 Courtney Fatta Reviewed by: MCD 7824 Start Date: 11/05/18 Start time: 11:55

18309005

Tech 1: PJR9213 Tech 2: CF12698 (Spiked)

Analyses on Batch: PFAS in Soil by LC/MS/MS-DoD

Dept: 33 Prep Analysis: 14510 PFAS Solid Prep - DoD

3 mL CF12698 11/05/18

Port #	QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV ~~(uL)~~	IS Amt (uL)	BC	Comments
	9881938MS	9S105MS	1.02	SSMODX1833BX	.05	MSMODX1833AP	.04	1.0	20	170	
	BLANKA	BLK309005	1.0	SSMODX1833BX	.05	N/A	N/A	1.0			
	LCSA	LCS309005	1.0	SSMODX1833BX	.05	MSMODX1833AP	.04	1.0			
	LCSDA	LCSD309005	1.0	SSMODX1833BX	.05	MSMODX1833AP	.04	1.0			

Spike Solutions: Witness: PJR9213 Instrument: LM27631

MSMODX1833AP PFAS 537 Native Spike

SSMODX1833BX PFAS 537 Modified Extraction/Surrogate Spik

Sequence: 18NOV07DOD / 18NOV07D & 18NOV08D

3 mL

Port#		Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV ~~(uL)~~	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
	1	9881938	9S105	1.03	SSMODX1833BX	.05	1.0	20	170a		14478	11/13/2018	N
	2	9881939	9S110	1.02	SSMODX1833BX	.05	1.0		170a	Sand	14478	11/13/2018	N
	3	9881940	9S115	1.05	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	4	9881941	9S120	1.04	SSMODX1833BX	.05	1.0		170a	pebbles, Sand	14478	11/13/2018	N
	5	9881943	51721	1.06	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	6	9881944	51723	1.05	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	7	9881945	51725	1.08	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	8	9881946	51726	1.05	SSMODX1833BX	.05	1.0		170a	Sand	14478	11/13/2018	N
	9	9881949	51711	1.03	SSMODX1833BX	.05	1.0		170a	Sand	14478	11/13/2018	N
	10	9881950	51713	1.06	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	11	9881951	51715	1.07	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	12	9881952	51718	1.04	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	13	9881955	57351	1.05	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	14	9881956	57353	1.03	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	15	9881957	57355	1.04	SSMODX1833BX	.05	1.0		170a		14478	11/13/2018	N
	16	9881958	57358	1.01	SSMODX1833BX	.05	1.0		170a	pebbles	14478	11/13/2018	N

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18309005

Organic Extraction Batchlog **18309005**

③ mL

Port#		Sample #	Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	FV ~~(uL)~~	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
Z	17	9881961	57341	1.02	SSMODX1833BX	.05	1.0	20	170a		14478	11/13/2018	N
	18	9881962	57343	1.08	SSMODX1833BX	.05	1.0	↓	170a		14478	11/13/2018	N

Reagents used During Extraction

Reagent/Material/Equip	Lot No./ID No.
1:1 ACN:MEOH	1269810311833B
Auto-pipette (dilutions)	N/A JPT12262 11/8/18 N/A
Auto-pipette (extract vialin	P1000-1
Envi-Carb	107563
Internal Standard	IS1830933A
Methanol	DV013-US
Sand	MKBW7349V
Syringe (IS)	PFAS 11
Syringe (MS)	PFAS 10
Syringe (SS)	PFAS 13

CF12698 11/05/18

Balance #	B6297641122	Sonic Bath ID	3800A	N-evap	A	24°C	SPE Manifold	—

18309005

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

N/A JPT12262 11/8/18

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Organic Extraction Batchlog Assigned to: 25478 Danielle McCully Reviewed by: MCD 7824 Start Date: 11/27/18 Start time: 21:30

18331014 Tech 1: DDM25478 Tech 2: ACPZG543

Analyses on Batch: PFAS in Soil by LC/MS/MS-DoD

Dept: 33 Prep Analysis: 14510 PFAS Solid Prep - DoD ③ mi DDM25478 11/27/18

Port #	QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (uL) ③	IS Amt (uL)	BC	Comments
	9881899MS	73310MS	1.03	SSMODX1833CF	.05	MSMODX1833AU	.04	1.00	20	170a	
	BLANKA	BLK331014	1.00	SSMODX1833CF	.05			1.00			
N/A	LCSA	LCS331014	1.00	SSMODX1833CF	.05	MSMODX1833AU	.04	1.00		N/A	
	LCSDA	LCSD331014	1.00	SSMODX1833CF	.05	MSMODX1833AU	.04	1.00			

Spike Solutions: Witness: ACPZG543 Instrument: LM27631

MSMODX1833AU PFAS 537 Native Spike

SSMODX1833CF PFAS 537 Modified Extraction/Surrogate Spik Sequence: 18NOV28D0D/18NOV29D + 18DEC03D0D/18DEC04D

