MPI RESEARCH
3058 Research Drive
State College, Pennsylvania 16801 USA
Telephone: 814.272.1039
Fax: 814.272.1019

Analytical Report

PFOA and PFOS Analysis of Deer Serum Samples by LC/MS/MS

MPI Report No. L0019345

Revised Report Date: 12/17/09

Testing Laboratory

MPI Research, Inc.
3058 Research Drive
State College, PA 16801

Requester/Project Manager

Dena Haverland
Dalton Utilities
PO BOX 869
Dalton, GA 30722
Phone: 706-529-1010

2010 JAN -6 P 1:44

1 Introduction

Results are reported for the analysis of PFOS in the 3.5 yr male deer serum sample received at MPI Research from Dalton Utilities. The MPI Research study number assigned to the project is L0019345. Table I lists the target analytes quantitated for the samples.

Table I. Target Analytes for Quantitation

Compound Name	Acronym
Perfluorooctanesulfonate	C8 Sulfonate or PFOS

Note: PFOA results for both the 0.5 yr female and 3.5 yr male are reported in the original report signed on 11/19/09, as well as the PFOS results for the 0.5yr female.

2 Sample Receipt

Two samples were received from Dena Haverland at Dalton Utilities for this study. The samples were collected on October 02, 2009. The samples arrived on October 06, 2009 via Fedex and were logged in under MPI Research login number L0019345. The shipment was received frozen on dry ice. The samples were stored frozen at approximately -80°C from receipt until analysis. Chain-of-custody information is presented in Attachment A.

3 Methods - Analytical and Preparatory

3.1 Serum Sample Preparation

3.1.1. Measure 1 mL of serum sample into a 50 mL disposable centrifuge tube and fortify, if appropriate. Add 20 µL of a 50000 ng/mL WIS for a final concentration of 0.5 ng/mL.

Note: The internal standard was spiked at a higher level to allow for post extraction dilutions to be performed.

3.1.2 Add water to sample for a final volume of 20 mL. Cap tightly and vortex for ~1 minute.

3.1.3 Transfer 1 mL of the sample using a disposable pipette into 15 mL disposable centrifuge tubes. Add 5 mL of ACN and shake for ~20 minutes on a wrist action shaker.

3.1.4 Centrifuge tubes at ~3000 rpm for ~ 5 minutes. Carefully decant supernatant into a 50 mL disposable centrifuge tube and add 35 mL of water.

3.1.5 Place the unconditioned SPE columns on the vacuum manifold. Condition the SPE columns by passing ~ 10 mL of methanol through the column followed by ~ 5 mL of water. The washes may be pulled through the SPE column using vacuum at a flow rate of ~1 drop/sec or may be allowed to pass through the column unaided. Discard all washes. Do not allow the column to dry.

3.1.6 Load the sample onto a conditioned SPE column . Discard the eluate. Any analyte residues will be trapped on the SPE column at this point.

3.1.7 Elute with 2 mL of methanol. Collect 2 mL of elute into a graduated 15 mL centrifuge tube.

Note: Post extraction dilutions were prepared in methanol.

3.2 Sample Analysis by LC/MS/MS

In High Pressure Liquid Chromatography (HPLC), an aliquot of extract is injected and passed through a liquid-phase chromatographic column. Based on the affinity of the analyte for the stationary phase in the column relative to the liquid mobile phase, the analyte is retained for a characteristic amount of time. Following HPLC separation, mass spectrometry provides a rapid and accurate means for analyzing a wide range of organic compounds. Molecules are ionized, fragmented, and detected. The ions characteristic of the compounds are observed and quantitated against external calibration standards.

An HP1100 system interfaced to an Applied Biosystems API 4000 LC/MS/MS was used to analyze the sample extracts for quantitation. A gradient elution through a Phenomenex Luna 3µ C8(2) Mercury, 20 x 4.0 mm column was used for separation.

The following gradient was performed:

Mobile Phase (A): 2mM Ammonium Acetate in Water
Mobile Phase (B): Methanol

Time	%A	%B
0.0	90	10
0.5	90	10
2.0	10	90
5.0	10	90
5.1	0	100
6.0	0	100
6.1	90	10
10.0	90	10

The following parameters were used for operation of the mass spectrometer:

Parameter	Setting
Ionization Mode	Electrospray
Polarity	Negative
Transitions Monitored	499→80 (PFOS) 503→80 (Internal Std. ^{13}C PFOS (m+4))
Gas Temperature	450°C

4 *Analysis by LCMSMS*

4.1 Calibration

For the serum sample analysis, a 6-point calibration curve was analyzed throughout the analytical sequence for PFOS. The calibration points were prepared at 0.1, 0.2, 0.5, 1.0, 2.0, 5.0 ng/mL (ppb) containing 1.0 ng/mL ^{13}C-PFOS (m+4).

The ratio of the analyte concentration to the IS concentration versus the ratio of the analyte instrument response (area) to the IS response (area) was plotted for each point. Using linear regression with 1/x weighting, the slope, y-intercept and coefficient of determination (r^2) were determined. A calibration curve is acceptable if $r^2 \geq 0.985$.

For the results reported here, calibration criteria were met. The calibration curves are included in the raw data in Attachment C.

4.2 Laboratory Control Spikes

Laboratory control spikes in the analytical set were prepared during each extraction set by adding a known concentration of the analyte to deer serum controls. Laboratory control spikes are used to assess method accuracy. The laboratory control spikes must show recoveries between 70-130% or the data is rejected. For the results reported here, the laboratory control spikes were within the acceptable range. Laboratory control spike recoveries are given in Attachment B.

4.3 Matrix Spikes

One matrix spike was prepared by adding a known concentration of the target analyte to a sample. Matrix spikes are used to assess method accuracy in the matrix. The matrix spikes should show recoveries between 70-130%. For the results reported here, the matrix spike was within the acceptable range with the exceptions of:

4.4 Laboratory Duplicates

One sample was prepared in duplicate and analyzed. Duplicate results are given along with the sample results in Attachment B.

5 *Data Summary*

Please see Attachment B for a detailed listing of the analytical results. For the serum samples the results are reported in parts per billion (ng/mL) on an as-received basis.

6 *Data/Sample Retention*

Samples are disposed of 60 days after the report is issued unless otherwise specified by the project manager. All electronic data is archived on retrievable media and hard copy reports are stored in data folders maintained by MPI Research. Hardcopy data is stored for a minimum of five years. The client will be notified 30 days prior to the disposal of hardcopy data.

7 Attachments

7.1 Attachment A: Chain of Custody

7.2 Attachment B: Analytical Results

7.3 Attachment C: Raw Analytical Data for Water

8 Signatures

Mark Neeley, Research Chemist Associate II — Date: 12-17-09

Robert Zhu, Manager, Analytical — Date: 12/17/09

A

MPI RESEARCH

Mattawan (Corporate Headquarters)
54943 North Main Street
Mattawan, MI 49071-9399
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(269) 668-4151 Fax

State College
3058 Research Drive
State College, PA 16801
(814) 272-1039 Phone
(814) 231-1580 Fax

Login

Login Group: L0019345

Login #:	19459	Conform COC Sample:	True
Project:	P0005195	Conform COC:	True
Company Name:	Dalton Utilities	Conform Sample:	True
Submitted By:	Dena Haverland	Conform Request:	True
Login Type:	Immediate Receipt of Samples		
Started:	True		
Date Start:	10/27/2009		
Due Date:	11/06/2009		
Login Initiated:	10/27/2009		
Received By:	Ammerman, Mark		
Spread Sample:			
Label:			
MPI SD/PI:	Zhu, Xiang		
Project Title/Type:	PFOA and PFOS Analysis of Serum Samples By LC/MS/MS / ROUTINE		
Login Notes:			

Packages / Containers

Package	Carton	Date / Condition	Shipper / ID	Temp. Control/Temp.	Direction / Handled By
K0022041		Received Date: 10/6/09 10:25 Package & Contents Uncompromised	FEDEX 8694 2057 8178	Dry Ice -79.2	RECEIVED Ammerman, Mark

