N60200.AR.003497
NAS CECIL FIELD, FL
5090.3a

SECOND QUARTER 2002 OPERATIONS AND MAINTENANCE STATUS REPORT FOR NUTRIENT INJECTION SYSTEM BUILDING 9 FORMER TANKS 9L1 AND 9L2 NAS CECIL FIELD FL

12/2/2002

CH2MHILL CONSTRUCTORS INC

Second Quarter 2002 Operations and Maintenance Status Report

Contract No. N62467-98-D-0995
Contract Task Order No. 0062

Nutrient Injection System

Building 9, Former Tanks 9L1 and 9L2

April 1, 2002 – June 30, 2002

Former Naval Air Station Cecil Field
Jacksonville, Florida

Submitted to:

U.S. Naval Facilities Engineering Command Southern Division

Prepared by:

CH2MHILL Constructors, Inc.

115 Perimeter Center Place, N.E.
Suite 700
Atlanta, GA 30346

December 2002

Contents

Acronyms....iii
1.0 Introduction....1-1
1.1 Objective....1-1
1.2 Site History....1-1
1.3 Remediation System/Technology Description....1-2
2.0 System Performance Monitoring....2-1
2.1 Operational Efficiencies....2-1
2.2 Summary of Maintenance and System Downtime....2-1
2.3 Pressure/Flow Rate Monitoring....2-1
2.3.1 Nutrient Injection System....2-1
2.4 Water Level Measurements....2-2
3.0 Summary of Sampling and Laboratory Analytical Results....3-1
3.1 Soil Monitoring....3-1
3.2 Groundwater Monitoring....3-1
4.0 Conclusions and Recommendations....4-1
5.0 References....5-1

Tables

2-1 Injection Well Measurements....2-3
2-2 Injection System Data....2-5
2-3 Groundwater Monitoring Well – Water Level & Free Product Data....2-6
3-1 Soil Analytical Results....3-3
3-2 Groundwater Analytical Results....3-4
3-3 Groundwater Field Analytical Results....3-7

Figures

1-1 Injection Well, Monitor Well, and Soil Boring Location Map....1-3

Appendices (CD only)

A Laboratory Analytical Reports for Soil Samples
B Laboratory Analytical Reports for Groundwater Samples

Acronyms

ABB-ES	ABB Environmental Services, Inc.
acfh	actual cubic feet per hour
acfm	actual cubic feet per minute
AST	aboveground storage tank
bls	below land surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CCI	CH2M HILL Constructors, Inc.
cfm	cubic feet per minute
CTO	Contract Task Order
EPA	U.S. Environmental Protection Agency
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	flame ionization detector
FL PRO	Florida Petroleum Residual Organic
GCTLs	groundwater cleanup target levels
LNAPL	light non-aqueous phase liquid
MTBE	methyl-tert butyl ether
MW	monitoring well
NADSC	Natural Attenuation Default Source Concentration
NAS	Naval Air Station
NAVFAC	Naval Facilities Engineering Command
O&M	operation and maintenance
OVA	organic vapor analyzer
PAHs	polycyclic aromatic hydrocarbons
ppb	parts per billion
psig	pounds per square inch gauge
RAP	Remedial Action Plan
RWP	Remediation Work Plan
SAR	Site Assessment Report
scfm	standard cubic feet per minute
SCTLs	soil cleanup target levels
SVE	Soil Vapor Extraction
TEP	triethylphosphate
TRPH	total recoverable petroleum hydrocarbons
UST	underground storage tank
VEW	Vapor Extraction Well
VOCs	volatile organic compounds

1.0 Introduction

CH2M HILL Constructors, Inc. (CCI) with J.A. Jones Environmental Services Company (J.A. Jones) has been contracted by the Department of the Navy, Southern Division Naval Facilities Engineering Command (NAVFAC), to provide Operation and Maintenance (O&M) services at Building 9, Former NAS Cecil Field, Jacksonville, Florida, under Response Action Contract No. N62467-98-D-0995, Contract Task Order (CTO) Nos. 0002 and 0062. The purpose of this Second Quarter 2002 O&M Report is to provide a summary of activities performed at the site during the period of April 1, 2002, to June 30, 2002.

1.1 Objective

The objective of the remedial action at Building 9 is to reduce the concentrations of petroleum contaminants in the groundwater and unsaturated soils to Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Levels (GCTLs) and Soil Cleanup Target Levels (SCTLs), as specified in Tables I and II of Chapter 62-777, Florida Administrative Code (FAC). Nutrient injection using the PHOSter nutrient injection system is the technology currently utilized to achieve this objective.

1.2 Site History

Building 9 served as the NAS Cecil Field main fire base station from 1953 until base closure. Prior to 1953, the site served as a public works center and incorporated a transportation garage and automotive hobby shop. As such, the site contained two gasoline underground storage tanks (USTs), labeled Tanks 9L1 and 9L2, which were removed from the site around 1985. A fuel storage tank was located west of the former UST location, and the removal date of this tank is unknown (Tetra Tech NUS, Inc. [TtNUS], 2000).

A Site Assessment Report (SAR) prepared for Building 9 (Harding Lawson Associates [HLA], 1998) concluded that operation of the two former USTs had resulted in contamination of soil and groundwater with petroleum compounds, including benzene, toluene, ethylbenzene, and xylenes (BTEX), naphthalene, acenaphthylene, and total recoverable petroleum hydrocarbons (TRPH). The SAR determined that an area of soil approximately 3,000 square feet in size at the location of the former USTs was highly contaminated to a depth of 7 feet below land surface (bls) and acted as a source of groundwater contamination. The SAR also established that groundwater contamination extends only to the shallow surficial aquifer (7 to 25 feet bls) to a depth of 20 feet bls over an area approximately 3,000 square feet in size, which coincides with the area of soil contamination.

CCI/J.A. Jones with PhA Environmental Restoration installed a nutrient injection system at the site during the period of November 2000 to January 2001 to treat the petroleum-impacted soil and groundwater. The nutrient injection system commenced operation on January 9, 2001.

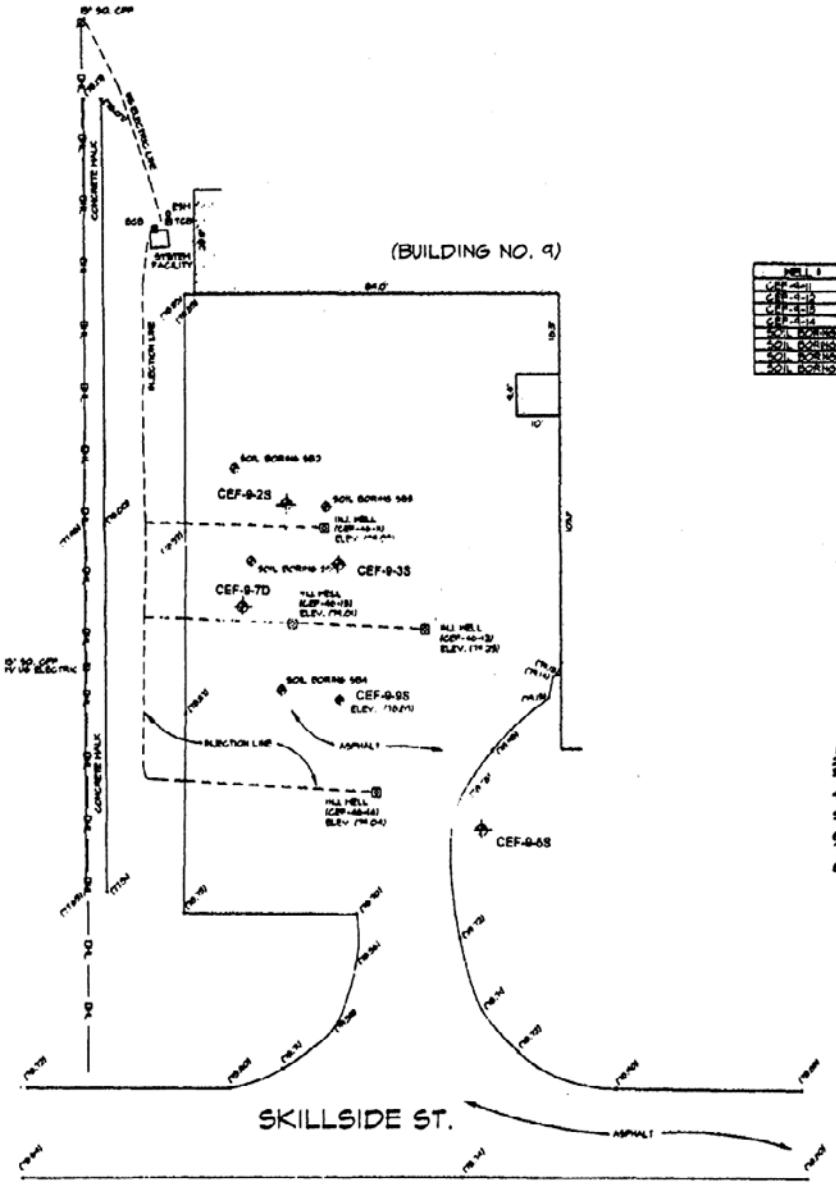
1.3 Remediation System/Technology Description

The PHOSter nutrient injection system provides subsurface delivery of oxygen, nitrogen, and phosphorus to enhance the development of naturally occurring heterotrophic bacteria that have the capability of metabolizing petroleum wastes. A compressor is used to inject air as the oxygen source and the airflow is mixed with nitrous oxide and vapor-phase triethylphosphate (TEP) to provide nitrogen and phosphorus, respectively. Near the end of cleanup operations when contaminant concentrations have been reduced to the point where insufficient food (contaminants) is available to sustain an effective microorganism population, propane is also injected as a carbon source (TtNUS, 2000).

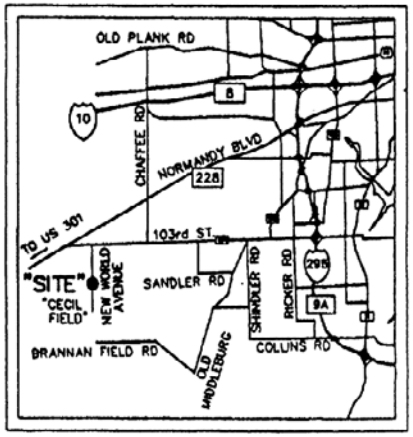
The Building 9 Nutrient Injection System consists of four 30-foot deep injection wells labeled as CEF-9-I1 through CEF-9-I4 that are screened from 27 to 30 feet bls, and a temporary building containing a compressor, injection gas storage containers, and associated piping and instrumentation. The nutrient injection system is designed for each injection well to operate at a flow rate of 3 to 5 actual cubic feet per minute (acfm) at an injection pressure of 15 pounds per square inch gauge (psig). The locations of the injection wells are shown on Figure 1-1.

MAP SHOWING SPECIFIC PURPOSE SURVEY OF

A PORTION OF SECTION 22, TOWNSHIP 3 SOUTH, RANGE 24 EAST, JACKSONVILLE HEIGHTS, PLAT BOOK 5, PAGE 93, OF THE CURRENT PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA.