Port #		Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (uL) ③	IS Amt (uL)	BC	Comments	Analyses	Due	Pri
BS 1699	1	9881899	73310	1.04	SSMODX1833CF	.05	1.00	20	170a		14478	12/06/2018	N
	2	9881900	73312	1.04	SSMODX1833CF	.05	1.00		170a		14478	12/06/2018	N
	3	9881932	G1S10	1.06	SSMODX1833CF	.05	1.00		170a	⑤ D10	14478	12/06/2018	N
	4	9881933	BKG G1S12	1.06	SSMODX1833CF	.05	1.00		170a	⑤ D10	14478	12/06/2018	N
N/A	5	9881947	17210	1.09	SSMODX1833CF	.05	1.00		170a		14478	12/06/2018	N
	6	9881948	17212	1.06	SSMODX1833CF	.05	1.00		170a		14478	12/06/2018	N

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⑤ D10 prepared using 877 µL methanol, 100 µL sample, and 22.5 µL SSMODX1833CM. 400 µL sch internalized w 20 µL IS18332338.

MCD 7824 12/4/18

N/A MCD7824 12/5/18

18331014

Organic Extraction Batchlog **18331014**

Port#	Sample #	Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	FV (uL)	IS Amt (uL)	BC	Comments	Analyses	Due	Pri

Reagents used During Extraction

Reagent/Material/Equip	Lot No./ID No.
1:1 ACN:MEOH	213112718333a
Auto-pipette (dilutions)	P1000-3 + P100-2
Auto-pipette (extract vialin	P1000-3
Envi-Carb	③~~47324~~ 107563
Internal Standard	IS18331334
Methanol	DV013-GJ
Sand	MKBW7349V
Syringe (IS)	PFAS 22
Syringe (MS)	PFAS 10
Syringe (SS)	PFAS 13

③PJR9213 11/28/18

NPA MCD 7824 12/5/18

PJR9213 11/28/18

Balance #	B629764122	Sonic Bath ID	3800B	N-evap	C	35C	SPE Manifold	N/A

18331014

B = Blank D = Dilution Factor FV = Final Volume Documented temps are NIST corrected.

NPA MCD 7824 12/5/18

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Moisture Data

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
9881943	51721
9881944	51723
9881945	51725
9881946	51726
9881947	17210
9881948	17212
9881949	51711
9881950	51713
9881951	51715
9881952	51718
9881955	57351
9881956	57353
9881957	57355
9881958	57358
9881961	57341
9881962	57343

COMMENTS:

Method defined actions are taken for any failed matrix QC.

Laboratory Compliance Quality Control

Analysis Name		LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number:	18312820004A	Sample number(s):	9881943-9881946, 9881949-9881950			
Moisture		100		99-101		
Batch number:	18312820004B	Sample number(s):	9881951-9881952, 9881955-9881958, 9881961-9881962			
Moisture		100		99-101		
Batch number:	18337820002A	Sample number(s):	9881947-9881948			
Moisture		100		99-101		

MOISTURE

Sample Matrix Quality Control

Analysis Name		BKG Conc	DUP Conc	RPD	RPD Max
Batch number:	18312820004A	Sample number(s):	9881943-9881946, 9881949-9881950		
Moisture		7.0	6.6	5	5
Batch number:	18312820004B	Sample number(s):	9881951-9881952, 9881955-9881958, 9881961-9881962		
Moisture		16.5	17.3	5	5
Batch number:	18337820002A	Sample number(s):	9881947-9881948		
Moisture		13.1	12.6	3	5

* - Outside of specification

(1) - The result for one or both determinations was less than five times the LOQ.

Moisture Data Report

Batch #: 18312820004

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
9881943BKG	A	00111	1.0658	5.3727	6.0631	6.99	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881943DUP	A	00111	1.0652	5.3072	6.0200	6.64	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881944	A	00111	1.0763	5.1965	5.8844	7.47	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881945	A	00111	1.0626	5.1822	5.9492	5.70	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881946	A	00111	1.0685	5.5621	6.4506	3.24	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881949	A	00111	1.0716	5.2616	6.2738	1.13	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881950	A	00111	1.0863	5.1396	6.1718	1.05	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881951	B	00111	1.0728	5.2278	6.2522	0.93	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881952	B	00111	1.0860	5.2503	6.0926	4.64	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881955BKG	B	00111	1.0880	5.5883	5.7545	16.50	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881955DUP	B	00111	1.0473	5.5126	5.6051	17.32	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881956	B	00111	1.0825	5.4226	5.5473	17.66	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881957	B	00111	1.0790	5.3241	5.6635	13.89	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881958	B	00111	1.0812	5.7366	6.7360	1.43	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881961	B	00111	1.0663	5.9588	6.6774	5.84	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
9881962	B	00111	1.0654	5.7736	6.5473	5.05	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)
LCS 89.5% Std.		00111	1.0714	5.0619	1.6108	89.34	11/ 8/18 (835/LEB)	11/ 9/18 (236/CW)