Container #	Gross Weight	pH	Container Type	Preservative	Mfg. Lot	Mfg. ID
C0457604	3.10 g		2 ml clear plst vial	NONE		
C0457605	3.10 g		2 ml clear plst vial	NONE		
C0457606	3.20 g		2 ml clear plst vial	NONE		
C0457607	3.10 g		2 ml clear plst vial	NONE		
C0457608	3.10 g		2 ml clear plst vial	NONE		
C0457609	3.10 g		2 ml clear plst vial	NONE		
C0457610	3.20 g		2 ml clear plst vial	NONE		
C0457611	3.40 g		2 ml clear plst vial	NONE		
C0457612	3.10 g		2 ml clear plst vial	NONE		
C0457613	3.10 g		2 ml clear plst vial	NONE		
C0457614	3.10 g		2 ml clear plst vial	NONE		
C0457615	3.20 g		2 ml clear plst vial	NONE		
C0457616	3.10 g		2 ml clear plst vial	NONE		
C0457617	3.10 g		2 ml clear plst vial	NONE		
C0457618	3.10 g		2 ml clear plst vial	NONE		
C0457619	3.10 g		2 ml clear plst vial	NONE		
C0457620	3.10 g		2 ml clear plst vial	NONE		
C0457621	3.10 g		2 ml clear plst vial	NONE		
C0457622	3.20 g		2 ml clear plst vial	NONE		
C0457623	3.10 g		2 ml clear plst vial	NONE		

Login

Samples

Sample ID	Container	Matrix	System	System Matrix	Sample	Date Sampled	Date Due
L0019345-0001		LIQUID	Deer	Serum	Deer #6 0.5 yr female-serum	10/02/2009	11/06/20
	C0457613						
	C0457612						
	C0457611						
	C0457610						
	C0457609						
	C0457608						
	C0457607						
	C0457606						
	C0457605						
	C0457604						
L0019345-0002		LIQUID	Deer	Serum	Deer #7 3.5 yr male-serum	10/02/2009	11/06/2009
	C0457617						
	C0457623						
	C0457622						
	C0457621						
	C0457620						
	C0457619						
	C0457618						
	C0457616						
	C0457615						
	C0457614						

Login Reviewed By: _____ Date/Time: 12/16/09. 1317

MPI RESEARCH

Sample Submittal

Please fax this form before sending samples.

Please send samples to shipping and receiving:
3048 Research Drive, State College, PA 16801
T: (814) 272-1039 • F: (814) 272-1019

MPI Research Contact: Daniel Wright

Send Report To:

Company: Dalton Utilities
Address: 1200 VD Parrott JR Parkway, PO Box 869
City, State, ZIP: Dalton, GA 30722-0869
Attention: Dena Haverland
Phone #: 706-529-1010
Fax #: 706-529-1271
Email: dhaverland@dutil.com
Study/Job #:
Signature/Date:
Printed Name:

Turnaround time (TAT) requirements:

Results Due Date: 30 days
Preliminary Results Format: Verbal (Email) Fax
Report Due Date: 30 days

Storage Conditions

Room temperature
Refrigerator
(Freezer)
Ultra Low freezer
Desiccated
Lighting required
Stability (°C/%RH):
Stability time period:

Safety Information

Special handling:
MSDS attached
Controlled substance:
HAZARDS:
Please fill in the diamond HMIS/NFPA (0 4) if appropriate

	Client ID# Description	Lot/ Control #	Amt. Sent/ Weight	# of Bottles	Matrix	Date & Time	Tests Requested
1	Deer #6 0.5 yr female-Serum		10ml	10	deer	10/2/09 1:08AM	PFOA/PFOS
2	Deer #6 0.5yr female-muscle		as requested	1 bag	deer	10/2/09 2:28AM	PFOA/PFOS
3	Deer #6 0.5yr female-Liver		Whole	1 bag	deer	10/2/09 2:30AM	PFOA/PFOS
4	Deer #7 3.5yr Male-Serum		10ml	10	deer	10/2/09 1:45AM	PFOA/PFOS
5	Deer #7 3.5yr Male-muscle		as requested	1 bag	deer	10/2/09 2:45AM	PFOA/PFOS
6	Deer #7 3.5yr Male-Liver		Whole	1 bag	deer	10/2/09 2:48AM	PFOA/PFOS
7							
8							
9							
10							

PO #:

Notes:

Relinquished by	Date	Time	Received by	Date	Time
Darrell Kavanaugh	10/5/09	6:30pm		10/6/09	1025

V0002836 2

Administrative Form

MPI RESEARCH

TEMPORARY SAMPLE STORAGE FORM

To be completed during ExyLIMS Login

Project #: P5195

Login #: L19345

Initials / Date: MA 10/27/09

One form to be completed for each package

Date / Time Received: 10/06/09 1025

Received By: Mark Amperse

Shipper: FedEx

Shipper Package ID: 8694 2057 8178

Temperature (deg C) / Thermometer ID: -79.2 / D0001775

Temperature Control Method: dry ice-active

Temporary Storage Location: freezer 32

Condition of sample(s):

✓ Good – Package and contents uncompromised
___ Fair – Package damaged / contents uncompromised
___ Poor – Package and contents compromised

Notes:

FedEx Express US Airbill

FedEx Tracking Number 8694 2057 8178

Form ID No. 0200

Recipient's Copy

1 From

Date 10/5/09 [redacted]

Sender's Name Darrell Karanaugh Phone 706 546-5637

Company USDA Wildlife Services / for Dalton Utilities

Address 200 Phoenix Road

Dept./Floor/Suite/Room

City Athens State GA ZIP 30602

2 Your Internal Billing Reference

3 To

Recipient's Name Daniel Wright Phone 814 272-1039

Company MPI Research Labs

Recipient's Address 3048 Research Drive

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City State College State PA ZIP 16801

8694 2057 8178

4a Express Package Service *Packages up to 150 lbs.*

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate

* To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation. ** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

* Declared value limit $500.

6 Special Handling

Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 2Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [x] Dry Ice — Dry ice, 9, UN 1845 1 x 2.5 kg
- [ ] Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain Recip. Acct. No. [ ]

[redacted]

Total Packages	Total Weight	Total Declared Value†
1	\\\	$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [x] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. Fee applies.

520

Rev. Date 10/09-Part #158281-©1994-2008 FedEx-PRINTED IN U.S.A. SRY

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B

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Analytical Report

Summary of Fluorochemical Residues in Serum Samples

Sample ID	PFOS Perfluorooctanesulfonate Analyte Found (ng/mL, ppb)
Deer # 7 3.5 yr male-serum	1140
Deer # 7 3.5 yr male-serum*	1120

*Laboratory Duplicate
ND = Not detected = Response is below the LOD of 1.0 ng/mL (ppb).
NQ = Not quantifiable = Response is between the LOD and the LOQ of 10 ng/mL (ppb).

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Recovery Summary of Fluorochemical Residues in Serum Samples

Sample Description	PFOS Amount Spiked (ng/mL)	PFOS Amt Found in Sample (ng/mL)	PFOS Amount Recovered (ng/mL)	PFOS Recovery (%)
LCS A (Data set 120709A) 1000 ng/mL	1000	ND	1050	105
LCS B (Data set 120709A) 1000 ng/mL	1000	ND	1100	110
Deer # 7 3.5 yr male-serum (L19345-2 Spk C, 1000 ng/mL Lab Spike)	1000	1140	2130	99

ND = Not detected = Response is below the LOD of 1.0 ng/mL.
NQ = Not quantifiable = Response is between the LOD and the LOQ of 10 ng/mL.

C

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	10 ng/mL	Set No:	120709A
MPI Study No:	L19345	Injection Volume:	15 µL	Analyst:	Mark Neeley
Analyte:	PFOS	Matrix:	Deer Serum	Instrument Type:	LC/MS/MS Unit # 9
Ions Monitored:	499 -> 80			Extraction Date:	12/07/09
Site:	NA			Analyzed on:	12/07/09

