AR226-3543

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2005 AUG 15

Contain NO CBI

Mark G. Herwig
Manager, CMP Programs
GE Corporate Environmental Programs
3135 Easton Turnpike, W1B
Fairfield, CT 06828
(203) 373-2817
Mark.Herwig@corporate.ge.com

August 3, 2005

FYI-0805-01378

TSCA Confidential Business Information Center (7407M)
EPA East – Room 6428 Attn: FYI
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460-0001

FYI-00-001378

RECEIVED
OPPT CBIC
2005 AUG -8 AM 11:33

RE: Supplemental Submission
TSCA 8(e) FYI Notice – 0804-01378

The General Electric Company (GE) submits the following corroborative data on Ammonium Perfluorooctanoate (APFO) CAS# 3825-26-1, the ammonium salt of Perfluorooctanoic Acid (PFOA) CAS# 335-67-1.

The attached data confirms and is consistent with data embodied in numerous reports, studies, draft risk assessments, and related manufacturer and chemical information found in EPA's TSCA 8(e) and FYI web site: www.epa.gov/oppt/tsca8e/doc/pacess.htm, PFOA Docket (#OPPT-2003-0012), and the Society of the Plastics Industry, Inc. (SPI) web-site www.PFOA-facts.com, respectively. None of the information provided within this FYI Notice is considered to represent new information, or information that would substantially change or alter the current understanding of any risk posed by APFO or PFOA to human health or the environment. However, given EPA's interest in this substance and its ongoing review, GE is submitting its data on detectable levels of PFOA in polytetrafluoroethylene (PTFE) based resins, dispersions and related high temperature processing releases.

8850500000003

The data was generated under two different processing scenarios, and summarized as follows:

Processing Scenario 1

GE, through its Energy (GE Energy) business, acquired BHA Technologies, Inc. (BHA), headquartered in Kansas City, Missouri, on August 31, 2004. BHA is currently a wholly owned subsidiary of GE.

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FYI Submittal to 0804-01378

MR288241

BHA manufactures and markets "expanded" polytetrafluoroethylene (ePTFE) membrane-based products. BHA purchases raw PTFE fluoropolymer resin (#601A) from DuPont and processes it through a variety of steps (some of which at high temperature) to create ePTFE. BHA does not independently purchase any APFO/PFOA chemical or chemical formulation for use in these operations.

ePTFE membranes are laminated to a variety of substrate media. These laminates are then manipulated into a variety of finished products including industrial air filtration cartridges, military protective wear, out-door performance apparel and other industrial end-use applications.

GE has determined through its business acquisition integration process that BHA sampled, analyzed and detected low levels of PFOA in these media and select processing locations within it's facilities in early 2004. Process air sampling was conducted at fixed stations utilizing OVS tubes. NOTE: this sampling and resultant data was NOT industrial hygiene (IH) air samples from pumps donned on employees.

The work was initiated as a result of published reports on Teflon®. BHA conducted this work in the interest of ensuring it was employing appropriate engineering controls and PPE to minimize the presence of PFOA/APFO in its facilities, and potential for exposure to it's own employees in consideration of the fact that there were no published regulatory standards.

Specific BHA data are summarized in the table below, with the actual laboratory report provided as Attachment A.

BHA PFOA Data Summary Table

Sample Type	Value	UOM	Comment
Bulk PTFE Resin	155 & 561	ppb	Stored at approx 45 F
Laminated Fabric samples	31 & 155	ppb	
ePTFE membrane	83.9	ppb	
Process Air Sample	<0.8	ppb	Extruder Head (room temperature)
Process Air Sample	4.6	ppb	Hot Drum (approx 260 F)
Process Air Samples	0.4 to 1.3	ppb	Laminators (approx 730 F)
Process Air Samples	<0.4	ppb	Dry Cans / Steam Drums (approx 650 F)
Process Air Sample	<1.4	ppb	Wicking Cabinet (approx 95 F)

Process Air Samples	0.5 to 0.6	ppb	Tenter Frames (approx 400 – 500 F)
Wipe Samples	834 & 2560	ppb	Laminator Exhaust Hood Wipe Samples

Conclusion on Scenario 1

BHA results confirm that manufactured PTFE resin for commercial sale/distribution contains residual levels of APFO (as determined through the PFOA analyses), and that APFO sublimates under elevated processing temperatures.

Processing Scenario 2

GE operates a plastic resin manufacturing facility in Ottawa, IL, in which it manufactures a variety of "thermoplastics". Many of the thermoplastic formulations require the incorporation of T-SAN (Teflon-styrene acrylonitrile co-polymer) for anti-drip, wear resistance and lubrication properties. The Ottawa, IL facility manufactures T-SAN from a number of raw materials including a tetrafluoroethylene homopolymer (CAS# 9002-84-0) dispersion [Algoflon D60 27 supplied by Solvay-Solexis, Inc. – MSDS provided as Attachment B] comprising <0.5% by weight of Ammonium Perfluorooctanoate as one of its dispersion agents.

The commercial manufacture of T-SAN at the Ottawa, IL facility began in approximately the first quarter of 2003. This manufacturing was re-located from a non-US facility. Within the start-up phases of the T-SAN manufacturing process, process flow wastewater calculations were completed, and included the collection and laboratory testing of one process wastewater sample. This sample was not of treated site effluent (treated wastewater). The result of this sampling identified PFOA at 0.074 ppb (74000 ng/L) in the sampled process wastewater. Full laboratory results are provided as Attachment C.

Conclusion on Scenario 2

Ottawa results confirm that APFO is soluble in water (conversion to PFOA), and is simply a processing aid and not a reactant in the manufacture of organic polymers.

Questions regarding this submission should be directed to me.

Sincerely,

Mark G. Herwig, Manager
CMP Programs
GE Corporate Environmental Programs

FYI Submittal to 0804-01378

AR226-3544

ATTACHMENT A

Exygen™ RESEARCH
Precise Research.
Proven Results.

~~CONFIDENTIAL~~
Does NOT contain CBI

Analytical Report

Fluorochemical Monitoring Report

CSR Inc.

Exygen Research Report No. L0002133

Testing Laboratory

Exygen Research
3058 Research Drive
State College, PA 16801

Requester

William Mizel
CSR Inc.
PO Box 201857
Arlington, TX 76006
Phone: (817) 633-7236

000005

3058 Research Drive
State College, PA 16801, USA
T: 800.281.3219
F: 814.272.1019
exygen.com

Summary

Twenty-two solid media samples were received by Exygen Research from CSR, Inc. The media represent samples of air collected on OVS tubes and bulk solid materials.

The samples were analyzed for perfluorooctanoic acid (PFOA) by solvent extraction followed by liquid choromatography / mass spectrometry (LCMS) analysis.

The OVS tubes were separated into three fractions for analysis. Fraction A consisted of the filter, backing material and plastic ring. Fraction B contained the first bed of XAD resin and the PUF backing. Fraction C contained the second bed of XAD resin and PUF backing. Fractions A and B were extracted with 1 ml of acetone. Fraction C was not analyzed but saved for possible future analysis.

Bulk solid materials were extracted into methanol. The methanol extracts were diluted with water and subjected to solid phase extraction (SPE) to remove interferences and concentrate the extract.

Chain-of-custody information can be found in Attachment A. Attachment B contains the raw data and analytical conditions for the OVS tube analysis. Attachment C contains the raw data for the bulk solids analysis.

ALL DATA CONTAINED IN THIS REPORT WAS GENERATED BY EXYGEN RESEARCH

Results Summary

Request #	Air Volume Sampled (L)	PFOA (ug/fraction)	PFOA (mg/m3)
1489 A	274	< 0.10	< 0.0004
1489 B	274	< 0.10	< 0.0004
1489 C	274	NA	NA
1489 (Total)		< 0.20	< 0.0008
1490 A	262	1.2	0.0046
1490 B	262	< 0.10	< 0.0004
1490 C	262	NA	NA
1490 (Total)		1.2	0.0046
1492 A	412	< 0.10	< 0.0002
1492 B	412	< 0.10	< 0.0002
1492 C	412	NA	NA
1492 (Total)		< 0.20	< 0.0004
1493 A	390	< 0.10	< 0.0003
1493 B	390	0.20	0.0005
1493 C	390	NA	NA
1493 (Total)		0.20	0.0005
1494 A	413	0.32	0.0008
1494 B	413	0.19	0.0005
1494 C	413	NA	NA
1494 (Total)		0.51	0.0013
1495 A	407	0.16	0.0004
1495 B	407	< 0.10	< 0.0002
1495 C	407	NA	NA
1495 (Total)		0.16	0.0004
1496 A	135	< 0.10	< 0.0007
1496 B	135	< 0.10	< 0.0007
1496 C	135	NA	NA
1496 (Total)		< 0.20	< 0.0014

ALL DATA CONTAINED IN THIS REPORT WAS GENERATED BY EXYGEN RESEARCH

Request #	Air Volume Sampled (L)	PFOA (ug/fraction)	PFOA (mg/m3)
1497 A	134	< 0.10	< 0.0007
1497 B	134	< 0.10	< 0.0007
1497 C	134	NA	NA
1497 (Total)		< 0.20	< 0.0014
1498 A	89	< 0.10	< 0.0011
1498 B	89	< 0.10	< 0.0011
1498 C	89	NA	NA
1498 (Total)		< 0.20	< 0.0022
1499 A	327	< 0.10	< 0.0003
1499 B	327	< 0.10	< 0.0003
1499 C	327	NA	NA
1499 (Total)		< 0.20	< 0.0006
1500 A	320	0.15	0.0005
1500 B	320	< 0.10	< 0.0003
1500 C	320	NA	NA
1500 (Total)		0.15	0.0005
1501 A	320	< 0.10	< 0.0003
1501 B	320	< 0.10	< 0.0003
1501 C	320	NA	NA
1501 (Total)		< 0.20	< 0.0006
1502 A	327	< 0.10	< 0.0003
1502 B	327	< 0.10	< 0.0003
1502 C	327	NA	NA
1502 (Total)		< 0.20	< 0.0006
1503 A	327	< 0.10	< 0.0003
1503 B	327	< 0.10	< 0.0003
1503 C	327	NA	NA
1503 (Total)		< 0.20	< 0.0006

NA – Not Analyzed

ALL DATA CONTAINED IN THIS REPORT WAS GENERATED BY EXYGEN RESEARCH

Notes:

1. "<" is defined as not detected at or above the reported level.

2. Sample results have not been corrected for blank results or matrix spike recoveries.

3. Please note the following descriptions of the OVS sample tube fractions:

Fraction	Fraction Description
A	Frit Extract
B	1st set beads extract
C	2nd set beads extract (not analyzed)

ALL DATA CONTAINED IN THIS REPORT WAS GENERATED BY EXYGEN RESEARCH

Summary of PFOA in Solids

Sample ID	PFOA (ng/g) (as received)
Bulk-A w/o lube	561
Bulk-B w/ lube	170
Fab-A	31.4
Mem-A	83.9
Wipe-A #2 hand	2560
Wipe-B #1 hand	834
Fab-B	155

ALL DATA CONTAINED IN THIS REPORT WAS GENERATED BY EXYGEN RESEARCH

QC Data (OVS Tubes)

LCS

A control sample was spiked with PFOA to give a final concentration of 500 ppb. The fractions were separated and analyzed. The acceptable range for control recovery is 75-125%.

Sample Identification	PFOA (raw-ppb)	PFOA (% recovery)
Control 1A	624	125
Control 1B	499	100

Blanks

Sample Identification	Vol. Of Air (L)	PFOA (raw-ppb)	PFOA (ug/fraction)
1491 A	0	14	< 0.10
1491 B	0	14	< 0.10

QC Data (Bulk Material)

Matrix Spike Recovery

Sample Bulk-A was spiked with PFOA and analyzed to determine percent recovery. The acceptable range for matrix spike recovery is 70-130%. Concentrations represent the amount of material in the sample extract.

	PFOA			
Sample Identification	Amount Spiked (ng/mL)	Amount Found in Sample (ng/mL)	Amount Recovered (ng/mL)	Recovery (%)
Bulk A	50.0	56.1	104	96

Laboratory Duplicate

Samples Bulk-A was analyzed in duplicate. The maximum relative percent difference between duplicates is 30% for solid samples.

	PFOA		
Sample Identification	Sample Results (ng/g)	Sample Duplicate (ng/g)	RPD (%)
Bulk A	561	564	0.53

ALL DATA CONTAINED IN THIS REPORT WAS GENERATED BY EXYGEN RESEARCH

Signatures

Paul Connolly, LCMS Team Leader — Date: 4/2/04

John M. Flaherty, Vice President — Date: 4/2/04

Other Lab Members Contributing to Data

James Miller
Karen Rysha

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Exygen® RESEARCH
3058 Research Drive
State College, PA 16801
Phone: 814-272-1039
Fax: 814-231-1580

Login

Login Group: L0002133

Login #: 2244
Project: P0000718

Company Name: CSR, Inc
Submitted By: William Mizel
Login Type: Immediate Receipt of Samples
Started: T
Date Start: 03/23/2004
Due Date: 04/06/2004
Received Date: 03/19/2004
Received By: AMMERMAN, MARK
Spread Sample:
Label:
Project Title/Type: Analysis of PFOA in Solids and OVS Tubes / ROUTINE
Exygen SD/PI: RISHA, KAREN
Login Notes:
Conform Notes:

Conform COC Sample: True
Conform COC: True
Conform Sample: True
Conform Request: True

Packages / Containers

Package	Carton	Mail Date / Condition	Shipper / ID	Temp. Control/Temp.	Direction / Handled By
PK0002767		3/23/2004 9:59:50AM Package & Contents Uncompromised	UPS 1Z75X4890340393715	Wet Ice 3.1	RECEIVED AMMERMAN, MARK

Container #	Gross Weight	pH	Container Type	Preservative	Mfg. Lot	Mfg. ID
C0029398	245.0 g		500 ml Clear Plastic Narrow	NONE		
C0029399	315.3 g		500 ml Clear Plastic Narrow	NONE		
C0029400	156.7 g		500 ml Clear Plastic Narrow	NONE		
C0029401	85.9 g		500 ml Clear Plastic Narrow	NONE		
C0029402	60.9 g		500 ml Clear Plastic Narrow	NONE		
C0029403	58.8 g		500 ml Clear Plastic Narrow	NONE		
C0029404	100.5 g		500 ml Clear Plastic Narrow	NONE		
C0029405	6.4 g		Air tube	NONE		
C0029406	6.4 g		Air tube	NONE		
C0029407	6.3 g		Air tube	NONE		
C0029408	6.3 g		Air tube	NONE		
C0029409	6.3 g		Air tube	NONE		
C0029410	6.3 g		Air tube	NONE		
C0029411	6.2 g		Air tube	NONE		
C0029412	6.2 g		Air tube	NONE		
C0029413	6.2 g		Air tube	NONE		
C0029414	6.2 g		Air tube	NONE		
C0029415	6.3 g		Air tube	NONE		
C0029416	6.3 g		Air tube	NONE		
C0029417	6.2 g		Air tube	NONE		
C0029418	6.2 g		Air tube	NONE		
C0029419	6.3 g		Air tube	NONE		
C0029420	6.3 g		Air tube	NONE		
C0029421	6.3 g		Air tube	NONE		

000013

Login

Login Group: L0002133

Login #:	2244	Conform COC Sample:	True
Project:	P0000718	Conform COC:	True
		Conform Sample:	True
Company Name:	CSR, Inc	Conform Request:	True
Submitted By:	William Mizel		
Login Type:	Immediate Receipt of Samples		
Started:	T		
Date Start:	03/23/2004		
Due Date:	04/06/2004		
Received Date:	03/19/2004		
Received By:	AMMERMAN, MARK		
Spread Sample:			
Label:			
Project Title/Type:	Analysis of PFOA in Solids and OVS Tubes / ROUTINE		
Exygen SD/PI:	RISHA, KAREN		
Login Notes:			
Conform Notes:			

Packages / Containers

Package	Carton	Mail Date / Condition	Shipper / ID	Temp. Control/Temp.	Direction / Handled By
PK0002767		3/23/2004 9:59:50AM Package & Contents Uncompromised	UPS 1Z75X4890340393715	Wet Ice 3.1	RECEIVED AMMERMAN, MARK

Container #	Gross Weight	pH	Container Type	Preservative	Mfg. Lot	Mfg. ID
C0029422	6.3 g		Air tube	NONE		
C0029423	6.4 g		Air tube	NONE		
C0029424	6.4 g		Air tube	NONE		
C0029425	6.3 g		Air tube	NONE		
C0029426	6.3 g		Air tube	NONE		
C0029427	6.3 g		Air tube	NONE		
C0029428	6.3 g		Air tube	NONE		
C0029429	6.2 g		Air tube	NONE		
C0029430	6.3 g		Air tube	NONE		
C0029431	6.2 g		Air tube	NONE		
C0029432	6.2 g		Air tube	NONE		
C0029433	6.3 g		Air tube	NONE		
C0029434	6.3 g		Air tube	NONE		
C0029435	6.3 g		Air tube	NONE		
C0029436	6.3 g		Air tube	NONE		

000014

Login

Samples

Sample ID	Container	Matrix	Fraction	Sample	Date Sampled	Date Received	Date Du
L0002133-0001	C0029398	SOLID	Solids	Bulk-A	03/11/2004	03/19/2004	04/06/20
L0002133-0002	C0029399	SOLID	Solids	Bulk-B	03/11/2004	03/19/2004	04/06/20
L0002133-0003	C0029400	SOLID	Solids	Fab-A	03/11/2004	03/19/2004	04/06/20
L0002133-0004	C0029401	SOLID	Solids	Mem-A	03/11/2004	03/19/2004	04/06/20
L0002133-0005	C0029402	SOLID	Solids	Wipe-A	03/12/2004	03/19/2004	04/06/20
L0002133-0006	C0029403	SOLID	Solids	Wipe-B	03/12/2004	03/19/2004	04/06/20
L0002133-0007	C0029404	SOLID	Solids	Fab-B	03/12/2004	03/19/2004	04/06/20
L0002133-0008	C0029405	GAS	OVS Tubes	1489 A		03/19/2004	04/06/20
L0002133-0009	C0029406	GAS	OVS Tubes	1489 B		03/19/2004	04/06/20
L0002133-0010	C0029407	GAS	OVS Tubes	1490 A		03/19/2004	04/06/20
L0002133-0011	C0029408	GAS	OVS Tubes	1490 B		03/19/2004	04/06/20
L0002133-0012	C0029409	GAS	OVS Tubes	1492 A		03/19/2004	04/06/20
L0002133-0013	C0029410	GAS	OVS Tubes	1492 B		03/19/2004	04/06/20
L0002133-0014	C0029411	GAS	OVS Tubes	1493 A		03/19/2004	04/06/20
L0002133-0015	C0029412	GAS	OVS Tubes	1493 B		03/19/2004	04/06/20
L0002133-0016	C0029413	GAS	OVS Tubes	1494 A		03/19/2004	04/06/20
L0002133-0017	C0029414	GAS	OVS Tubes	1494 B		03/19/2004	04/06/20
L0002133-0018	C0029415	GAS	OVS Tubes	1495 A		03/19/2004	04/06/20
L0002133-0019	C0029416	GAS	OVS Tubes	1495 B		03/19/2004	04/06/20
L0002133-0020	C0029417	GAS	OVS Tubes	1496 A		03/19/2004	04/06/20

000015

L0002133-0021	C0029418	GAS	OVS Tubes	1496 B	03/19/2004	04/06/20
L0002133-0022	C0029419	GAS	OVS Tubes	1497 A	03/19/2004	04/06/20
L0002133-0023	C0029420	GAS	OVS Tubes	1497 B	03/19/2004	04/06/20
L0002133-0024	C0029421	GAS	OVS Tubes	1498 A	03/19/2004	04/06/20
L0002133-0025	C0029422	GAS	OVS Tubes	1498 B	03/19/2004	04/06/20
L0002133-0026	C0029423	GAS	OVS Tubes	1499 A	03/19/2004	04/06/20
L0002133-0027	C0029424	GAS	OVS Tubes	1499 B	03/19/2004	04/06/20
L0002133-0028	C0029425	GAS	OVS Tubes	1500 A	03/19/2004	04/06/20
L0002133-0029	C0029426	GAS	OVS Tubes	1500 B	03/19/2004	04/06/20
L0002133-0030	C0029427	GAS	OVS Tubes	1501 A	03/19/2004	04/06/20
L0002133-0031	C0029428	GAS	OVS Tubes	1501 B	03/19/2004	04/06/20
L0002133-0032	C0029429	GAS	OVS Tubes	1502 A	03/19/2004	04/06/20
L0002133-0033	C0029430	GAS	OVS Tubes	1502 B	03/19/2004	04/06/20
L0002133-0034	C0029431	GAS	OVS Tubes	1503 A	03/19/2004	04/06/20
L0002133-0035	C0029432	GAS	OVS Tubes	1503 B	03/19/2004	04/06/20
L0002133-0036	C0029433	GAS	OVS Tubes	1491 A Blank	03/19/2004	04/06/20
L0002133-0037	C0029434	GAS	OVS Tubes	1491 B Blank	03/19/2004	04/06/20
L0002133-0038	C0029435	GAS	OVS Tubes	Control 1 A	03/19/2004	04/06/20
L0002133-0039	C0029436	GAS	OVS Tubes	Control 1 B	03/19/2004	04/06/20

000016

Exygen®
3058 Research Drive Phone: 814-272-1039
State College, PA 16801 Fax: 814-231-1580

SAMPLE CONDITION UPON RECEIPT FORM

Protocol # N/A

Exygen Study # *

Date & Time Received 03/19/04 1020

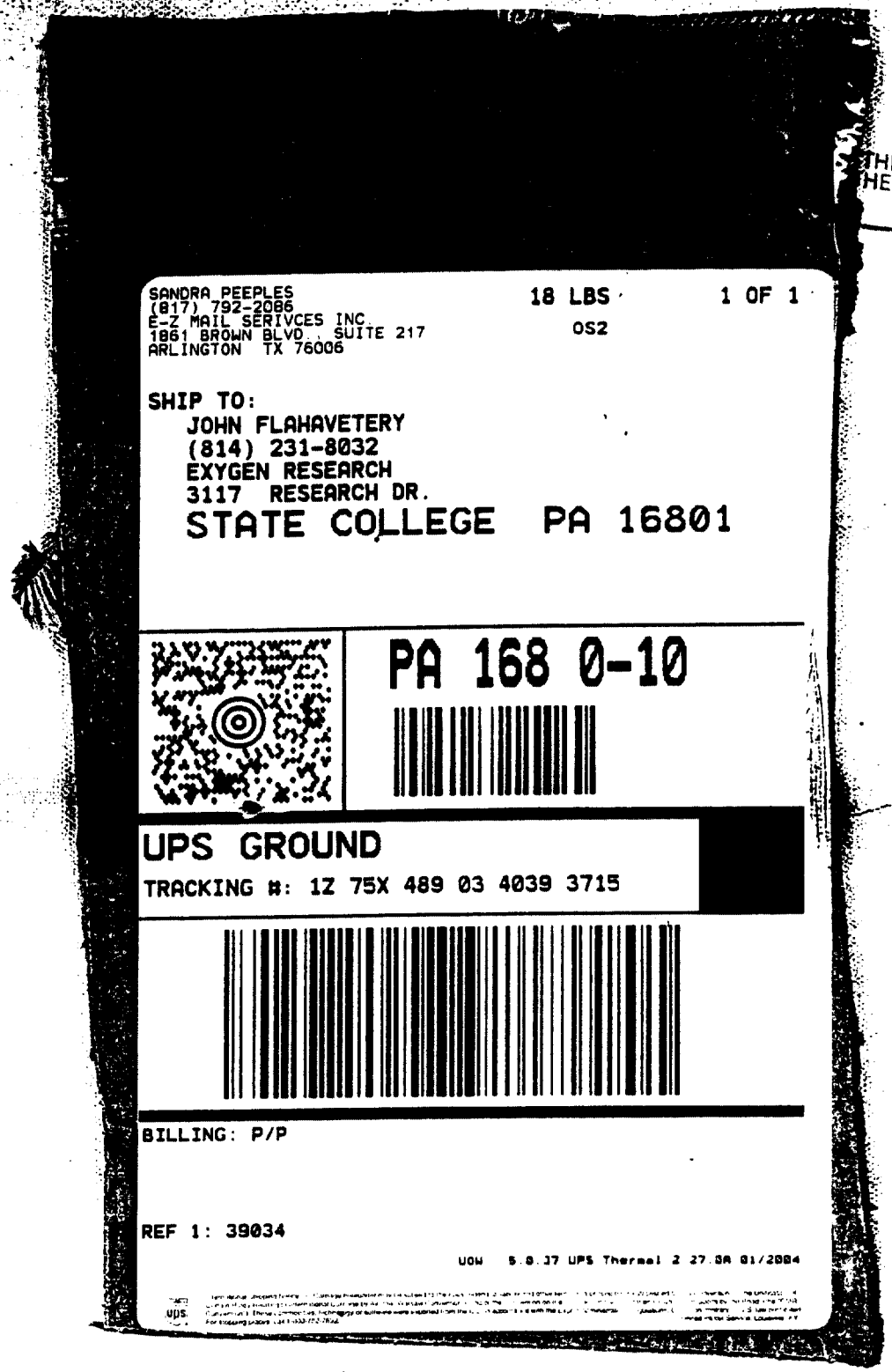
Condition of Samples wet ice-active

Temporary Storage Location Deco 537

Initials & Date MH 03/19/04

Waybill # 1Z 75X 489 03 4039 3715

* waiting for study number. MH 03/19/04



SANDRA PEEPLES
(817) 792-2086
E-Z MAIL SERIVCES INC.
1861 BROWN BLVD., SUITE 217
ARLINGTON TX 76006

18 LBS
OS2

1 OF 1

SHIP TO:
JOHN FLAHAVETERY
(814) 231-8032
EXYGEN RESEARCH
3117 RESEARCH DR.
STATE COLLEGE PA 16801

PA 168 0-10

UPS GROUND
TRACKING #: 1Z 75X 489 03 4039 3715

BILLING: P/P

REF 1: 39034

UOW 5.0.17 UPS Thermal 2 27.0A 01/2004

THIS IS AN EXACT CO
HE ORIGINAL DOCUM
DATE

Ctek

Analytical Request Form

Industrial Hygiene Laboratory
9742 Skillman • Dallas, Texas 75234 • 214/343-2025
1-800 937-2835 (Outside 214 Area)
Fax 214-343-9757

FEE ACCOUNTS

Send Report To
Company Name: CSR Inc
Address: PO box 201857
Arlington, TX 76006
Attn: William Mizel
Phone: (817) 633-6121 FAX: (817) 633-7236
Send Invoice To
Company Name: same
Address:

P.O. #:

☐ Taxable ☐ Non Taxable (Texas Clients Only)

LAB USE ONLY

Rept. #:
Date Received:

INTERNAL ACCOUNTS

Client Name:
Street Address:
City, State, Zip:

Billing Info Cost Center: Risk Code: CIN:
Service Provider:
Office Address:
Telephone No.: ( ) Fax No.: ( )

ITEM #	IHL# (Lab Only)	SAMPLE ID#	SAMPLE MEDIA	SAMPLE AIR VOL.	ANALYSIS REQUESTED (One Analyte per line)
1		1489	OVS-XAD-4	274 L	PFOA
2		1490	"	262 L	PFOA
3		1492	"	412 L	PFOA
4		1493	"	390 L	PFOA
5		1494	"	413 L	PFOA
6		1495	"	407 L	PFOA
7		1496	"	135 L	PFOA
8		1497	"	134 L	PFOA
9		1498	"	89 L	PFOA
10		1499	"	327 L	PFOA
11		1500	"	320 L	PFOA
12		1501	"	320 L	PFOA
13		1502	"	327 L	PFOA
14		1503	"	327 L	PFOA
15		1491	Blank		

Comments:

Project Red Dog

CHAIN OF CUSTODY

Relinquished By: (Signature) Date:

Priority ☐ Routine ☐ Rush (3 Day) ☐ Urgent (Next Day) ☐ Same Day

Accepted By: (Signature) Date: 03/19/04 1020

Sample Condition: (When received by Lab) (good) ~~bto~~ Wet ice-active @ MAC 3/19/04

Page 1 Of 1

CTEK -1367-E

000019

Printed in U.S.A.

Exygen RESEARCH — CHAIN OF CUSTODY/ANALYSIS REQUEST FORM

Exygen Research Sample Receiving • 3117 Research Drive • State College, PA 16801, USA
T: 814.231.8032 • F: 814.231.1580 • exygenresearch.com

PROJECT INFORMATION

Client (name & address):
CSR, Inc
PO Box 201857
Arlington, TX 76006
Phone: 817-633-6121
Fax: 817-633-7236
Sampler: William Mizel

Project Manager (Name & E-mail Address):
William Mizel
csr1@mindspring.com
Project Name:
Red-Dog
P.O. #:
Quotation #:

Please fill out this form *completely* to ensure correct analysis and proper handling of your samples.

SAMPLE ANALYSIS

ExyLIMS#	Client Sample Identification	Collection Date	Collection Time	Grab	Composite	Number of Containers	Specify Matrix	Comments	PFOA						
	Bulk-A	3-11-04				1		container 478206	X						
	Bulk-B	3-11-04				1		478202	X						
	Fab-A	3-11-04				1		478325	X						
	mem-A	3-11-04				1		478207	X						
	wipe-A	3-12-04				1		478208	X						
	wipe-B	3-12-04				1		478210	X						
	Fab-B	3-12-04				1		478211	X						

LAB USE ONLY

CHAIN OF CUSTODY

Relinquished by	Date	Time

Cooler ID # client Cooler Temp. (°C) 3.1

Received by	Date	Time
	3/19/04	1016

LAB USE ONLY

OTHER INFORMATION

PROJECT REQUIREMENTS

Results Deadline:

Laboratory Report Options:
- [x] Sample results only
- [x] Add case narrative
- [x] Add quality control summary
- [x] Add calibration summary
- [x] Add raw data
- [ ] Other

000020

REV 3.02

Sequence: C:\HPCHEM\1\SEQUENCE\033004F.S

Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 1	STD 10 ppb	POAASUR	1	Sample		
2	Vial 1	STD 10 ppb	POAASUR	1	Calib		
3	Vial 2	STD 50 ppb	POAASUR	1	Calib		
4	Vial 3	STD 100 ppb	POAASUR	1	Calib		
5	Vial 4	STD 250 ppb	POAASUR	1	Calib		
6	Vial 5	STD 500 ppb	POAASUR	1	Calib		
7	Vial 6	STD 750 ppb	POAASUR	1	Calib		
8	Vial 7	STD 1000 ppb	POAASUR	1	Calib		
9	Vial 92	solvent blank	POAASUR	1	Sample		
10	Vial 11	Surrogate	POAASUR	1	Sample		
11	Vial 12	L2133-38	POAASUR	1	Sample		
12	Vial 13	L2133-39	POAASUR	1	Sample		
13	Vial 14	L2133-36	POAASUR	1	Sample		
14	Vial 15	L2133-37	POAASUR	1	Sample		
15	Vial 16	L2133-8	POAASUR	1	Sample		
16	Vial 17	L2133-9	POAASUR	1	Sample		
17	Vial 18	L2133-10	POAASUR	1	Sample		
18	Vial 19	L2133-11	POAASUR	1	Sample		
19	Vial 20	L2133-12	POAASUR	1	Sample		
20	Vial 4	STD 250 ppb	POAASUR	1	Sample		
21	Vial 92	solvent blank	POAASUR	1	Sample		
22	Vial 21	L2133-13	POAASUR	1	Sample		
23	Vial 22	L2133-14	POAASUR	1	Sample		
24	Vial 23	L2133-15	POAASUR	1	Sample		
25	Vial 24	L2133-16	POAASUR	1	Sample		
26	Vial 25	L2133-17	POAASUR	1	Sample		
27	Vial 26	L2133-18	POAASUR	1	Sample		
28	Vial 27	L2133-19	POAASUR	1	Sample		
29	Vial 28	L2133-20	POAASUR	1	Sample		
30	Vial 29	L2133-21	POAASUR	1	Sample		
31	Vial 30	L2133-22	POAASUR	1	Sample		
32	Vial 4	STD 250 ppb	POAASUR	1	Sample		
33	Vial 92	solvent blank	POAASUR	1	Sample		
34	Vial 31	L2133-23	POAASUR	1	Sample		
35	Vial 32	L2133-24	POAASUR	1	Sample		
36	Vial 33	L2133-25	POAASUR	1	Sample		
37	Vial 34	L2133-26	POAASUR	1	Sample		
38	Vial 35	L2133-27	POAASUR	1	Sample		
39	Vial 36	L2133-28	POAASUR	1	Sample		
40	Vial 37	L2133-29	POAASUR	1	Sample		
41	Vial 38	L2133-30	POAASUR	1	Sample		
42	Vial 39	L2133-31	POAASUR	1	Sample		
43	Vial 40	L2133-32	POAASUR	1	Sample		
44	Vial 4	STD 250 ppb	POAASUR	1	Sample		
45	Vial 92	solvent blank	POAASUR	1	Sample		
46	Vial 41	L2133-33	POAASUR	1	Sample		
47	Vial 42	L2133-34	POAASUR	1	Sample		
48	Vial 43	L2133-35	POAASUR	1	Sample		
49	Vial 4	STD 250 ppb	POAASUR	1	Sample		
50	Vial 92	solvent blank	POAASUR	1	Sample		
51	Vial 1	STD 10 ppb	POAASUR	1	Calib		
52	Vial 2	STD 50 ppb	POAASUR	1	Calib		
53	Vial 3	STD 100 ppb	POAASUR	1	Calib		
54	Vial 4	STD 250 ppb	POAASUR	1	Calib		
55	Vial 5	STD 500 ppb	POAASUR	1	Calib		
56	Vial 6	STD 750 ppb	POAASUR	1	Calib		
57	Vial 7	STD 1000 ppb	POAASUR	1	Calib		

000021

LCMS3 3/30/04 4:50:40 PM jmiller 3/30/04

Sequence: C:\HPCHEM\1\SEQUENCE\033004F.S

Calibration Part:

Line	Location	SampleName	Method	CalLev	Update RF	Update RT	Interval
2	Vial 1	STD 10 ppb	POAASUR	1	Replace	Average	
3	Vial 2	STD 50 ppb	POAASUR	2	Replace	Average	-2
4	Vial 3	STD 100 ppb	POAASUR	3	Replace	Average	
5	Vial 4	STD 250 ppb	POAASUR	4	Replace	Average	
6	Vial 5	STD 500 ppb	POAASUR	5	Replace	Average	
7	Vial 6	STD 750 ppb	POAASUR	6	Replace	Average	
8	Vial 7	STD 1000 ppb	POAASUR	7	Replace	Average	
51	Vial 1	STD 10 ppb	POAASUR	1	Average	Average	
52	Vial 2	STD 50 ppb	POAASUR	2	Average	Average	
53	Vial 3	STD 100 ppb	POAASUR	3	Average	Average	
54	Vial 4	STD 250 ppb	POAASUR	4	Average	Average	
55	Vial 5	STD 500 ppb	POAASUR	5	Average	Average	
56	Vial 6	STD 750 ppb	POAASUR	6	Average	Average	
57	Vial 7	STD 1000 ppb	POAASUR	7	Average	Average	

000022

LC/MS SYSTEM AND OPERATING CONDITIONS

Client: CSR Inc. EXYGEN STUDY: L0002133

Instrument:	Hewlett-Packard 1100 LC/MSD (LCMS 3) API-ES Interface - Negative SIM mode Nitrogen: 10 L/min at 300°C Fragmentor: Variable; Vcap: 3500V
Computer:	Hewlett-Packard Kayak workstation
Software:	Microsoft Windows NT 4.0 Agilent Chemstation Version A.08.03
HPLC Equipment:	HP G1379A Solvent Degasser HP G1311A Quaternary Pump HP G1313A Autosampler HP G1316A Column Thermostat HP G1946A MSD
HPLC Column:	Thermo-Hypersil Keystone Betasil C18, 30 x 2.1 mm x 3µm
Column Temp.:	30° C
Mobile Phase (A):	2mM Ammonium acetate in OmniSolv Water
Mobile Phase (B):	HPLC grade Methanol

Time	% A	% B
0.0	90	10
5.0	10	90
9.0	10	90
9.0	STOP	STOP

Post Time = 5 min.
Total run time = 14 min.

Flow Rate:	0.3 mL/min
Injected Volume:	5 µL

Ions monitored:

Analyte	Ion (m/z)
TH-PFOS (I.S.)	427
PFOA (POAA)	369
Surrogate	513

Extraction Date: March 30, 2004

Analyst: James R. Miller 3/30/04

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

Method C:\HPCHEM\1\METHODS\033004F.M

Calibration Table

Calib. Data Modified : Wednesday, March 31, 2004 9:04:59 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 5.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 5.000 %
Abs. Non-ref. Window : 0.000 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Quadratic (some peaks differ, see below)
Origin : Included (some peaks differ, see below)
Weight : Equal (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount [ppb]	Name
1	500.00000	TH-PFOS

Signal 1: MSD1 427, EIC=426.7:427.7
Signal 2: MSD1 369, EIC=368.7:369.7
Signal 3: MSD1 513, EIC=512.7:513.7

RetTime [min]	Sig	Lvl	Amount [ppb]	Area	Amt/Area	Ref	Grp	Name
7.273	1	1	500.00000	3.06333e5	1.63221e-3	I1		TH-PFOS
		2	500.00000	2.87995e5	1.73614e-3			
		3	500.00000	2.82575e5	1.76944e-3			
		4	500.00000	2.66974e5	1.87284e-3			
		5	500.00000	2.56077e5	1.95254e-3			
		6	500.00000	2.32126e5	2.15400e-3			
		7	500.00000	2.46664e5	2.02705e-3			
7.281	2	1	10.00000	7944.07910	1.25880e-3	1		PFOA
		2	50.00000	2.69978e4	1.85200e-3			
		3	100.00000	5.28759e4	1.89122e-3			
		4	250.00000	1.29464e5	1.93104e-3			
		5	500.00000	2.52757e5	1.97818e-3			
		6	750.00000	3.56357e5	2.10463e-3			
		7	1000.00000	4.51134e5	2.21664e-3			
7.747	3	1	10.00000	1760.20929	5.68114e-3	1		SURROGATE
		2	50.00000	4853.52673	1.03018e-2			
		3	100.00000	8862.66040	1.12833e-2			
		4	250.00000	1.96676e4	1.27113e-2			
		5	500.00000	3.71388e4	1.34630e-2			
		6	750.00000	4.98274e4	1.50520e-2			
		7	1000.00000	6.49905e4	1.53869e-2			

000025

Method C:\HPCHEM\1\METHODS\033004F.M

More compound-specific settings:

Compound: TH-PFOS
  Time Window : From 5.653 min To 8.073 min
  Curve Type : Linear
  Origin : Forced
  Calibration Level Weights:/
    Level 1 : 1
    Level 2 : 1
    Level 3 : 1
    Level 4 : 1
    Level 5 : 1
    Level 6 : 1
    Level 7 : 1

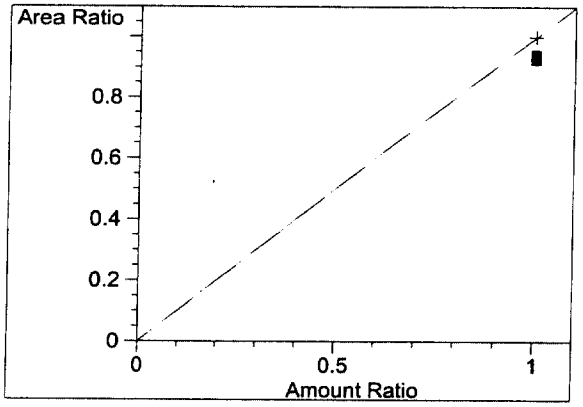
Compound: PFOA
  Time Window : From 5.652 min To 8.100 min

Compound: SURROGATE
  Time Window : From 7.227 min To 8.578 min

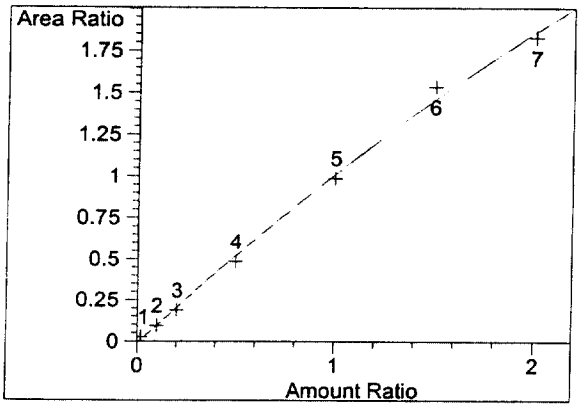
Peak Sum Table

No Entries in table

Calibration Curves



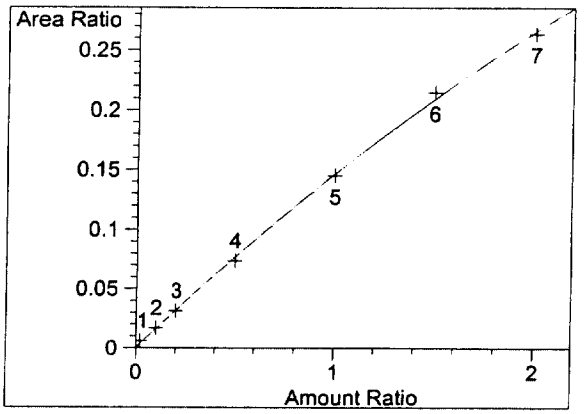
TH-PFOS at exp. RT: 7.273
MSD1 427, EIC=426.7:427.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: y = mx
  m: 1.00000
  x: Amount Ratio
  y: Area Ratio
Calibration Level Weights:
  Level 1 : 1
  Level 2 : 1
  Level 3 : 1
  Level 4 : 1
  Level 5 : 1
  Level 6 : 1
  Level 7 : 1



PFOA at exp. RT: 7.281
MSD1 369, EIC=368.7:369.7
Correlation: 0.99868
Residual Std. Dev.: 0.04011
Formula: $y = ax^2 + bx + c$
  a: -8.86528e-2
  b: 1.11680
  c: -1.61426e-2
  x: Amount Ratio
  y: Area Ratio

000026

Method C:\HPCHEM\1\METHODS\033004F.M



SURROGATE at exp. RT: 7.747
MSD1 513, EIC=512.7:513.7
Correlation: 0.99966
Residual Std. Dev.: 0.00287
Formula: $y = ax^2 + bx + c$
a: -1.34309e-2
b: 1.59540e-1
c: 4.31606e-4
x: Amount Ratio
y: Area Ratio

==========

000027

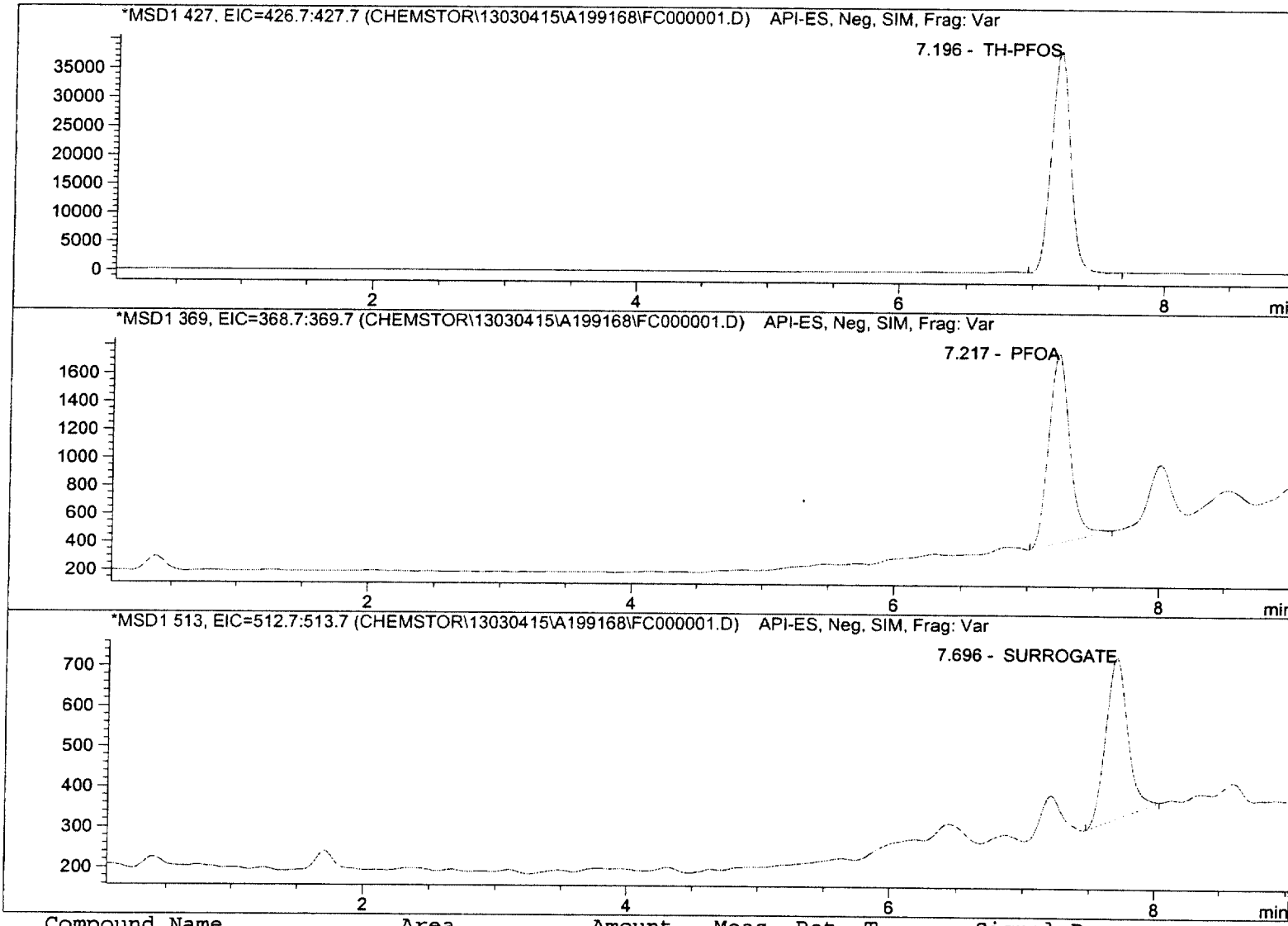
Sample Name:STD 10 ppb
Sample Info:Warm up

Data file :C:\HPCHEM\1\DATA\Chemstor\13030415\A199168\FC000001.D

Injection Date	: 3/30/04 5:09:40 PM	Seq Line	: 1
Acq Operator	: jmiller	Vial No.	: 1
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am

Initials
Date 4/1/04
Run# FC000001 To FC00000



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	381058.06	500.00	7.196	MSD1 427, EIC=426.7:427.7
PFOA	14793.73	24.71	7.217	MSD1 369, EIC=368.7:369.7
SURROGATE	4655.52	37.17	7.696	MSD1 513, EIC=512.7:513.7

*** End of Report ***

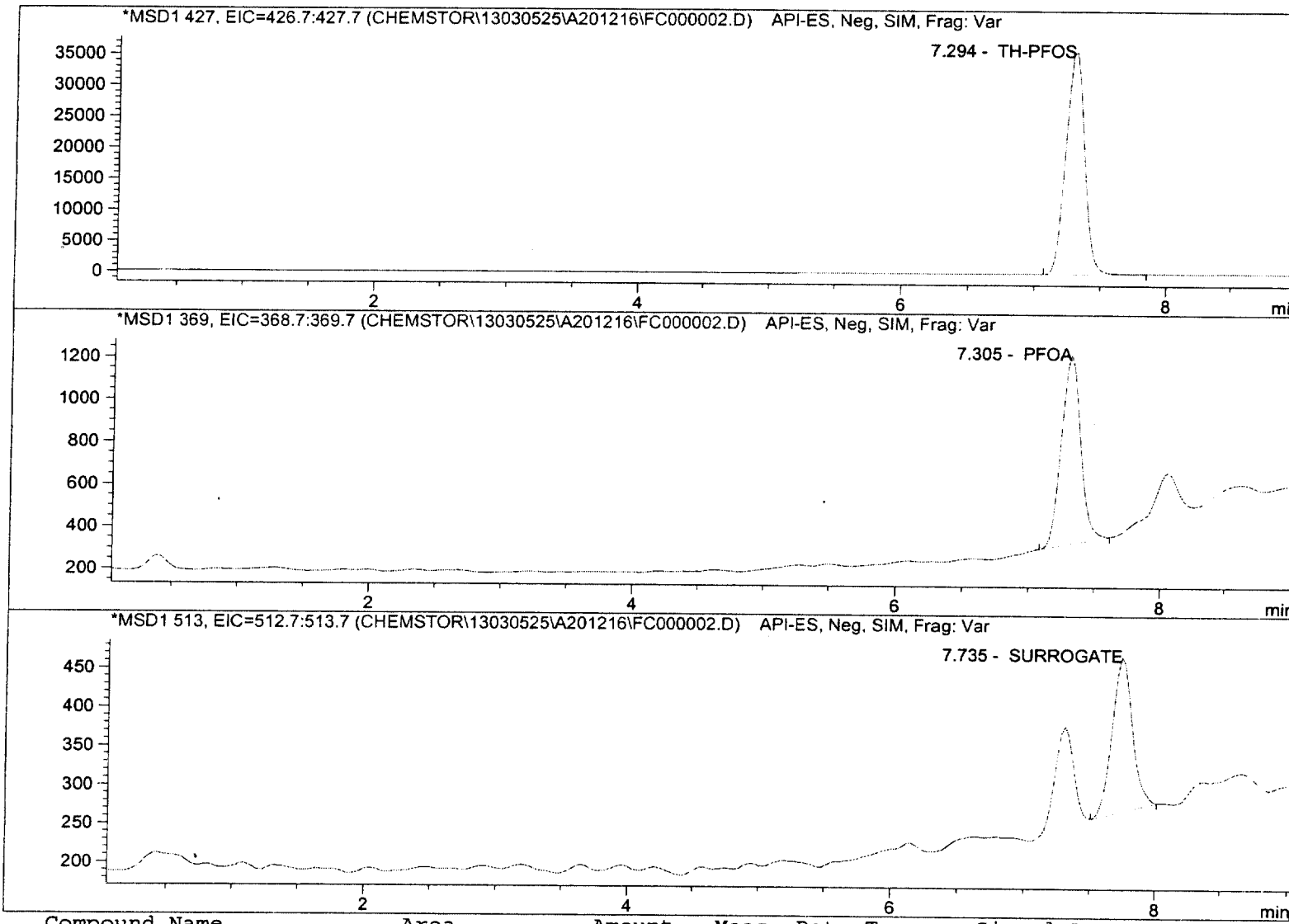
000028

Sample Name:STD 10 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13030525\A201216\FC000002.D

Injection Date	: 3/30/04 5:25:17 PM	Seq Line	: 2
Acq Operator	: jmiller	Vial No.	: 1
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	351174.81	500.00	7.294	MSD1 427, EIC=426.7:427.7
PFOA	8939.94	18.68	7.305	MSD1 369, EIC=368.7:369.7
SURROGATE	2169.02	18.06	7.735	MSD1 513, EIC=512.7:513.7

*** End of Report ***

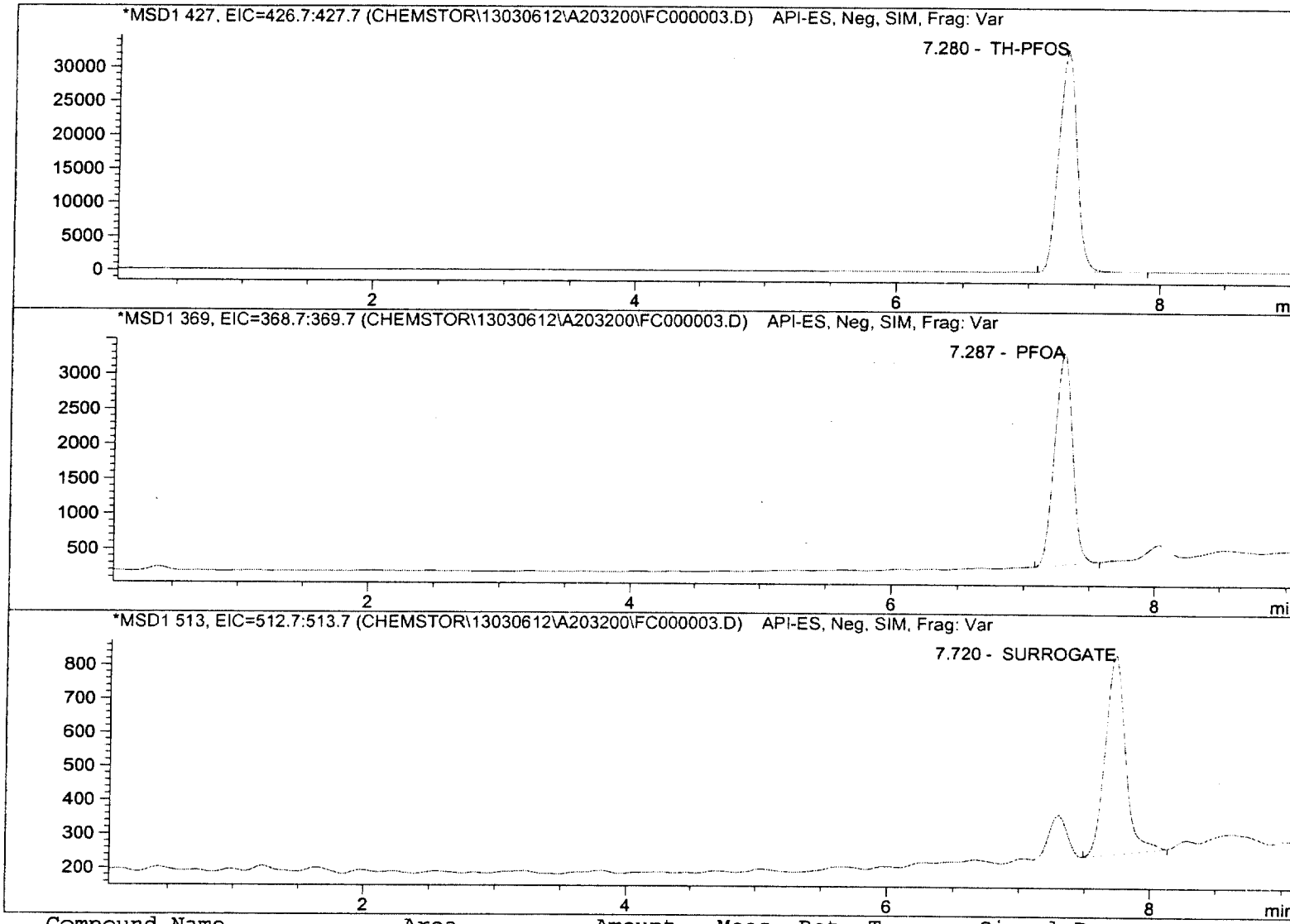
000029

Sample Name:STD 50 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13030612\A203200\FC000003.D

Injection Date	: 3/30/04 5:40:50 PM	Seq Line	: 3
Acq Operator	: jmiller	Vial No.	: 2
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	315424.91	500.00	7.280	MSD1 427, EIC=426.7:427.7
PFOA	29009.79	48.78	7.287	MSD1 369, EIC=368.7:369.7
SURROGATE	6317.18	62.06	7.720	MSD1 513, EIC=512.7:513.7

*** End of Report ***

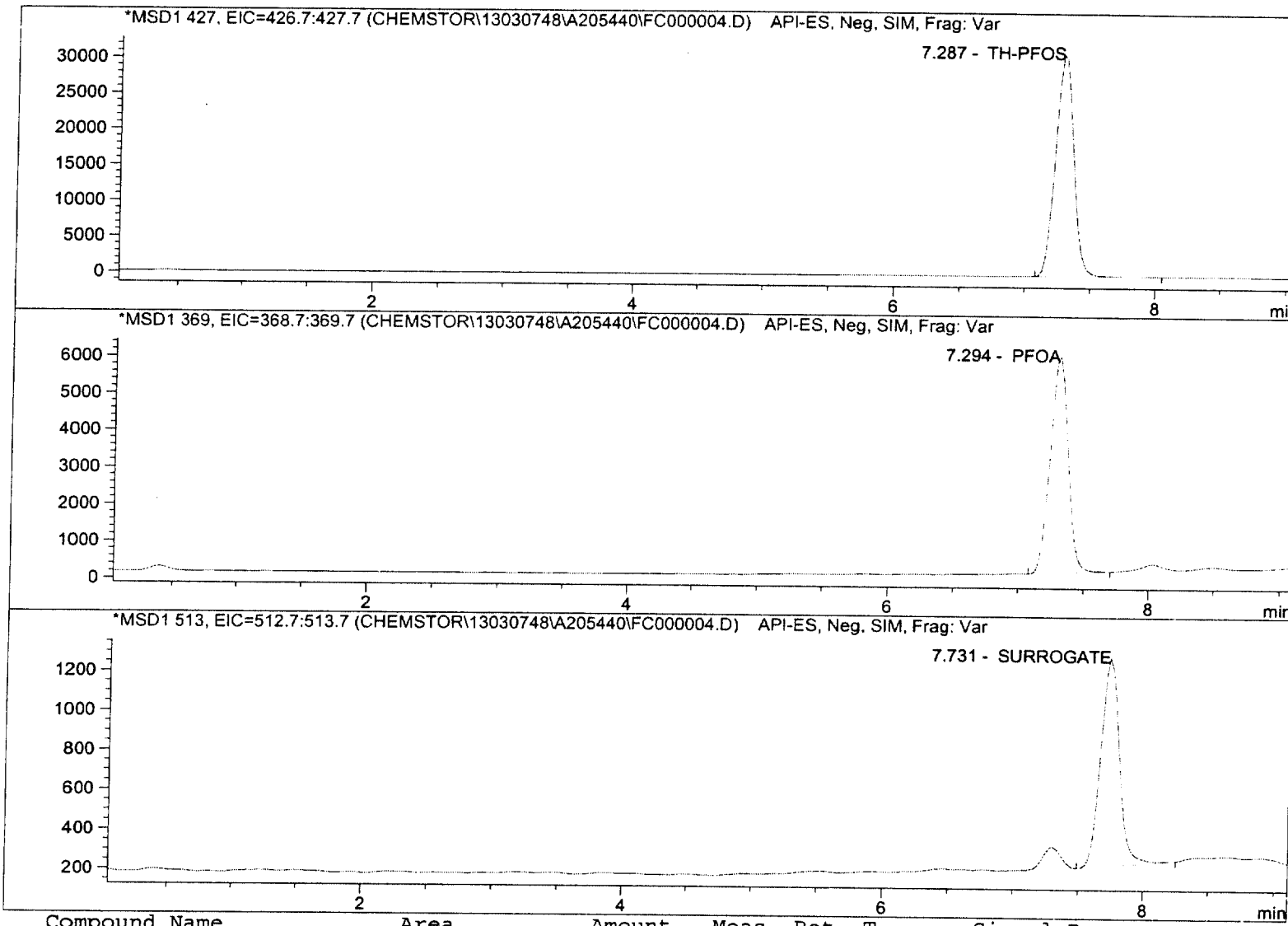
000030

Sample Name:STD 100 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13030748\A205440\FC000004.D

Injection Date	: 3/30/04 5:56:25 PM	Seq Line	: 4
Acq Operator	: jmiller	Vial No.	: 3
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	301721.16	500.00	7.287	MSD1 427, EIC=426.7:427.7
PFOA	56373.87	92.23	7.294	MSD1 369, EIC=368.7:369.7
SURROGATE	10383.05	108.48	7.731	MSD1 513, EIC=512.7:513.7

*** End of Report ***

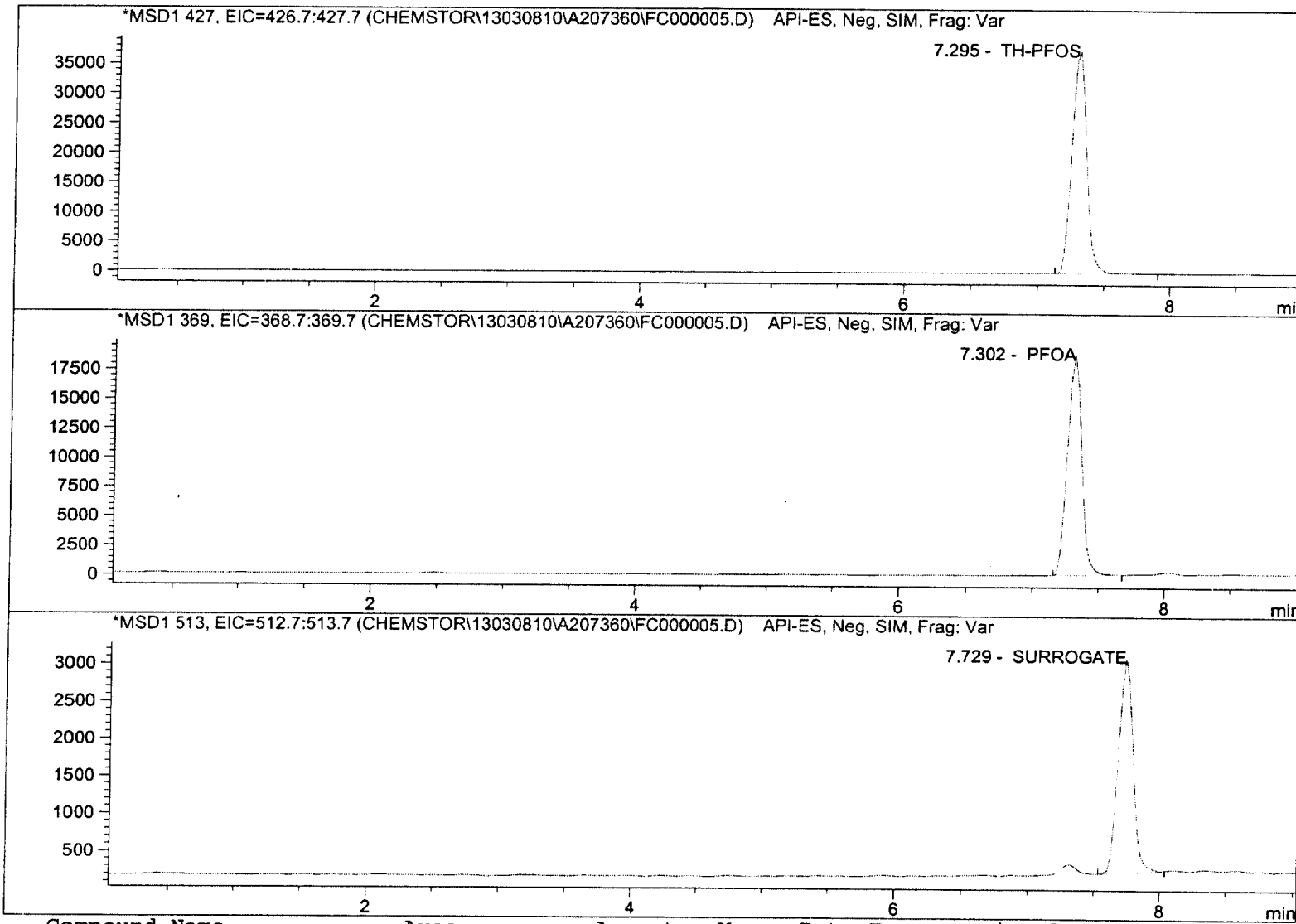
000031

Sample Name:STD 250 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13030810\A207360\FC000005.D

Injection Date	: 3/30/04 6:11:58 PM	Seq Line	: 5
Acq Operator	: jmiller	Vial No.	: 4
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	286496.72	500.00	7.295	MSD1 427, EIC=426.7:427.7
PFOA	139903.34	234.59	7.302	MSD1 369, EIC=368.7:369.7
SURROGATE	21990.65	249.70	7.729	MSD1 513, EIC=512.7:513.7

*** End of Report ***

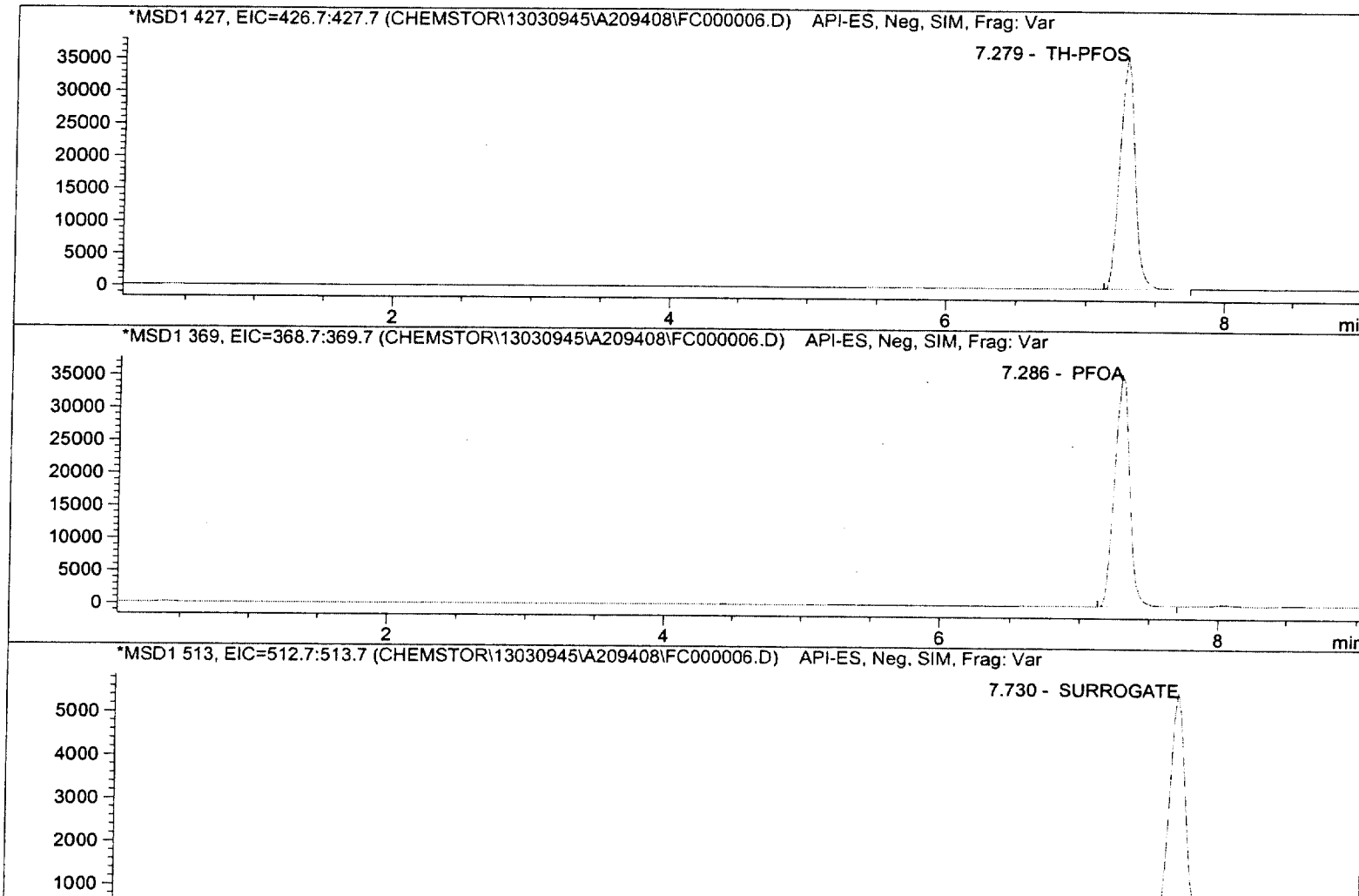
000032

Sample Name:STD 500 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13030945\A209408\FC000006.D

Injection Date	: 3/30/04 6:27:35 PM	Seq Line	: 6
Acq Operator	: jmiller	Vial No.	: 5
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	273931.84	500.00	7.279	MSD1 427, EIC=426.7:427.7
PFOA	270093.41	486.19	7.286	MSD1 369, EIC=368.7:369.7
SURROGATE	41181.93	514.35	7.730	MSD1 513, EIC=512.7:513.7

*** End of Report ***

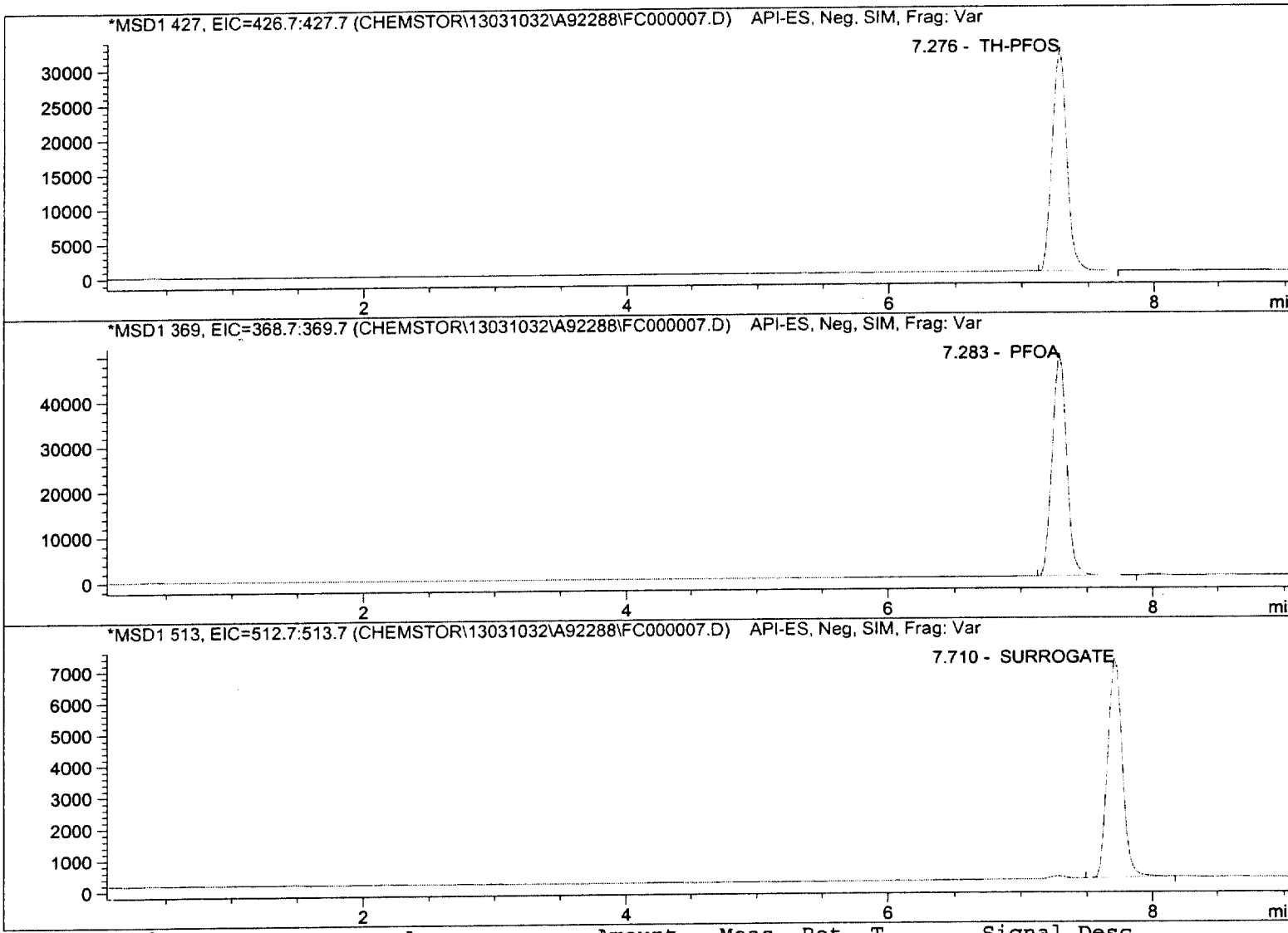
000033

Sample Name:STD 750 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13031032\A92288\FC000007.D

Injection Date	: 3/30/04 6:43:10 PM	Seq Line	: 7
Acq Operator	: jmiller	Vial No.	: 6
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	244656.30	500.00	7.276	MSD1 427, EIC=426.7:427.7
PFOA	371633.72	785.17	7.283	MSD1 369, EIC=368.7:369.7
SURROGATE	54317.40	803.02	7.710	MSD1 513, EIC=512.7:513.7