Batch #: 18337820002

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
9881947	A	00111	1.0789	5.2956	6.2733	1.91	12/ 3/18 (835/LEB)	12/ 4/18 (236/CW)
9881948	A	00111	1.0819	5.2477	6.2504	1.51	12/ 3/18 (835/LEB)	12/ 4/18 (236/CW)
P881933BKG	A	00111	1.0793	5.1827	5.5848	13.07	12/ 3/18 (835/LEB)	12/ 4/18 (236/CW)
P881933DUP	A	00111	1.1053	5.1600	5.6134	12.63	12/ 3/18 (835/LEB)	12/ 4/18 (236/CW)
LCS 89.5% Std.		00111	1.0740	5.0698	1.6127	89.37	12/ 3/18 (835/LEB)	12/ 4/18 (236/CW)

CONTRACT_ID DO_CTO_NUMBER PHASE INSTALLATION_ID SAMPLE_NAME ANALYTICAL_METHOD LAB_NAME CONTRACTOR_NAME LEACHATE_METHOD SAMPLE_BASIS EXTRACTION_METHOD RESULT_TYPE SAMPLE_MEDIUM CLEANUP_METHOD QC_LEVEL LEACHATE_DATE LEACHATE_TIME EXTRACTION_DATE EXTRACTION_TIME ANALYSIS_DATE ANALYSIS_TIME LAB_SAMPLE_ID LAB_REPORT_DATE LAB_REPORT_NUMBER FILTER_SIZE DILUTION RUN_NUMBER PERCENT_MOISTURE PERCENT_LIPID ANALYTE_ID ANALYTE_VALUE ORIGINAL_ANALYTE_VALUE RESULT_UNITS LAB_QUALIFIER VALIDATOR_QUALIFIER FINAL_QUALIFIER DETECTED GC_COLUMN_TYPE ANALYSIS_RESULT_TYPE RADIOLOGICAL_ERROR RESULT_NARRATIVE RETENTION_TIME QC_CONTROL_LIMIT_CODE QC_ACCURACY_UPPER QC_ACCURACY_LOWER CONTROL_LIMIT_DATE RELATIVE_PCT_DIFF QC_NARRATIVE MDL CDL IDL PQL CRQL DETECTION_LIMIT VALIDATOR_DET_LIMIT VALIDATOR_MDL DL LOD LOQ SDG LEACH_LOT METHOD_BATCH PREP_BATCH RUN_BATCH ANALYSIS_BATCH VALIDATOR_NAME VALIDATION_QC VAL_DATE REPORTABLE_RESULT

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 Calculation EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108 13:07:00 9881943 20190118 2005362 0.00 1 1 7 -86 7.0 7.0 PCT Y TRG 0.50 0.50 0.50 0.50 0.50 BSI09 18312820004A 18312820004A 18312820004A Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105 11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 335-67-1 1.1 1.1 NG_G Y TRG 0.20 0.20 0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105 11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 375-95-1 0.69 0 NG_G U N TRG 0.20 0.20 0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105 11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 335-76-2 0.69 0 NG_G U N TRG 0.30 0.30 0.30 0.69 1.0 BSI09 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105 11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 2058-94-8 0.69 0 NG_G U N TRG 0.20 0.20 0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105 11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 307-55-1 0.69 0 NG_G U N TRG 0.20 0.20 0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105 11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 72629-94-8 0.69 0 NG_G U N TRG 0.20

0.20 0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 376-06-7
0.69 0 NG_G U N TRG 0.20
0.20 0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 307-24-4
0.27 0.27 NG_G J Y TRG 0.20
0.20 0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 375-85-9
0.69 0 NG_G U N TRG 0.20
0.20 0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 375-73-5
0.61 0 NG_G U N TRG 0.20
0.20 0.20 0.61 0.81 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 355-46-4
0.69 0.69 NG_G J Y TRG 0.20
0.20 0.20 0.65 0.81 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 1763-23-1
16 16 NG_G Y TRG 0.20
0.20 0.20 0.66 0.81 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 2991-50-6
2.0 0 NG_G U N TRG 0.51
0.51 0.51 2.0 3.0 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:30:00 9881943 20190118 2005362 0.00 1 1 7 2355-31-9
2.0 0 NG_G U N TRG 0.51
0.51 0.51 2.0 3.0 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881944 20190118 2005362 0.00 1 1 7.5 -86 7.5 7.5 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50

BSI09 18312820004A 18312820004A 18312820004A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 335-67-1
4.4 4.4 NG_G Y TRG 0.21
0.21 0.21 0.70 0.82 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 375-95-1
0.70 0 NG_G U N TRG 0.21
0.21 0.21 0.70 0.82 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 335-76-2
0.70 0 NG_G U N TRG 0.31
0.31 0.31 0.70 1.0 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 2058-94-8
0.70 0 NG_G U N TRG 0.21
0.21 0.21 0.70 0.82 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 307-55-1
0.70 0 NG_G U N TRG 0.21
0.21 0.21 0.70 0.82 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 72629-94-8
0.70 0 NG_G U N TRG 0.21
0.21 0.21 0.70 0.82 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 376-06-7
0.70 0 NG_G U N TRG 0.21
0.21 0.21 0.70 0.82 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 307-24-4
0.39 0.39 NG_G J Y TRG 0.21
0.21 0.21 0.70 0.82 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 375-85-9
0.70 0 NG_G U N TRG 0.21
0.21 0.21 0.70 0.82 BSI09 18309005 18309005 18309005 18309005

Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 375-73-5
0.62 0 NG_G U N TRG 0.21
0.21 0.21 0.62 0.82 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 355-46-4
1.7 1.7 NG_G Y TRG 0.21
0.21 0.21 0.66 0.82 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 1763-23-1
0.67 0 NG_G U N TRG 0.21
0.21 0.21 0.67 0.82 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 2991-50-6
2.1 0 NG_G U N TRG 0.51
0.51 0.51 2.1 3.1 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 14:39:00 9881944 20190118 2005362 0.00 1 1 7.5 2355-31-9
2.1 0 NG_G U N TRG 0.51
0.51 0.51 2.1 3.1 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881945 20190118 2005362 0.00 1 1 5.7 -86 5.7 5.7 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50
BSI09 18312820004A 18312820004A 18312820004A Y
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1.3 1.3 NG_G Y TRG 0.20
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Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
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11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 375-95-1
0.67 0 NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 335-76-2
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0.29 0.29 0.67 0.98 BSI09 18309005 18309005 18309005 18309005
Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 2058-94-8
0.67 0 NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 307-55-1
0.67 0 NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 72629-94-8
0.67 0 NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 376-06-7
0.67 0 NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 307-24-4
0.53 0.53 NG_G J Y TRG 0.20
0.20 0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 375-85-9
0.67 0 NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 375-73-5
0.59 0 NG_G U N TRG 0.20
0.20 0.20 0.59 0.79 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 355-46-4
0.67 0.67 NG_G J Y TRG 0.20
0.20 0.20 0.63 0.79 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 1763-23-1
0.64 0 NG_G U N TRG 0.20
0.20 0.20 0.64 0.79 BSI09 18309005 18309005 18309005 18309005
Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 2991-50-6
2.0 0 NG_G U N TRG 0.49
0.49 0.49 2.0 2.9 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:42:00 9881945 20190118 2005362 0.00 1 1 5.7 2355-31-9
2.0 0 NG_G U N TRG 0.49
0.49 0.49 2.0 2.9 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881946 20190118 2005362 0.00 1 1 3.2 -86 3.2 3.2 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50
BSI09 18312820004A 18312820004A 18312820004A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 335-67-1
1.4 1.4 NG_G Y TRG 0.20
0.20 0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 375-95-1
0.67 0 NG_G U N TRG 0.20
0.20 0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 335-76-2 0.67 0
NG_G U N TRG 0.30 0.30
0.30 0.67 0.98 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 2058-94-8 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 307-55-1 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 72629-94-8 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 376-06-7 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 307-24-4 0.38 0.38
NG_G J Y TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 375-85-9 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 375-73-5 0.59 0
NG_G U N TRG 0.20 0.20
0.20 0.59 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 355-46-4 0.75 0.75
NG_G J Y TRG 0.20 0.20
0.20 0.63 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 1763-23-1 0.29 0.29
NG_G J Y TRG 0.20 0.20
0.20 0.64 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 12:51:00 9881946 20190118 2005362 0.00 1 1 3.2 2991-50-6 2.0 0
NG_G U N TRG 0.49 0.49
0.49 2.0 3.0 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-6.5 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
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NG_G U N TRG 0.49 0.49
0.49 2.0 3.0 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181203
10:37:00 9881947 20190118 2005362 0.00 1 1 1.9 -86 1.9 1.9 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI09 18337820002A 18337820002A
18337820002A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 335-67-1 0.26 0.26
NG_G J Y TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 375-95-1 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 335-76-2 0.64 0
NG_G U N TRG 0.28 0.28

0.28 0.64 0.94 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 2058-94-8 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 307-55-1 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 72629-94-8 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 376-06-7 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 307-24-4 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 375-85-9 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 375-73-5 0.56 0
NG_G U N TRG 0.19 0.19
0.19 0.56 0.75 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 355-46-4 0.60 0
NG_G U N TRG 0.19 0.19
0.19 0.60 0.75 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 1763-23-1 0.61 0
NG_G U N TRG 0.19 0.19
0.19 0.61 0.75 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 2991-50-6 1.9 0
NG_G U N TRG 0.47 0.47
0.47 1.9 2.8 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-10 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:19:00 9881947 20190118 2005362 0.00 1 1 1.9 2355-31-9 1.9 0

NG_G U N TRG 0.47 0.47
0.47 1.9 2.8 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181203
10:37:00 9881948 20190118 2005362 0.00 1 1 1.5 -86 1.5 1.5 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI09 18337820002A 18337820002A
18337820002A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 335-67-1 0.35 0.35
NG_G J Y TRG 0.19 0.19
0.19 0.65 0.77 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 375-95-1 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 335-76-2 0.65 0
NG_G U N TRG 0.29 0.29
0.29 0.65 0.96 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 2058-94-8 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 307-55-1 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 72629-94-8 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 376-06-7 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 307-24-4 0.20 0.20
NG_G J Y TRG 0.19 0.19
0.19 0.65 0.77 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 375-85-9 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.77 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127