MPI Research ID	Sponsor ID	Sample Code	Sample Index No.	Std. Conc. (ng/mL)	Internal Std. Conc. (ng/mL)	Aliquot Factor (AF)	Dilution Factor (DF)	Peak Area	Internal Standard Peak Area	Analyte Found (ng/mL)	Amount Analyte Added (ng/mL)	Recovery (%)
SS33618	-	CS	1	0.100	1.0	-	-	32357	288516	-	-	-
SS33617	-	CS	2	0.200	1.0	-	-	57528	266317	-	-	-
SS33616	-	CS	3	0.500	1.0	-	-	136098	262877	-	-	-
SS33615	-	CS	4	1.00	1.0	-	-	283539	268037	-	-	-
SS33614	-	CS	5	2.00	1.0	-	-	571538	269425	-	-	-
SS33613	-	CS	6	5.00	1.0	-	-	1342568	263402	-	-	-
Methanol Wash	-	W	7	-	-	-	-	1015	25	-	-	-
Methanol Wash	-	W	8	-	-	-	-	1046	85	-	-	-
Control	MC4311 Deer Serum Control	C	9	-	0.5	40	1	1056	73370	ND	-	-
LCS A	MC4311 Deer Serum Spike A, 1000 ng/mL	LCS	10	-	2.5	40	10	479561	440582	1046	1000	105
LCS B	MC4311 Deer Serum Spike B, 1000 ng/mL	LCS	11	-	2.5	40	10	469874	412103	1097	1000	110
L19345-2 Spk C	Deer # 7 3.5 yr male-serum Spike C, 1000 ng/ml	LF	12	-	2.5	40	10	962941	435982	2134	1000	100
L19345-2	Deer # 7 3.5 yr male-serum	S	13	-	2.5	40	10	493540	418410	1135	-	-
L19345-2 Dup	Deer # 7 3.5 yr male-serum Duplicate	S	14	-	2.5	40	10	440374	379350	1117	-	-
SS33615	CCV, 1.0 ng/mL	CCV	15	1.00	1.0	1	1	286632	268817	1.02	1.00	102

Analyte Found (ng/mL) = ((((analyte peak area/IS peak area) - intercept) / slope) x IS conc.) x AF x DF

Recovery (%) = [Analyte found (ng/mL)-Analyte found in control (ng/mL)] / amount Analyte added (ng/mL) x 100

Standard Curve : Linear (1/x weighted)
Intercept = 0.0106
Slope = 1.03
Coef. Of Det. = 0.9996

CS = Calibration standard
CCV = Continuing Calibration Verification
C = Control sample
S = Sample

LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike

W = Methanol Wash
ND = Not detected = Response between 0 and LOD
NQ = Not quantifiable = Response between LOD and LOQ

Spreadsheet prepared by: MNL / 12-8-09

MPI RESEARCH

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State College, PA 16801

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Internal Chain of Custody/Fortification Sheet

MPI Reseach Study Number: L19345
Sponsor Study/Protocol No: NA

Matrix: Deer Serum

The samples listed below were removed from Freezer No. 37
Time 9:45 AM Date 12-7-09 Initials MDW

CLIENT SAMPLE ID	MPI RESEARCH ID NUMBER	VOLUME (mL)	FORTIFICATION (ng)
na	MC4311 Control	1.0	-
na	MC4311 LCS A	1.0	1000
na	MC4311 LCS B	1.0	1000
Deer #7 3.5 yr male-serum	L19345-2 Spk C	1.0	1000
Deer #7 3.5 yr male-serum	L19345-2	1.0	-
Deer #7 3.5 yr male-serum	L19345-2 Dup	1.0	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

	Spiking Solution Used		Volume Used for Spiking	Initial/Date
MC4311 LCS A	SS0033971	(100000 ng/mL)	10 µL (0.5-10µL auto-pipette)	MDW / 12-7-09
MC4311 LCS B	SS0033971	(100000 ng/mL)	10 µL (0.5-10µL auto-pipette)	MDW / 12-7-09
L19345-2 Spk C	SS0033971	(100000 ng/mL)	10 µL (0.5-10µL auto-pipette)	MDW / 12-7-09
MC4311 Control	SS0032652	(100 ng/mL)	200 µL (50-250µL auto-pipette)	MDW / 12-7-09
All Samples (except Control)	SP0011659	(50000 ng/mL)	20 µL (5-100µL auto-pipette)	MDW / 12-7-09

All samples were measured using a digital autopipet IN 1496.
Time 11:45 AM Date 12-7-09 Initials MDW

After measuring samples were returned to Freezer No. 40
Time 2:27 PM Date 12-7-09 Initials MDW

Comments:

Analysis Summary:

Data Set: 120709A Initials/Date: MDW / 12-7-09
Data Set: - Initials/Date: - / -
Data Set: - Initials/Date: - / -

Set extraction/analysis data verified by: _____ Date: _____

MPI RESEARCH

3058 Research Drive
State College, PA 16801

Phone: 814-272-1039
Fax: 814-231-1580

SAMPLE EXTRACTION AND ANALYSIS TRACKING SHEET

MPI STUDY NUMBER: L19345
MATRIX: Deer Serum

METHOD: V5821
ANALYTES: PFOA & PFOS

PROTOCOL NUMBER: NA

Client ID	MPI Research ID	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	Dilutions (mL/mL)	STEP 7	Dilutions (mL/mL)	STEP 8	Reagents/ Materials	ExyLims ID
na	MC4311 Control							—		—	—	Acetonitrile	RE47372
na	MC4311 LCS A							0.1/1.0		—	—	Water	RE47850
na	MC4311 LCS B							0.1/1.0		—	—	Methanol	RE47955
Deer #7 3.5 yr male-serum	L19345-2 Spk C							0.1/1.0		—	—	SPE Column	MA48825
Deer #7 3.5 yr male-serum	L19345-2							0.1/1.0		—	—	*Initials/Date*	MDN 12-7-09
Deer #7 3.5 yr male-serum	L19345-2 Dup							0.1/1.0		—	—	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
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-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	**HPLC**	
-	-	-	-	-	-	-	-	-	-	-	-	Methanol	RE47850
-	-	-	-	-	-	-	-	-	-	-	-	2 mM Ammonium Acetate in Water	SL45925
-	-	-	-	-	-	-	-	-	-	-	-		
**Initials/Date*	-	MDN 12-7-09	MDN 12-7-09	MDN 12-7-09	MDN 12-7-09	MDN 12-7-09	MDN 12-7-09	MDN 12-7-09	MDN 12-7-09	—	—	*Initials/Date*	MDN 12-7-09

STEP 1: Measure 1 mL of serum into a 50 mL disposable centrifuge tube and fortify if appropriate. Add ~~0.2 mL~~ 0.02 (*) of internal standard (~~100~~ 50000 (*) ng/mL).
STEP 2: Add water to the sample for a final volume of 20 mL. Cap tightly and vortex for ~1 minute.
STEP 3: Transfer 1.0 mL of the sample to a 15 mL centrifuge tube. Add 5 mL of ACN and shake for ~20 minutes on a wrist action shaker.
STEP 4: Centrifuge tubes at ~3000 for ~5 minutes. Carefully decant supernatant into a 50 mL disposable centrifuge tube and add 35 mL of water.
STEP 5: SPE Cleanup: Condition column with ~10 mL of methanol followed by ~5 mL of water at a rate of ~1 drop/second. Discard all washes. Do not allow column to go dry.
STEP 6: Load the sample onto the SPE Column. Discard the eluate. Elute with 2 mL of methanol into a 15 mL centrifuge tube. Transfer the extract into autosampler vials.
STEP 7: LC/MS/MS analysis.
STEP 8: LC/MS/MS reanalysis.

*Initials and date under each step indicates the personnel that performed this step.

COMMENTS: (*) (cc) MDN 12-16-09

Final extracts stored in refrigerator 34 Initials: MDN Date: 12-7-09

alyst Version: 1.4.2
Printing Time: 3:30:15 PM
Printing Date: Monday, December 07, 2009

MPI Study: L19345
MPI Set No.: 120709A

Operator: Mark Neeley
Instrument No.: LC/MS/MS #9

MJN 12-7-09

oject: \\sc1wp5556\mdrive\PE SCIEX DATA\Projects\P5195 Batch:09_1200709A Tab:Sample Set:SET1 AcqMethod:P5195_102909.d

Sample

	Sample Name	Sample ID	Vial Position	Data File
1	SS33618	Calibration Standard, 0.1 ng/mL	11	09_120709A\120709A
	SS33617	Calibration Standard, 0.2 ng/mL	12	09_120709A\120709A
3	SS33616	Calibration Standard, 0.5 ng/mL	13	09_120709A\120709A
4	SS33615	Calibration Standard, 1.0 ng/mL	14	09_120709A\120709A
	SS33614	Calibration Standard, 2.0 ng/mL	15	09_120709A\120709A
6	SS33613	Calibration Standard, 5.0 ng/mL	16	09_120709A\120709A
7	Methanol Wash	Methanol Wash	91	09_120709A\120709A
	Methanol Wash	Methanol Wash	91	09_120709A\120709A
9	Control	MC4311 Deer Serum Control	21	09_120709A\120709A
10	LCS A	MC4311 Deer Serum Spike A, 1000 ng/mL, DF=~~50~~ *	22	09_120709A\120709A
1	LCS B	MC4311 Deer Serum Spike B, 1000 ng/mL, DF=~~50~~ *	23	09_120709A\120709A
12	L19345-2 Spk C	Deer # 7 3.5 yr male-serum Spike C, 1000 ng/mL, DF=~~50~~ *	24	09_120709A\120709A
13	L19345-2	Deer # 7 3.5 yr male-serum, DF=~~50~~ *	25	09_120709A\120709A
4	L19345-2 Dup	Deer # 7 3.5 yr male-serum Duplicate, DF=~~50~~ *	26	09_120709A\120709A
15	SS33615	CCV, 1.0 ng/mL	14	09_120709A\120709A

* 10 (10) MJN 12-8-09

Research, Inc.