WELL #	NORTHING	EASTING
CEF-9-11	2142910.03	316283.88
CEF-9-12	2142846.37	316281.20
CEF-9-13	2142611.82	316288.01
CEF-9-14	2142608.81	316272.44
SOIL BORING 581	2142882.16	316246.41
SOIL BORING 582	2142864.15	316242.14
SOIL BORING 583	2142875.28	316264.15
SOIL BORING 584	2142852.16	316252.50



VICINITY MAP

NOT TO SCALE

LEGEND

BLDG - BUILDING
ELEV. - ELEVATION
INJ - INJECTION
CONC. - CONCRETE
BG - BOLLARD
CPP - CONCRETE POWER POLE
GSM - ELECTRIC SERVICE METER
TCB - TELEPHONE CONTROL BOX
ECB - ELECTRIC CONTROL BOX
UG - UNDERGROUND
OHL - OVERHEAD LINE

SURVEYOR'S NOTES

1) THE DESCRIPTION AS SHOWN HEREON WAS SUPPLIED BY CLIENT.
2) NORTH ARROW SHOWN HEREON IS BASED ON NGS COORDINATES FURNISHED BY CLIENT.
3) ALL MEASUREMENTS ARE IN U.S. STANDARD FEET AND WERE MADE WITH A THEODOLITE AND ELECTRONIC DISTANCE MEASURING DEVICE AND/OR STEEL TAPE.
4) THIS IS A COPYRIGHTED DOCUMENT, NO PORTION OF IT MAY BE REPRODUCED, WHOLLY OR IN PART, WITHOUT THE EXPRESSED WRITTEN PERMISSION OF HOLLAND & BASSETT SURVEYORS, INC.
5) THIS MAP IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
6) ELEVATIONS SHOWN THUS (10.00) ARE IN FEET & REFER TO NATIONAL GEODETIC VERTICAL DATUM (NGVD 1929).
7) THE SPECIFIC PURPOSE OF THIS MAP IS TO GRAPHICALLY ILLUSTRATE THE AS-BUILT LOCATION OF INJECTION WELLS, MONITORING WELLS, AND SOIL BORINGS ON SUBJECT SITE AT BUILDING 9.
8) INJECTION LINES SHOWN HEREON ARE AS PER CONTRACTOR. ELEVATIONS ON NEW MONITORING WELLS WERE TAKEN ON NORTH TOP OF PVC CASING.

Figure 1-1
Injection Well, Monitor Well, and Soil Boring Location Map
Building 9
NAS Cecil Field
Jacksonville, Florida

© COPYRIGHT 2001 HOLLAND & BASSETT SURVEYORS, INC.

HOLLAND BASSETT
H&B
SURVEYORS, INC.
7801 ALTON AVENUE
JACKSONVILLE, FLORIDA 32211
FLORIDA CERTIFICATE OF AUTHORIZATION NO. LB 6789

ROBERT B. HOLLAND
FL REGISTRATION NO. 4242
CHARLES R. BASSETT, JR.
FL REGISTRATION NO. 4541

DATE: JANUARY 29, 2001
WORK ORDER NO. 269.00
PROJECT NUMBER: 17100
SHEET 1 OF 1
DRAWING NO. 17100

PARTY CHIEF: LBM COMPUTED BY: JLV CADD TECH: JLV CADD FILE: 17100AB DG FILE NO.: 17101 F.B.: - P.G.: -

2.0 System Performance Monitoring

O&M checks of the system were performed monthly during the monitoring period. During an O&M check maintenance activities (based upon manufacturer's recommendations) are completed and all meters and gauges at the system are read.

2.1 Operational Efficiencies

	Period	To Date
Hours of Possible Operation:	2,184	12,912
Hours of Actual Operation:	2,103	12,476
Percent hours of Operation:	96.3	96.6

2.2 Summary of Maintenance and System Downtime

During the period of April 1, 2002, to June 30, 2002, the nutrient injection system ran a total of 87.6 days out of a possible 91 days, resulting in 81 hours of downtime. The system downtime is the result of power outages and equipment maintenance.

2.3 Pressure/Flow Rate Monitoring

2.3.1 Nutrient Injection System

During the April 1, 2002, to June 30, 2002, monitoring period, the injection pressure at the compressors averaged 31 psig, compared to the design injection pressure of 15 psig. The total gas injection flow rate averaged 6.3 actual cubic feet per minute (acfm), compared to the design total gas injection flow rate of 12 to 20 acfm. The nitrous oxide injection rate averaged 0.33 actual cubic feet per hour (acfh), which is 0.09 percent by volume of air flow, compared to the design nitrous oxide injection rate of 0.07 percent to 0.10 percent by volume of air flow. The TEP injection mass for the monitoring period totaled 2.9 pounds, compared to the design injection mass of 9.5 pounds. The data for the injection wells and injection system are tabulated in Tables 2-1 and 2-2, respectively.

The injection flow rates were re-balanced on a monthly basis during the monitoring to alternate injection between the four injection wells (Table 2-1).

Various injection flow rate combinations have been utilized during the operating life of the system. A history of the flow rate adjustments is as follows:

At system startup, the initial injection flow rates split flow equally between the four injection wells. The injection flow rates were re-balanced during the second quarter of 2001 to maximize injection in the area of monitoring well CEF-9-9S by diverting all flow equally between injection wells CEF-9-I3 and CEF-9-I4 on a continuous basis. The injection flow

rates remained in this configuration during the third quarter of 2001. The previous configuration was to alternate injection on 12-hour cycles between the four injection wells. During the fourth quarter of 2001, the injection rates were adjusted to divert 100 percent of the air flow to a single injection well for 1 month each during the quarter as follows: CEF-9-I4 (October), CEF-9-I2 (November), and CEF-9-I3 (December). Diverting all flow to a single injection well increased the radius of influence for the active injection well in an attempt to affect monitoring well CEF-9-9S. This change has caused a decrease in contaminant concentrations in CEF-9-9S during the fourth quarter of 2001. Injection rates were split between injection wells CEF-9-I1 and CEF-9-I3 in January 2002, then all flow was diverted to CEF-9-I4 in February 2002, and split between CEF-9-I1 and CEF-9-I4 in March 2002.

2.4 Water Level Measurements

Depth to water measurements were recorded at selected monitoring wells (CEF-9-2S, CEF-9-3S, CEF-9-5S, CEF-9-7D, and CEF-9-9S) on a quarterly basis during the monitoring period. Depth to water measurements for the second quarter 2002 were performed on June 5, 2002. The top of casing elevation, depth to water measurements, and calculated water level elevations are provided in Table 2-3.

Light non-aqueous phase liquid (LNAPL) was not noted in any monitoring well during the monitoring period.

TABLE 2-1
Injection Well Measurements

Injection Well	Date	Valve % Open	Wellhead Flow (acfm)
CEF-9-I1	1/9/2001	100	3
	2/28/2001	100	4.75
	3/30/2001	100	4
	4/13/2001	0	0
	5/10/2001	0	0
	6/7/2001	0	0
	7/2/2001	0	0
	8/6/2001	0	0
	9/11/2001	0	0
	10/3/2001	0	0
	11/15/2001	0	0
	12/10/2001	0	0
	1/11/2002	100	4
	2/4/2002	0	0
	3/11/2002	25	1
	4/15/2002	25	0
	5/13/2002	25	1
	6/17/2002	0	0
CEF-9-I2	1/9/2001	100	4
	2/28/2001	50	4
	3/30/2001	100	4
	4/13/2001	100	5
	5/10/2001	0	0
	6/7/2001	0	0
	7/2/2001	0	0
	8/6/2001	0	0
	9/11/2001	0	0
	10/3/2001	0	0
	11/15/2001	100	4
	12/10/2001	0	0
	1/11/2002	0	0
	2/4/2002	0	0
	3/11/2002	0	0
	4/15/2002	0	0
	5/13/2002	0	0
	6/17/2002	25	1
CEF-9-I3	1/9/2001	100	4
	2/28/2001	0	0
	3/30/2001	100	3
	4/13/2001	100	5
	5/10/2001	100	3
	6/7/2001	100	3
	7/2/2001	100	3
	8/6/2001	100	3
	9/11/2001	100	3
	10/3/2001	0	0
	11/15/2001	0	0
	12/10/2001	100	4
	1/11/2002	100	4
	2/4/2002	0	0
	3/11/2002	0	0
	4/15/2002	100	0
	5/13/2002	0	0
	6/17/2002	100	8

TABLE 2-1
Injection Well Measurements

Injection Well	Date	Valve % Open	Wellhead Flow (acfm)
CEF-9-I4	1/9/2001	100	2.75
	2/28/2001	50	5
	3/30/2001	100	3
	4/13/2001	100	4
	5/10/2001	100	3
	6/7/2001	100	3
	7/2/2001	100	3
	8/6/2001	100	3
	9/11/2001	100	3
	10/3/2001	100	6
	11/15/2001	0	0
	12/10/2001	0	0
	1/11/2002	0	0
	2/4/2002	100	4
	3/11/2002	100	4
	4/15/2002	100	0
	5/13/2002	100	4
	6/17/2002	0	0

NR = No Reading
acfm = actual cubic feet per minute

TABLE 2-2
Injection System Data

Date	Air Supply Pressure (psig)	Total Gas Flow (acfm)	NOX Flow (acfh)	TEP Injection (pounds)
1/9/2001	NR	6.5	1	--
2/28/2001	17	6.5	0.8	1.78
3/30/2001	16	6.5	0.8	1.52
4/13/2001	19	6.5	0.8	0.00
5/10/2001	28	6	0.5	2.68
6/7/2001	28	6	0.5	3.57
7/2/2001	23	6	0.5	1.78
8/6/2001	24	6	0.5	1.78
9/11/2001	18	6	0.5	7.14
10/3/2001	35	6	0.5	1.78
11/15/2001	30	4	0.25	0.89
12/10/2001	30	4	0.25	1.78
1/11/2002	24	8	0.4	1.78
2/4/2002	21	4	0.4	0.89
3/11/2002	30	5	0.4	0.89
4/15/2002	28	5	0.1	0.71
5/13/2002	30	5	0.4	1.07
6/17/2002	36	9	0.5	1.16

NR = No Reading
psig = pounds per square inch gauge
acfm = actual cubic feet per minute
acfh = actual cubic feet per hour
NOX = nitrous oxide
TEP = triethylphosphate

TABLE 2-3
Groundwater Monitoring Well - Water Level & Free Product Data

Well Identification	Well Total Depth (feet bgs)	Date	Top of Casing Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	Water Level Elevation (feet)
CEF-9-2S	14.45	12/18/2000	78.74	no LNAPL	7.93	70.81
		1/18/2001		no LNAPL	8.55	70.19
		1/24/2001		no LNAPL	8.60	70.14
		1/31/2001		no LNAPL	8.74	70.00
		2/7/2001		no LNAPL	8.58	70.16
		2/14/2001		no LNAPL	8.72	70.02
		2/21/2001		no LNAPL	8.75	69.99
		3/7/2001		no LNAPL	8.49	70.25
		3/20/2001		no LNAPL	7.46	71.28
		4/3/2001		no LNAPL	6.99	71.75
		4/17/2001		no LNAPL	7.61	71.13
		5/1/2001		no LNAPL	8.13	70.61
		6/14/2001		no LNAPL	7.62	71.12
		7/24/2001		no LNAPL	6.62	72.12
		8/13/2001		no LNAPL	5.38	73.36
		9/17/2001		no LNAPL	3.41	75.33
		10/22/2001		no LNAPL	5.72	73.02
		11/13/2001		no LNAPL	6.50	72.24
		12/17/2001		no LNAPL	6.73	72.01
		3/18/2002		no LNAPL	6.56	72.18
		6/5/2002		no LNAPL	7.95	70.79
CEF-9-3S	15.54	12/18/2000	78.81	no LNAPL	8.04	70.77
		1/18/2001		no LNAPL	8.67	70.14
		1/24/2001		no LNAPL	8.72	70.09
		1/31/2001		no LNAPL	8.89	69.92
		2/7/2001		no LNAPL	8.69	70.12
		2/14/2001		no LNAPL	8.83	69.98
		2/21/2001		no LNAPL	8.87	69.94
		3/7/2001		no LNAPL	8.60	70.21
		3/20/2001		no LNAPL	7.55	71.26
		4/3/2001		no LNAPL	7.12	71.69
		4/17/2001		no LNAPL	7.72	71.09
		5/1/2001		no LNAPL	8.50	70.31
		6/14/2001		no LNAPL	7.75	71.06
		7/24/2001		no LNAPL	6.47	72.34
		8/13/2001		no LNAPL	5.50	73.31
		9/17/2001		no LNAPL	3.51	75.30
		10/22/2001		no LNAPL	5.86	72.95
		11/13/2001		no LNAPL	6.62	72.19
		12/17/2001		no LNAPL	6.87	71.94
		3/18/2002		no LNAPL	6.75	72.06
		6/5/2002		no LNAPL	8.04	70.77