21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 375-73-5 0.57 0
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0.19 0.57 0.77 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 355-46-4 0.61 0
NG_G U N TRG 0.19 0.19
0.19 0.61 0.77 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 1763-23-1 0.62 0
NG_G U N TRG 0.19 0.19
0.19 0.62 0.77 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 2991-50-6 1.9 0
NG_G U N TRG 0.48 0.48
0.48 1.9 2.9 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-02-12 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181127
21:30:00 20181129 17:28:00 9881948 20190118 2005362 0.00 1 1 1.5 2355-31-9 1.9 0
NG_G U N TRG 0.48 0.48
0.48 1.9 2.9 BSI09 18331014 18331014 18331014 18331014 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881949 20190118 2005362 0.00 1 1 1.1 -86 1.1 1.1 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI09 18312820004A 18312820004A
18312820004A Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 335-67-1 2.5 2.5
NG_G Y TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 375-95-1 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 335-76-2 0.67 0
NG_G U N TRG 0.29 0.29
0.29 0.67 0.98 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 2058-94-8 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 307-55-1 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD

EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 72629-94-8 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 376-06-7 0.67 0
NG_G U N TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 307-24-4 0.81 0.81
NG_G Y TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 375-85-9 0.33 0.33
NG_G J Y TRG 0.20 0.20
0.20 0.67 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 375-73-5 0.59 0
NG_G U N TRG 0.20 0.20
0.20 0.59 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 355-46-4 0.62 0.62
NG_G J Y TRG 0.20 0.20
0.20 0.63 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 1763-23-1 4.2 4.2
NG_G Y TRG 0.20 0.20
0.20 0.64 0.79 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 2991-50-6 2.0 0
NG_G U N TRG 0.49 0.49
0.49 2.0 2.9 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:00:00 9881949 20190118 2005362 0.00 1 1 1.1 2355-31-9 2.0 0
NG_G U N TRG 0.49 0.49
0.49 2.0 2.9 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881950 20190118 2005362 0.00 1 1 1.1 -86 1.1 1.1 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI09 18312820004A 18312820004A
18312820004A Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 335-67-1 0.22 0.22
NG_G J Y TRG 0.19 0.19
0.19 0.65 0.76 BSI09 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 375-95-1 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 335-76-2 0.65 0
NG_G U N TRG 0.29 0.29
0.29 0.65 0.95 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 2058-94-8 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 307-55-1 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 72629-94-8 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 376-06-7 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 307-24-4 0.28 0.28
NG_G J Y TRG 0.19 0.19
0.19 0.65 0.76 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 375-85-9 0.65 0
NG_G U N TRG 0.19 0.19
0.19 0.65 0.76 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 375-73-5 0.57 0
NG_G U N TRG 0.19 0.19
0.19 0.57 0.76 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 355-46-4 0.61 0
NG_G U N TRG 0.19 0.19
0.19 0.61 0.76 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 1763-23-1 0.62 0
NG_G U N TRG 0.19 0.19

0.19 0.62 0.76 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 2991-50-6 1.9 0
NG_G U N TRG 0.48 0.48
0.48 1.9 2.9 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:09:00 9881950 20190118 2005362 0.00 1 1 1.1 2355-31-9 1.9 0
NG_G U N TRG 0.48 0.48
0.48 1.9 2.9 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881951 20190118 2005362 0.00 1 1 0.93 -86 0.93 0.93 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI09 18312820004B 18312820004B
18312820004B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 335-67-1 0.34 0.34
NG_G J Y TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 375-95-1 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 335-76-2 0.64 0
NG_G U N TRG 0.28 0.28
0.28 0.64 0.94 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 2058-94-8 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 307-55-1 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 72629-94-8 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 376-06-7 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 307-24-4 0.24 0.24

NG_G J Y TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 375-85-9 0.64 0
NG_G U N TRG 0.19 0.19
0.19 0.64 0.75 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 375-73-5 0.57 0
NG_G U N TRG 0.19 0.19
0.19 0.57 0.75 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 355-46-4 0.60 0
NG_G U N TRG 0.19 0.19
0.19 0.60 0.75 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 1763-23-1 0.49 0.49
NG_G J Y TRG 0.19 0.19
0.19 0.61 0.75 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 2991-50-6 1.9 0
NG_G U N TRG 0.47 0.47
0.47 1.9 2.8 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:18:00 9881951 20190118 2005362 0.00 1 1 0.93 2355-31-9 1.9 0
NG_G U N TRG 0.47 0.47
0.47 1.9 2.8 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881952 20190118 2005362 0.00 1 1 4.6 -86 4.6 4.6 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI09 18312820004B 18312820004B
18312820004B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:27:00 9881952 20190118 2005362 0.00 1 1 4.6 335-67-1 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:27:00 9881952 20190118 2005362 0.00 1 1 4.6 375-95-1 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:27:00 9881952 20190118 2005362 0.00 1 1 4.6 335-76-2 0.69 0
NG_G U N TRG 0.30 0.30
0.30 0.69 1.0 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105