LC/MS/MS SYSTEM AND OPERATING CONDITIONS

Protocol No: NA | MPI Study No: L19345

Instrument: AB API 4000 Biomolecular Mass Analyzer, **(LC/MS/MS #9)**
SCIEX Turbo Ion Spray Liquid Introduction Interface
Turbo Ion spray temperature = 450 °C

Computer: Dell OptiPlex GX 110

Software: PE Sciex Analyst 1.4

HPLC Equipment: Hewlett Packard (HP) Series 1100
HP Quat Pump — HP Vacuum Degasser
HP Autosampler — HP Column Oven

HPLC Column: Phenomenex Luna C8 (2) Mercury, 2cm x 4mm, 3 µm (ExyLIMS ID: MA0052622)

Column Temperature: 35°C

Mobile Phase (A): 2 mM Ammonium Acetate in Water (ExyLIMS ID: SL0045925)

Mobile Phase (B): Methanol (ExyLIMS ID: RE0047880)

Injected Volume: 15 µL

Time (min)	% A	% B	Flow Rate (µL/min)
0.0	90	10	750
0.5	90	10	750
2.0	10	90	750
5.0	10	90	750
5.1	0	100	750
6.0	0	100	750
6.1	90	10	750
10.0	90	10	750

Ions monitored:

Analyte	Parent ion	Daughter ion(s)	Dwell (secs)
PFOS	499	80	0.200
^{13}C PFOS (m+4) Internal Standard	503	80	0.200

Analyst: Mark Neeley MN 12-7-09
MPI Research, Inc.
3058 Research Drive, State College, PA 16801
Phone: (814) 272-1039 FAX: (814) 231-1580

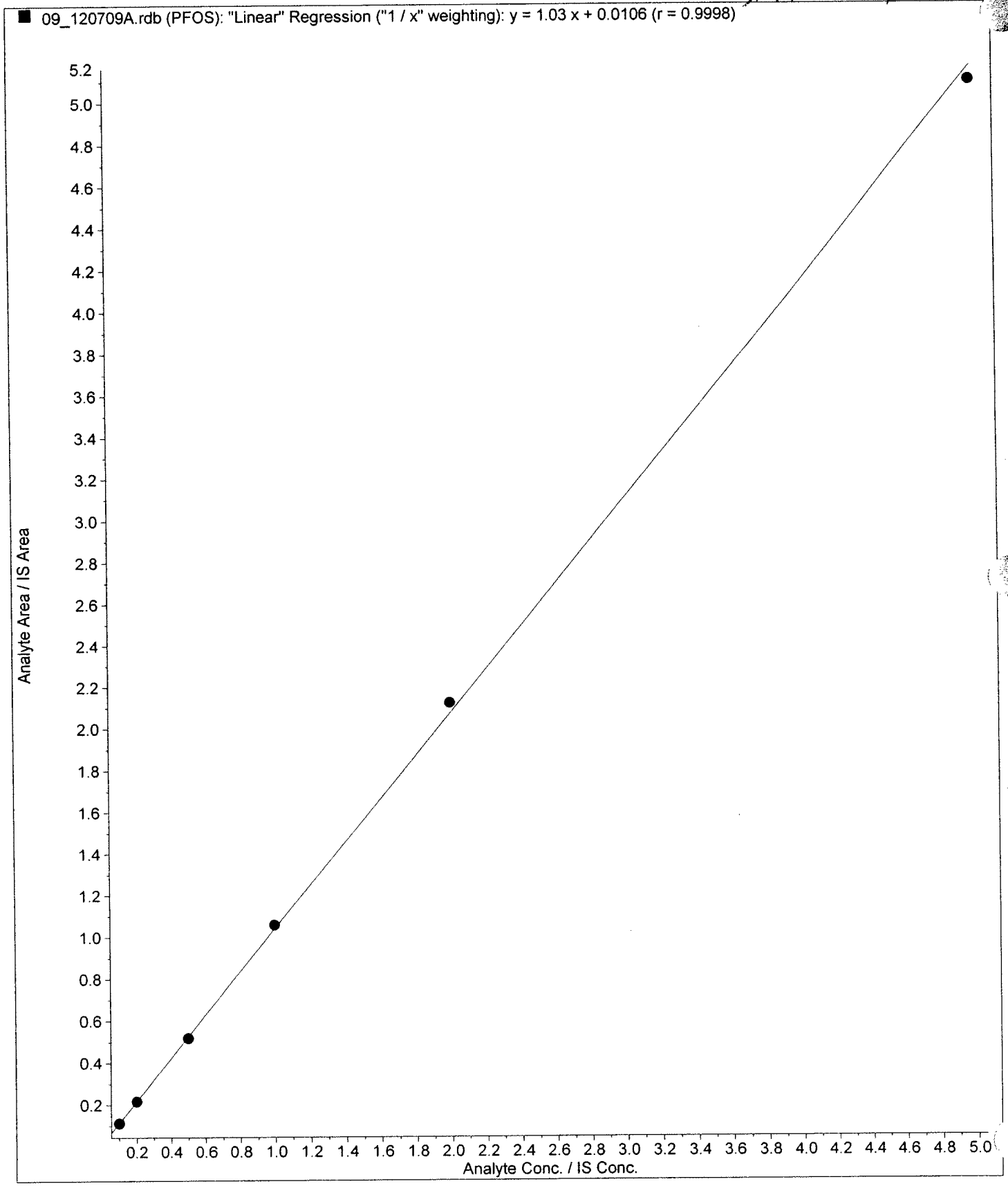
All Handwritten Peak ID's by: MN 12-8-09

Printing Time: 9:17:17 AM
Printing Date: Tue, Dec 08, 2009
Analyst Version: 1.4.2

MPI Study No.: L19345
Set No.: 120709A

Operator: Mark Neeley
Instrument No.: LC/MS/MS # 9

MDN 12-8-09



MPI Research, Inc.

Printing Time: 9:17:41 AM
Printing Date: Tue, Dec 08, 2009
Analyst Version: 1.4.2

MPI Study No.: L19345
Set No.: 120709A

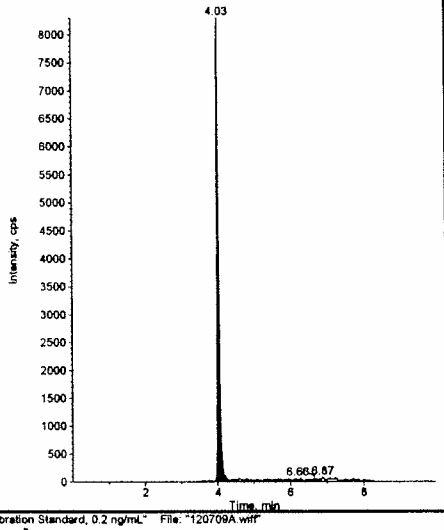
Operator: Mark Neeley
Instrument No.: LC/MS/MS # 9

Sample Name: "SS33618" Sample ID: "Calibration Standard, 0.1 ng/mL" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 1
Sample Type: Standard
Concentration: 0.100 ng/mL
Calculated Conc: 0.0986 ng/mL
Acq. Date: 12/7/2009
Acq. Time: 4:56:17 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.03 min
Area: 32357 counts
Height: 8420 cps
Start Time: 3.91 min
End Time: 4.32 min