*** End of Report ***

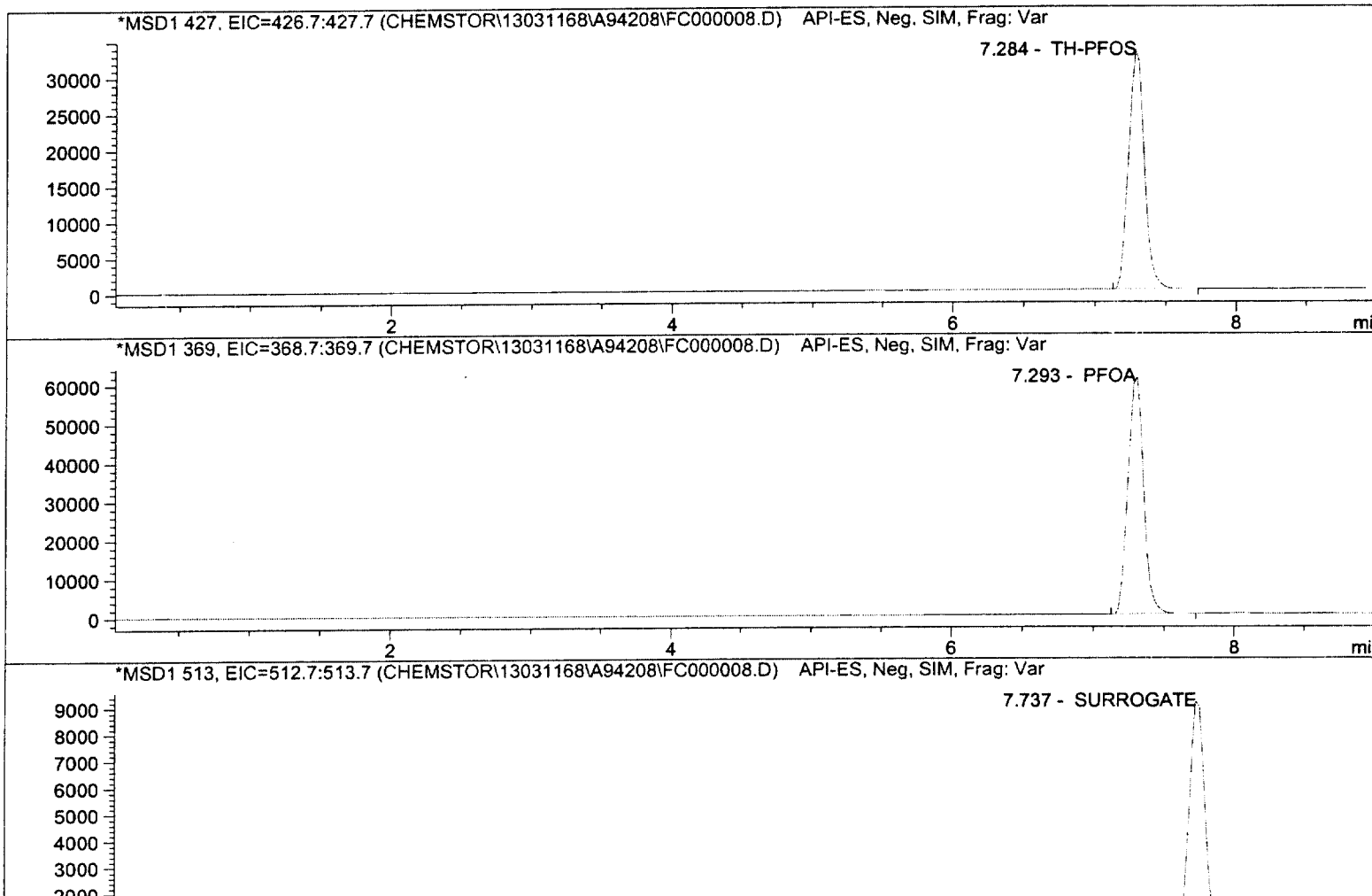
000034

Sample Name:STD 1000 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13031168\A94208\FC000008.D

Injection Date	: 3/30/04 6:58:48 PM	Seq Line	: 8
Acq Operator	: jmiller	Vial No.	: 7
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	256301.19	500.00	7.284	MSD1 427, EIC=426.7:427.7
PFOA	469969.84	980.93	7.293	MSD1 369, EIC=368.7:369.7
SURROGATE	70507.30	1044.48	7.737	MSD1 513, EIC=512.7:513.7

*** End of Report ***

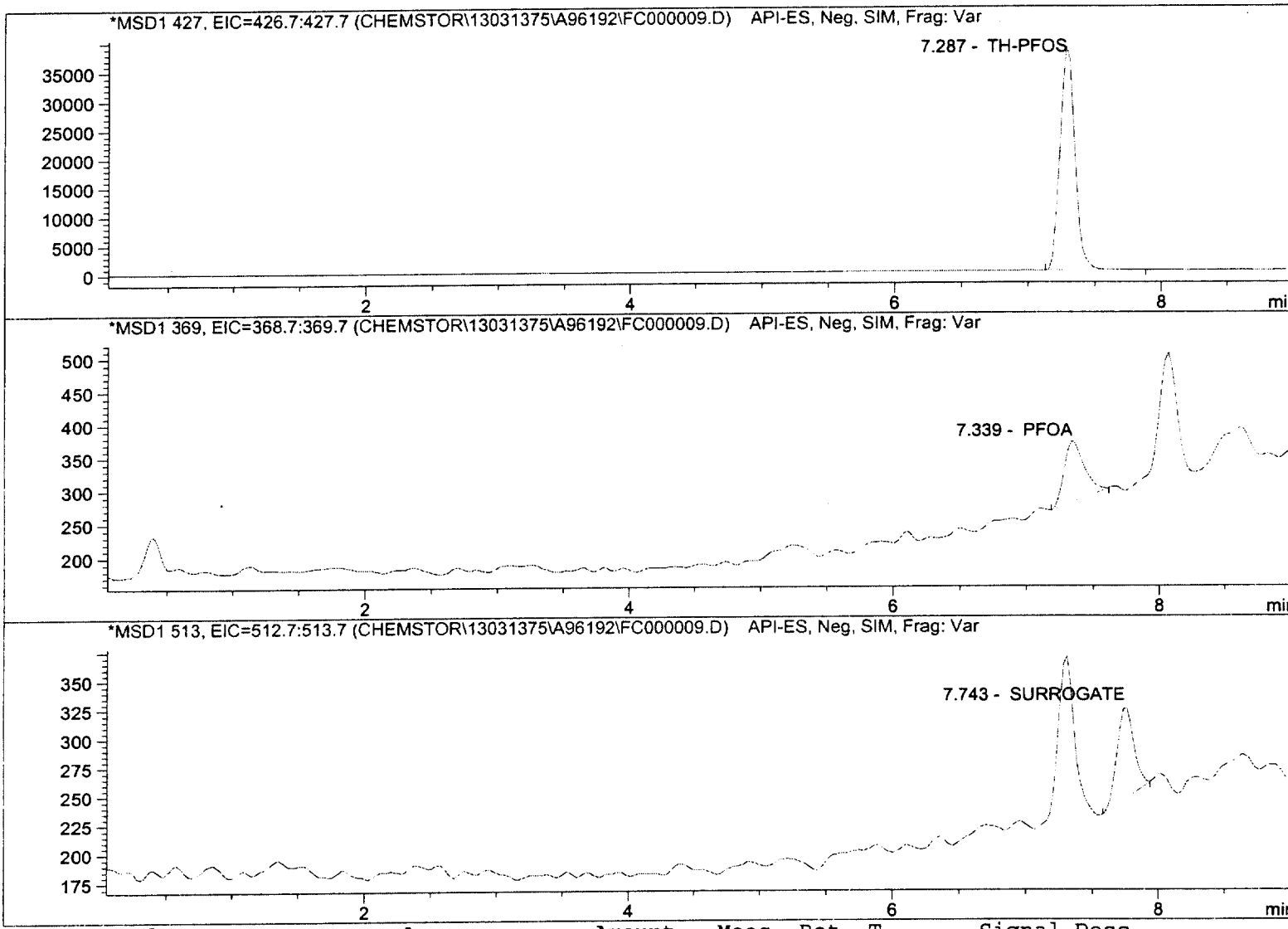
000035

Sample Name:solvent blank
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13031375\A96192\FC000009.D

Injection Date	: 3/30/04 7:14:19 PM	Seq Line	: 9
Acq Operator	: jmiller	Vial No.	: 92
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	294378.31	500.00	7.287	MSD1 427, EIC=426.7:427.7
PFOA	949.01	8.68	7.339	MSD1 369, EIC=368.7:369.7
SURROGATE	705.08	6.16	7.743	MSD1 513, EIC=512.7:513.7

*** End of Report ***

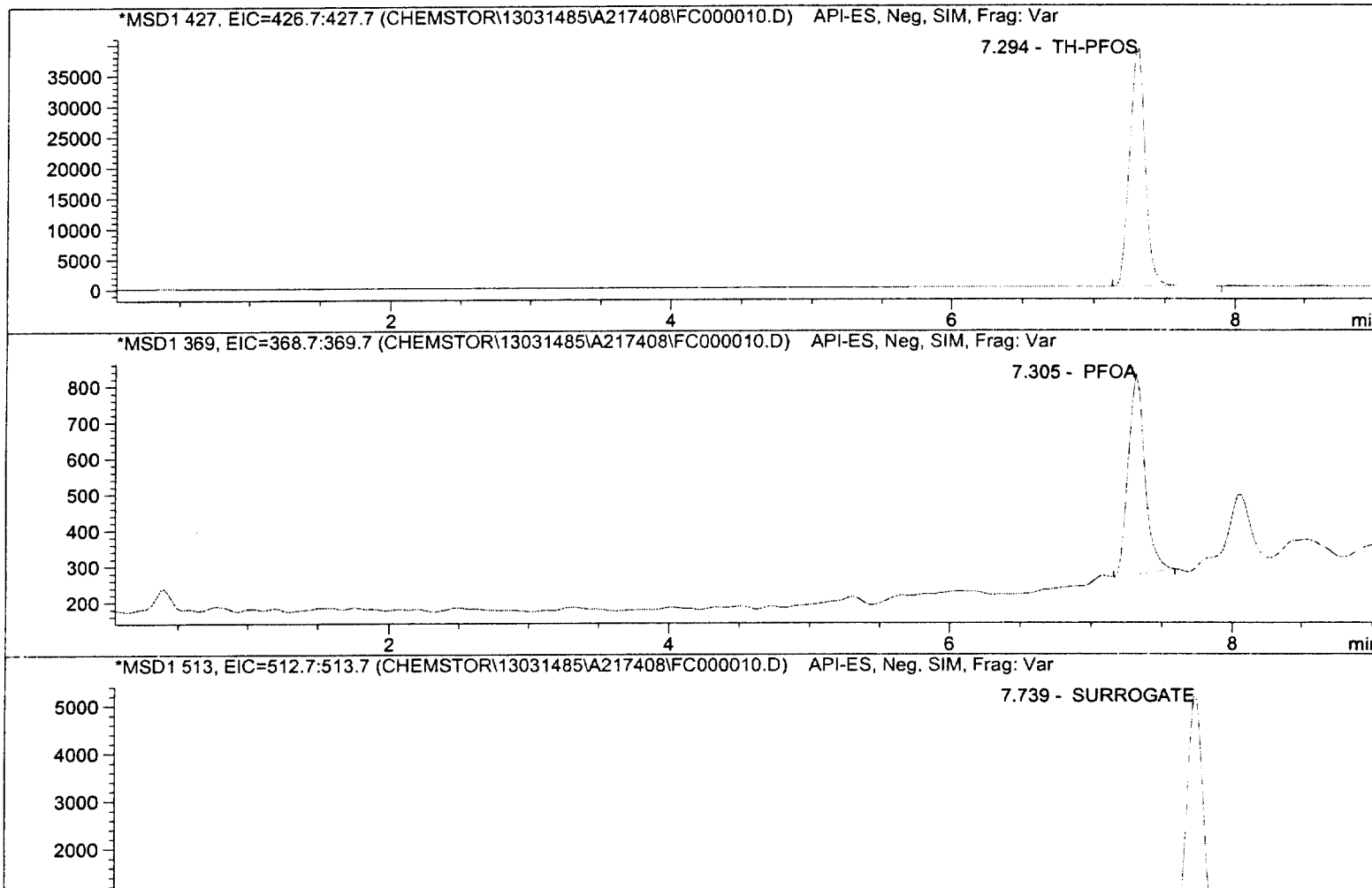
000036

Sample Name:Surrogate
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13031485\A217408\FC000010.D

Injection Date	: 3/30/04 7:29:52 PM	Seq Line	: 10
Acq Operator	: jmiller	Vial No.	: 11
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	297779.28	500.00	7.294	MSD1 427, EIC=426.7:427.7
PFOA	4568.15	14.13	7.305	MSD1 369, EIC=368.7:369.7
SURROGATE	38976.33	441.71	7.739	MSD1 513, EIC=512.7:513.7

*** End of Report ***

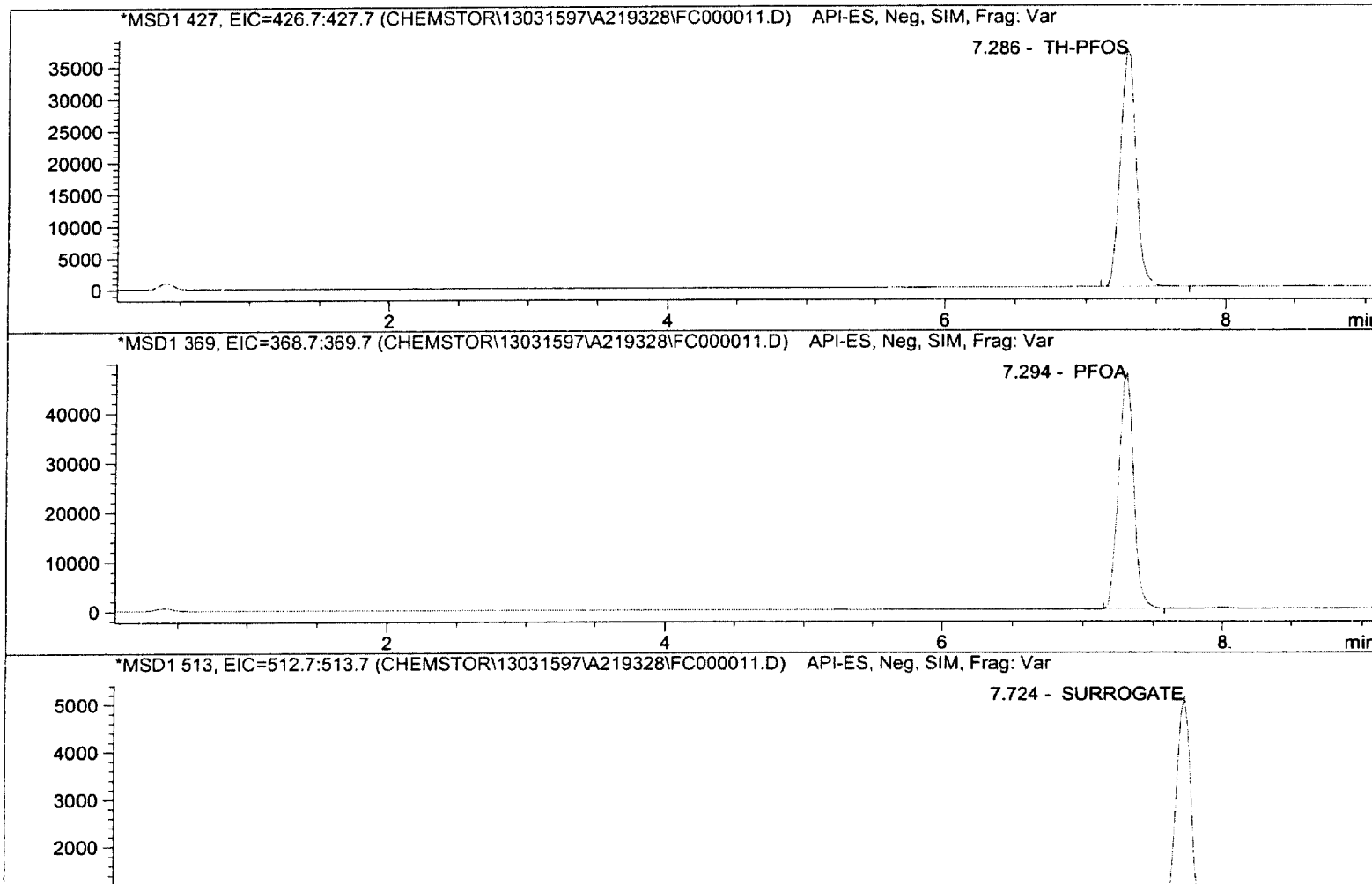
000037

Sample Name:L2133-38
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13031597\A219328\FC000011.D

Injection Date	: 3/30/04 7:45:26 PM	Seq Line	: 11
Acq Operator	: jmiller	Vial No.	: 12
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	290741.16	500.00	7.286	MSD1 427, EIC=426.7:427.7
PFOA	360322.87	623.87	7.294	MSD1 369, EIC=368.7:369.7
SURROGATE	38528.03	447.70	7.724	MSD1 513, EIC=512.7:513.7

*** End of Report ***

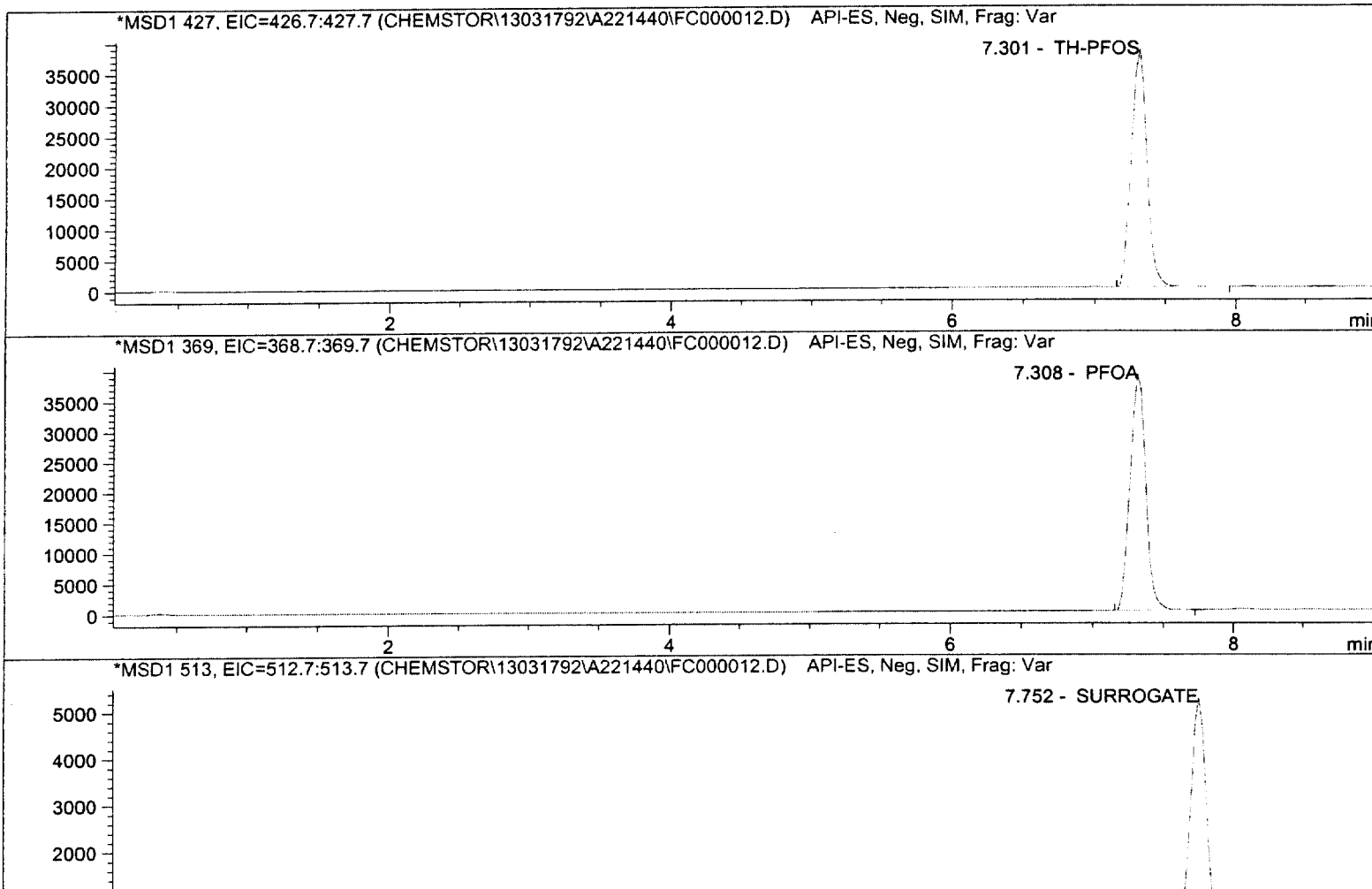
000038

Sample Name:L2133-39
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13031792\A221440\FC000012.D

Injection Date	: 3/30/04 8:01:02 PM	Seq Line	: 12
Acq Operator	: jmiller	Vial No.	: 13
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	290724.38	500.00	7.301	MSD1 427, EIC=426.7:427.7
PFOA	293724.41	499.10	7.308	MSD1 369, EIC=368.7:369.7
SURROGATE	38285.21	444.65	7.752	MSD1 513, EIC=512.7:513.7

*** End of Report ***

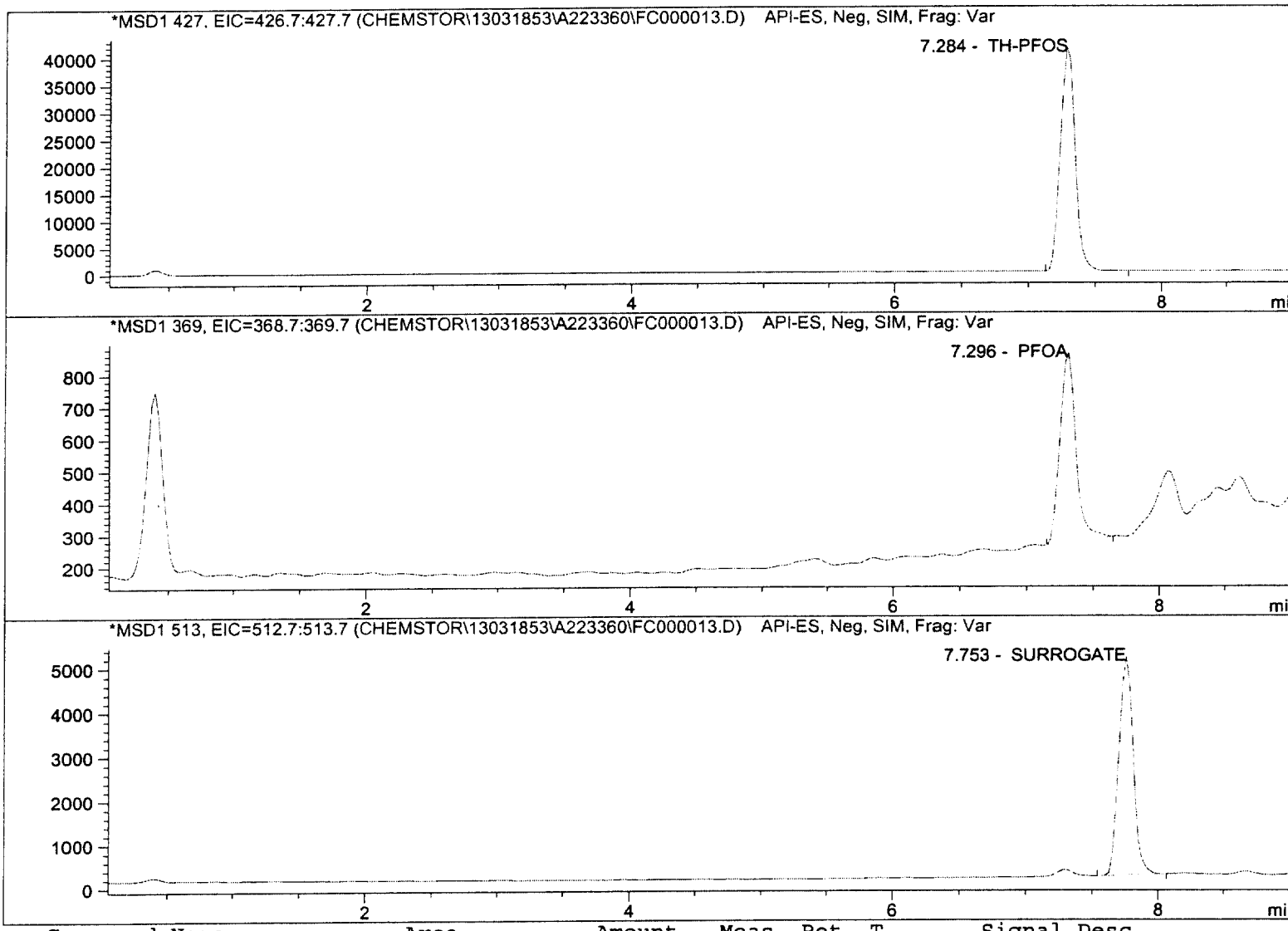
000039

Sample Name:L2133-36
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13031853\A223360\FC000013.D

Injection Date	: 3/30/04 8:16:39 PM	Seq Line	: 13
Acq Operator	: jmiller	Vial No.	: 14
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	317239.12	500.00	7.284	MSD1 427, EIC=426.7:427.7
PFOA	4890.69	14.16	7.296	MSD1 369, EIC=368.7:369.7
SURROGATE	37853.95	399.48	7.753	MSD1 513, EIC=512.7:513.7

*** End of Report ***

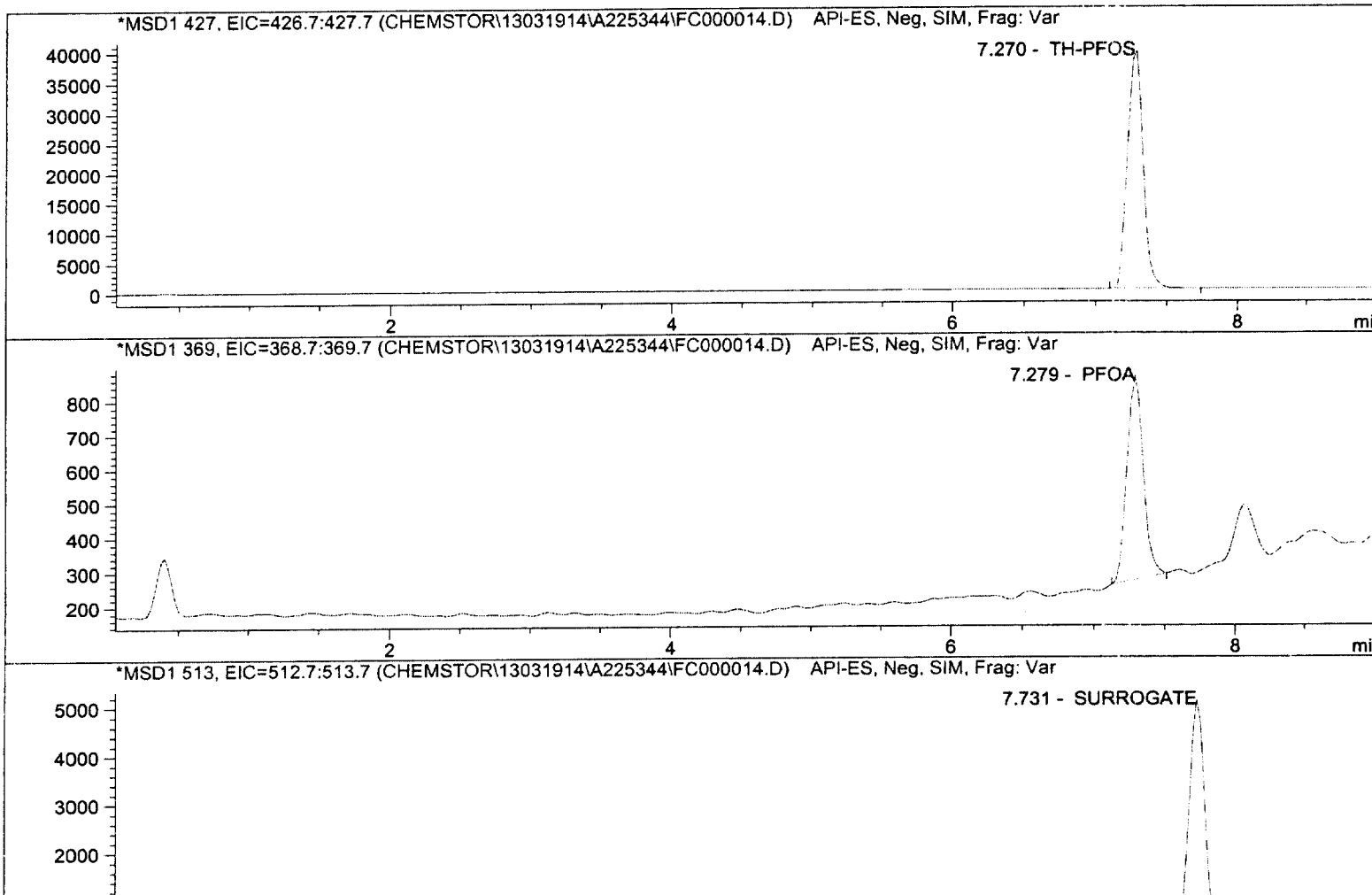
000040

Sample Name:L2133-37
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13031914\A225344\FC000014.D

Injection Date	: 3/30/04 8:32:16 PM	Seq Line	: 14
Acq Operator	: jmiller	Vial No.	: 15
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	301105.63	500.00	7.270	MSD1 427, EIC=426.7:427.7
PFOA	4725.47	14.29	7.279	MSD1 369, EIC=368.7:369.7
SURROGATE	37147.81	414.18	7.731	MSD1 513, EIC=512.7:513.7

*** End of Report ***

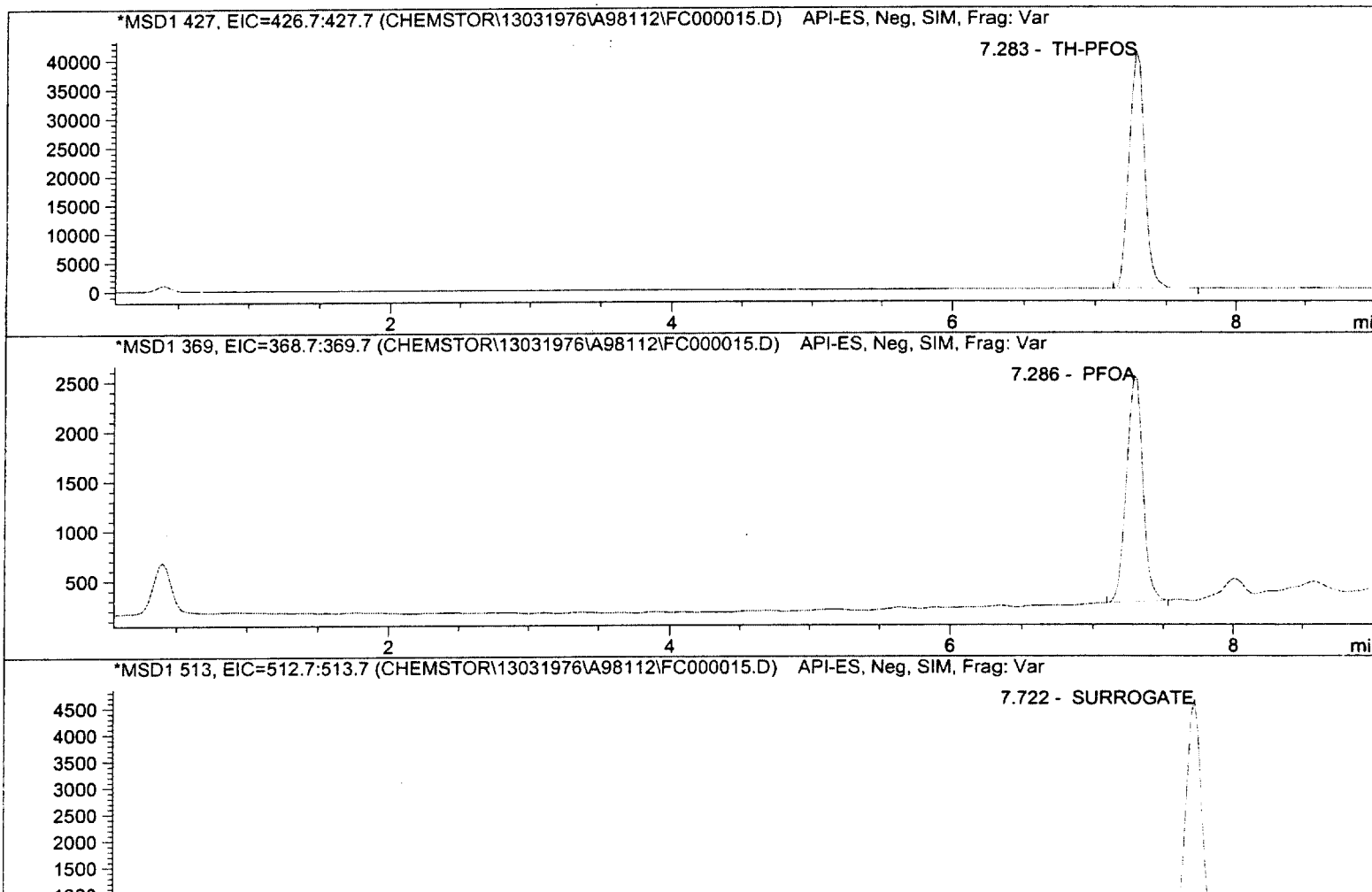
000041

Sample Name:L2133-8
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13031976\A98112\FC000015.D

Injection Date	: 3/30/04 8:47:53 PM	Seq Line	: 15
Acq Operator	: jmiller	Vial No.	: 16
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	313245.38	500.00	7.283	MSD1 427, EIC=426.7:427.7
PFOA	18395.42	33.70	7.286	MSD1 369, EIC=368.7:369.7
SURROGATE	33291.57	352.67	7.722	MSD1 513, EIC=512.7:513.7

*** End of Report ***

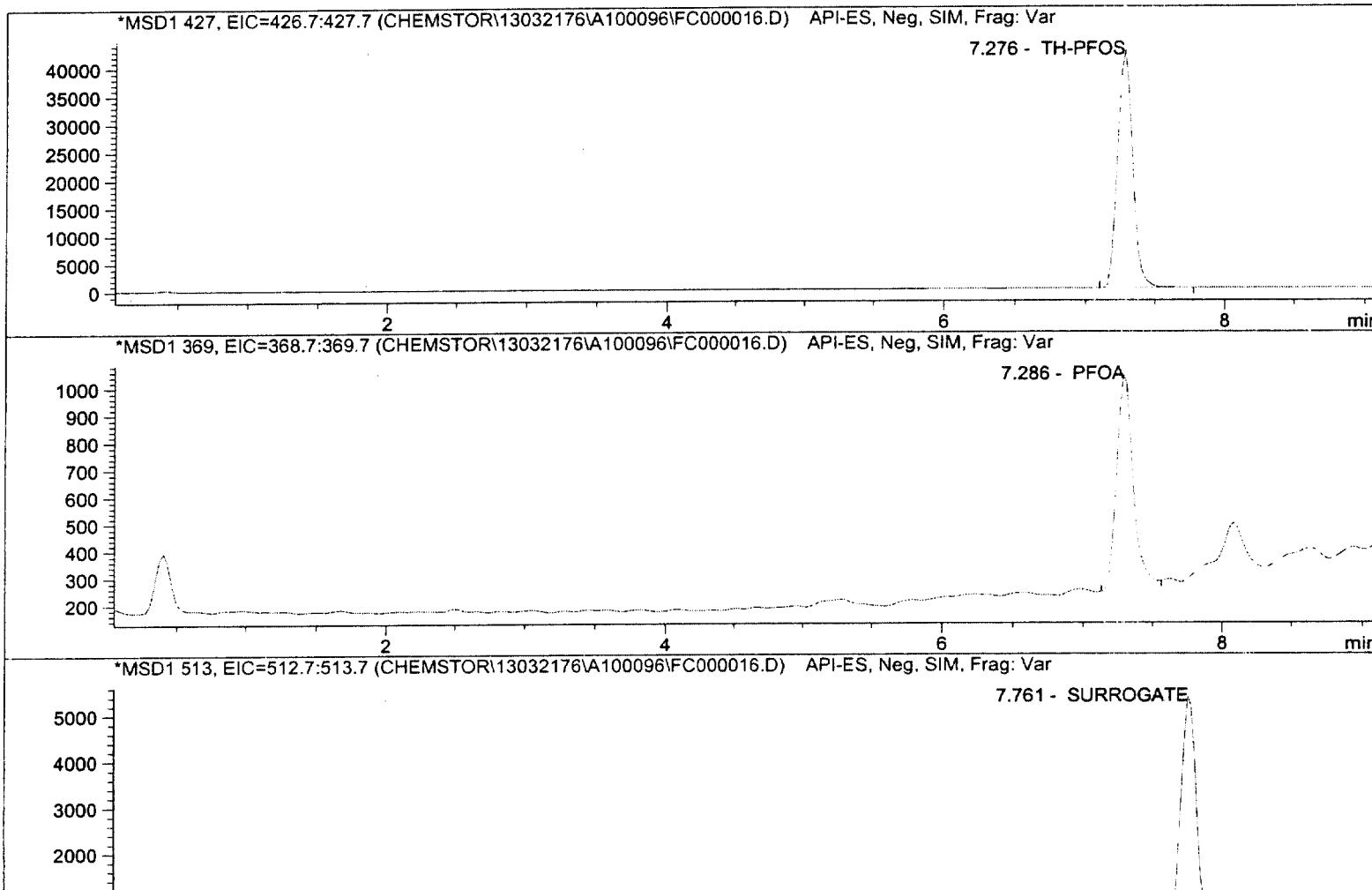
000042

Sample Name:L2133-9
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13032176\A100096\FC000016.D

Injection Date	: 3/30/04 9:03:30 PM	Seq Line	: 16
Acq Operator	: jmiller	Vial No.	: 17
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	323992.78	500.00	7.276	MSD1 427, EIC=426.7:427.7
PFOA	6460.67	16.20	7.286	MSD1 369, EIC=368.7:369.7
SURROGATE	39744.98	411.63	7.761	MSD1 513, EIC=512.7:513.7

*** End of Report ***

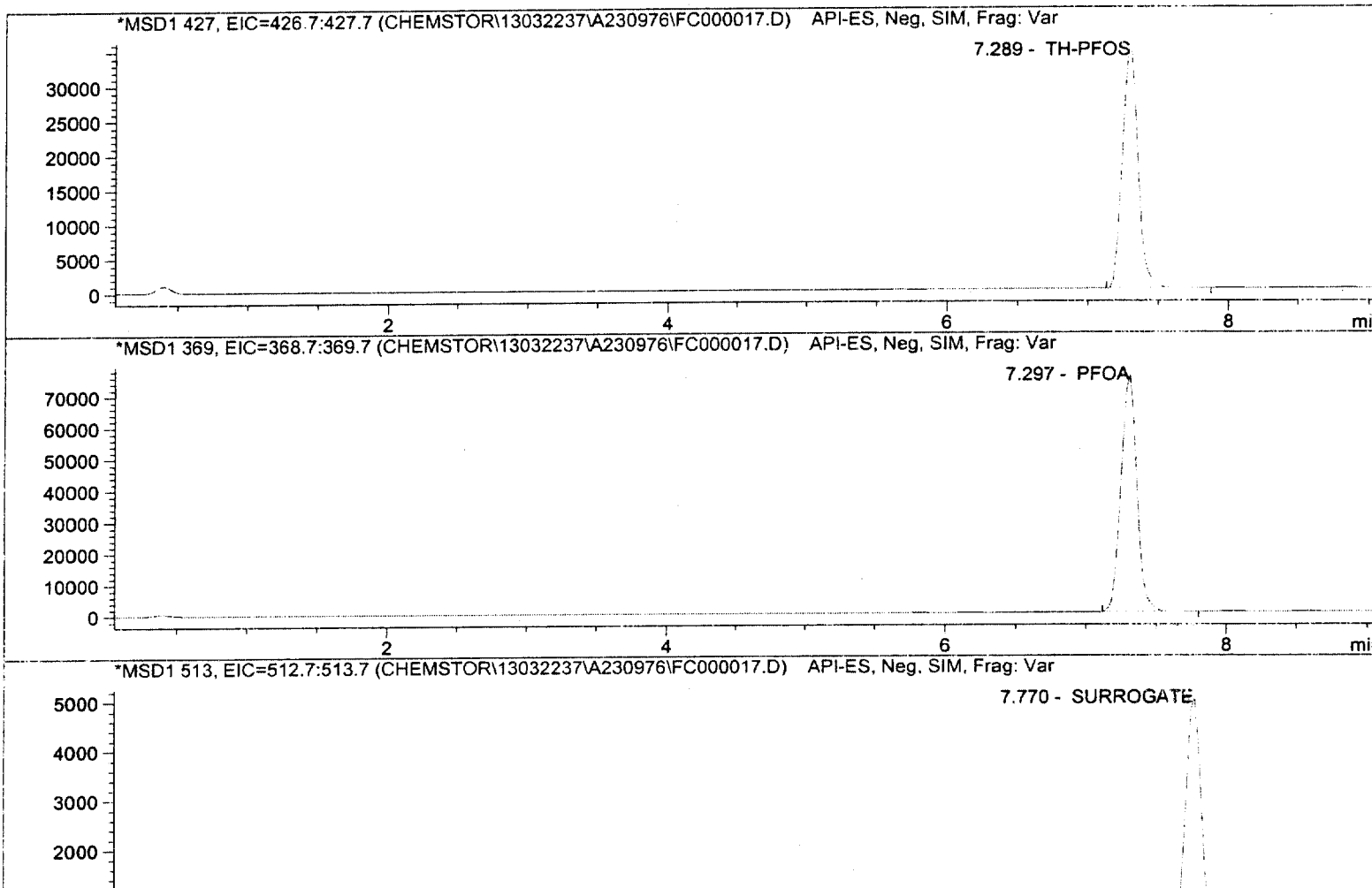
000043

Sample Name:L2133-10
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13032237\A230976\FC000017.D

Injection Date	: 3/30/04 9:19:09 PM	Seq Line	: 17
Acq Operator	: jmiller	Vial No.	: 18
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	272033.38	500.00	7.289	MSD1 427, EIC=426.7:427.7
PFOA	597702.44	1231.81	7.297	MSD1 369, EIC=368.7:369.7
SURROGATE	36879.13	458.99	7.770	MSD1 513, EIC=512.7:513.7

*** End of Report ***

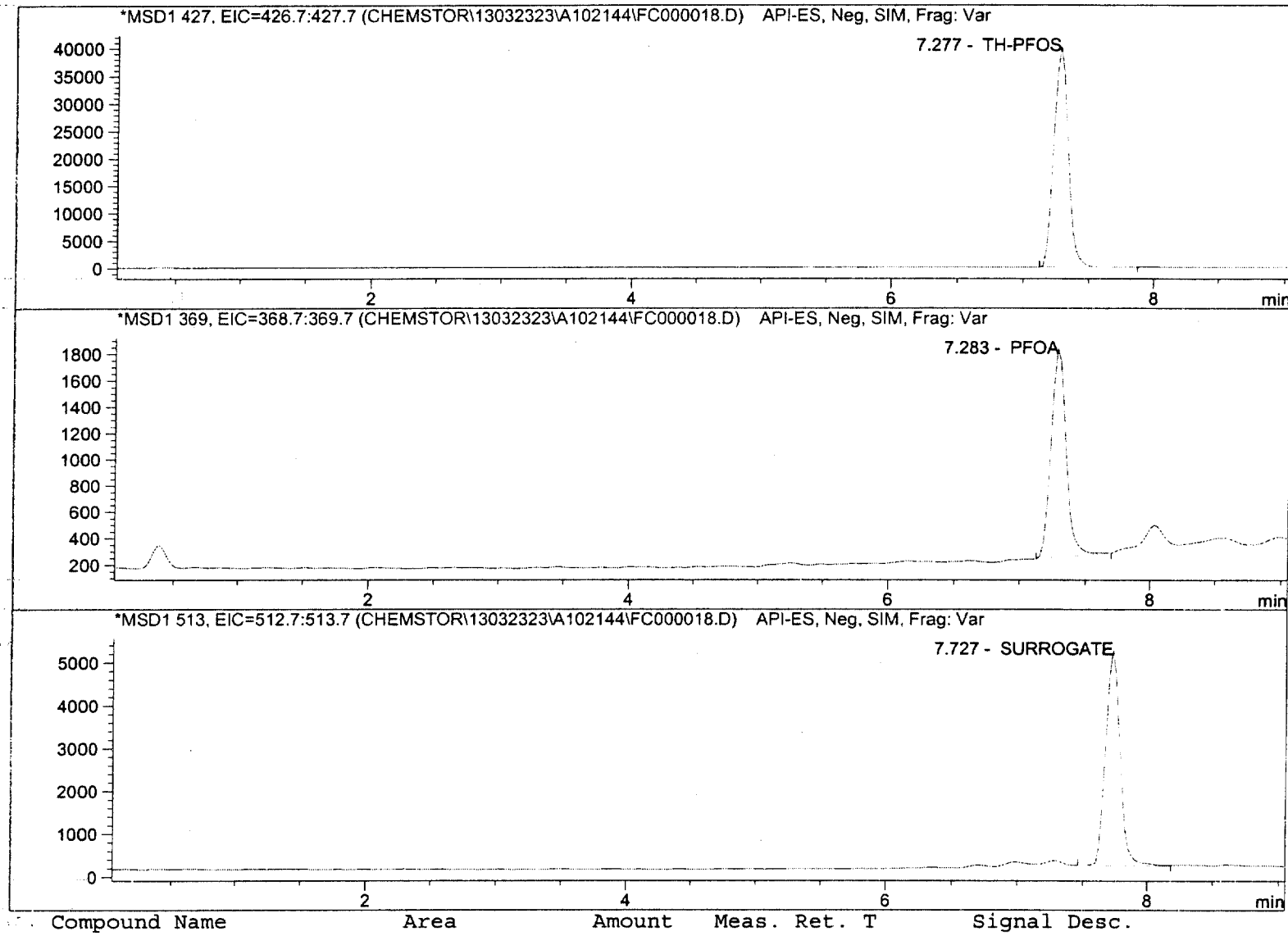
000044

Sample Name:L2133-11
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13032323\A102144\FC000018.D

Injection Date	: 3/30/04 9:34:52 PM	Seq Line	: 18
Acq Operator	: jmiller	Vial No.	: 19
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	303139.19	500.00	7.277	MSD1 427, EIC=426.7:427.7
PFOA	12458.16	25.73	7.283	MSD1 369, EIC=368.7:369.7
SURROGATE	39190.64	435.80	7.727	MSD1 513, EIC=512.7:513.7

*** End of Report ***

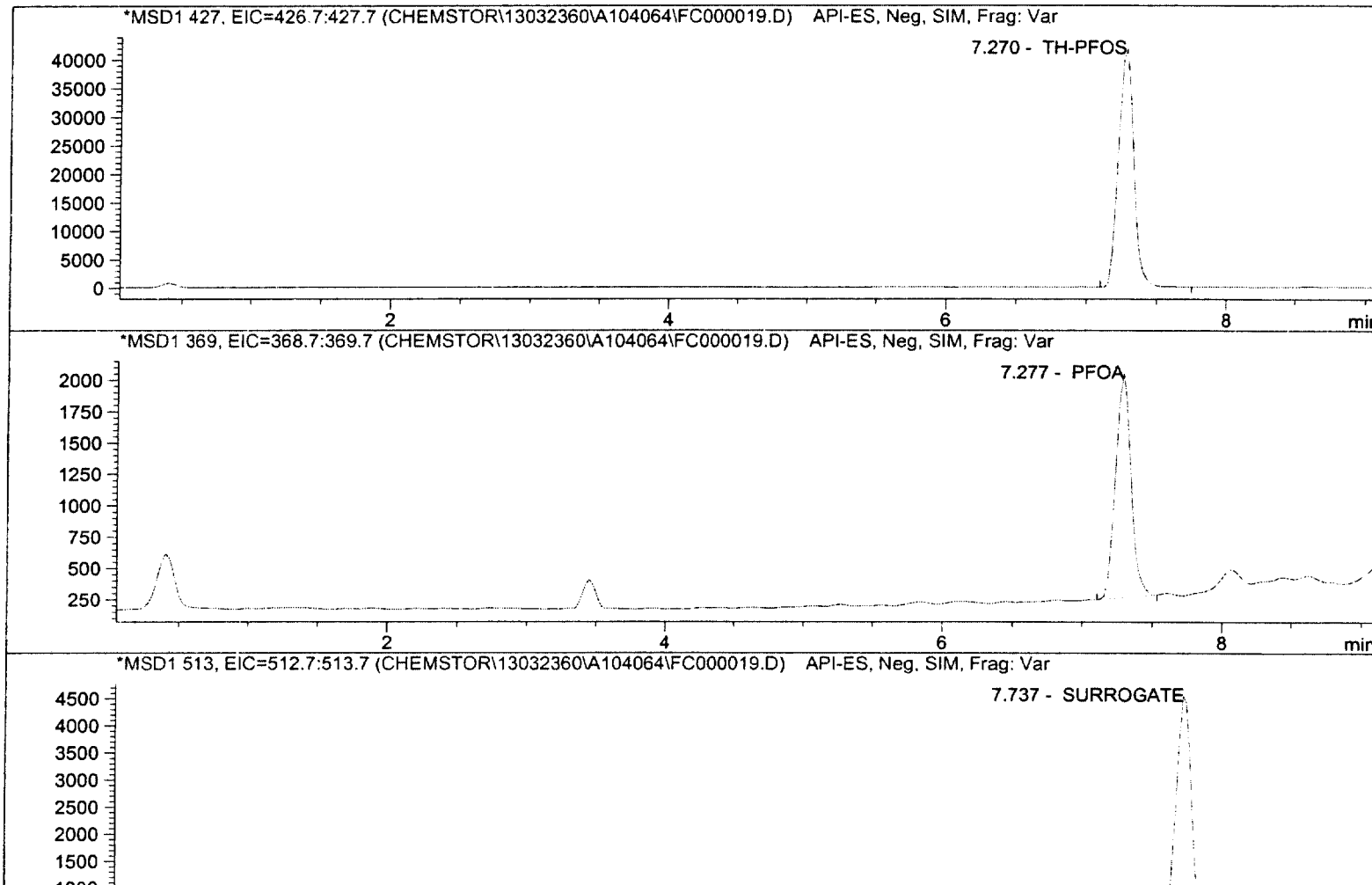
000045

Sample Name:L2133-12
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13032360\A104064\FC000019.D

Injection Date	: 3/30/04 9:50:34 PM	Seq Line	: 19
Acq Operator	: jmiller	Vial No.	: 20
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	319936.38	500.00	7.270	MSD1 427, EIC=426.7:427.7
PFOA	13914.09	26.81	7.277	MSD1 369, EIC=368.7:369.7
SURROGATE	33598.00	348.18	7.737	MSD1 513, EIC=512.7:513.7

*** End of Report ***

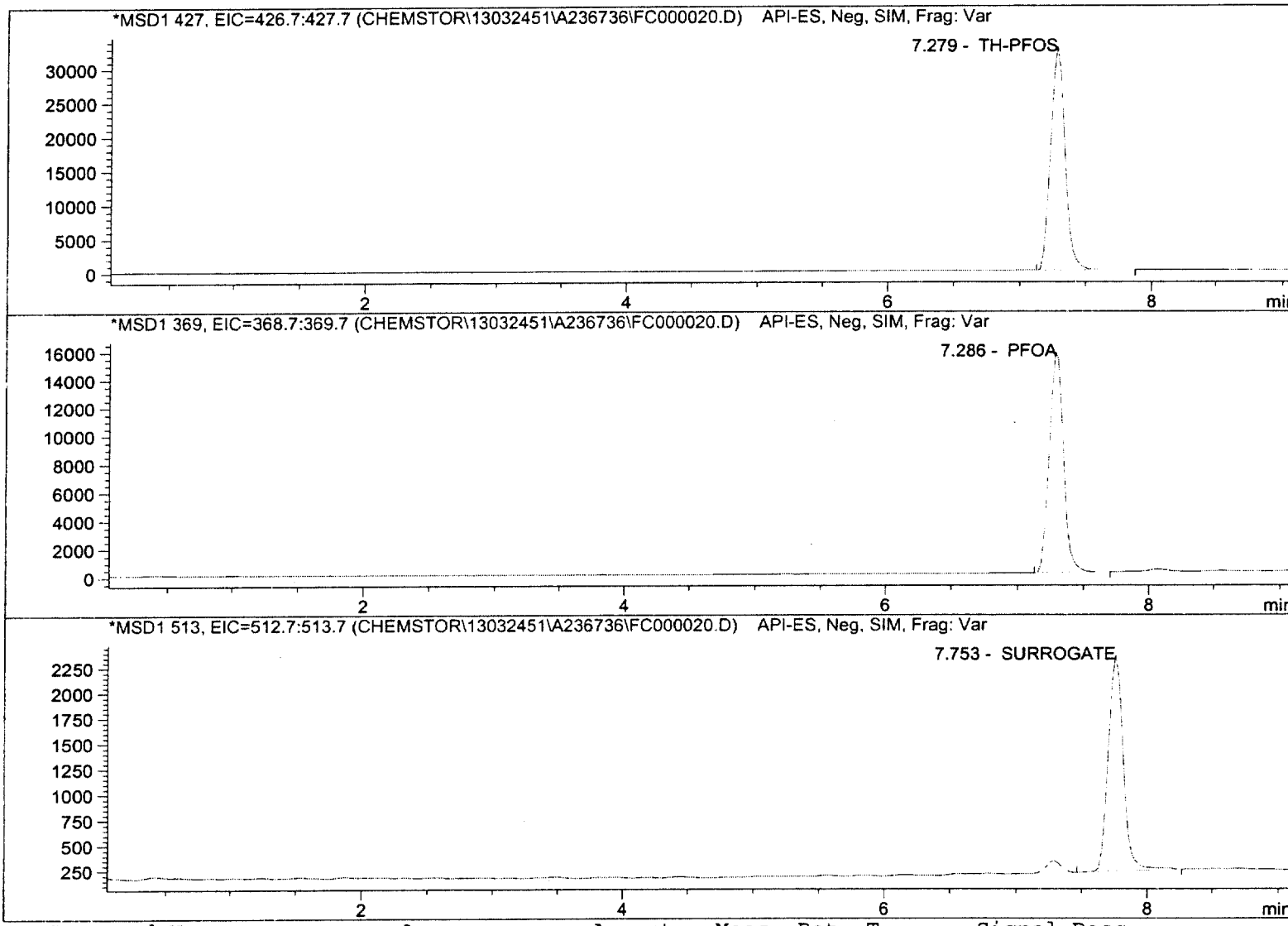
000046

Sample Name:STD 250 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13032451\A236736\FC000020.D

Injection Date	: 3/30/04 10:06:07 PM	Seq Line	: 20
Acq Operator	: jmiller	Vial No.	: 4
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	251367.09	500.00	7.279	MSD1 427, EIC=426.7:427.7
PFOA	120153.27	229.60	7.286	MSD1 369, EIC=368.7:369.7
SURROGATE	16885.06	217.10	7.753	MSD1 513, EIC=512.7:513.7

*** End of Report ***

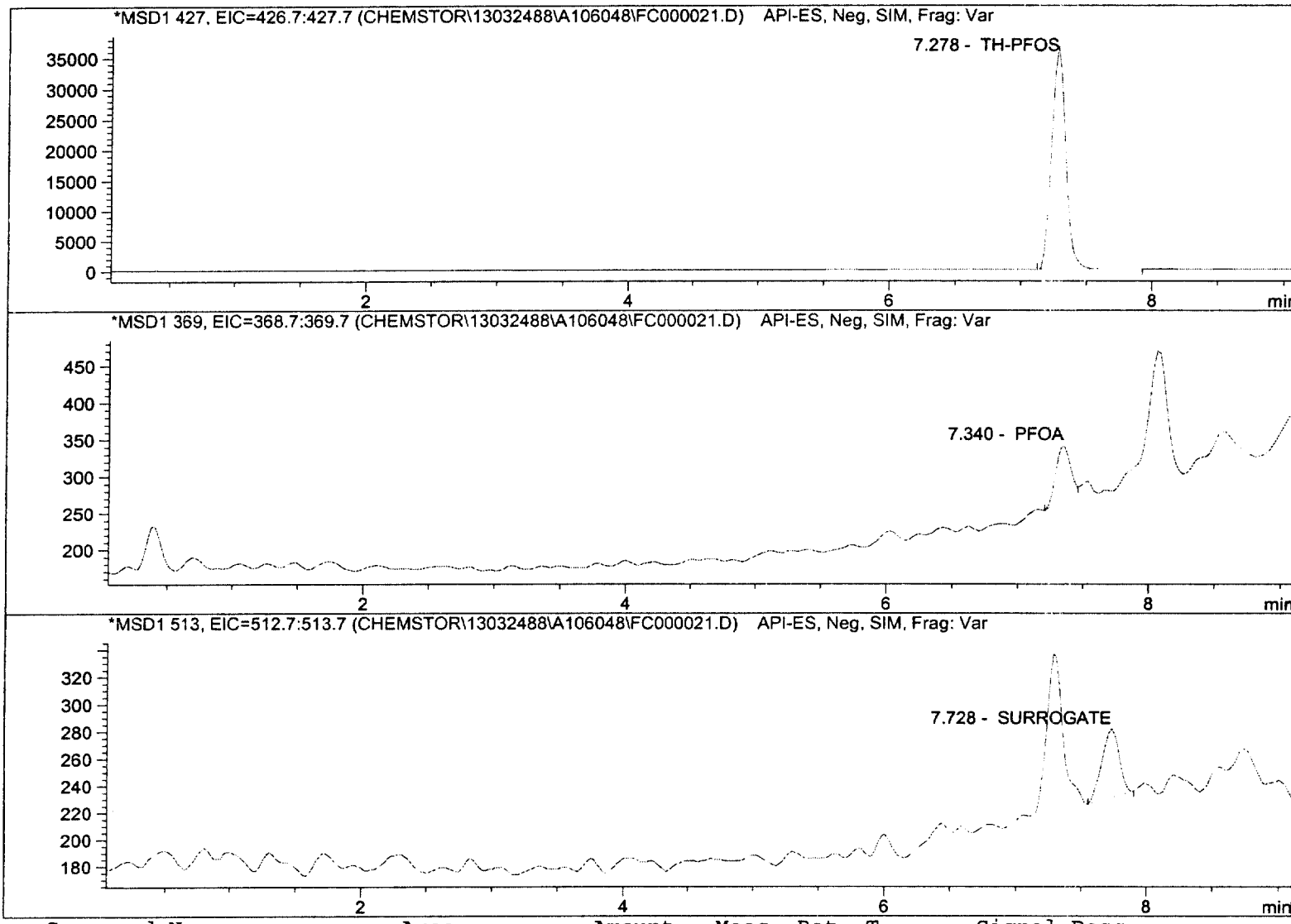
000047

Sample Name:solvent blank
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13032488\A106048\FC000021.D

Injection Date	: 3/30/04 10:21:39 PM	Seq Line	: 21
Acq Operator	: jmiller	Vial No.	: 92
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	278424.84	500.00	7.278	MSD1 427, EIC=426.7:427.7
PFOA	530.74	8.09	7.340	MSD1 369, EIC=368.7:369.7
SURROGATE	467.79	3.92	7.728	MSD1 513, EIC=512.7:513.7

*** End of Report ***

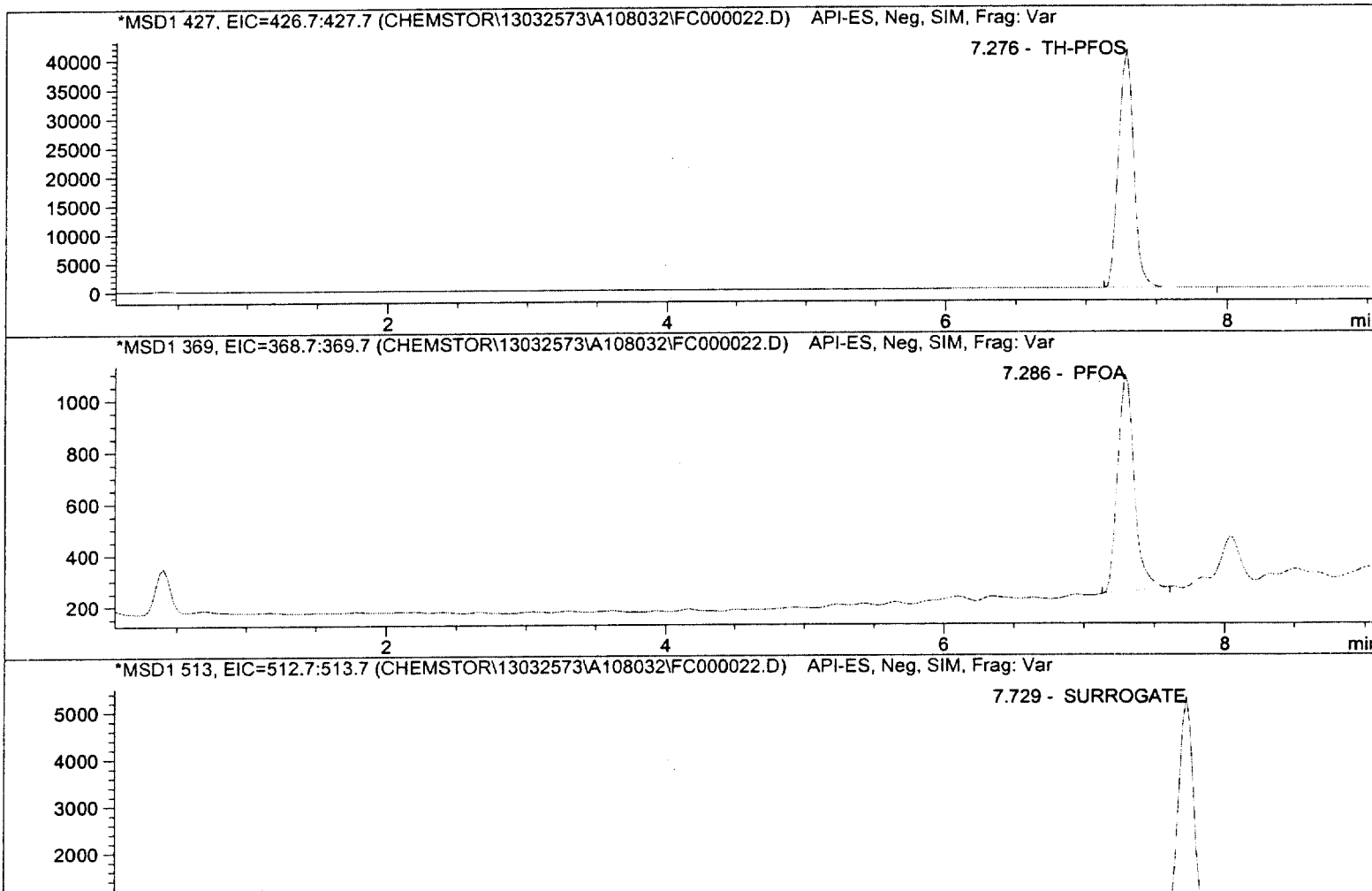
C00048

Sample Name:L2133-13
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13032573\A108032\FC000022.D

Injection Date	: 3/30/04 10:37:15 PM	Seq Line	: 22
Acq Operator	: jmiller	Vial No.	: 21
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	309027.56	500.00	7.276	MSD1 427, EIC=426.7:427.7
PFOA	6937.89	17.33	7.286	MSD1 369, EIC=368.7:369.7
SURROGATE	38306.29	416.31	7.729	MSD1 513, EIC=512.7:513.7

*** End of Report ***

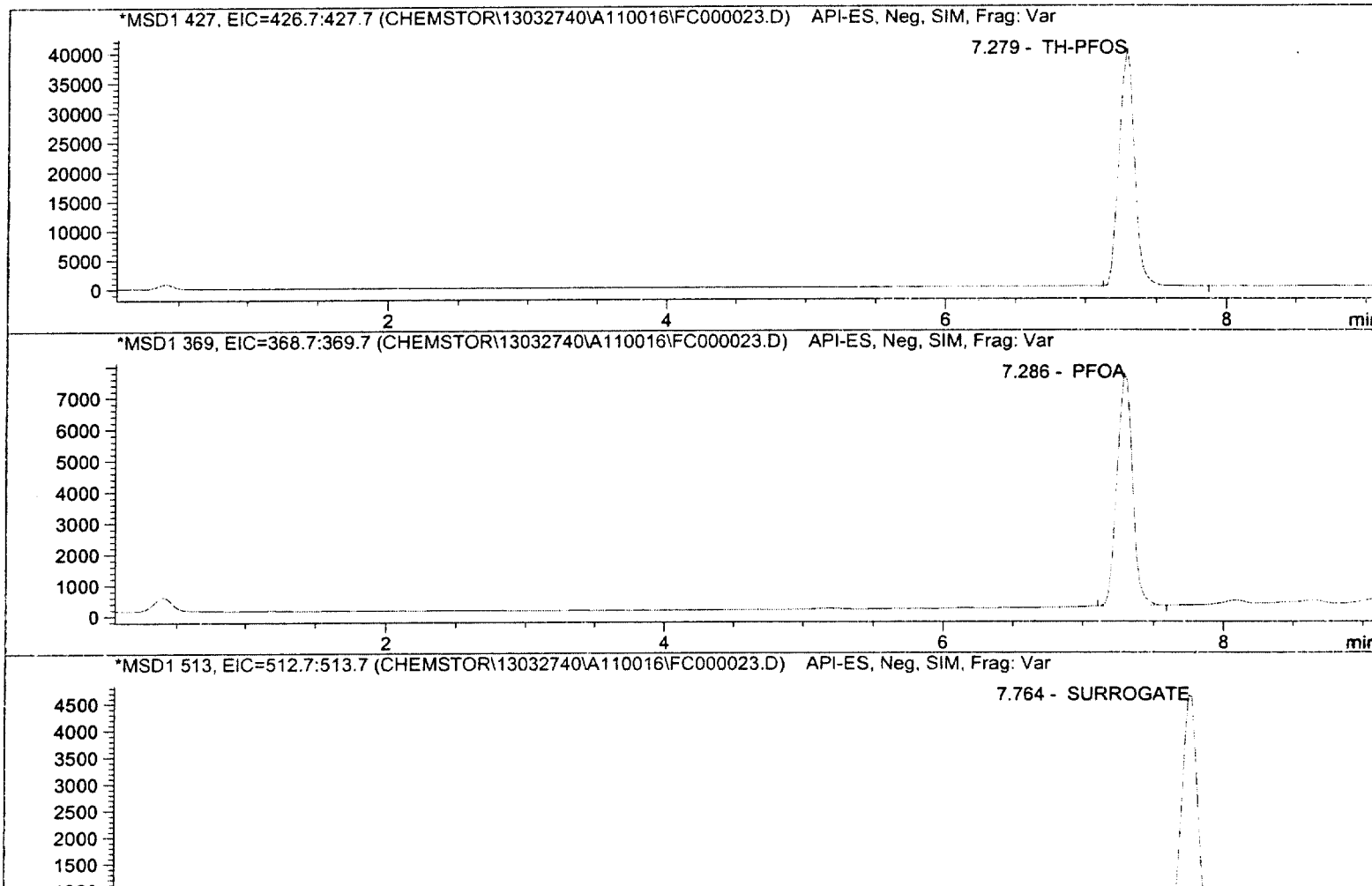
000049

Sample Name:L2133-14
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13032740\A110016\FC000023.D

Injection Date	: 3/30/04 10:52:50 PM	Seq Line	: 23
Acq Operator	: jmiller	Vial No.	: 22
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	306091.31	500.00	7.279	MSD1 427, EIC=426.7:427.7
PFOA	57381.82	92.52	7.286	MSD1 369, EIC=368.7:369.7
SURROGATE	33845.78	367.99	7.764	MSD1 513, EIC=512.7:513.7

*** End of Report ***

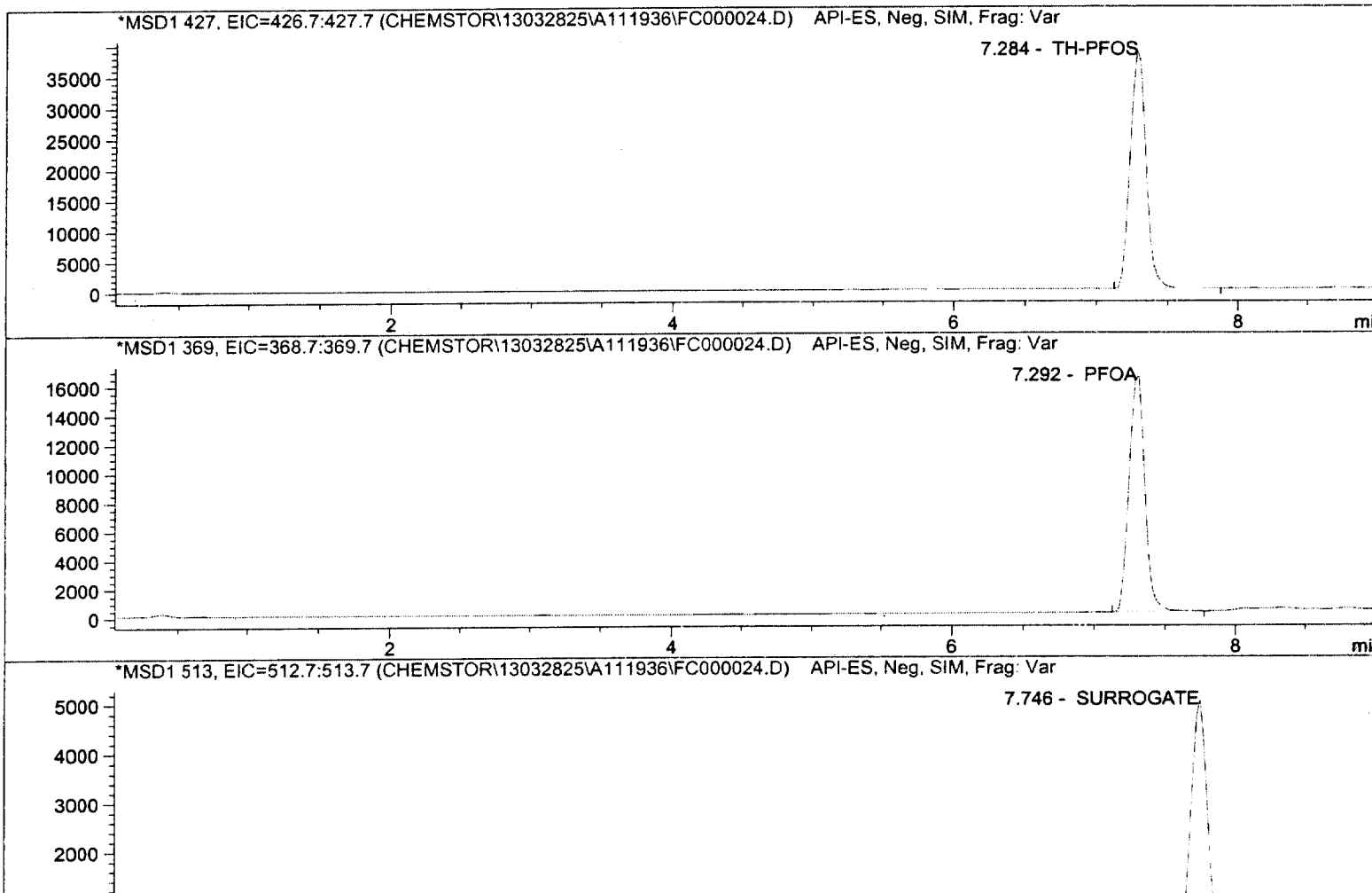
C00050

Sample Name:L2133-15
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13032825\A111936\FC000024.D

Injection Date	: 3/30/04 11:08:24 PM	Seq Line	: 24
Acq Operator	: jmiller	Vial No.	: 23
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	296662.34	500.00	7.284	MSD1 427, EIC=426.7:427.7
PFOA	125197.53	202.69	7.292	MSD1 369, EIC=368.7:369.7
SURROGATE	37054.03	419.76	7.746	MSD1 513, EIC=512.7:513.7

*** End of Report ***

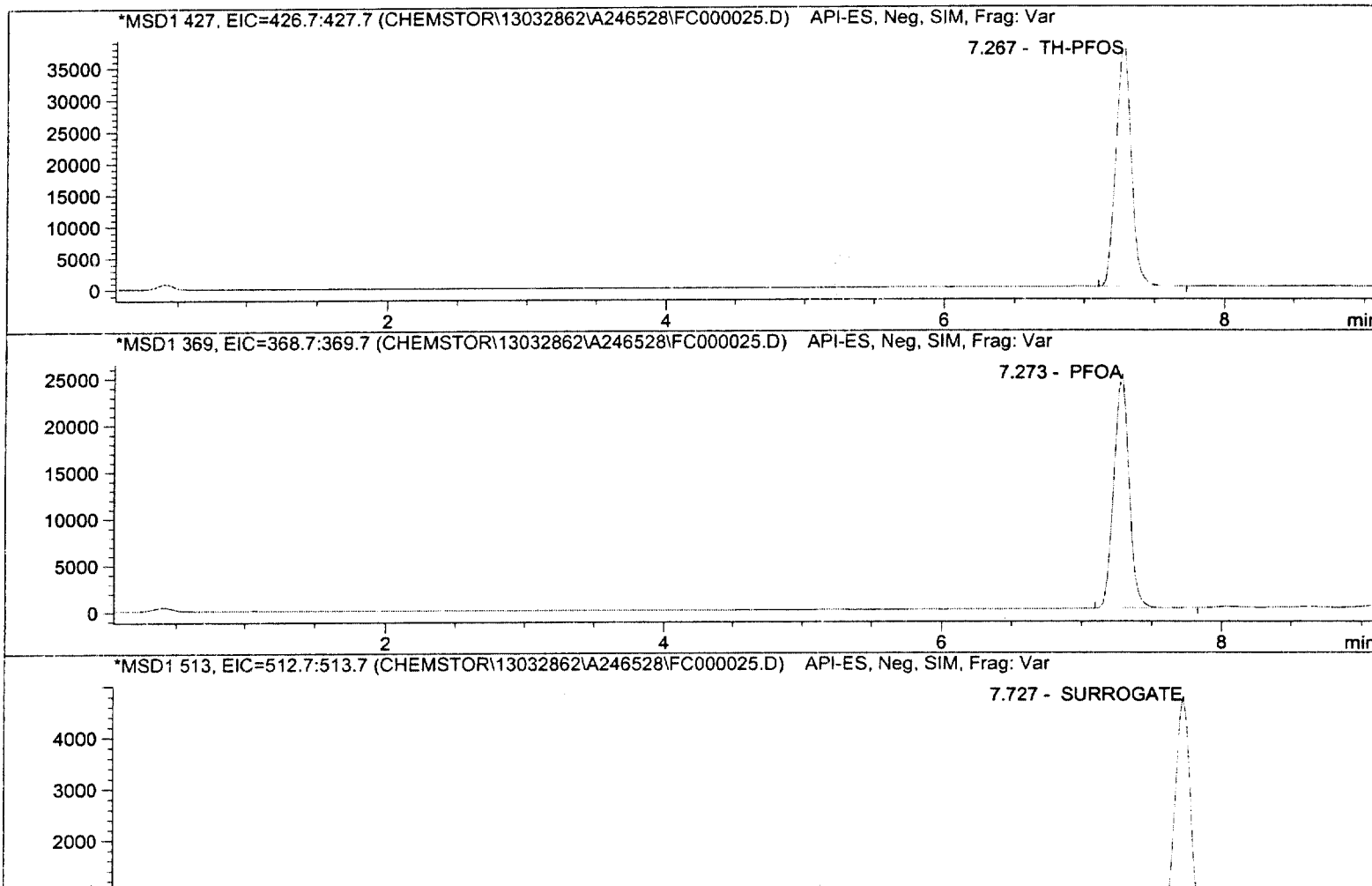
000051

Sample Name:L2133-16
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13032862\A246528\FC000025.D