11:55:00 20181108 13:27:00 9881952 20190118 2005362 0.00 1 1 4.6 2058-94-8 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:27:00 9881952 20190118 2005362 0.00 1 1 4.6 307-55-1 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:27:00 9881952 20190118 2005362 0.00 1 1 4.6 72629-94-8 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:27:00 9881952 20190118 2005362 0.00 1 1 4.6 376-06-7 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:27:00 9881952 20190118 2005362 0.00 1 1 4.6 307-24-4 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:27:00 9881952 20190118 2005362 0.00 1 1 4.6 375-85-9 0.69 0
NG_G U N TRG 0.20 0.20
0.20 0.69 0.81 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:27:00 9881952 20190118 2005362 0.00 1 1 4.6 375-73-5 0.60 0
NG_G U N TRG 0.20 0.20
0.20 0.60 0.81 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:27:00 9881952 20190118 2005362 0.00 1 1 4.6 355-46-4
0.65 0 NG_G U N TRG 0.20
0.20 0.20 0.65 0.81 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
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0.66 0 NG_G U N TRG 0.20
0.20 0.20 0.66 0.81 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
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0.50 0.50 2.0 3.0 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-CAOC1517-S-01-08 537_MOD
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11:55:00 20181108 13:27:00 9881952 20190118 2005362 0.00 1 1 4.6 2355-31-9

2.0 0 NG_G U N TRG 0.50
0.50 0.50 2.0 3.0 BSI09 18309005 18309005 18309005 18309005
Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881955 20190118 2005362 0.00 1 1 16.5 -86 16.5 16.5 PCT Y
TRG 0.50 0.50 0.50 0.50 0.50 BSI09
18312820004B 18312820004B 18312820004B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 335-67-1 0.78 0
NG_G U N TRG 0.23 0.23
0.23 0.78 0.91 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 375-95-1 0.78 0
NG_G U N TRG 0.23 0.23
0.23 0.78 0.91 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 335-76-2 0.78 0
NG_G U N TRG 0.34 0.34
0.34 0.78 1.1 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 2058-94-8 0.78 0
NG_G U N TRG 0.23 0.23
0.23 0.78 0.91 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 307-55-1 0.78 0
NG_G U N TRG 0.23 0.23
0.23 0.78 0.91 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 72629-94-8 0.78 0
NG_G U N TRG 0.23 0.23
0.23 0.78 0.91 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 376-06-7 0.78 0
NG_G U N TRG 0.23 0.23
0.23 0.78 0.91 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 307-24-4 0.27 0.27
NG_G J Y TRG 0.23 0.23
0.23 0.78 0.91 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 375-85-9 0.78 0
NG_G U N TRG 0.23 0.23
0.23 0.78 0.91 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD

EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 375-73-5 0.68 0
NG_G U N TRG 0.23 0.23
0.23 0.68 0.91 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 355-46-4 0.73 0
NG_G U N TRG 0.23 0.23
0.23 0.73 0.91 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 1763-23-1 0.50 0.50
NG_G J Y TRG 0.23 0.23
0.23 0.74 0.91 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 2991-50-6 2.3 0
NG_G U N TRG 0.57 0.57
0.57 2.3 3.4 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:36:00 9881955 20190118 2005362 0.00 1 1 16.5 2355-31-9 2.3 0
NG_G U N TRG 0.57 0.57
0.57 2.3 3.4 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881956 20190118 2005362 0.00 1 1 17.7 -86 17.7 17.7 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI09 18312820004B 18312820004B
18312820004B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 335-67-1 0.80 0
NG_G U N TRG 0.24 0.24
0.24 0.80 0.94 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 375-95-1 0.80 0
NG_G U N TRG 0.24 0.24
0.24 0.80 0.94 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 335-76-2 0.80 0
NG_G U N TRG 0.35 0.35
0.35 0.80 1.2 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 2058-94-8 0.80 0
NG_G U N TRG 0.24 0.24
0.24 0.80 0.94 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 307-55-1 0.80 0
NG_G U N TRG 0.24 0.24
0.24 0.80 0.94 BSI09 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 72629-94-8 0.80 0
NG_G U N TRG 0.24 0.24
0.24 0.80 0.94 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 376-06-7 0.80 0
NG_G U N TRG 0.24 0.24
0.24 0.80 0.94 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 307-24-4 0.80 0
NG_G U N TRG 0.24 0.24
0.24 0.80 0.94 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 375-85-9 0.80 0
NG_G U N TRG 0.24 0.24
0.24 0.80 0.94 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 375-73-5 0.71 0
NG_G U N TRG 0.24 0.24
0.24 0.71 0.94 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 355-46-4 0.75 0
NG_G U N TRG 0.24 0.24
0.24 0.75 0.94 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 1763-23-1 0.77 0
NG_G U N TRG 0.24 0.24
0.24 0.77 0.94 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 2991-50-6 2.4 0
NG_G U N TRG 0.59 0.59
0.59 2.4 3.5 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:45:00 9881956 20190118 2005362 0.00 1 1 17.7 2355-31-9 2.4 0
NG_G U N TRG 0.59 0.59
0.59 2.4 3.5 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881957 20190118 2005362 0.00 1 1 13.9 -86 13.9 13.9 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI09 18312820004B 18312820004B
18312820004B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 335-67-1 0.76 0
NG_G U N TRG 0.22 0.22