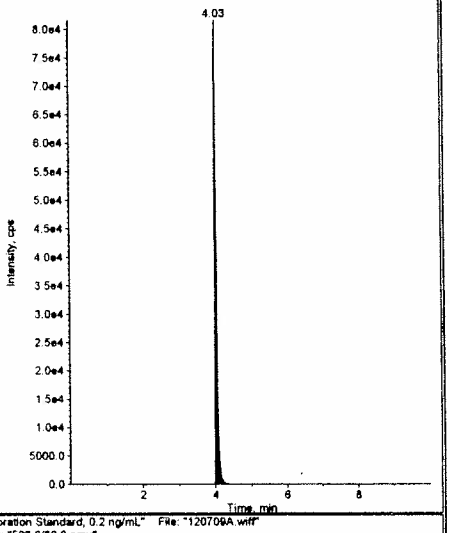


Sample Name: "SS33618" Sample ID: "Calibration Standard, 0.1 ng/mL" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 1
Sample Type: Standard
Concentration: 1.00 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 4:56:17 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Exponential Skim
Retention Time: 4.03 min
Area: 288516 counts
Height: 82659 cps
Start Time: 3.90 min
End Time: 4.18 min

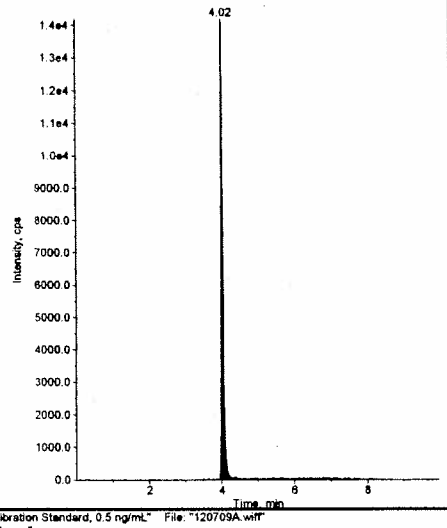


Sample Name: "SS33617" Sample ID: "Calibration Standard, 0.2 ng/mL" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 2
Sample Type: Standard
Concentration: 0.200 ng/mL
Calculated Conc: 0.200 ng/mL
Acq. Date: 12/7/2009
Acq. Time: 5:07:12 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.02 min
Area: 57528 counts
Height: 14660 cps
Start Time: 3.92 min
End Time: 4.33 min

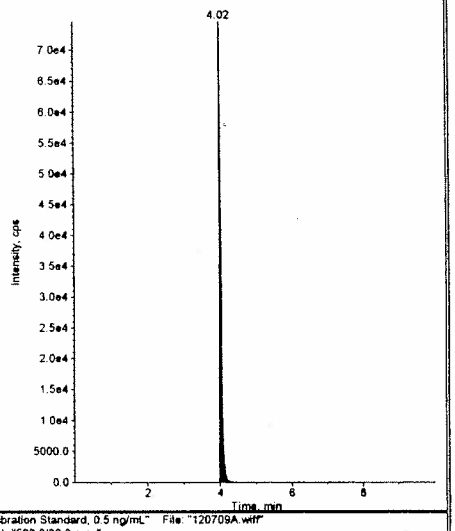


Sample Name: "SS33617" Sample ID: "Calibration Standard, 0.2 ng/mL" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 2
Sample Type: Standard
Concentration: 1.00 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 5:07:12 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Exponential Skim
Retention Time: 4.02 min
Area: 266317 counts
Height: 78071 cps
Start Time: 3.91 min
End Time: 4.25 min

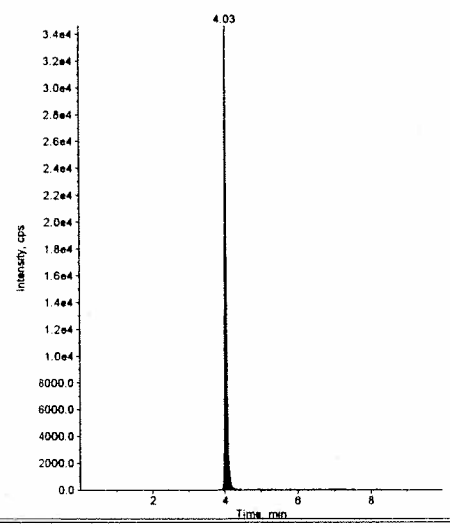


Sample Name: "SS33616" Sample ID: "Calibration Standard, 0.5 ng/mL" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 3
Sample Type: Standard
Concentration: 0.500 ng/mL
Calculated Conc: 0.493 ng/mL
Acq. Date: 12/7/2009
Acq. Time: 5:18:07 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.03 min
Area: 116098 counts
Height: 35350 cps
Start Time: 3.88 min
End Time: 4.28 min

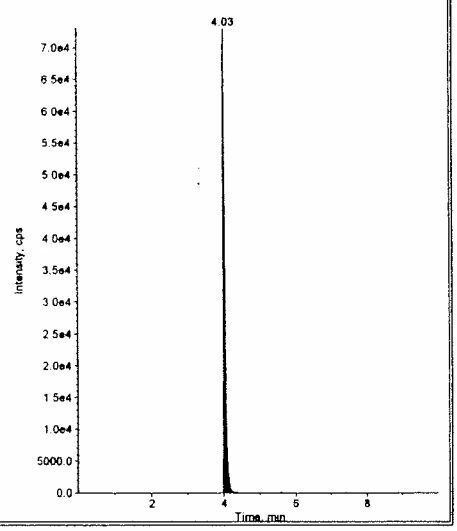


Sample Name: "SS33616" Sample ID: "Calibration Standard, 0.5 ng/mL" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 3
Sample Type: Standard
Concentration: 1.00 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 5:18:07 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Exponential Skim
Retention Time: 4.03 min
Area: 262877 counts
Height: 74648 cps
Start Time: 3.96 min
End Time: 4.21 min



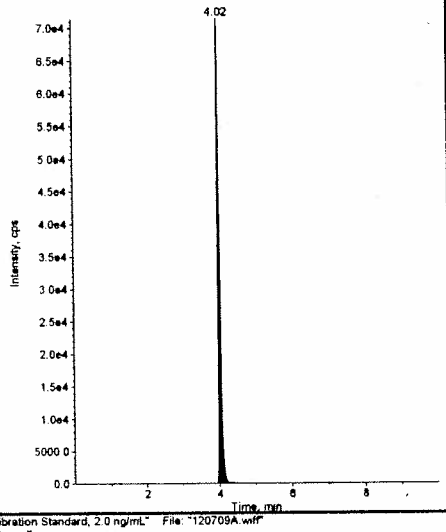
Initials MNN
Date 12-8-09
Sample Index 1 To 15

Sample Name: "SS33615" Sample ID: "Calibration Standard, 1.0 ng/mL" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 4
Sample Type: Standard
Concentration: 1.00 ng/mL
Calculated Conc: 1.02 ng/mL
Acq. Date: 12/7/2009
Acq. Time: 5:29:02 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.02 min
Area: 283539 counts
Height: 72465 cps
Start Time: 3.92 min
End Time: 4.29 min

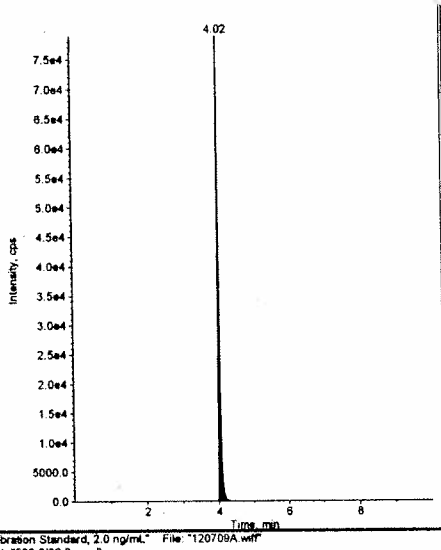


Sample Name: "SS33615" Sample ID: "Calibration Standard, 1.0 ng/mL" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 4
Sample Type: Standard
Concentration: 1.00 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 5:29:02 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.02 min
Area: 268037 counts
Height: 80453 cps
Start Time: 3.95 min
End Time: 4.31 min

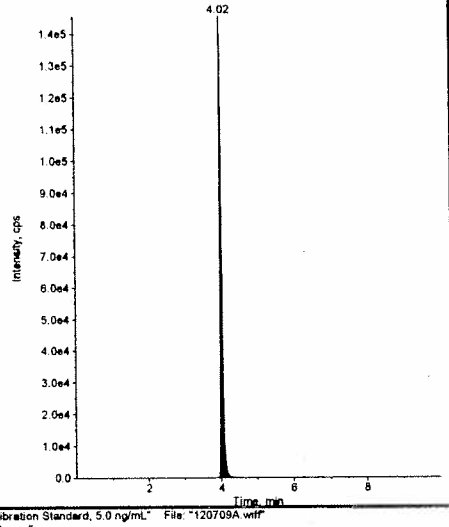


Sample Name: "SS33614" Sample ID: "Calibration Standard, 2.0 ng/mL" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 5
Sample Type: Standard
Concentration: 2.00 ng/mL
Calculated Conc: 2.05 ng/mL
Acq. Date: 12/7/2009
Acq. Time: 5:39:59 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.02 min
Area: 571538 counts
Height: 148511 cps
Start Time: 3.91 min
End Time: 4.31 min