TABLE 2-3
Groundwater Monitoring Well - Water Level & Free Product Data

Well Identification	Well Total Depth (feet bgs)	Date	Top of Casing Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	Water Level Elevation (feet)
CEF-9-5S	13.72	12/18/2000	78.93	no LNAPL	8.34	70.59
		1/18/2001		no LNAPL	8.96	69.97
		1/24/2001		no LNAPL	9.03	69.90
		1/31/2001		no LNAPL	9.13	69.80
		2/7/2001		no LNAPL	8.97	69.96
		2/14/2001		no LNAPL	9.11	69.82
		2/21/2001		no LNAPL	9.10	69.83
		3/7/2001		no LNAPL	8.81	70.12
		3/20/2001		no LNAPL	7.61	71.32
		4/3/2001		no LNAPL	7.40	71.53
		4/17/2001		no LNAPL	8.02	70.91
		5/1/2001		no LNAPL	8.25	70.68
		6/14/2001		no LNAPL	7.99	70.94
		7/24/2001		no LNAPL	6.91	72.02
		8/13/2001		no LNAPL	5.78	73.15
		9/17/2001		no LNAPL	3.70	75.23
		10/22/2001		no LNAPL	6.21	72.72
		11/13/2001		no LNAPL	6.97	71.96
		12/17/2001		no LNAPL	7.17	71.76
		3/18/2002		no LNAPL	7.02	71.91
		6/5/2002		no LNAPL	8.36	70.57
CEF-9-7D	29.23	12/18/2000	78.59	no LNAPL	7.83	70.76
		1/18/2001		no LNAPL	8.45	70.14
		1/24/2001		no LNAPL	8.50	70.09
		1/31/2001		no LNAPL	8.63	69.96
		2/7/2001		no LNAPL	8.46	70.13
		2/14/2001		no LNAPL	8.61	69.98
		2/21/2001		no LNAPL	8.62	69.97
		3/7/2001		no LNAPL	8.36	70.23
		3/20/2001		no LNAPL	7.29	71.30
		4/3/2001		no LNAPL	6.90	71.69
		4/17/2001		no LNAPL	7.52	71.07
		5/1/2001		no LNAPL	8.02	70.57
		6/14/2001		no LNAPL	7.51	71.08
		7/24/2001		no LNAPL	6.38	72.21
		8/13/2001		no LNAPL	5.28	73.31
		9/17/2001		no LNAPL	3.25	75.34
		10/22/2001		no LNAPL	5.66	72.93
		11/13/2001		no LNAPL	6.42	72.17
		12/17/2001		no LNAPL	6.65	71.94
		3/18/2002		no LNAPL	6.48	72.11
		6/5/2002		no LNAPL	7.83	70.76

TABLE 2-3
Groundwater Monitoring Well - Water Level & Free Product Data

Well Identification	Well Total Depth (feet bgs)	Date	Top of Casing Elevation (feet)	Depth to LNAPL (feet)	Depth to Water (feet)	Water Level Elevation (feet)
CEF-9-9S	14.23	12/18/2000	78.89	no LNAPL	8.39	70.50
		1/18/2001		no LNAPL	8.81	70.08
		1/24/2001		no LNAPL	8.88	70.01
		1/31/2001		no LNAPL	9.00	69.89
		2/7/2001		no LNAPL	8.85	70.04
		2/14/2001		no LNAPL	8.98	69.91
		2/21/2001		no LNAPL	8.97	69.92
		3/7/2001		no LNAPL	8.72	70.17
		3/20/2001		no LNAPL	7.66	71.23
		4/3/2001		no LNAPL	7.28	71.61
		4/17/2001		no LNAPL	7.89	71.00
		5/1/2001		no LNAPL	8.38	70.51
		6/14/2001		no LNAPL	7.87	71.02
		7/24/2001		no LNAPL	6.78	72.11
		8/13/2001		no LNAPL	5.67	73.22
		9/17/2001		no LNAPL	3.63	75.26
		10/22/2001		no LNAPL	6.09	72.80
		11/13/2001		no LNAPL	6.80	72.09
		12/17/2001		no LNAPL	7.01	71.88
		3/18/2002		no LNAPL	6.90	71.99
		6/5/2002		no LNAPL	8.21	70.68
		6/5/2002		no LNAPL	8.21	70.68

bgs = below ground surface
Elevation is referenced to National Geodetic Vertical Datum 1929 (NGVD 1929)
LNAPL = light non-aqueous phase liquid
Depth to LNAPL measured from top of casing
Depth to water measured from top of casing

3.0 Summary of Sampling and Laboratory Analytical Results

3.1 Soil Monitoring

During the monitoring period, quarterly soil screening and sampling was conducted on June 20, 2002. One soil boring, labeled as SB-1, was installed in the location of the former USTs adjacent to groundwater monitoring wells CEF-9-2S, CEF-9-3S, and CEF-9-7D. The soil was screened using an organic vapor analyzer (OVA) equipped with a flame ionization detector (FID) and a sample was collected at 2 feet bls for laboratory analysis. The water table was encountered at 6.5-feet bls. The OVA/FID readings are summarized below.

Date	Soil Boring No.	Depth (ft bgs)	OVA/FID Unfiltered (ppm)	OVA/FID Filtered (ppm)	OVA/FID Net (ppm)
6/20/02	SB-1	2	0.33	n/a	0.33
6/20/02	SB-1	4	0.67	n/a	0.67
6/20/02	SB-1	6	0.47	n/a	0.47

ppm = parts per million
n/a = reading not taken

The soil sample was laboratory analyzed for BTEX and MTBE by EPA Method 8021B; naphthalene and polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8310; and TRPH by the Florida Petroleum Residual Organic (FL PRO) method. The results showed that no constituents are above the FDEP Leachability or Direct Exposure Residential SCTLs. The location of SB-1 is shown on Figure 1-1. Copies of the analytical laboratory report from the soil sampling event are provided in Appendix A, and analytical results are summarized in Table 3-1.

3.2 Groundwater Monitoring

Monitoring wells CEF-9-2S, CEF-9-3S, CEF-9-5S, CEF-9-7D, and CEF-9-9S were sampled on June 5, 2002. The samples were analyzed for BTEX and MTBE by EPA Method 8021B; naphthalene and PAHs by USEPA Method 8310; TRPH by the FL PRO method; and nitrate, nitrite, phosphate by USEPA Method 300.0. The locations of the monitoring wells are shown on Figure 1-1. A copy of the analytical laboratory report from the groundwater sampling event is provided in Appendix B, and the analytical results are summarized in Table 3-2.

The second quarter 2002 groundwater results showed that only monitoring well CEF-9-9S exhibited contaminant concentrations that exceeded the FDEP GCTLs. CEF-9-9S exhibited concentrations of benzene (1.4 micrograms per liter [µg/L]), ethylbenzene (39 µg/L), xylenes (55 µg/L), and naphthalene (44 µg/L) that exceeded the FDEP GCTLs (1 µg/L, 30 µg/L, 20 µg/L, and 20 µg/L, respectively).

Field analytical tests were performed on the five monitoring wells during the sampling event. The groundwater was tested for pH, conductivity, temperature, dissolved oxygen, carbon dioxide, alkalinity, ferrous iron, and hydrogen sulfide. The results from the field analytical tests are summarized in Table 3-3. An evaluation of the field analytical tests for monitoring well CEF-9-9S show that pH and temperature are acceptable for biological activity. The conductivity values have remained relatively constant indicating that the groundwater samples represent the same groundwater system previously sampled. The dissolved oxygen level is greater than 1 milligram per liter (mg/L), which indicates aerobic conditions. The carbon dioxide and alkalinity values are decreasing, which may indicate decreased aerobic activity. Ferrous iron values remain relatively constant. An increase in ferrous iron may indicate anaerobic activity and a depletion of oxygen, nitrite, and manganese. Hydrogen sulfide values continue to fluctuate after remaining relatively constant. This may indicate a reduction in natural hydrogen sulfide production.

TABLE 3-1
Soil Analytical Results

Soil Boring Number	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylene	BETX	Methyl tert-butyl ether	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene	TRPH (mg/kg)
SB-1	1/4/2001	7E-04	<0.0011	8E-04	<.0032	0.001	<0.0011	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	0.0565	0.06	0.02	0.03	0.08	0.04	0.07	0.06	0.11	0.18	73
	6/27/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/20/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/12/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/20/2002	<0.0011	<0.0011	<0.0011	<0.0032	<0.0065	<0.0011	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	0.089 J	0.14 J	0.06	0.12	0.24	0.11	0.21	0.12	0.19	0.25	120
SB-2	1/4/2001	<0.12	0.65	<0.12	0.53	1.18	<0.12	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	0.0285	0.06	0.01	0.03	0.06	0.02	0.06	0.05	0.05	0.0815	70
	6/27/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/20/2001	<0.0013	<0.0013	<0.004	0.005	0.005	<0.0013	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.02	<0.02	<0.02	0.01	0.03	0.01	0.02	<0.02	0.02	0.013	21
	12/12/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/20/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SB-3	1/4/2001	<0.1	<0.1	0.5	4	4.5	<0.1	1.3	<0.18	<0.18	<0.18	<0.18	<0.18	<0.018	0.04	<.018	0.02	0.04	0.02	0.04	0.03	0.04	0.0615	86
	6/27/2001	<0.0011	<0.0011	<0.0011	<0.0033	<0.0066	<0.0011	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	21
	9/20/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/12/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/20/2002	NS	NS	NS	NS	N	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SB-4	1/4/2001	<0.11	<0.11	0.15	3.2	3.35	<0.11	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.019	0.01	<.019	0.05	0.02	0.01	0.02	0.01	0.06	0.0275	220
	6/27/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/20/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/12/2001	<0.0012	<0.0012	<0.0012	<0.0035	<0.0071	<0.0012	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.021	<0.021	<0.021	0.05	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	1100
	3/7/2002	<0.0012	<0.0012	<0.0012	<0.0035	<0.0071	<0.0012	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.015	0.01	<0.020	0.03	0.02	0.01	0.03	0.02	0.04	0.03	340
	6/20/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Direct Exposure Residential [1]		1.1	1100	380	5900	n/a	3200	40	1100	1900	2200	2000	18000	2900	2200	1.4	140	1.4	15	0.1	1.5	0.1	2300			340			
Leachability from GW Criteria [1]		7E-04	0.6	0.5	0.2	n/a	0.2	1.7	27	2.1	160	250	2500	1200	880	3.2	77	10	25	8	28	30	32000			340			

All values reported in mg/kg
1 = Ch 62-777 F.A.C Soil cleanup Target Level (SCTLs) reported in mg/kg
Shaded values indicate the compounds that exceed the SCTLs
NS = Not Sampled