0.22 0.76 0.89 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 375-95-1 0.76 0
NG_G U N TRG 0.22 0.22
0.22 0.76 0.89 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 335-76-2 0.76 0
NG_G U N TRG 0.34 0.34
0.34 0.76 1.1 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 2058-94-8 0.76 0
NG_G U N TRG 0.22 0.22
0.22 0.76 0.89 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 307-55-1 0.76 0
NG_G U N TRG 0.22 0.22
0.22 0.76 0.89 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 72629-94-8 0.76 0
NG_G U N TRG 0.22 0.22
0.22 0.76 0.89 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 376-06-7 0.76 0
NG_G U N TRG 0.22 0.22
0.22 0.76 0.89 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 307-24-4 0.76 0
NG_G U N TRG 0.22 0.22
0.22 0.76 0.89 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 375-85-9 0.76 0
NG_G U N TRG 0.22 0.22
0.22 0.76 0.89 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 375-73-5 0.67 0
NG_G U N TRG 0.22 0.22
0.22 0.67 0.89 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 355-46-4 0.71 0
NG_G U N TRG 0.22 0.22
0.22 0.71 0.89 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 1763-23-1 0.73 0

NG_G U N TRG 0.22 0.22
0.22 0.73 0.89 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 2991-50-6 2.2 0
NG_G U N TRG 0.56 0.56
0.56 2.2 3.4 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-05 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 13:54:00 9881957 20190118 2005362 0.00 1 1 13.9 2355-31-9 2.2 0
NG_G U N TRG 0.56 0.56
0.56 2.2 3.4 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881958 20190118 2005362 0.00 1 1 1.4 -86 1.4 1.4 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI09 18312820004B 18312820004B
18312820004B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 335-67-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 375-95-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 335-76-2 0.68 0
NG_G U N TRG 0.30 0.30
0.30 0.68 1.0 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 2058-94-8 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 307-55-1 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 72629-94-8 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 376-06-7 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105

11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 307-24-4 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 375-85-9 0.68 0
NG_G U N TRG 0.20 0.20
0.20 0.68 0.80 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 375-73-5 0.60 0
NG_G U N TRG 0.20 0.20
0.20 0.60 0.80 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 355-46-4 0.64 0
NG_G U N TRG 0.20 0.20
0.20 0.64 0.80 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 1763-23-1 0.65 0
NG_G U N TRG 0.20 0.20
0.20 0.65 0.80 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 2991-50-6 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-05-08 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181108 14:03:00 9881958 20190118 2005362 0.00 1 1 1.4 2355-31-9 2.0 0
NG_G U N TRG 0.50 0.50
0.50 2.0 3.0 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881961 20190118 2005362 0.00 1 1 5.8 -86 5.8 5.8 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI09 18312820004B 18312820004B
18312820004B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 335-67-1 6.9 6.9
NG_G Y TRG 0.21 0.21
0.21 0.71 0.83 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 375-95-1 0.47 0.47
NG_G J Y TRG 0.21 0.21
0.21 0.71 0.83 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 335-76-2 0.71 0
NG_G U N TRG 0.31 0.31
0.31 0.71 1.0 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD

EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 2058-94-8 0.71 0
NG_G U N TRG 0.21 0.21
0.21 0.71 0.83 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 307-55-1 0.71 0
NG_G U N TRG 0.21 0.21
0.21 0.71 0.83 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 72629-94-8 0.71 0
NG_G U N TRG 0.21 0.21
0.21 0.71 0.83 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 376-06-7 0.71 0
NG_G U N TRG 0.21 0.21
0.21 0.71 0.83 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 307-24-4 1.7 1.7
NG_G Y TRG 0.21 0.21
0.21 0.71 0.83 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 375-85-9 2.6 2.6
NG_G Y TRG 0.21 0.21
0.21 0.71 0.83 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 375-73-5 0.62 0
NG_G U N TRG 0.21 0.21
0.21 0.62 0.83 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 355-46-4 0.67 0
NG_G U N TRG 0.21 0.21
0.21 0.67 0.83 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 1763-23-1 2.5 2.5
NG_G Y TRG 0.21 0.21
0.21 0.68 0.83 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 2991-50-6 2.1 0
NG_G U N TRG 0.52 0.52
0.52 2.1 3.1 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-01 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:43:00 9881961 20190118 2005362 0.00 1 1 5.8 2355-31-9 2.1 0
NG_G U N TRG 0.52 0.52
0.52 2.1 3.1 BSI09 18309005 18309005 18309005 18309005 Y