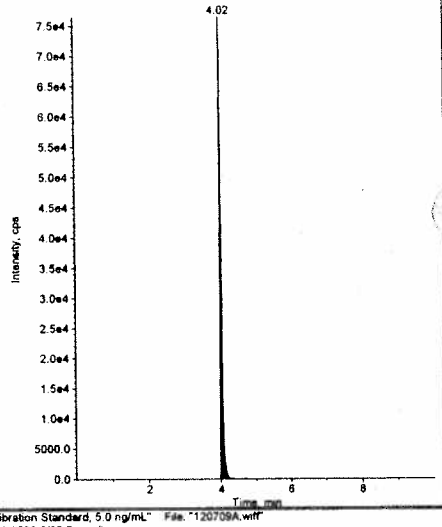


Sample Name: "SS33614" Sample ID: "Calibration Standard, 2.0 ng/mL" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 5
Sample Type: Standard
Concentration: 1.00 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 5:39:59 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Exponential Skim
Retention Time: 4.02 min
Area: 269425 counts
Height: 78457 cps
Start Time: 3.95 min
End Time: 4.20 min

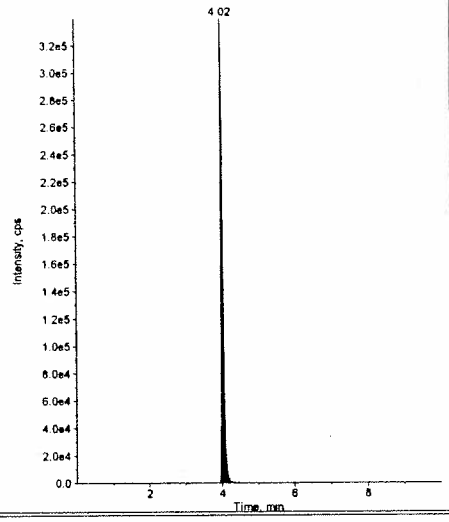


Sample Name: "SS33613" Sample ID: "Calibration Standard, 5.0 ng/mL" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 6
Sample Type: Standard
Concentration: 5.00 ng/mL
Calculated Conc: 4.94 ng/mL
Acq. Date: 12/7/2009
Acq. Time: 5:50:55 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.02 min
Area: 1342568 counts
Height: 344881 cps
Start Time: 3.87 min
End Time: 4.50 min

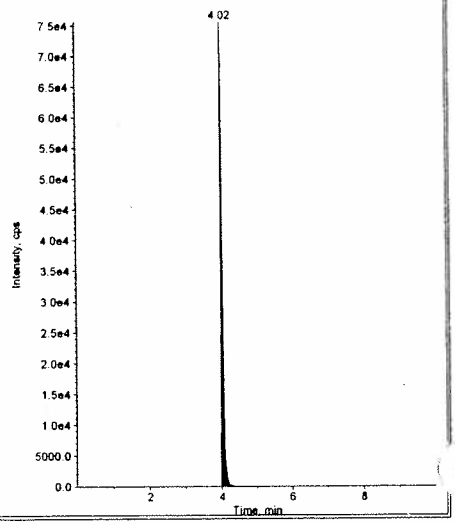


Sample Name: "SS33613" Sample ID: "Calibration Standard, 5.0 ng/mL" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 6
Sample Type: Standard
Concentration: 1.00 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 5:50:55 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Exponential Skim
Retention Time: 4.02 min
Area: 263402 counts
Height: 76981 cps
Start Time: 3.96 min
End Time: 4.25 min

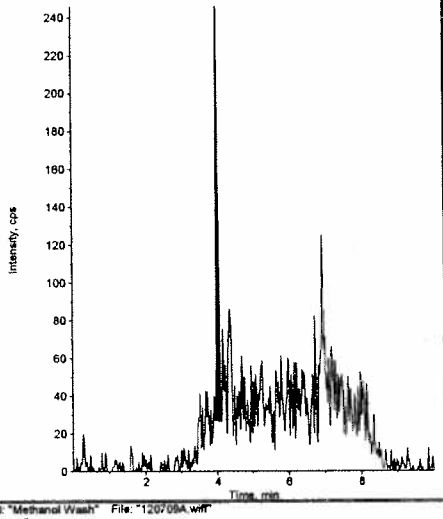


Sample Name: "Methanol Wash" Sample ID: "Methanol Wash" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 7
Sample Type: Solvent
Concentration: 0.00 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 6:01:50 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.02 min
Area: 1015 counts
Height: 224 cps
Start Time: 3.90 min
End Time: 4.13 min

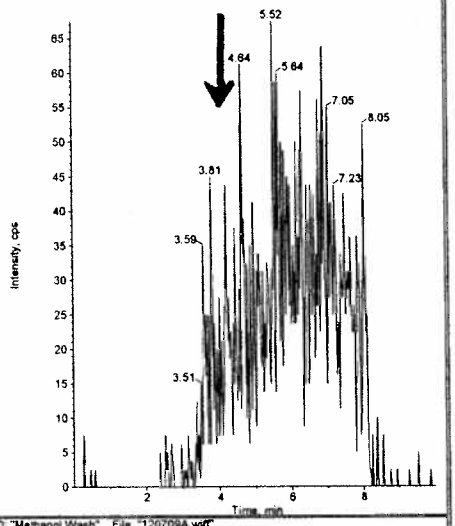


Sample Name: "Methanol Wash" Sample ID: "Methanol Wash" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 7
Sample Type: Solvent
Concentration: 1.00 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 6:01:50 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.02 min
Area: 25 counts
Height: 15 cps
Start Time: 3.98 min
End Time: 4.05 min

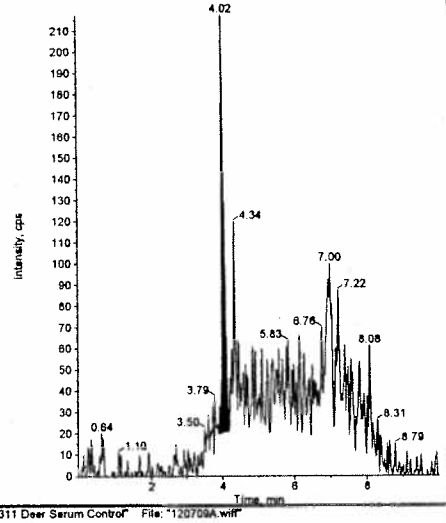


Sample Name: "Methanol Wash" Sample ID: "Methanol Wash" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 8
Sample Type: Solvent
Concentration: 0.00 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 6:12:46 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.02 min
Area: 1046 counts
Height: 197 cps
Start Time: 3.90 min
End Time: 4.18 min

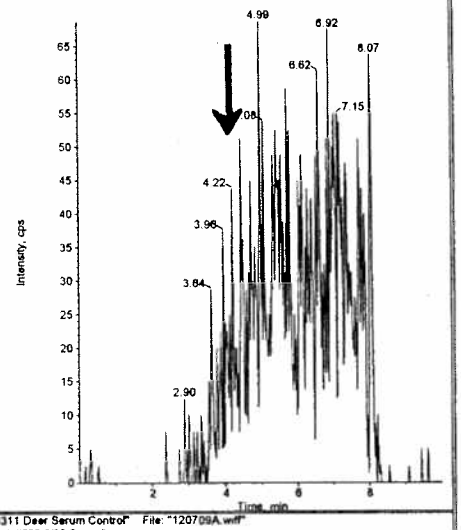


Sample Name: "Methanol Wash" Sample ID: "Methanol Wash" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 8
Sample Type: Solvent
Concentration: 1.00 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 6:12:46 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 3.96 min
Area: 85 counts
Height: 32 cps
Start Time: 3.91 min
End Time: 3.99 min