TABLE 3-2
Groundwater Analytical Results

Well Identification	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylene	BETX	Methyl tert-butyl ether	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene	Nitrate	Nitrite	Phosphate	TRPH
CEF-9-2S	12/18/2000	<1.0	6.9	<1.0	1.7	8.6	NA	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	<530
	1/18/2001	<1.0	<1.0	<1.0	4.2	4.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	0.2	<500
	1/24/2001	<1.0	1.6	<1.0	0.6	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	0.3	<530
	1/31/2001	0.4	3.0	0.30	4.0	7.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	0.3	<500
	2/7/2001	<1.0	1	<1.0	0.9	1.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.11	<0.40	0.3	<500
	2/14/2001	<1.0	0.4	<1.0	0.8	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.14	<0.40	0.20	220
	2/21/2001	<1.0	0.4	0.3	0.7	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.11	<0.40	0.3	<500
	3/7/2001	<1.0	0.2	<1.0	0.5	0.8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.12	<.40	0.19	<530
	3/20/2001	<1.0	1.1	<1.0	0.6	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.12	<0.40	0.3	<520
	4/3/2001	0.2	0.6	<1.0	0.5	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.24	<0.40	0.2	<500
	4/17/2001	0.1	0.5	<1.0	<1.0	0.6	<1.0	0.6	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.14	<0.40	0.2	<520
	5/1/2001	<1.0	1.2	<1.0	0.3	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	<520
	6/14/2001	<1.0	<1.0	<1.0	0.9	0.9	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.17	<0.40	0.4	280
	7/24/2001	<1.0	8.8	<1.0	6.7	16	<1.0	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.3	<0.40	<1.0	1400
	8/13/2001	<1.0	7.6	<1.0	3.5	11	<1.0	2.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.18	<0.40	<1.0	1200
	9/17/2001	<1.0	2.1	<1.0	<1.0	2.1	<1.0	1	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	580
	10/22/2001	1	7.5	<1.0	1	9.5	<1.0	2.8	<1.0	<1.1	<1.1	<1.1	<1.1	<0.21	0.1	<0.21	<0.21	0.04	<0.21	<0.21	<0.21	<0.21	<0.21	0.16	<0.40	0.3	780
	11/13/2001	2.4	14	<1.0	2.7	19	<1.0	5.3	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.21	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.15	<0.40	<1.0	720
	12/17/2001	1.1	21	2.1	5.6	30	<1.0	3.3	<1.1	<1.1	<1.0	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	2000
	3/18/2002	<1.0	7.3	2	4.6	14	<1.0	3.3	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.21	<0.21	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.21	0.165	<0.40	<1.0	736
	6/5/2002	<1.0	<1.0	1.1	<1.0	1.1	<1.0	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	0.120 J	0.091 J	<0.20	0.094 J	<0.20	<0.20	<0.60	<0.40	<1.0	310 J
CEF-9-3S	12/18/2000	18	130	8.9	170	327	NA	29	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	1500
	1/18/2001	21	140	40	430	631	<1.0	20	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	0.20	1700
	1/24/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	0.2	720
	1/31/2001	<1.0	38	2.8	180	221	<1.0	3.6	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	960
	2/7/2001	0.4	12	1.9	89	103	<1.0	0.8	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	0	<0.20	0.04	<0.20	<0.20	<0.20	<0.20	<0.20	0.074	<0.40	<1.0	720
	2/14/2001	0.2	8.0	2.8	53	64	<1.0	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	520
	2/21/2001	0.2	7.2	3.7	45	56	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.15	<0.40	0.2	470
	3/7/2001	<1.0	<1.0	<1.0	4.6	4.6	<1.0	2.3	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.20	<0.40	<1.0	440
	3/20/2001	<1.0	<1.0	<1.0	4.7	4.7	<1.0	2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.22	<0.40	<1.0	<270
	4/3/2001	<1.0	2.7	<1.0	3	5.7	<1.0	0.8	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.25	0.063	0.2	<520
	4/17/2001	<1.0	5.9	1	5.6	12	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.16	<0.40	<1.0	300
	5/1/2001	0.7	6.2	1.9	12	21	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	600
	6/14/2001	0.5	3.3	<1.0	4.2	8	<1.0	1	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.19	<0.40	<1.0	780
	7/24/2001	<1.0	11	<1.0	4.4	15	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.24	<0.40	<1.0	540
	8/13/2001	<1.0	11	<1.0	3.2	14	<1.0	2.7	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.2	<0.40	<1.0	760
	9/17/2001	<1.0	11	<1.0	20	31	<1.0	6	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	1200
	10/22/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	8.3	<1.0	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	780
	11/13/2001	<1.0	15	<1.0	5.9	21	<1.0	7.6	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.21	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	500
	12/17/2001	<1.0	11	1.1	3.1	15	<1.0	4.9	<1.0	<1.1	<1.0	<1.1	<1.1	<0.20	<0.22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	440
	3/18/2002	<1.0	6.1	1.7	2.7	10	<1.0	2.7	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.21	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.21	<0.60	<0.40	<1.0	630

TABLE 3-2
Groundwater Analytical Results

Well Identification	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylene	BETX	Methyl tert-butyl ether	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene	Nitrate	Nitrite	Phosphate	TRPH
	6/5/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.21	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.21	<0.60	<0.40	<1.0	680
CEF-9-5S	12/18/2000	<1.0	<1.0	<1.0	0.5	0.5	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.09	<0.40	<1.0	<530
	1/18/2001	0.1	<1.0	<1.0	<1.0	0.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.31	<0.40	<1.0	<500
	1/24/2001	<1.0	0.8	0.30	2.2	3.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.30	<0.40	<1.0	<530
	1/31/2001	0.30	<1.0	<1.0	<1.0	0.3	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.26	<0.40	<1.0	<530
	2/7/2001	0.3	0.3	<1.0	<1.0	0.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.28	<0.40	<1.0	<500
	2/14/2001	0.8	0.7	<1.0	0.5	2	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.20	<0.40	<1.0	200
	2/21/2001	0.8	0.8	0.3	0.6	2.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.18	<0.40	<1.0	<500
	3/7/2001	0.8	0.9	0.3	0.9	2.8	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.20	<0.40	<1.0	<530
	3/20/2001	0.10	0.1	<1.0	<1.0	0.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.15	<0.40	<1.0	<520
	4/3/2001	0.16	<1.0	<1.0	<1.0	0.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0..074	<0.40	<1.0	<520
	4/17/2001	0.26	<1.0	<1.0	<1.0	0.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.11	<0.40	<1.0	<520
	5/1/2001	<1.0	0.3	<1.0	<1.0	0.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.22	<0.40	<1.0	<530
	6/14/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.25	<0.40	<1.0	<500
	7/24/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.2	<0.40	<1.0	<520
	8/13/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.16	<0.40	<1.0	<520
	9/17/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.32	<0.40	<1.0	<520
	10/22/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.1	<1.0	<1.0	<1.1	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.2	<0.40	<1.0	<530
	11/13/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.2	<0.40	<1.0	<530
	12/17/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.1	<1.0	<1.0	<1.0	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.36	<0.40	<1.0	<540
	3/18/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.394	<0.40	<1.0	<530
	6/5/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1.5	0.096 J	<1.0	<530
CEF-9-7D	12/18/2000	<1.0	<1.0	<1.0	<1.0	<4.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.30	<0.40	<1.0	<500
	1/18/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	<500
	1/24/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	<520
	1/31/2001	0.1	<1.0	<1.0	0.4	0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.60	<0.40	<1.0	<520
	2/7/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	<530
	2/14/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	<500
	2/21/2001	<1.0	<1.0	<1.0	0.2	0.2	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	<500
	3/7/2001	<1.0	<1.0	<1.0	0.4	0.4	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	<530
	3/20/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	<520
	4/3/2001	0.5	<1.0	<1.0	1.1	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	0.072	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	<520
	4/17/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	<520
	5/1/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	<520
	6/14/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	<520
	7/24/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.21	<0.40	<1.0	<520
	8/13/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.61	<0.40	<1.0	<520
	9/17/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	<520
	10/22/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.1	<1.0	<1.1	<1.1	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	290
	11/13/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.1	<1.1	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.21	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	<530
	12/17/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.1	<1.0	<1.0	<1.0	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	<530

TABLE 3-2
Groundwater Analytical Results

Well Identification	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylene	BETX	Methyl tert-butyl ether	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene	Nitrate	Nitrite	Phosphate	TRPH
	3/18/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	<530
	6/5/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	<520
CEF-9-9S	1/18/2001	24	210	99	640	973	<1.0	63	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	2300
	1/24/2001	22	190	60	440	712	<1.0	45	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	1400
	1/31/2001	16	160	49	430	655	<5.0	57	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	1800
	2/7/2001	8.7	160	40	360	569	<2.0	53	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	1900
	2/14/2001	16	260	74	590	940	<1.0	36	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	2300
	2/21/2001	9.5	150	36	290	486	<10	50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	1800
	3/7/2001	27	210	82	410	729	<20	37	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	2100
	3/20/2001	11	120	18	150	299	<5.0	45	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	1600
	4/3/2001	14	140	36	250	440	<10	35	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.081	<0.40	<1.0	870
	4/17/2001	23	200	44	370	637	<5.0	49	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	1300
	5/1/2001	12	210	38	310	570	<5.0	59	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	1400
	6/14/2001	9.5	130	17	130	287	<10	24	1.2	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.18	<0.40	0.4	1200
	7/24/2001	16	150	10	120	296	<1.0	25	3.3	7	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.19	<0.40	<1.0	1200
	8/13/2001	16	140	9.1	130	295	3.5	26	3.2	7.2	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.2	<0.40	0.5	1500
	9/17/2001	18	150	30	290	488	2.9	23	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.60	<0.40	<1.0	1500
	10/22/2001	1.9	6	0.7	13	21.6	<1.0	4.7	<1.1	<1.1	<1.1	<1.1	<1.1	<0.20	<0.22	<0.20	<0.20	<0.20	<0.22	<0.20	<0.20	<0.20	<0.20	0.13	<0.40	<1.0	3100
	11/13/2001	6.8	54	2.8	44	108	<1.0	24	<1.1	<1.1	<1.1	<1.1	<1.1	<0.20	<0.21	<0.20	<0.21	<0.20	<0.20	<0.21	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	1700
	12/17/2001	1.8	43	<1.0	36	81	<1.0	32	<1.0	<1.1	<1.0	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60	<0.40	<1.0	1400
	3/18/2002	1	30	1.8	47	80	<1.0	43	<1.1	<1.1	<1.1	<1.1	<1.1	<0.20	<0.21	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.21	0.17	<0.40	<1.0	719
	6/5/2002	1.4	39	1.7	55	97	<1.0	44	<1.1	<1.1	<1.1	<1.1	<1.1	<0.20	<0.21	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.21	0.089 J	<0.40	<1.0	860
Groundwater Criteria [1]		1	30	40	20	n/a	50	20	210	20	280	210	2100	280	210	0.2	4.8	0.2	0.5	0.2	0.2	0.2	210	10,000	1000	n/a	5000
Natural Attenuation Default Source [1]		100	300	400	200	n/a	500	200	2100	200	2800	2100	21000	2800	2100	20	480	20	50	20	20	20	2100	100,000	10000	n/a	50000

All values reported in µg/L
1 = Ch 62-777 F.A.C Groundwater Cleanup Target Levels (GCTLs) reported in µg/L
Shaded values indicate the compounds that exceed the GCTLs

TABLE 3-3
Groundwater Field Analytical Results

	Date	pH	Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)
CEF-9-2S	12/18/2000	6.19	0.192	27.20	0.0	NR	80	1.2	0.3
	1/18/2001	6.19	0.106	23.40	2.5	1000+	400+	0.0	0.3
	1/24/2001	6.41	0.650	22.30	3.9	1000+	400+	0.0	0.1
	1/31/2001	6.49	0.062	25.10	4.7	1000+	400	0.0	0.2
	2/7/2001	6.42	0.060	22.40	5.2	1000+	400+	0.2	0.1
	2/14/2001	6.30	0.070	23.00	5.8	1000+	400+	0.0	0.7
	2/21/2001	6.30	0.070	23.00	6.3	NR	NR	0.0	0.1
	3/7/2001	6.60	0.080	22.00	6.0	NR	NR	0.2	0.1
	3/20/2001	6.37	0.092	22.60	6.6	1000+	400+	0.0	0.5
	4/3/2001	6.40	0.100	23.00	6.5	>	400+	0.2	0.5
	4/17/2001	8.55	0.110	23.00	4.0	1000+	400+	0.2	0.1
	5/1/2001	6.20	0.110	23.00	3.0	1000+	400+	0.2	0.1
	6/14/2001	5.74	0.128	25.00	2.0	1000+	400+	0.0	0.1
	7/24/2001	5.71	0.144	26.4	2.1	500	120	0.6	0.1
	8/13/2001	6.11	0.153	27.8	1.9	1000+	220	0.0	0.3
	9/17/2001	5.59	0.174	27.8	1.7	180	60	1.8	0.2
	10/22/2001	6.13	0.167	27.3	1.8	1000+	400+	1.0	0.1
	11/13/2001	6.38	0.163	26.1	1.6	160	60	1.0	0.5
	12/17/2001	6.00	0.146	25.6	1.5	240	60	1.0	1.0
	3/18/2002	6.13	0.140	23.6	1.2	200	60	0.6	0.3
	6/5/2002	6.18	0.120	26.6	1.0	240	60	0.2	0.1
CEF-9-3S	12/18/2000	6.49	0.348	25.40	0.0	17	160	3.4	0.5
	1/18/2001	6.50	0.131	23.00	1.6	1000+	600	0.2	0.5
	1/24/2001	6.67	0.087	22.30	1.5	1000+	300	0.4	0.3
	1/31/2001	6.67	0.087	23.50	2.6	1000+	400	0.0	0.6
	2/7/2001	6.47	0.074	22.20	1.6	1000+	400+	1.2	0.1
	2/14/2001	6.50	0.067	22.00	2.4	1000+	400+	0.0	0.5
	2/21/2001	6.40	0.070	23.00	2.2	400	100	0.2	0.1
	3/7/2001	6.70	0.080	22.00	2.5	300	60	0.8	0.1
	3/20/2001	6.14	0.073	22.70	2.6	250	80	0.6	0.3
	4/3/2001	6.10	0.080	23.00	3.4	200	400+	0.1	0.1
	4/17/2001	5.90	0.080	23.00	1.8	160	80	0.8	0.5
	5/1/2001	6.20	0.090	24.00	1.7	120	60	1.2	0.3
	6/14/2001	5.41	0..098	26.10	1.9	228	80	1.1	2.0
	7/24/2001	6.82	0.111	27.20	3.1	120	40	2.0	2.0
	8/13/2001	6.61	0.108	27.90	2.5	84	60	2.2	0.5
	9/17/2001	6.24	0.139	28.20	2.1	60	60	1.0	0.3
	10/22/2001	6.82	0.119	27.40	1.8	120	80	1.4	0.7
	11/13/2001	6.58	0.121	26.30	0.5	100	40	1.4	0.8
	12/17/2001	5.00	0.118	25.60	1.7	100	60	1.2	1.0
	3/18/2002	6.19	0.138	23.4	3.9	60	40	1.0	0.4
	6/5/2002	6.18	0.158	27.5	1.6	80	40	0.8	0.5