N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 Calculation
EUROFINS BRADY GCE II NONE Wet NONE 000 S UNK 20181108
13:07:00 9881962 20190118 2005362 0.00 1 1 5.1 -86 5.1 5.1 PCT Y TRG
0.50 0.50 0.50 0.50 0.50 BSI09 18312820004B 18312820004B
18312820004B Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 335-67-1 0.66 0
NG_G U N TRG 0.20 0.20
0.20 0.66 0.78 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 375-95-1 0.66 0
NG_G U N TRG 0.20 0.20
0.20 0.66 0.78 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 335-76-2 0.66 0
NG_G U N TRG 0.29 0.29
0.29 0.66 0.98 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 2058-94-8 0.66 0
NG_G U N TRG 0.20 0.20
0.20 0.66 0.78 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 307-55-1 0.66 0
NG_G U N TRG 0.20 0.20
0.20 0.66 0.78 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 72629-94-8 0.66 0
NG_G U N TRG 0.20 0.20
0.20 0.66 0.78 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 376-06-7 0.66 0
NG_G U N TRG 0.20 0.20
0.20 0.66 0.78 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 307-24-4 2.7 2.7
NG_G Y TRG 0.20 0.20
0.20 0.66 0.78 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 375-85-9 0.25 0.25
NG_G J Y TRG 0.20 0.20
0.20 0.66 0.78 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 375-73-5 0.59 0
NG_G U N TRG 0.20 0.20

0.20 0.59 0.78 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 355-46-4 0.62 0
NG_G U N TRG 0.20 0.20
0.20 0.62 0.78 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 1763-23-1 0.63 0
NG_G U N TRG 0.20 0.20
0.20 0.63 0.78 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 2991-50-6 2.0 0
NG_G U N TRG 0.49 0.49
0.49 2.0 2.9 BSI09 18309005 18309005 18309005 18309005 Y
N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB OU1-BLDG573-S-04-03 537_MOD
EUROFINS BRADY GCE II NONE Dry METHOD 000 S UNK 20181105
11:55:00 20181107 20:52:00 9881962 20190118 2005362 0.00 1 1 5.1 2355-31-9 2.0 0
NG_G U N TRG 0.49 0.49
0.49 2.0 2.9 BSI09 18309005 18309005 18309005 18309005 Y
SAMPLE_NAME CONTRACT_ID DO_CTO_NUMBER PHASE INSTALLATION_ID SITE_NAME
LOCATION_NAME SPECIMEN_NAME BIOLOGICAL_CLASS SEX AGE_CLASS EXCAVATION_NAME
PARENT_SAMPLE_NAME SAMPLE_MATRIX SAMPLE_TYPE SAMPLING_EQUIPMENT
PROJECT_PHASE COMPOSITE WATER_COLUMN COLLECT_DATE COLLECT_TIME DATUM_ELEV
ELEV_UNITS DATUM_MLLW DATUM_DESC START_DEPTH END_DEPTH DEPTH_UNITS
REMOVED REMOVED_DATE AMBIENT_BLANK EQUIPMENT_BLANK SOURCE_BLANK
TRIP_BLANK SAMPLE_NARRATIVE
OU1-CAOC1517-S-02-01 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
CAOC1517-S-02 SO N N 20181029 10:05:00
01 FT
OU1-CAOC1517-S-02-03 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
CAOC1517-S-02 SO N N 20181029 10:20:00
03 FT
OU1-CAOC1517-S-02-05 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
CAOC1517-S-02 SO N N 20181029 10:28:00
05 FT
OU1-CAOC1517-S-02-6.5 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
CAOC1517-S-02 SO N N 20181029 10:45:00
6.5 FT
OU1-CAOC1517-S-02-10 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
CAOC1517-S-02 SO N N 20181029 10:55:00
10 FT
OU1-CAOC1517-S-02-12 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
CAOC1517-S-02 SO N N 20181029 11:00:00
12 FT
OU1-CAOC1517-S-01-01 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
CAOC1517-S-01 SO N N 20181029 11:30:00
01 FT
OU1-CAOC1517-S-01-03 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
CAOC1517-S-01 SO N N 20181029 12:00:00
03 FT
OU1-CAOC1517-S-01-05 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
CAOC1517-S-01 SO N N 20181029 12:10:00

05 FT
OU1-CAOC1517-S-01-08 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
CAOC1517-S-01 SO N N 20181029 12:17:00
08 FT
OU1-BLDG573-S-05-01 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
BLDG573-S-05 SO N N 20181029 13:10:00
01 FT
OU1-BLDG573-S-05-03 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
BLDG573-S-05 SO N N 20181029 13:20:00
03 FT
OU1-BLDG573-S-05-05 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
BLDG573-S-05 SO N N 20181029 13:25:00
05 FT
OU1-BLDG573-S-05-08 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
BLDG573-S-05 SO N N 20181029 13:38:00
08 FT
OU1-BLDG573-S-04-01 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
BLDG573-S-04 SO N N 20181029 14:10:00
01 FT
OU1-BLDG573-S-04-03 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
BLDG573-S-04 SO N N 20181029 14:25:00
03 FT
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SO LB N
LCS18309005 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
SO BS N
LCSD18309005 N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
SO BD N
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SO BS N
DUP18312820004A N62473-14-D-1405 N6247317F4100 BARSTOW_MCLB 00000
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SO BD N
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SO BS N