Injection Date	: 3/30/04 11:23:57 PM	Seq Line	: 25
Acq Operator	: jmiller	Vial No.	: 24
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	290834.09	500.00	7.267	MSD1 427, EIC=426.7:427.7
PFOA	190187.05	315.84	7.273	MSD1 369, EIC=368.7:369.7
SURROGATE	34084.31	391.78	7.727	MSD1 513, EIC=512.7:513.7

*** End of Report ***

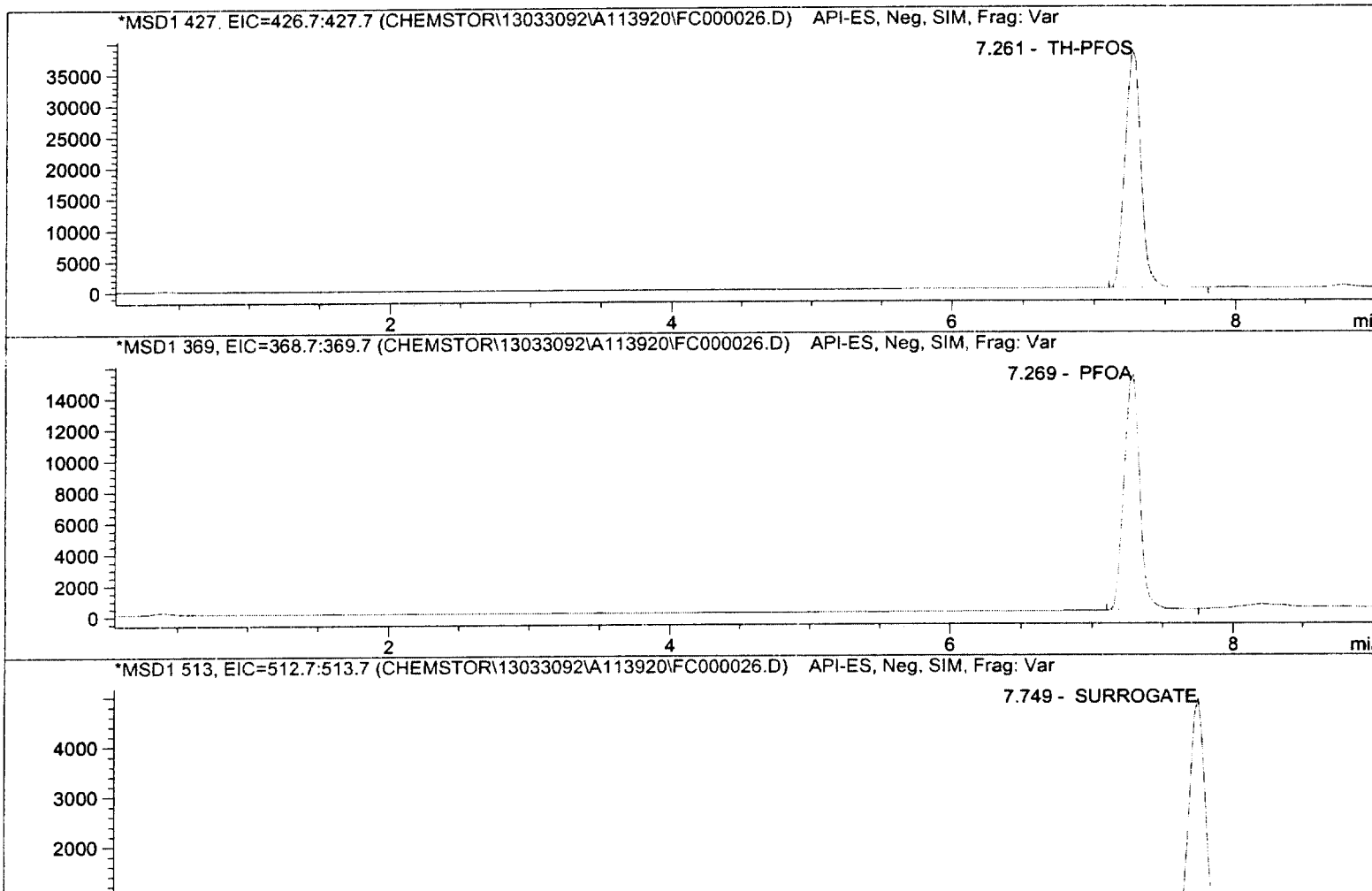
000052

Sample Name:L2133-17
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13033092\A113920\FC000026.D

Injection Date	: 3/30/04 11:39:34 PM	Seq Line	: 26
Acq Operator	: jmiller	Vial No.	: 25
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	294437.66	500.00	7.261	MSD1 427, EIC=426.7:427.7
PFOA	115131.87	187.90	7.269	MSD1 369, EIC=368.7:369.7
SURROGATE	36761.68	419.58	7.749	MSD1 513, EIC=512.7:513.7

*** End of Report ***

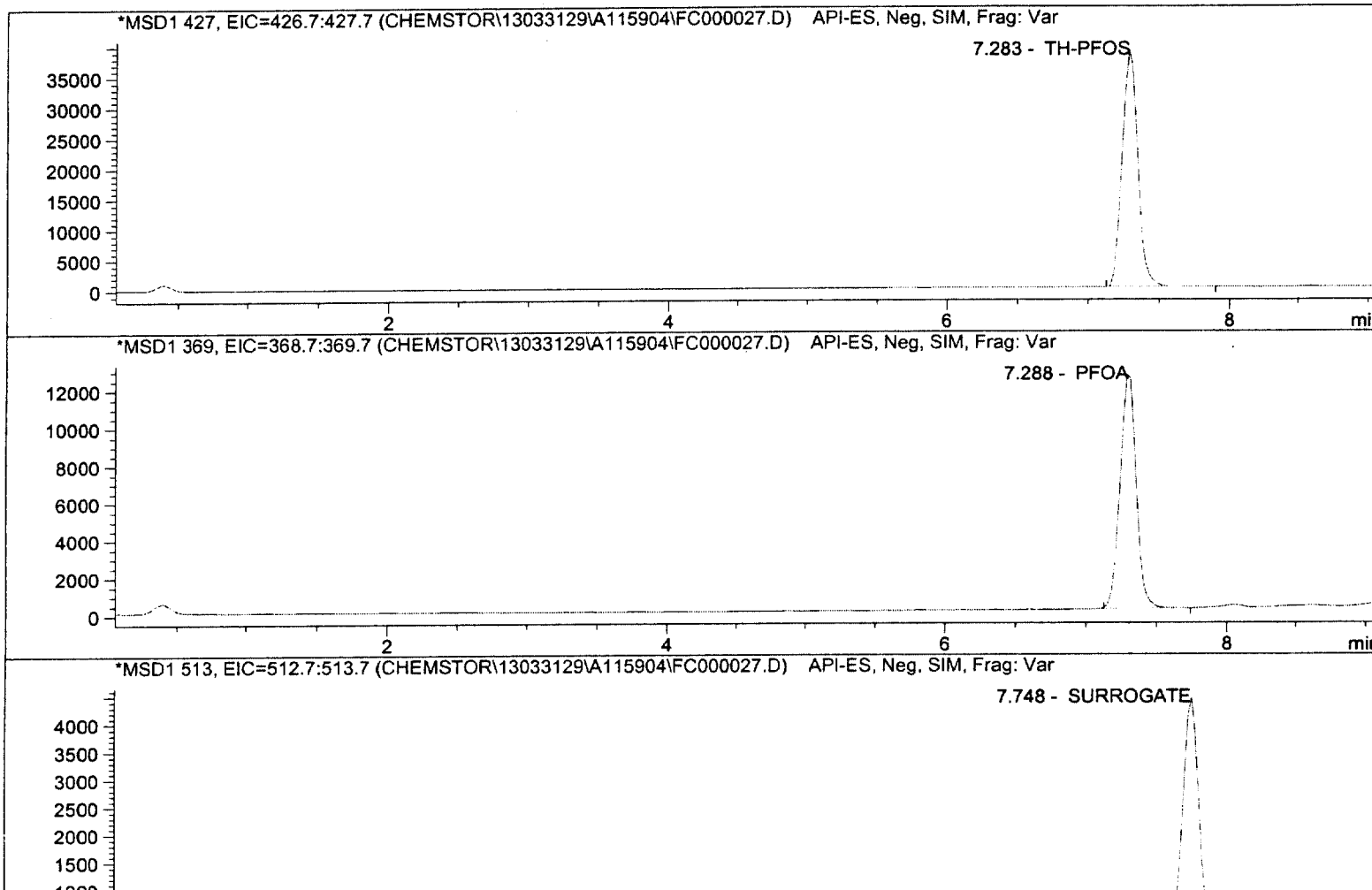
000053

Sample Name:L2133-18
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13033129\A115904\FC000027.D

Injection Date	: 3/30/04 11:55:13 PM	Seq Line	: 27
Acq Operator	: jmiller	Vial No.	: 26
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	299029.22	500.00	7.283	MSD1 427, EIC=426.7:427.7
PFOA	99718.22	160.62	7.288	MSD1 369, EIC=368.7:369.7
SURROGATE	34284.52	382.62	7.748	MSD1 513, EIC=512.7:513.7

*** End of Report ***

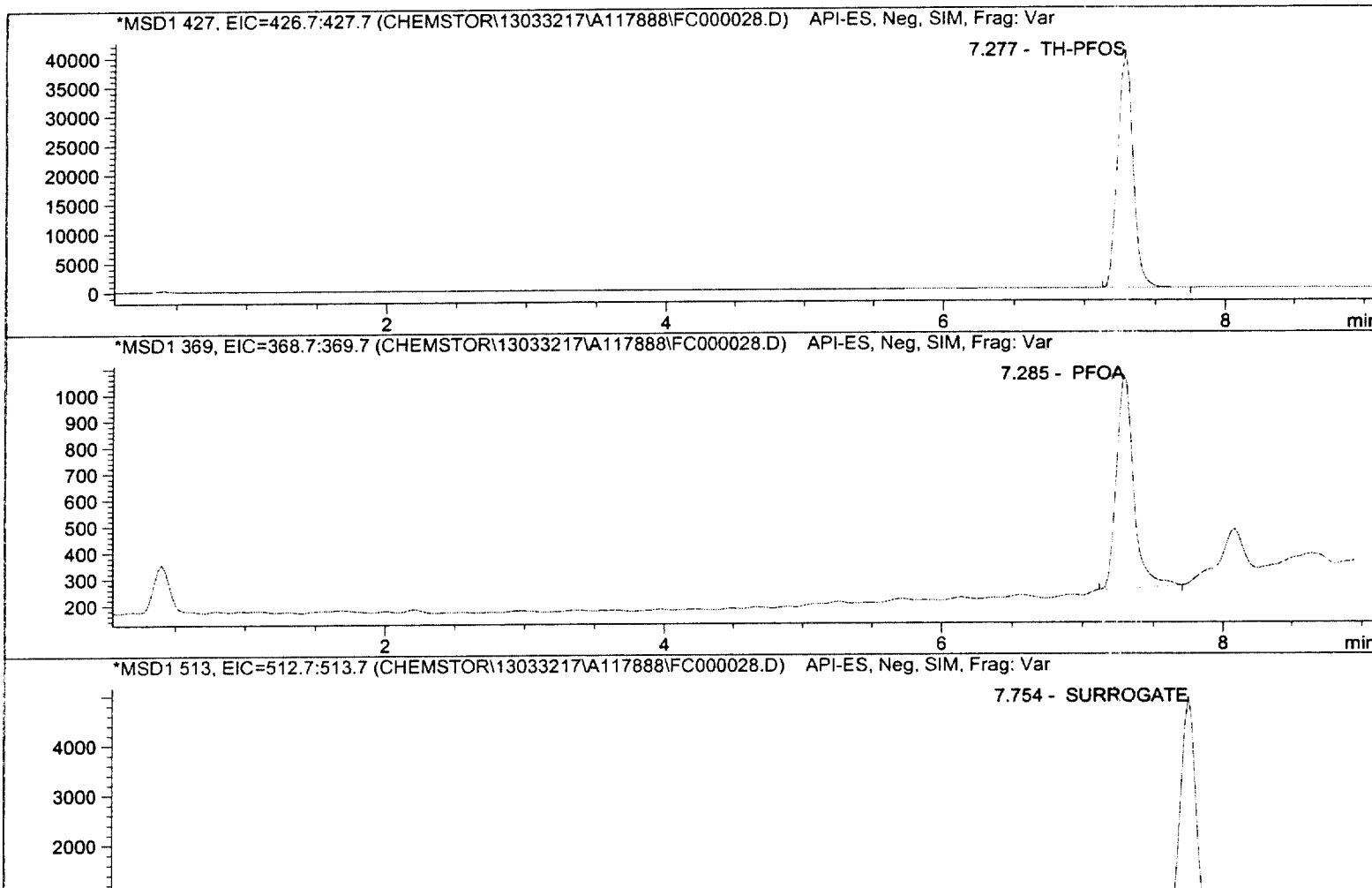
000054

Sample Name:L2133-19
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13033217\A117888\FC000028.D

Injection Date	: 3/31/04 12:10:51 AM	Seq Line	: 28
Acq Operator	: jmiller	Vial No.	: 27
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	307450.34	500.00	7.277	MSD1 427, EIC=426.7:427.7
PFOA	6871.85	17.28	7.285	MSD1 369, EIC=368.7:369.7
SURROGATE	35730.28	388.25	7.754	MSD1 513, EIC=512.7:513.7

*** End of Report ***

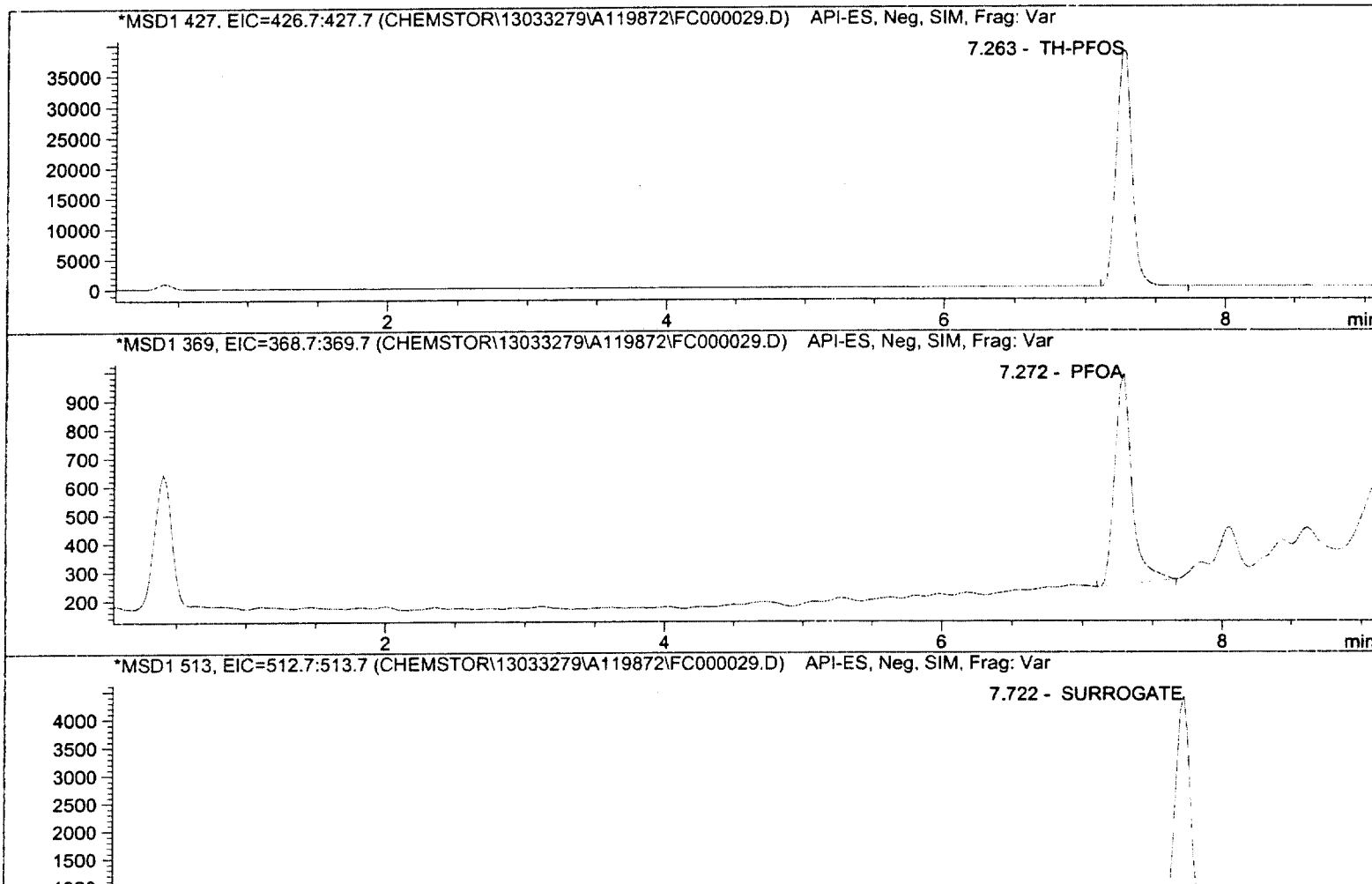
000055

Sample Name:L2133-20
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13033279\A119872\FC000029.D

Injection Date	: 3/31/04 12:26:31 AM	Seq Line	: 29
Acq Operator	: jmiller	Vial No.	: 28
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	299260.06	500.00	7.263	MSD1 427, EIC=426.7:427.7
PFOA	6391.48	16.83	7.272	MSD1 369, EIC=368.7:369.7
SURROGATE	31405.99	347.93	7.722	MSD1 513, EIC=512.7:513.7

*** End of Report ***

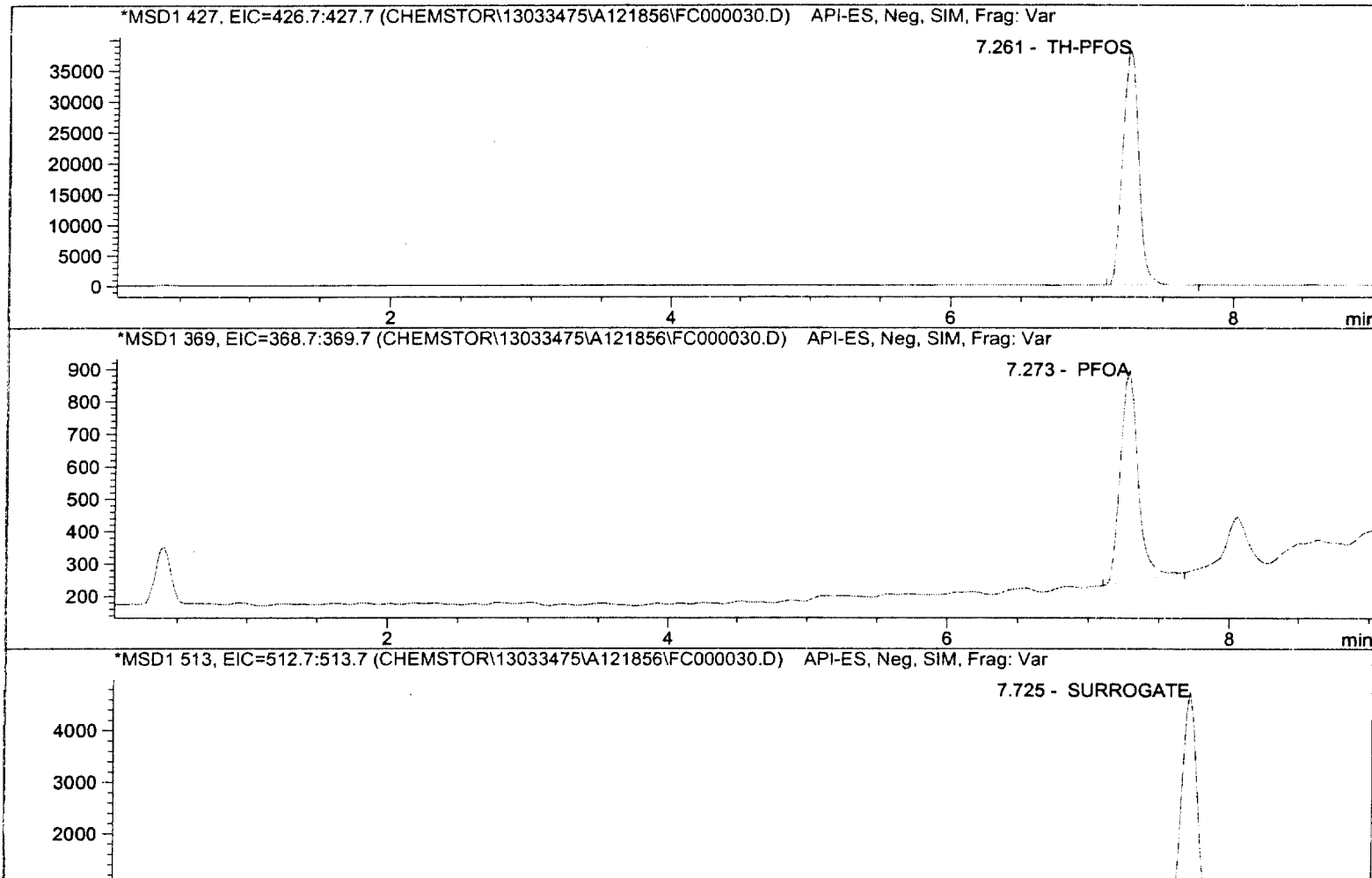
000056

Sample Name:L2133-21
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13033475\A121856\FC000030.D

Injection Date	: 3/31/04 12:42:09 AM	Seq Line	: 30
Acq Operator	: jmiller	Vial No.	: 29
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	293701.81	500.00	7.261	MSD1 427, EIC=426.7:427.7
PFOA	5472.77	15.61	7.273	MSD1 369, EIC=368.7:369.7
SURROGATE	35186.57	401.22	7.725	MSD1 513, EIC=512.7:513.7

*** End of Report ***

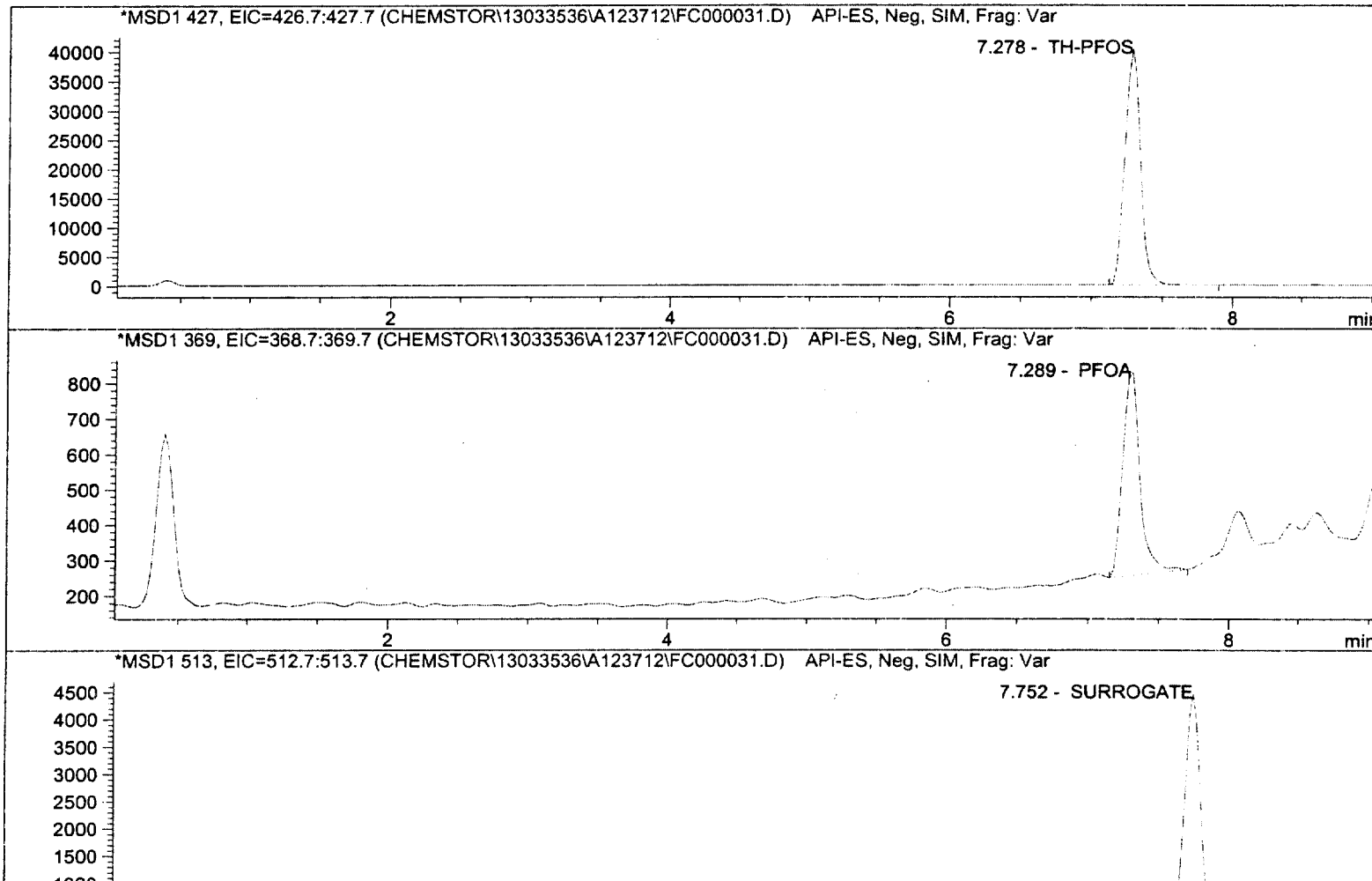
000057

Sample Name:L2133-22
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13033536\A123712\FC000031.D

Injection Date	: 3/31/04 12:57:51 AM	Seq Line	: 31
Acq Operator	: jmiller	Vial No.	: 30
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	305413.34	500.00	7.278	MSD1 427, EIC=426.7:427.7
PFOA	4772.74	14.26	7.289	MSD1 369, EIC=368.7:369.7
SURROGATE	32984.04	358.79	7.752	MSD1 513, EIC=512.7:513.7

*** End of Report ***

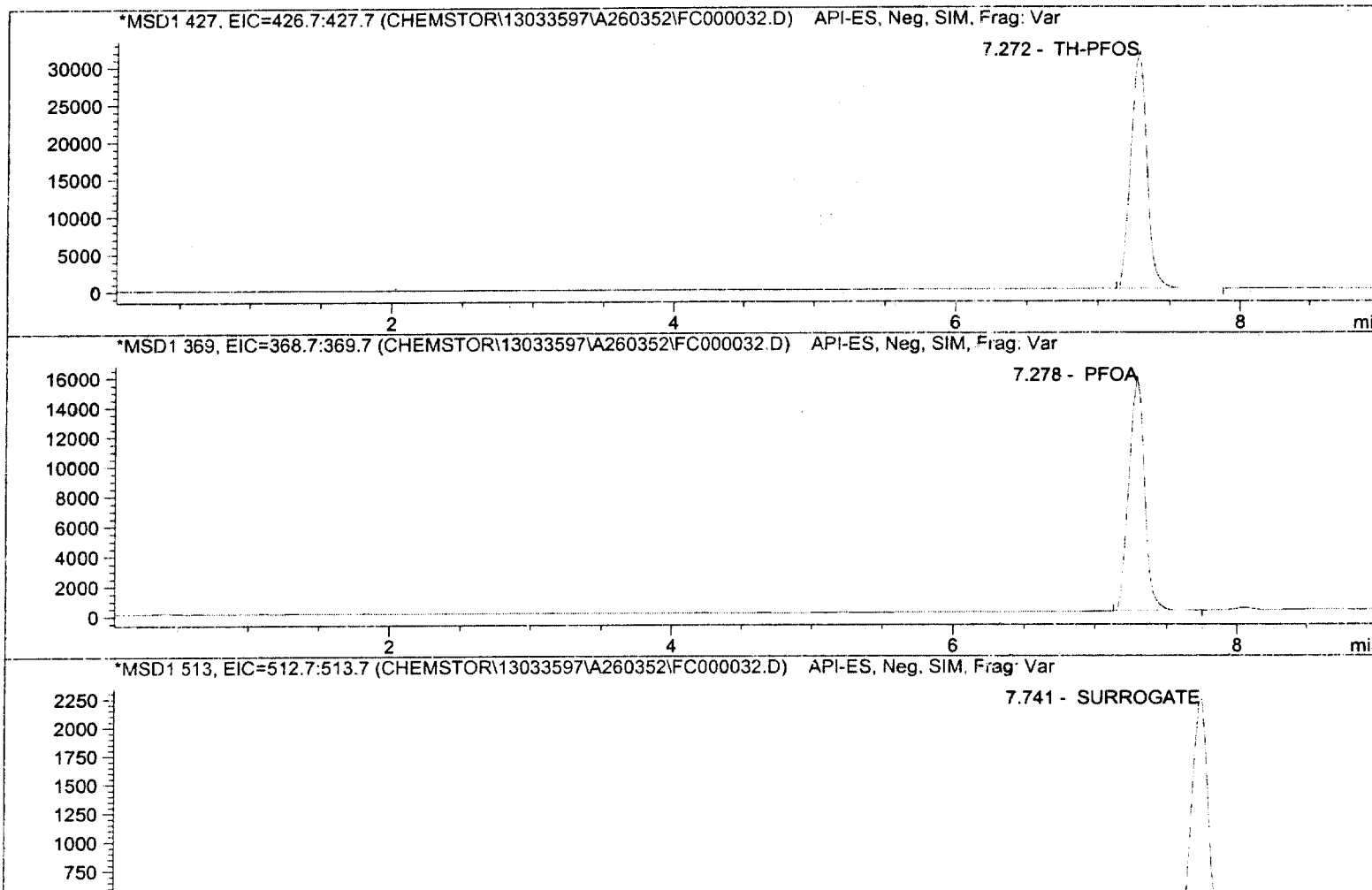
000058

Sample Name:STD 250 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13033597\A260352\FC000032.D

Injection Date	: 3/31/04 1:13:24 AM	Seq Line	: 32
Acq Operator	: jmiller	Vial No.	: 4
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	244879.00	500.00	7.272	MSD1 427, EIC=426.7:427.7
PFOA	118710.01	232.87	7.278	MSD1 369, EIC=368.7:369.7
SURROGATE	16083.03	212.05	7.741	MSD1 513, EIC=512.7:513.7

*** End of Report ***

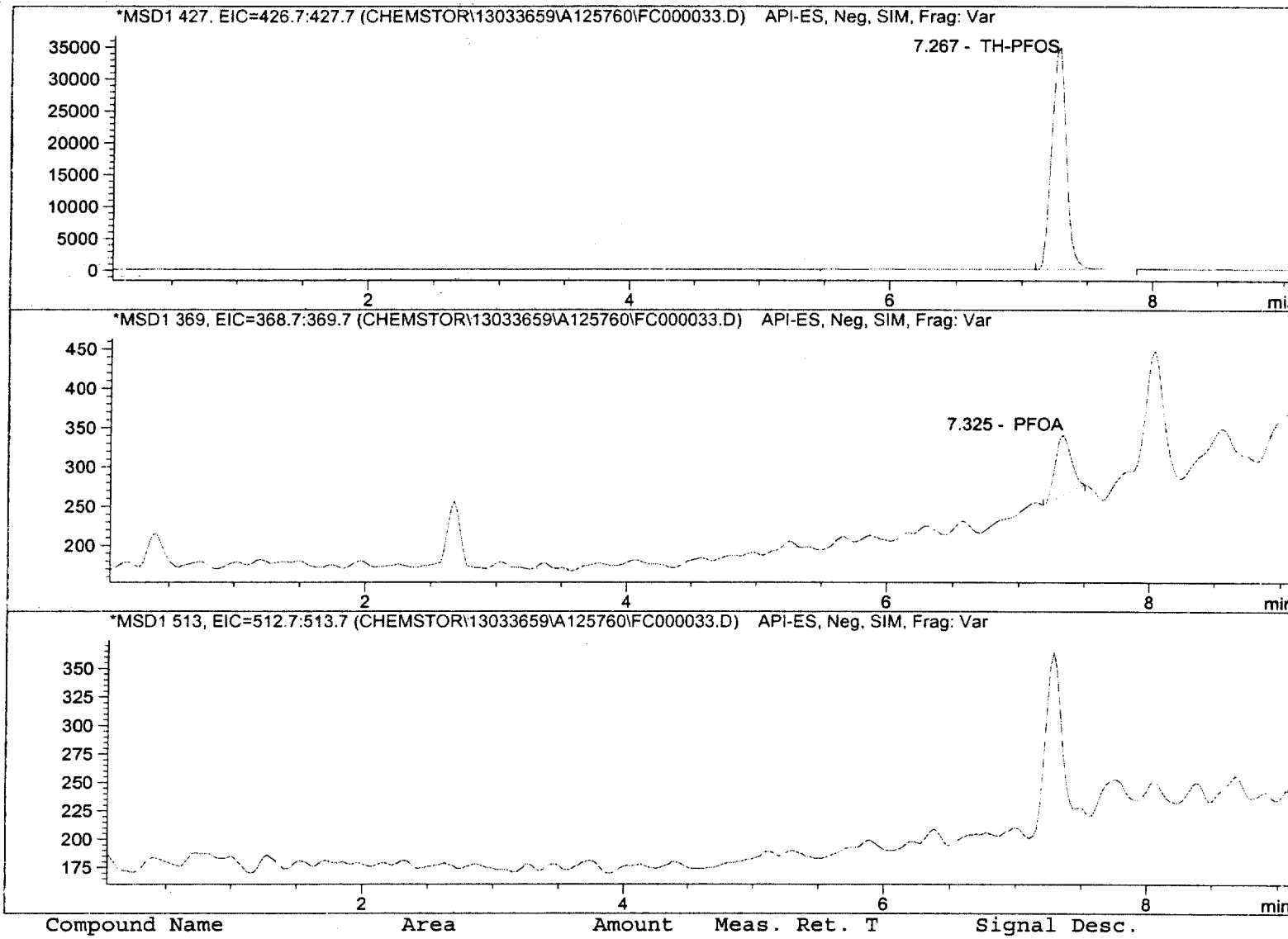
000059

Sample Name:solvent blank
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13033659\A125760\FC000033.D

Injection Date	: 3/31/04 1:28:53 AM	Seq Line	: 33
Acq Operator	: jmiller	Vial No.	: 92
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	270813.50	500.00	7.267	MSD1 427, EIC=426.7:427.7
PFOA	647.58	8.31	7.325	MSD1 369, EIC=368.7:369.7
SURROGATE	0.00	0.00	0.000	MSD1 513, EIC=512.7:513.7

*** End of Report ***

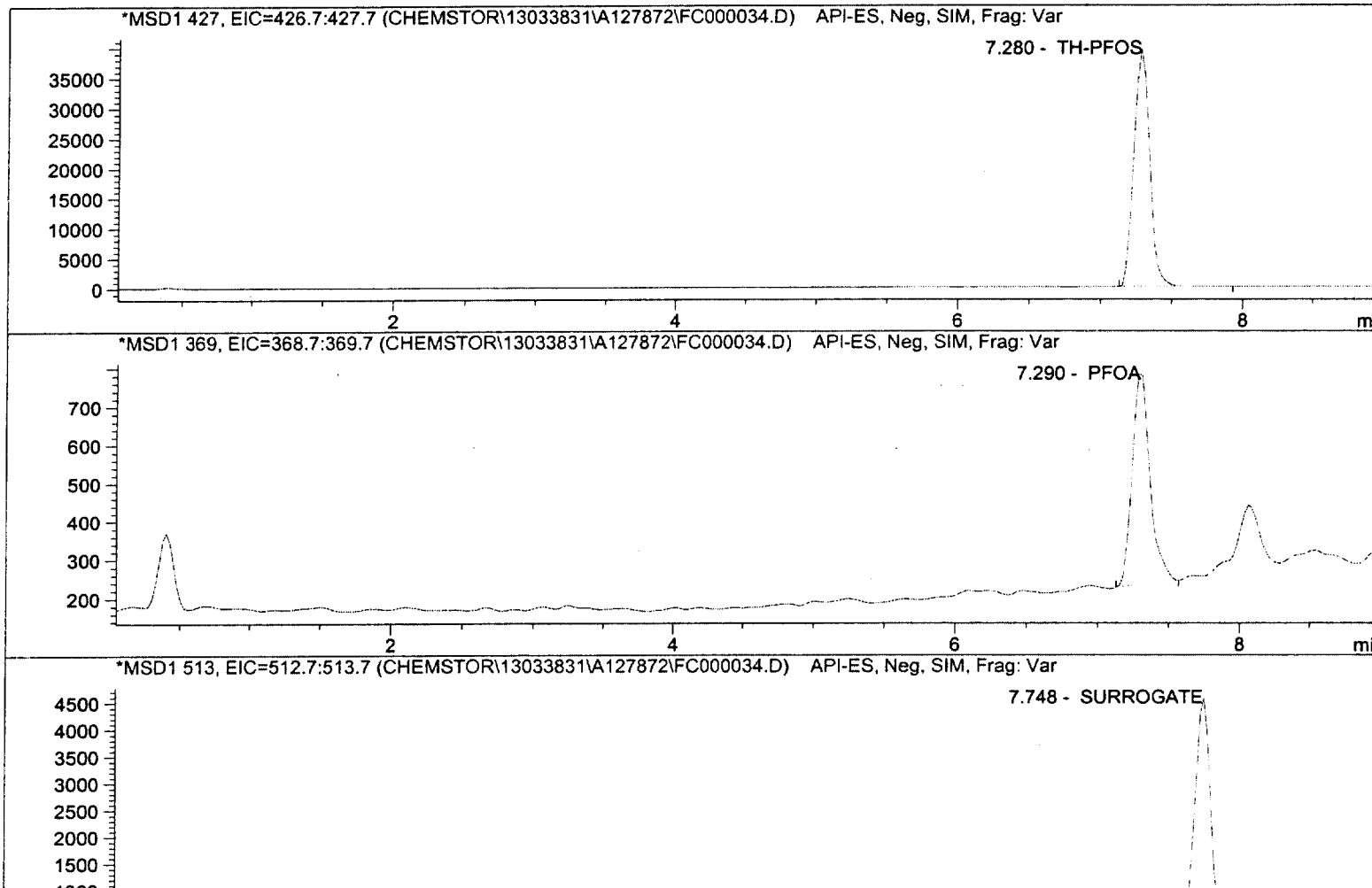
000060

Sample Name:L2133-23
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13033831\A127872\FC000034.D

Injection Date	: 3/31/04 1:44:28 AM	Seq Line	: 34
Acq Operator	: jmiller	Vial No.	: 31
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	299113.31	500.00	7.280	MSD1 427, EIC=426.7:427.7
PFOA	4805.65	14.45	7.290	MSD1 369, EIC=368.7:369.7
SURROGATE	34079.96	380.04	7.748	MSD1 513, EIC=512.7:513.7

*** End of Report ***

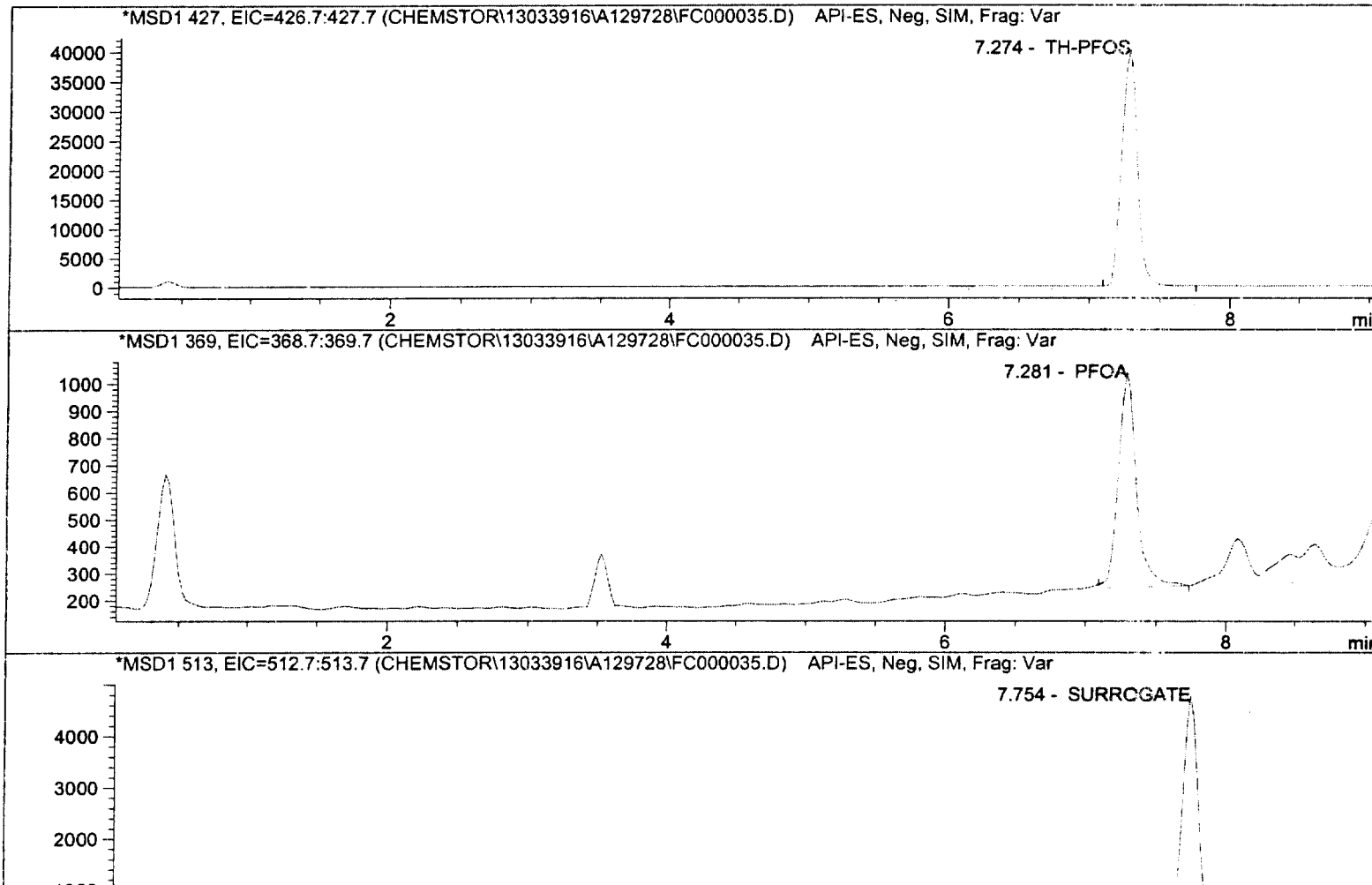
000061

Sample Name:L2133-24
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13033916\A129728\FC000035.D

Injection Date	: 3/31/04 2:00:05 AM	Seq Line	: 35
Acq Operator	: jmiller	Vial No.	: 32
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	306321.38	500.00	7.274	MSD1 427, EIC=426.7:427.7
PFOA	7006.48	17.52	7.281	MSD1 369, EIC=368.7:369.7
SURROGATE	35915.12	391.97	7.754	MSD1 513, EIC=512.7:513.7

*** End of Report ***

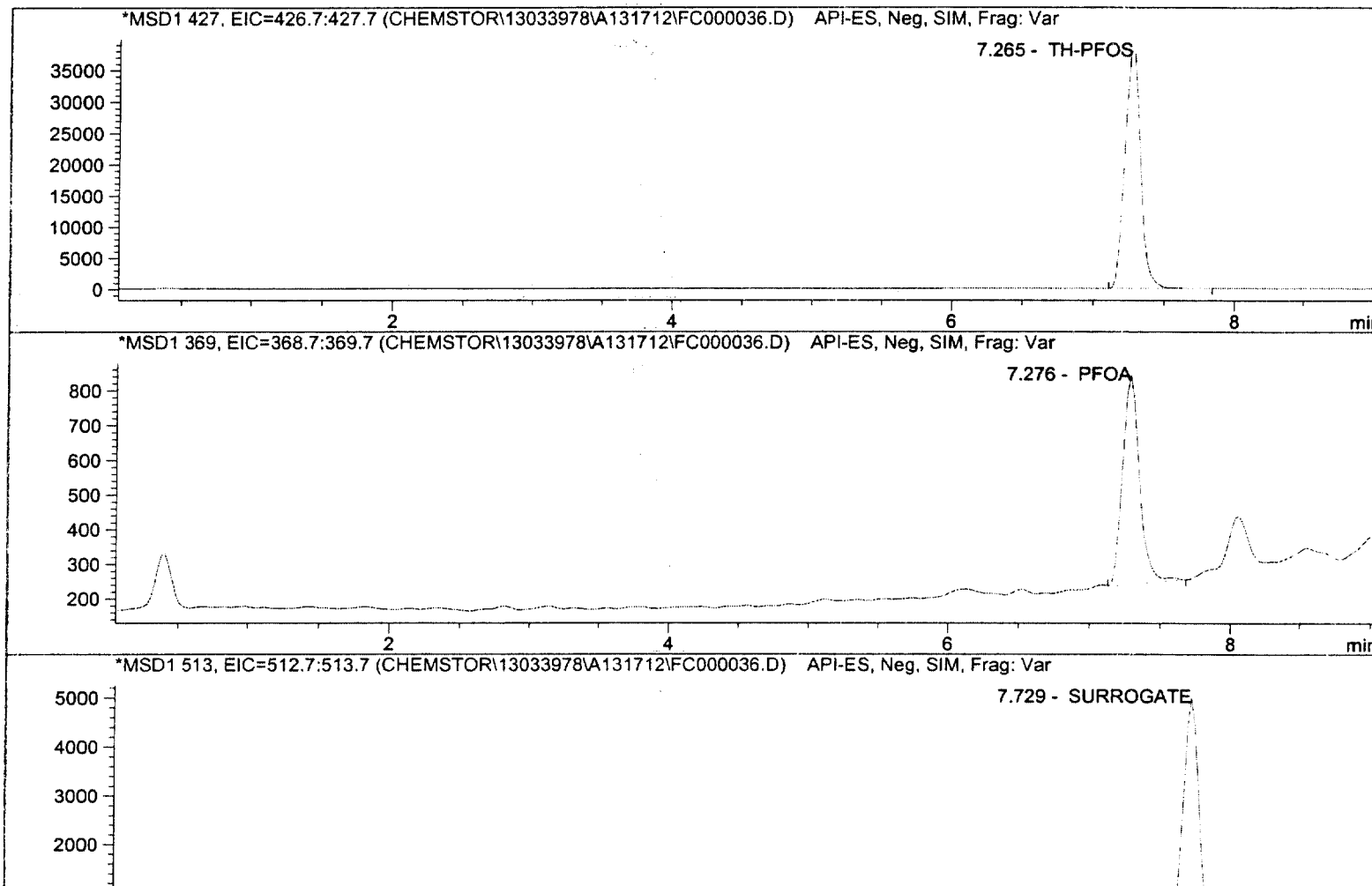
000062

Sample Name:L2133-25
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13033978\A131712\FC000036.D

Injection Date	: 3/31/04 2:15:41 AM	Seq Line	: 36
Acq Operator	: jmiller	Vial No.	: 33
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	294770.19	500.00	7.265	MSD1 427, EIC=426.7:427.7
PFOA	5014.12	14.88	7.276	MSD1 369, EIC=368.7:369.7
SURROGATE	37270.63	425.38	7.729	MSD1 513, EIC=512.7:513.7

*** End of Report ***

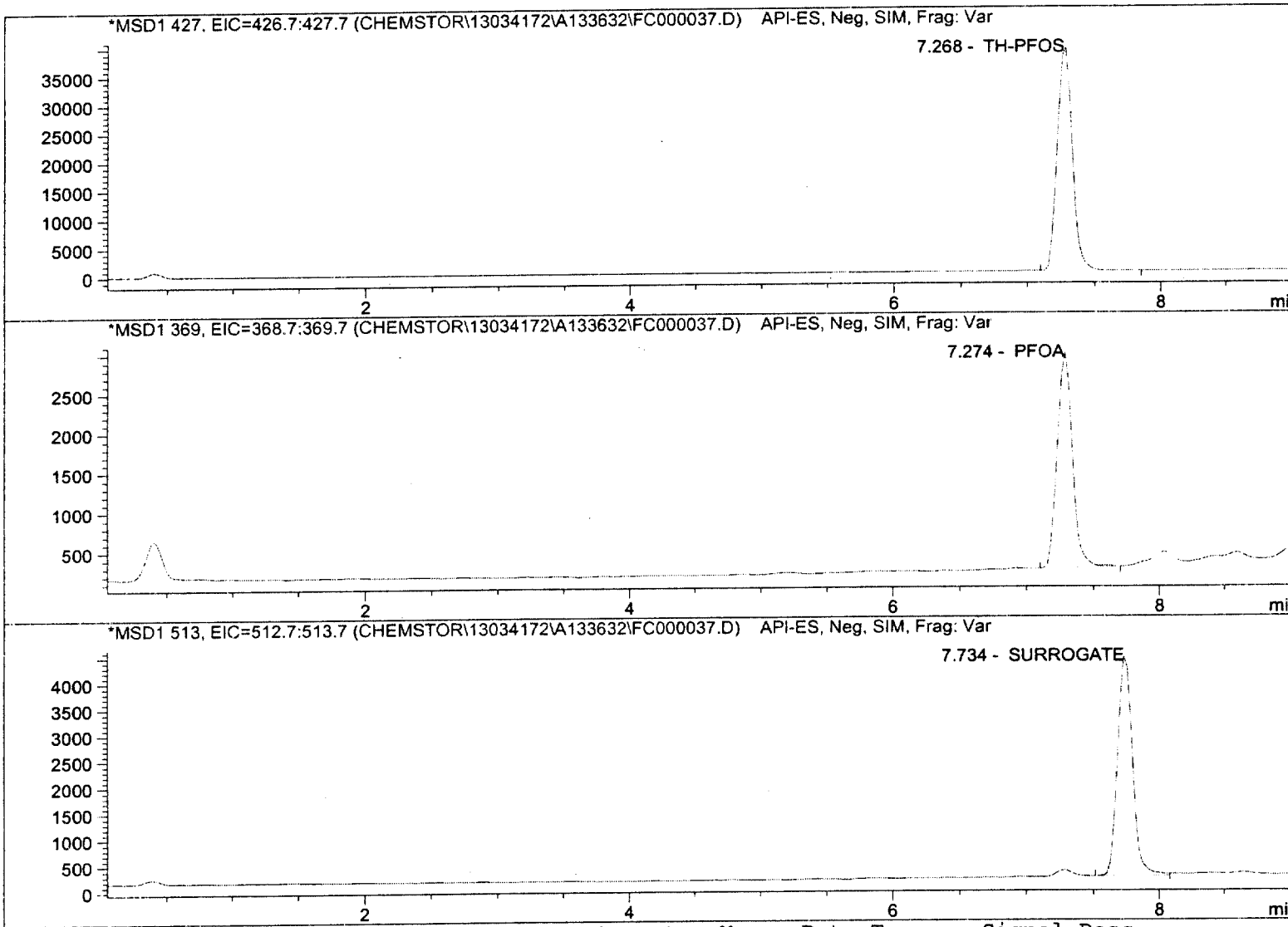
000063

Sample Name:L2133-26
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13034172\A133632\FC000037.D

Injection Date	: 3/31/04 2:31:21 AM	Seq Line	: 37
Acq Operator	: jmiller	Vial No.	: 34
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	300039.00	500.00	7.268	MSD1 427, EIC=426.7:427.7
PFOA	21172.05	39.06	7.274	MSD1 369, EIC=368.7:369.7
SURROGATE	33212.82	368.42	7.734	MSD1 513, EIC=512.7:513.7

*** End of Report ***

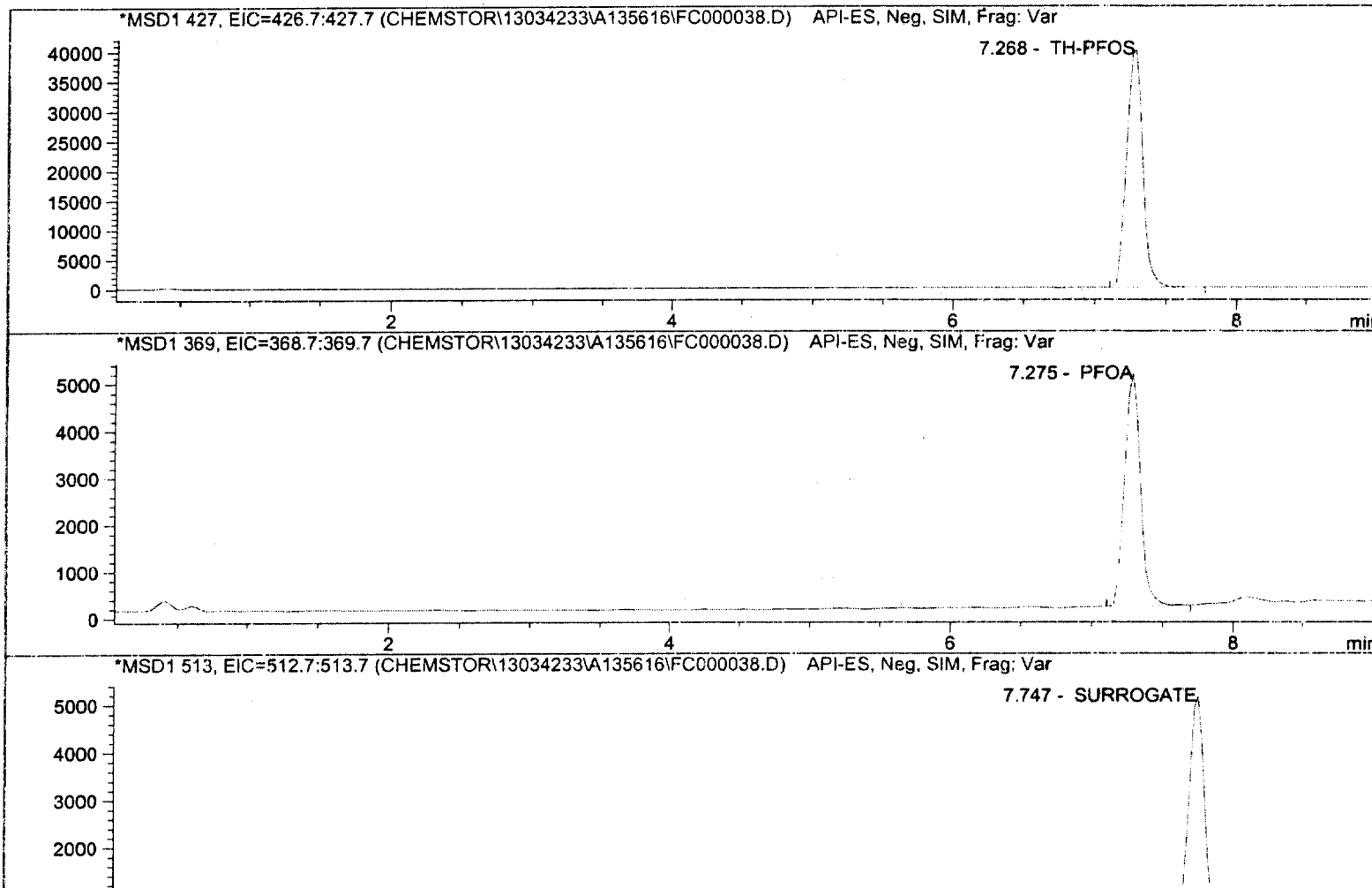
000064

Sample Name:L2133-27
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13034233\A135616\FC000038.D

Injection Date	: 3/31/04 2:47:00 AM	Seq Line	: 38
Acq Operator	: jmiller	Vial No.	: 35
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	309396.13	500.00	7.268	MSD1 427, EIC=426.7:427.7
PFOA	37705.35	62.41	7.275	MSD1 369, EIC=368.7:369.7
SURROGATE	38518.58	418.28	7.747	MSD1 513, EIC=512.7:513.7

*** End of Report ***

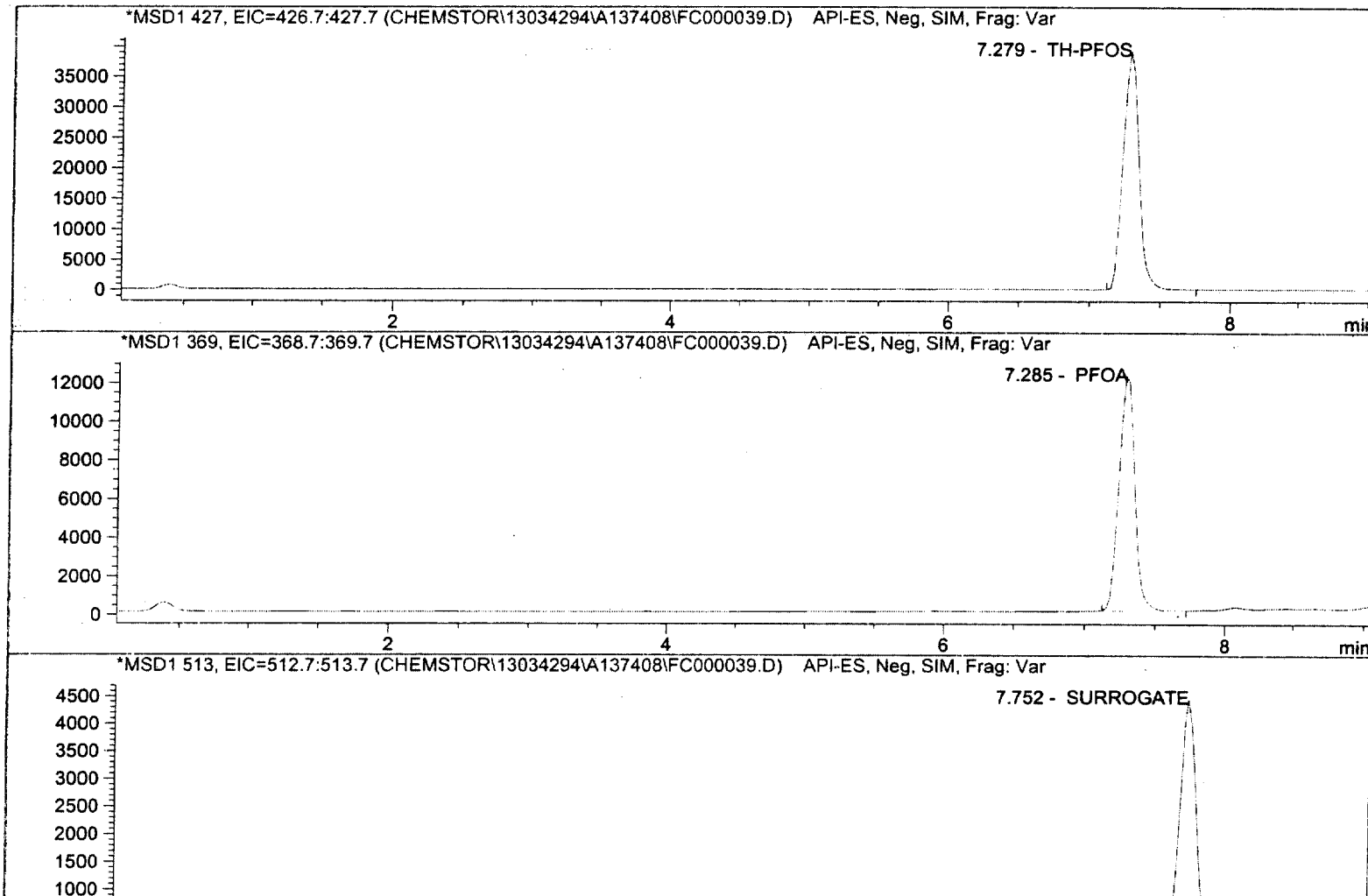
000065

Sample Name:L2133-28
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13034294\A137408\FC000039.D

Injection Date	: 3/31/04 3:02:38 AM	Seq Line	: 39
Acq Operator	: jmiller	Vial No.	: 36
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 03:59:57 pm



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	301672.38	500.00	7.279	MSD1 427, EIC=426.7:427.7
PFOA	94443.52	151.01	7.285	MSD1 369, EIC=368.7:369.7
SURROGATE	33247.03	366.68	7.752	MSD1 513, EIC=512.7:513.7

*** End of Report ***

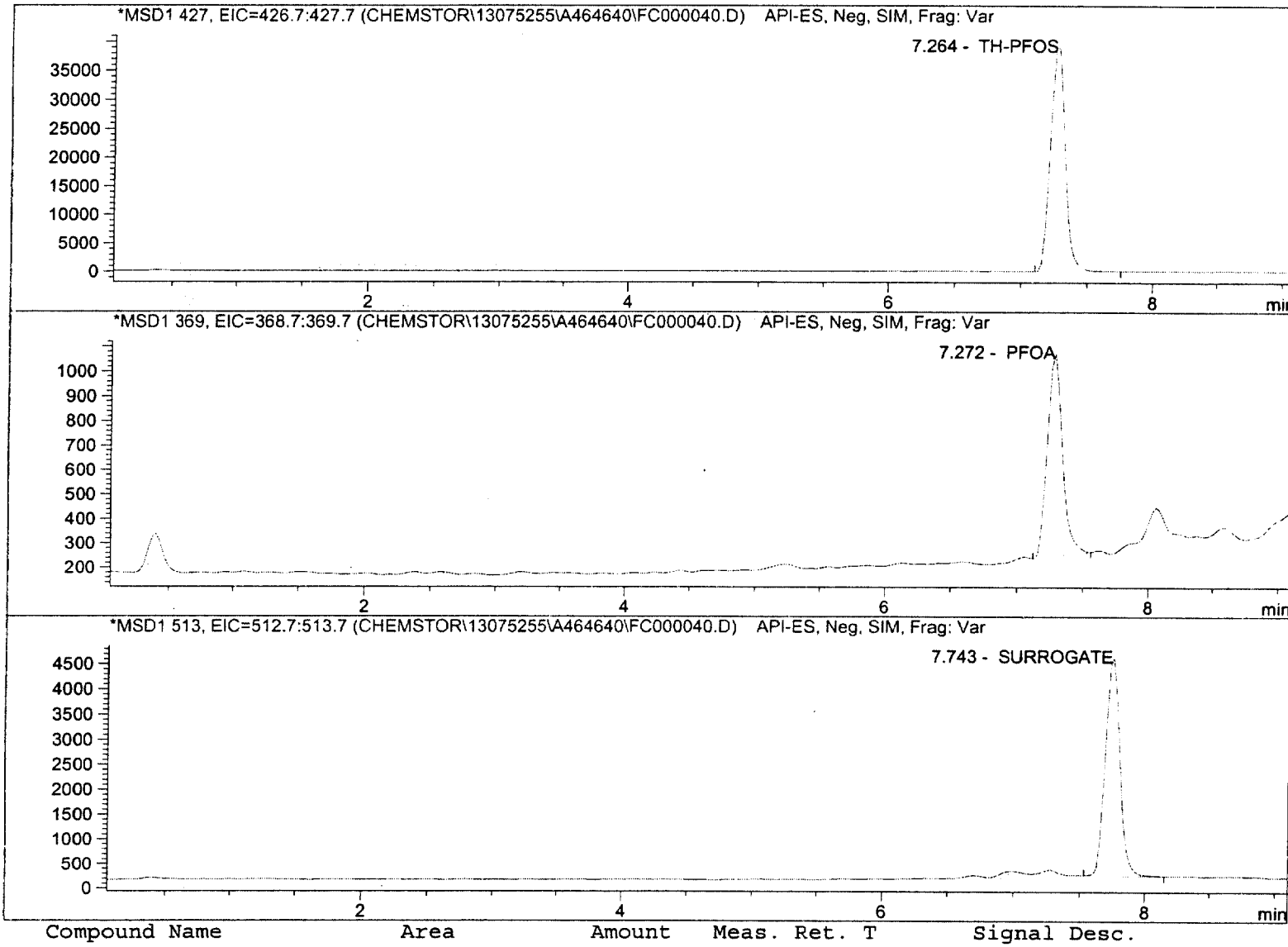
000066

Sample Name:L2133-29
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13075255\A464640\FC000040.D

Injection Date	: 3/31/04 3:18:16 AM	Seq Line	: 40
Acq Operator	: jmiller	Vial No.	: 37
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	303869.59	500.00	7.264	MSD1 427, EIC=426.7:427.7
PFOA	6630.79	17.04	7.272	MSD1 369, EIC=368.7:369.7
SURROGATE	34009.48	372.81	7.743	MSD1 513, EIC=512.7:513.7

*** End of Report ***

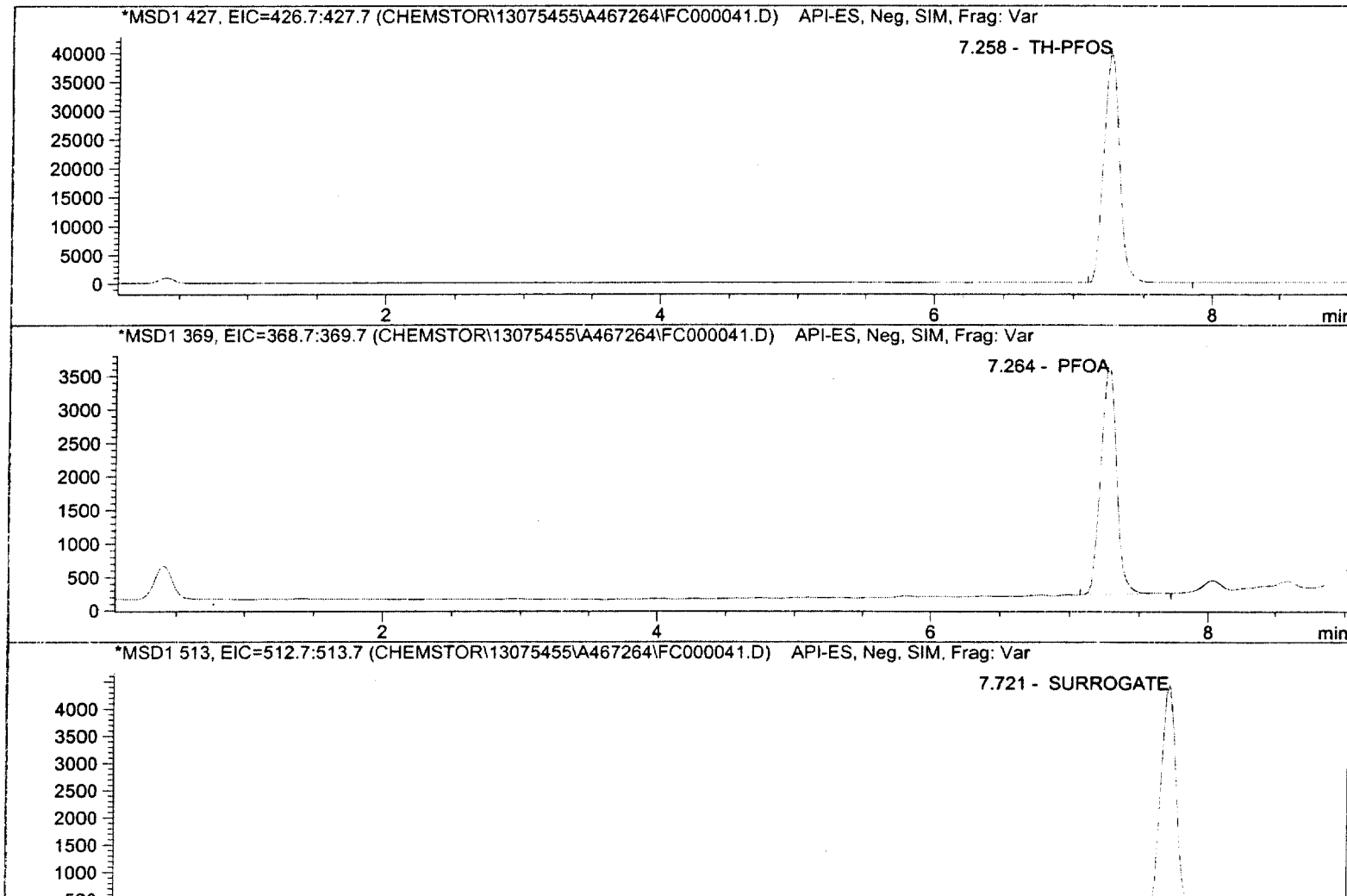
000067

Sample Name:L2133-30
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13075455\A467264\FC000041.D

Injection Date	: 3/31/04 3:33:57 AM	Seq Line	: 41
Acq Operator	: jmiller	Vial No.	: 38
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	309346.59	500.00	7.258	MSD1 427, EIC=426.7:427.7
PFOA	26716.35	46.23	7.264	MSD1 369, EIC=368.7:369.7
SURROGATE	32683.64	350.45	7.721	MSD1 513, EIC=512.7:513.7

*** End of Report ***

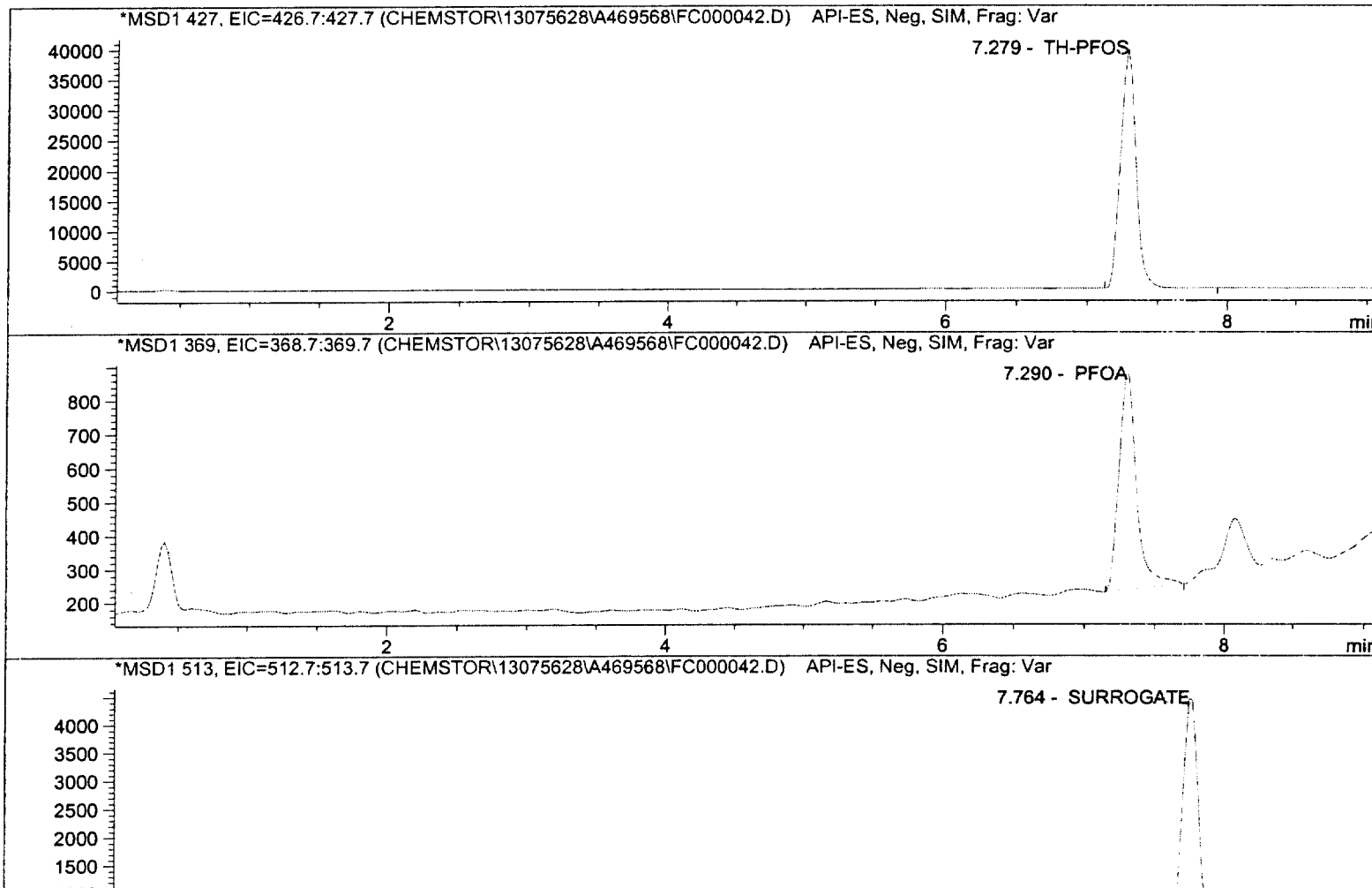
000068

Sample Name:L2133-31
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13075628\A469568\FC000042.D