TABLE 3-3
Groundwater Field Analytical Results

	Date	pH	Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)
CEF-9-5S	12/18/2000	6.20	0.186	22.70	0.0	10	100	0.0	0.1
	1/18/2001	6.43	0.158	22.40	3.8	1000+	400+	0.6	0.1
	1/24/2001	6.54	0.159	21.40	3.5	200	100	0.4	0.0
	1/31/2001	6.51	0.178	22.80	4.2	350	400	0.6	0.1
	2/7/2001	6.55	0.163	21.80	4.0	220	120	0.2	0.0
	2/14/2001	6.40	0.150	22.00	3.4	1000+	400+	0.0	0.2
	2/21/2001	6.40	0.150	21.00	4.5	140	100	0.2	0.1
	3/7/2001	6.57	0.141	20.90	3.3	300	80	0.2	0.0
	3/20/2001	6.20	0.130	21.00	3.5	300	160	0.1	0.1
	4/3/2001	5.90	0.070	21.00	5.7	500	120	0.4	0.1
	4/17/2001	6.10	0.080	22.00	4.3	260	100	0.9	0.1
	5/1/2001	6.10	0.110	22.00	3.4	280	100	0.4	0.1
	6/14/2001	6.11	0.119	25.20	NR	1000+	400+	0.0	3.0
	7/24/2001	5.36	0.062	25.50	3.8	260	120	1.0	0.1
	8/13/2001	6.85	0.058	26.60	3.8	1000+	180	0.0	0.1
	9/17/2001	6.57	0.164	26.50	5.5	200	80	0.6	0.1
	10/22/2001	6.27	0.074	25.90	2.5	220	80	0.8	0.1
	11/13/2001	6.71	0.075	24.90	2.1	80	60	0.4	0.1
	12/17/2001	6.00	0.072	24.20	2.9	140	40	0.6	0.0
	3/18/2002	6.44	0.070	22.0	2.3	80	40	0.4	0.0
	6/5/2002	6.43	0.117	25.3	1.6	80	40	0.2	0.0
CEF-9-7D	12/18/2000	7.45	0.264	25.20	0.1	8	85	0.0	0.1
	1/18/2001	6.69	0.133	24.40	2.0	80	100	0.4	0.1
	1/24/2001	6.29	0.079	24.20	1.9	130	100	0.6	0.0
	1/31/2001	6.29	0.092	25.40	1.0	50	60	0.1	0.1
	2/7/2001	5.93	0.057	24.20	2.4	140	60	0.2	0.0
	2/14/2001	5.90	0.050	24.00	2.6	70	40	0.2	0.1
	2/21/2001	5.80	0.050	24.00	2.4	100	40	0.4	0.0
	3/7/2001	6.10	0.060	23.30	1.9	140	40	0.6	0.0
	3/20/2001	5.47	0.049	23.60	2.4	50	40	0.3	0.1
	4/3/2001	5.40	0.050	23.00	2.8	80	40	0.4	0.1
	4/17/2001	5.30	0.050	24.00	2.7	60	40	0.6	0.0
	5/1/2001	5.50	0.050	24.00	2.5	80	40	0.8	0.0
	6/14/2001	9.82	0.047	24.40	NR	102	40	0.6	0.0
	7/24/2001	5.42	0.043	24.30	2.5	80	20	0.6	0.0
	8/13/2001	5.44	0.041	24.80	2.5	66	40	0.8	0.0
	9/17/2001	5.47	0.065	25.00	8.1	50	40	0.6	0.1
	10/22/2001	4.87	0.029	26.00	2.9	60	20	0.4	0.0
	11/13/2001	6.21	0.043	24.50	2.6	80	40	0.6	0.0
	12/17/2001	5.00	0.033	25.00	1.7	90	20	0.6	0.0
	3/18/2002	5.47	0.036	25.1	1.6	50	20	0.0	0.0
	6/5/2002	5.36	0.390	25.9	2.0	90	20	0.6	0.0

TABLE 3-3
Groundwater Field Analytical Results

	Date	pH	Conductivity (mS/cm)	Temperature (^oC)	Dissolved Oxygen (mg/L)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)
CEF-9-9S	12/18/2001	5.31	0.121	26.30	0.0	NR	NR	NR	NR
	1/18/2001	5.44	0.058	23.00	2.1	500	400+	1.0	5.0
	1/24/2001	5.53	0.054	22.60	1.7	500	200	0.8	5.0
	1/31/2001	5.44	0.059	23.30	2.1	500	400	1.1	5.0
	2/7/2001	5.46	0.052	22.60	2.4	260	100	0.6	5.0
	2/14/2001	5.40	0.050	23.00	2.0	120	140	1.0	4.0
	2/21/2001	5.40	0.050	22.00	1.9	300	80	0.6	5.0
	3/7/2001	5.56	0.540	22.00	1.5	200	80	0.6	5.0
	3/20/2001	5.28	0.052	22.30	2.3	360	80	0.4	5.0
	4/3/2001	5.00	0.060	22.00	2.4	280	160	0.3	5.0
	4/17/2001	5.00	0.060	23.00	2.2	200	100	0.6	5.0
	5/1/2001	5.20	0.060	23.00	2.2	220	60	0.4	5.0
	6/14/2001	5.02	0.064	26.00	NR	88	60	1.8	0.5
	7/24/2001	4.35	0.057	26.80	2.1	170	40	1.0	2.0
	8/13/2001	8.54	0.049	27.40	2.5	220	40	1.0	5.0
	9/17/2001	5.08	0.088	28.20	3.1	130	20	0.8	0.6
	10/22/2001	4.94	0.095	27.20	2.7	160	40	1.0	5.0
	11/13/2001	5.21	0.080	25.90	1.2	110	40	1.4	1.0
	12/17/2001	5.00	0.068	25.40	1.7	80	20	1.0	1.0
	3/18/2002	5.15	0.104	23.60	1.2	100	20	0.6	1.0
	6/5/2002	5.35	0.119	26.7	1.4	10	20	0.6	0.7

NR = No Reading
mS/cm = millisiemans per centimeter
^oC = degrees Celsius
mg/L = milligrams per liter

4.0 Conclusions and Recommendations

The soil screening results performed in the vicinity of the former UST area (soil boring SB-1) indicated that OVA/FID readings were less than 50 ppm at depths above the water table. Laboratory analysis of the soil indicated that all contaminant concentrations were below the FDEP Leachability and Direct Exposure Residential SCTLs.

The groundwater sampling results indicated that monitoring wells CEF-9-2S, CEF-9-3S, CEF-9-5S, and CEF-9-7D were below the FDEP GCTLs. Monitoring well CEF-9-9S exhibited benzene, ethylbenzene, xylenes, and naphthalene concentrations that exceed the FDEP GCTLs but are below the FDEP Natural Attenuation Default Source Concentrations (NADSC). LNAPL was not noted in any monitoring well during the monitoring period.

CCI/J.A. Jones recommends continuing to operate the nutrient injection system. The field parameter readings will be evaluated and the airflow may be re-balanced as warranted. All five monitoring wells will be sampled during the next quarter. The soil screening and sampling will be conducted at soil boring location SB-1 again during the next quarter to monitor the soil in this location. If the soil sample at SB-1 is below the FDEP SCTLs, CCI/J.A. Jones will recommend that no further soil sampling be performed.

5.0 References

Harding Lawson and Associates. October 1998. Site Assessment Report, Building 9, Former Tanks 9L1 and 9L2; Naval Air Station Cecil Field, Jacksonville, Florida.

Tetra Tech NUS, Inc. June 2000. Remedial Action Plan Addendum; Building 9, Former Tanks 9L1 and 9L2; Naval Air Station Cecil Field, Jacksonville, Florida.

Appendix A

Laboratory Analytical Reports for Soil Samples

KEMRON REPORT L0206416

PREPARED FOR CCI

WORK ID: BLDG 9 CECIL FIELD

Summary Report 1
Laboratory Report 2
Attachments 26

Full Sample Data Package..... 33
Volatiles Data 34
BTEX GC Data (8021) 35
QC Summary..... 38
Sample Data..... 63
Standards Data 70
Raw Data..... 127
Semivolatiles Data 141
Method 8011 142
QC Summary..... 145
Sample Data..... 167
Standards Data 172
Raw QC Data 203
PAH HPLC DATA (8310) 224
QC Summary..... 227
Sample Data..... 275
Standards Data 288
Raw QC Data 345
General Chemistry Data..... 377

1.0 Summary Report

1.1 Laboratory Report

Cover Page
Laboratory Narrative
Laboratory Results

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

L0206416

CHAIN OF CUSTODY:

The chain of custody number was 163151-052.

SHIPMENT CONDITIONS:

The chain of custody forms were received sealed in a cooler. The cooler temperature was 1 ° C.

SAMPLE MANAGEMENT:

All samples received were intact.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

REVIEWED Stephanie L Lepe DATE: 6/24/02

REPORT NARRATIVE
GC VOLATILE ORGANICS - BETX

KEMRON Login No: L0206416

METHOD

Preparation: SW- 846 5030B, 5035
Analysis: SW-846 8021B

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Sample: All acceptance criteria were met.
Matrix Spikes: Not associated with this SDG.

SAMPLES

Surrogates: All acceptance criteria were met.
Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CBN REVIEWED: _____ DATE: 6/28/02

Rev. 6/00

REPORT NARRATIVE
PAH HPLC

KEMRON Login No.: L0206416

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8310

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds linear equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples: The percent reproducibility for the LCS/LCS2 analyzed with the water fractions was above the advisory limit for dibenz(a,h)anthracene.
Matrix Spikes: The MS/MSD results were not associated with this sample delivery group.

SAMPLES

Surrogates: Fraction 01 yielded a percent recovery for the surrogate by the fluorescence detector which was above the advisory limit. For the same fraction all acceptance criteria were met for the surrogate by the UV detector.
Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: RDC REVIEWED: _____ DATE: 7/3/02

Rev. 7/14/00

REPORT NARRATIVE
GC PRO RANGE ORGANICS

KEMRON Report No.: L0206416

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8015

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: The MS/MSD results were not associated with sample delivery group .