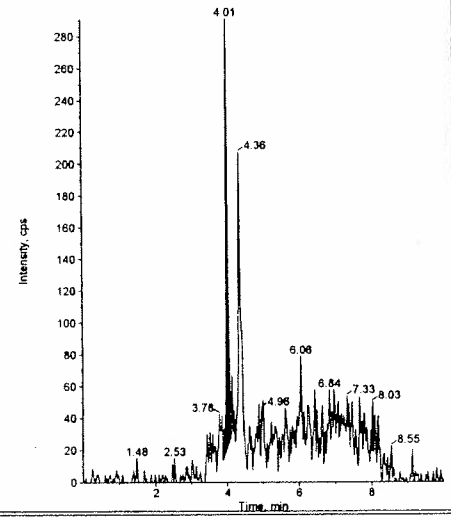


Sample Name: "Control" Sample ID: "MC4311 Deer Serum Control" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 9
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.0732 ng/mL
Acq. Date: 12/7/2009
Acq. Time: 6:23:40 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.01 min
Area: 1056 counts
Height: 273 cps
Start Time: 3.88 min
End Time: 4.10 min

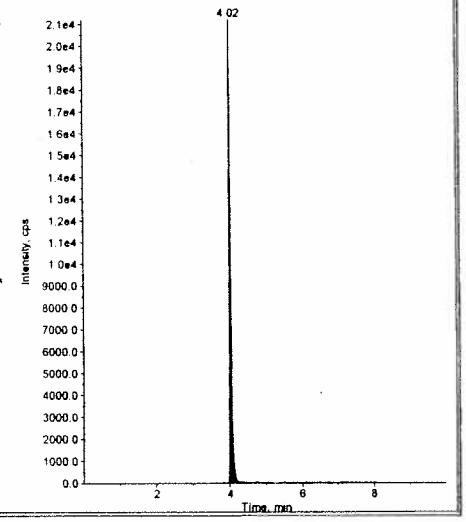


Sample Name: "Control" Sample ID: "MC4311 Deer Serum Control" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 9
Sample Type: Unknown
Concentration: 0.500 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 6:23:40 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Exponential Skim
Retention Time: 4.02 min
Area: 73370 counts
Height: 21217 cps
Start Time: 3.91 min
End Time: 4.20 min

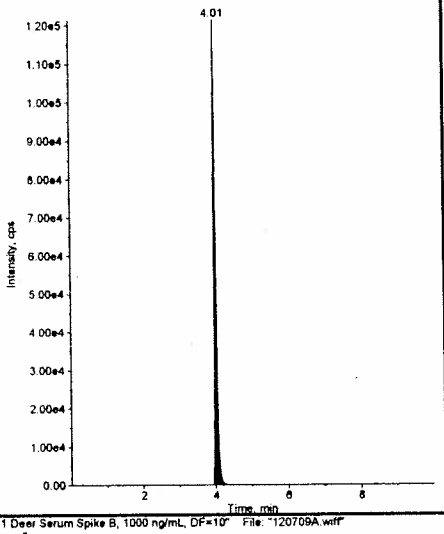


Sample Name: "LCS A" Sample ID: "MC4311 Deer Serum Spike A, 1000 ng/mL, DF=10" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 10
Sample Type: QC
Concentration: 1000. ng/mL
Calculated Conc: 1050. ng/mL
Acq. Date: 12/7/2009
Acq. Time: 6:34:36 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.01 min
Area: 479561 counts
Height: 123315 cps
Start Time: 3.84 min
End Time: 4.46 min

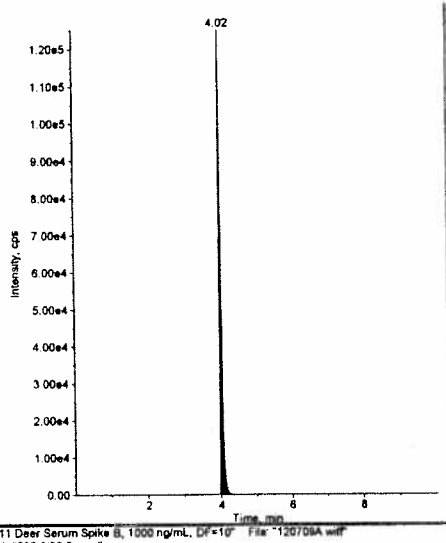


Sample Name: "LCS A" Sample ID: "MC4311 Deer Serum Spike A, 1000 ng/mL, DF=10" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 10
Sample Type: QC
Concentration: 2.50 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 6:34:36 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.02 min
Area: 440582 counts
Height: 126221 cps
Start Time: 3.95 min
End Time: 4.25 min

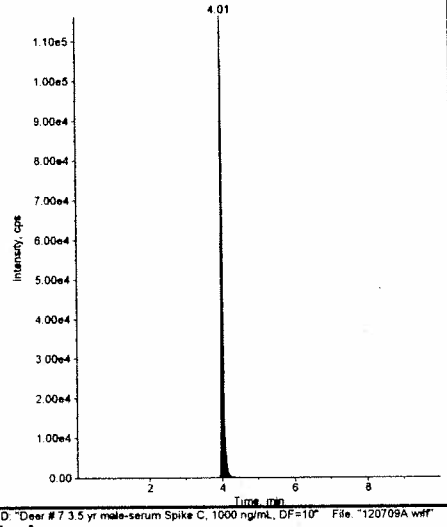


Sample Name: "LCS B" Sample ID: "MC4311 Deer Serum Spike B, 1000 ng/mL, DF=10" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 11
Sample Type: QC
Concentration: 1000. ng/mL
Calculated Conc: 1100. ng/mL
Acq. Date: 12/7/2009
Acq. Time: 6:45:32 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.01 min
Area: 469874 counts
Height: 119758 cps
Start Time: 3.90 min
End Time: 4.31 min

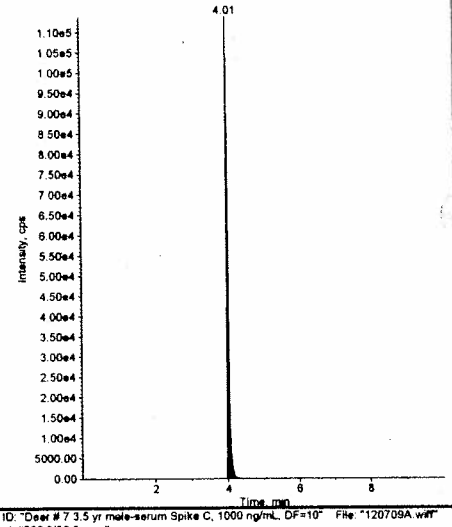


Sample Name: "LCS B" Sample ID: "MC4311 Deer Serum Spike B, 1000 ng/mL, DF=10" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 11
Sample Type: QC
Concentration: 2.50 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 6:45:32 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.01 min
Area: 412103 counts
Height: 119377 cps
Start Time: 3.95 min
End Time: 4.28 min

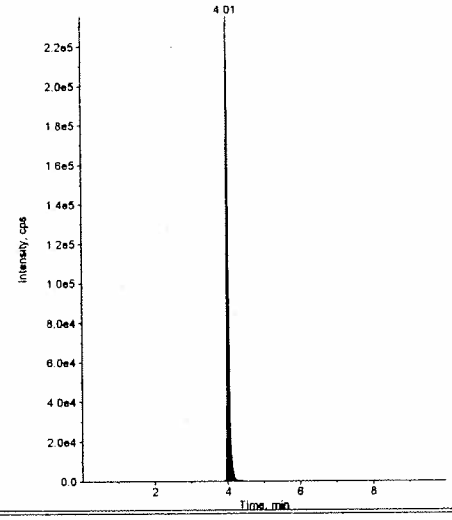


Sample Name: "L19345-2 Spk C" Sample ID: "Deer # 7 3.5 yr male-serum Spike C, 1000 ng/mL, DF=10" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 12
Sample Type: QC
Concentration: 1000. ng/mL
Calculated Conc: 2140. ng/mL
Acq. Date: 12/7/2009
Acq. Time: 6:56:28 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.01 min
Area: 962941 counts
Height: 241250 cps
Start Time: 3.88 min
End Time: 4.43 min