Injection Date	: 3/31/04 3:49:35 AM	Seq Line	: 42
Acq Operator	: jmiller	Vial No.	: 39
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	303647.50	500.00	7.279	MSD1 427, EIC=426.7:427.7
PFOA	5664.11	15.62	7.290	MSD1 369, EIC=368.7:369.7
SURROGATE	33678.26	369.20	7.764	MSD1 513, EIC=512.7:513.7

*** End of Report ***

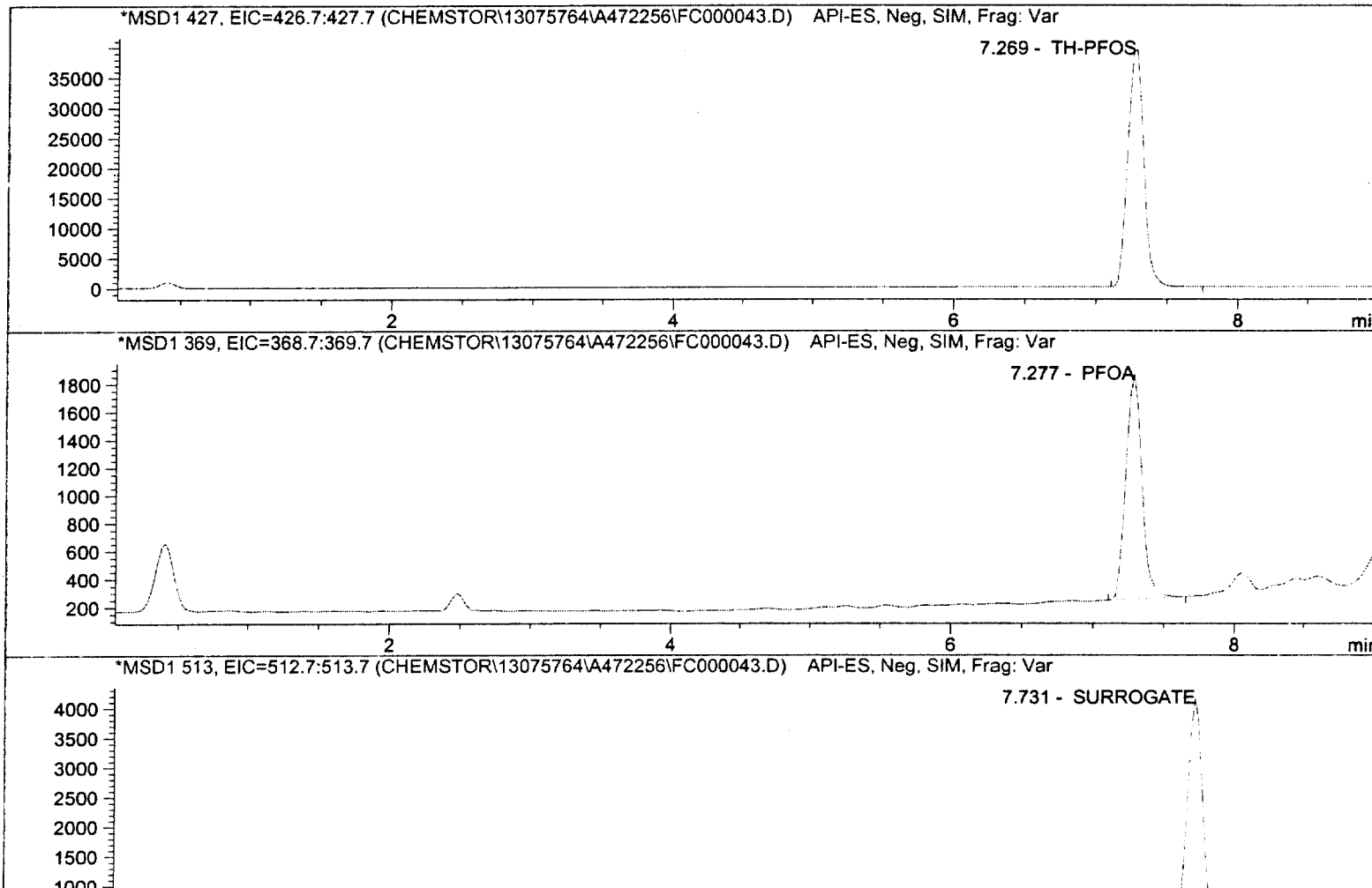
000069

Sample Name:L2133-32
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13075764\A472256\FC000043.D

Injection Date	: 3/31/04 4:05:16 AM	Seq Line	: 43
Acq Operator	: jmiller	Vial No.	: 40
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	304940.03	500.00	7.269	MSD1 427, EIC=426.7:427.7
PFOA	12592.52	25.82	7.277	MSD1 369, EIC=368.7:369.7
SURROGATE	30228.34	327.36	7.731	MSD1 513, EIC=512.7:513.7

*** End of Report ***

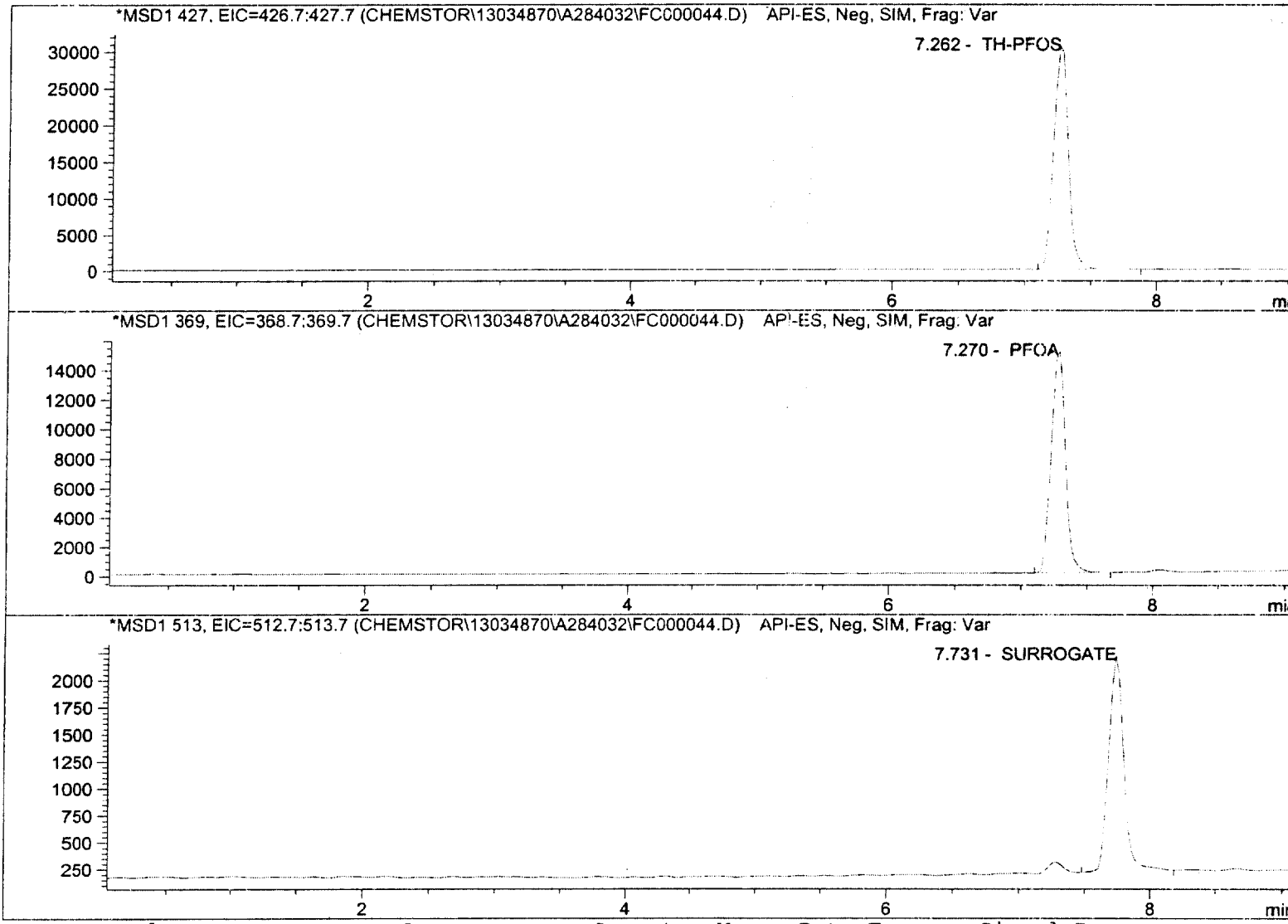
000070

Sample Name:STD 250 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13034870\A284032\FC000044.D

Injection Date	: 3/31/04 4:20:50 AM	Seq Line	: 44
Acq Operator	: jmiller	Vial No.	: 4
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	238043.88	500.00	7.262	MSD1 427, EIC=426.7:427.7
PFOA	114189.80	230.42	7.270	MSD1 369, EIC=368.7:369.7
SURROGATE	15935.87	216.33	7.731	MSD1 513, EIC=512.7:513.7

*** End of Report ***

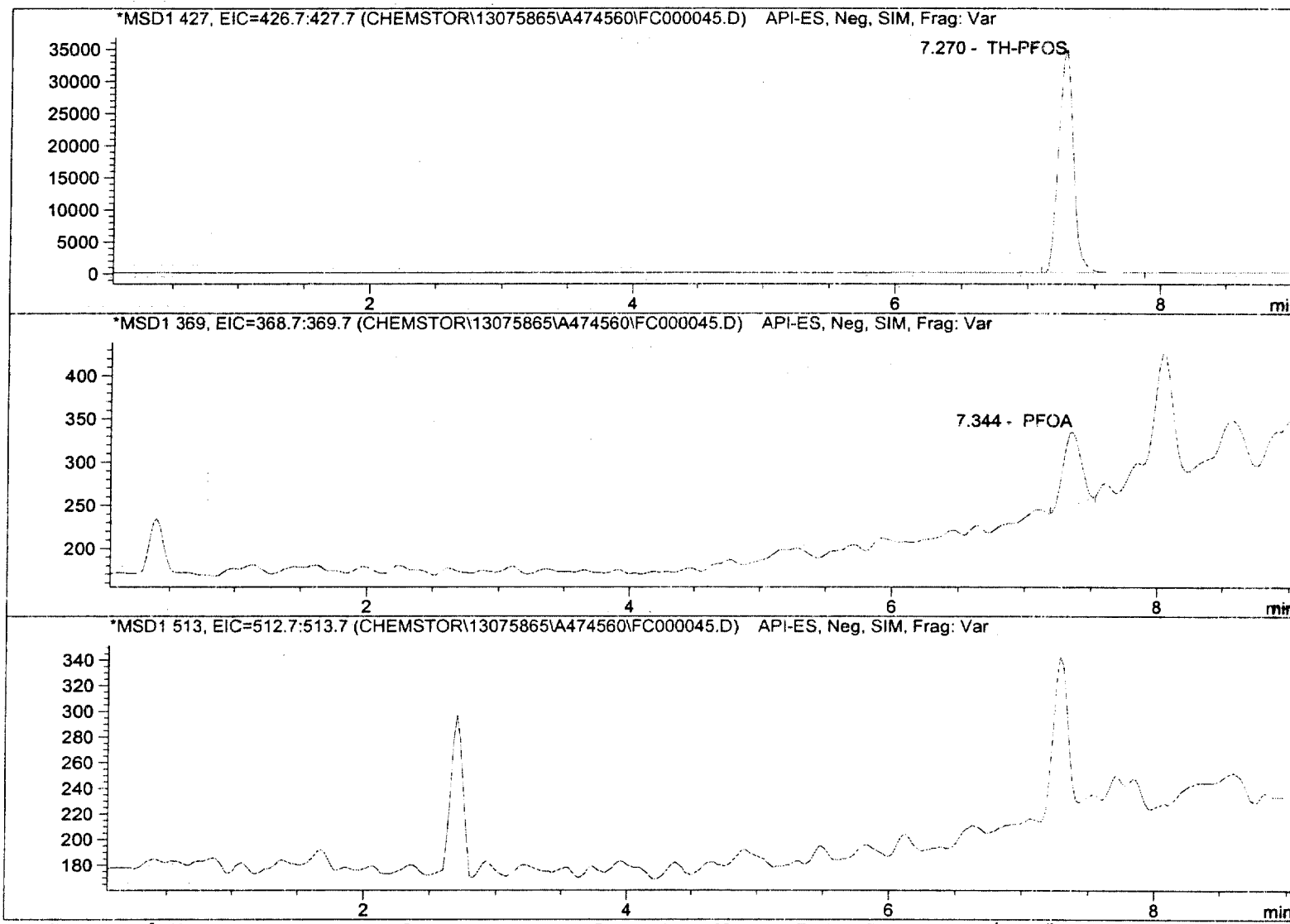
000071

Sample Name:solvent blank
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13075865\A474560\FC000045.D

Injection Date	: 3/31/04 4:36:19 AM	Seq Line	: 45
Acq Operator	: jmiller	Vial No.	: 92
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	269087.53	500.00	7.270	MSD1 427, EIC=426.7:427.7
PFOA	795.73	8.56	7.344	MSD1 369, EIC=368.7:369.7
SURROGATE	0.00	0.00	0.000	MSD1 513, EIC=512.7:513.7

*** End of Report ***

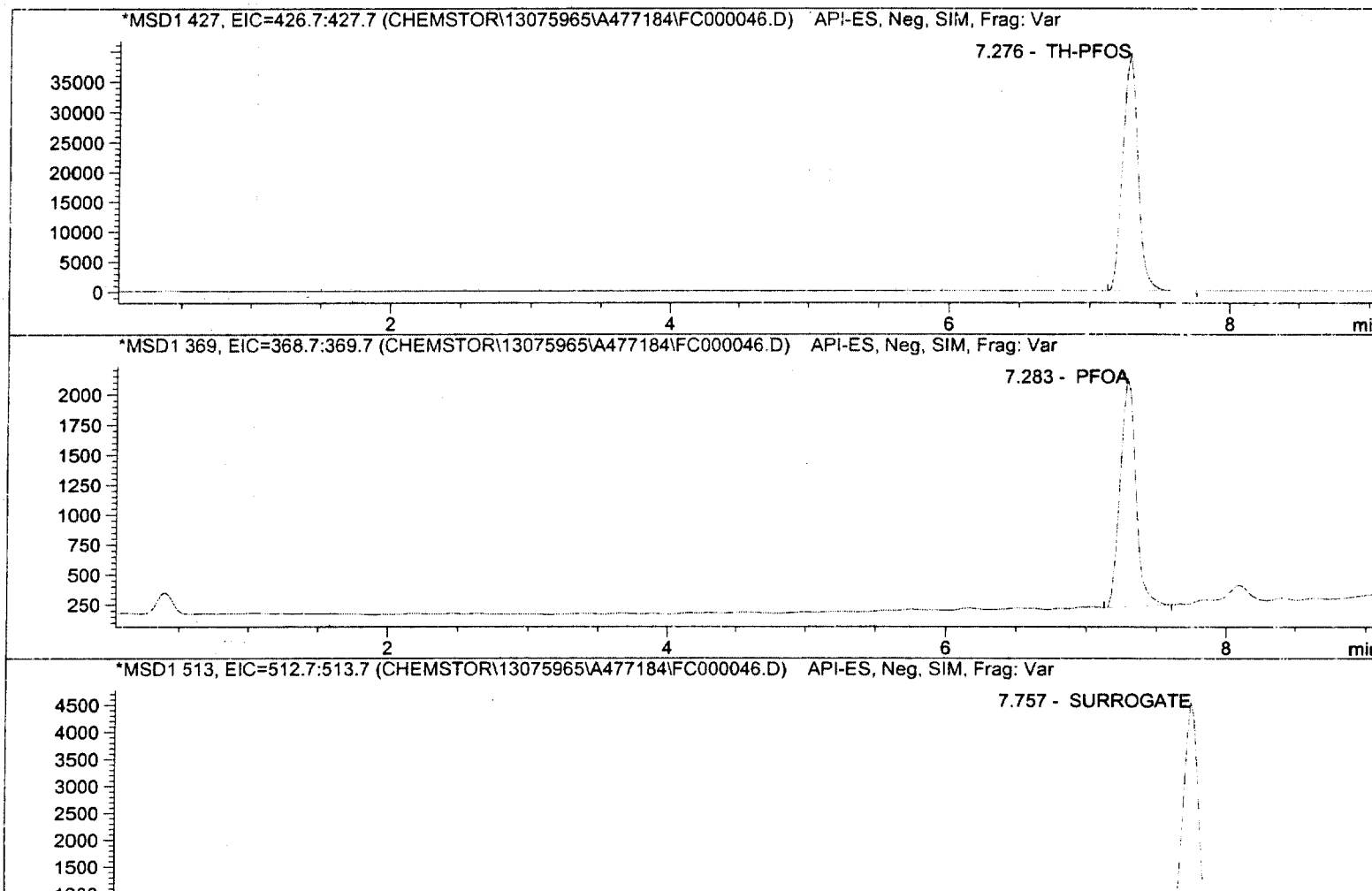
000072

Sample Name:L2133-33
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13075965\A477184\FC000046.D

Injection Date	: 3/31/04 4:51:58 AM	Seq Line	: 46
Acq Operator	: jmiller	Vial No.	: 41
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	301122.06	500.00	7.276	MSD1 427, EIC=426.7:427.7
PFOA	14898.15	29.52	7.283	MSD1 369, EIC=368.7:369.7
SURROGATE	33244.16	367.37	7.757	MSD1 513, EIC=512.7:513.7

*** End of Report ***

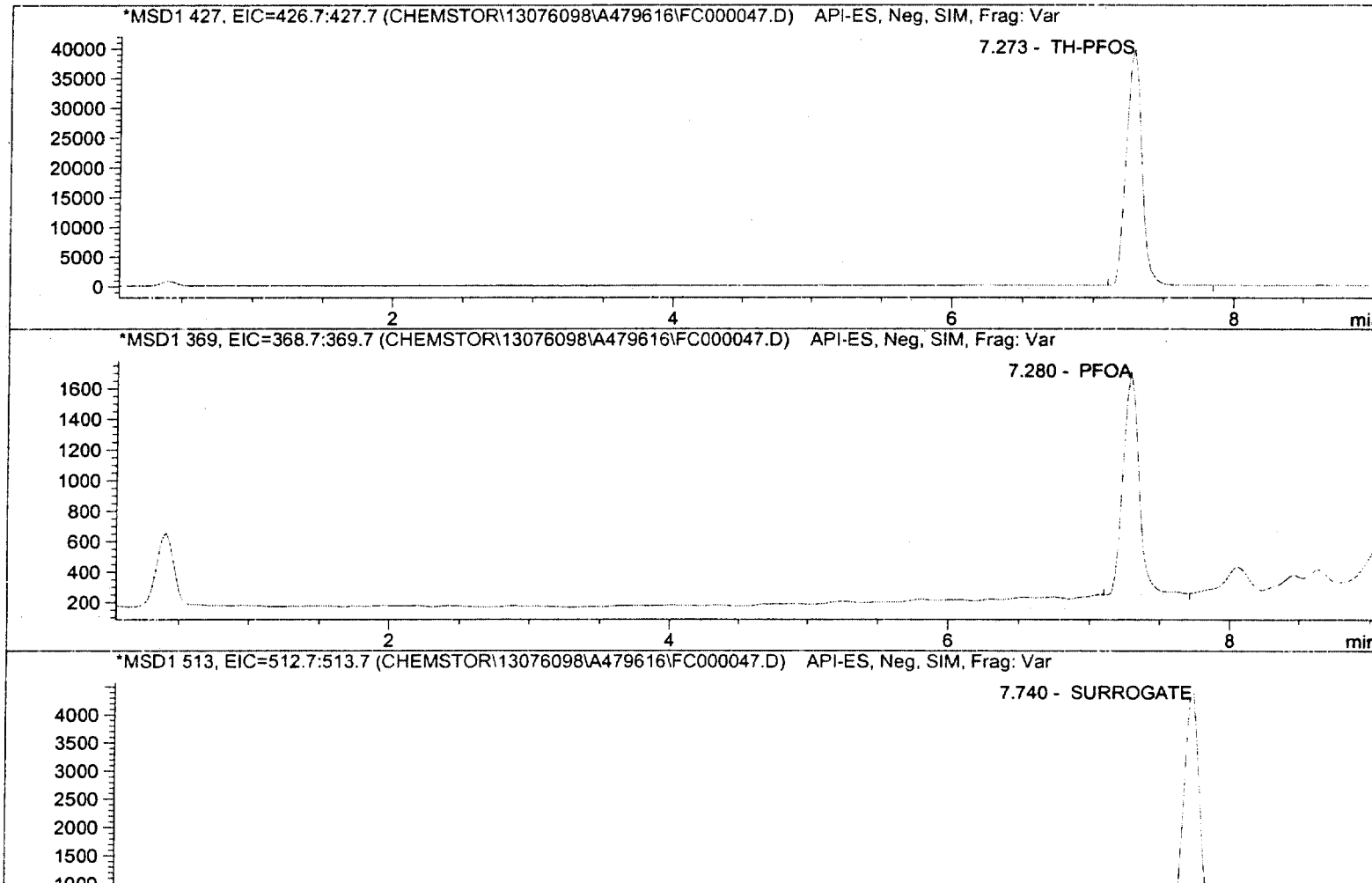
000073

Sample Name:L2133-34
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13076098\A479616\FC000047.D

Injection Date	: 3/31/04 5:07:34 AM	Seq Line	: 47
Acq Operator	: jmiller	Vial No.	: 42
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	303977.50	500.00	7.273	MSD1 427, EIC=426.7:427.7
PFOA	11583.06	24.38	7.280	MSD1 369, EIC=368.7:369.7
SURROGATE	32820.80	358.69	7.740	MSD1 513, EIC=512.7:513.7

*** End of Report ***

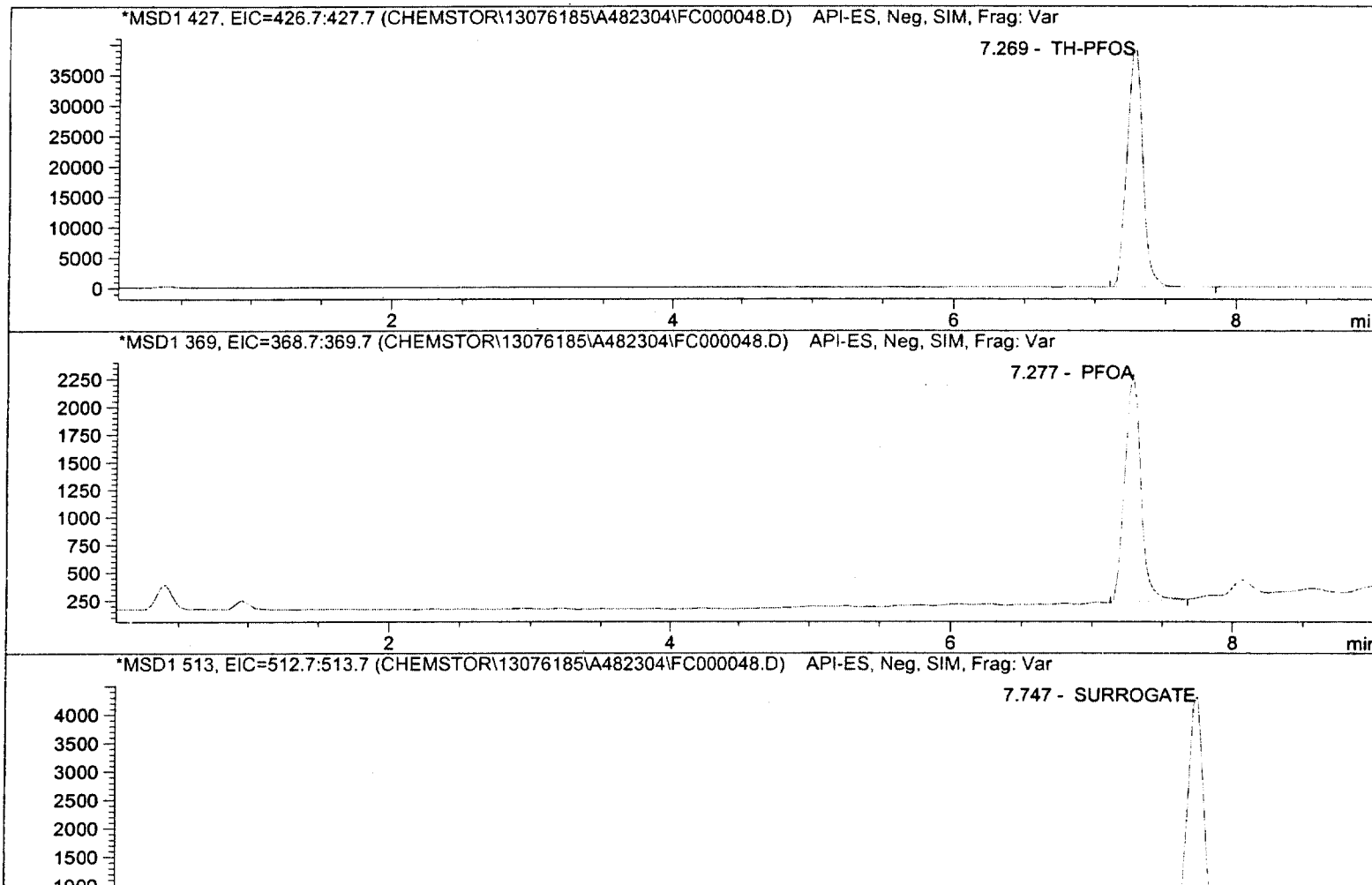
000074

Sample Name:L2133-35
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13076185\A482304\FC000048.D

Injection Date	: 3/31/04 5:23:11 AM	Seq Line	: 48
Acq Operator	: jmiller	Vial No.	: 43
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	302776.56	500.00	7.269	MSD1 427, EIC=426.7:427.7
PFOA	16011.21	31.06	7.277	MSD1 369, EIC=368.7:369.7
SURROGATE	31464.02	344.29	7.747	MSD1 513, EIC=512.7:513.7

*** End of Report ***

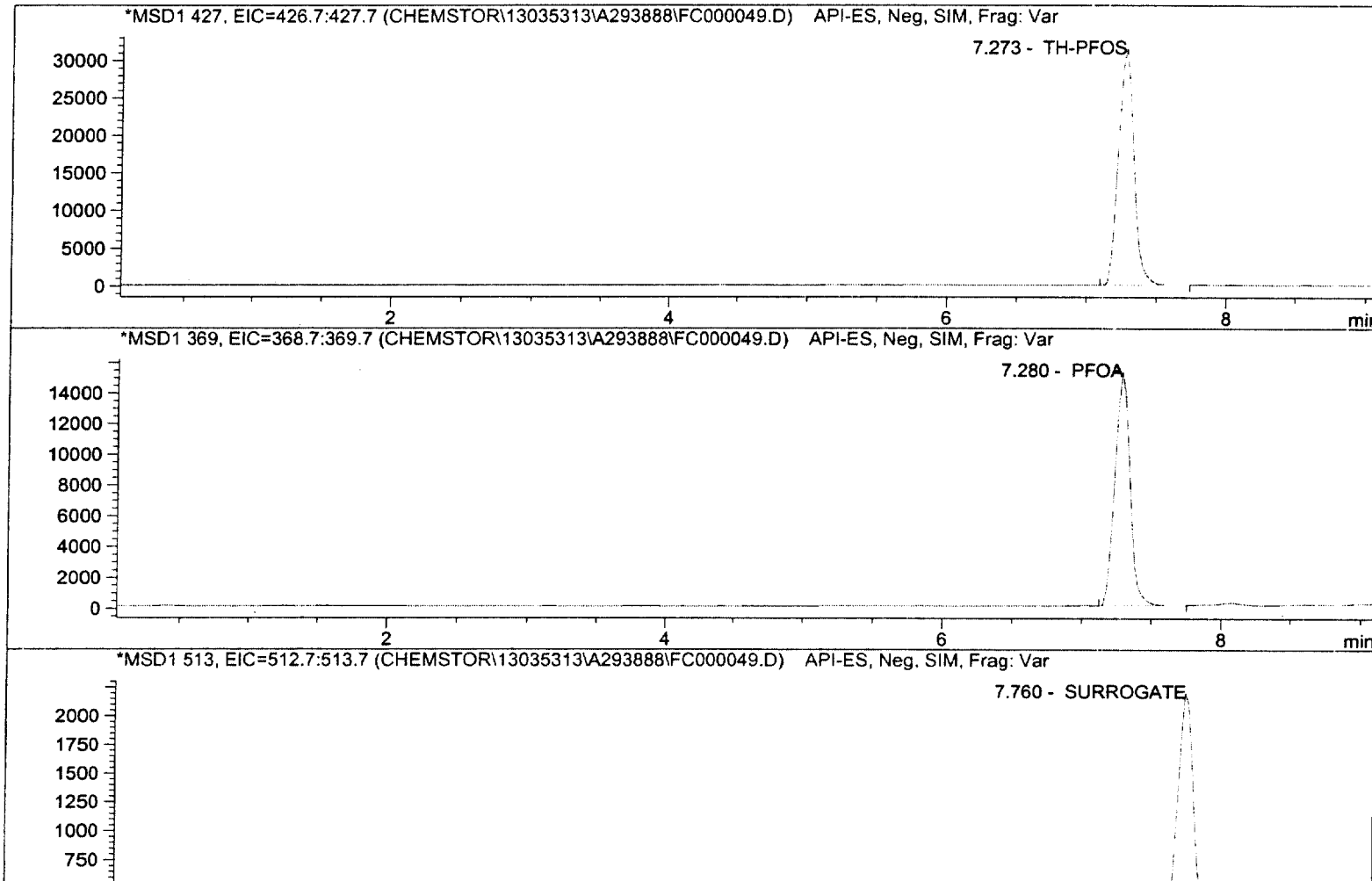
000075

Sample Name:STD 250 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13035313\A293888\FC000049.D

Injection Date	: 3/31/04 5:38:47 AM	Seq Line	: 49
Acq Operator	: jmiller	Vial No.	: 4
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	241887.81	500.00	7.273	MSD1 427, EIC=426.7:427.7
PFOA	114801.61	227.96	7.280	MSD1 369, EIC=368.7:369.7
SURROGATE	15566.03	207.58	7.760	MSD1 513, EIC=512.7:513.7

*** End of Report ***

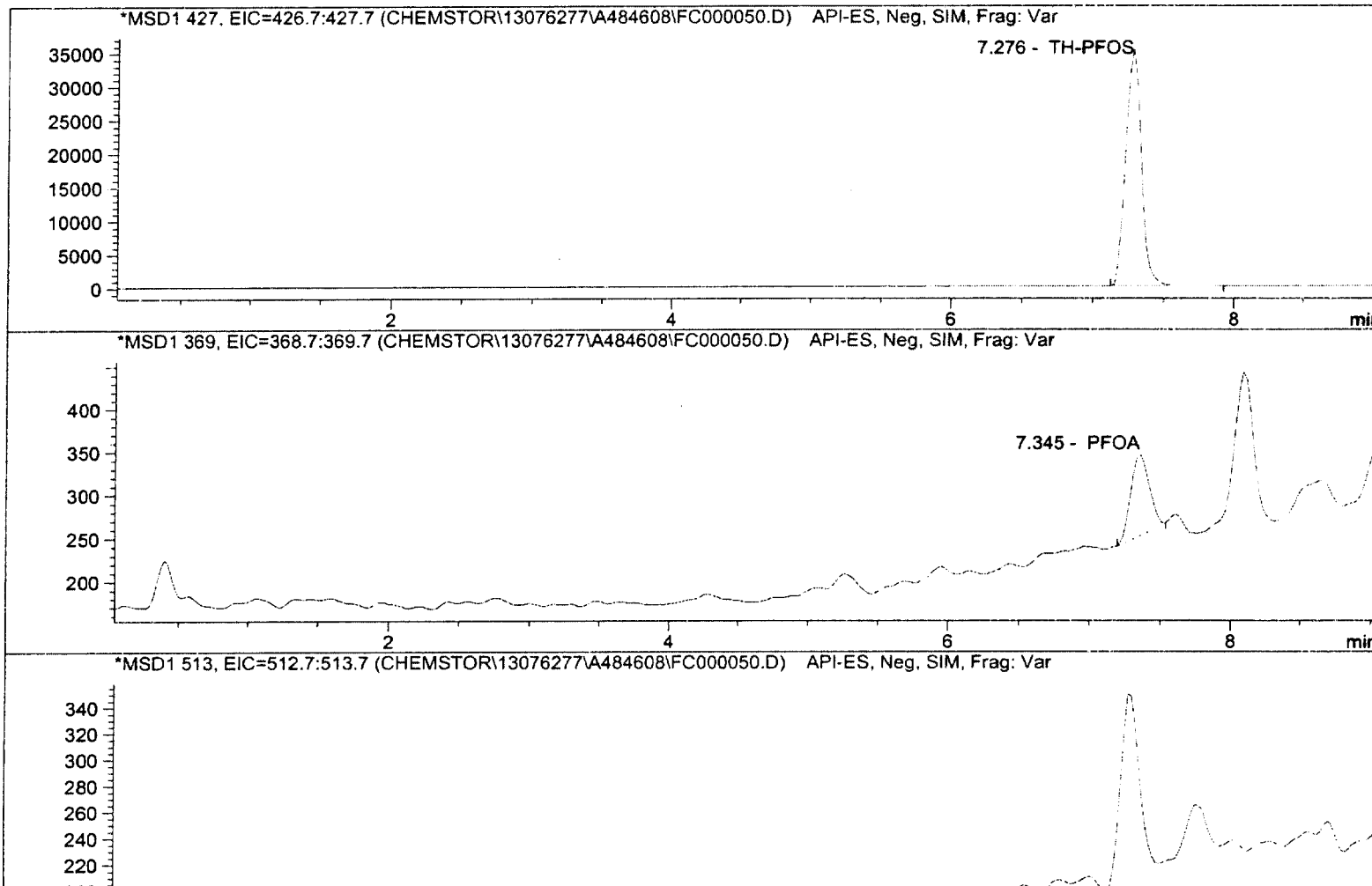
000076

Sample Name:solvent blank
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13076277\A484608\FC000050.D

Injection Date	: 3/31/04 5:54:19 AM	Seq Line	: 50
Acq Operator	: jmiller	Vial No.	: 92
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	270083.06	500.00	7.276	MSD1 427, EIC=426.7:427.7
PFOA	863.55	8.67	7.345	MSD1 369, EIC=368.7:369.7
SURROGATE	0.00	0.00	0.000	MSD1 513, EIC=512.7:513.7

*** End of Report ***

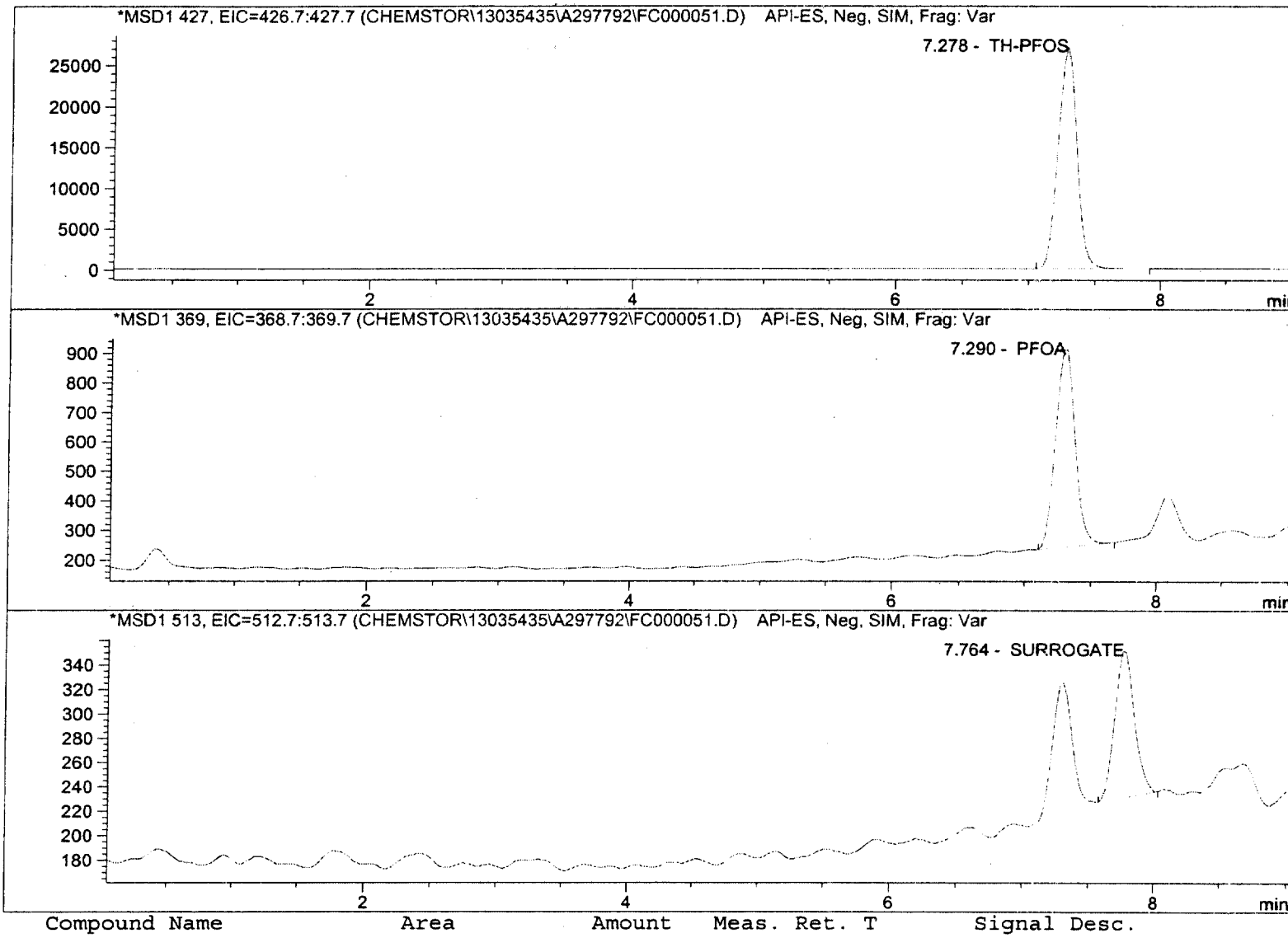
000077

Sample Name:STD 10 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13035435\A297792\FC000051.D

Injection Date	: 3/31/04 6:09:52 AM	Seq Line	: 51
Acq Operator	: jmiller	Vial No.	: 1
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 3/31/04 09:05:00 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	263472.88	500.00	7.278	MSD1 427, EIC=426.7:427.7
PFOA	6735.55	18.73	7.290	MSD1 369, EIC=368.7:369.7
SURROGATE	1258.45	13.65	7.764	MSD1 513, EIC=512.7:513.7

*** End of Report ***

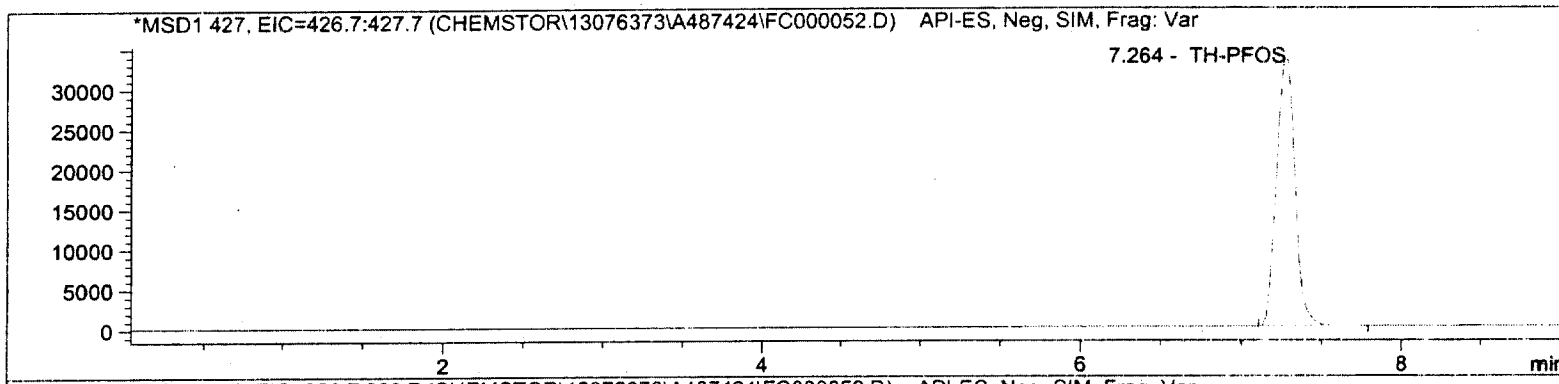
000078

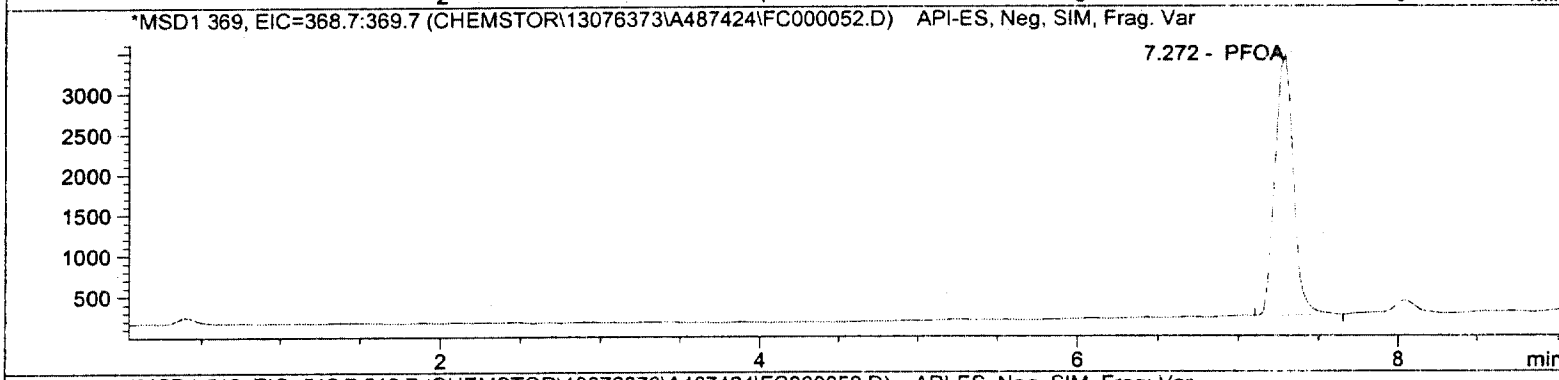
Sample Name:STD 50 ppb
Sample Info:

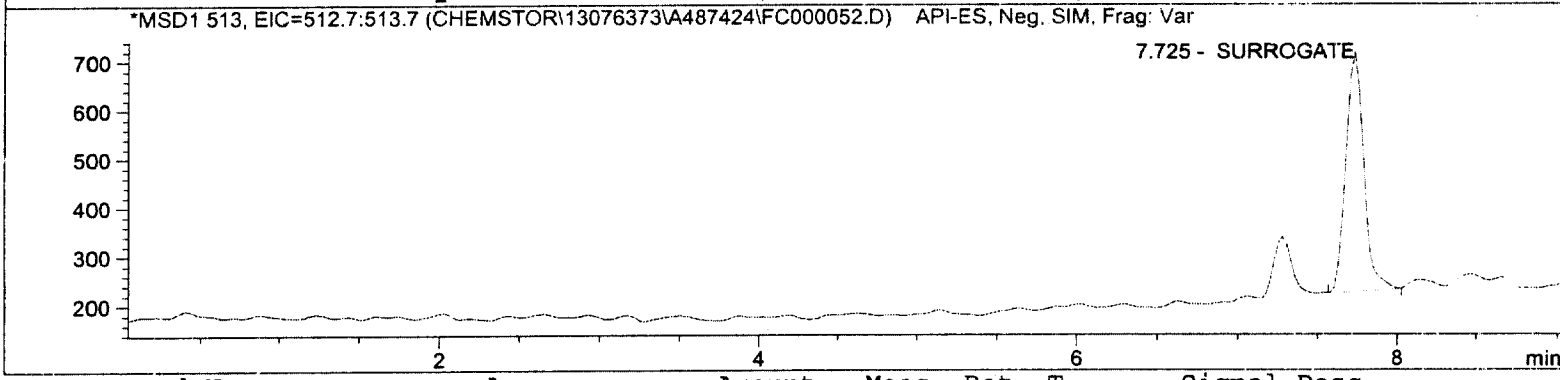
Data file :C:\HPCHEM\1\DATA\Chemstor\13076373\A487424\FC000052.D

Injection Date	: 3/31/04 6:25:25 AM	Seq Line	: 52
Acq Operator	: jmiller	Vial No.	: 2
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am







Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	261640.47	500.00	7.264	MSD1 427, EIC=426.7:427.7
PFOA	24845.60	50.14	7.272	MSD1 369, EIC=368.7:369.7
SURROGATE	3856.23	45.18	7.725	MSD1 513, EIC=512.7:513.7

*** End of Report ***

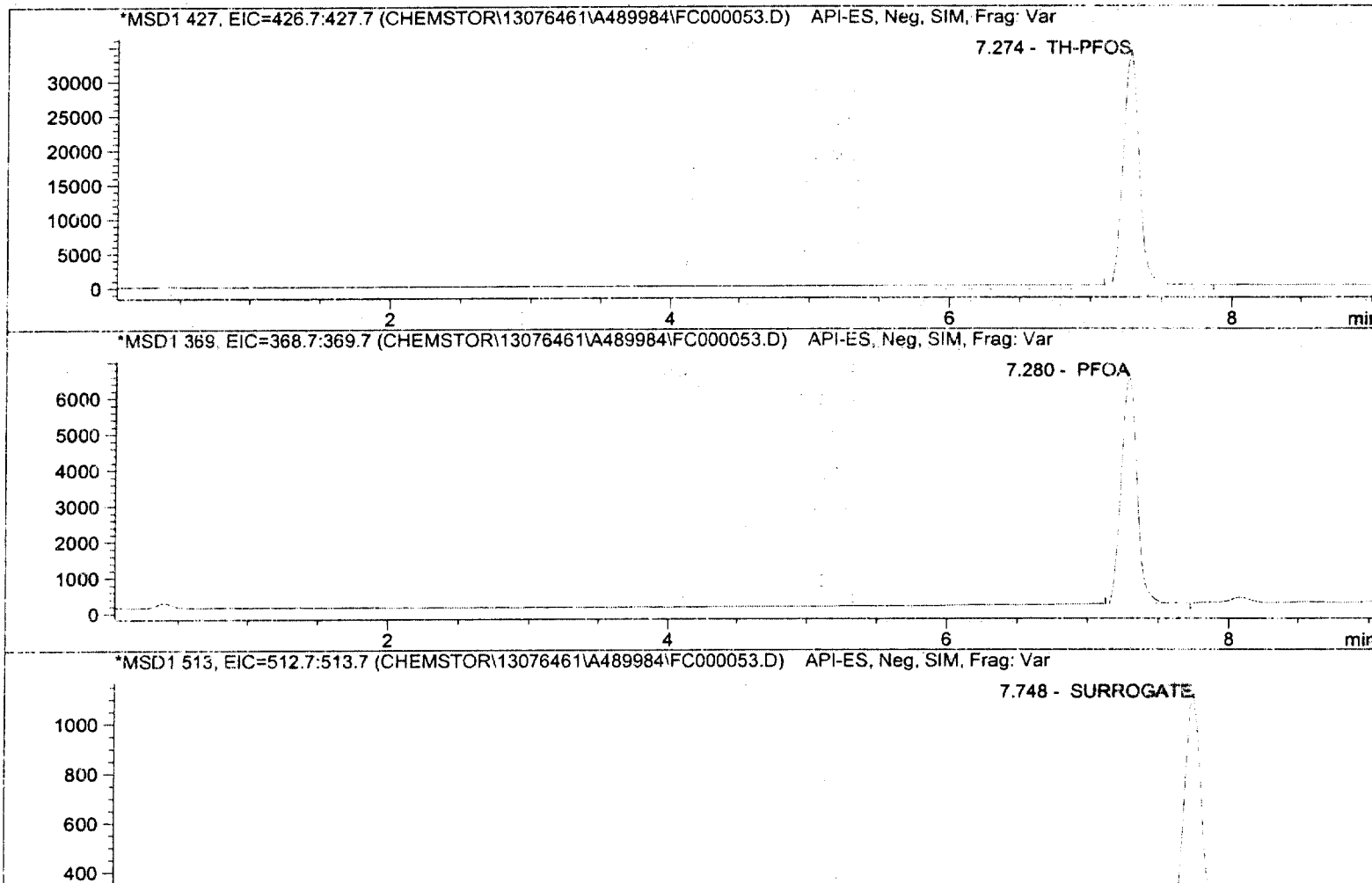
000079

Sample Name:STD 100 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13076461\A489984\FC000053.D

Injection Date	: 3/31/04 6:41:01 AM	Seq Line	: 53
Acq Operator	: jmiller	Vial No.	: 3
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	264437.66	500.00	7.274	MSD1 427, EIC=426.7:427.7
PFOA	49178.01	91.83	7.280	MSD1 369, EIC=368.7:369.7
SURROGATE	7253.66	85.86	7.748	MSD1 513, EIC=512.7:513.7

*** End of Report ***

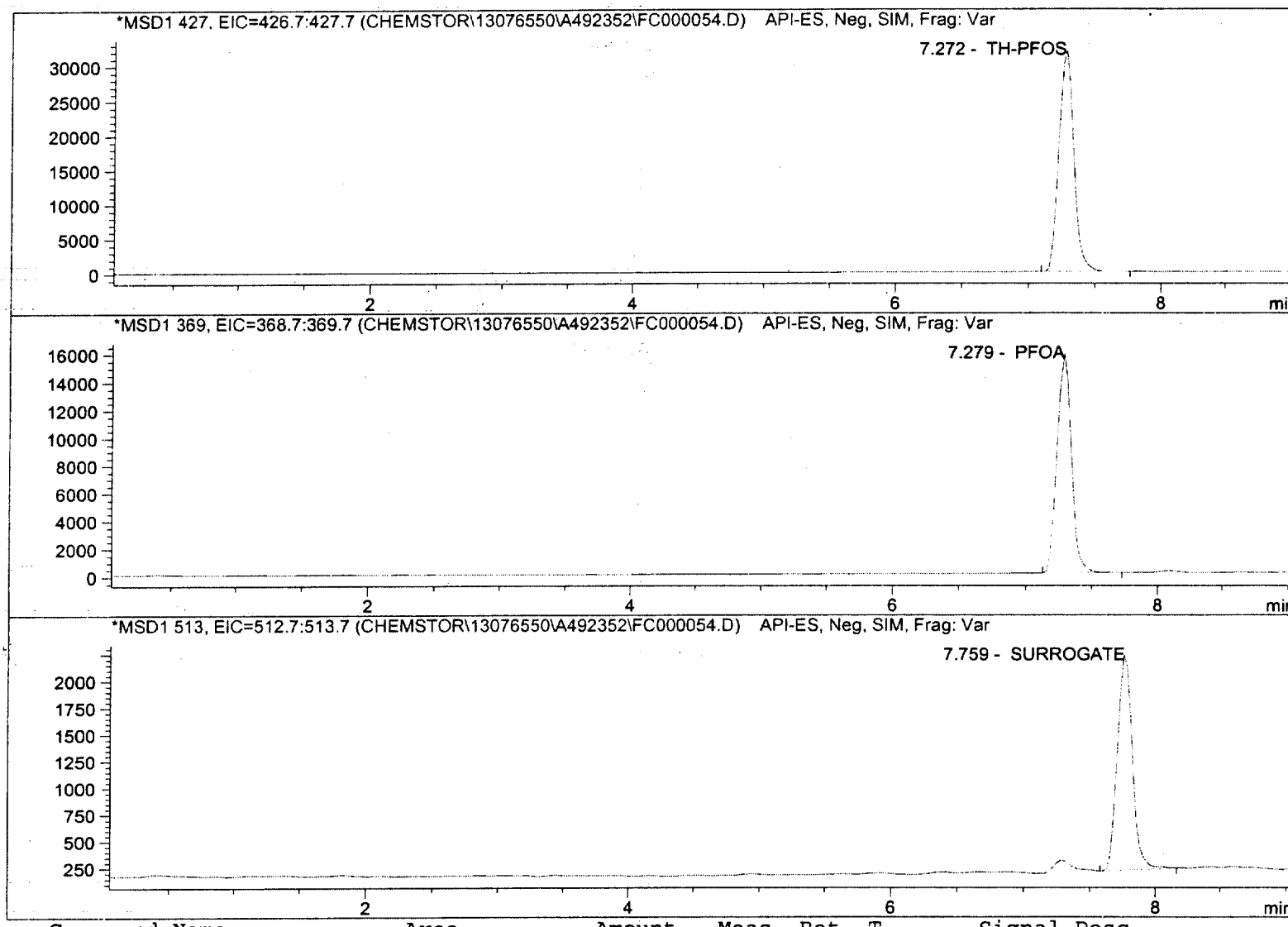
000080

Sample Name:STD 250 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13076550\A492352\FC000054.D

Injection Date	: 3/31/04 6:56:35 AM	Seq Line	: 54
Acq Operator	: jmiller	Vial No.	: 4
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	247451.16	500.00	7.272	MSD1 427, EIC=426.7:427.7
PFOA	119024.13	231.05	7.279	MSD1 369, EIC=368.7:369.7
SURROGATE	15913.50	207.44	7.759	MSD1 513, EIC=512.7:513.7

*** End of Report ***

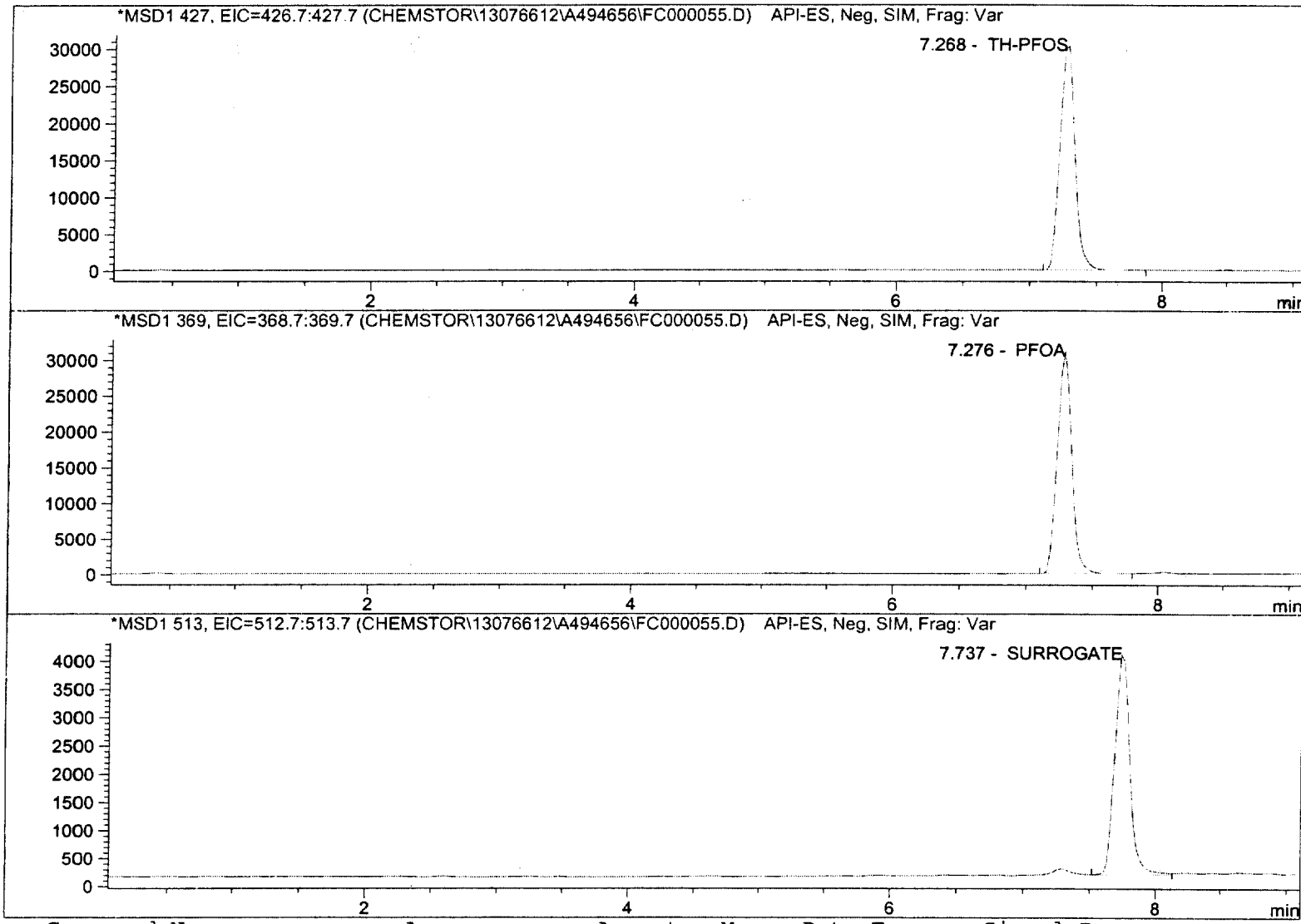
000081

Sample Name:STD 500 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13076612\A494656\FC000055.D

Injection Date	: 3/31/04 7:12:13 AM	Seq Line	: 55
Acq Operator	: jmiller	Vial No.	: 5
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	238222.09	500.00	7.268	MSD1 427, EIC=426.7:427.7
PFOA	235420.88	487.38	7.276	MSD1 369, EIC=368.7:369.7
SURROGATE	31545.33	447.35	7.737	MSD1 513, EIC=512.7:513.7

*** End of Report ***

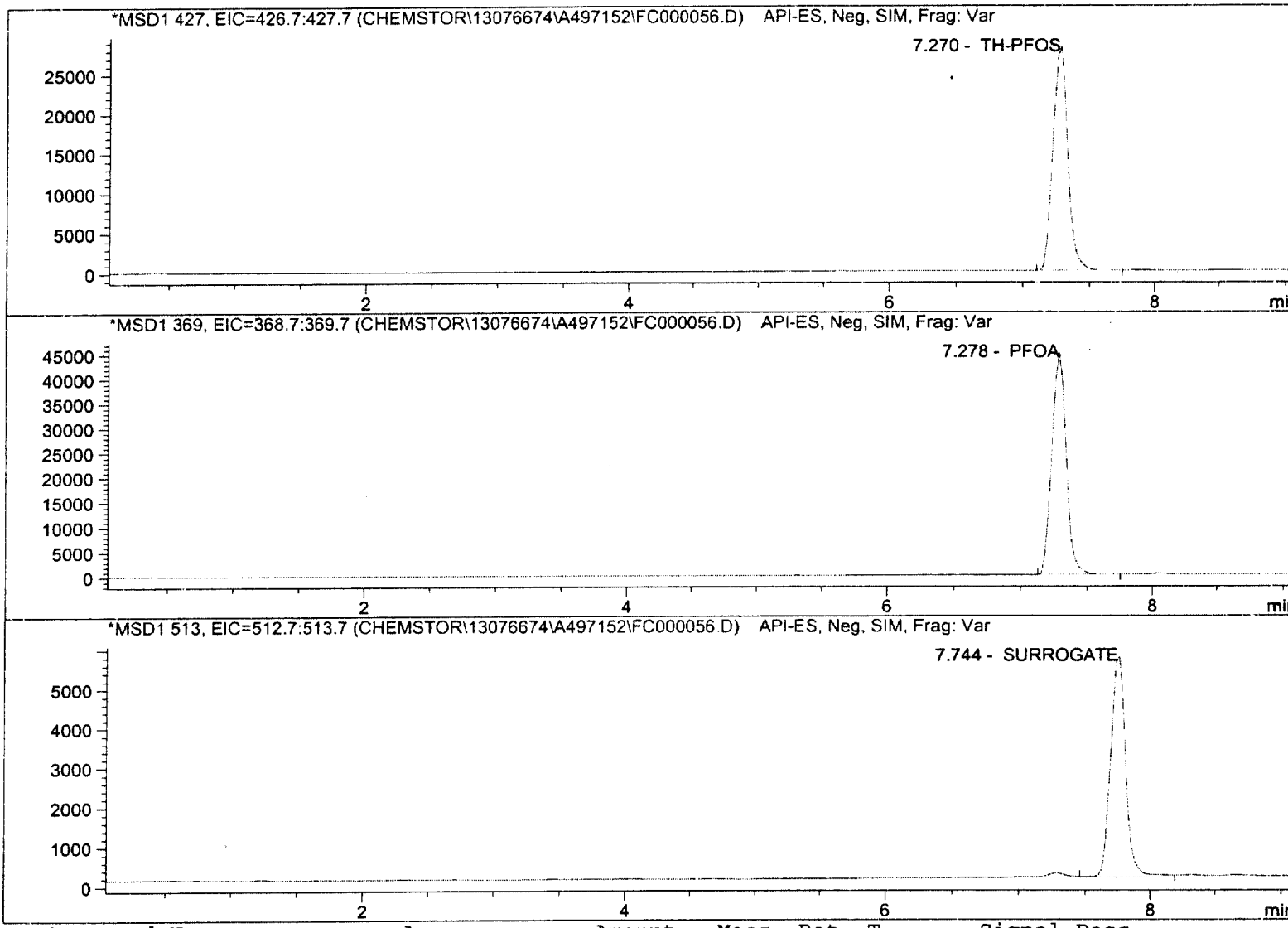
000082

Sample Name:STD 750 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13076674\A497152\FC000056.D

Injection Date	: 3/31/04 7:27:50 AM	Seq Line	: 56
Acq Operator	: jmiller	Vial No.	: 6
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	219595.55	500.00	7.270	MSD1 427, EIC=426.7:427.7
PFOA	341079.84	805.66	7.278	MSD1 369, EIC=368.7:369.7
SURROGATE	45337.44	737.19	7.744	MSD1 513, EIC=512.7:513.7

*** End of Report ***

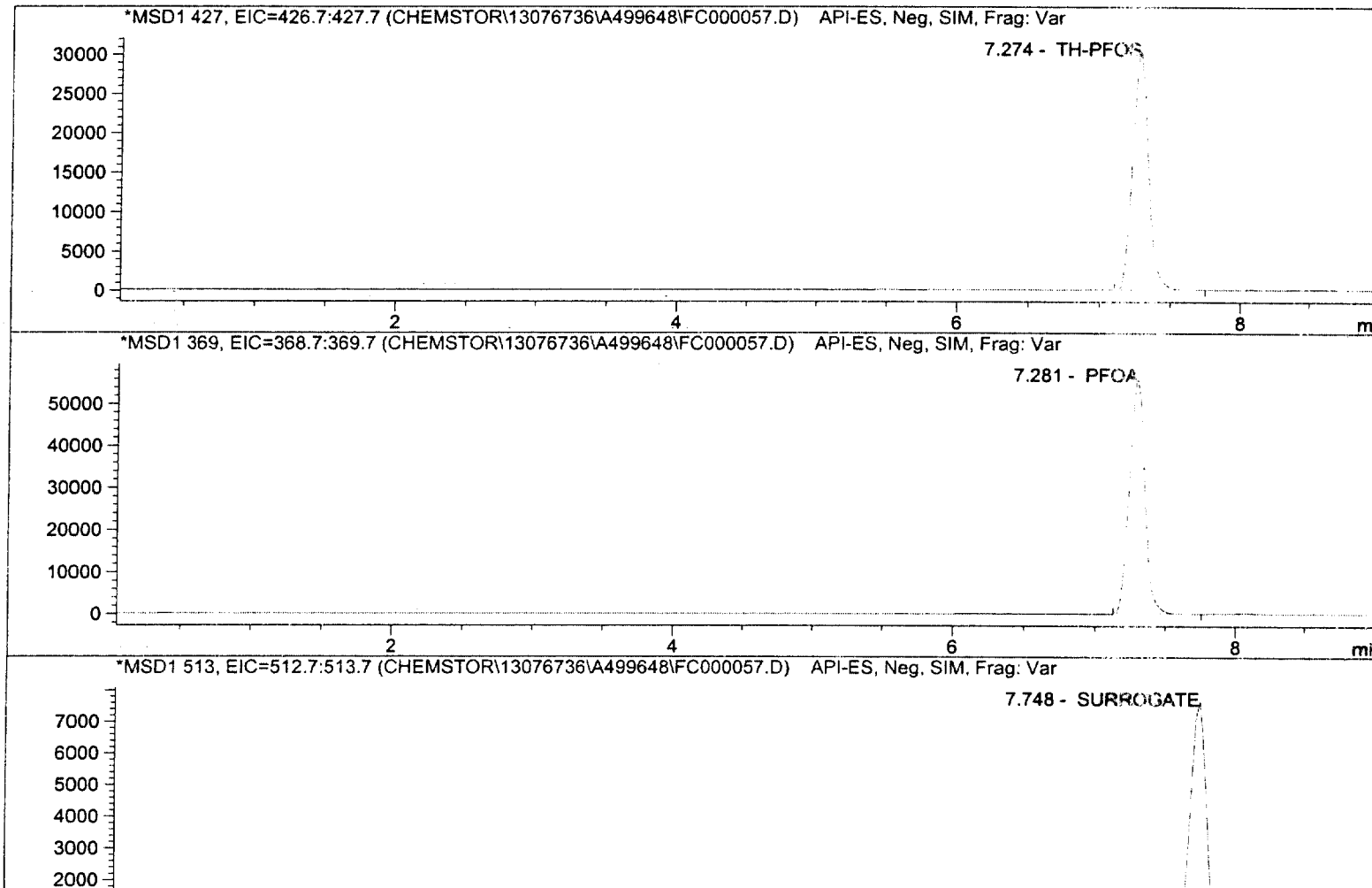
000083

Sample Name:STD 1000 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13076736\A499648\FC000057.D

Injection Date	: 3/31/04 7:43:29 AM	Seq Line	: 57
Acq Operator	: jmiller	Vial No.	: 7
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\033004F.M
Last Changed : 4/1/04 10:12:43 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	237026.95	500.00	7.274	MSD1 427, EIC=426.7:427.7
PFOA	432297.72	974.55	7.281	MSD1 369, EIC=368.7:369.7
SURROGATE	59473.75	930.94	7.748	MSD1 513, EIC=512.7:513.7

*** End of Report ***

000084

Sequence: C:\HPCHEM\1\SEQUENCE\040104.S

Sequence Table:

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 1	STD 10 ppb	POAASUR	1	Sample		
2	Vial 1	STD 10 ppb	POAASUR	1	Calib		
3	Vial 2	STD 50 ppb	POAASUR	1	Calib		
4	Vial 3	STD 100 ppb	POAASUR	1	Calib		
5	Vial 4	STD 250 ppb	POAASUR	1	Calib		
6	Vial 5	STD 500 ppb	POAASUR	1	Calib		
7	Vial 6	STD 750 ppb	POAASUR	1	Calib		
8	Vial 7	STD 1000 ppb	POAASUR	1	Calib		
9	Vial 92	solvent blank	POAASUR	1	Sample		
10	Vial 51	L2133-10 2X	POAASUR	1	Sample		
11	Vial 4	STD 250 ppb	POAASUR	1	Sample		
12	Vial 92	solvent blank	POAASUR	1	Sample		
13	Vial 1	STD 10 ppb	POAASUR	1	Calib		
14	Vial 2	STD 50 ppb	POAASUR	1	Calib		
15	Vial 3	STD 100 ppb	POAASUR	1	Calib		
16	Vial 4	STD 250 ppb	POAASUR	1	Calib		
17	Vial 5	STD 500 ppb	POAASUR	1	Calib		
18	Vial 6	STD 750 ppb	POAASUR	1	Calib		
19	Vial 7	STD 1000 ppb	POAASUR	1	Calib		

Calibration Part:

Line	Location	SampleName	Method	CalLev	Update RF	Update RT	Interval
2	Vial 1	STD 10 ppb	POAASUR	1	Replace	Average	-2
3	Vial 2	STD 50 ppb	POAASUR	2	Replace	Average	-2
4	Vial 3	STD 100 ppb	POAASUR	3	Replace	Average	-2
5	Vial 4	STD 250 ppb	POAASUR	4	Replace	Average	-2
6	Vial 5	STD 500 ppb	POAASUR	5	Replace	Average	-2
7	Vial 6	STD 750 ppb	POAASUR	6	Replace	Average	-2
8	Vial 7	STD 1000 ppb	POAASUR	7	Replace	Average	-2
13	Vial 1	STD 10 ppb	POAASUR	1	Average	Average	-2
14	Vial 2	STD 50 ppb	POAASUR	2	Average	Average	-2
15	Vial 3	STD 100 ppb	POAASUR	3	Average	Average	-2
16	Vial 4	STD 250 ppb	POAASUR	4	Average	Average	-2
17	Vial 5	STD 500 ppb	POAASUR	5	Average	Average	-2
18	Vial 6	STD 750 ppb	POAASUR	6	Average	Average	-2
19	Vial 7	STD 1000 ppb	POAASUR	7	Average	Average	-2

000085

Method C:\HPCHEM\1\METHODS\040104F.M

Calibration Table

Calib. Data Modified : Friday, April 02, 2004 8:47:24 AM

Calculate : Internal Standard
Based on : Peak Area

Rel. Reference Window : 5.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 5.000 %
Abs. Non-ref. Window : 0.000 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Quadratic (some peaks differ, see below)
Origin : Included (some peaks differ, see below)
Weight : Equal (some peaks differ, see below)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Default Sample ISTD Information (if not set in sample table):

ISTD #	ISTD Amount [ppb]	Name
1	500.00000	TH-PFOS

Signal 1: MSD1 427, EIC=426.7:427.7
Signal 2: MSD1 369, EIC=368.7:369.7
Signal 3: MSD1 513, EIC=512.7:513.7

RetTime [min]	Sig	Lvl	Amount [ppb]	Area	Amt/Area	Ref	Grp	Name
7.366	1	1	500.00000	3.56778e5	1.40143e-3	I1		TH-PFOS
		2	500.00000	3.50146e5	1.42797e-3			
		3	500.00000	3.54204e5	1.41162e-3			
		4	500.00000	3.08978e5	1.61824e-3			
		5	500.00000	3.05992e5	1.63403e-3			
		6	500.00000	2.78856e5	1.79304e-3			
		7	500.00000	2.95806e5	1.69030e-3			
7.375	2	1	10.00000	7730.66968	1.29355e-3	1		PFOA
		2	50.00000	2.83580e4	1.76317e-3			
		3	100.00000	6.83229e4	1.46364e-3			
		4	250.00000	1.23253e5	2.02835e-3			
		5	500.00000	2.71475e5	1.84179e-3			
		6	750.00000	3.89000e5	1.92802e-3			
		7	1000.00000	4.58630e5	2.18041e-3			
7.794	3	1	10.00000	1211.51978	8.25410e-3	1		SURROGATE
		2	50.00000	4570.36548	1.09400e-2			
		3	100.00000	8758.15869	1.14179e-2			
		4	250.00000	1.72815e4	1.44663e-2			
		5	500.00000	3.49914e4	1.42892e-2			
		6	750.00000	5.04186e4	1.48755e-2			
		7	1000.00000	6.30135e4	1.58696e-2			

000086

Method C:\HPCHEM\1\METHODS\040104F.M

More compound-specific settings:

Compound: TH-PFOS
  Time Window : From 5.746 min To 8.166 min
  Curve Type : Linear
  Origin : Forced
  Calibration Level Weights:/
    Level 1 : 1
    Level 2 : 1
    Level 3 : 1
    Level 4 : 1
    Level 5 : 1
    Level 6 : 1
    Level 7 : 1