SAMPLES

Samples: All acceptance criteria were met.
Surrogates: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: HV REVIEWED: _____ DATE: 7/1/02

Rev. 7/14/00

6

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA PACKAGE

Analytical Method : **8021B**

AAB # : **WG120311**

Lab Name : **Kemron Environmental Services**

Contract # : **N62467-98-D-0995**

Base/Command : **blgs 9 and 46**

Prime Contractor : **CCI**

Field sample ID	Lab Sample ID
062-CEF9-SB1-S-Q2-02	L0206416-01

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner

Name: **David L. Bumgarner**

Date: **08-JUL-02**

Title: **Laboratory Director**

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG120311

Lab Name : Kemron Environmental Services Contract#: N62467-98-D-0995

Field Sample ID: 062-CEF9-SB1-S-Q2-02 Lab Sample ID: L0206416-01 Matrix: Soil

% Solids: 93 Initial Calibration ID: HP11 30-APR-2002

Date Received: 21-JUN-02 Date Extracted: Date Analyzed: 21-JUN-02 18:08

Concentration Units: ug/kg File ID: 11G13776

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.529	1.1	0.529	1	U
Ethylbenzene	0.529	1.1	0.529	1	U
Methyl tert-butyl ether	0.529	1.1	0.529	1	U
Toluene	0.529	1.1	0.529	1	U
Xylenes, Total	0.529	3.2	0.529	1	U

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	101	47 – 121	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA PACKAGE

Analytical Method : **8021B**

AAB # : **WG120409**

Lab Name : **Kemron Environmental Services**

Contract # : **N62467-98-D-0995**

Base/Command : **blgs 9 and 46**

Prime Contractor : **CCI**

Field sample ID	Lab Sample ID
062-CEF9-EQB-W-Q2-02	L0206416-02
062-CEF9-TB-W-Q2-02	L0206416-03

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner

Name: **David L. Bumgarner**

Date: **08-JUL-02**

Title: **Laboratory Director**

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG120409

Lab Name : Kemron Environmental Services Contract#: N62467-98-D-0995

Field Sample ID: 062-CEF9-EQB-W-02-02 Lab Sample ID: L0206416-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 22-APR-2002

Date Received: 21-JUN-02 Date Extracted: Date Analyzed: 25-JUN-02 08:28

Concentration Units: ug/L File ID: 5G13818

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.500	1.0	0.500	1	U
Ethylbenzene	0.500	1.0	0.500	1	U
Methyl tert-butyl ether	0.500	1.0	0.500	1	U
Toluene	0.500	1.0	0.500	1	U
Xylenes, Total	0.500	1.0	0.500	1	U

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	104	70 - 130	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG120409

Lab Name : Kemron Environmental Services Contract#: N62467-98-D-0995

Field Sample ID: 062-CEF9-TB-W-02-02 Lab Sample ID: L0206416-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 22-APR-2002

Date Received: 21-JUN-02 Date Extracted: Date Analyzed: 25-JUN-02 09:03

Concentration Units: ug/L File ID: 5G13819

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.500	1.0	0.500	1	U
Ethylbenzene	0.500	1.0	0.500	1	U
Methyl tert-butyl ether	0.500	1.0	0.500	1	U
Toluene	0.500	1.0	0.500	1	U
Xylenes, Total	0.500	1.0	0.500	1	U

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	104	70 - 130	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA PACKAGE

Analytical Method : 8310

Lab Name : Kemron Environmental Services

Base/Command : blgs 9 and 46

AAB # : WG120425

Contract # : N62467-98-D-0995

Prime Contractor : CCI

Field sample ID	Lab Sample ID
062-CEF9-SB1-S-Q2-02	L0206416-01

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner

Name: David L. Bumgarner

Date: 08-JUL-02

Title: Laboratory Director

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : WG120425

Lab Name : Kemron Environmental Services Contract#: N62467-98-D-0995

Field Sample ID: 062-CEF9-SB1-S-Q2-02 Lab Sample ID: L0206416-01 Matrix: Soil

% Solids: 93 Initial Calibration ID: HPLC4 19-JUN-2002

Date Received: 21-JUN-02 Date Extracted: 24-JUN-02 Date Analyzed: 26-JUN-02 02:11

Concentration Units: ug/kg File ID: 4L003222.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	5.64	180	7.80	1	J
2-Methylnaphthalene	4.91	180	11.0	1	J
Acenaphthene	60.2	180	60.2	1	U
Acenaphthylene	48.4	180	48.4	1	U
Anthracene	44.1	180	44.1	1	U
Benzo(a)anthracene	4.08	18	74.0	1	
Benzo(a)pyrene	3.12	18	190	1	
Benzo(b)fluoranthene	5.16	18	180	1	
Benzo(g,h,i)perylene	3.87	18	220	1	
Benzo(k)fluoranthene	2.15	18	80.0	1	
Chrysene	4.08	18	130	1	
Dibenzo(a,h)anthracene	4.84	18	210	1	
Fluoranthene	3.98	18	190	1	J
Fluorene	61.3	180	61.3	1	U
Indeno(1,2,3-cd)pyrene	3.44	18	92.0	1	
Naphthalene	67.7	180	67.7	1	U
Phenanthrene	50.5	180	50.5	1	U
Pyrene	3.98	18	290	1	J

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : WG120425

Lab Name : Kemron Environmental Services Contract#: N62467-98-D-0995

Field Sample ID: 062-CEF9-SB1-S-02-02 Lab Sample ID: L0206416-01 Matrix: Soil

% Solids: 93 Initial Calibration ID: HPLC4 19-JUN-2002

Date Received: 21-JUN-02 Date Extracted: 24-JUN-02 Date Analyzed: 26-JUN-02 02:11

Concentration Units: % Recovery File ID: 4L003222.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	208	50 - 150	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 2 of 2

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : WG120425

Lab Name : Kemron Environmental Services Contract#: N62467-98-D-0995

Field Sample ID: 062-CEF9-SB1-S-02-02 Lab Sample ID: L0206416-01 Matrix: Soil

% Solids: 93 Initial Calibration ID: HPLC4 19-JUN-2002

Date Received: 21-JUN-02 Date Extracted: 24-JUN-02 Date Analyzed: 26-JUN-02 02:11

Concentration Units: ug/kg File ID: 4L003222.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	5.64	180	6.60	1	J
2-Methylnaphthalene	4.91	180	13.0	1	J
Acenaphthene	60.2	180	60.2	1	U
Acenaphthylene	48.4	180	48.4	1	U
Anthracene	44.1	180	44.1	1	U
Benzo(a)anthracene	4.08	18	55.0	1	
Benzo(a)pyrene	3.12	18	210	1	
Benzo(b)fluoranthene	5.16	18	240	1	
Benzo(g,h,i)perylene	3.87	18	250	1	
Benzo(k)fluoranthene	2.15	18	110	1	
Chrysene	4.08	18	120	1	
Dibenzo(a,h)anthracene	4.84	18	190	1	
Fluoranthene	3.98	18	89.0	1	J
Fluorene	61.3	180	61.3	1	U
Indeno(1,2,3-cd)pyrene	3.44	18	120	1	
Naphthalene	67.7	180	67.7	1	U
Phenanthrene	50.5	180	50.5	1	U
Pyrene	3.98	18	140	1	J

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : WG120425

Lab Name : Kemron Environmental Services Contract#: N62467-98-D-0995

Field Sample ID: 062-CEF9-SB1-S-Q2-02 Lab Sample ID: L0206416-01 Matrix: Soil

% Solids: 93 Initial Calibration ID: HPLC4 19-JUN-2002

Date Received: 21-JUN-02 Date Extracted: 24-JUN-02 Date Analyzed: 26-JUN-02 02:11

Concentration Units: % Recovery File ID: 4L003222.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	70.6	50 - 150	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 2 of 2

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA PACKAGE

Analytical Method : **8310**

Lab Name : **Kemron Environmental Services**

Base/Command : **blgs 9 and 46**

AAB # : **WG120426**

Contract # : **N62467-98-D-0995**

Prime Contractor : **CCI**

Field sample ID	Lab Sample ID
062-CEF9-EQB-W-Q2-02	L0206416-02

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner

Name: **David L. Bumgarner**

Date: **08-JUL-02**

Title: **Laboratory Director**

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG120426

Lab Name : Kemron Environmental Services Contract#: N62467-98-D-0995

Field Sample ID: 062-CEF9-EQB-W-02-02 Lab Sample ID: L0206416-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 19-JUN-2002

Date Received: 21-JUN-02 Date Extracted: 24-JUN-02 Date Analyzed: 25-JUN-02 20:31

Concentration Units: ug/L File ID: 4L003216.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.377	1.0	0.377	1	U
2-Methylnaphthalene	0.350	1.0	0.350	1	U
Acenaphthene	0.432	1.0	0.432	1	U
Acenaphthylene	0.351	1.0	0.351	1	U
Anthracene	0.297	1.0	0.297	1	U
Benzo(a)anthracene	0.0313	0.21	0.0313	1	U
Benzo(a)pyrene	0.0552	0.21	0.0552	1	U
Benzo(b)fluoranthene	0.0354	0.21	0.0354	1	U
Benzo(g,h,i)perylene	0.0521	0.21	0.0521	1	U
Benzo(k)fluoranthene	0.0750	0.21	0.0750	1	U
Chrysene	0.0250	0.21	0.0250	1	U
Dibenzo(a,h)anthracene	0.0802	0.21	0.0802	1	U
Fluoranthene	0.0521	0.21	0.0521	1	U
Fluorene	0.582	1.0	0.582	1	U
Indeno(1,2,3-cd)pyrene	0.0833	0.21	0.0833	1	U
Naphthalene	0.374	1.0	0.374	1	U
Phenanthrene	0.299	1.0	0.299	1	U
Pyrene	0.0708	0.21	0.0708	1	U

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG120426

Lab Name : Kemron Environmental Services Contract#: N62467-98-D-0995

Field Sample ID: 062-CEF9-EQB-W-02-02 Lab Sample ID: L0206416-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 19-JUN-2002

Date Received: 21-JUN-02 Date Extracted: 24-JUN-02 Date Analyzed: 25-JUN-02 20:31

Concentration Units: % Recovery File ID: 4L003216.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	90.0	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 2 of 2

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA PACKAGE

Analytical Method : **8015 MOD**

AAB # : **WG120442**

Lab Name : **Kemron Environmental Services**

Contract # : **N62467-98-D-0995**

Base/Command : **blgs 9 and 46**

Prime Contractor : **CCI**

Field sample ID	Lab Sample ID
062-CEF9-SB1-S-Q2-02	L0206416-01

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner

Name: **David L. Bumgarner**

Date: **08-JUL-02**

Title: **Laboratory Director**

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3550B AAB # : WG120442

Lab Name : Kemron Environmental Services Contract#: N62467-98-D-0995

Field Sample ID: 062-CEF9-SB1-S-Q2-02 Lab Sample ID: L0206416-01 Matrix: Soil

% Solids: 93 Initial Calibration ID: HP2 27-JUN-2002

Date Received: 21-JUN-02 Date Extracted: 24-JUN-02 Date Analyzed: 27-JUN-02 16:18

Concentration Units: ug/kg File ID: 2G20656

Analyte	MDL	RL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	5360	11000	120000	1	

Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	112	43 - 136	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA PACKAGE

Analytical Method : **8015 MOD**

Lab Name : **Kemron Environmental Services**

Base/Command : **blgs 9 and 46**

AAB # : **WG120443**

Contract # : **N62467-98-D-0995**

Prime Contractor : **CCI**

Field sample ID	Lab Sample ID
062-CEF9-EQB-W-Q2-02	L0206416-02

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner

Name: **David L. Bumgarner**

Date: **08-JUL-02**

Title: **Laboratory Director**

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG120443

Lab Name : Kemron Environmental Services Contract#: N62467-98-D-0995

Field Sample ID: 062-CEF9-EOB-W-02-02 Lab Sample ID: L0206416-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 27-JUN-2002

Date Received: 21-JUN-02 Date Extracted: 24-JUN-02 Date Analyzed: 27-JUN-02 13:00

Concentration Units: ug/L File ID: 2G20645

Analyte	MDL	RL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	263	530	263	1	U

Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	87.6	49 - 174	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA PACKAGE

Analytical Method : **D2216-90**

Lab Name : **Kemron Environmental Services**

Base/Command : **blgs 9 and 46**

AAB # : **WG120393**

Contract # : **N62467-98-D-0995**

Prime Contractor : **CCI**

Field sample ID	Lab Sample ID
062-CEF9-SB1-S-Q2-02	L0206416-01

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner

Name: **David L. Bumgarner**

Date: **08-JUL-02**

Title: **Laboratory Director**

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : D2216-90 Preparatory Method: D2216-90 AAB # : WG120393