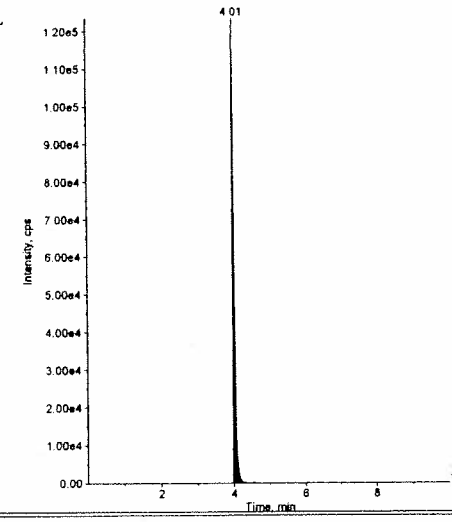


Sample Name: "L19345-2 Spk C" Sample ID: "Deer # 7 3.5 yr male-serum Spike C, 1000 ng/mL, DF=10" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 12
Sample Type: QC
Concentration: 2.50 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 6:56:28 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.01 min
Area: 435982 counts
Height: 125234 cps
Start Time: 3.94 min
End Time: 4.28 min

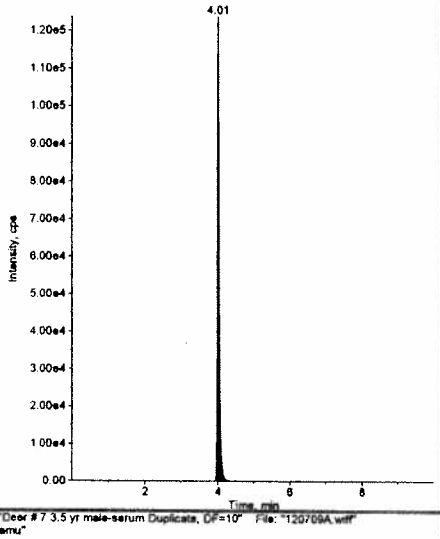


Sample Name: "L19345-2" Sample ID: "Deer # 7 3.5 yr male-serum, DF=10" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 13
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 1140. ng/mL
Acq. Date: 12/7/2009
Acq. Time: 7:07:24 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.01 min
Area: 493540 counts
Height: 128616 cps
Start Time: 3.91 min
End Time: 4.37 min

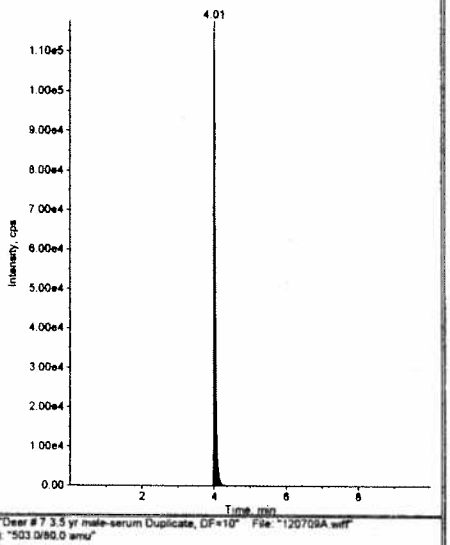


Sample Name: "L19345-2" Sample ID: "Deer # 7 3.5 yr male-serum, DF=10" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 13
Sample Type: Unknown
Concentration: 2.50 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 7:07:24 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Exponential Skim
Retention Time: 4.01 min
Area: 418410 counts
Height: 120076 cps
Start Time: 3.95 min
End Time: 4.32 min

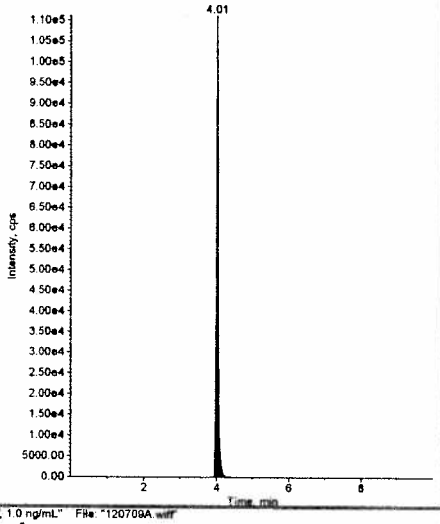


Sample Name: "L19345-2 Dup" Sample ID: "Deer # 7 3.5 yr male-serum Duplicate, DF=10" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 14
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 1120. ng/mL
Acq. Date: 12/7/2009
Acq. Time: 7:18:20 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.01 min
Area: 440374 counts
Height: 112082 cps
Start Time: 3.91 min
End Time: 4.29 min

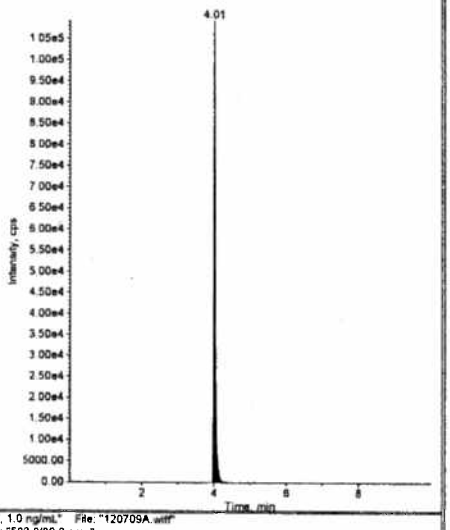


Sample Name: "L19345-2 Dup" Sample ID: "Deer # 7 3.5 yr male-serum Duplicate, DF=10" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 14
Sample Type: Unknown
Concentration: 2.50 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 7:18:20 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.01 min
Area: 379350 counts
Height: 111748 cps
Start Time: 3.95 min
End Time: 4.32 min

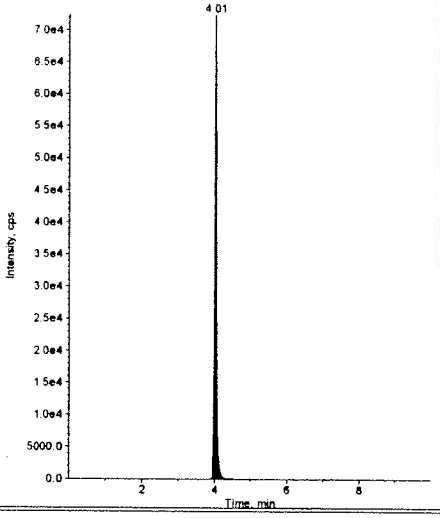


Sample Name: "SS33615" Sample ID: "CCV, 1.0 ng/mL" File: "120709A.wiff"
Peak Name: "PFOS" Mass(es): "499.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 15
Sample Type: QC
Concentration: 1.00 ng/mL
Calculated Conc: 1.03 ng/mL
Acq. Date: 12/7/2009
Acq. Time: 7:29:16 PM

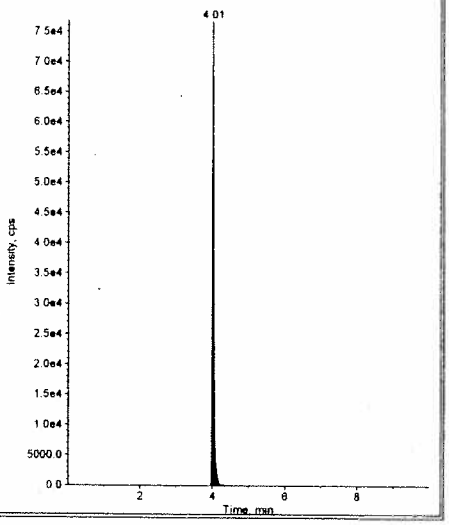
Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 13.88 cps
Area Threshold: 69.40 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.01 min
Area: 286932 counts
Height: 74765 cps
Start Time: 3.85 min
End Time: 4.32 min



Sample Name: "SS33615" Sample ID: "CCV, 1.0 ng/mL" File: "120709A.wiff"
Peak Name: "13CPFOS(M+4)(IS)" Mass(es): "503.0/80.0 amu"
Comment: "" Annotation: ""

Sample Index: 15
Sample Type: QC
Concentration: 1.00 ng/mL
Calculated Conc: N/A
Acq. Date: 12/7/2009
Acq. Time: 7:29:16 PM

Modified: No
Proc. Algorithm: Analyst Classic
Bunching Factor: 1
Noise Threshold: 1.31 cps
Area Threshold: 6.56 cps
Num. Smooths: 1
Sep. Width: 0.20
Sep. Height: 0.01
Exp. Peak Ratio: 5.00
Exp. Adj. Ratio: 4.00
Exp. Val. Ratio: 3.00
RT Window: 30.0 sec
Expected RT: 3.99 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 4.01 min
Area: 268817 counts
Height: 79569 cps
Start Time: 3.94 min
End Time: 4.22 min