Compound: PFOA
  Time Window : From 5.746 min To 8.194 min

Compound: SURROGATE
  Time Window : From 7.274 min To 8.625 min

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Peak Sum Table

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No Entries in table

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Calibration Curves

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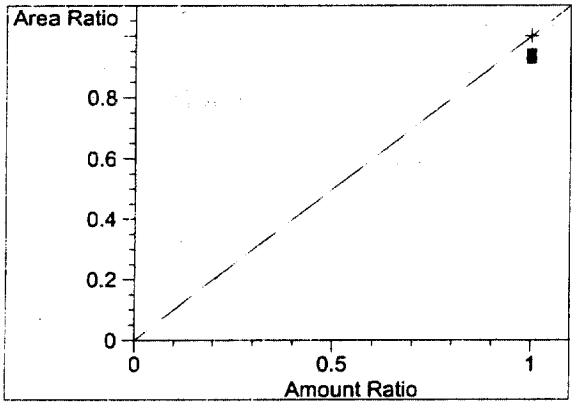
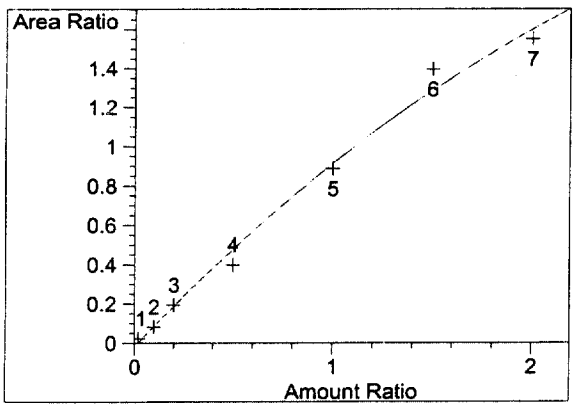


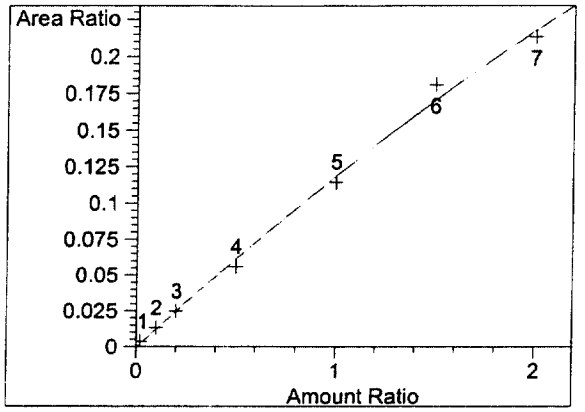
TH-PFOS at exp. RT: 7.366
MSD1 427, EIC=426.7:427.7
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: y = mx
  m: 1.00000
  x: Amount Ratio
  y: Area Ratio
Calibration Level Weights:
  Level 1 : 1
  Level 2 : 1
  Level 3 : 1
  Level 4 : 1
  Level 5 : 1
  Level 6 : 1
  Level 7 : 1



PFOA at exp. RT: 7.375
MSD1 369, EIC=368.7:369.7
Correlation: 0.99608
Residual Std. Dev.: 0.06020
Formula: $y = ax^2 + bx + c$
  a: -1.22587e-1
  b: 1.05531
  c: -2.02004e-2
  x: Amount Ratio
  y: Area Ratio

000087

Method C:\HPCHEM\1\METHODS\040104F.M



SURROGATE at exp. RT: 7.794
MSD1 513, EIC=512.7:513.7
Correlation: 0.99821
Residual Std. Dev.: 0.00543
Formula: $y = ax^2 + bx + c$
a: -1.00284e-2
b: 1.29210e-1
c: -7.98798e-4
x: Amount Ratio
y: Area Ratio

==========

000088

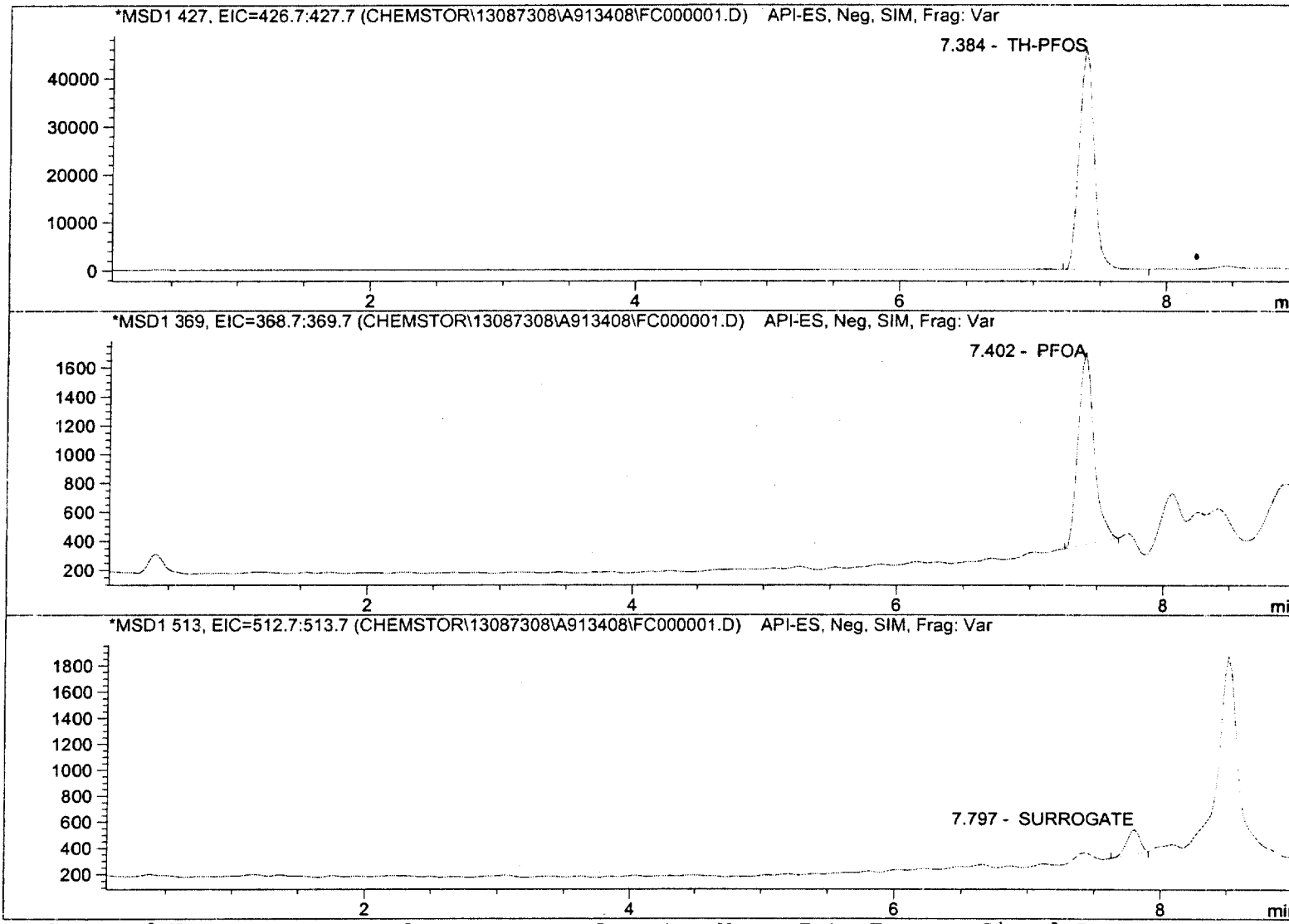
Sample Name:STD 10 ppb
Sample Info:Warm up

Data file :C:\HPCHEM\1\DATA\Chemstor\13087308\A913408\FC000001.D

Injection Date	: 4/1/04 11:37:41 AM	Seq Line	: 1
Acq Operator	: jmiller	Vial No.	: 1
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am

Initials JMM
Date 4/2/04
Run# FC000001 To FC000019



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	356990.38	500.00	7.384	MSD1 427, EIC=426.7:427.7
PFOA	11158.69	24.52	7.402	MSD1 369, EIC=368.7:369.7
SURROGATE	1354.99	17.83	7.797	MSD1 513, EIC=512.7:513.7

*** End of Report ***

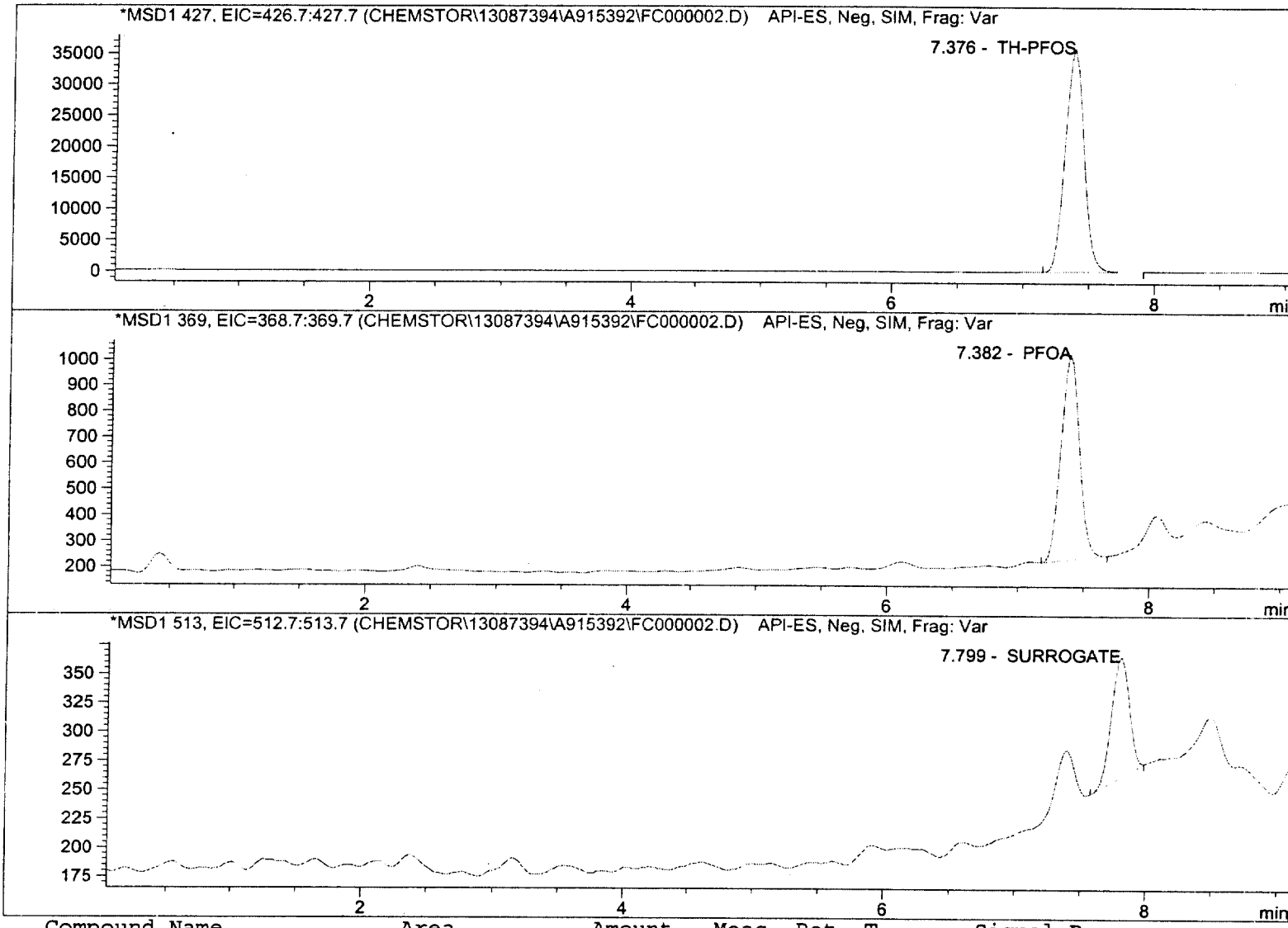
000089

Sample Name:STD 10 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13087394\A915392\FC000002.D

Injection Date	: 4/1/04 11:53:13 AM	Seq Line	: 2
Acq Operator	: jmiller	Vial No.	: 1
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	354735.72	500.00	7.376	MSD1 427, EIC=426.7:427.7
PFOA	7660.40	19.89	7.382	MSD1 369, EIC=368.7:369.7
SURROGATE	969.38	13.69	7.799	MSD1 513, EIC=512.7:513.7

*** End of Report ***

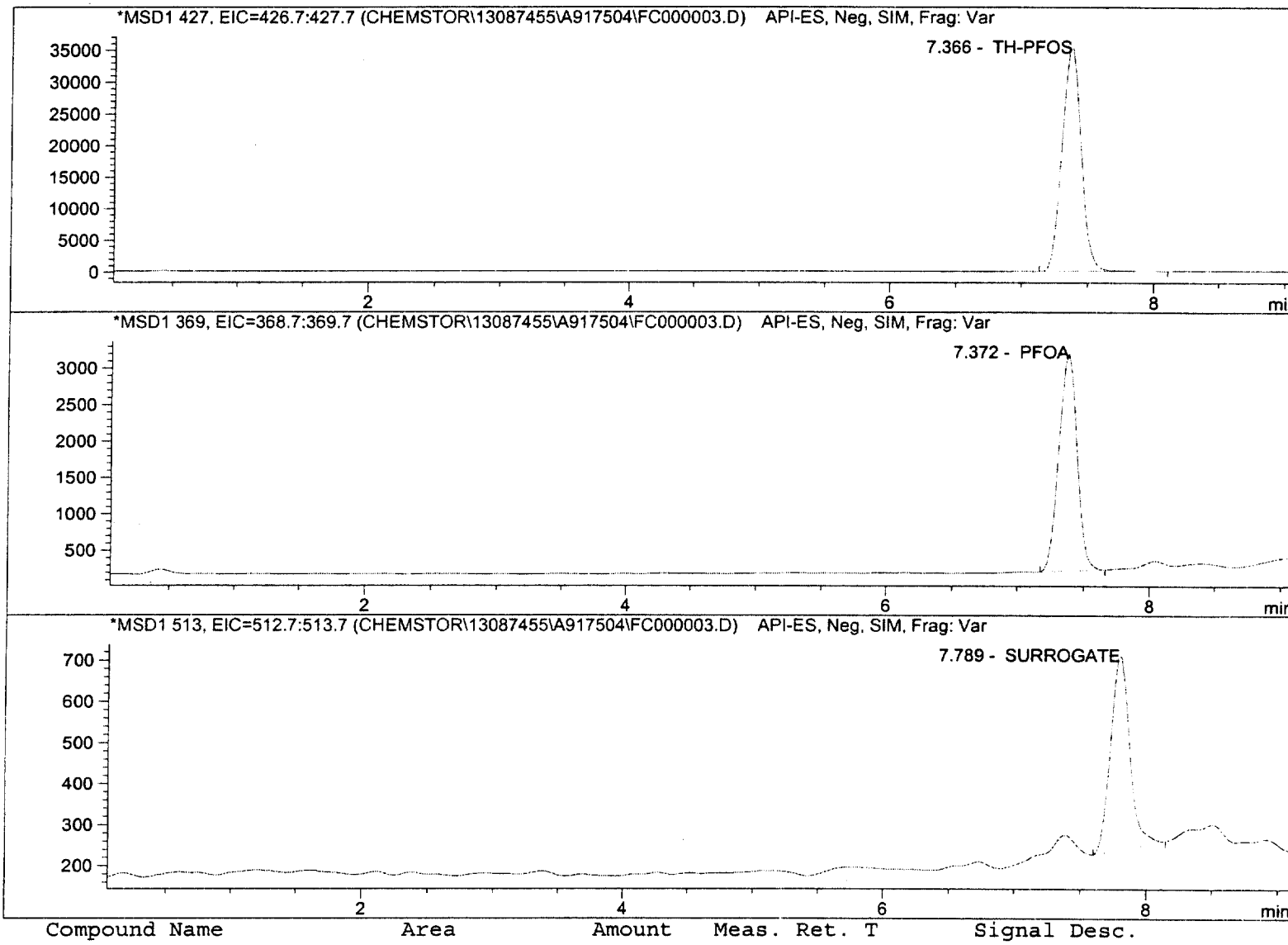
000090

Sample Name:STD 50 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13087455\A917504\FC000003.D

Injection Date	: 4/1/04 12:08:49 PM	Seq Line	: 3
Acq Operator	: jmiller	Vial No.	: 2
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	352644.63	500.00	7.366	MSD1 427, EIC=426.7:427.7
PFOA	28374.35	48.23	7.372	MSD1 369, EIC=368.7:369.7
SURROGATE	4789.71	56.14	7.789	MSD1 513, EIC=512.7:513.7

*** End of Report ***

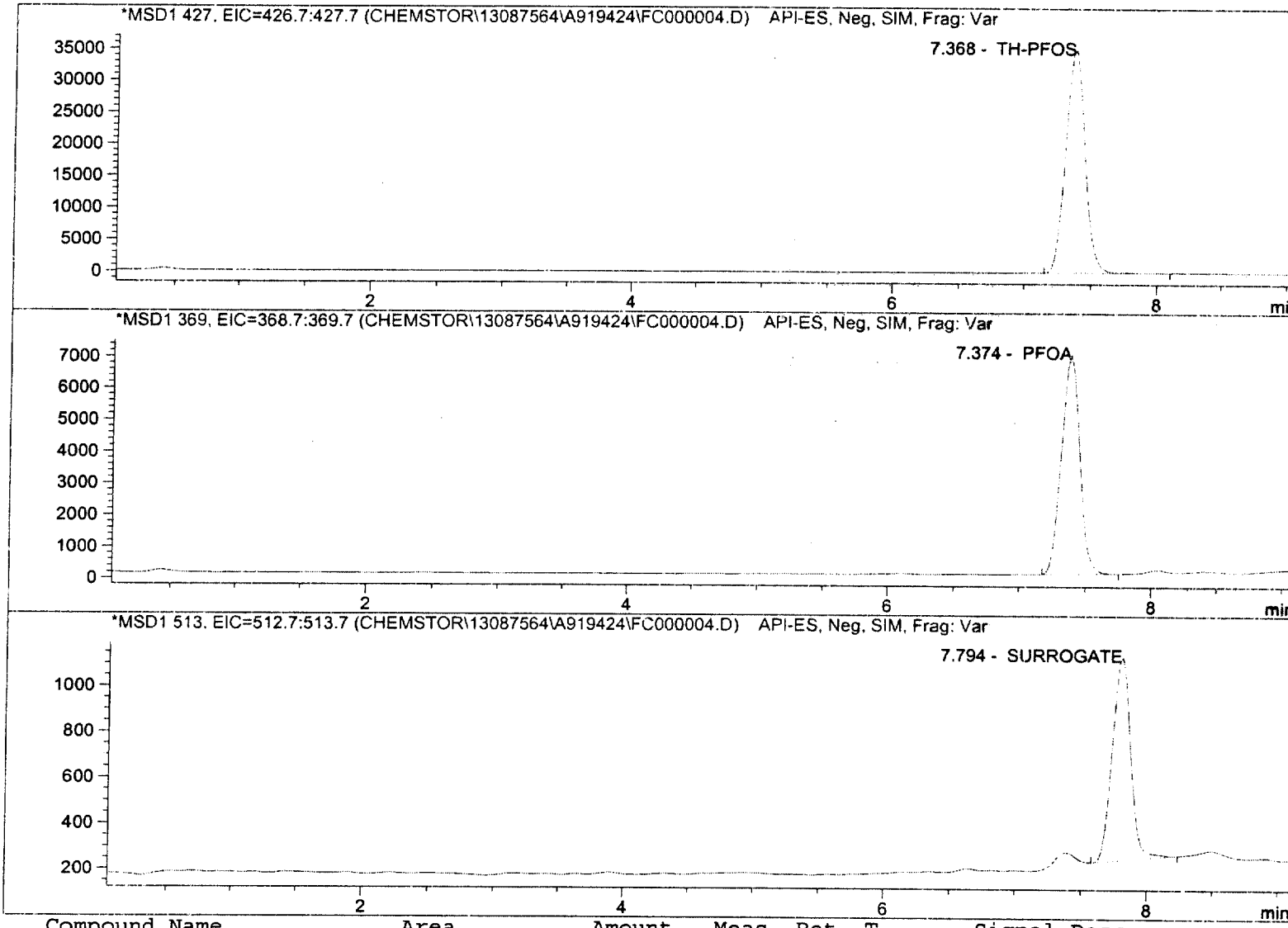
000091

Sample Name:STD 100 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13087564\A919424\FC000004.D

Injection Date	: 4/1/04 12:24:24 PM	Seq Line	: 4
Acq Operator	: jmiller	Vial No.	: 3
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	351885.25	500.00	7.368	MSD1 427, EIC=426.7:427.7
PFOA	66469.05	101.46	7.374	MSD1 369, EIC=368.7:369.7
SURROGATE	8635.50	99.60	7.794	MSD1 513, EIC=512.7:513.7

*** End of Report ***

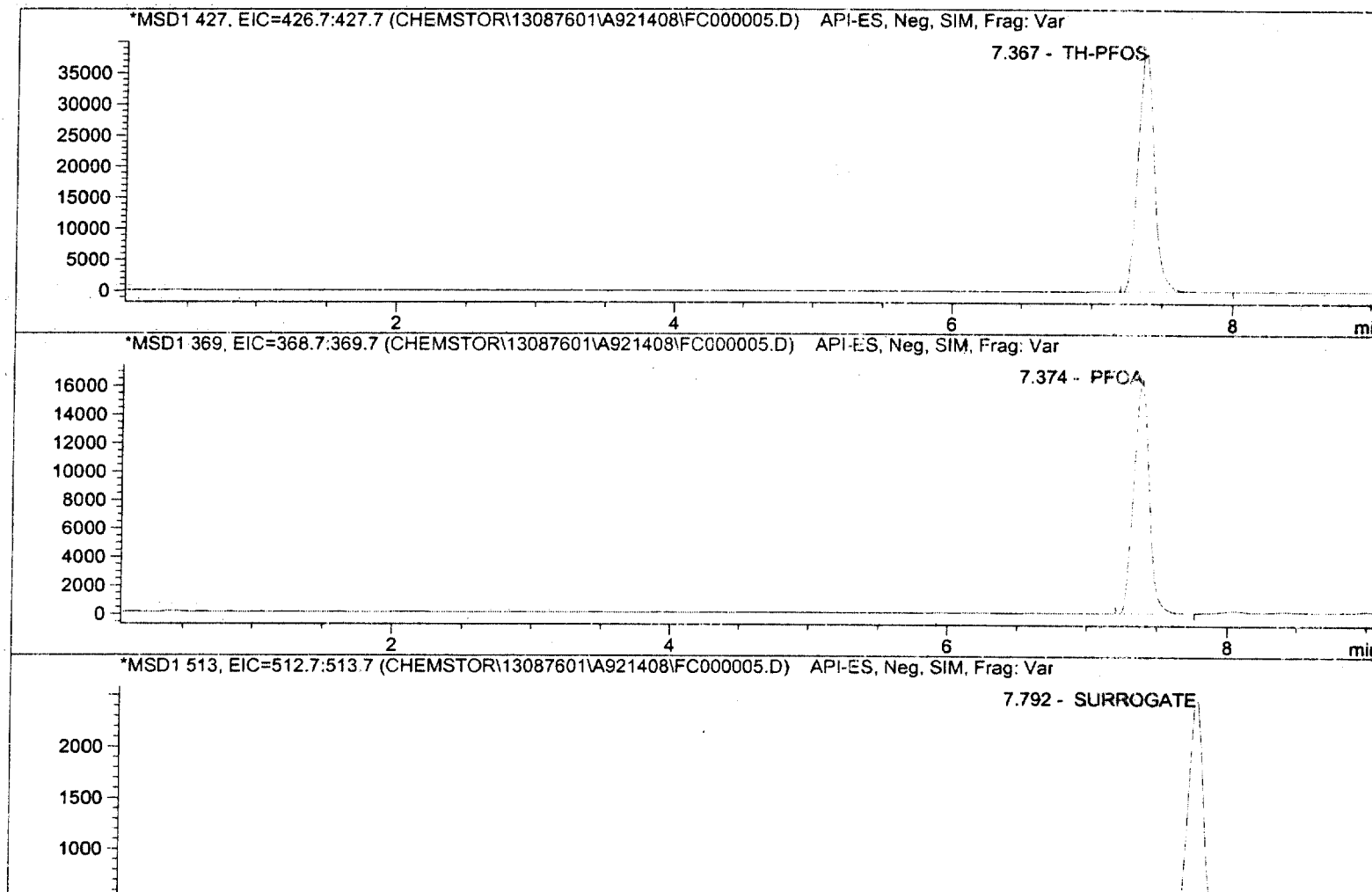
000092

Sample Name:STD 250 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13087601\A921408\FC000005.D

Injection Date	: 4/1/04 12:40:00 PM	Seq Line	: 5
Acq Operator	: jmiller	Vial No.	: 4
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	308243.25	500.00	7.367	MSD1 427, EIC=426.7:427.7
PFOA	124214.29	210.82	7.374	MSD1 369, EIC=368.7:369.7
SURROGATE	17317.49	228.61	7.792	MSD1 513, EIC=512.7:513.7

*** End of Report ***

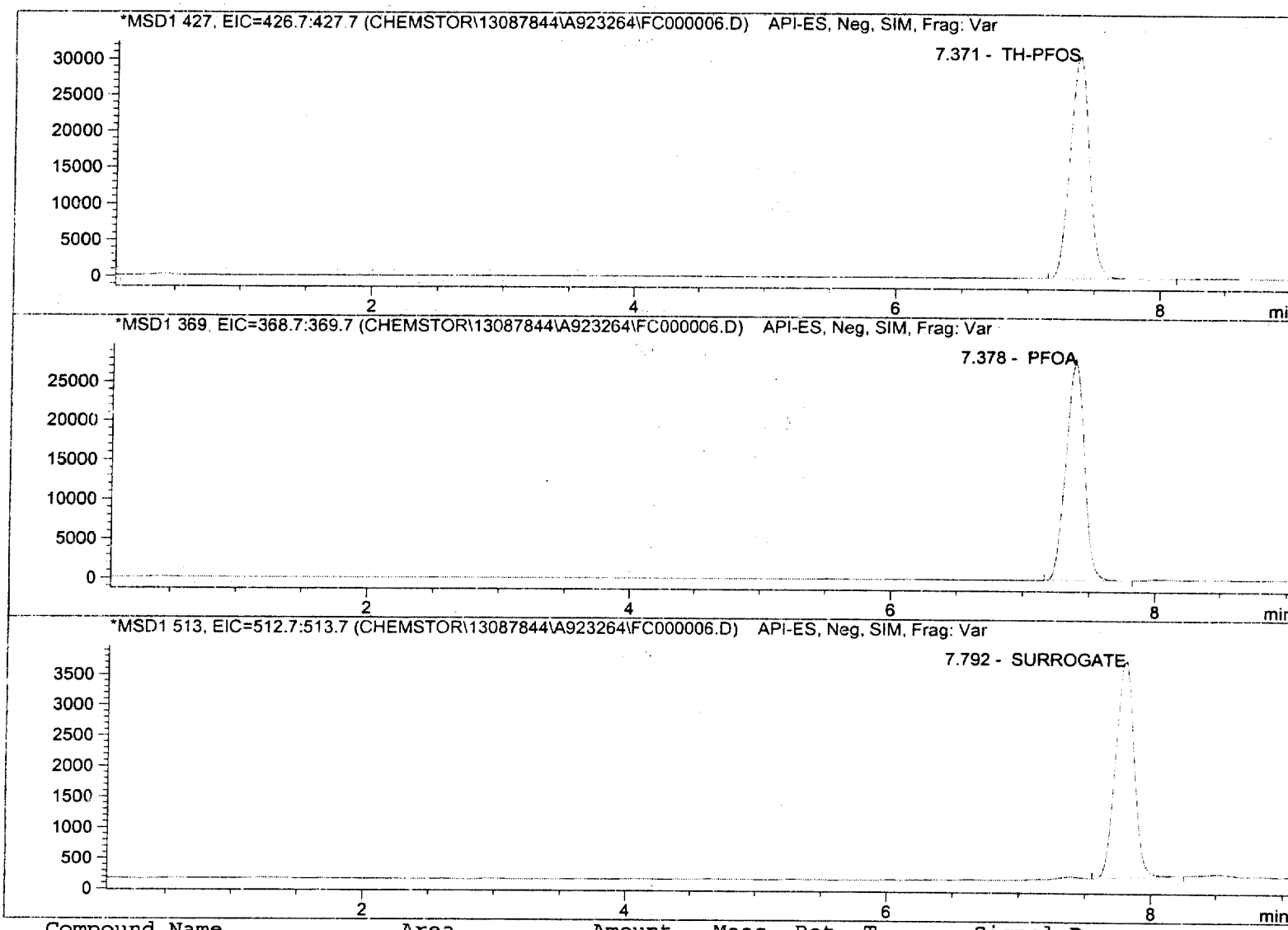
000093

Sample Name:STD 500 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13087844\A923264\FC000006.D

Injection Date	: 4/1/04 12:55:35 PM	Seq Line	: 6
Acq Operator	: jmiller	Vial No.	: 5
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	307319.81	500.00	7.371	MSD1 427, EIC=426.7:427.7
PFOA	270138.06	479.44	7.378	MSD1 369, EIC=368.7:369.7
SURROGATE	34356.35	469.98	7.792	MSD1 513, EIC=512.7:513.7

*** End of Report ***

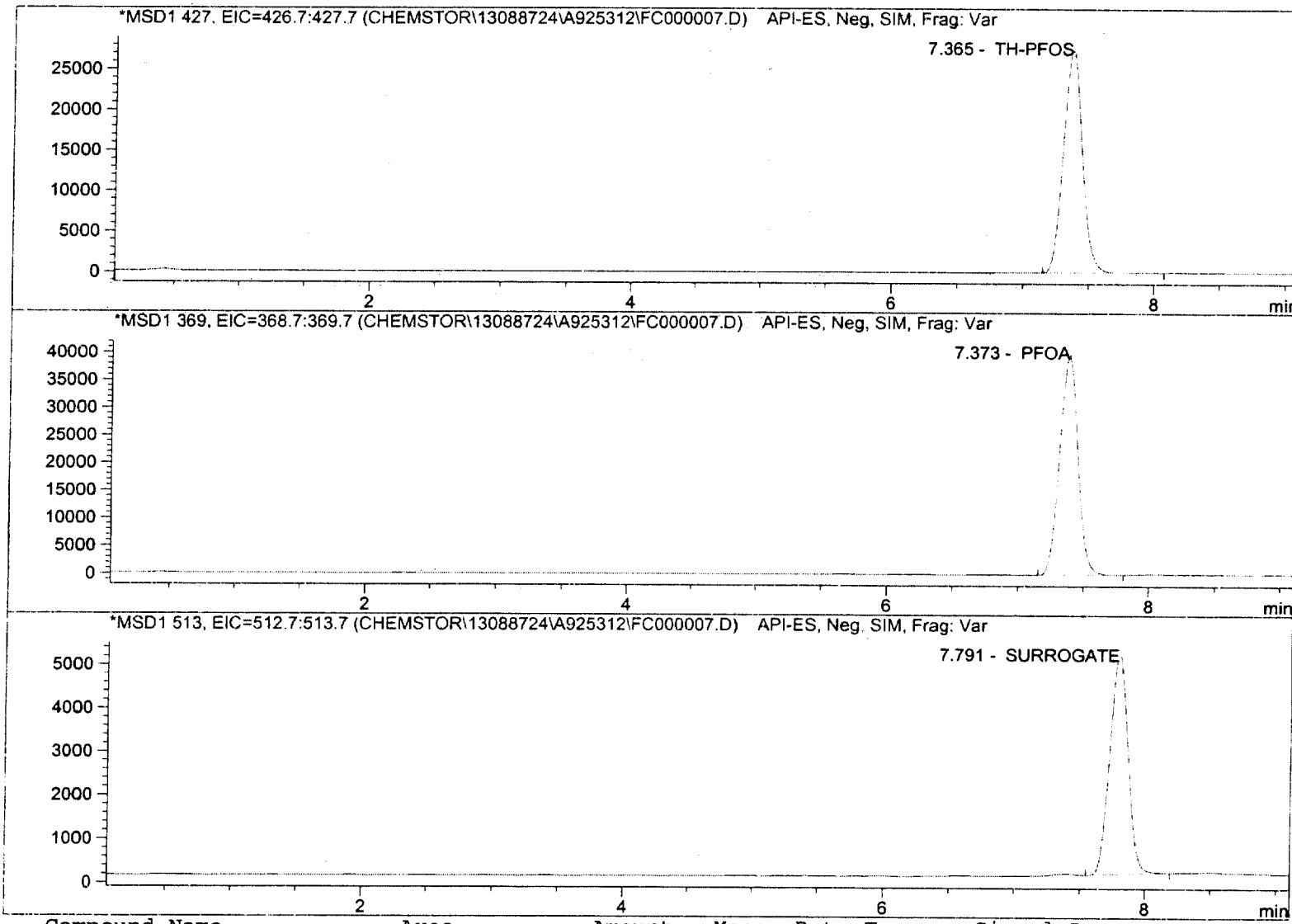
000094

Sample Name:STD 750 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13088724\A925312\FC000007.D

Injection Date	: 4/1/04 1:11:12 PM	Seq Line	: 7
Acq Operator	: jmiller	Vial No.	: 6
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	277681.97	500.00	7.365	MSD1 427, EIC=426.7:427.7
PFOA	385419.88	825.51	7.373	MSD1 369, EIC=368.7:369.7
SURROGATE	48821.63	777.22	7.791	MSD1 513, EIC=512.7:513.7

*** End of Report ***

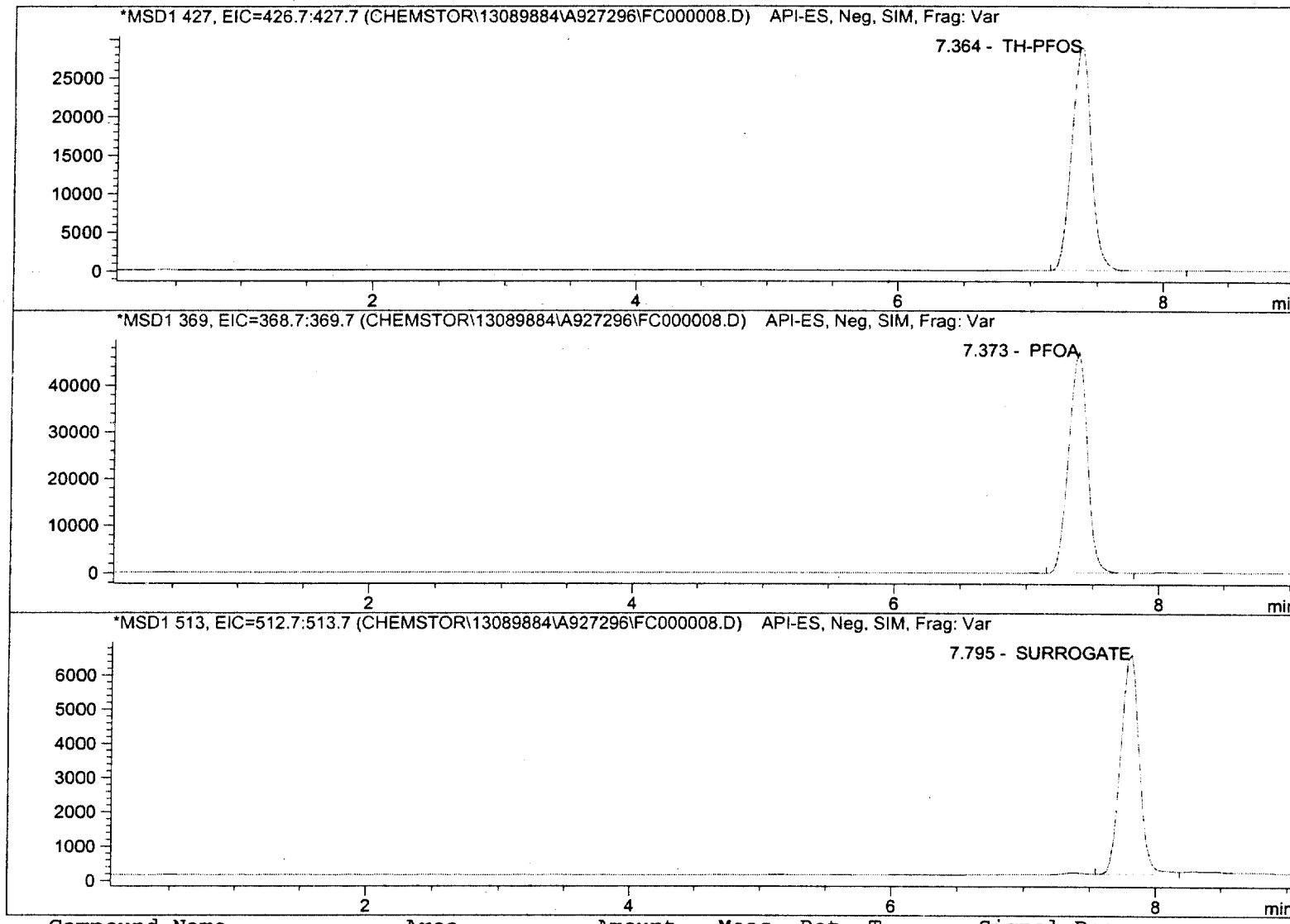
000095

Sample Name:STD 1000 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13089884\A927296\FC000008.D

Injection Date	: 4/1/04 1:26:48 PM	Seq Line	: 8
Acq Operator	: jmiller	Vial No.	: 7
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	294882.97	500.00	7.364	MSD1 427, EIC=426.7:427.7
PFOA	458266.38	959.97	7.373	MSD1 369, EIC=368.7:369.7
SURROGATE	63190.88	982.02	7.795	MSD1 513, EIC=512.7:513.7

*** End of Report ***

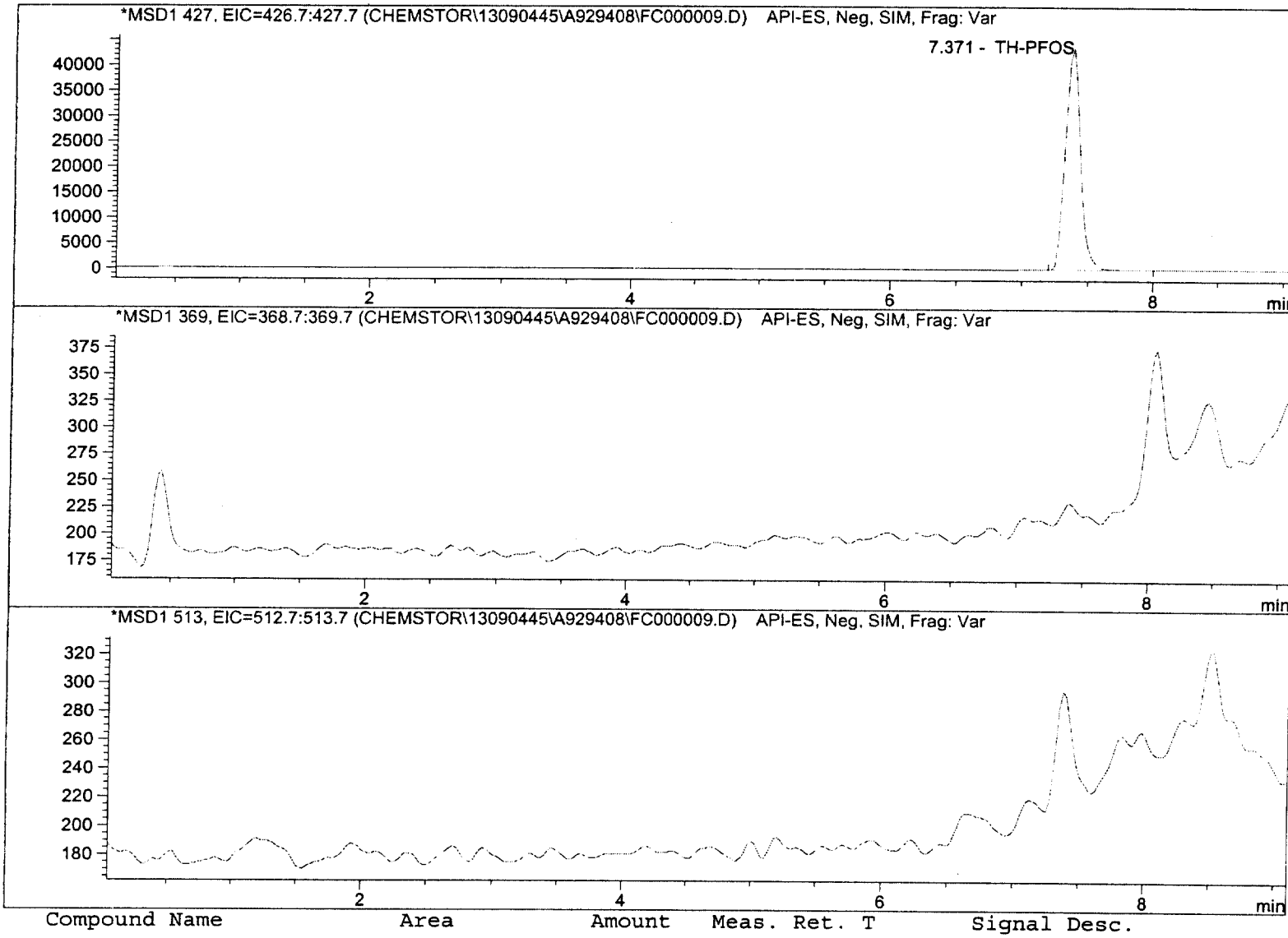
000096

Sample Name:solvent blank
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13090445\A929408\FC000009.D

Injection Date	: 4/1/04 1:42:18 PM	Seq Line	: 9
Acq Operator	: jmiller	Vial No.	: 92
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	346065.75	500.00	7.371	MSD1 427, EIC=426.7:427.7
PFOA	0.00	0.00	0.000	MSD1 369, EIC=368.7:369.7
SURROGATE	0.00	0.00	0.000	MSD1 513, EIC=512.7:513.7

*** End of Report ***

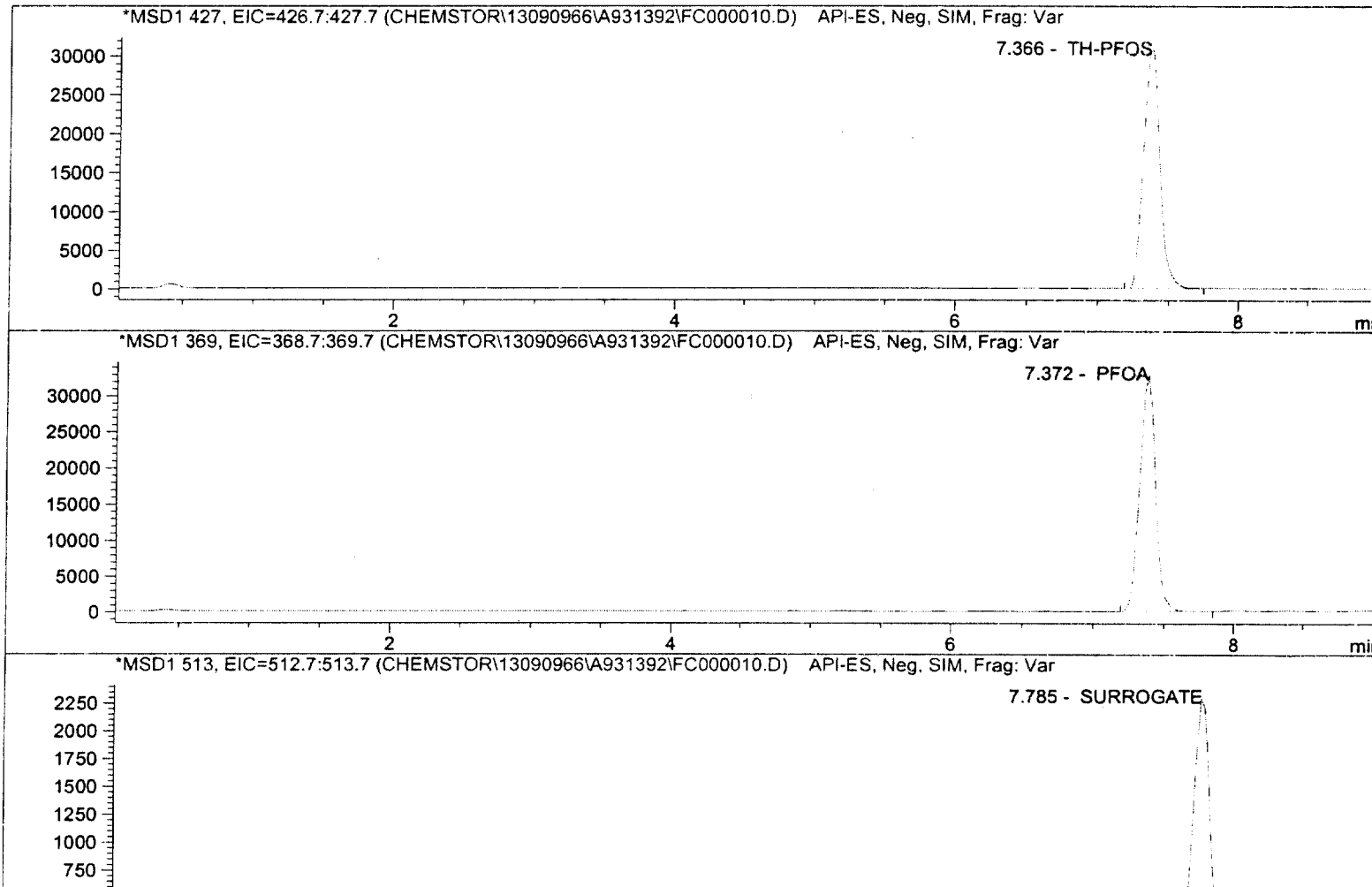
000097

Sample Name:L2133-10 2X
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13090966\A931392\FC000010.D

Injection Date	: 4/1/04 1:57:55 PM	Seq Line	: 10
Acq Operator	: jmiller	Vial No.	: 51
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	247135.17	500.00	7.366	MSD1 427, EIC=426.7:427.7
PFOA	254884.70	575.04	7.372	MSD1 369, EIC=368.7:369.7
SURROGATE	15840.49	261.76	7.785	MSD1 513, EIC=512.7:513.7

*** End of Report ***

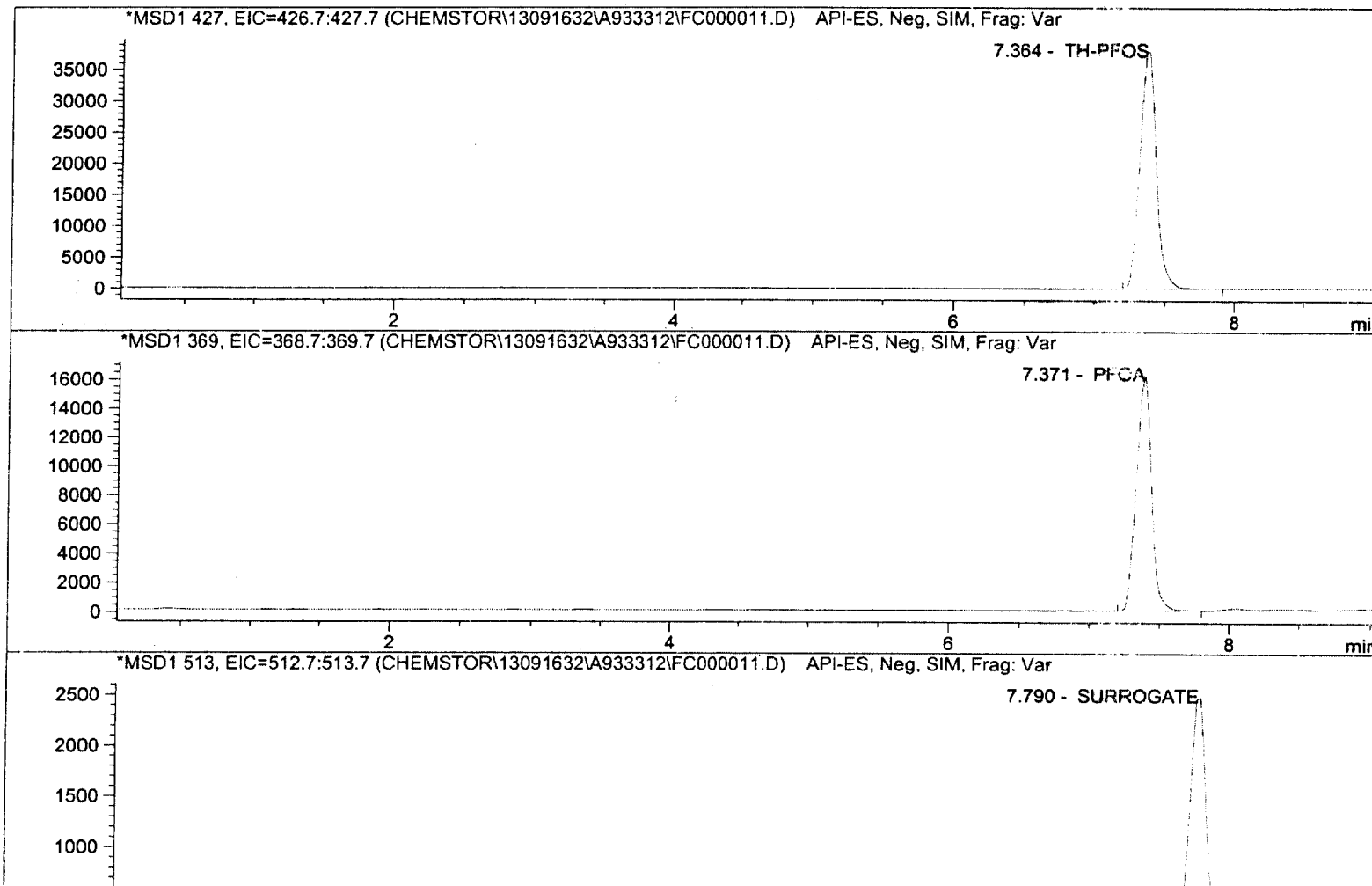
000098

Sample Name:STD 250 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13091632\A933312\FC000011.D

Injection Date	: 4/1/04 2:13:29 PM	Seq Line	: 11
Acq Operator	: jmiller	Vial No.	: 4
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	309885.84	500.00	7.364	MSD1 427, EIC=426.7:427.7
PFOA	122156.09	206.22	7.371	MSD1 369, EIC=368.7:369.7
SURROGATE	17604.30	231.22	7.790	MSD1 513, EIC=512.7:513.7

*** End of Report ***

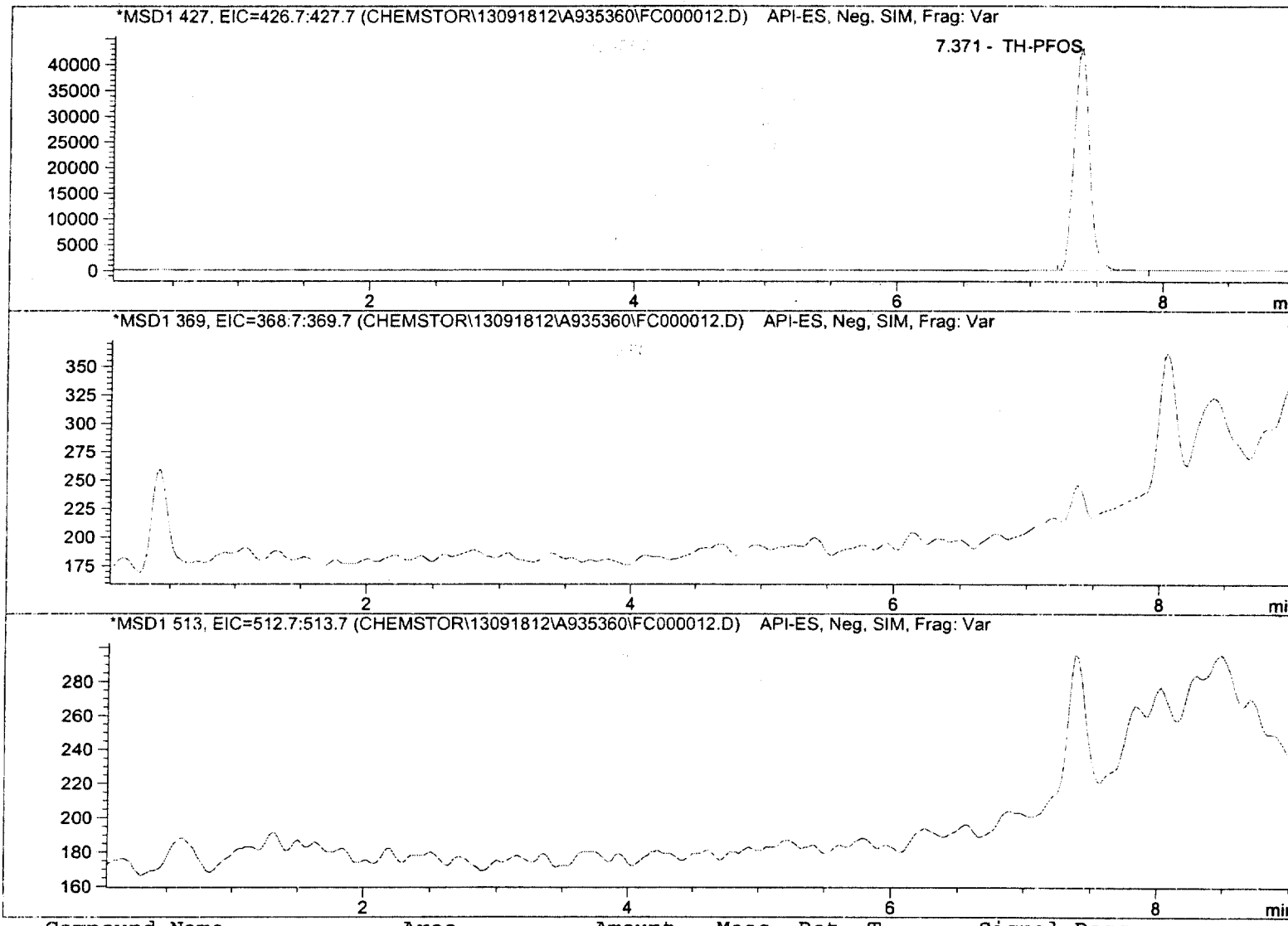
000099

Sample Name:solvent blank
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13091812\A935360\FC000012.D

Injection Date	: 4/1/04 2:28:58 PM	Seq Line	: 12
Acq Operator	: jmiller	Vial No.	: 92
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	346328.72	500.00	7.371	MSD1 427, EIC=426.7:427.7
PFOA	0.00	0.00	0.000	MSD1 369, EIC=368.7:369.7
SURROGATE	0.00	0.00	0.000	MSD1 513, EIC=512.7:513.7

*** End of Report ***

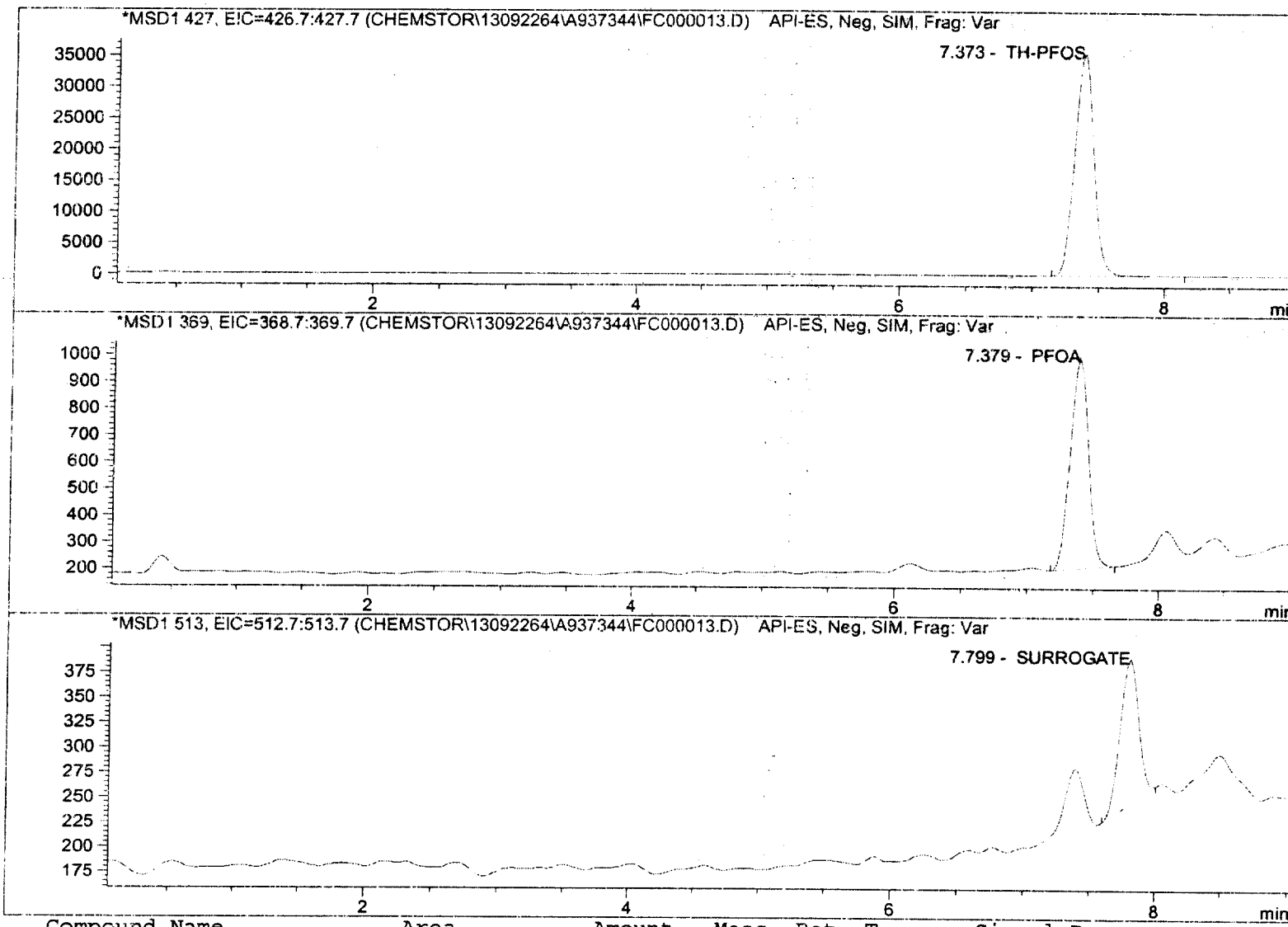
000100

Sample Name:STD 10 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13092264\A937344\FC000013.D

Injection Date	: 4/1/04 2:44:30 PM	Seq Line	: 13
Acq Operator	: jmiller	Vial No.	: 1
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	356246.53	500.00	7.373	MSD1 427, EIC=426.7:427.7
PFOA	7658.50	19.85	7.379	MSD1 369, EIC=368.7:369.7
SURROGATE	1416.25	18.53	7.799	MSD1 513, EIC=512.7:513.7

*** End of Report ***

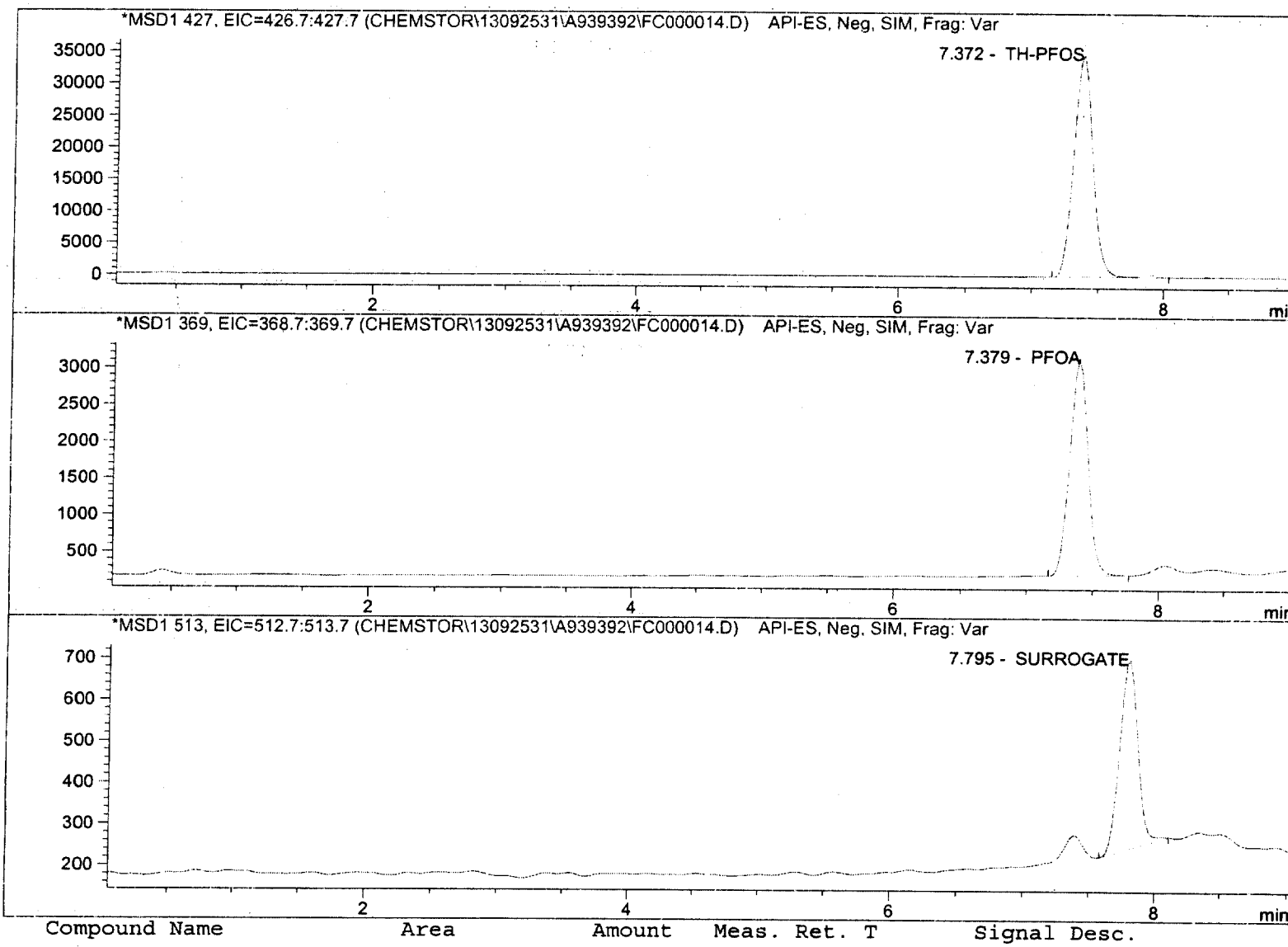
000101

Sample Name:STD 50 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13092531\A939392\FC000014.D

Injection Date	: 4/1/04 3:00:08 PM	Seq Line	: 14
Acq Operator	: jmiller	Vial No.	: 2
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	348357.78	500.00	7.372	MSD1 427, EIC=426.7:427.7
PFOA	28341.27	48.67	7.379	MSD1 369, EIC=368.7:369.7
SURROGATE	4376.44	52.13	7.795	MSD1 513, EIC=512.7:513.7

*** End of Report ***

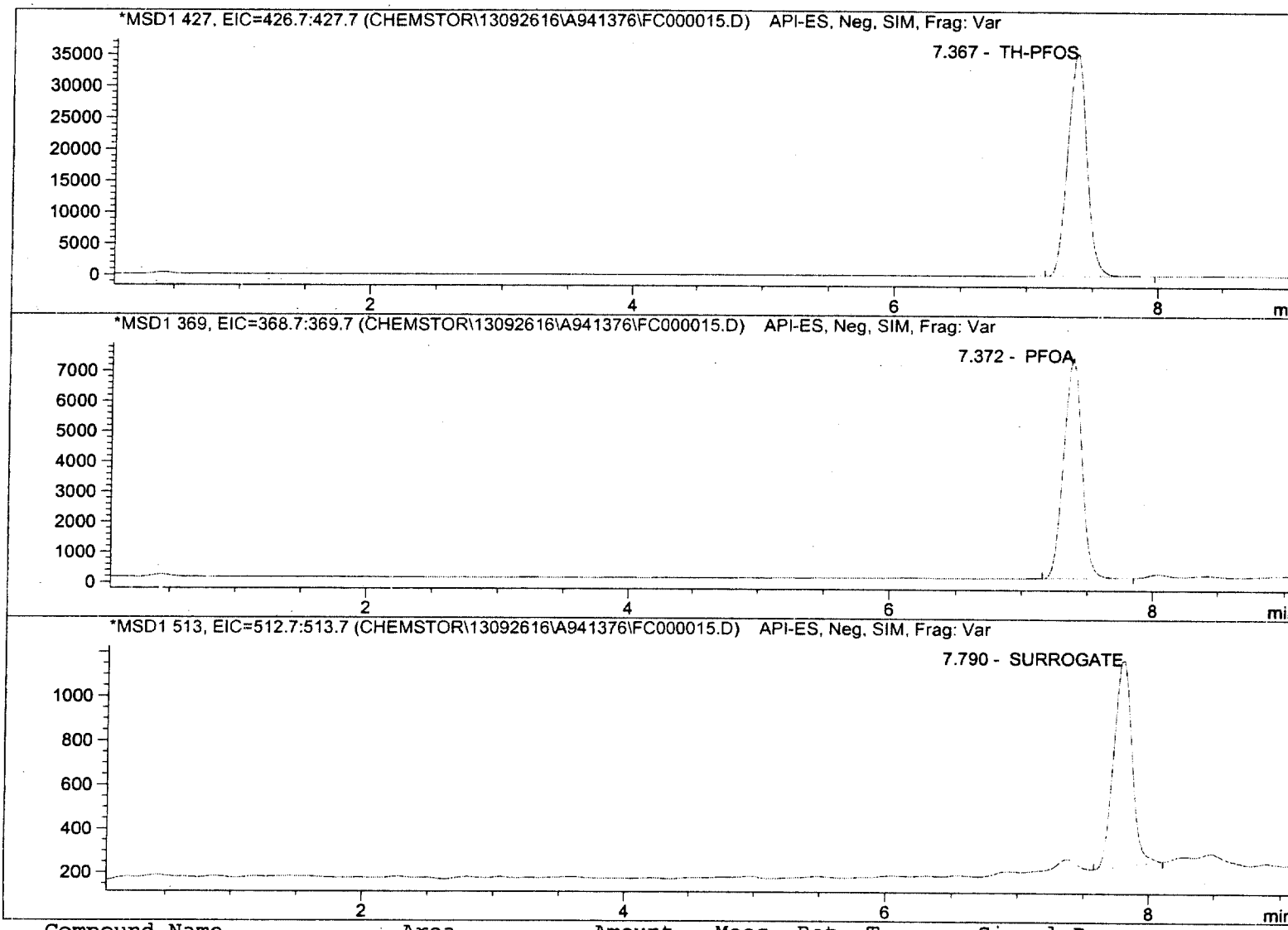
000102

Sample Name:STD 100 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13092616\A941376\FC000015.D

Injection Date	: 4/1/04 3:15:44 PM	Seq Line	: 15
Acq Operator	: jmiller	Vial No.	: 3
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	357273.00	500.00	7.367	MSD1 427, EIC=426.7:427.7
PFOA	70043.46	105.02	7.372	MSD1 369, EIC=368.7:369.7
SURROGATE	9109.27	103.41	7.790	MSD1 513, EIC=512.7:513.7

*** End of Report ***

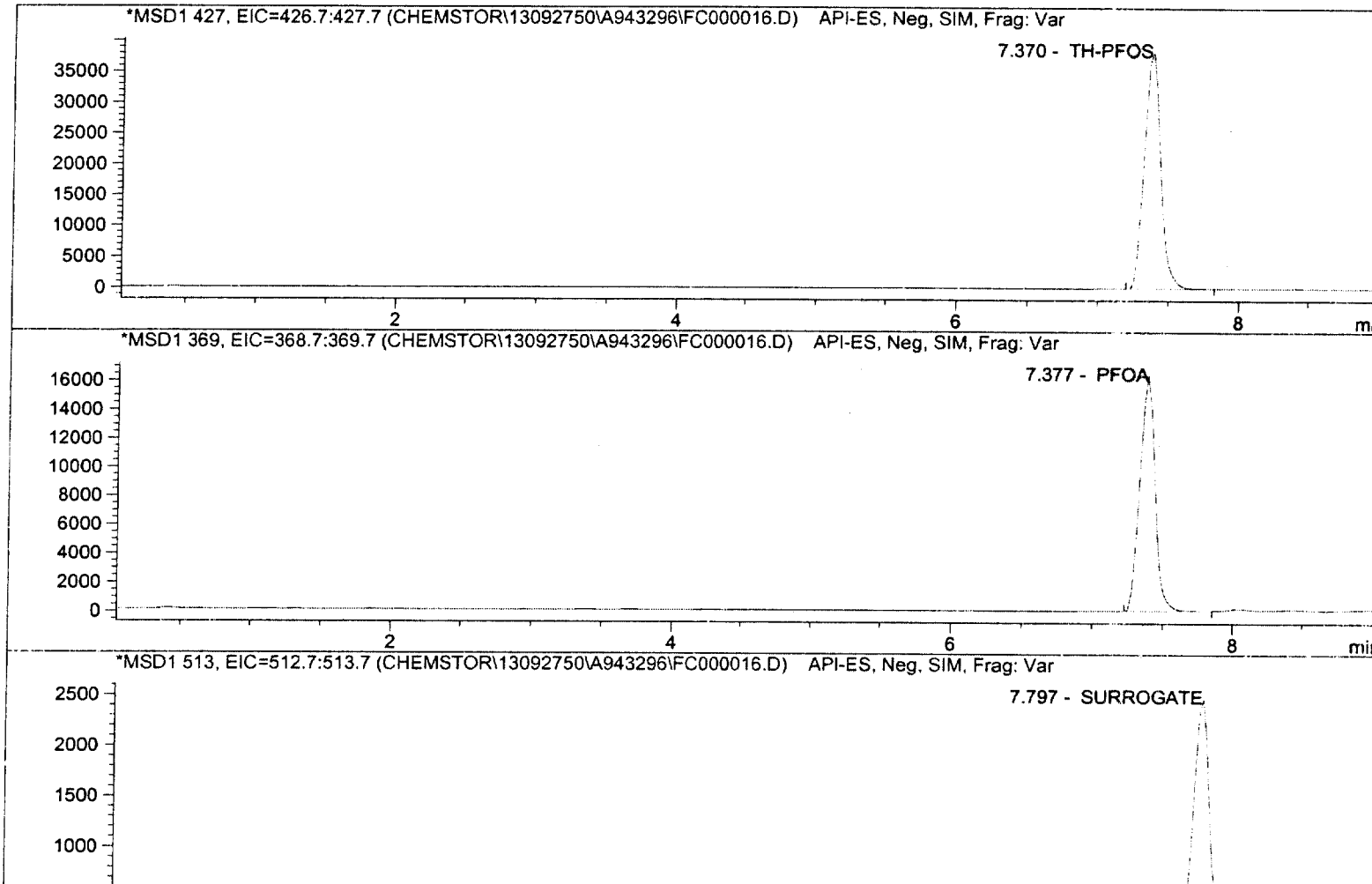
000103

Sample Name:STD 250 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13092750\A943296\FC000016.D

Injection Date	: 4/1/04 3:31:20 PM	Seq Line	: 16
Acq Operator	: jmiller	Vial No.	: 4
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	309713.47	500.00	7.370	MSD1 427, EIC=426.7:427.7
PFOA	122291.34	206.56	7.377	MSD1 369, EIC=368.7:369.7
SURROGATE	17154.91	225.31	7.797	MSD1 513, EIC=512.7:513.7

*** End of Report ***

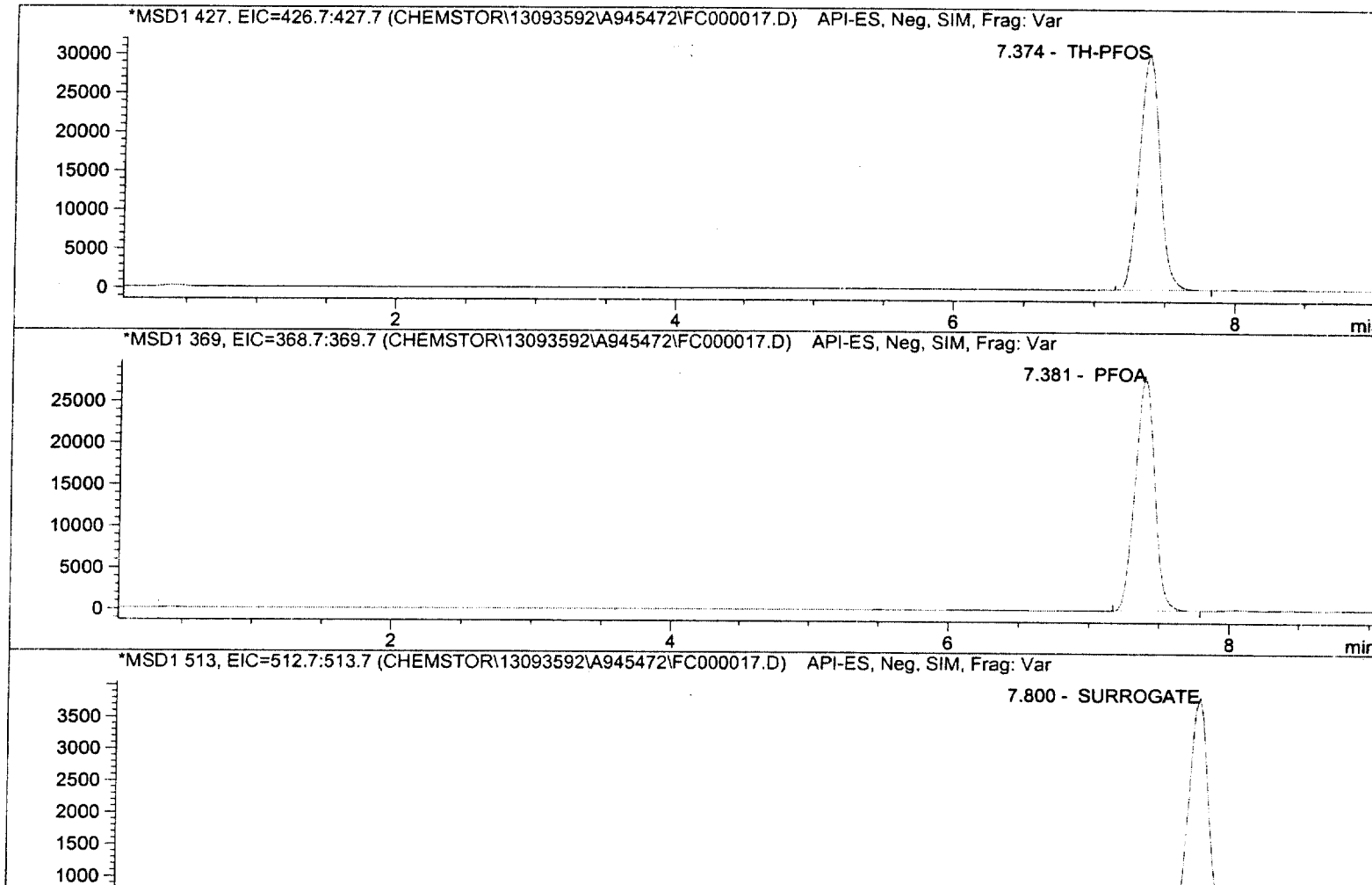
000104

Sample Name:STD 500 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13093592\A945472\FC000017.D