Lab Name : Kemron Environmental Services Contract#: N62467-98-D-0995

Field Sample ID: 062-CEF9-SB1-S-02-02 Lab Sample ID: L0206416-01 Matrix: Soil

% Solids: 93 Initial Calibration ID: OVEN 24-JUN-02

Date Received: 21-JUN-02 Date Extracted: Date Analyzed: 24-JUN-02 14:00

Concentration Units: weight % File ID:

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Percent Solids	1.00	1.0	93.0	1	

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

1.2 Attachments

KEMRON ANALYST LIST

Ohio Valley Laboratory

06/17/2002

AJF - AMANDA J. FICKIESEN
ALT - ANN L. THAYER
ARS - ANGELINA R. SCOTT
BRG - BRENDA R. GREGORY
CAF - CHERYL A. FLOWERS
CAK - CHERYL A. KOELSCH
CBN - CHARLES B. NOLL
CEB - CHAD E. BARNES
CLC - CHRYS L. CRAWFORD
CLK - CARL L. KING
CLW - CHARISSA L. WINTERS
CMS - CRYSTAL M. STEVENS
CRC - CARLA R. COCHRAN
CSH - CHRIS S. HILL
DAD - DAVE A. DAULEY
DAH - DON A. HUNTER
DAM - DAN A. MUSGRAVE
DAS - DALLAS A. SULLIVAN
DAT - DEBBIE A. TORNES
DEL - DON E. LIGHTFRITZ
DEV - DAVID E. VANDENBERG
DGB - DOUGLAS G. BUTCHER
DIH - DEANNA I. HESSON
DLA - DENISE L. ADAMS
DLB - DAVID L. BUMGARNER
DLN - DEANNA L. NORTON
DLP - DOROTHY L. PAYNE
DLR - DIANNA L. RAUCH
DP - DEANNA L. PIERSON
DRB - DOUG R. BARNETT
DSM - DAVID S. MOSSOR
DST - DENNIS S. TEPE
ECL - ERIC C. LAWSON
GSG - GALEN S. GEORGE
HV - HEMA VILASAGAR
JAL - JOHN A. LENT
JJG - JAKE J. GREUEY
JKW - JANE K. WARDEN
JLS - JANICE L. SCHIMMEL
JMM - JARROD M. MARTIN
JMT - JOY M. THOMAS
JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES
JYH - JI Y. HU
KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON
LKN - LINDA K. NEDEFF
LRR - LUCYNDA R. ROBERTS
LSA - LUCINDA S. ARNOLD
LSB - LESLIE S. BUCINA
MDA - MICHAEL D. ALBERTSON
MDC - MICHAEL D. COCHRAN
MEF - MIKE E. FLANAGAN
MES - MARY E. SCHILLING
MKZ - MARILYN K. ZUMBRO
MLR - MARY L. ROCHOTTE
MLS - MICHAEL L. SCHIMMEL
MMB - MAREN M. BEERY
MSW - MATT S. WILSON
NJB - NATALIE J. BOOTH
OGT - OKEY G. TUCKER
RDC - REBECCA D. CUTLIP
REF - RON E. FERTILE
REK - ROBERT E. KYER
RJW - RHONDA J. WITTEKIND
RLW - RON L. WATSON
RSS - REGINA S. SIMMONS
RWC - ROD W. CAMPBELL
SJK - SINDY J. KINNEY
SLP - SHERI L. PFALZGRAF
SLT - STEPHANIE L. TEPE
SMW - SHAUNA M. WELCH
SMW - SHARON M. WASHBURN
SPL - STEVE P. LEARN
TJH - TIM J. HOEFLICH
TMM - TAMMY M. MORRIS
VC - VICKI COLLIER
VKL - VICKY K. LAUER

KEMRON Environmental Services, Inc
List of Valid Qualifiers
December 15, 2000

Standard Qualifiers

These are KEMRON's Standard Report Qualifiers

A	See the report narrative
B	Present in the method blank
C	Confirmed by GC/MS
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met
N	Tentatively Identified Compound (TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration >40% difference between The two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Re analysis confirms reported results
RE	Re analysis confirms sample matrix Interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out Of control limits
Z	Can not be resolved from isomer.***
+	Correlation coefficient for the MSA is less Than 0.995
<	Less than
>	Greater than
*	Surrogate or spike compound out of range

***** Special Notes for Organic Analytes**

1. Acrolein and acrylonitrile by method 624 are semiquantative screens only
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene
3. N-nitrosodiphenylamine cannot be separated from diphenylamine
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds
5. m-Xylene and p-Xylene are unresolvable compounds
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent

AFCEE Qualifiers

These are KEMRON's AFCEE Report Qualifiers

J	The analyte was positively identified, the quantitation is an estimation
U	The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL
F	The analyte was positively identified but the associated numerical value is below the RL
R	The data is unusable due to deficiencies in the ability to analyze the sample and meet QC criteria
B	The analyte was found in an associated blank, as well as in the sample
M	The matrix effect was present
S	To be applied to all field screening data
T	Tentatively identified compound (using GC/MS)

CH2M Hill Constructors, Inc.
115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No (770) 604-9182 ; Fax No (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER
163151-052

PROJECT NAME:	PROJECT NUMBER:	LAB NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 1 (Name and Company)	RECIPIENT 1 (Address, Tel No. , and Fax No.):
N.A.S. Cecil Field Building 9	163151	Debbie Tornes Kemron Environmental Services	Bill Canelos J.A Jones Env. Services	6219 Authority Road, Jacksonville, FL 32221 PH: (904) 7774812 FAX: (904) 7774262
PROJECT PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 2 (Name and Company)	RECIPIENT 2 (Address, Tel No. , and Fax No.):
Building 9 / Quarterly Soil Boring Sampling Event	0062	3868	Christelle Newsome CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 (770)604-9182 Ext.561 FAX:604-9282
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Bill Canelos	Phone: 904-777-4812 Fax:904-777-4262	Phone: 740-373-4071 Fax: 740-373-4835		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on back)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on back)	TAT (calendar days)	BTEX and MTBE by 8021B(EnCore)	Naphthalene & 15 Method Listed PAHs by 8310	TRPH by FL-PRO						SAMPLE TYPE (see codes on back)	COMMENTS/ SCREENING READINGS	LAB ID
1	062-CEF9-SB1-S-Q2-02	Soil Boring 1 @ 4' bls.	S	06/20/02	10:00	III/C	14	3	1	1						Grab	OVA : 1 ppm	
2	062-CEF9-EQB-W-Q2-02	Equipment Blank	W	06/20/02	10:15	III/C	14	2	2	2						Grab		
3	062-CEF9-TB-W-Q2-02	Trip Blank	W	--	--	III/C	14	2									Prepared by Lab	
4		Temperature Blank	W	--	--						1							
5																		
6																		
7																		
8																		
9																		
10																		

SAMPLER(S) AND COMPANY: (please print)
Randy Dumaop / Sean Smith
J.A. Jones Environmental Services

COURIER AND SHIPPING NUMBER:
Federal Express Track #791866735058, 791866735106 .

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
Randy Dumaop	6/20/02	17:00	Federal Express	6/20/02	17:00
Printed Name and Signature:			Printed Name and Signature:		
			Jane K. Warden	6/21/02	1012

KEMRON Internal Laboratory Chain of Custody

Work Order: L02 06416 **Client:** CCI-630 **# of Samples:** 3 **Due Date:** 6/28/02 **Page:**

Sample #	Analysis	Reason	Removed By ADT	Removed From	Moved To	Reliq. by	Ret'd By ADT	Ret'd To	Rec'd By	Reason
01	8260	AN	MCS 6.21.02 1530	V-1	ORG-4	JKW				
02,03	⊥	⊥	MCS 6.21-02 1530	⊥	⊥	JKW				
02A	FLA-PRO	EXT	MK 6/24/02 @0710	WALKIN	SHD	CEB	06-24-02 DGL 2000	crusher		disposal
02A	8310	EXT	MK 6/24/02 @0710	WALKIN	FLDS	CEB	06-24-02 DGL 2000	crusher		disposal
01A	8310 FLA-PRO	EXT	MK 6/24/02 @0725	WALKIN	SHD	CEB	CEB 6/24/02 @ 0935	WALKIN	BLG	HOLD
01	PCTFS	RST	Tmm @ 6/24/02 1410	walkin	net	SMW	Tmm @ 6/24/02 1500	walkin	SMW	Hold
01	—	Archive 2	BLG 7/9/02 @ 0900	WALKIN	Archive	BLG				
			Reports sent							

KEMRON Environmental Services | **SAMPLES RECEIPT FORM** | **Marietta Laboratory**

CLIENT: CCI BOG9 BRG Other SHW	**DATE:** 6-21-02	**SHIPPED BY:** (✓) FED-EX ( ) AIRBORNE ( ) UPS ( ) EMERY ( ) RPS ( ) US MAIL ( ) KEMRON ( ) CLIENT

COOLER ID: KL-894	**COOLER ID:**	**COOLER ID:**
INDEX #: 7918 6603 5106	**INDEX #:**	**INDEX #:**
SEALED (✓) YES ( ) NO	**SEALED** ( ) YES ( ) NO	**SEALED** ( ) YES ( ) NO
CUSTODY (✓) YES ( ) NO	**CUSTODY** ( ) YES ( ) NO	**CUSTODY** ( ) YES ( ) NO
TEMP: 1 °C (D) (E)	**TEMP:** °C (D) (E)	**TEMP:** °C (D) (E)
TEMP IN RANGE ( ) YES (✓) NO (4°C ± 2°)	**TEMP IN RANGE** ( ) YES ( ) NO (4°C ± 2°)	**TEMP IN RANGE** ( ) YES ( ) NO (4°C ± 2°)
WET ICE (✓) **BLUE ICE** ( )	**WET ICE** ( ) **BLUE ICE** ( )	**WET ICE** ( ) **BLUE ICE** ( )
ICE FROZEN (✓) **MELTED** ( )	**ICE FROZEN** ( ) **MELTED** ( )	**ICE FROZEN** ( ) **MELTED** ( )
RADIATION CHECKED ( ) YES ( ) NO	**RADIATION CHECKED** ( ) YES ( ) NO	**RADIATION CHECKED** ( ) YES ( ) NO
SAMPLE INTACT ( ) YES ( ) NO **SALVAGEBLE** ( ) YES ( ) NO	**SAMPLE INTACT** ( ) YES ( ) NO **SALVAGEBLE** ( ) YES ( ) NO	**SAMPLE INTACT** ( ) YES ( ) NO **SALVAGEBLE** ( ) YES ( ) NO
SAMPLE TYPE: **WATER** ( ) **SOIL** ( ) **OTHER** ( )	**SAMPLE TYPE:** **WATER** ( ) **SOIL** ( ) **OTHER** ( )	**SAMPLE TYPE:** **WATER** ( ) **SOIL** ( ) **OTHER** ( )
LABELS: **INTACT** ( ) YES ( ) NO **LEGIBLE** ( ) YES ( ) NO **MATCH COC** ( ) YES ( ) NO	**LABELS:** **INTACT** ( ) YES ( ) NO **LEGIBLE** ( ) YES ( ) NO **MATCH COC** ( ) YES ( ) NO	**LABELS:** **INTACT** ( ) YES ( ) NO **LEGIBLE** ( ) YES ( ) NO **MATCH COC** ( ) YES ( ) NO
pH IN RANGE (2 - >9 - >12) ( ) YES ( ) NO **AS APPROPRIATE**	**pH IN RANGE (2 - >9 - >12)** ( ) YES ( ) NO **AS APPROPRIATE**	**pH IN RANGE (2 - >9 - >12)** ( ) YES ( ) NO **AS APPROPRIATE**
SAMPLES FROZEN? ( ) YES (✓) NO	**SAMPLES FROZEN?** ( ) YES ( ) NO	**SAMPLES FROZEN?** ( ) YES ( ) NO
LOG-IN COMMENTS	**LOG-IN COMMENTS**	**LOG-IN COMMENTS**
SNCIRES		