Injection Date	: 4/1/04 3:46:56 PM	Seq Line	: 17
Acq Operator	: jmiller	Vial No.	: 5
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	304949.88	500.00	7.374	MSD1 427, EIC=426.7:427.7
PFOA	272757.56	488.87	7.381	MSD1 369, EIC=368.7:369.7
SURROGATE	34619.75	477.84	7.800	MSD1 513, EIC=512.7:513.7

*** End of Report ***

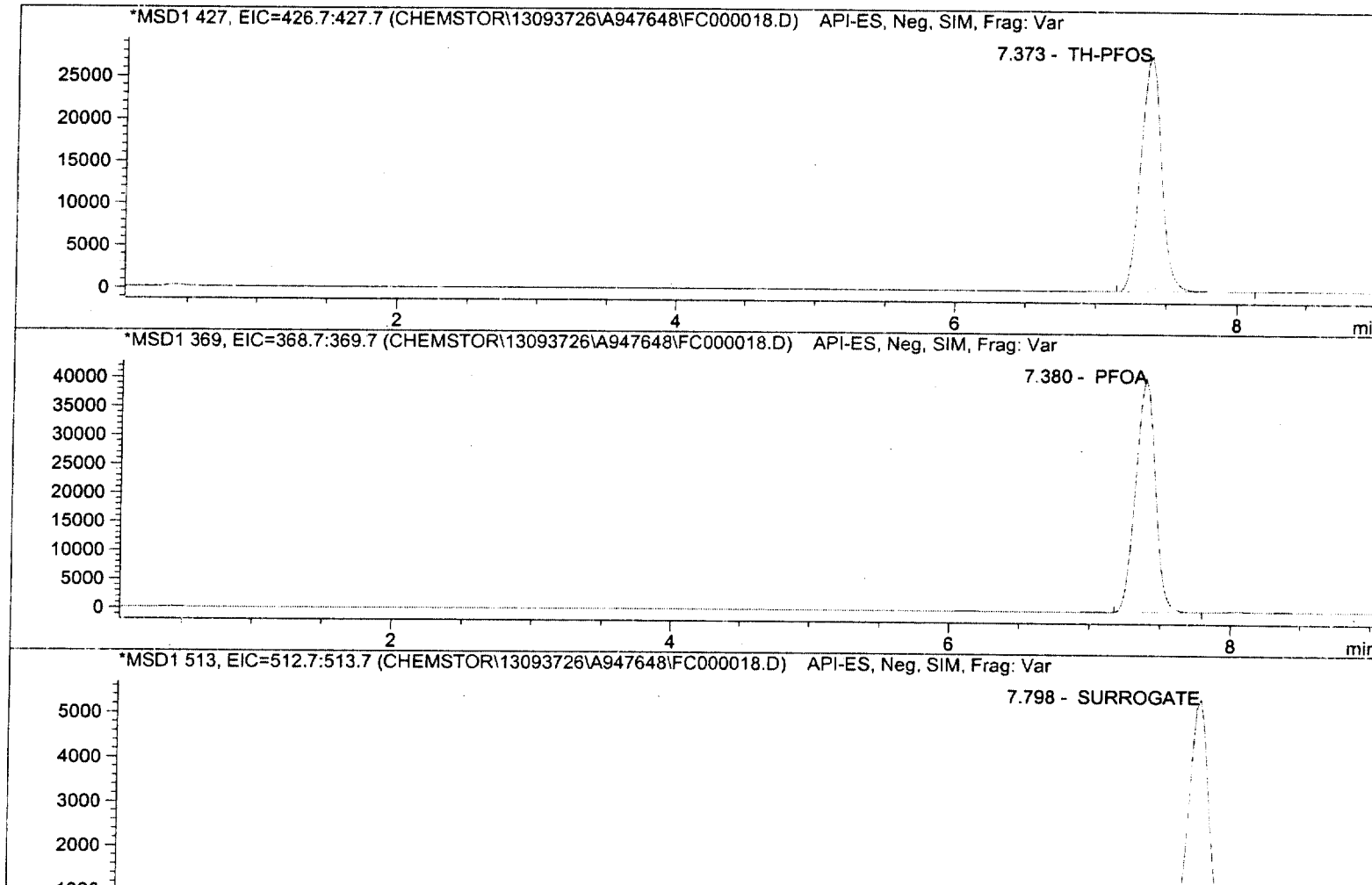
000105

Sample Name:STD 750 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13093726\A947648\FC000018.D

Injection Date	: 4/1/04 4:02:33 PM	Seq Line	: 18
Acq Operator	: jmiller	Vial No.	: 6
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	280172.09	500.00	7.373	MSD1 427, EIC=426.7:427.7
PFOA	392147.00	834.52	7.380	MSD1 369, EIC=368.7:369.7
SURROGATE	49627.12	783.92	7.798	MSD1 513, EIC=512.7:513.7

*** End of Report ***

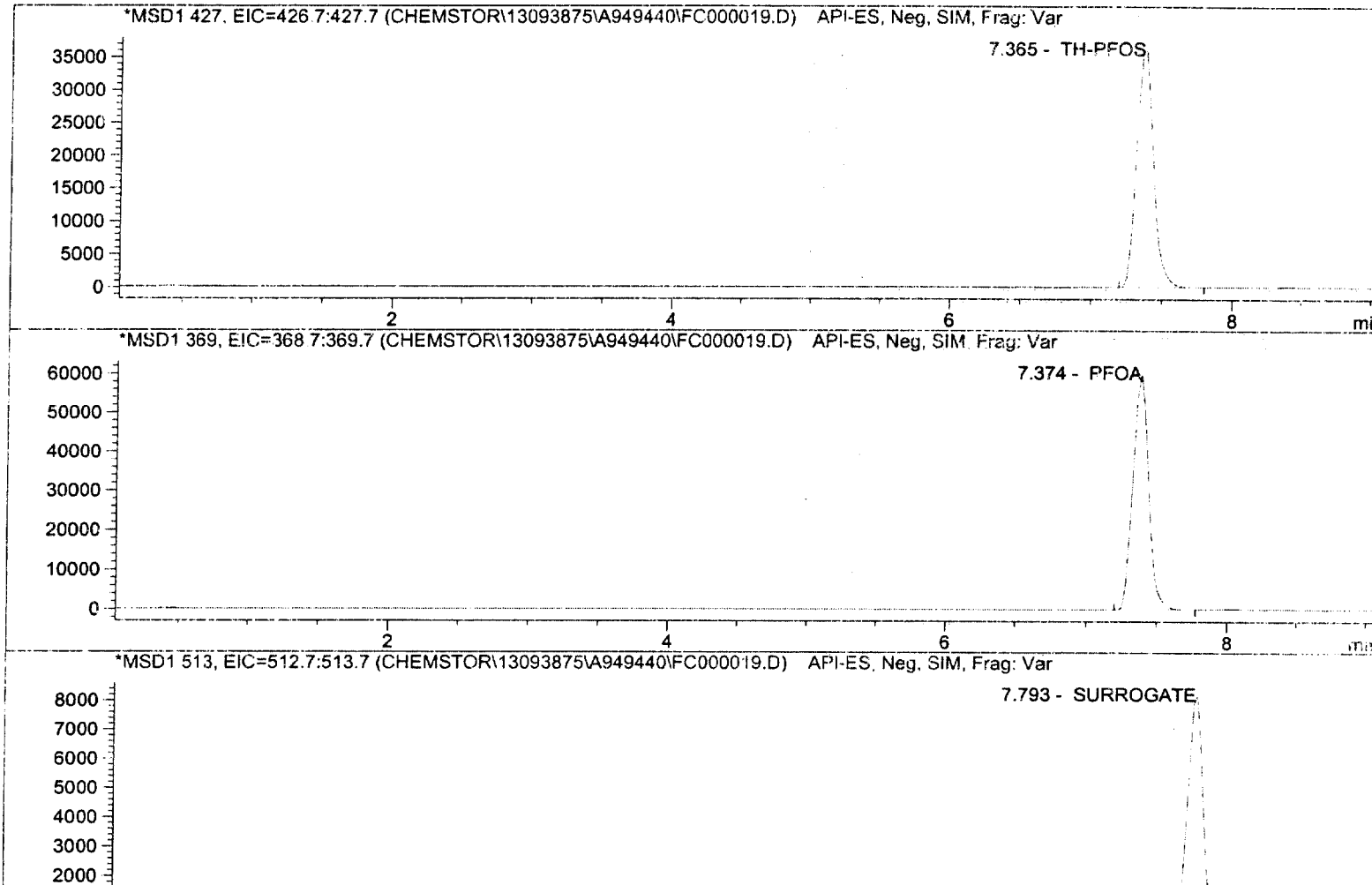
000106

Sample Name:STD 1000 ppb
Sample Info:

Data file :C:\HPCHEM\1\DATA\Chemstor\13093875\A949440\FC000019.D

Injection Date	: 4/1/04 4:18:09 PM	Seq Line	: 19
Acq Operator	: jmiller	Vial No.	: 7
Instrument	: PC00414	Inj. No.	: 1
Dilution	: 1	Inj. Vol.	: 5 µl

Acq. Method : POAASUR.M
Analysis Method : C:\HPCHEM\1\METHODS\040104F.M
Last Changed : 4/2/04 08:47:26 am



Compound Name	Area	Amount	Meas. Ret. T	Signal Desc.
TH-PFOS	296890.44	500.00	7.365	MSD1 427, EIC=426.7:427.7
PFOA	459125.56	953.48	7.374	MSD1 369, EIC=368.7:369.7
SURROGATE	62778.01	966.27	7.793	MSD1 513, EIC=512.7:513.7

*** End of Report ***

000107

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	0.2 ng/mL (2 ng/g)	Set No:	032604AR
Exygen Study No:	L2133	Injection Volume:	15 µL	Analyst:	Amy Sheehan
Analyte:	**PFOA**	Matrix:	Solids	Instrument Type:	LC/MS/MS Unit # 7
Ions Monitored:	413 -> 369	Sample Weight:	1 g	Extraction Date:	03/26-29/04
Site:	NA	Final Volume:	10 mL	Analyzed on:	04/01/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ng/mL)	Dilution Factor	Peak Area	PFOA Found (ng/mL)	PFOA Found (ng/g)	Amount PFOA Added (ng/mL)	Recovery (%)
C032604-6	-	CS	032604AR-201	0.2	-	4041	-	-	-	-
C032604-5	-	CS	032604AR-202	0.5	-	8434	-	-	-	-
C032604-4	-	CS	032604AR-203	1	-	16736	-	-	-	-
L2133-5**	Wipe-A	S	032604AR-204	-	100	23296	128	2560	-	-
C032604-3	-	CS	032604AR-205	2	-	36520	-	-	-	-
C032604-2	-	CS	032604AR-206	5	-	89915	-	-	-	-
C032604-1	-	CS	032604AR-207	10	-	186372	-	-	-	-

PFOA Found (ng/mL) = (peak area - intercept) / slope x DF

Recovery (%) = $\frac{\text{[PFOA found (ng/mL)-PFOA found in control (ng/mL)]}}{\text{amount PFOA added (ng/mL)}} \times 100$

Standard Curve : Linear (1/x weighted)
Intercept = -152.256
Slope = 18338.6
Coef. Of Det. = 0.999392

PFOA Found (ng/g) = PFOA found (ng/mL) x Ext. Volume (mL) / Sample Weight (g)

CS = Calibration standard
C = Control sample
S = Sample

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

CK = Check Standard
ND = Not detected = Response between 0 and LOD
NQ = Not quantifiable = Response between LOD and LOQ

Spreadsheet prepared by: AMB 04/01/04

**Due to the bulkiness of the sample 20 mL of methanol was used for the extraction.

LC/MS/MS SYSTEM AND OPERATING CONDITIONS

Sponsor Protocol No: NA

Exygen Study No: L2133

Instrument:	Micromass Quattro Ultima (LC/MS/MS Unit #7)
Computer:	COMPAQ Professional Workstation AP200
Software:	Microsoft Windows NT: Version 4 Build 1381: Service Pack 5 Micromass Limited: MassLynx 3.4 Build 004
HPLC Equipment:	Hewlett Packard (HP) Series 1100 HP Binary Pump — HP Vacuum Degasser HP Autosampler — HP Column Oven
HPLC Column:	Genesis C-8, 5 cm x 2.1 mm i.d. x 4 µ (Exygen ID:MA13296) (**JONES**CHROMATOGRAPHY: Part No. FK5962EJ)
Mobile Phase (A) :	2 mM Ammonium Acetate in Water
Mobile Phase (B) :	Methanol
Analyst:	Amy Sheehan AMS 03\31\04 Exygen Research 3058 Research Drive, State College, PA 16801 Phone: (814) 272-1039 FAX: (814) 231-1580

NOTE: The next 3 pages are computer generated printouts from the masslynx software program. The pages contain the instrument settings used for the analysis of this data set.

All Handwritten Peak ID's by: C

	Vial	File Name	LIMS ID	Client ID	Sample Description	Matrix	Sample Type	Conc (ng/mL)	Conc B	Conc C	Test ID	DF	MS Method
1	61	032604AR-201	---	---	C032604-6, 0.2 ng/mL standard	---	Standard	0.2	---	---	0	1	008 PFOA
2	62	032604AR-202	---	---	C032604-5, 0.5 ng/mL standard	---	Standard	0.5	---	---	0	1	008 PFOA
3	63	032604AR-203	---	---	C032604-4, 1.0 ng/mL standard	---	Standard	1.0	---	---	0	1	008 PFOA
4	68	032604AR-204	---	---	L2133-5, DF=100	---	Analyte	---	---	---	0	100	008 PFOA
5	64	032604AR-205	---	---	C032604-3, 2.0 ng/mL standard	---	Standard	2.0	---	---	0	1	008 PFOA
6	65	032604AR-206	---	---	C032604-2, 5.0 ng/mL standard	---	Standard	5.0	---	---	0	1	008 PFOA
7	66	032604AR-207	---	---	C032604-1, 10.0 ng/mL standard	---	Standard	10.0	---	---	0	1	008 PFOA

	HPLC Method	MS Tune File	Inj Volume (µL)
1	water	Fluorochems	15
2	water	Fluorochems	15
3	water	Fluorochems	15
4	water	Fluorochems	15
5	water	Fluorochems	15
6	water	Fluorochems	15
7	water	Fluorochems	15

LC/MS/MS SYSTEM AND OPERATING CONDITIONS

Sponsor Protocol No: NA

Exygen Study No: L2133

Instrument:	Micromass Quattro Ultima (LC/MS/MS Unit #7)
Computer:	COMPAQ Professional Workstation AP200
Software:	Microsoft Windows NT: Version 4 Build 1381: Service Pack 5 Micromass Limited: MassLynx 3.4 Build 004
HPLC Equipment:	Hewlett Packard (HP) Series 1100 HP Binary Pump — HP Vacuum Degasser HP Autosampler — HP Column Oven
HPLC Column:	Genesis C-8, 5 cm x 2.1 mm i.d. x 4 µ (Exygen ID:MA13296) (**JONES**CHROMATOGRAPHY: Part No. FK5962EJ)
Mobile Phase (A) :	2 mM Ammonium Acetate in Water
Mobile Phase (B) :	Methanol
Analyst:	Amy Sheehan AMB 03/31/04 Exygen Research 3058 Research Drive, State College, PA 16801 Phone: (814) 272-1039 FAX: (814) 231-1580

NOTE: The next 3 pages are computer generated printouts from the masslynx software program. The pages contain the instrument settings used for the analysis of this data set.

All Handwritten Peak ID's by: —

Scanning Method Report

Method: C:\MASSLYNX\FLUOROCHEMS.PRO\ACQUDB\008 PFOA
Last Modified: Thu Oct 02 13:56:38 2003

Printed: Wed Mar 31 13:59:18 2004 AMB 03/31/04

Solvent Delay (mins) : 0.00

Function : 1 **MRM of 1 Mass Pair (ESP-)**

Inter Channel Delay (Secs) : 0.03
Span (Daltons) : 0.00
Start Time (Mins) : 0.00
End Time (Mins) : 8.00
Repeats : 1

Channel	Parent	Daughter	Dwell (Secs)	Coll Energy (eV)	Cone (V)
1	413.00	369.00	0.20	10	10

Method Report

Method File: c:\masslynx\fluorochems.pro\acqudb\water
Last Modified: Wednesday, March 31, 2004 13:52:32

Printed: Wednesday, March 31, 2004 13:59:25

AMB 03/31/04

HP1100 LC Pump Initial Conditions

Solvents	
A%	60.0
B%	40.0
C%	0.0
D%	0.0
Flow (ml/min)	0.300
Stop Time (mins)	15.0
Min Pressure (bar)	0
Max Pressure (bar)	400
Oven Temperature Left(°C)	35.0
Oven Temperature Right(°C)	35.0

HP1100 LC Pump Gradient Timetable

The gradient Timetable contains 10 entries which are :

Time	A%	B%	C%	D%	Flow	Pressure
0.00	60.0	40.0	0.0	0.0	0.300	400
0.40	60.0	40.0	0.0	0.0	0.300	400
1.00	10.0	90.0	0.0	0.0	0.300	400
7.00	10.0	90.0	0.0	0.0	0.300	400
7.50	0.0	100.0	0.0	0.0	0.300	400
9.00	0.0	100.0	0.0	0.0	0.400	400
9.50	60.0	40.0	0.0	0.0	0.400	400
13.50	60.0	40.0	0.0	0.0	0.400	400
14.00	60.0	40.0	0.0	0.0	0.300	400
15.00	60.0	40.0	0.0	0.0	0.300	400

HP1100 LC Pump External Event Timetable

The Timetable contains 4 entries which are :

Time	Column Switch	Contact1	Contact2	Contact3	Contact4
Initial	Off	Off	Off	Off	Off
0.00	Off	On	Off	Off	Off
0.10	Off	Off	On	Off	Off
8.00	Off	Off	Off	Off	Off

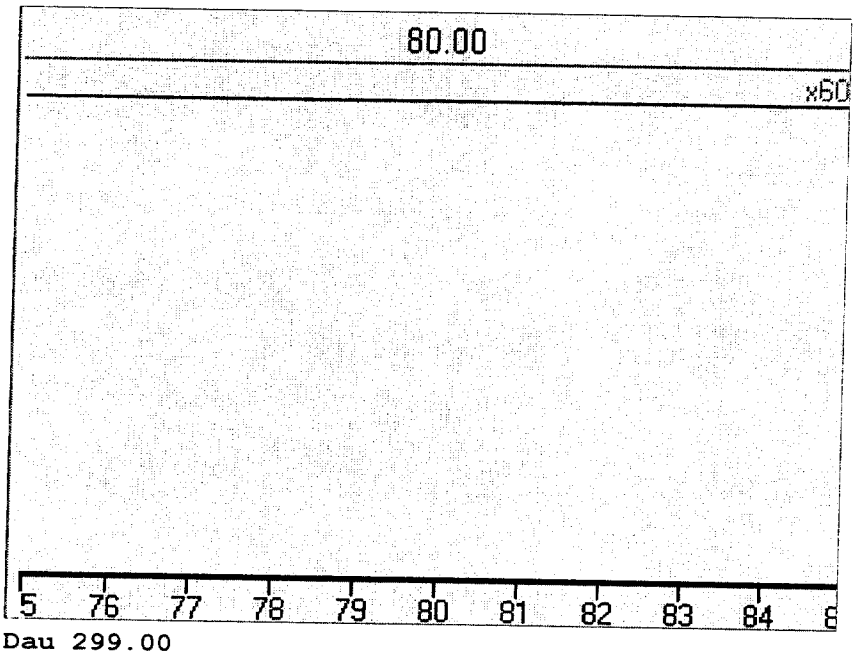
HP1100 Autosampler Initial Conditions

Draw Speed	200.0
Eject Speed (µl/min)	200
Draw Position (mm)	0.10
Stop Time (mins)	15.00
Injection Volume(µl)	15.0
Vial Number	71

Tuning Method Report

Method: C:\MASSLYNX\FLUOROCHEMS.PRO\ACQUDB\FLUOROCHEMS

Printed: Wed Mar 31 13:59:36 2004 AMB 03/31/04



Dau 299.00

SOURCE (ESP-)	Set	Rdbk
Capillary	3.00	-2.93
Cone	30	-10
Hexapole 1	0.0	
Aperture 1	0.0	
Hexapole 2	0.0	
Source Block Temp.	100	101
Desolvation Temp.	300	300

Analyser	Set	Rdbk
LM Res 1	14.0	
HM Res 1	14.0	
IEnergy 1	1.0	
Entrance	-2	8
Collision	30	9
Exit	2	11
LM Res 2	14.0	
HM Res 2	14.0	
IEnergy 2	2.0	
Multiplier	700	-695

Pressures	Rdbk
Analyser Vacuum	OFF
Gas Cell	2.9e-3

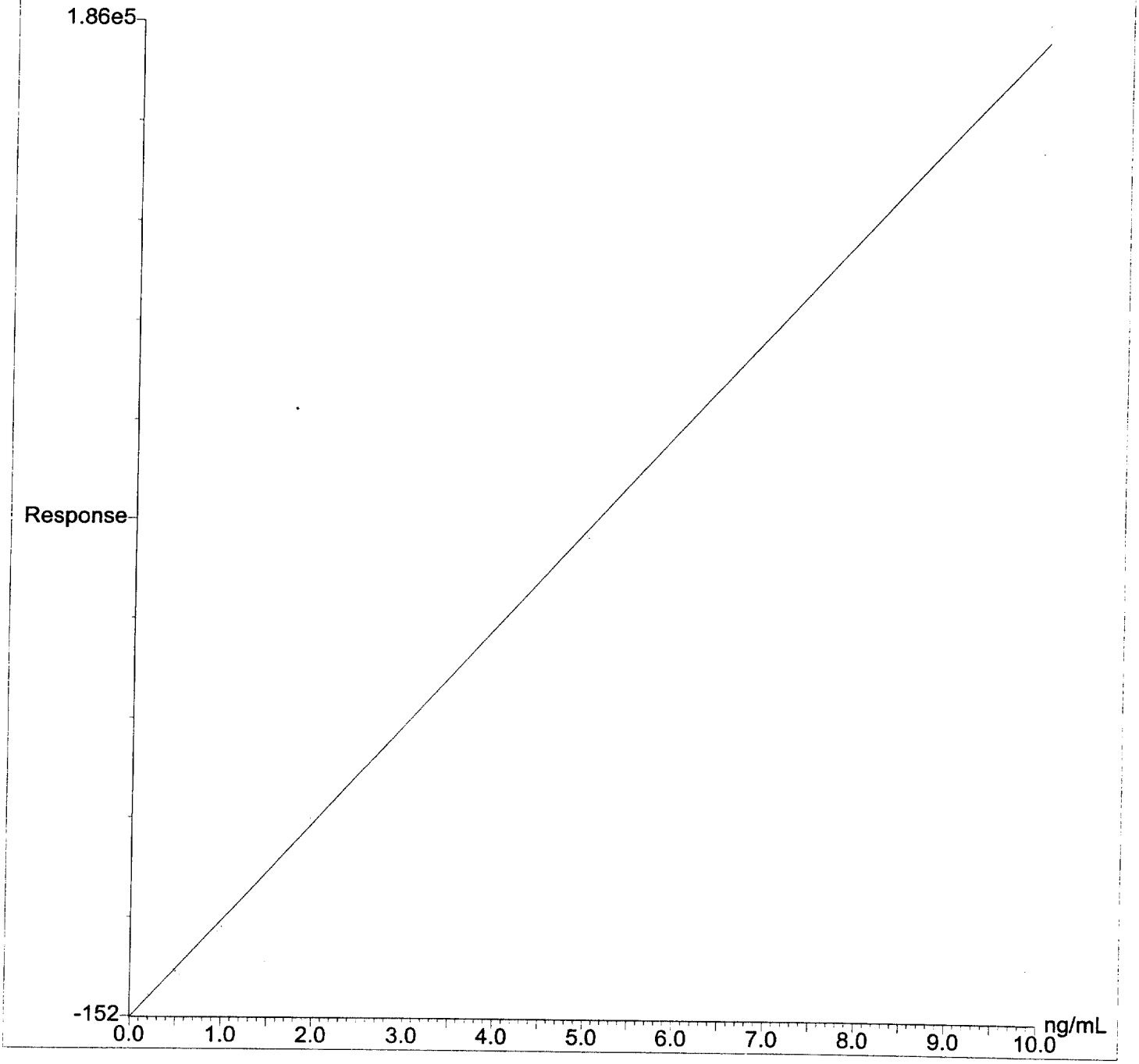
Gas Flows	Rdbk
Cone Gas	87.8
Desolvation	697.1

Quantify Calibration Report
StudyNo:L2133,SetNo:032604AR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Calibration: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\CurveDB\032604AR CSR Solids
Last modified: Thu Apr 01 13:41:03 2004
Printed: Thu Apr 01 13:42:47 2004

AMB 040 03/01/04 D AMB 04/01/04

Compound 1 name: PFOA
Coefficient of Determination: 0.999392
Calibration curve: 18338.6 * x + -152.256
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Sample Report
StudyNo:L2133,SetNo:032604AR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

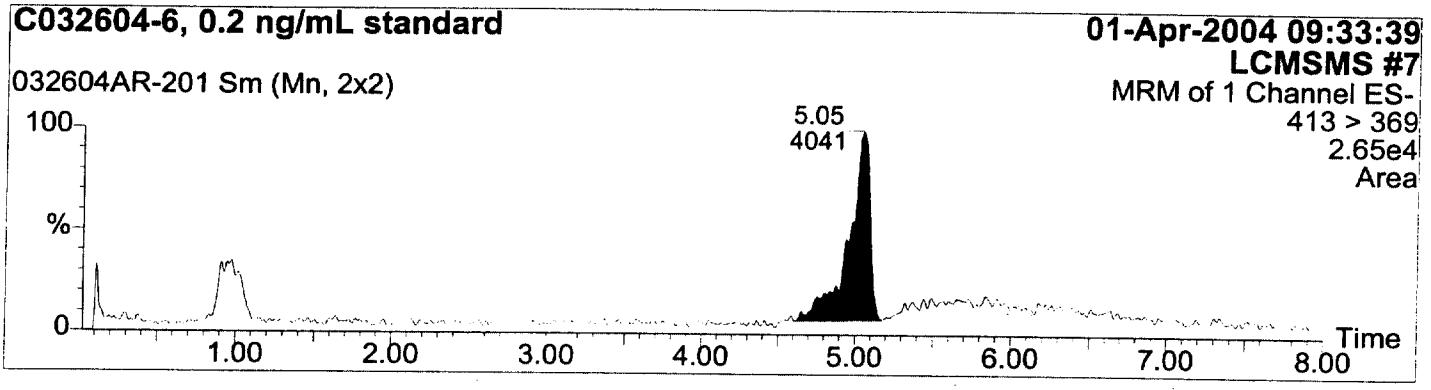
Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604AR CSR Solids
Last modified: Thu Apr 01 13:35:12 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 040104
Last modified: Thu Apr 01 13:40:08 2004
Job Code:

Printed: Thu Apr 01 13:42:48 2004

Initials AMB
Date 04/01/04
Run# 032604AR-201 To 032604AR-207

Name: 032604AR-201
Text:

1: PFOA

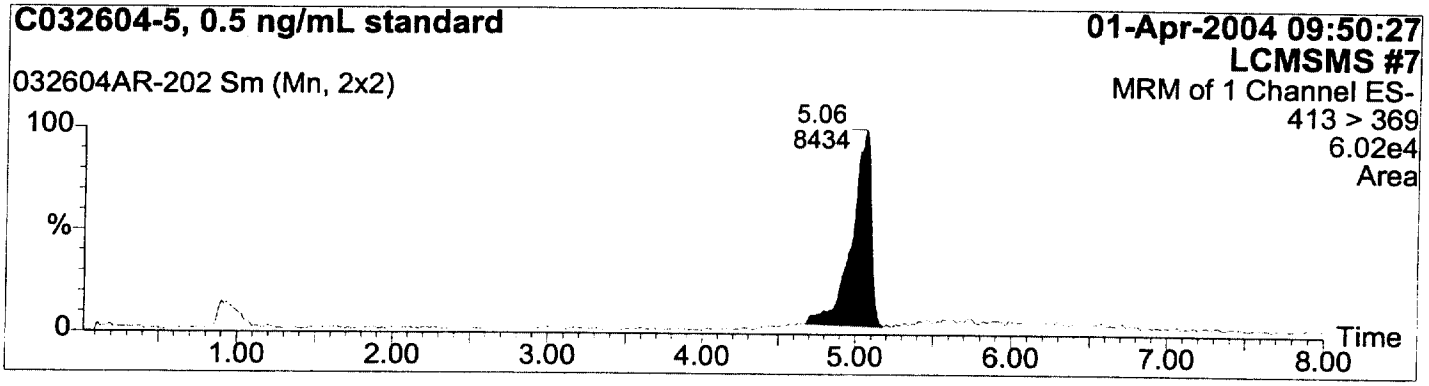


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604AR CSR Solids
Last modified: Thu Apr 01 13:35:12 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 040104
Last modified: Thu Apr 01 13:40:08 2004
Job Code:

Printed: Thu Apr 01 13:42:48 2004

Name: 032604AR-202
Text:

1: PFOA

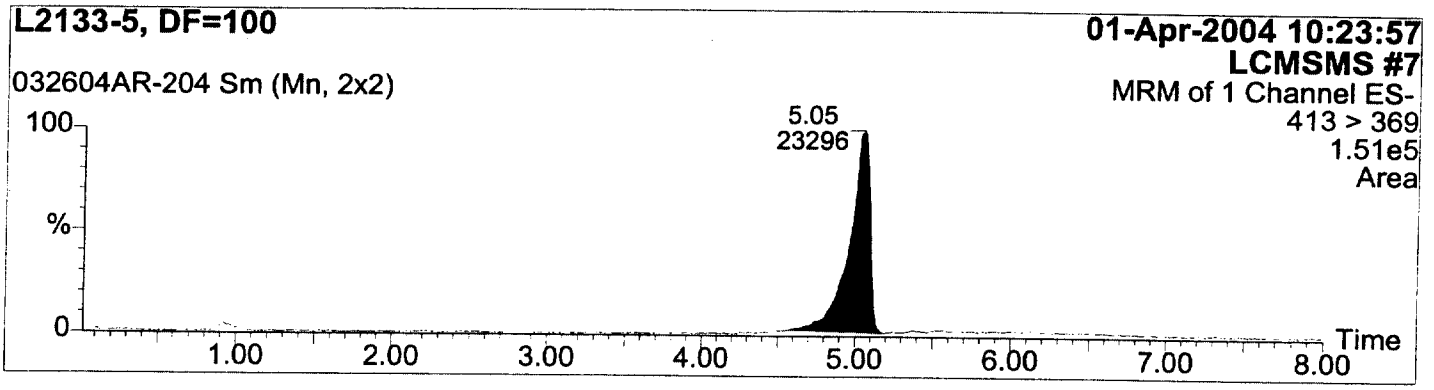


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604AR CSR Solids
Last modified: Thu Apr 01 13:35:12 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 040104
Last modified: Thu Apr 01 13:40:08 2004
Job Code:

Printed: Thu Apr 01 13:42:48 2004

Name: 032604AR-204
Text:

1: PFOA

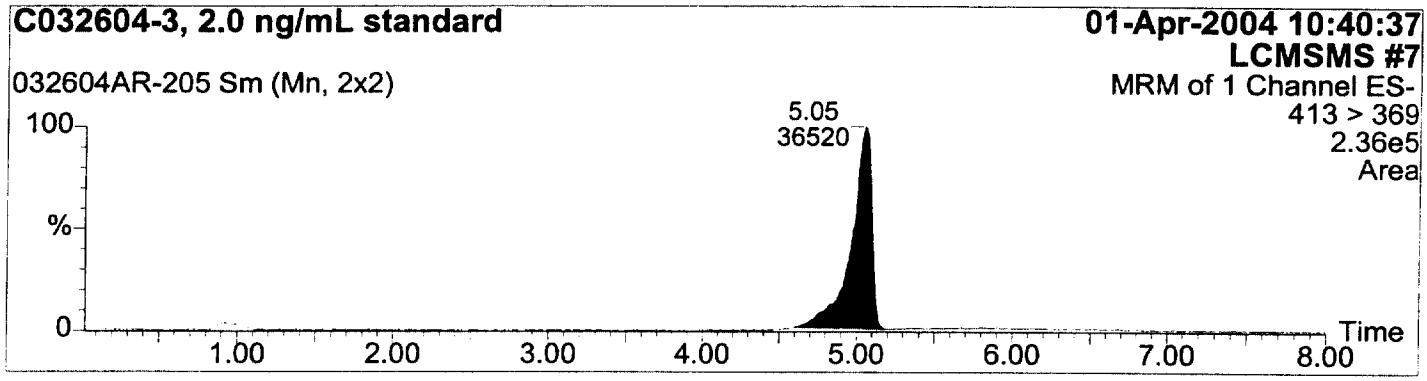


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604AR CSR Solids
Last modified: Thu Apr 01 13:35:12 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 040104
Last modified: Thu Apr 01 13:40:08 2004
Job Code:

Printed: Thu Apr 01 13:42:48 2004

Name: 032604AR-205
Text:

1: PFOA



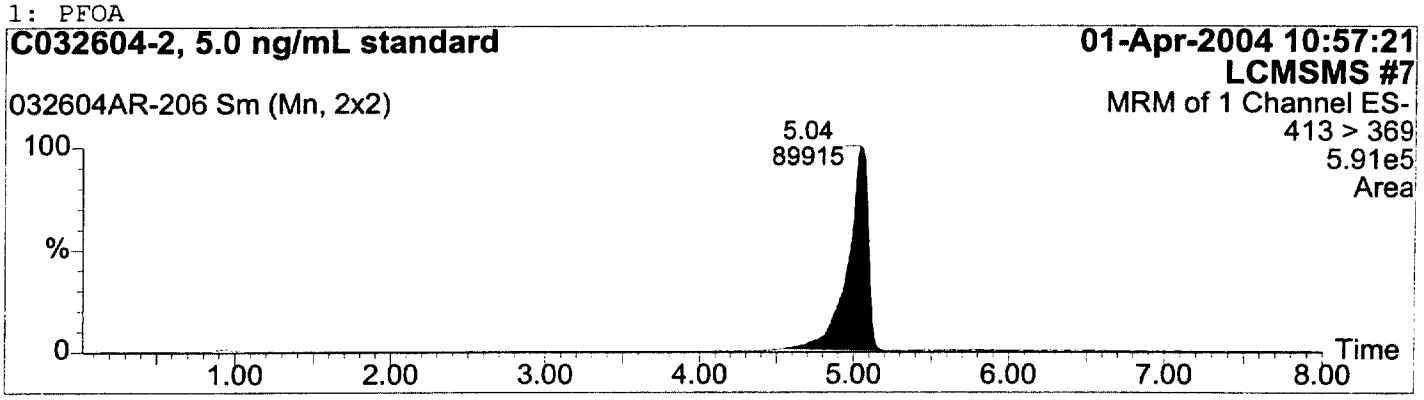
StudyNo:L2133,SetNo:032604AR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604AR CSR Solids
Last modified: Thu Apr 01 13:35:12 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 040104
Last modified: Thu Apr 01 13:40:08 2004
Job Code:

Printed: Thu Apr 01 13:42:48 2004

Name: 032604AR-206
Text:

1: PFOA

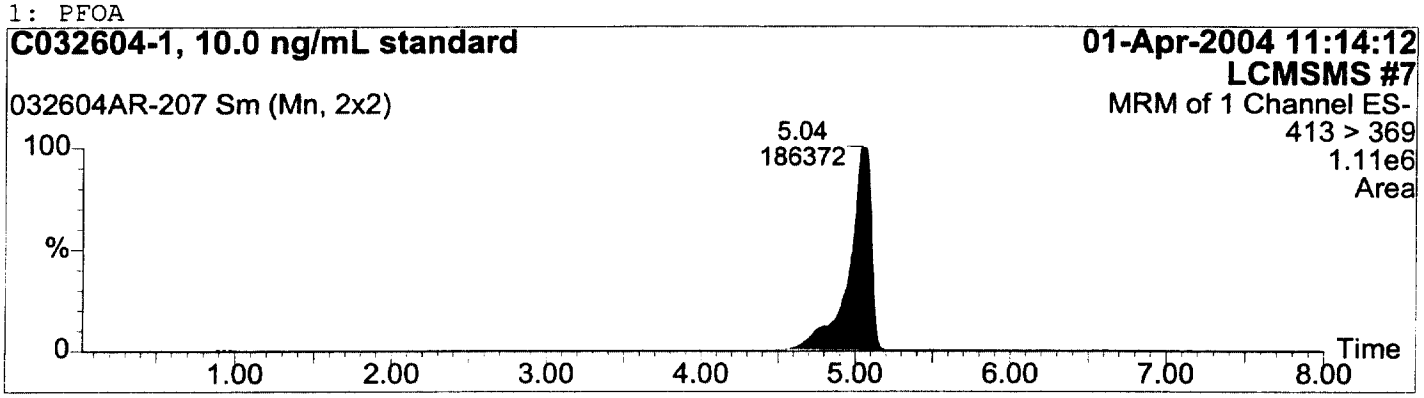


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604AR CSR Solids
Last modified: Thu Apr 01 13:35:12 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 040104
Last modified: Thu Apr 01 13:40:08 2004
Job Code:

Printed: Thu Apr 01 13:42:48 2004

Name: 032604AR-207
Text:

1: PFOA



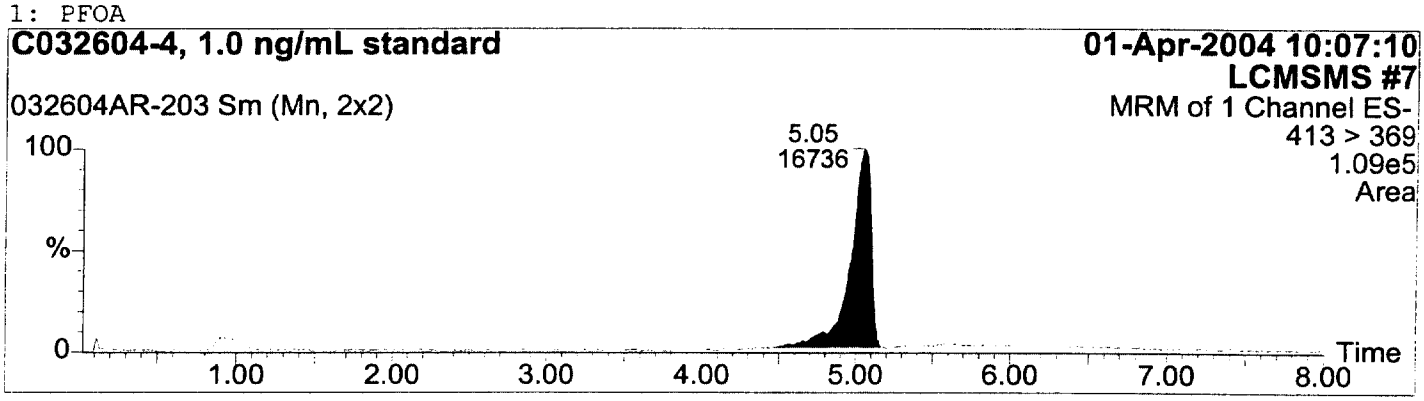
StudyNo:L2133,SetNo:032604AR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604AR CSR Solids
Last modified: Thu Apr 01 13:35:12 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 040104
Last modified: Thu Apr 01 13:40:08 2004
Job Code:

Printed: Thu Apr 01 13:42:48 2004

Name: 032604AR-203
Text:

1: PFOA



RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	0.2 ng/mL (2 ng/g)	Set No:	032604A
Exygen Study No:	L2133	Injection Volume:	15 µL	Analyst:	Amy Sheehan
Analyte:	**PFOA**	Matrix:	Solids	Instrument Type:	LC/MS/MS Unit # 7
Ions Monitored:	413 -> 369	Sample Weight:	1 g	Extraction Date:	03/26-29/04
Site:	NA	Final Volume:	10 mL	Analyzed on:	03/31/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ng/mL)	Dilution Factor	Peak Area	PFOA Found (ng/mL)	PFOA Found (ng/g)	Amount PFOA Added (ng/mL)	Recovery (%)
C032604-6	-	CS	032604A-101	0.2	-	4334	-	-	-	-
C032604-5	-	CS	032604A-102	0.5	-	9435	-	-	-	-
C032604-4	-	CS	032604A-103	1	-	18127	-	-	-	-
C032604-3	-	CS	032604A-104	2	-	36646	-	-	-	-
C032604-2	-	CS	032604A-105	5	-	89299	-	-	-	-
C032604-1	-	CS	032604A-106	10	-	187621	-	-	-	-
Methanol wash	-	C	032604A-107	-	-	0	-	-	-	-
Reagent Blank	-	C	032604A-108	-	1	0	-	-	-	-
Reagent Spk A	-	LCS	032604A-109	-	1	7656	0.402	4.02	0.5	80
Reagent Spk B	-	LCS	032604A-110	-	1	31984	1.75	17.5	2.0	87
L2133-1 Spk C	Bulk-A	LF	032604A-111	-	100	19268	104	1040	50	96
L2133-1 Spk C	Bulk-A	LF	032604A-112	-	10	190450	105	1050	50	*
C032604-6	-	CS	032604A-113	0.2	-	4247	-	-	-	-
L2133-1	Bulk-A	S	032604A-114	-	10	101805	56.1	561	-	-
L2133-1 Rep	Bulk-A	S	032604A-115	-	10	102476	56.4	564	-	-
L2133-2	Bulk-B	S	032604A-116	-	10	31177	17.0	170	-	-
L2133-3	Fab-A	S	032604A-117	-	10	7160	*	-	-	-
C032604-5	-	CS	032604A-118	0.5	-	9048	-	-	-	-
L2133-4	Mem-A	S	032604A-119	-	10	15557	8.39	83.9	-	-
L2133-5**	Wipe-A	S	032604A-120	-	10	229092	^	-	-	-
L2133-6**	Wipe-B	S	032604A-121	-	10	75752	41.7	834	-	-
L2133-7	Fab-B	S	032604A-122	-	10	28423	15.5	155	-	-
C032604-4	-	CS	032604A-123	1	-	16775	-	-	-	-
L2133-1	Bulk-A	S	032604A-124	-	1	963512	*	-	-	-
L2133-1 Rep	Bulk-A	S	032604A-125	-	1	943166	*	-	-	-
L2133-2	Bulk-B	S	032604A-126	-	1	256353	*	-	-	-
L2133-3	Fab-A	S	032604A-127	-	1	57136	3.14	31.4	-	-
C032604-3	-	CS	032604A-128	2	-	36761	-	-	-	-
L2133-4	Mem-A	S	032604A-129	-	1	142643	*	-	-	-
L2133-5	Wipe-A	S	032604A-130	-	1	2126942	*	-	-	-
L2133-6	Wipe-B	S	032604A-131	-	1	732340	*	-	-	-
L2133-7	Fab-B	S	032604A-132	-	1	281935	*	-	-	-
C032604-2	-	CS	032604A-133	5	-	88895	-	-	-	-
C032604-1	-	CS	032604A-134	10	-	179913	-	-	-	-

PFOA Found (ng/mL) = (peak area - intercept) / slope x DF

Recovery (%) = $\frac{\text{[PFOA found (ng/mL)-PFOA found in control (ng/mL)]}}{\text{amount PFOA added (ng/mL)}} \times 100$

Standard Curve : Linear (1/x weighted)
Intercept = 388.036
Slope = 18086.8
Coef. Of Det. = 0.998929

PFOA Found (ng/g) = PFOA found (ng/mL) x Ext. Volume (mL) / Sample Weight (g)

CS = Calibration standard
C = Control sample
S = Sample
LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike
CK = Check Standard
ND = Not detected = Response between 0 and LOD
NQ = Not quantifiable = Response between LOD and LOQ

Spreadsheet prepared by: KF / 04/02/04

**Due to the bulkiness of the sample 20 mL of methanol was used for the extraction.
*Sample was analyzed at several dilution levels in this set. The appropriate results are reported.
^Sample requires dilution. For reanalysis see data set 032604AR

Exygen RESEARCH
3058 Research Drive
State College, PA 16801
Phone: 814-272-1039
Fax: 814-231-1580

Internal Chain of Custody/Fortification Sheet

Exygen Study Number: L2133 Matrix: Solids
Sponsor Study/Protocol No: NA
The samples listed below were removed from storage cabinet No. 1
Time 0945 Date 03/26/04 Initials CEE

CLIENT SAMPLE ID	EXYGEN ID NUMBER	WEIGHT (g)	FORTIFICATION (ng)
-	Reagent Blank	-	-
-	Reagent Spk A	-	5.0
-	Reagent Spk B	-	20.0
Bulk-A	L2133-1 Spk C	1.0	500.0
Bulk-A	L2133-1	1.0	-
Bulk-A	L2133-1 Rep	1.0	-
Bulk-B	L2133-2	1.0	-
Fab-A	L2133-3	1.0	-
Mem-A	L2133-4	1.0	-
Wipe-A	L2133-5	1.0	-
Wipe-B	L2133-6	1.0	-
Fab-B	L2133-7	1.0	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

	Spiking Solution Used	Volume Used for Spiking	Initial/Date
Reagent Spk A	F030804-5 (10 ng/mL)	500 µL (200 µL micropipette)	KL 03/26/04
Reagent Spk B	F030804-4 (100 ng/mL)	200 µL (200 µL micropipette)	KL 03/26/04
L2133-1 Spk C	F030804-2 (10000 ng/mL)	50 µL (100 µL micropipette)	KL 03/26/04
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

All samples were weighed on balance no. 20:
Time 1145 Date 03/26/04 Initials CEE

After weighing samples were returned to storage cabinet No. 1
Time 1430 Date 03/26/04 Initials CEE

Comments:

Analysis Summary:
Data Set: 032604A Initials/Date: AMB / 03/30/04
Data Set: 032604AR Initials/Date: KL / 03/31/04
Data Set: - Initials/Date: - / -

Set extraction/analysis data verified by: JMF Date: 4/2/04

Exygen™ RESEARCH
3058 Research Drive
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SAMPLE EXTRACTION AND ANALYSIS TRACKING SHEET

EXYGEN STUDY NUMBER: L2133
MATRIX: Solids
METHOD: Modified 03M-001-035$S
ANALYTES: PFOA
PROTOCOL NUMBER: NA

Client ID	Exygen ID	STEP 1	STEP 2	Dilutions (mL/mL)	STEP 3	Dilutions (mL/mL)	STEP 4	Reagents/ Materials	Lot #
-	Reagent Blank			-		-	-	Methanol	44034406
-	Reagent Spk A			-		-	-	-	-
-	Reagent Spk B			-		-	-	-	-
Bulk-A	L2133-1 Spk C			0.1/1.0, 0.1/1.0 ①		-	-	-	-
Bulk-A	L2133-1			0.1/1.0		-	-	-	-
Bulk-A	L2133-1 Rep			0.1/1.0		-	-	-	-
Bulk-B	L2133-2			0.1/1.0		-	-	-	-
Fab-A	L2133-3			0.1/1.0		-	-	-	-
Mem-A	L2133-4			0.1/1.0		-	-	-	-
Wipe-A	L2133-5	④		0.1/1.0		③ 0.1/1.0	↓	*Initials/Date*	CEE 03/29/04
Wipe-B	L2133-6	④		0.1/1.0		-	-	-	-
Fab-B	L2133-7	↓	↓	0.1/1.0	↓	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	HPLC	
-	-	-	-	-	-	-	-	Methanol	43308345
-	-	-	-	-	-	-	-	Ammonium Acetate	V36159
-	-	-	-	-	-	-	-	Water	43290
-	-	-	-	-	-	-	-	-	-
Initials/Date	-	CEE 03/26/04	CEE ④ 03/29/04	KB 03/29/04	AMB 03/30/04	KB 03/31/04	AMB 03/31/04	*Initials/Date*	AMB 03/30/04

STEP 1: Add 10 mL Methanol and Shake on a wrist action shaker overnight.
STEP 2: Centrifuge and filter through a glass acrodisc filter, collect elute.
STEP 3: LC/MS/MS analysis
STEP 4: LC/MS/MS reanalysis.

① DF = 10 and 100 KB 03/29/04
③ SAMPLE WAS DILUTED AN ADDITIONAL 10 X FROM PREVIOUSLY DILUTED 10 X SAMPLE FOR A TOTAL DF = 100. KB 03/31/04

*Initials and date under each step indicates the personnel that performed this step.
$$ Method of Analysis for the Determination of Perfluorooctanoic Acid in Soil by LC/MS/MS.

COMMENTS:
④ Samples were placed on shaker on 03/26 and taken off on 03/29.

Final extracts stored in refrigerator 32 Initials: CEE Date: 03/29/04

000126

Sample List: C:\MASSLYNX\Fluorochems.PRO\SampleDB\032604A CSR Solids.SPL
Printed: Tue Mar 30 10:57:31 2004 AMB 03/30/04

Exygen STUDY NO. L2133

Page Position: (1, 1)

	Vial	File Name	LIMS ID	Client ID	Sample Description	Matrix	Sample Type	Conc (ng/mL)	Conc B	Conc C	Test ID	DF	MS Method
1	61	032604A-101	---	---	C032604-6, 0.2 ng/mL standard	---	Standard	0.2	---	---	0	1	008 PFOA
2	62	032604A-102	---	---	C032604-5, 0.5 ng/mL standard	---	Standard	0.5	---	---	0	1	008 PFOA
3	63	032604A-103	---	---	C032604-4, 1.0 ng/mL standard	---	Standard	1.0	---	---	0	1	008 PFOA
4	64	032604A-104	---	---	C032604-3, 2.0 ng/mL standard	---	Standard	2.0	---	---	0	1	008 PFOA
5	65	032604A-105	---	---	C032604-2, 5.0 ng/mL standard	---	Standard	5.0	---	---	0	1	008 PFOA
6	66	032604A-106	---	---	C032604-1, 10.0 ng/mL standard	---	Standard	10.0	---	---	0	1	008 PFOA
7	92	032604A-107	---	---	Methanol Wash	---	Blank	---	---	---	0	1	008 PFOA
8	41	032604A-108	---	---	Reagent Blank	---	Blank	---	---	---	0	1	008 PFOA
9	42	032604A-109	---	---	Reagent Spk A, 0.5 ng/mL	---	QC	0.5	---	---	0	1	008 PFOA
10	43	032604A-110	---	---	Reagent Spk B, 2.0 ng/mL	---	QC	2.0	---	---	0	1	008 PFOA
11	44	032604A-111	---	---	L2133-1 Spk C, 50 ng/mL, DF=100	---	QC	50	---	---	0	100	008 PFOA
12	45	032604A-112	---	---	L2133-1 Spk C, 50 ng/mL, DF=10	---	QC	50	---	---	0	10	008 PFOA
13	61	032604A-113	---	---	C032604-6, 0.2 ng/mL standard	---	Standard	0.2	---	---	0	1	008 PFOA
14	46	032604A-114	---	---	L2133-1, DF=10	---	Analyte	---	---	---	0	10	008 PFOA
15	47	032604A-115	---	---	L2133-1 Rep, DF=10	---	Analyte	---	---	---	0	10	008 PFOA
16	48	032604A-116	---	---	L2133-2, DF=10	---	Analyte	---	---	---	0	10	008 PFOA
17	49	032604A-117	---	---	L2133-3, DF=10	---	Analyte	---	---	---	0	10	008 PFOA
18	62	032604A-118	---	---	C032604-5, 0.5 ng/mL standard	---	Standard	0.5	---	---	0	1	008 PFOA
19	50	032604A-119	---	---	L2133-4, DF=10	---	Analyte	---	---	---	0	10	008 PFOA
20	51	032604A-120	---	---	L2133-5, DF=10	---	Analyte	---	---	---	0	10	008 PFOA
21	52	032604A-121	---	---	L2133-6, DF=10	---	Analyte	---	---	---	0	10	008 PFOA
22	53	032604A-122	---	---	L2133-7, DF=10	---	Analyte	---	---	---	0	10	008 PFOA
23	63	032604A-123	---	---	C032604-4, 1.0 ng/mL standard	---	Standard	1.0	---	---	0	1	008 PFOA
24	54	032604A-124	---	---	L2133-1	---	Analyte	---	---	---	0	1	008 PFOA
25	55	032604A-125	---	---	L2133-1 Rep	---	Analyte	---	---	---	0	1	008 PFOA
26	56	032604A-126	---	---	L2133-2	---	Analyte	---	---	---	0	1	008 PFOA
27	57	032604A-127	---	---	L2133-3	---	Analyte	---	---	---	0	1	008 PFOA
28	64	032604A-128	---	---	C032604-3, 2.0 ng/mL standard	---	Standard	2.0	---	---	0	1	008 PFOA
29	58	032604A-129	---	---	L2133-4	---	Analyte	---	---	---	0	1	008 PFOA
30	59	032604A-130	---	---	L2133-5	---	Analyte	---	---	---	0	1	008 PFOA
31	60	032604A-131	---	---	L2133-6	---	Analyte	---	---	---	0	1	008 PFOA
32	67	032604A-132	---	---	L2133-7	---	Analyte	---	---	---	0	1	008 PFOA
33	65	032604A-133	---	---	C032604-2, 5.0 ng/mL standard	---	Standard	5.0	---	---	0	1	008 PFOA
34	66	032604A-134	---	---	C032604-1, 10.0 ng/mL standard	---	Standard	10.0	---	---	0	1	008 PFOA

	HPLC Method	MS Tune File	Inj Volume (µL)
1	water	Fluorochems	15
2	water	Fluorochems	15
3	water	Fluorochems	15
4	water	Fluorochems	15
5	water	Fluorochems	15
6	water	Fluorochems	15
7	water	Fluorochems	15
8	water	Fluorochems	15
9	water	Fluorochems	15
10	water	Fluorochems	15
11	water	Fluorochems	15
12	water	Fluorochems	15
13	water	Fluorochems	15
14	water	Fluorochems	15
15	water	Fluorochems	15
16	water	Fluorochems	15
17	water	Fluorochems	15
18	water	Fluorochems	15
19	water	Fluorochems	15
20	water	Fluorochems	15
21	water	Fluorochems	15
22	water	Fluorochems	15
23	water	Fluorochems	15
24	water	Fluorochems	15
25	water	Fluorochems	15
26	water	Fluorochems	15
27	water	Fluorochems	15
28	water	Fluorochems	15
29	water	Fluorochems	15
30	water	Fluorochems	15
31	water	Fluorochems	15
32	water	Fluorochems	15
33	water	Fluorochems	15
34	water	Fluorochems	15

LC/MS/MS SYSTEM AND OPERATING CONDITIONS

Sponsor Protocol No: NA | Exygen Study No: L2133

Instrument:	Micromass Quattro Ultima (LC/MS/MS Unit #7)
Computer:	COMPAQ Professional Workstation AP200
Software:	Microsoft Windows NT: Version 4 Build 1381: Service Pack 5 Micromass Limited: MassLynx 3.4 Build 004
HPLC Equipment:	Hewlett Packard (HP) Series 1100 HP Binary Pump — HP Vacuum Degasser HP Autosampler — HP Column Oven
HPLC Column:	Genesis C-8, 5 cm x 2.1 mm i.d. x 4 µ (Exygen ID:MA13296) (**JONES**CHROMATOGRAPHY: Part No. FK5962EJ)
Mobile Phase (A) :	2 mM Ammonium Acetate in Water
Mobile Phase (B) :	Methanol
Analyst:	Amy Sheehan AMB 03/30/04 Exygen Research 3058 Research Drive, State College, PA 16801 Phone: (814) 272-1039 FAX: (814) 231-1580

NOTE: The next 3 pages are computer generated printouts from the masslynx software program. The pages contain the instrument settings used for the analysis of this data set.

All Handwritten Peak ID's by: AMB 03/31/04

Method: C:\MASSLYNX\FLUOROCHEMS.PRO\ACQUDB\008 PFOA
Last Modified: Thu Oct 02 13:56:38 2003

Printed: Tue Mar 30 10:55:42 2004 AMB 03/30/04

Solvent Delay (mins) : 0.00

Function : 1 MRM of 1 Mass Pair (ESP-)

Inter Channel Delay (Secs) : 0.03
Span (Daltons) : 0.00
Start Time (Mins) : 0.00
End Time (Mins) : 8.00
Repeats : 1

Channel	Parent	Daughter	Dwell (Secs)	Coll Energy (eV)	Cone (V)
1	413.00	369.00	0.20	10	10

Method File: c:\masslynx\fluorochems.pro\acqudb\water
Last Modified: Tuesday, March 30, 2004 10:39:54

Printed: Tuesday, March 30, 2004 10:55:54 AMB 03/30/04

HP1100 LC Pump Initial Conditions

Solvents	
A%	60.0
B%	40.0
C%	0.0
D%	0.0
Flow (ml/min)	0.300
Stop Time (mins)	15.0
Min Pressure (bar)	0
Max Pressure (bar)	400
Oven Temperature Left(°C)	35.0
Oven Temperature Right(°C)	35.0

HP1100 LC Pump Gradient Timetable

The gradient Timetable contains 10 entries which are :

Time	A%	B%	C%	D%	Flow	Pressure
0.00	60.0	40.0	0.0	0.0	0.300	400
0.40	60.0	40.0	0.0	0.0	0.300	400
1.00	10.0	90.0	0.0	0.0	0.300	400
7.00	10.0	90.0	0.0	0.0	0.300	400
7.50	0.0	100.0	0.0	0.0	0.300	400
9.00	0.0	100.0	0.0	0.0	0.400	400
9.50	60.0	40.0	0.0	0.0	0.400	400
13.50	60.0	40.0	0.0	0.0	0.400	400
14.00	60.0	40.0	0.0	0.0	0.300	400
15.00	60.0	40.0	0.0	0.0	0.300	400

HP1100 LC Pump External Event Timetable

The Timetable contains 4 entries which are :

Time	Column Switch	Contact1	Contact2	Contact3	Contact4
Initial	Off	Off	Off	Off	Off
0.00	Off	On	Off	Off	Off
0.10	Off	Off	On	Off	Off
8.00	Off	Off	Off	Off	Off

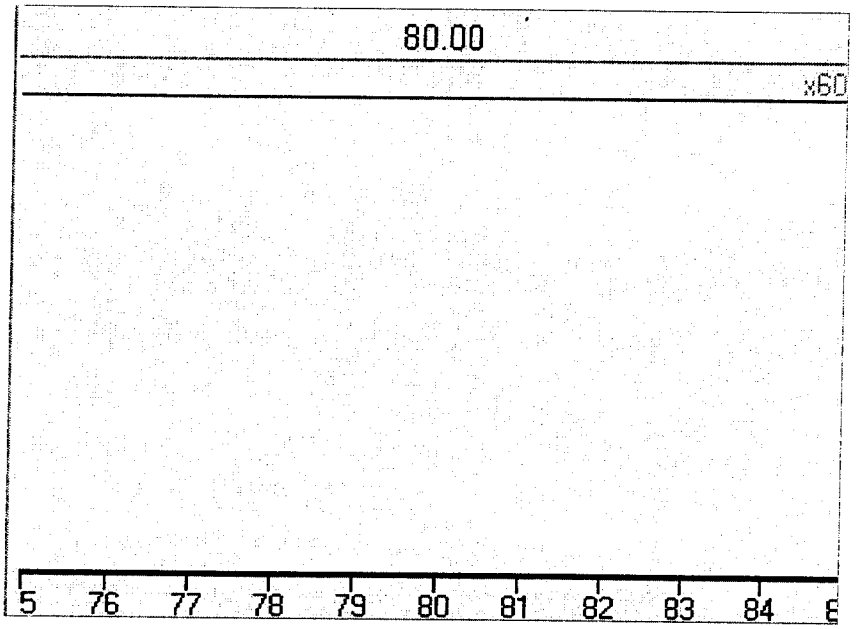
HP1100 Autosampler Initial Conditions

Draw Speed	200.0
Eject Speed (µl/min)	200
Draw Position (mm)	0.10
Stop Time (mins)	15.00
Injection Volume(µl)	15.0
Vial Number	34

Tuning Method Report

Method: C:\MASSLYNX\FLUOROCHEMS.PRO\ACQUDB\FLUOROCHEMS

Printed: Tue Mar 30 10:56:06 2004 AMB 03/30/04



Dau 299.00

SOURCE (ESP-)	Set	Rdbk
Capillary	3.00	-2.93
Cone	30	-10
Hexapole 1	0.0	
Aperture 1	0.0	
Hexapole 2	0.0	
Source Block Temp.	100	102
Desolvation Temp.	300	300

Analyser	Set	Rdbk
LM Res 1	14.0	
HM Res 1	14.0	
IEnergy 1	1.0	
Entrance	-2	8
Collision	30	9
Exit	2	11
LM Res 2	14.0	
HM Res 2	14.0	
IEnergy 2	2.0	
Multiplier	700	-695

Pressures	Rdbk
Analyser Vacuum	OFF
Gas Cell	2.8e-3

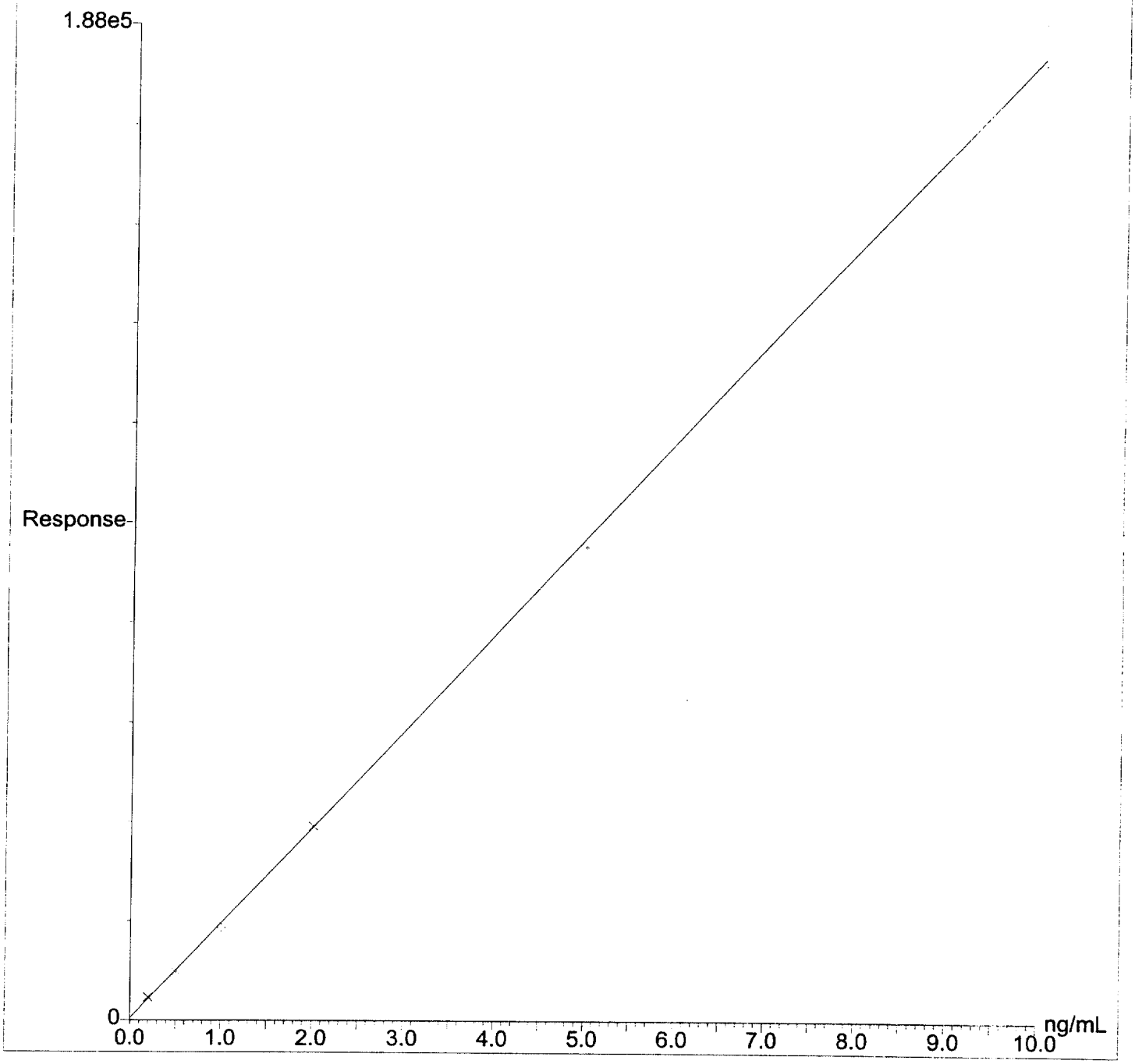
Gas Flows	Rdbk
Cone Gas	87.8
Desolvation	697.1

Quantify Calibration Report
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Calibration: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\CurveDB\032604A CSR Solids
Last modified: Wed Mar 31 11:52:14 2004
Printed: Wed Mar 31 12:00:53 2004

AmB 03/31/04

Compound 1 name: PFOA
Coefficient of Determination: 0.998929
Calibration curve: 18086.8 * x + 388.036
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Sample Report
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

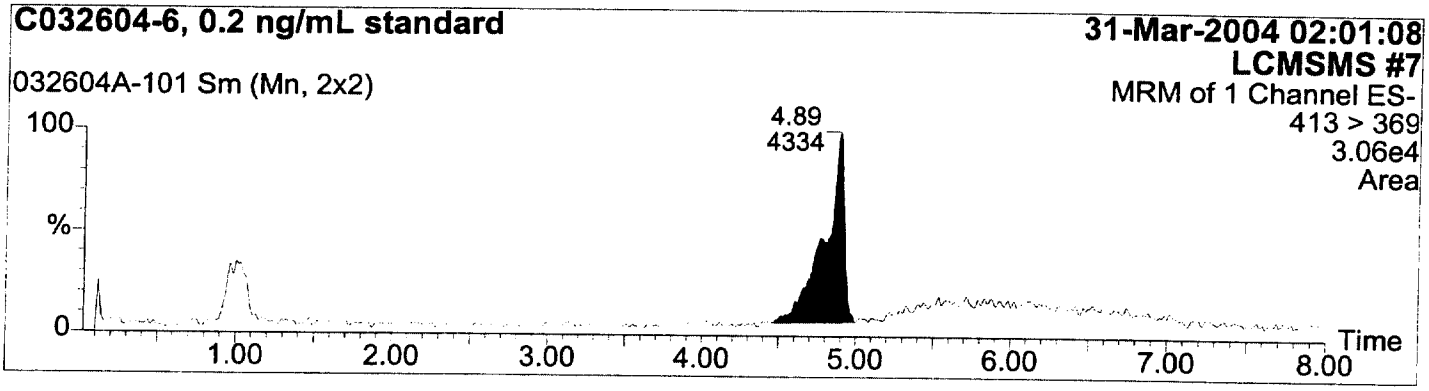
Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Initials AMB
Date 03/31/04
Run# 032604A-101 To 032604A-134

Name: 032604A-101
Text:

1: PFOA



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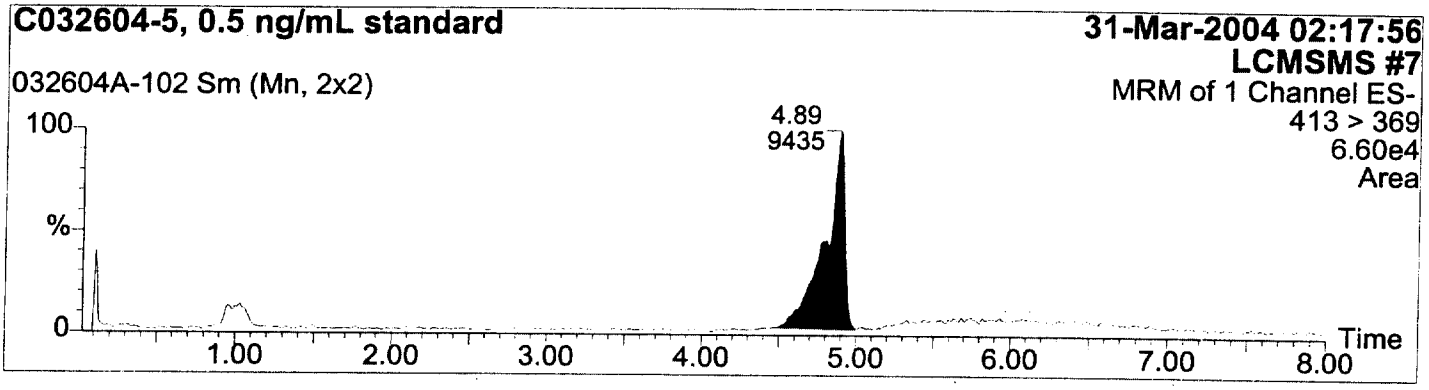
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-102
Text:

1: PFOA



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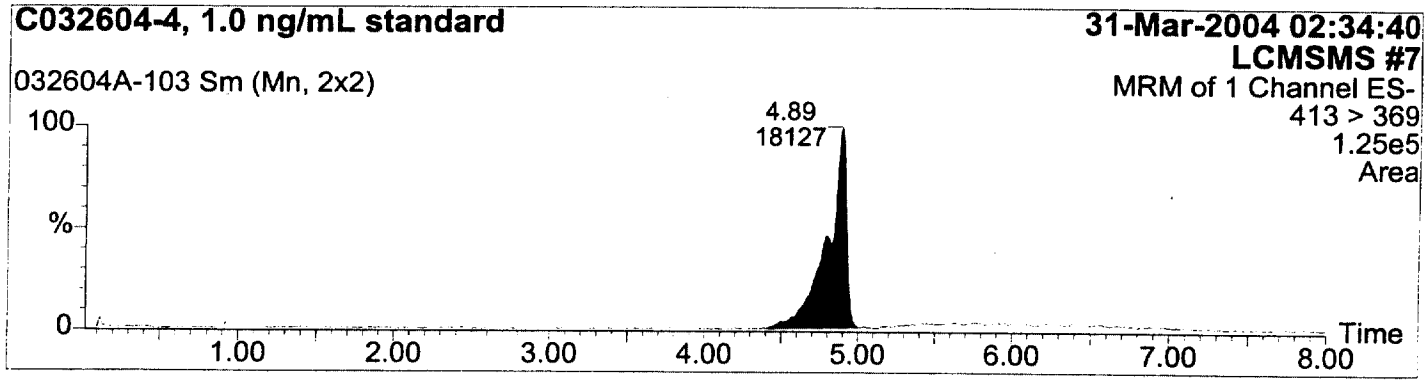
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-103
Text:

1: PFOA



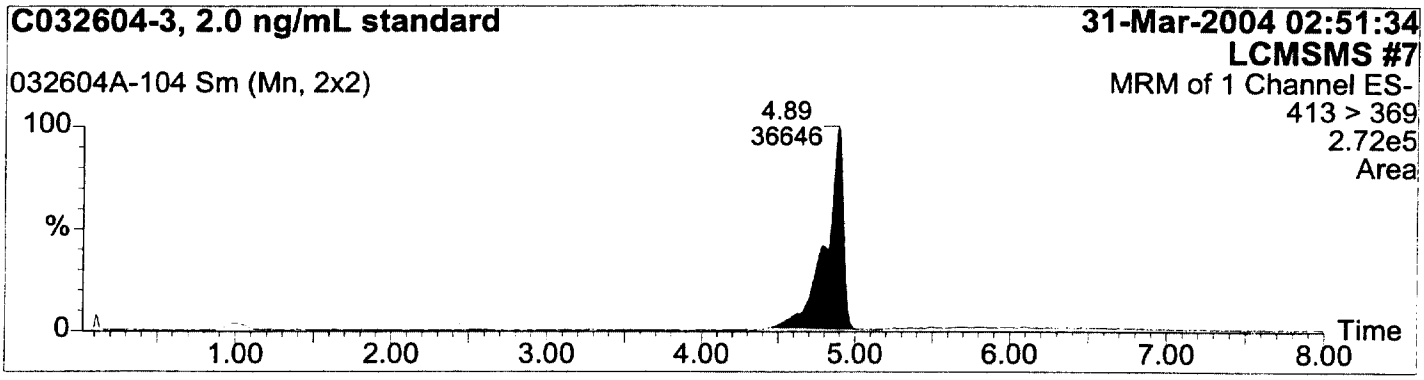
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-104
Text:

1: PFOA



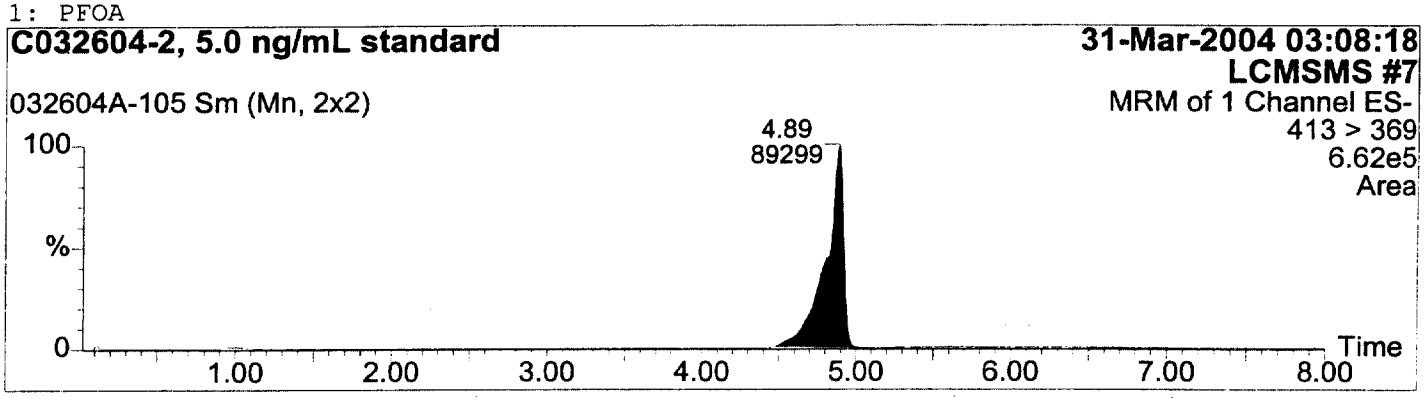
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-105
Text:

1: PFOA



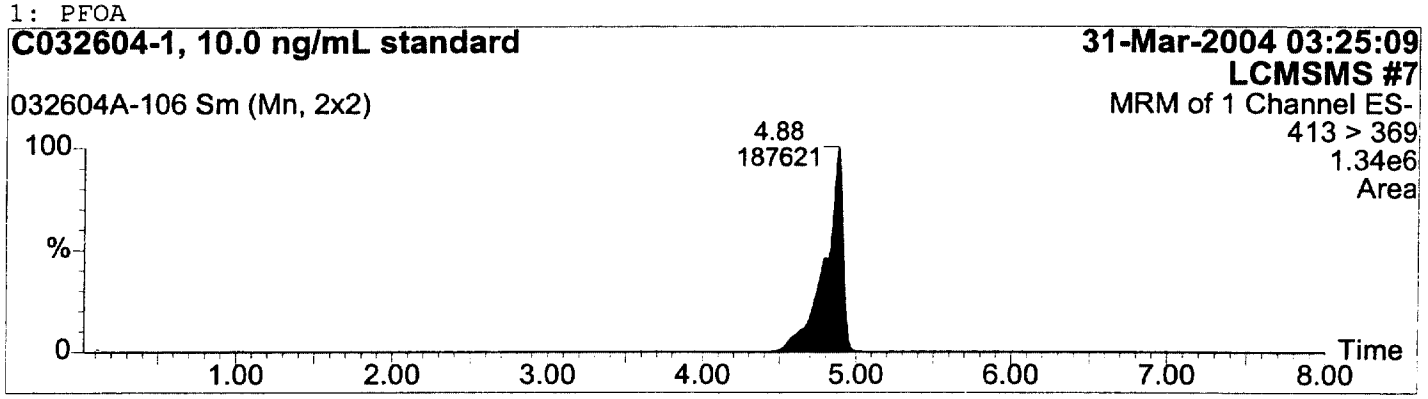
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-106
Text:

1: PFOA



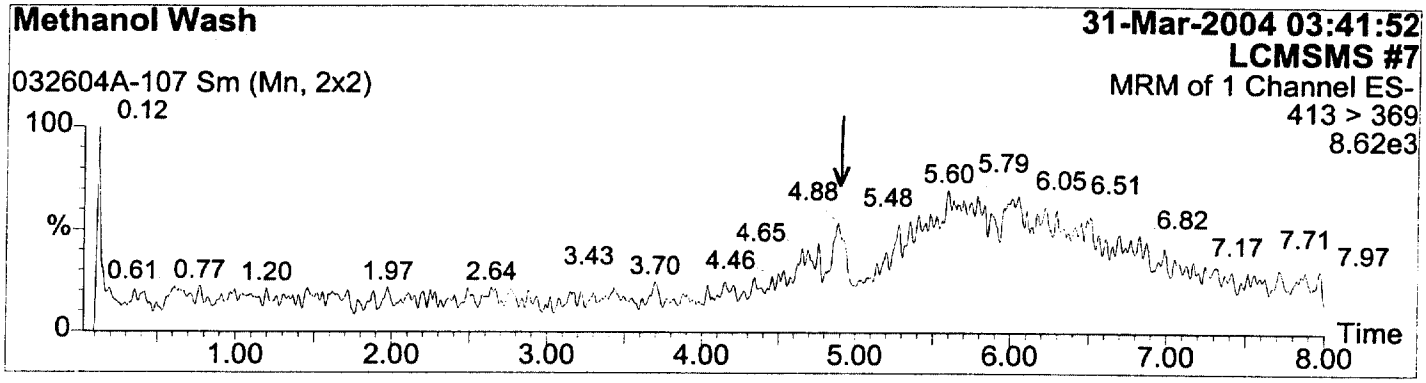
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-107
Text:

1: PFOA



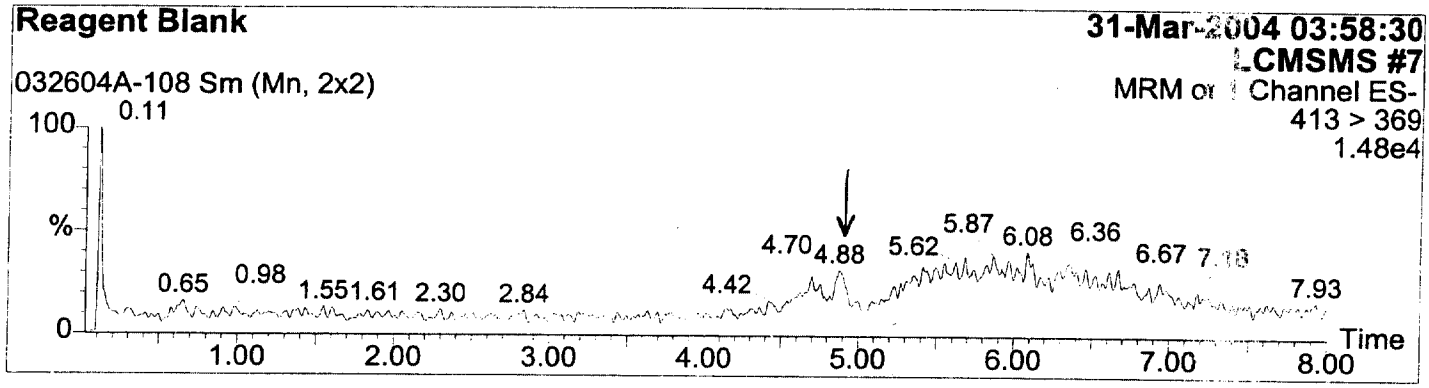
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-108
Text:

1: PFOA



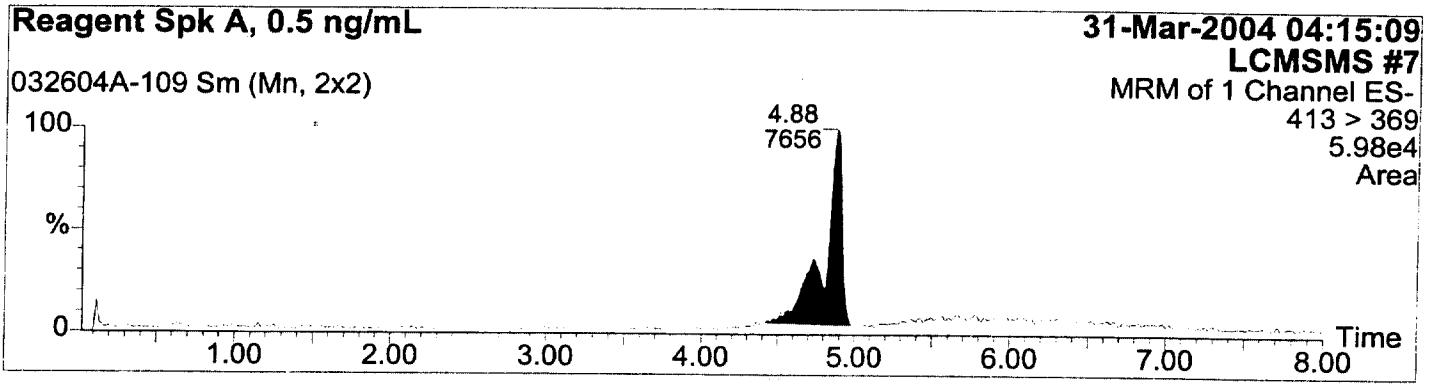
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-109
Text:

1: PFOA



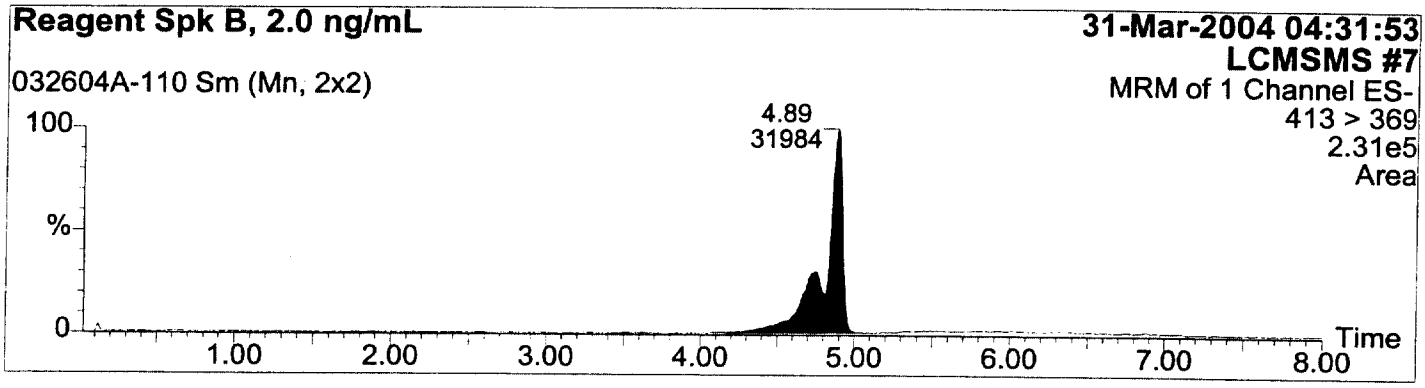
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-110
Text:

1: PFOA

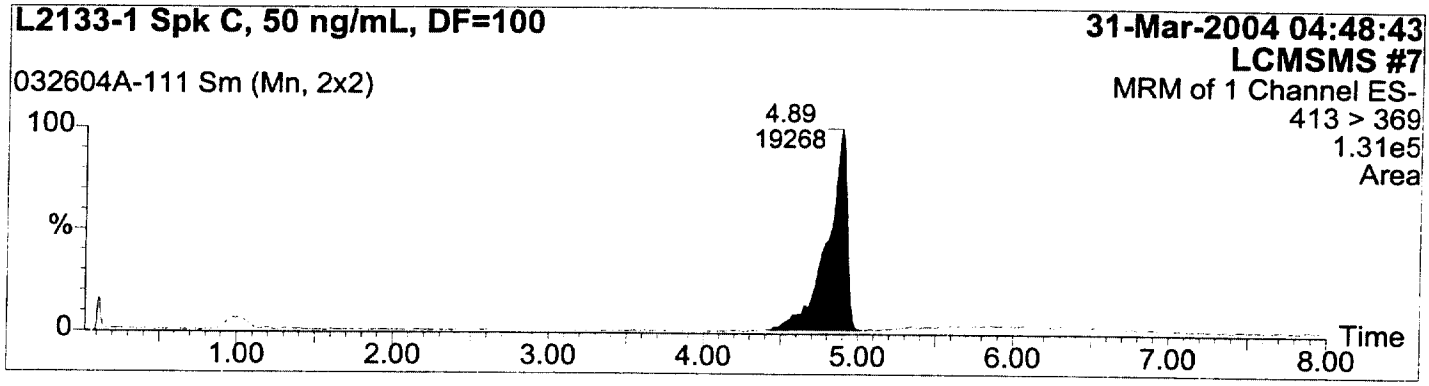


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-111
Text:

1: PFOA

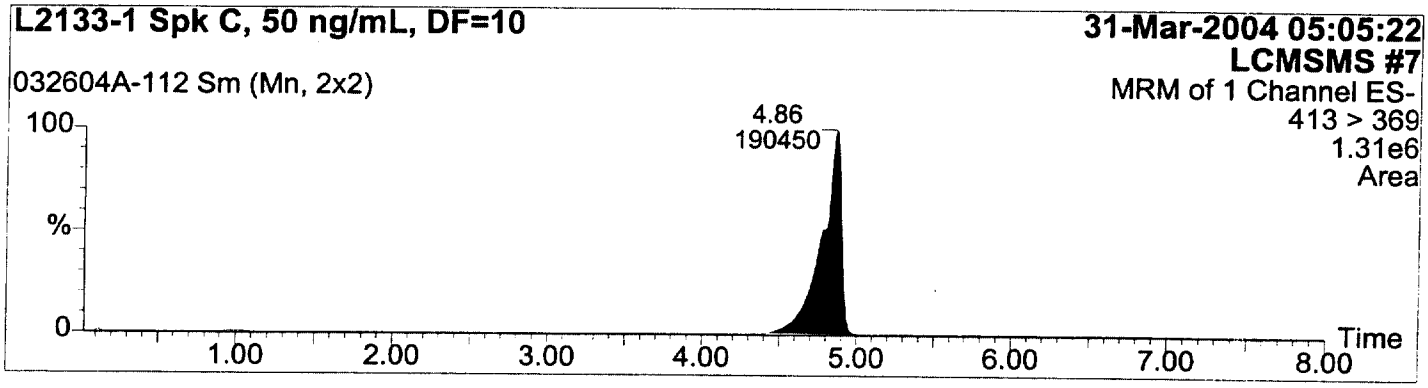


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-112
Text:

1: PFOA



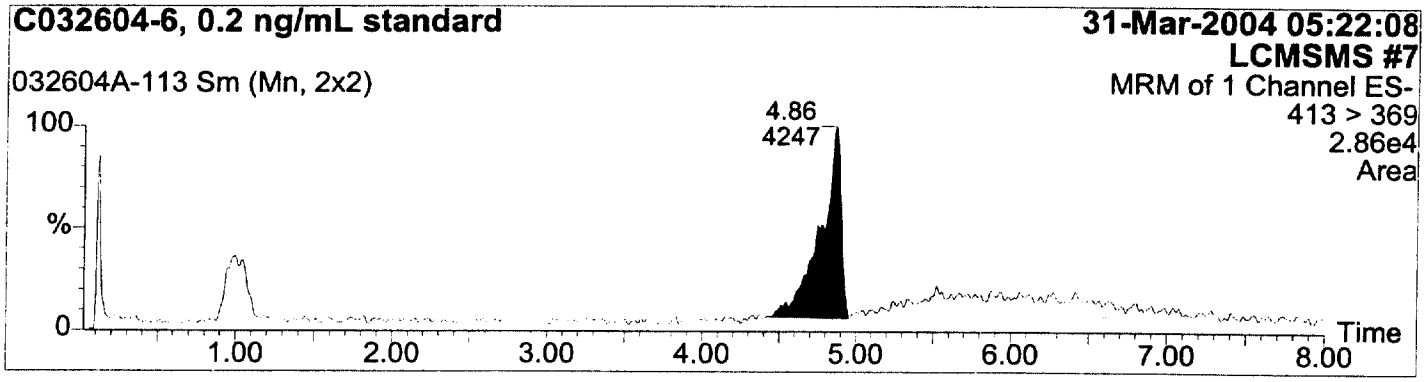
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-113
Text:

1: PFOA



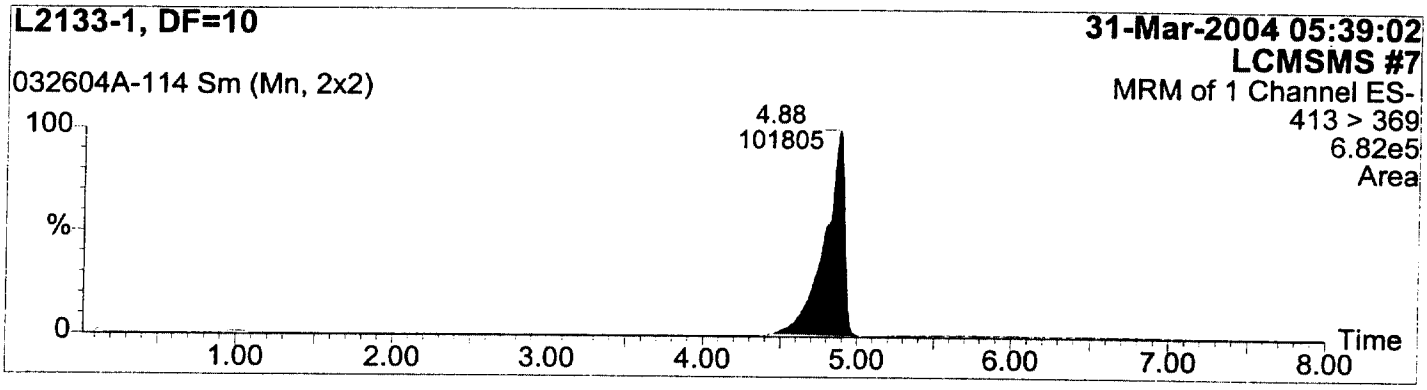
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-114
Text:

1: PFOA

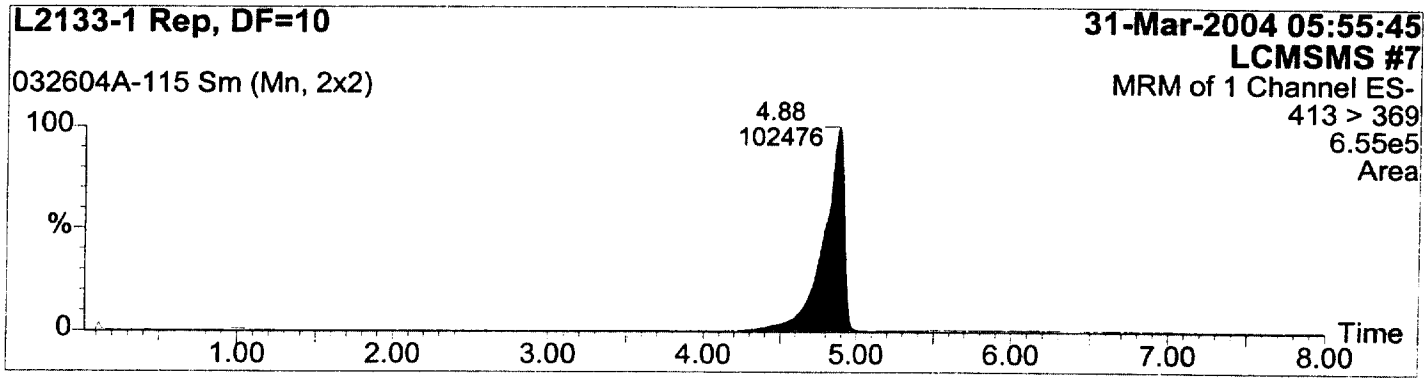


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-115
Text:

1: PFOA

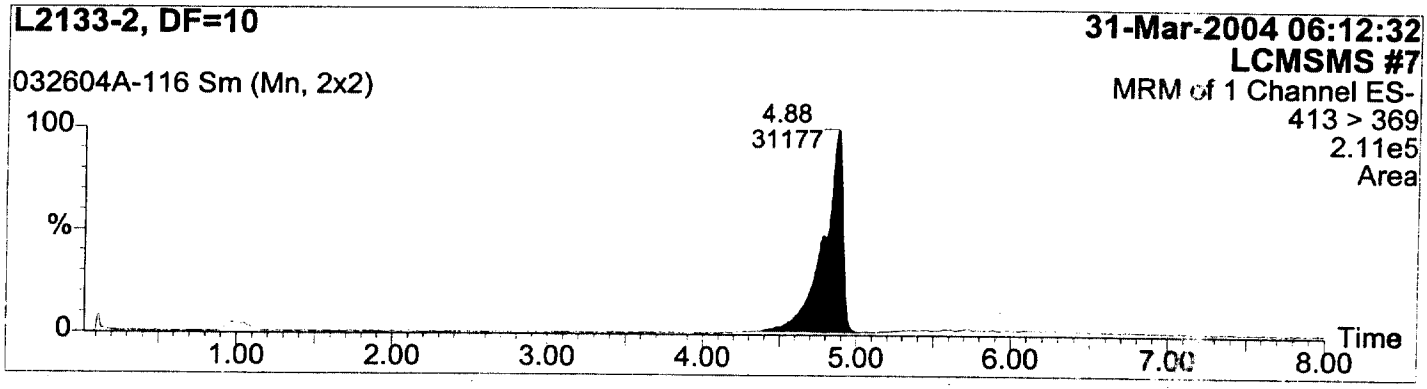


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-116
Text:

1: PFOA

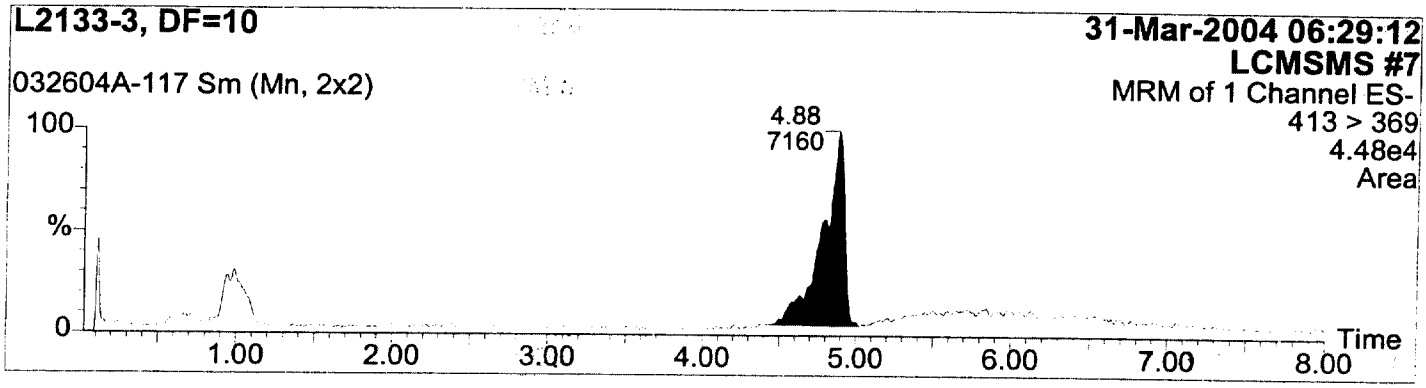


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-117
Text:

1: PFOA

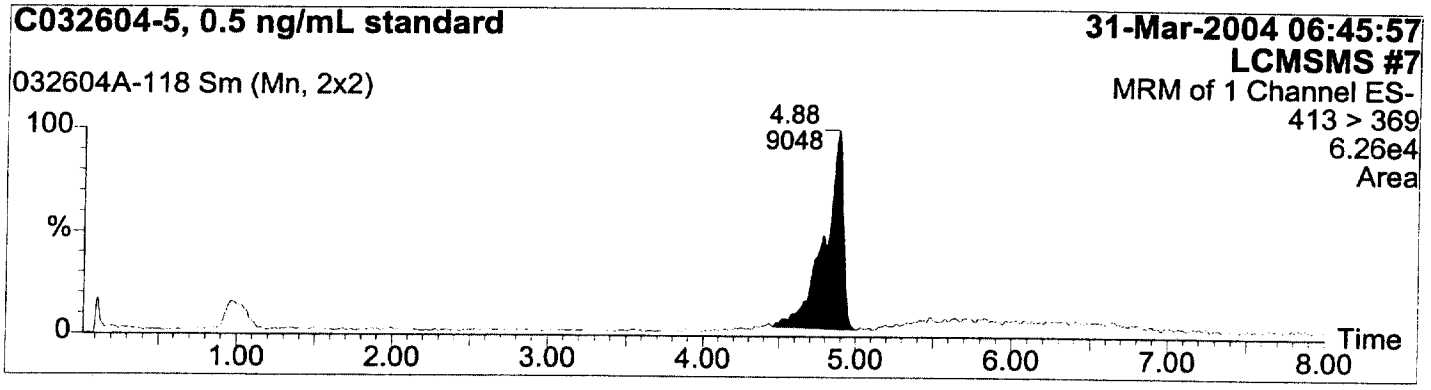


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-118
Text:

1: PFOA



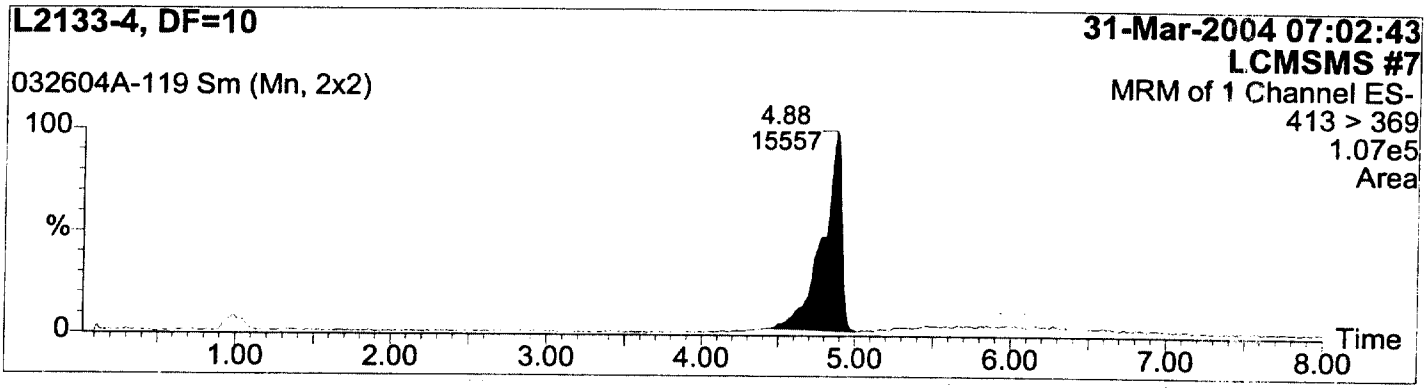
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-119
Text:

1: PFOA



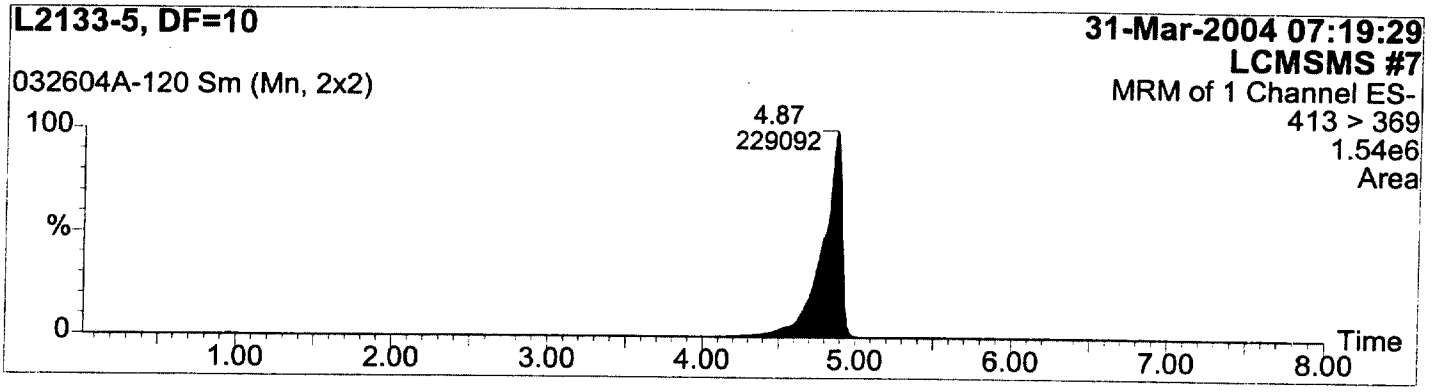
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-120
Text:

1: PFOA



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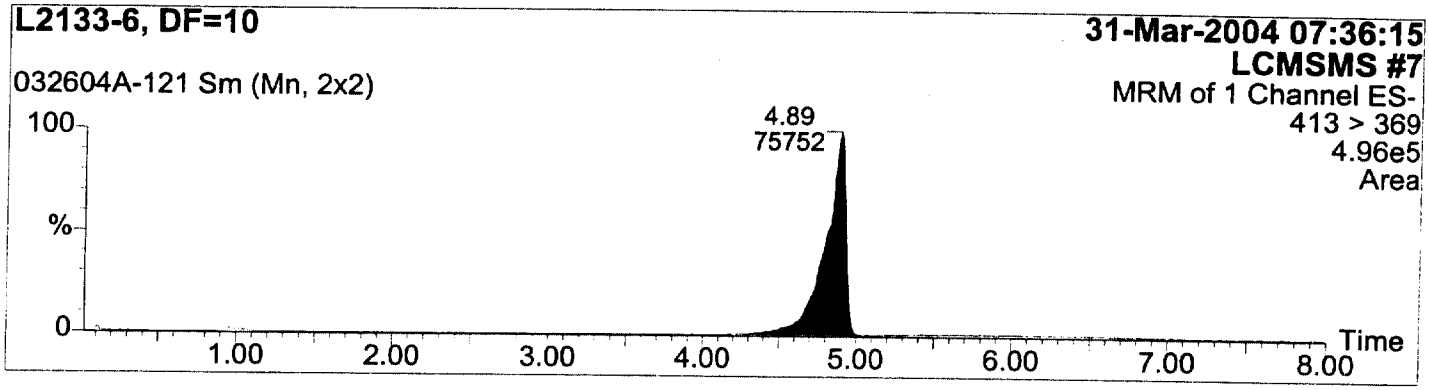
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-121
Text:

1: PFOA



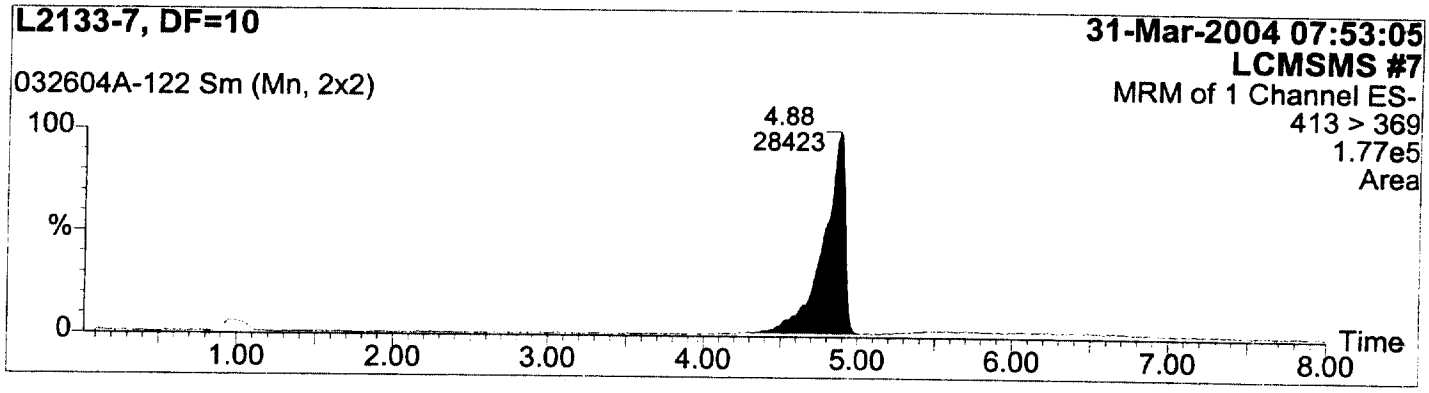
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-122
Text:

1: PFOA

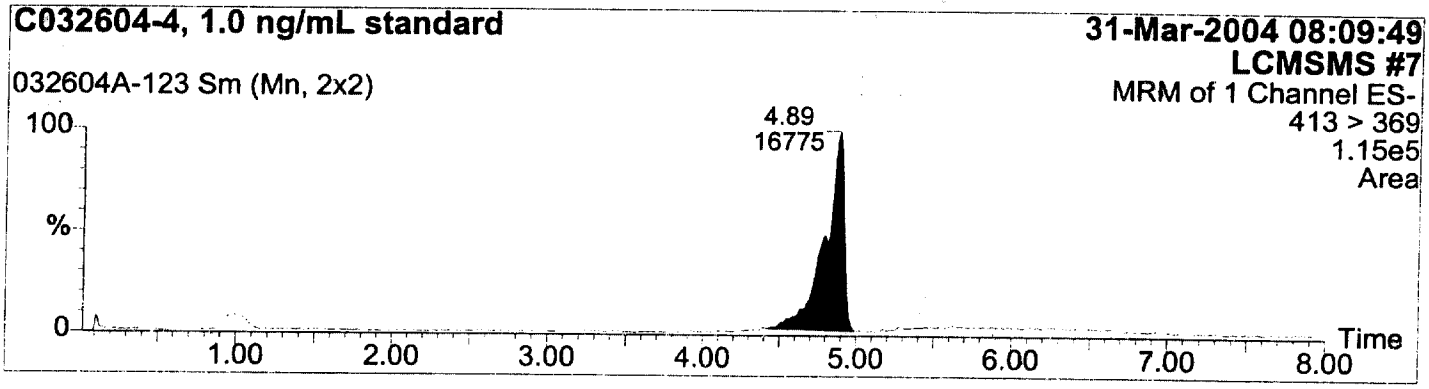


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-123
Text:

1: PFOA



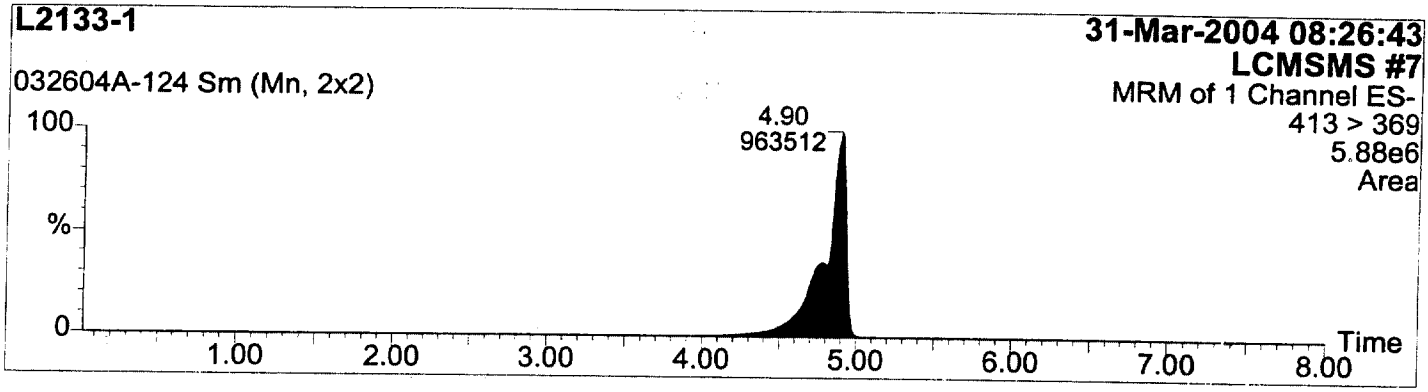
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-124
Text:

1: PFOA



Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
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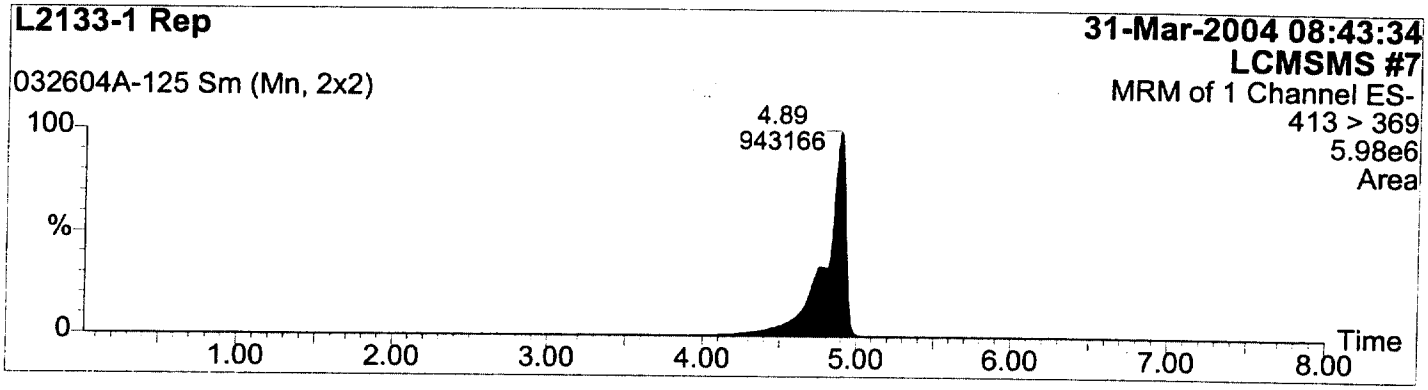
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-125
Text:

1: PFOA



Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
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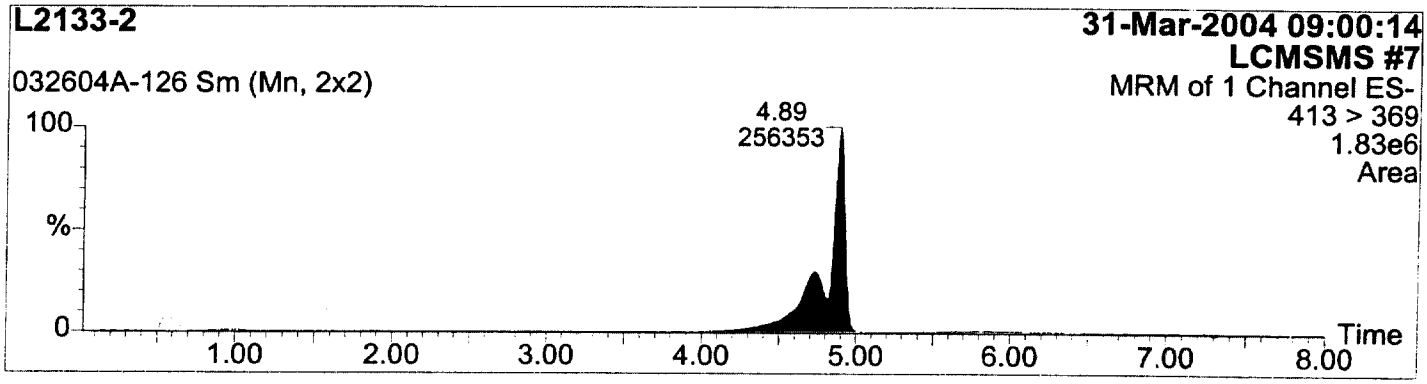
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-126
Text:

1: PFOA

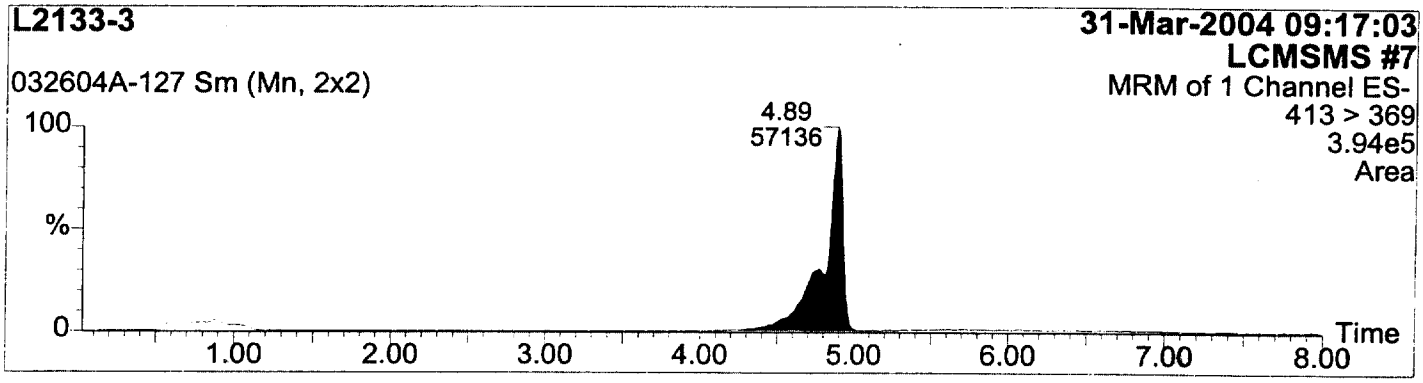


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-127
Text:

1: PFOA



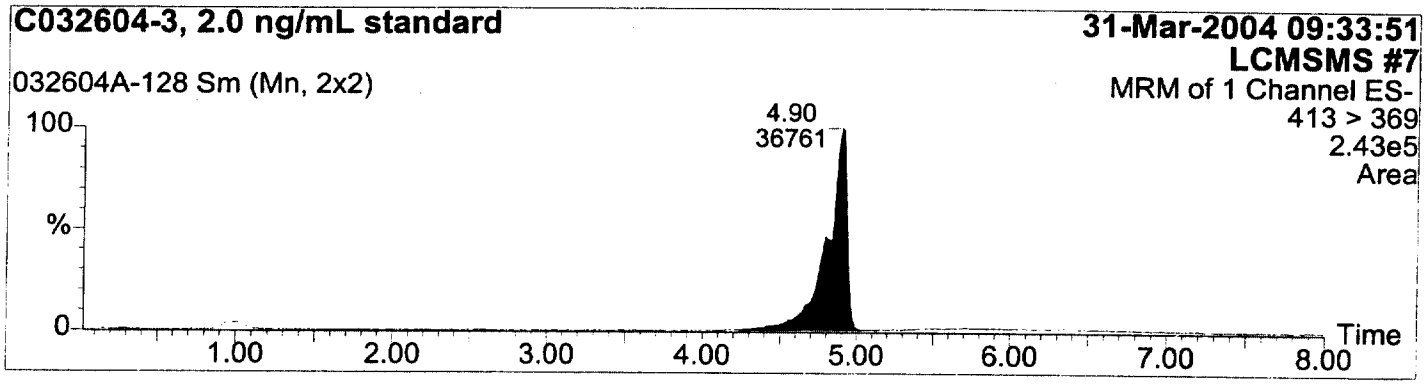
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-128
Text:

1: PFOA



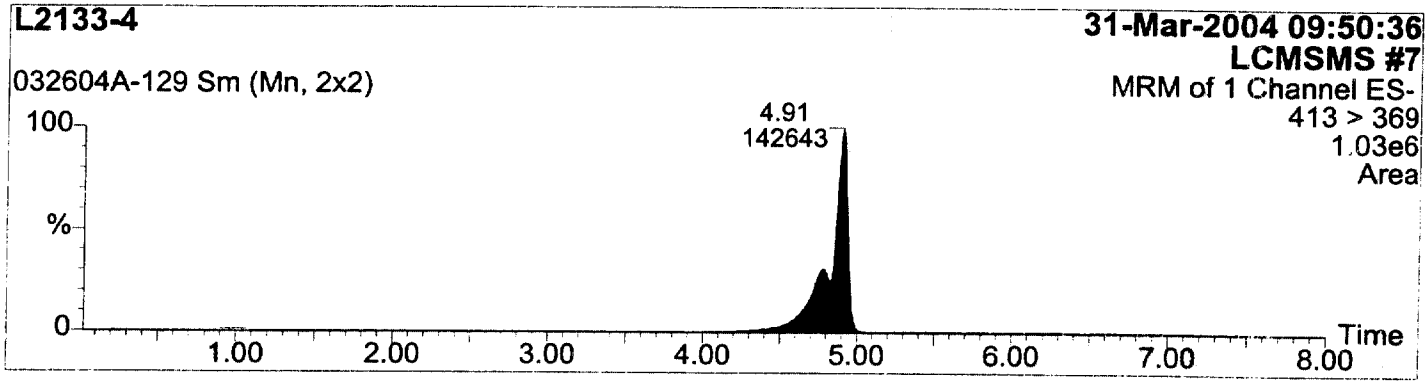
StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-129
Text:

1: PFOA



StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-130
Text:

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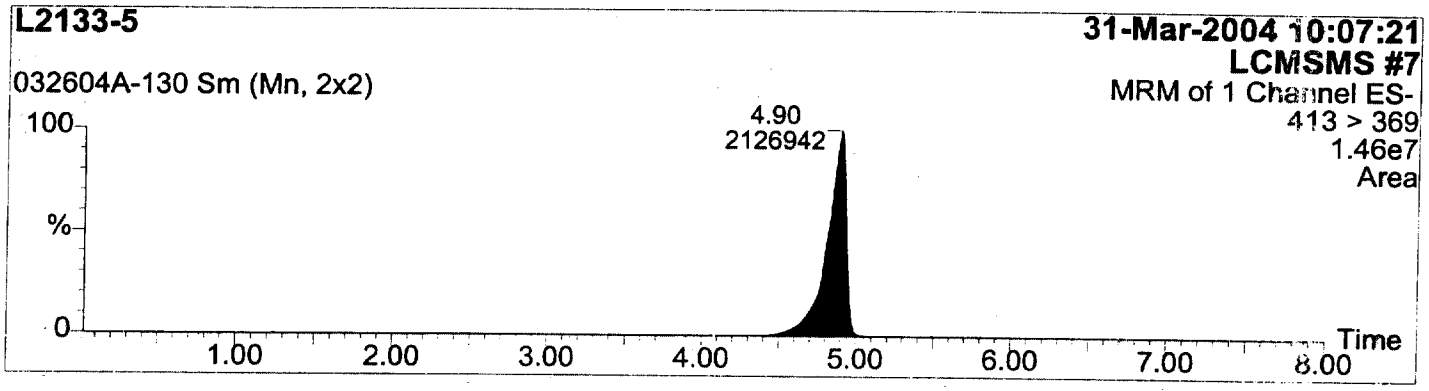
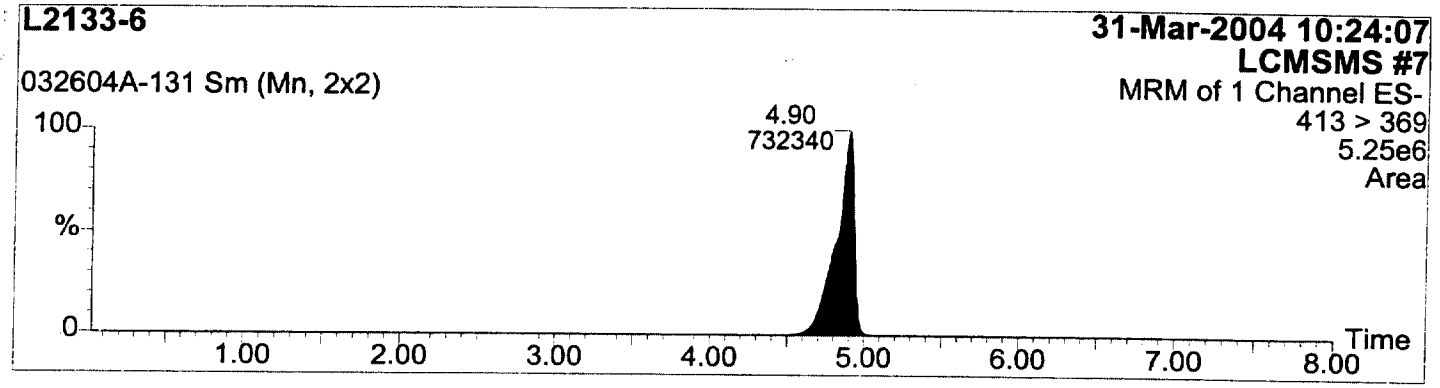


Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-131
Text:

1: PFOA



StudyNo:L2133,SetNo:032604A CSR Solids, ExtDate:03/26-29/04, Analyst A. Sheehan

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-132
Text:

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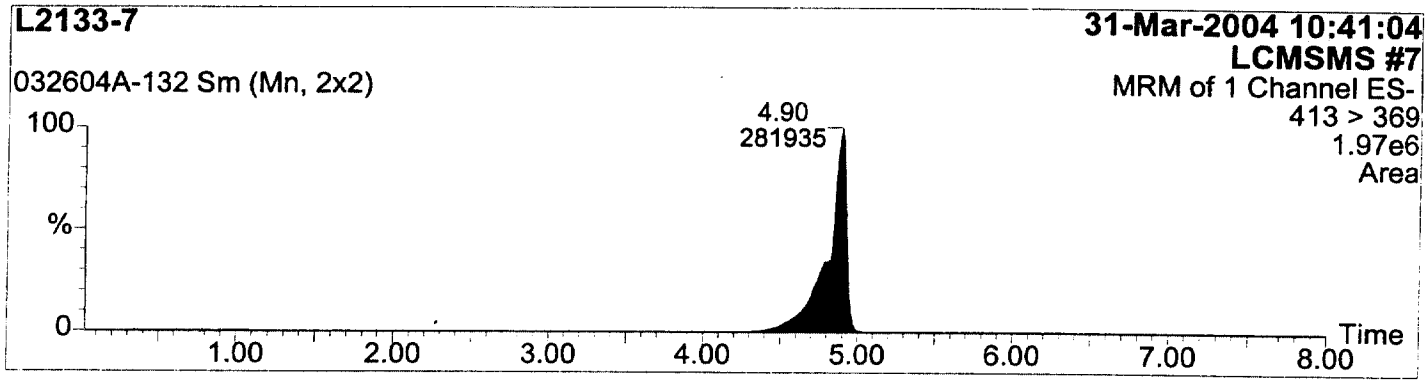

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-133
Text:

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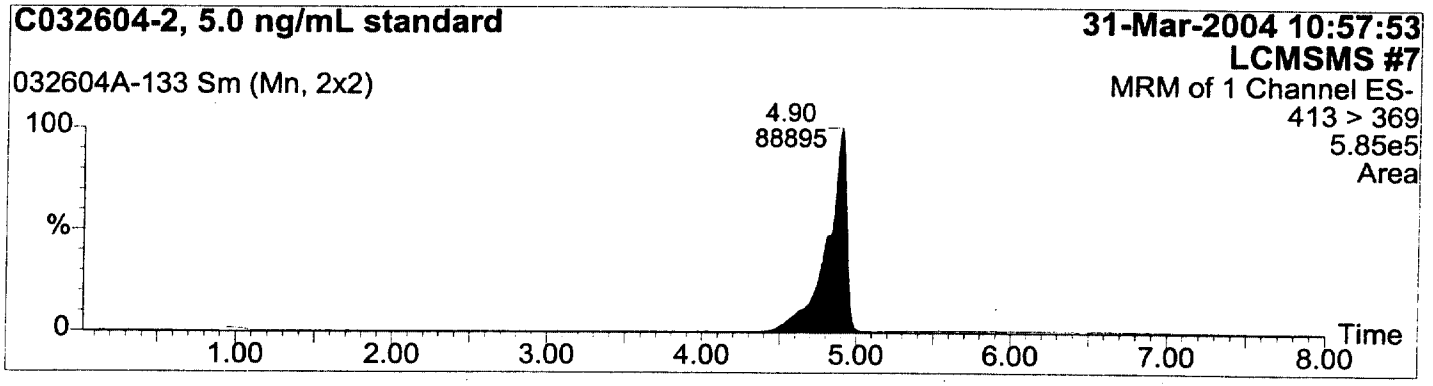

Sample List: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\SampleDB\032604A CSR Solids
Last modified: Wed Mar 31 11:45:41 2004
Method: P:\Data\LCMSMS7\Masslynx\Fluorochems.PRO\MethDB\PFOA non extract 032904
Last modified: Tue Mar 30 08:18:31 2004
Job Code:

Printed: Wed Mar 31 12:00:54 2004

Name: 032604A-134
Text:

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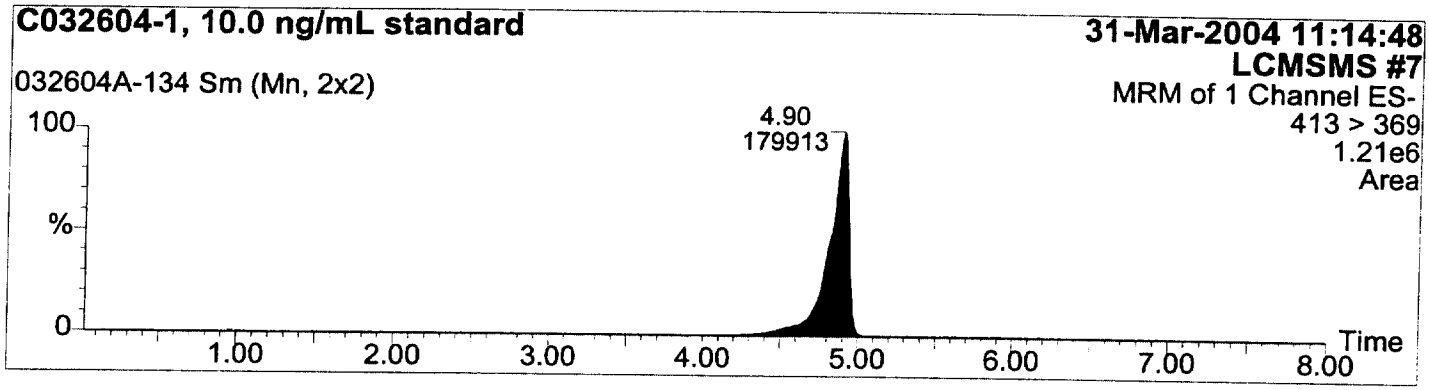

AR226-3545

ATTACHMENT B

FYI Submittal to 0804-01378

ALGOFLON D60 27

SOLVAY SOLEXIS, Inc.
10 Leonards Lane
Thorofare, NJ 08086
856-853-8119

Section 1 - Chemical product and Company information

Date Revised: December 26, 2002
Product Name: ALGOFLON D60 27
Chemical Name: Aqueous dispersion of tetrafluoroethylene homopolymer and surfactant
Chemical Family: Fluoropolymer dispersion
Synonyms: Mixture
Emergency Telephone: 800-424-9300 (CHEMTREC, 24 hours)
856-853-8119

Emergency Overview:

White aqueous dispersion. Surfaces can be extremely slippery in the case of a spill.

Section 2 - Compositional information

Name:	CAS#	Approximate Weight (% wt.)
Tetrafluoroethylene homopolymer	9002-84-0 Teflon	59-61
Water	7732-18-5	35-38
Triton X 100	9002-93-1	2-4
Ammonium Perfluoroctonoate	3825-26-1 → Ammonium Perfluoroctanoate	<0.5

Poly Ethylene Glycol
Octyl Phenol Ether

Section 3 - Potential Health Effects

Effects of Overexposure:

Eye Contact
Eye contact can cause irritation.

Skin Contact
Skin contact can cause irritation.

Inhalation
Inhalation of vapors or mist may cause irritation of the respiratory tract and mucous membranes. Breathing fumes generated during processing of the polymer at temperatures above 315 C (707 F) can cause "polymer fume fever".

Ingestion
Not an expected exposure route. Ingestion can cause gastrointestinal tract irritation, nausea, and vomiting.

Section 4 - First Aid Measures

Eye Contact:
Flush eyes for 15 minutes with copious amounts of water, retracting eyelids often. Seek medical attention.

Skin Contact:
Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. If irritation persists, consult a physician.

Inhalation:
If symptoms of irritation or discomfort are experienced, or victim is overcome by exposure, remove affected person to fresh air. Give oxygen or artificial respiration as needed.

Ingestion:
If conscious, drink three to four 8 ounce glasses of water or milk. Call a physician. If unconscious, immediately take affected person to a hospital. Do not give anything by mouth to an unconscious person.

Section 5 - Fire Fighting Measures

Flash Point: Not Flammable
Lower Explosive Limit: Not Applicable
Upper Explosive Limit: Not Applicable
Autoignition Temperature: Not Applicable
Extinguishing Media: Water (spray or fog), foam, dry chemical or carbon dioxide (CO2).

Unusual Fire Hazards:

Fluoropolymers will degrade upon prolonged heating or in a fire, liberating carbonyl fluoride and hydrogen fluoride (HF). Decomposition products are toxic if inhaled or they come into contact with moist skin. HF has an ACGIH TLV ceiling limit of 3 ppm (2.6 mg/m3) and an OSHA PEL TWA of 3 ppm. Carbonyl fluoride has an ACGIH TLV TWA and OSHA PEL TWA of 2 ppm (5 mg/m3).

Fire Fighting Procedures:

Use self contained breathing apparatus (SCBA) and skin protection for acid gas exposure. Do not enter fire area without proper protection. Fight fire from safe distance. If possible, air monitoring should be performed.

Section 6 - Accidental Release Measures

Releases:

In case of a release or spill, absorb material onto vermiculite or similar inert absorbent. Place spilled material into a covered container for disposal. Dispose of according to applicable local, state and federal regulations.

Extinguish all ignition sources and evacuate the area. Exercise caution - spill area may be extremely slippery. Only personnel equipped with eye protection should be allowed in the area.

Section 7 - Handling and Storage

Wash hands after use and before handling food or applying cosmetics. Do not use tobacco products in the immediate area. Keep containers closed. Keep away from heat, sparks and flames. Do not store near combustible materials.

Section 8 - Exposure Controls/Personal Protection

ACGIH Threshold Limit Value (8hr. time weighted average)
Ammonium Perfluorooctonoate TLV/TWA-8hr 0.01 mg/m3 air, A3 skin notation

OSHA Permissible Exposure Limit Value (8hr. time weighted average)
None established

Engineering Controls:

Ventilation Requirements:
Local Exhaust: Vent vapors from melt processing away from operating personnel. Local exhaust ventilation at a rate of 50 feet per minute.

Personal Protective Equipment:

Respiratory Protection:
No occupational exposure standards have been developed for this material. In situations where exposure to vapors or mists is likely, NIOSH/MSHA approved respirators are recommended. Respirator use limitations made by NIOSH/MSHA or the manufacturer must be observed. Respiratory protection programs must be in accordance with 29 CFR 1910.134.

Eye Protection:
Eye/Face Protection: ANSI Z87.1 approved safety glasses with side shields or equivalent. Safety goggles where there is a potential for splashing or contact with liquid material.

Skin Protection:
Nitrile gloves where there is a potential for splashing or contact with liquid material.

Section 9 - Physical and Chemical Properties

Appearance: Liquid
Color: Grayish-white
Odor: Essentially odorless
Vapor Pressure: Not available
Vapor Density (Air=1): Not available
Boiling Point: 100 C/212 F (estimate, water)
Melting Point: 0 C/32 F (estimate, water)
Specific Gravity: 1.45
pH: Greater than 9
Solubility in Water: Dispersion
Molecular Formula: Mixture
Molecular Weight: Not applicable
% Volatile by Volume: 35-38

Section 10 - Stability and Reactivity

Stability:

This product is stable.

Reactivity:

This product is not reactive.

Conditions to Avoid:

Heat, sparks, flames, and other ignition sources.

Hazardous Decomposition Products:

Thermal decomposition of the polymer (at temperatures above 350 C/662 F) will generate hydrogen fluoride (HF), which is corrosive, causing burns on contact with skin and other tissue.

Incompatibility (Materials to Avoid):

Alkali metals and halogenated compounds.

Section 11 - Toxicological Information

Health injuries are not known or expected under normal use. Component surfactants may be absorbed by the skin and may be harmful by ingestion.
Ammonium Perfluoroctonoate:
LD50 oral – rat 536 mg/kg
Carcinogenicity – ACGIH A3
Non ionic surfactant
LD 50 oral – rat 1800 mg/kg
Polymer pyrolysis products (at 625 C/1157 F):

Rat 5 minute LC50: 2700 mg/m3
Rat 30 minute LC50: 3500 mg/m3

Breathing fumes generated during processing of the polymeric substance at temperatures ranging from 315 to 375 C (599 to 707 F) can cause an influenza-like disorder called "polymer fume fever". Symptoms include chills, headache, nausea, breathing discomfort, weakness, cough, sore throat, and tightness in the chest. The symptoms generally disappear within 24 to 48 hours. The specific chemicals in the fume which cause polymer fume fever are not known. A common cause of polymer fume fever is smoking tobacco contaminated with minute amounts of polytetrafluoroethylene (PTFE). In one experiment, volunteers developed a fever after smoking a single cigarette contaminated with less than 1 mg of PTFE. Above 400 C, the quantity of fumes and their toxicity increase. Hydrogen fluoride and other toxic fluorinated compounds are produced. Serious lung damage (inflammation of the lungs) may occur in severe cases, but recovery is normally complete. No fatalities from inhalation of PTFE fumes have been reported; no cases of polymer fume fever from overheating of finished PTFE products have been reported.

This product may contain small amounts of residual tetrafluoroethylene (TFE) monomer that can be released during processing. TFE has been shown to cause liver and kidney cancer in laboratory animals in a test conducted by the National Toxicology Program (NTP). It is also listed by the state of California under Proposition 65 as a carcinogen.

Exposures to TFE can occur in handling newly opened drums and in situations where processing temperatures exceed manufacturer=s recommendations. Avoid breathing fumes and gases produced in processing or burning of fluoropolymer containing parts. To minimize exposures to trace levels of TFE, follow the handling instructions in Section 8 of the MSDS. For additional information, consult the current edition of the guide to the Safe Handling of Fluoropolymers published by the Society of Plastics Industry, Inc. (SPI) Fluoropolymer Division.

Section 12 - Ecotoxicological Information

No ecotoxicological information is available for this material.

Section 13 - Disposal Considerations

Waste Disposal: Material, as supplied, is not a hazardous waste according to RCRA. Landfill according to current federal, state and local regulations, or incinerate in a high-temperature incinerator designed to burn fluorine-containing materials. Processing, use or contamination may make this information inaccurate or incomplete.

Section 14 - Transportation information

Shipping Class: Not regulated by DOT.

Section 15 - Regulatory information

All components of this product are listed on the Toxic Substances Control Act (TSCA) Section 8(b) Chemical Inventory and the Canadian Environmental Protection Act (CEPA) provisional domestic

substances list (DSL). This product is not a "hazardous substance" as defined by OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is not a "controlled product" as defined by the Canadian Workplace Hazardous Materials Information System (WHMIS).

SARA 313 Toxic Chemicals: Components not listed

SARA 311/312:
Acute: No
Chronic: No
Fire: No
Reactivity: No
Sudden Release of Pressure: No

SARA 302 Extremely Hazardous Substances: Components not listed

Polytetrafluoroethylene is listed on the Pennsylvania Hazardous Substance List.

Section 16 - Additional Information

NFPA Ratings (Scale of 0-4):
Health=1
Fire=0
Reactivity=0

To our knowledge, the information contained herein is accurate as of the date of this document. However, neither Solvay Solexis Inc. nor any of its affiliates makes any warranty, expressed or implied, or accepts any liability in connection with this information or its use. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right. The user alone must finally determine suitability of any information or material for any contemplated use, the manner of use and whether any patents are infringed. This information gives typical properties only and is not to be used for specification purposes.

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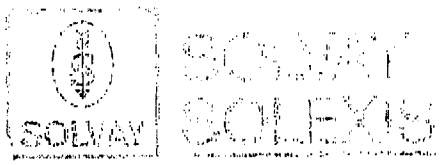
AR226-3546

ATTACHMENT C



November 11, 2003

Ms. Lynn Hall
GE Plastics
2148 North 2753rd Road
Ottawa, IL 61250

Dear Lynn,

I have attached a copy of the C8 report. Please let me know if I can provide any additional information.

Regards,

Tom Livesey
Algoflon PTFE Technical Service

Exygen RESEARCH
Precise Research. Proven Results.

Analytical Report

Fluorochemical Characterization of Wastewater Samples

Solvay Solexis PFOA Sampling 3/03

Exygen Research Laboratory Report No. L34300

Testing Laboratory

Exygen Research
3058 Research Drive
State College, PA 16801

Requester

Warren H. Buck, PhD.
Solvay Solexis
10 Leonard Lane
Thorofare, NJ 08086

3058 Research Drive
State College, PA 16801, USA
T: 800.281.3219
F: 814.272.1019
exygen.com

000177

1 Introduction

Results are reported for the analysis of water samples received by Centre Analytical Laboratories, Inc. (dba Exygen Research) (Exygen) from Solvay Solexis. This report presents results assigned to Exygen Research study number L34300.

Specific fluorochemical characterization by liquid chromatography / tandem mass spectrometry (LC/MS/MS) was requested for all samples. A single sample was received for analysis.

The samples were prepared and analyzed by LC/MS/MS for the following list of fluorochemicals:

- Table 1: Target Analysis

Compound Name	Acronym
Perfluorooctanoic Acid	PFOA

2 Sample Receipt

The sample was submitted in a plastic container, at ambient temperature. No sample collection date was supplied. The sample was received on 3/14/03. Chain-of-custody information is presented in Attachment C.

3 Holding Times

The analytical method used was validated against a maximum holding time of 14 days in water samples. All samples were analyzed within 14 days of receipt.

4 Methods - Analytical and Preparatory

4.1 LC/MS/MS

4.1.1 Sample Preparation for LC/MS/MS Analysis

Water samples were initially treated with 200 uL of 250 mg/L sodium thiosulfate solution to remove residual chlorine. Solid phase extraction (SPE) was used to prepare the samples for LC/MS/MS analysis. A forty-milliliter portion of sample was transferred to a C_{18} SPE cartridge. The cartridge was eluted with 40% methanol: water. The eluate was discarded. The cartridge was then eluted with 100% methanol. A 5 mL portion of methanol was collected for analysis by LC/MS/MS. This treatment resulted in an eight-fold concentration of the samples prior to analysis.

4.1.2 Sample Analysis by LC/MS/MS

A Hewlett-Packard HP1100 HPLC system coupled to a Micromass Ultima MS/MS was used to analyze the sample extracts. Analysis was performed using selected reaction monitoring (SRM). Samples were extracted on 3/26/03 and analyzed on 3/27/03 and 3/28/03. Raw analytical data can be found in Attachment D.

5 Analysis

5.1 Calibration

A 6-point calibration curve was analyzed at the beginning of the analytical sequence and throughout the run for the compounds of interest. The calibration points were prepared at 25, 50, 100, 250, 500, and 1000 ng/L (ppt), as perfluorooctanoic acid (PFOA). The instrument response versus the concentration was plotted for each point. Using linear regression with 1/x weighting, the slope, y-intercept and correlation coefficient (r) and coefficient of determination (r^2) were determined. A calibration curve is acceptable if $r \geq 0.992$ ($r^2 \geq 0.985$).

Calibration standards for MS/MS analysis were prepared using the same SPE procedure used for samples.

For the results reported here, calibration criteria were met.

5.2 Blanks

Extraction blanks were prepared and analyzed with every extraction batch of samples. The extraction blanks should not have any target analytes present at or above the concentration of the low-level calibration standard. For these samples, the extraction blanks were compliant.

Instrument blanks in the form of clean methanol solvent were also analyzed after every high-level calibration standard, and after known high-level samples. Again, the blanks should not have any target analytes present at or above the low-level calibration standard. For the samples presented here the instrument blanks are compliant.

5.3 Surrogates

Surrogate spikes are not a component of the LC/MS/MS analytical method.

5.5 Duplicates

The sample was analyzed in duplicate. Results are given along with the sample results in Attachment A.

5.6 Laboratory Control Samples

Milliq water was spiked with PFOA at 50 and 500 ng/L. with each extraction set. All laboratory control samples showed recoveries between 70 and 130%.

6 Data Summary

Please see Attachment A for a detailed listing of the analytical results. All results are reported in (ng/L) parts per trillion as PFOA.

7 Data/Sample Retention

Samples are disposed of one month after the report is issued unless otherwise specified. All electronic data is archived on retrievable media and hard copy reports are stored in data folders maintained by Exygen.

8 Attachments

8.1 Attachment A: Results

8.2 Attachment B: Chain of Custody

8.3 Attachment C: LC/MS/MS Raw Analytical Data

9 Signatures

Paul Connolly, Team Leader, LC/MS — Date 3/28/03

John M. Flaherty, Vice President — Date 3/28/03

Other Lab Members Contributing to Data

Karen Smith

Exygen™ RESEARCH
Precise Research. Proven Results.

Analytical Report

Analytical Results Solvay Solexis Wastewater Sampling 3/03

Solvay Solexis Sample Identification	PFOA (ng/L)
03083	74000
03083 (laboratory duplicate)	75100

Limit of Detection (LOD) for the procedure is appoximately 10 ng/L

Limit of Quantitation (LOQ) for the procedure is 50 ng/L

ND - Compound not detected

NQ - Compound detected at a level between the LOD and LOQ. Result is not quantifiable.

ND < LOD < NQ < LOQ

3058 Research Drive
State College, PA 16801, USA
T: 814.272.1039
F: 814.231.1580
exygen.com

SOLVAY SOLEXIS

March 13, 2003

John Flaherty
Exygen Research, Inc.
3058 Research Drive
State College, PA 16801

Dear John:

I have enclosed a sample of wastewater from one of our Algoflon® PTFE latex customers. I have given it the code 03083. I would like to have it analyzed for perfluorooctanoic acid (PFOA), in duplicate. Based on waste water samples from PVDF lattices that I have analyzed, I would guess that the concentration might be in the range of tens of parts per million, but I don't know specifically what the customer's process is. Please send the results to me, and bill Accounts Payable under purchase order #1230707. Please call if there are any questions about the request.

Sincerely,

Warren H. Buck

Warren H. Buck, Ph. D.
Analytical Services Manager

03083 L34300-1
3/14/2003 1025
SLK

10 LEONARD LANE • THOROFARE, NJ • 08086
PHONE: 856-251-3445 • FAX: 856-384-6167

Exygen RESEARCH
3058 Research Drive
State College, PA 16801
Phone: 800-281-3219
Fax: 814-272-1019

Laboratory Sample Log-in Sheet (Environmental)

Complete upon sample receipt:		
Client and/or Project Name	Solvay Solexis	
Method of Delivery	☐ Walk-in ☐ Pick-up ☐ UPS ☑ FedEx ☐ Air Borne Tracking #: 4963 8168 8416 ☐ Other (explain)	
Chain of Custody	Custody Seals: ☑ present, & ☑ intact / ☐ broken (explain) ☐ absent	Chain-of-Custody Record: ☑ present ☐ absent
Temperature Preservation	Thermometer ID: 00234 Cooler ID: Box — Cooler temp: NA °C Cooler ID: ____ — Cooler temp: ____ °C Cooler ID: ____ — Cooler temp: ____ °C Cooler ID: ____ — Cooler temp: ____ °C	Samples Received: ☐ on ice ☐ in ice melt ☐ with ice pack ☐ none
Explanation		
Completed by	Signature: [signature] Date (Time): 3/14/2003 1025	
Complete during sample log-in:		
LIMS Log-in #	L34300	
Physical Condition	Samples intact? ☑ Yes ☐ No (explain)	
Chain of Custody	Samples received agree with COC record? ☑ Yes ☐ No (explain)	
Analysis Request	Analysis request clear? ☑ Yes ☐ No (explain)	
Preservation	Sample containers appropriate? ☐ Yes ☐ No (explain) Chemical preservation appropriate? ☐ Yes ☐ No (explain) Samples received within holding time? ☐ Yes ☐ No (explain) Sample volume/mass adequate? ☐ Yes ☐ No (explain)	
Explanation		
Completed by	Signature: [signature] Date: 3/14/2003 1509	
Complete following resolution of any nonconformances:		
Client Contacted	☐ Yes Client: ____ Date (Time): ____ ☐ No	
Resolution		
Completed by	Signature: ____ Date: ____	

LOGIN CHAIN OF CUSTODY REPORT (ln01)
Mar 14 2003, 03:22 pm

Login Number: L34300
Account: 2980 SOLVAY SOLEXIS

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L34300-1	03083		14-MAR-03	

SAMPLE STORED IN ROOM 008-D0002363.

Signature: [illegible]

Date: 3/14/03

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ng/L	Set No:	032603B SOLVAY
Exygen Study No:	L34300	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	PFOA	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 7
Ions Monitored:	413 -> 369	Sample Volume:	40.0 mL	Extraction Date:	03/26/03
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/27-28/03

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ng/L)	Dilution Factor	Peak Area	PFOA Found (ng/L)	Amount PFOA Added (ng/L)	Recovery (%)
XC031703-0	-	C	032603B-3001	0	-	0	-	-	-
XC031703-1	-	CS	032603B-3002	25	-	1254	-	-	-
XC031703-2	-	CS	032603B-3003	50	-	2231	-	-	-
XC031703-3	-	CS	032603B-3004	100	-	4792	-	-	-
XC031703-4	-	CS	032603B-3005	250	-	11709	-	-	-
XC031703-5	-	CS	032603B-3006	500	-	24453	-	-	-
XC031703-6	-	CS	032603B-3007	1000	-	48696	-	-	-
Methanol Wash	-	C	032603B-3008	-	-	0	-	-	-
0106020 Control	NA	C	032603B-3009	-	1	0	ND	-	-
0106020 Spk A	NA	LCS	032603B-3010	-	1	2670	48.9	50	98
0106020 Spk B	NA	LCS	032603B-3011	-	1	26791	499	500	100
L34300-1	03083	S	032603B-3012	-	100	39719	74000	-	-
L34300-1 Rep	03083	S	032603B-3013	-	100	40300	75100	-	-
XC031703-1	-	CS	032603B-3014	25	-	1833	-	-	-
XC031703-2	-	CS	032603B-3015	50	-	2803	-	-	-
XC031703-3	-	CS	032603B-3016	100	-	5777	-	-	-
XC031703-4	-	CS	032603B-3017	250	-	14527	-	-	-
XC031703-5	-	CS	032603B-3018	500	-	29456	-	-	-
XC031703-6	-	CS	032603B-3019	1000	-	59342	-	-	-

PFOA Found (ng/L) = (peak area - intercept) / slope x DF

Recovery (%) = $\frac{\text{[PFOA found (ng/L)-PFOA found in control (ng/L)]}}{\text{amount PFOA added (ng/L)}} \times 100$

Standard Curve : Linear (1/x weighted)
Intercept = 50.0803
Slope = 53.5769
Coef. Of Det. = 0.986138

CS = Calibration standard
C = Control sample
S = Sample

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

CK = Check Standard
ND = Not detected = Response between 0 and LOD
NQ = Not quantifiable = Response between LOD and LOQ

Spreadsheet prepared by: KR / 03/28/03

SOLVAY SOLEXIS

March 13, 2003

John Flaherty
Exygen Research, Inc.
3058 Research Drive
State College, PA 16801

Dear John:

I have enclosed a sample of wastewater from one of our Algoflon® PTFE latex customers. I have given it the code 03083. I would like to have it analyzed for perfluorooctanoic acid (PFOA), in duplicate. Based on waste water samples from PVDF lattices that I have analyzed, I would guess that the concentration might be in the range of tens of parts per million, but I don't know specifically what the customer's process is. Please send the results to me, and bill Accounts Payable under purchase order #1230707. Please call if there are any questions about the request.

Sincerely,

Warren H. Buck

Warren H. Buck, Ph. D.
Analytical Services Manager

03083 L34300-1
3/14/2003 1025
SLK

10 LEONARD LANE • THOROFARE, NJ • 08086
PHONE: 856-251-3445 • FAX: 856-384-6167

Exygen™ RESEARCH

3058 Research Drive
State College, PA 16801

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

SAMPLE TRANSFER SHEET

Protocol Number: NA Exygen Study Number: L34300

Exygen Sample #	Sponsor Sample #	Exygen Sample #	Sponsor Sample #
L34300-1	03083	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Amy Sheehan 03/26/03
Requested By (Printed Name/Date/Time)

Samples removed from: D0002363 Box# — Shelf# —
Samples removed from: — Box# — Shelf# —

Samples transferred to the custody of Amy Sheehan

MH 03/26/03 1270
Sample Custodian Initials/Date/Time

Samples received from custodian; Samples moved to Ref 32

[illegible] 03/26/03 1235
Laboratory Personnel Initials/Date/Time

Samples removed from ref. 32
Samples returned to ~~D0002363~~ D0002363 9/1/09

MH 03/27/03 1700
Sample Custodian Initials/Date/Time

Comments:

December 19, 2002/6

Exygen RESEARCH
3058 Research Drive
State College, PA 16801
Phone: 814-272-1039
Fax: 814-231-1580

Internal Chain of Custody/Fortification Sheet

Exygen Study Number: L34300 Matrix: Wastewater
Sponsor Study/Protocol No: NA
The samples listed below were removed from refrigerator No. 32
Time 1240 Date 03/26/03 Initials AMB

CLIENT SAMPLE ID	EXYGEN ID NUMBER	VOLUME (mL)	FORTIFICATION (ng)
na	0106020 Control	40.0	-
na	0106020 Spk A	40.0	2.0
na	0106020 Spk B	40.0	20.0
03083	L34300-1	40.0	-
03083	L34300-1 Rep	40.0	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

	Spiking Solution Used	Volume Used for Spiking	Initial/Date
0106020 Spk A	F010603-4 (10 ng/mL)	200 µL (200 µL micropipet)	KL 03/26/03
0106020 Spk B	F010603-3 (100 ng/mL)	200 µL (200 µL micropipet)	KL 03/26/03
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

All samples were measured:
Time 1410 Date 03/26/03 Initials AMB

After measuring samples were returned to refrigerator No. 32
Time 1430 Date 03/26/03 Initials AMB

Comments: 200 µL of 250 mg/mL sodium thiosulfate was added to all samples before spiking. Initials/Date: AMB 03/26/03

Analysis Summary:
Data Set: 032603B SOLVAY Initials/Date: KL / 03/27/03
Data Set: - Initials/Date: - / -
Data Set: - Initials/Date: - / -

Set extraction/analysis data verified by: JMF Date: 3/28/03

July 26, 2001/6

Exygen RESEARCH
8 Research Drive
State College, PA 16801
Phone: 814-272-1039
Fax: 814-231-1580

SAMPLE EXTRACTION AND ANALYSIS TRACKING SHEET

EXYGEN STUDY NUMBER: L34300
MATRIX: Wastewater
METHOD: 01M-008-046[$$]
ANALYTES: PFOA
PROTOCOL NUMBER: NA

Client ID	Exygen ID	STEP 1	STEP 2	Dilutions (mL/mL)	STEP 3	Dilutions (mL/mL)	STEP 4	Reagents/ Materials	Lot #
na	0106020 Control			-		-	-	Methanol	42350251
na	0106020 Spk A			-		-	-	C18 SPE	W214082
na	0106020 Spk B			-		-	-	Type I Water	NA
03083	L34300-1			0.1/10		-	-	-	-
03083	L34300-1 Rep	↓	↓	0.1/10	↓	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
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-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	*Initials/Date*	AMB 03/26/03
-	-	-	-	-	-	-	-	-	-
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-	-	-	-	-	-	-	-	HPLC	
-	-	-	-	-	-	-	-	Methanol	42302244
-	-	-	-	-	-	-	-	Ammonium Acetate	T42476
-	-	-	-	-	-	-	-	Type I water	NA
-	-	-	-	-	-	-	-	-	-
Initials/Date	-	AMB 03/26/03	AMB 03/26/03	03/26/03	03/27/03	-	-	*Initials/Date*	03/27/03

STEP 1: SPE column clean-up
STEP 2: Final volume to 5 mL collected in 15 mL polypropolene tubes
STEP 3: LC/MS/MS analysis
STEP 4: LC/MS/MS reanalysis.

*Initials and date under each step indicates the personnel that performed this step.
$$ Method of Analysis for the Determination of Ammonium Perfluorooctanoate (APFO) in Water

COMMENTS:

Final extracts stored in refrigerator 32 Initials: AMB Date: 03/26/03

000189

Exygen RESEARCH
3058 Research Drive
State College, PA 16801
Phone: 814-272-1039
Fax: 814-231-1580

PREPARATION OF EXTRACTED CALIBRATION STANDARDS

Exygen STUDY NO. L34300

Protocol No.: None
Method No.: 01M-008-046*
Exygen Study No.: NA
Analytes: PFOA
Matrix: Type I Water^
Sample Vol: 40 mL

Sponsor Sample ID	Exygen Sample ID	Sample Description	Fort. Solution ID	Fort. Soln. Conc. (ng/mL)	Fort. Volume (µL)	Micropipet used (µL)	Fort. Level (ppt)	Final Solution ID # **	Reagents/ Materials	Lot #
NA	0106020	Type I Water^	-	-	-	-	-	XC031703-0	Methanol	42350251
NA	0106020	Type I Water^	F010603-4	10	100	200	25	XC031703-1	C18 SPE	W209561
NA	0106020	Type I Water^	F010603-4	10	200	200	50	XC031703-2	Type I Water	NA
NA	0106020	Type I Water^	F010603-4	10	400	200	100	XC031703-3	-	-
NA	0106020	Type I Water^	F010603-3	100	100	200	250	XC031703-4	-	-
NA	0106020	Type I Water^	F010603-3	100	200	200	500	XC031703-5	-	-
NA	0106020	Type I Water^	F010603-3	100	400	200	1000	XC031703-6	-	-
NA	0106020	Type I Water^	F010603-6	100	100	200	250	XC031703-7		
-	-	-	-	-	-	-	-	-	Initials/Date:	CEB 3/17/03

Vertical arrows in a column indicate identical values.

***This must be a unique number. Use this system: Extracted Calibration Soln ID #: XCMMDDYY-0,1,2,3. etc.*

Samples removed from refrigerator / freezer # 32 Time: 1000 Initials/Date: CEB / 3/17/03

40 mL of each sample measured using a 50 mL graduated cylinder. Initials/Date: CEB / 3/17/03

After measuring, samples returned to refrigerator / freezer # 32 Time: 1550 Initials/Date: CEB / 3/17/03

Samples fortified: Initials/Date: [illegible] / 03/17/03

SPE clean-up: Initials/Date: CEB / 3/17/03

Final volume adjusted to 5 mL: Initials/Date: CEB / 3/17/03

Extracts placed in refrigerator # 32 Initials/Date: CEB / 3/17/03

"THIS IS AN EXACT COPY OF THE ORIGINAL DOCUMENT"
BY [illegible] DATE 03/28/03

STANDARD EXPIRATION DATE: 3/31/03

Comments: ^This type I water has been filtered through a hypercarb filter

* Method of Analysis for the Determination of Ammonium Perfluorooctanoate (APFO) in Water.

July 10, 2001/0

MassLynx - Sample List

Sample List: C:\MassLynx\fluorochemicals.pro\SampleDB\032603B SOLVAY.SPL

Signature: By CENTRE\Karens (Karen Risha)

At Thursday, March 27, 2003 3:44:36 PM

Reason Create Sample list

Printed: Friday, March 28, 2003 9:20:48 AM KR 03/28/03

Exygen STUDY NO. L34300

Page Position (1, 1)

	Vial	File Name	LIMS ID	Client ID	Sample Description	Matrix	Sample Type	Conc (ng/L)	Conc B	Conc C	Test ID	DF
1	1	032603B-3001	---	---	XC031703-0, 0 ng/L Standard	---	Standard	0	---	---	0.000000	1.000000
2	2	032603B-3002	---	---	XC031703-1, 25 ng/L Standard	---	Standard	25	---	---	0.000000	1.000000
3	3	032603B-3003	---	---	XC031703-2, 50 ng/L Standard	---	Standard	50	---	---	0.000000	1.000000
4	4	032603B-3004	---	---	XC031703-3, 100 ng/L Standard	---	Standard	100	---	---	0.000000	1.000000
5	5	032603B-3005	---	---	XC031703-4, 250 ng/L Standard	---	Standard	250	---	---	0.000000	1.000000
6	6	032603B-3006	---	---	XC031703-5, 500 ng/L Standard	---	Standard	500	---	---	0.000000	1.000000
7	7	032603B-3007	---	---	XC031703-6, 1000 ng/L Standard	---	Standard	1000	---	---	0.000000	1.000000
8	92	032603B-3008	---	---	Methanol Wash	---	Blank	---	---	---	0.000000	1.000000
9	61	032603B-3009	---	---	0106020 Control	---	Blank	---	---	---	0.000000	1.000000
10	62	032603B-3010	---	---	0106020 Spk A, 50 ng/L	---	QC	50	---	---	0.000000	1.000000
11	63	032603B-3011	---	---	0106020 Spk B, 500 ng/L	---	QC	500	---	---	0.000000	1.000000
12	64	032603B-3012	---	---	L34300-1, DF=100	---	Analyte	---	---	---	0.000000	100.000000
13	65	032603B-3013	---	---	L34300-1 Rep, DF=100	---	Analyte	---	---	---	0.000000	100.000000
14	2	032603B-3014	---	---	XC031703-1, 25 ng/L Standard	---	Standard	25	---	---	0.000000	1.000000
15	3	032603B-3015	---	---	XC031703-2, 50 ng/L Standard	---	Standard	50	---	---	0.000000	1.000000
16	4	032603B-3016	---	---	XC031703-3, 100 ng/L Standard	---	Standard	100	---	---	0.000000	1.000000
17	5	032603B-3017	---	---	XC031703-4, 250 ng/L Standard	---	Standard	250	---	---	0.000000	1.000000
18	6	032603B-3018	---	---	XC031703-5, 500 ng/L Standard	---	Standard	500	---	---	0.000000	1.000000
19	7	032603B-3019	---	---	XC031703-6, 1000 ng/L Standard	---	Standard	1000	---	---	0.000000	1.000000

MassLynx - Sample List

Sample List: C:\MassLynx\fluorochemicals.pro\SampleDB\032603B SOLVAY.SPL
Signature: By CENTRE\Karens (Karen Risha)
At Thursday, March 27, 2003 3:44:36 PM
Reason Create Sample list
Printed: Friday, March 28, 2003 9:20:48 AM 03/28/03

Exygen STUDY NO. L3130

MS Method	HPLC Method	MS Tune File	Inj Volume
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000
PFOA	Water	PFOA Tune	15.000000

LC/MS/MS SYSTEM AND OPERATING CONDITIONS

Sponsor Protocol No: NA

Exygen Study No: L34300

Instrument:	Micromass Quattro Ultima (LC/MS/MS Unit #7)
Computer:	IBM IntelliStation M Pro
Software:	Windows XP Professional: Version 5.1: Service Pack 1 Micromass Limited: MassLynx 4.0
HPLC Equipment:	Hewlett Packard (HP) Series 1100 HP Quat Pump — HP Vacuum Degasser HP Autosampler — HP Column Oven
HPLC Column:	Genesis C-8, 5 cm x 2.1 mm i.d. x 4 µ (Exygen ID: 72A) (JONESCHROMATOGRAPHY: Part No. FK5962E)
Mobile Phase (A) :	2 mM Ammonium Acetate in Type I Water
Mobile Phase (B) :	Methanol

KJ 03/27/03

Analyst: Karen Risha
Exygen Research
3058 Research Drive, State College, PA 16801
Phone: (814) 272-1039 FAX: (814) 231-1580

NOTE: The next 3 pages are computer generated printouts from the masslynx software program. The pages contain the instrument settings used for the analysis of this data set.

All Handwritten Peak ID's by: KJ 03/28/03

Experiment Report

File: c:\masslynx\fluorochemicals.pro\acqudb\pfoa.exp

Signature: At Thursday, March 27, 2003 14:13:39
By CENTRE\Karens (Karen Risha)
Reason update solvent delay

Printed: Thursday, March 27, 2003 14:50:03 KR 03/27/03

Name	Default Experiment
Creation Time	Thu 27 Mar 2003 14:13:39
Instrument Identifier	
Version Number	1.0
Duration (min)	8.0
Calibration Filename	C:\MassLynx\calibration.pro\ACQUDB\NaIRbCs032603.cal
Solvent Delay Start 2	8.0
Solvent Delay End 2	15.0
Solvent Delay Temperature 2	0.0
Solvent Delay Divert Valve Enabled	1
Number Of Functions	1

Function 1 : MRM of 413.00->369.00, Time 0.00 to 8.00, ES-

Type	MRM
Ion Mode	ES-
Parameter File	c:\masslynx\default.pro\acqudb\default.ipr
Inter Channel Delay (sec)	0.1
Span (Da)	0.0
Start Time (min)	0.0
End Time (min)	8.0

Ch	Prnt(Da)	Dau(Da)	Dwell(s)	Cone(V)	Coll(eV)	Delay(s)
1	413.00	369.00	0.20	10.00	10.00	0.03

Method Report

Method File: C:\MassLynx\008-apfo.pro\ACQUDB\Water
Last Modified: Thursday, March 27, 2003 14:09:50

Signature: At Wednesday, March 26, 2003 13:07:14
By CENTRE\karens (Karen Risha)
Reason create HPLC method

Printed: Thursday, March 27, 2003 14:50:56 KR 03/27/03

HP1100 LC Pump Initial Conditions

Solvents	
A%	60.0
B%	40.0
C%	0.0
D%	0.0
Flow (ml/min)	0.300
Stop Time (mins)	15.0
Min Pressure (bar)	0
Max Pressure (bar)	400
Oven Temperature Left(°C)	35.0
Oven Temperature Right(°C)	35.0

HP1100 LC Pump Gradient Timetable

The gradient Timetable contains 10 entries which are :

Time	A%	B%	C%	D%	Flow (ml/min)	Pressure	
0.00	60.0	40.0	0.0	0.0	0.300	400	
0.40	60.0	40.0	0.0	0.0	0.300	400	
1.00	10.0	90.0	0.0	0.0	0.300	400	
7.00	10.0	90.0	0.0	0.0	0.300	400	
7.50	0.0	100.0	0.0	0.0	0.300	400	
9.00	0.0	100.0	0.0	0.0	0.400	400	
9.50	60.0	40.0	0.0	0.0	0.400	400	
13.50	60.0	40.0	0.0	0.0	0.400	400	
14.00	60.0	40.0	0.0	0.0	0.300	400	
15.00	60.0	40.0	0.0	0.0	0.300	400	

HP1100 LC Pump External Event Timetable

The Timetable contains 4 entries which are :

Time	Column Switch	Contact1	Contact2	Contact3	Contact4
Initial	Off	Off	Off	Off	Off
0.00	Off	Off	Off	Off	Off
0.10	Off	On	On	Off	Off
8.00	Off	Off	Off	Off	Off

HP1100 Autosampler Initial Conditions

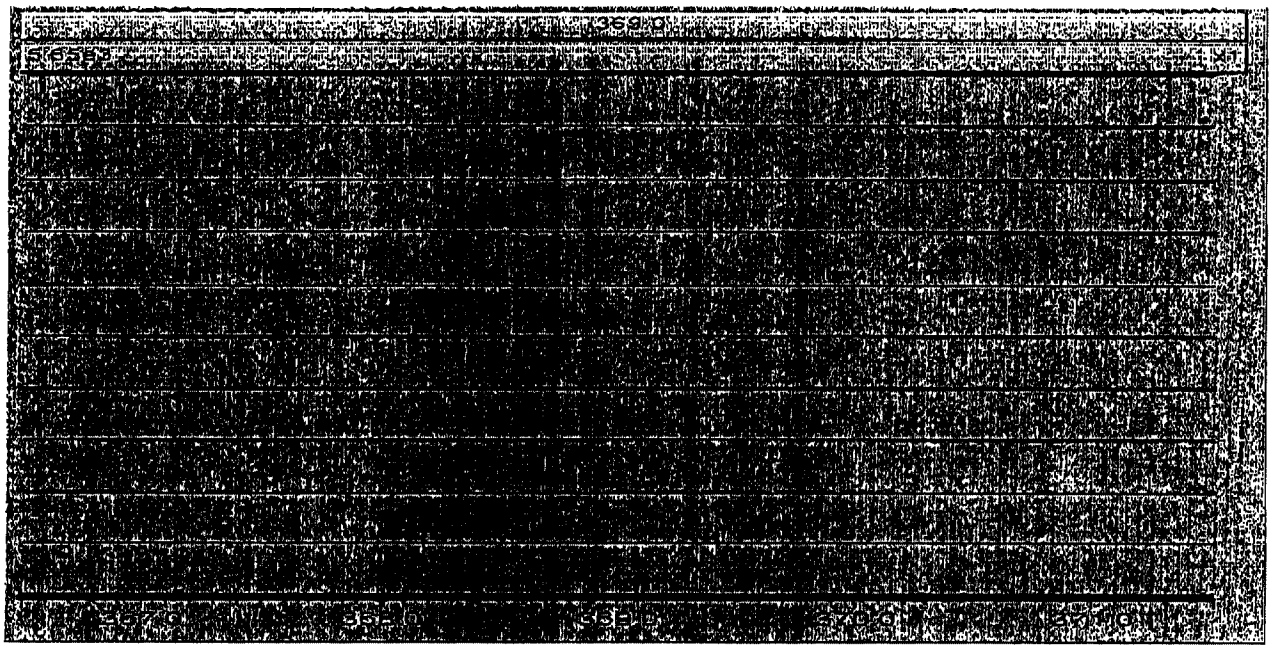
Draw Speed	200.0
Eject Speed (µl/min)	200
Draw Position (mm)	0.10
Stop Time (mins)	15.00
Injection Volume(µl)	15.0
Vial Number	1
Thermostat On	
Thermostat Temperature(°C)	12.0

Tune Parameters Page 1

File: C:\MassLynx\fluorochemicals.PRO\ACQUDB\PFOA Tune.IPR

Signature: At Thursday, March 27, 2003 14:01:08
By CENTRE\Karens (Karen Risha)
Reason new tune file

Printed: Thursday, March 27, 2003 14:51:17 KR 03/27/03



Type	Start Mass	End Mass	Set Mass
Daughter Scan	367	372	413

Source (ES-)	Settings	Readbacks
Capillary (kV)	3.00	-2.94
Cone (V)	10	-11
Hex 1 (V)	0.0	
Aperture (V)	0.0	
Hex 2 (V)	0.0	
Source Temperature (°C)	100	100
Desolvation Temperature (°C)	300	300
Cone Gas Flow (L/Hr)	131	
Desolvation Gas Flow (L/Hr)	669	

Analyser	Settings	Readbacks
LM 1 Resolution	15.0	
HM 1 Resolution	15.0	
Ion Energy 1	1.0	
Entrance	-2	8
Collision	10	9
Exit	2	11
LM 2 Resolution	15.0	
HM 2 Resolution	15.0	
Ion Energy 2	2.2	
Multiplier (V)	700	-696

Pressure Gauges	
Pirani Pressure(mbar)	1.14e-3
Penning Pressure(mbar)	OFF

MUX Configuration	
Probe	Standard

Quantify Calibration Report

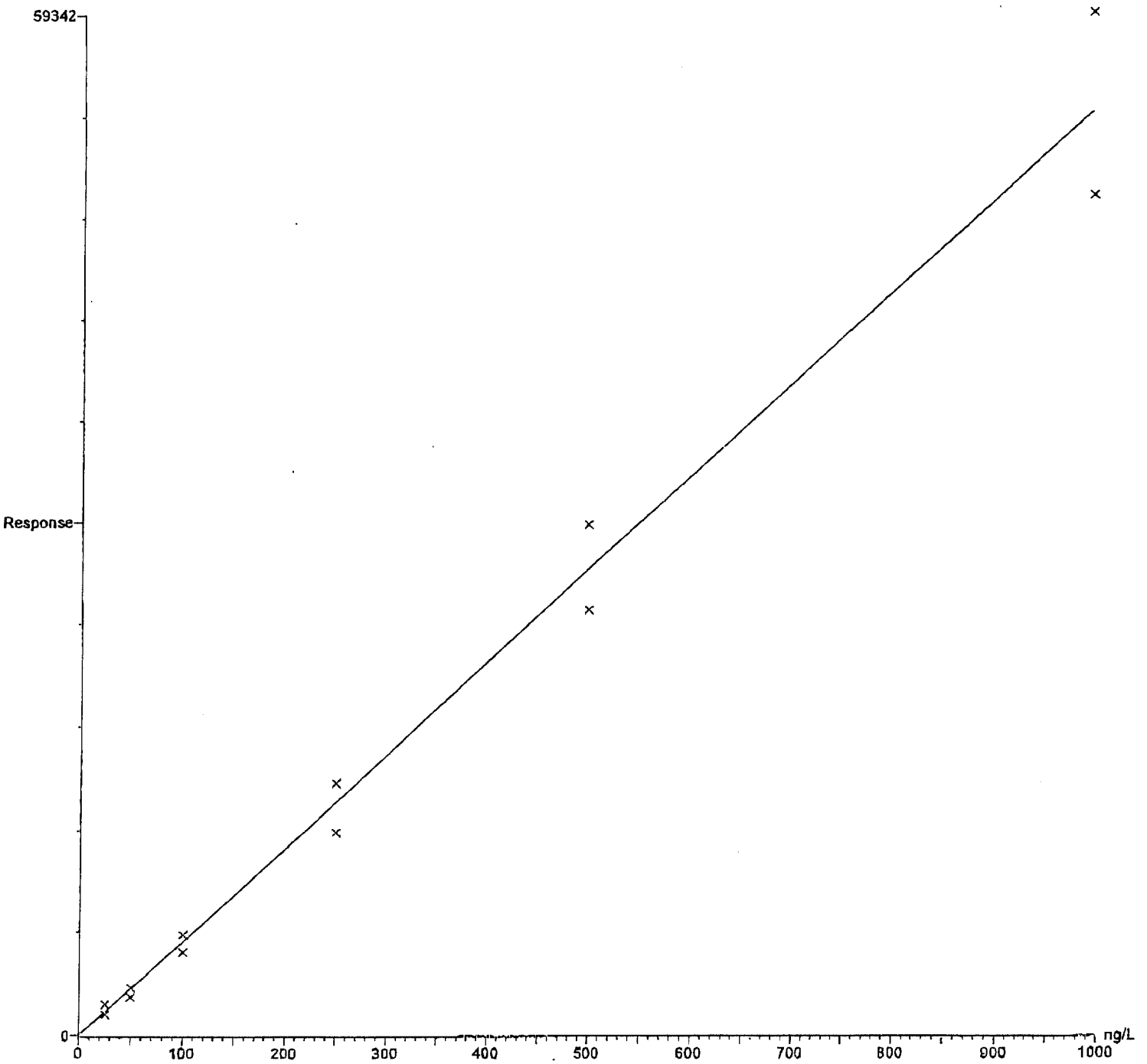
Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

kf 03/28/03

Method: C:\MassLynx\fluorochemicals.PRO\MethDB\PFOA 032603.mdb 28 Mar 2003 08:18:18
Calibration: 28 Mar 2003 08:49:19

Compound name: PFOA
Correlation coefficient: r = 0.993045, r^2 = 0.986138
Calibration curve: 53.5769 * x + 50.0803
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Exygen Research, 3058 Research Drive, State College, PA 16801, Data acquired on LCMSMS#7

Quantify Sample Report

Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

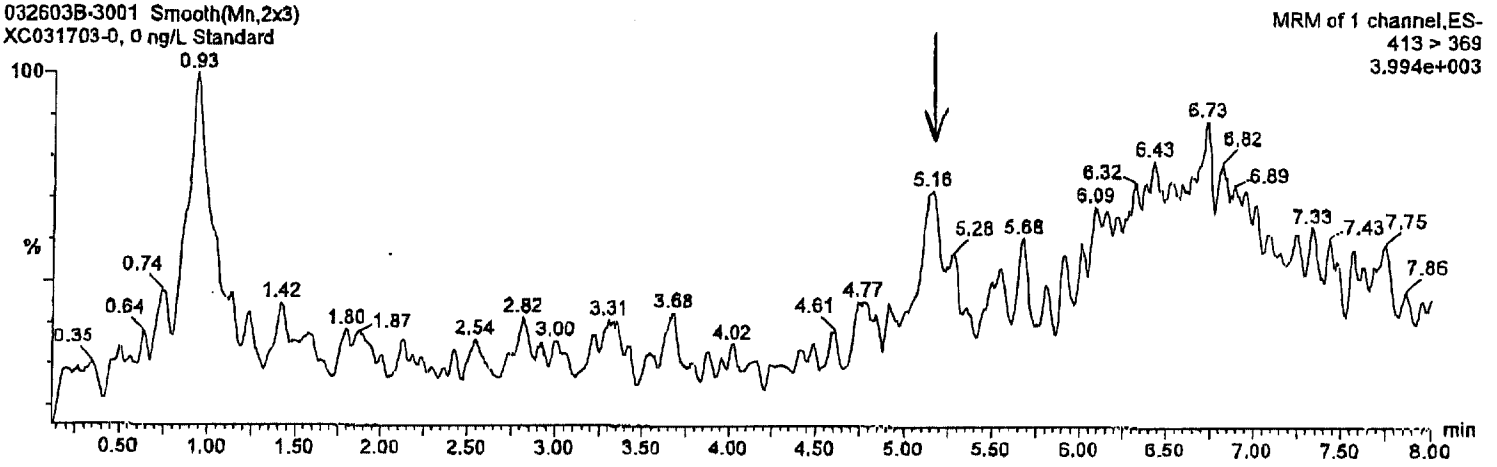
Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Initials KR
Date 03/28/03
Run# 032603B-3001 To 032603B-3019

Method: C:\MassLynx\fluorochemicals.PRO\MethDB\PFOA 032603.mdb 28 Mar 2003 08:18:18
Calibration: 28 Mar 2003 08:49:19

Name: 032603B-3001
Date: 27-Mar-2003
Time: 21:23:58
Description: XC031703-0, 0 ng/L Standard

PFOA



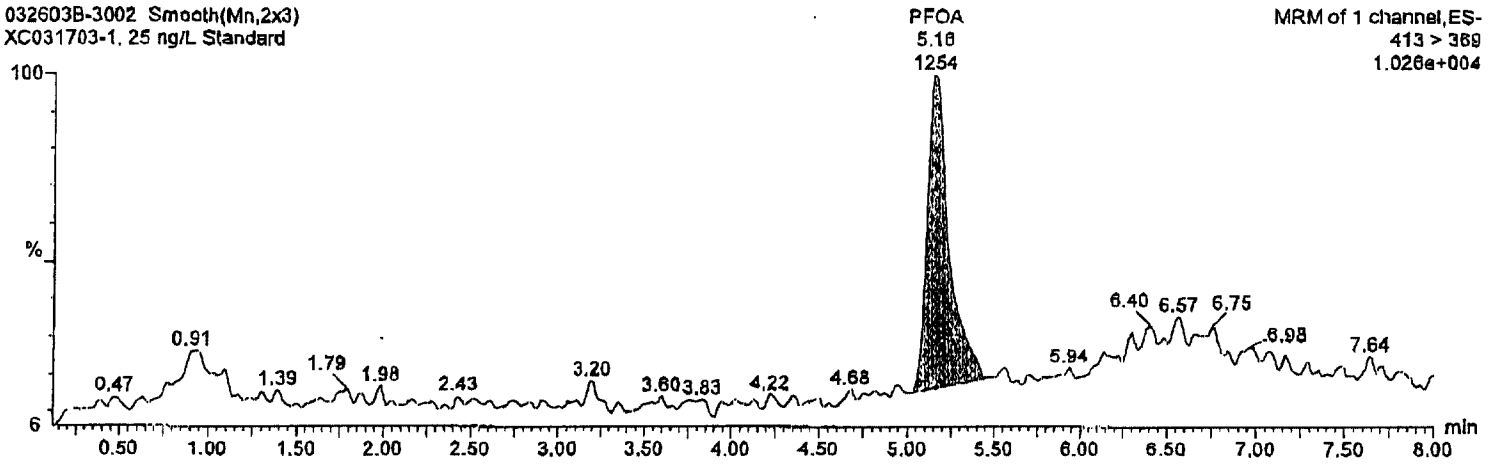
Quantify Sample Report

Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3002
Date: 27-Mar-2003
Time: 21:40:40
Description: XC031703-1, 25 ng/L Standard

PFOA



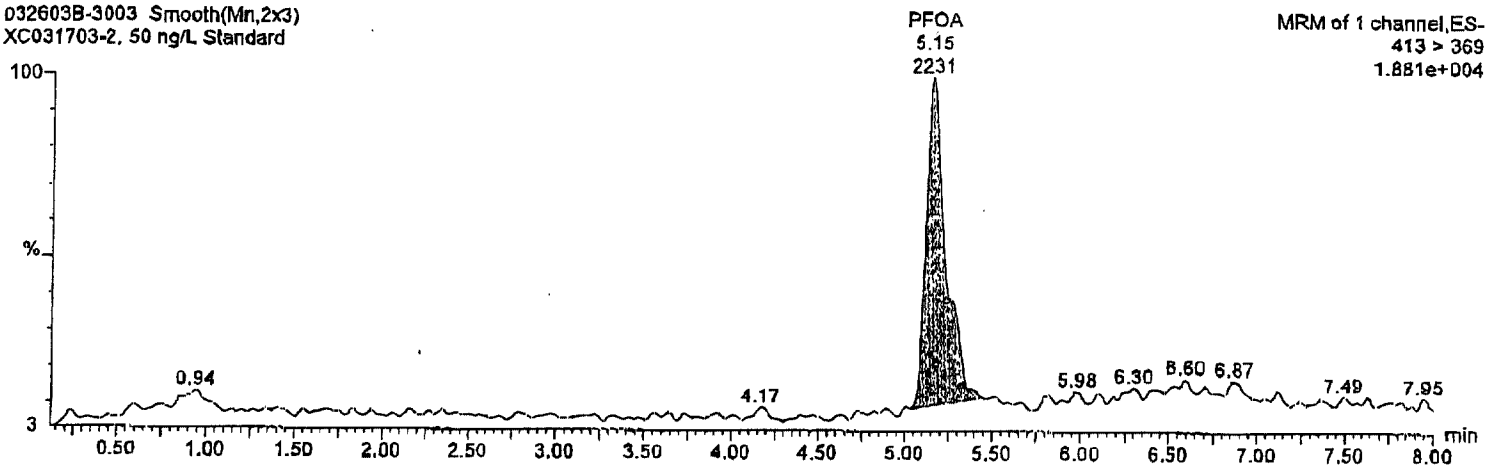
Quantify Sample Report

Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3003
Date: 27-Mar-2003
Time: 21:57:17
Description: XC031703-2, 50 ng/L Standard

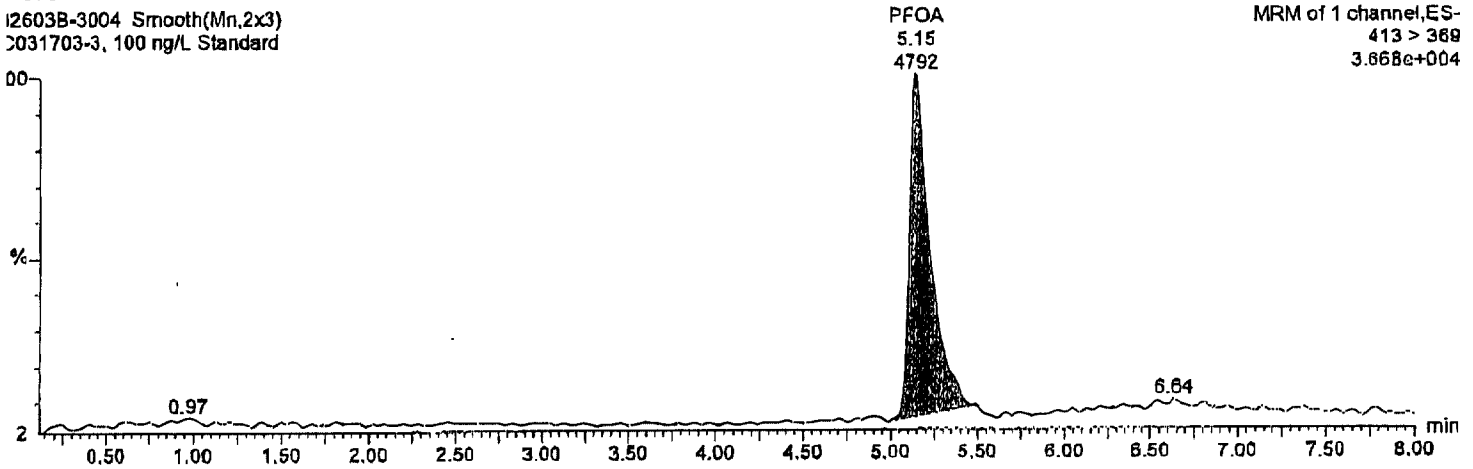
PFOA



uantify Sample Report
udy No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

ataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
gna' ': At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
inted: Friday, March 28, 2003 9:07:19 AM

ame: 032603B-3004
ate: 27-Mar-2003
me: 22:13:54
escription: XC031703-3, 100 ng/L Standard

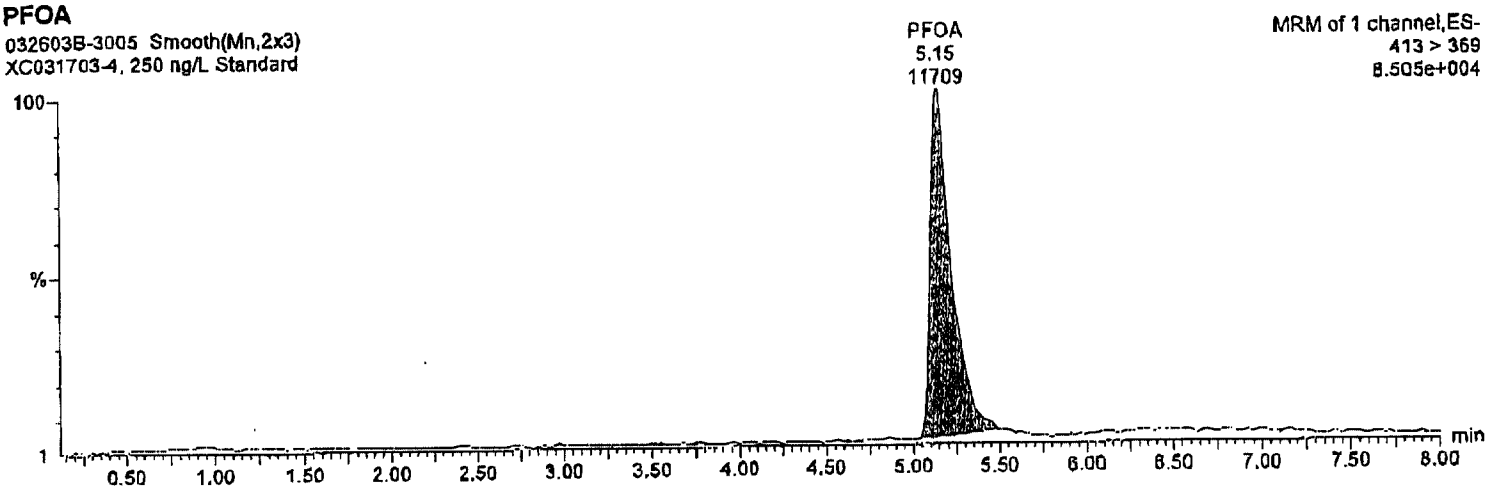


Quantify Sample Report
Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset:	C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld	
S[illegible]ture:	At	Friday, March 28, 2003 9:07:08 AM
	By	CENTRE\Karens (Karen Risha)
	Reason	Processing
Printed:	Friday, March 28, 2003 9:07:19 AM	

Name: 032603B-3005
Date: 27-Mar-2003
Time: 22:30:43
Description: XC031703-4, 250 ng/L Standard

PFOA



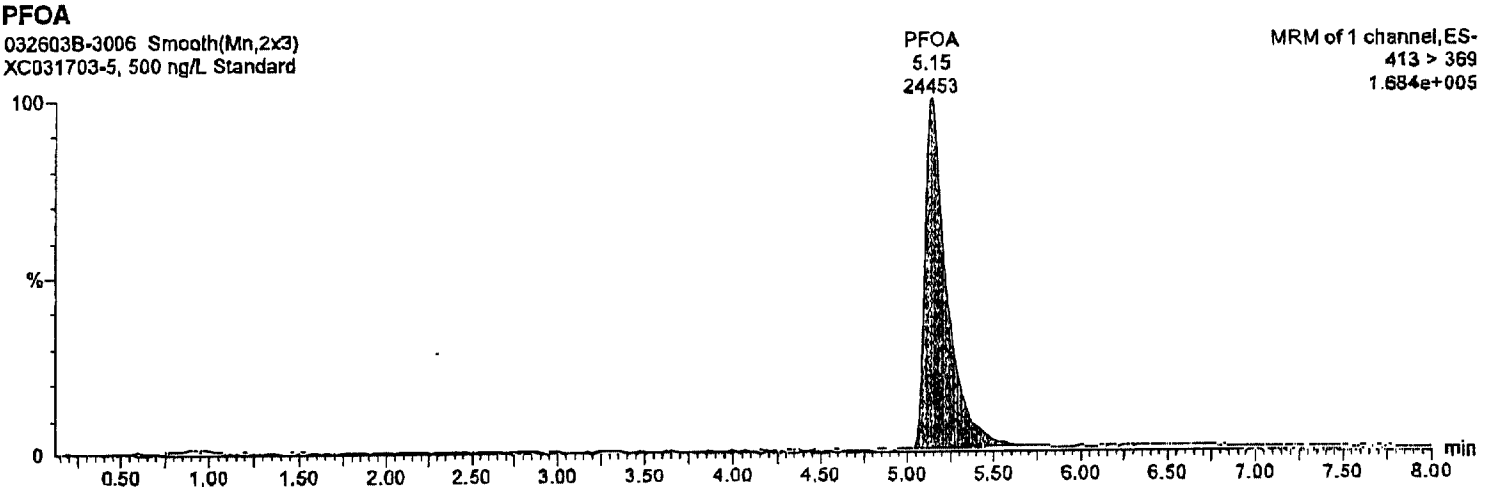
Quantify Sample Report

Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3006
Date: 27-Mar-2003
Time: 22:47:27
Description: XC031703-5, 500 ng/L Standard

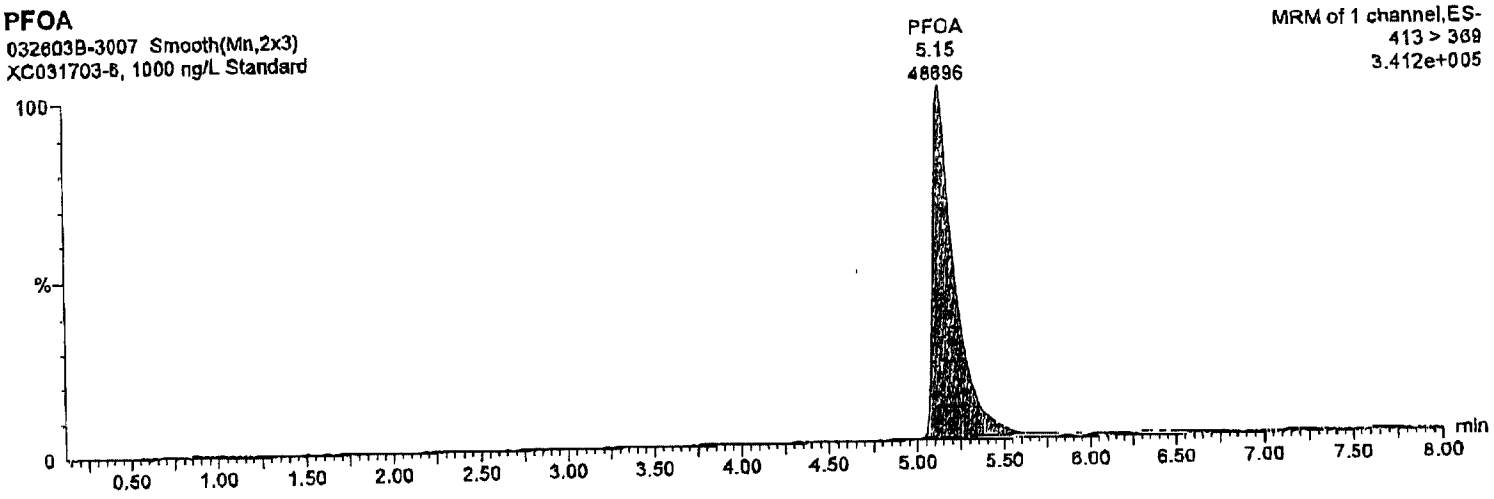
PFOA



Quantify Sample Report
Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Si ure: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3007
Date: 27-Mar-2003
Time: 23:04:17
Description: XC031703-6, 1000 ng/L Standard

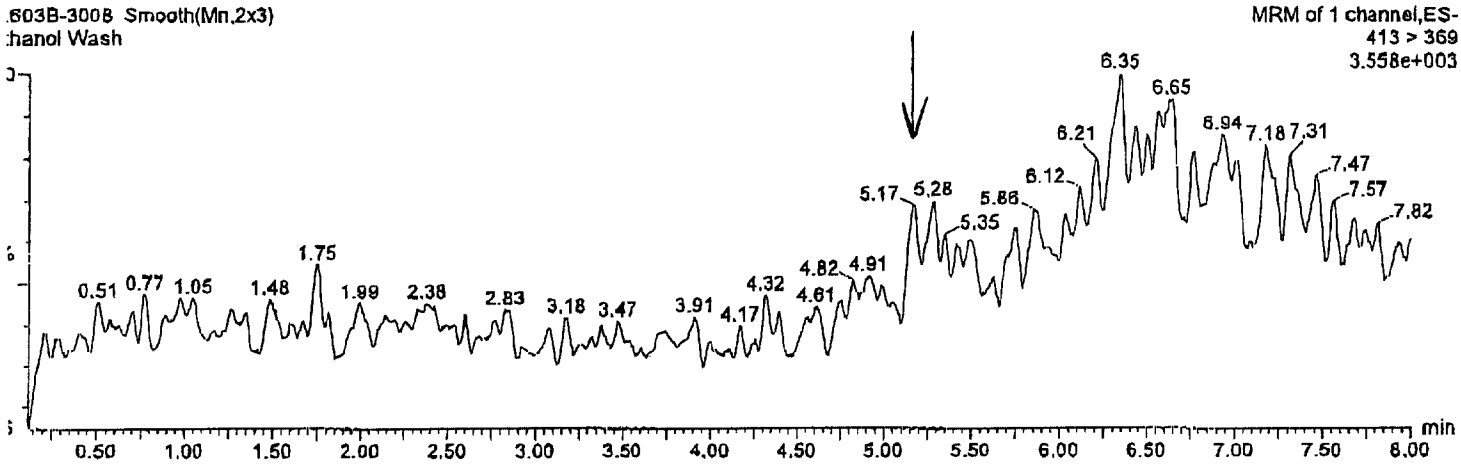


ıantify Sample Report
ıdy No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

taset:	C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld	
ınature:	At	Friday, March 28, 2003 9:07:08 AM
	By	CENTRE\Karens (Karen Risha)
	Reason	Processing
nted:	Friday, March 28, 2003 9:07:19 AM	

me: 032603B-3008
te: 27-Mar-2003
ne: 23:20:57
scription: Methanol Wash

OA

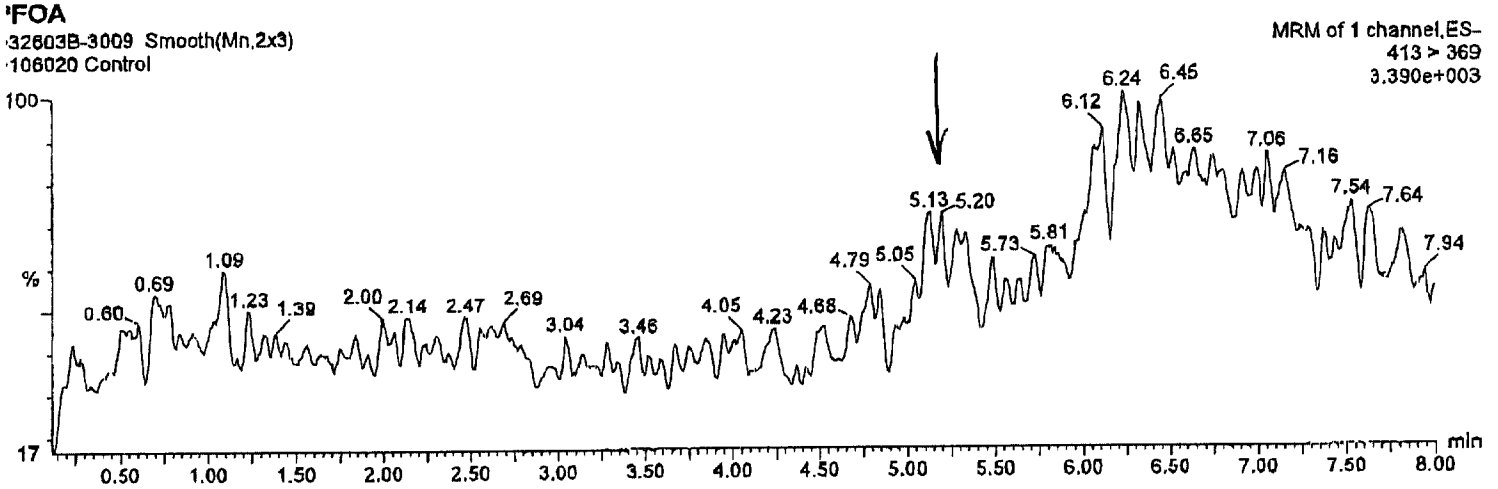


Quantify Sample Report
Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Sign ?e: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3009
Date: 27-Mar-2003
Time: 23:37:41
Description: 0106020 Control

PFOA
032603B-3009 Smooth(Mn,2x3)
0106020 Control

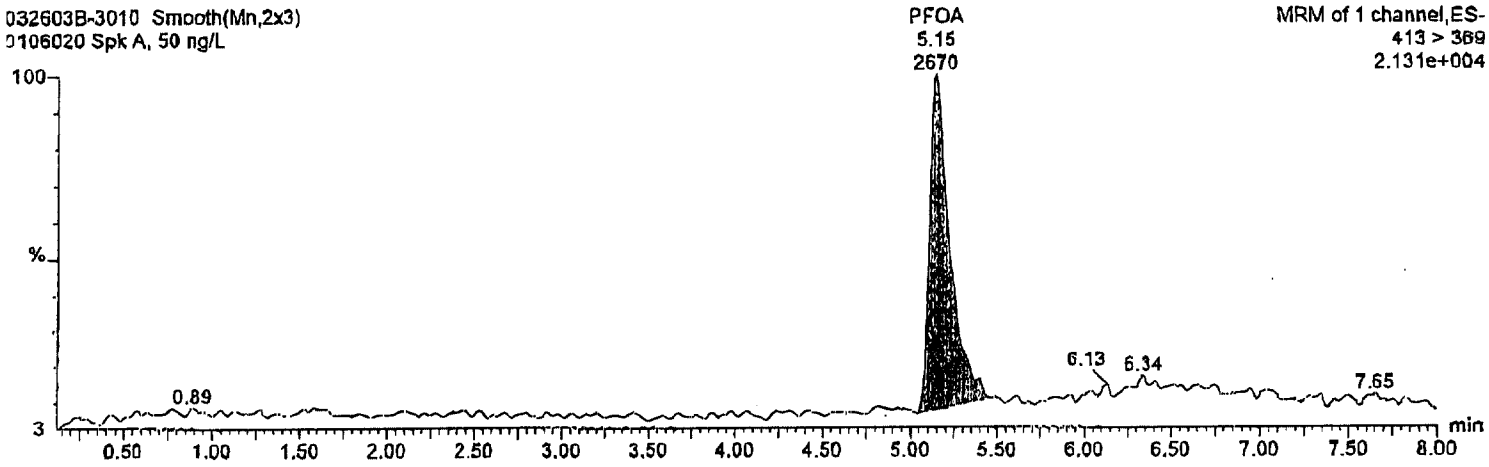


Quantify Sample Report
Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3010
Date: 27-Mar-2003
Time: 23:54:25
Description: 0106020 Spk A, 50 ng/L

PFOA

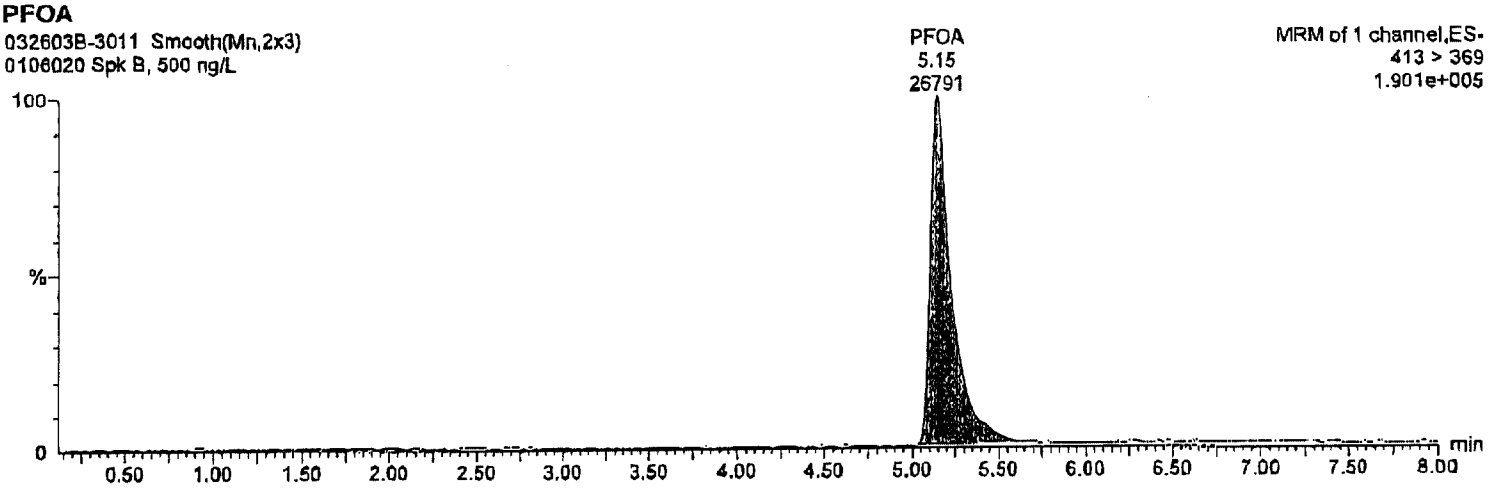


Quantify Sample Report
Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3011
Date: 28-Mar-2003
Time: 00:11:12
Description: 0106020 Spk B, 500 ng/L

PFOA



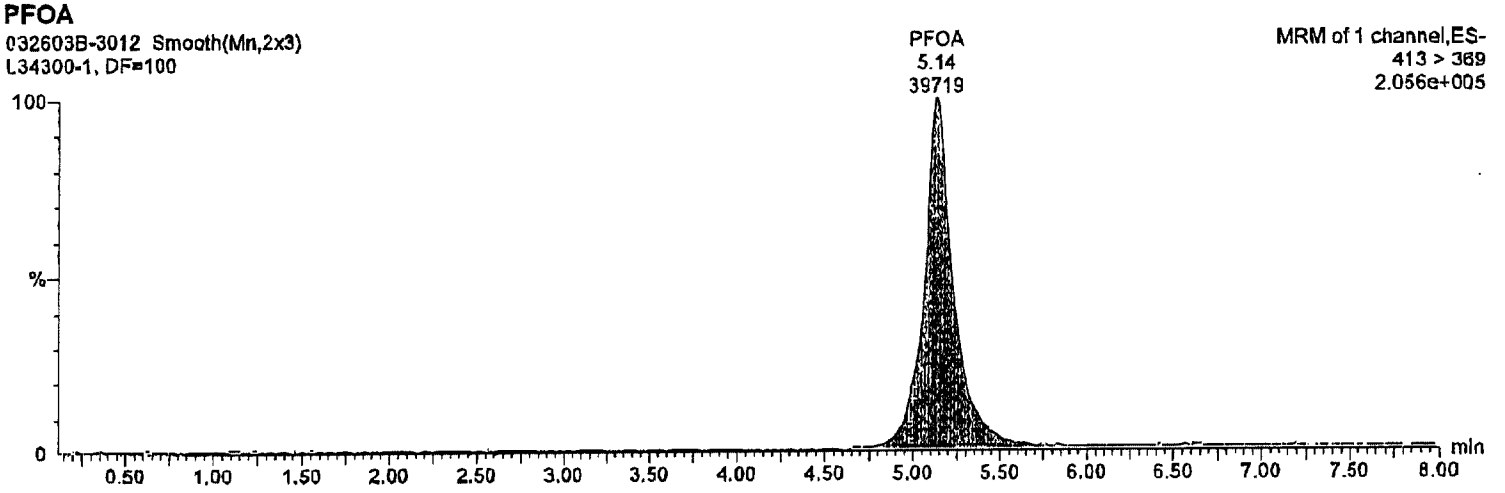
Quantify Sample Report

Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3012
Date: 28-Mar-2003
Time: 00:27:58
Description: L34300-1, DF=100

PFOA



Quantify Sample Report
Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

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Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3013
Date: 28-Mar-2003
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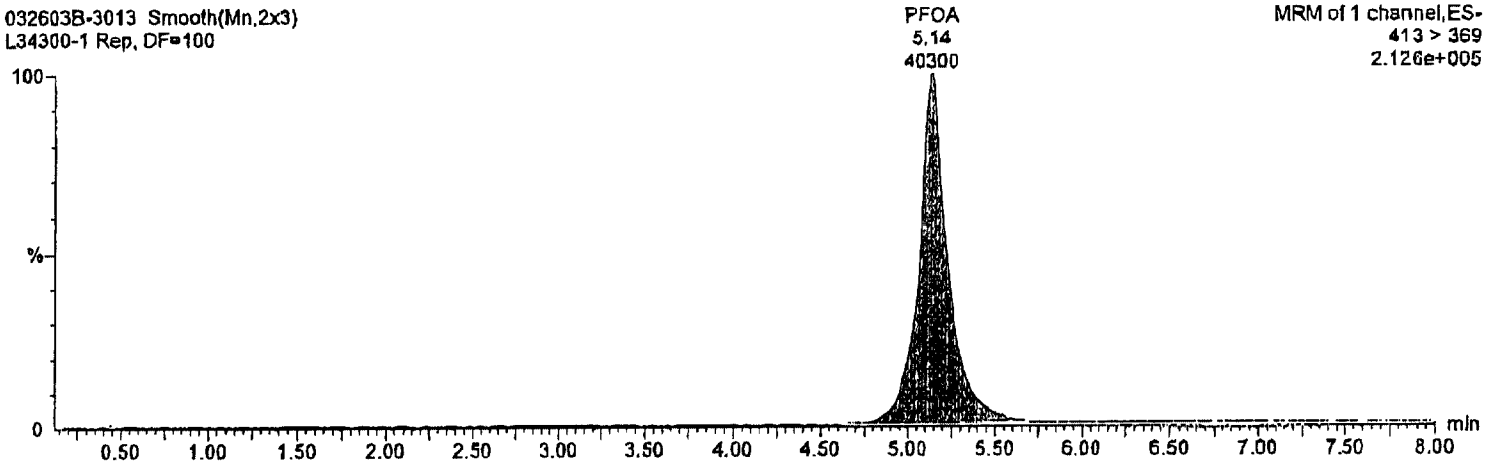
PFOA



Quantify Sample Report

Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

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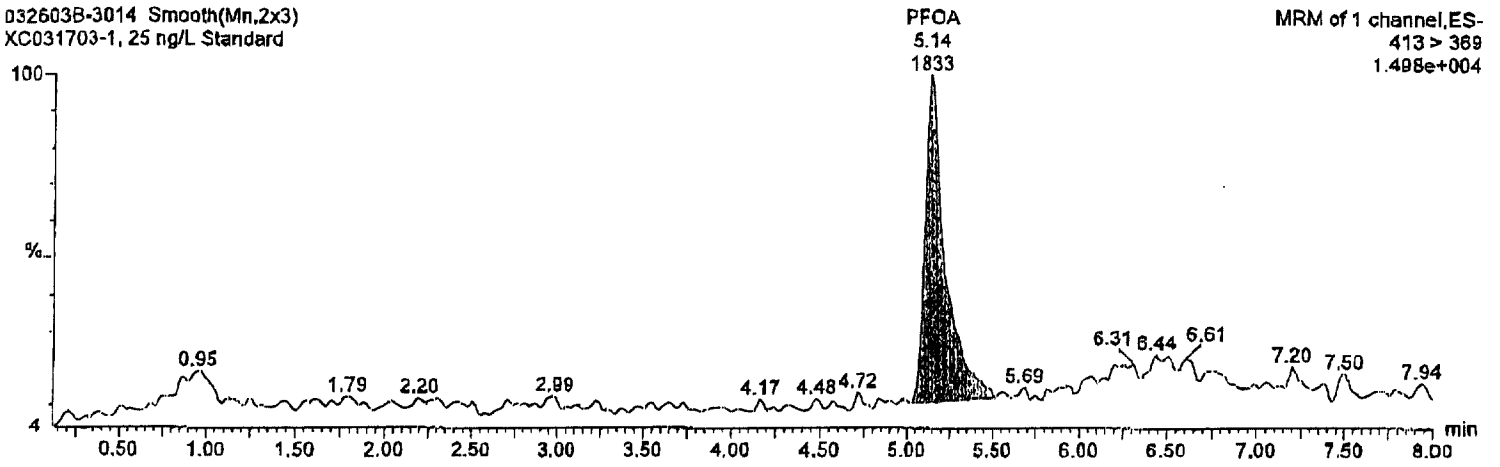
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3014
Date: 28-Mar-2003
Time: 01:01:30
Description: XC031703-1, 25 ng/L Standard

PFOA



Quantify Sample Report
Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3015
Date: 28-Mar-2003
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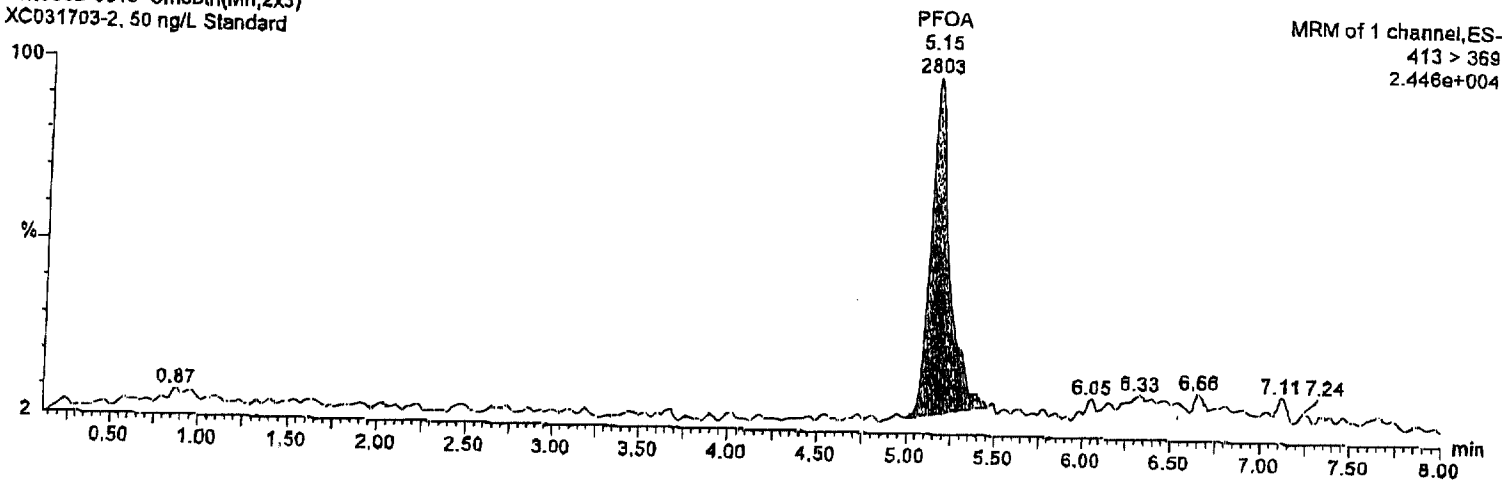
Description: XC031703-2, 50 ng/L Standard

PFOA



Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
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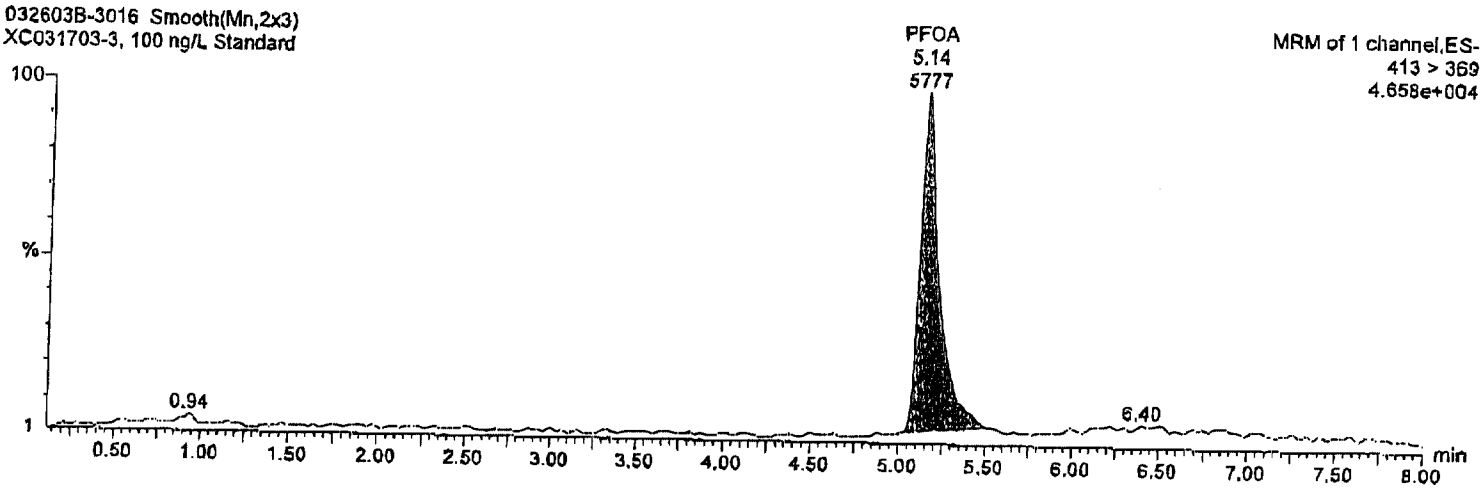
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3016
Date: 28-Mar-2003
Time: 01:34:58
Description: XC031703-3, 100 ng/L Standard

PFOA

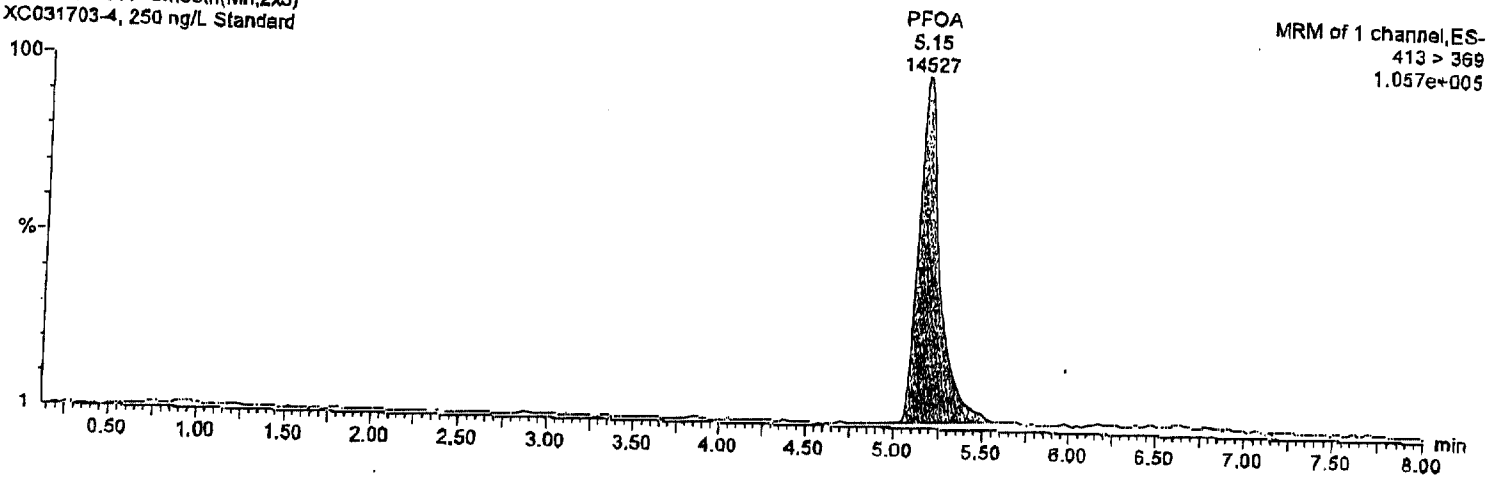


Quantify Sample Report
Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3017
Date: 28-Mar-2003
Time: 01:51:45
Description: XC031703-4, 250 ng/L Standard

PFOA

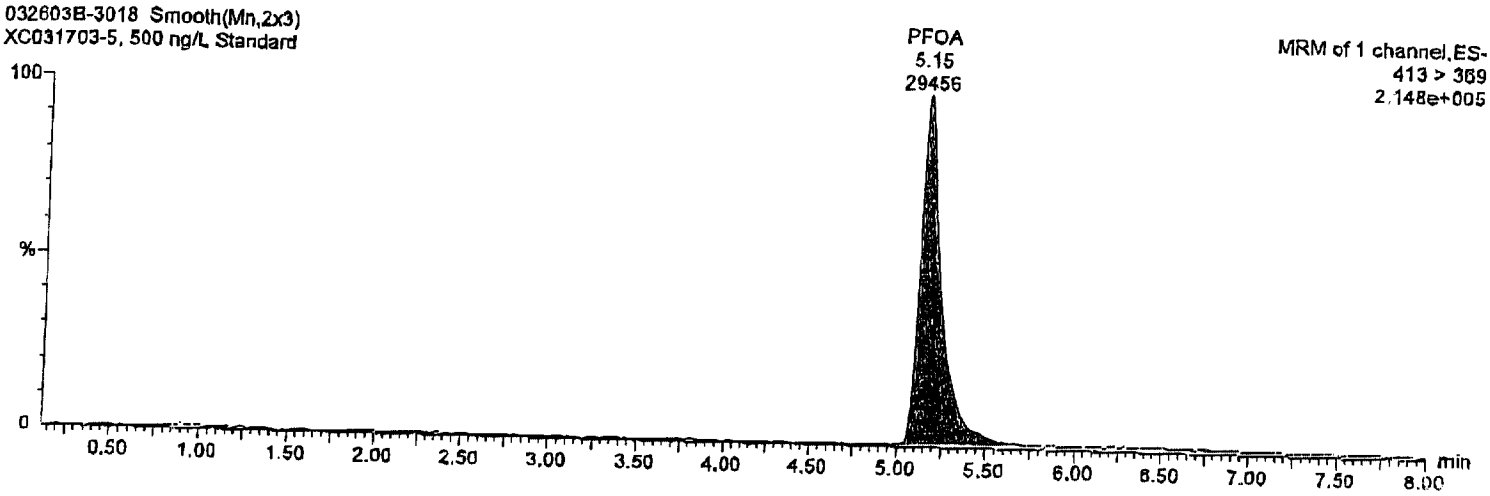


Quantify Sample Report
Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

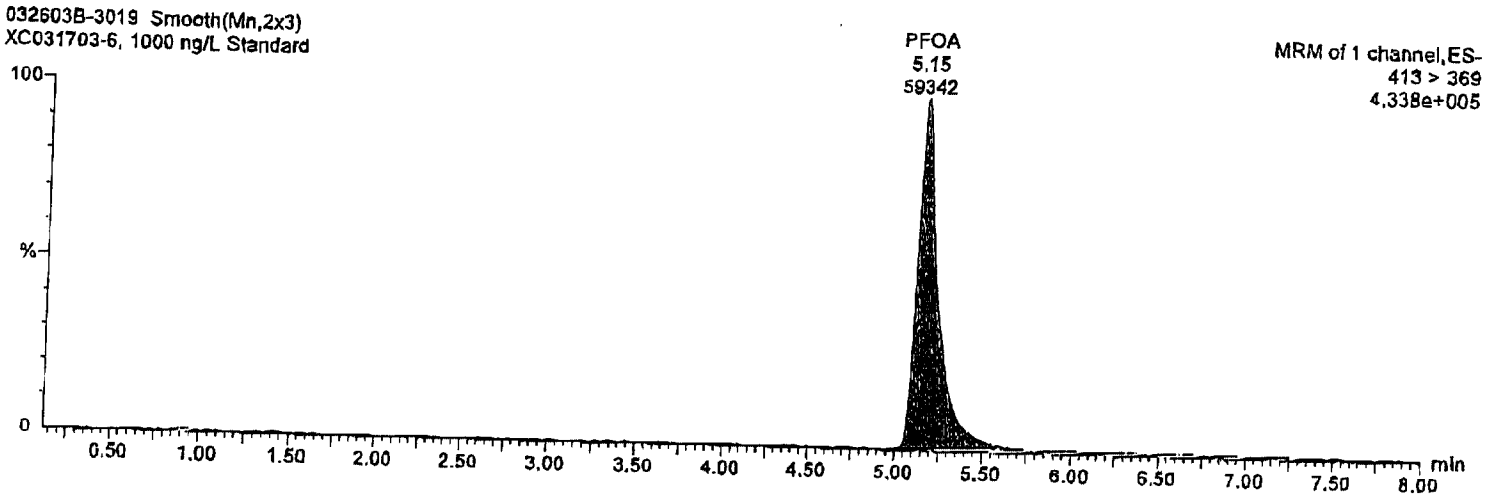
Name: 032603B-3018
Date: 28-Mar-2003
Time: 02:08:26
Description: XC031703-5, 500 ng/L Standard

PFOA



Quantify Sample Report
Study No.:L34300, Data Set:032603B SOLVAY, Ext.Date:03/26/03, Analyst:K.Risha

Dataset: C:\MassLynx\fluorochemicals.pro\032603B SOLVAY.qld
Signature: At Friday, March 28, 2003 9:07:08 AM
By CENTRE\Karens (Karen Risha)
Reason Processing
Printed: Friday, March 28, 2003 9:07:19 AM

Name: 032603B-3019
Date: 28-Mar-2003
Time: 02:25:15
Description: XC031703-6, 1000 ng/L Standard

PFOA