TSR COMMENTS

CONTACT:	**DATE:**	**TIME:**

COMMENTS: ( ) **VOICE** ( ) **FAX** ( ) **E-MAIL**

Contractor Cooler _____
MRD Cooler # _____
Number of Coolers _____

PROJECT: N.A.S Cecil Field Bldg 9 LIMS# L0226416

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONERNING CHECK-IN PROBLEMS

A. **PRELIMINARY EXAMINATION PHASE:** Date cooler opened: 6/21/02 C-of-C Number: 163151-052
by (print) Jane K. Warden (sign) Jane K. Warden

1. Did cooler come with a shipping slip (air bill, etc.)? ..... YES NO
   If YES, enter carrier name & air bill number here: Fed-ex 7918 66735106
2. Were custody seals on outside of cooler? ..... YES NO
   How many & where? 2 F+B, seal date: 6/20/02 seal name: Custody seal
3. Were custody seals unbroken and intact at the data and time of arrival? ..... YES NO
4. Did you screen samples for radioactivity using the Geiger Counter? ..... YES NO
5. Were custody papers sealed in a plastic bag & taped inside to the lid? ..... YES NO
6. Were custody papers filled out properly (ink, signed, etc.)? ..... YES NO
7. Did you sign custody papers in the appropriate place? ..... YES NO
8. Was project identifiable from custody papers? If yes, enter project name at the top of this form ..... YES NO
9. If required, was enough ice used? ..... Type of ice: wet Temp 1 °C ..... YES NO
10. Have designated person initial here to acknowledge receipt of cooler: JKW (date) 6/21/02

B. **LOG-IN PHASE:** Date samples were logged-in: 6/21/02
by (print) Jane K. Warden (sign) Jane K. Warden

11. Describe type of packing in cooler: bubble wrap, plastic dividers, cardboard
12. Were all bottles sealed in separate plastic bags? ..... YES NO
13. Did all bottles arrive unbroken & were labels in good condition? ..... YES NO
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? ..... YES NO
15. Did all bottle labels agree with custody papers? ..... YES NO
16. Were correct containers used for the tests indicated? ..... YES NO
17. Were correct preservatives added to samples? ..... YES NO
18. Was a sufficient amount of sample sent for tests indicated? ..... YES NO
19. Were bubbles absent in volatile samples? If NO, list by Sample # _____ YES NO
20. Was the project manager called and status discussed? If YES, give details on the back of this form ..... YES NO
21. Who was called? _____ By whom? _____ (date) _____

2.0 Full Sample Data Package

2.1 Volatiles Data

2.1.3 BTEX GC Data (8021)

REPORT NARRATIVE
GC VOLATILE ORGANICS - BETX

KEMRON Login No: L0206416

METHOD

Preparation: SW- 846 5030B, 5035
Analysis: SW-846 8021B

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Sample: All acceptance criteria were met.
Matrix Spikes: Not associated with this SDG.

SAMPLES

Surrogates: All acceptance criteria were met.
Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CBN REVIEWED: _____ DATE: 6/28/02

Rev. 6/00

BETX-GC DATA (8021)

Login Number: L0206416

A. QC Summary

✓ Batch QC Summary Form

B. Sample Data

NA Target Compound List results and surrogate recoveries - See section 1.0 (c) (laboratory report)

✓ Chromatogram and quantitation report for each sample analysis and re-analysis (if re-analyzed) (Numerical order)

C. Standards Data

✓ Initial calibration summary form (Average Response Factor Calibration Data) (Chronological)

✓ Chromatograms and quantitation reports for standards

✓ Calibration verification standards (Continuing Calibration Data) initial and ending checks, chromatograms and quantitation reports (chronological)

✓ Retention time window summary (if applicable)(chronological)

D. Raw QC Data

✓ Method Blank, chromatogram and quantitation report for each matrix type (chronological)

✓ Laboratory Control Sample, chromatogram and quantitation report for each matrix type (chronological)

NA Matrix Spike/Matrix Spike Duplicate, chromatograms and quantitation reports (if not reported as samples) and of the same client batch (chronological)

✓ Instrument runlogs (chronological)

NA Extraction bench sheets (for mid-level methanol extractions) (chronological)

✓ 5035 logs (if applicable) (chronological)

Checked By: Janice L. Schimmel **Date:** 6/26/02

2.1.3.1 QC Summary

METHOD BLANK SUMMARY

Login Number: L0206416
Blank File ID: 11G13774
Date Analyzed: 06/21/02
Time Analyzed: 16:59
Analyst: JLS

Work Group: WG120311
Blank Sample ID: WG120311-01
Instrument ID: HP11
Method: 8021B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG120311-02	11G13775	06/21/02 17:34	
062-CEF9-SB1-S-Q2-02	L0206416-01	11G13776	06/21/02 18:08	

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0206416
Run Date: 06/21/2002
Sample ID: WG120311-01
Instrument ID: HP11
Run Time: 16:59
Method: 8021B
File ID: 11G13774
Analyst: JLS
Matrix: Solid
Workgroup (AAB#): WG120311
Units: ug/kg
Contract #:
Cal ID: HP11-30-APR-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
MTBE	0.500	1.00	0.500	1.00	ND
Benzene	0.500	1.00	0.500	1.00	ND
Toluene	0.500	1.00	0.500	1.00	ND
Ethylbenzene	0.500	1.00	0.500	1.00	ND
Total xylenes	0.500	3.00	0.500	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
TFT	94.7	47 - 121	PASS

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0206416
Run Date: 06/21/2002
Sample ID: WG120311-02
Instrument ID: HP11
Run Time: 17:34
Method: 8021B
File ID: 11G13775
Analyst: JLS
Matrix: Solid
Workgroup (AAB#): WG120311
Units: ug/kg
Contract #:
Cal ID: HP11-30-APR-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
MTBE	20	15.9	79.6	12 - 159	
Benzene	20	18.2	90.8	80 - 120	
Toluene	20	18.1	90.5	80 - 121	
Ethylbenzene	20	18.2	90.9	80 - 124	
Total xylenes	60	55.1	91.8	80 - 120	

Surrogates	% Recovery	Surrogate Limits	Qualifier
TFT	101	47 - 121	PASS

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 06/19/2002
Version 1.3
Report generated

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8021B

AAB#: WG120311

Login Number: L0206416

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
062-CEF9-SB1-S-Q2-02	06/20/02	06/21/02	06/21/02	14	1.34	06/21/02	14	1.34	

* EXT = MISSED EXTRACTION HOLD TIME
*ANAL = MISSED ANALYITICAL HOLD TIME

KEMRON FORMS - Modified 05/28/2002
Version 1.2
Report generated

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0206416
Instrument Id: HP11
Workgroup (AAB#): WG120311

Method: 8021
Matrix: SOLID

Sample Number	Dilution	Tag	1
L0206416-01	1.00		101
WG120311-01	1.00		94.7
WG120311-02	1.00		101

Surrogates	Surrogate Limits		
1 - a,a,a-Trifluorotoluene	47	-	121

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON FORMS - Modified 03/07/2002
Version 1.2
Report generated

Calibration Table Report
Method: 8021S.M
Title: Method 8021B- Soil 4/30/02
Last Calibration: Wed May 01 09:30:22 2002

Calibration Files

Compound	1 11G13484.D	10 11G13485.D	20 11G13486.D	50 11G13487.D	100 11G13488.D	200 11G13489.D	300 11G13490.D	Avg	%RSD
MTBE	130564.4	121945.8	118085.1	113558.8	117930.3	117525.0	117007.7	119517.0	4.561
Benzene	279113.8	268849.7	261094.0	253130.6	260157.9	258106.5	258096.1	262650.0	3.298
TFT	69260.2	88424.7	89870.6	87645.0	86019.6	89195.3	88120.0	85505.0	8.498
Toluene	259198.2	270831.2	272580.5	258699.4	261099.4	267050.4	261847.2	264472.0	2.140
Chlorobenzene	249596.2	263083.7	274302.8	266351.2	275208.6	280495.5	276123.7	269309.0	3.916
Ethylbenzene	217223.4	238323.7	243877.6	234407.7	240646.2	239754.2	236638.0	235839.0	3.706
m-,p-Xylene	275744.9	295029.5	294859.3	279070.4	285347.0	281979.0	276669.0	284100.0	2.844
o-Xylene	259615.7	262554.4	259540.1	245129.9	251145.2	249289.5	245123.9	253200.0	2.879
BFB	214211.4	225675.9	230793.0	232489.7	237922.4	243022.1	242490.5	232372.0	4.388
1,3-Dichlorobenzene	245015.0	228402.0	234891.6	228735.8	246888.1	250543.5	245202.9	239954.0	3.798
1,4-Dichlorobenzene	267249.8	238331.3	243679.5	233666.0	250309.3	251355.9	244594.6	247027.0	4.403
1,2-Dichlorobenzene	239096.9	211357.5	211951.1	201122.8	217264.0	213515.7	205864.1	214310.0	5.661
BCB	241933.0	217600.8	227469.0	227638.9	249625.9	248757.7	244103.5	236733.0	5.250

Wed May 01 09:31:03 2002

Login Number: L0206416
File ID: 11G13493
ALT ID: WG116964-08
Units: ug/kg

Instrument ID: HP11
Run Date: 04/30/2002
Run Time: 20:20
Analyst: CBN
Cal ID: HP11 - 30-APR-02

Analyte		Expected	Found	RF	%D	Q
1,2-Dichlorobenzene		20	20.0	214000	0.0	
1,4-Dichlorobenzene		20	19.2	238000	4.0	
1,3-Dichlorobenzene		20	19.2	230000	4.0	
o-Xylene		20	19.9	251000	0.5	
m-,p-Xylene		40	40.8	290000	2.0	
Ethylbenzene		20	20.8	245000	4.0	
Chlorobenzene		20	19.8	266000	1.0	
Toluene		20	20.1	266000	0.5	
Benzene		20	20.6	270000	3.0	
MTBE		20	20.1	120000	0.5	

Login Number: L0206416
File ID: 11G13773
CCV ID: WG120310-01
Units: ug/kg

Instrument ID: HP11
Run Date: 06/21/2002
Run Time: 16:14
Analyst: JLS
Cal ID: HP11 - 30-APR-02

Analyte		Expected	Found	RF	%D	Q
1,2-Dichlorobenzene		20	21.3	228000	6.5	
1,4-Dichlorobenzene		20	19.3	239000	3.5	
1,3-Dichlorobenzene		20	18.8	226000	6.0	
o-Xylene		20	19.2	243000	4.0	
m-,p-Xylene		40	40.1	285000	0.3	
Ethylbenzene		20	19.8	233000	1.0	
Chlorobenzene		20	18.8	253000	6.0	
Toluene		20	20.0	264000	0.0	
Benzene		20	18.3	241000	8.5	
MTBE		20	18.6	111000	7.0	

* Exceeds %D Limit

Login Number: L0206416
File ID: 11G13780
CCV ID: WG120310-02
Units: ug/kg

Instrument ID: HP11
Run Date: 06/21/2002
Run Time: 20:26
Analyst: JLS
Cal ID: HP11 - 30-APR-02

Analyte		Expected	Found	RF	%D	Q
1,2-Dichlorobenzene		20	20.0	214000	0.0	
1,4-Dichlorobenzene		20	18.7	231000	6.5	
1,3-Dichlorobenzene		20	18.4	221000	8.0	
o-Xylene		20	19.2	243000	4.0	
m-,p-Xylene		40	39.4	280000	1.5	
Ethylbenzene		20	19.4	229000	3.0	
Chlorobenzene		20	18.6	250000	7.0	
Toluene		20	19.4	256000	3.0	
Benzene		20	19.6	257000	2.0	
MTBE		20	17.6	105000	12.0	

* Exceeds %D Limit

Injection Log

Directory: C:\HPCHEM\1\DATA\043002

Analyst : CBN

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	11g13484.d	1.	WG116964-01 8021 STD1 1PPB 5G ✓	7,1 S-92-(36,44)	30 Apr 2002 15:07
2	2	11g13485.d	1.	WG116964-02 8021 STD2 10PPB 5G ✓	7,1 S-92-(36,44)	30 Apr 2002 15:42
3	3	11g13486.d	1.	WG116964-03 8021 STD3 20PPB 5G ✓	7,1 S-92-(36,44)	30 Apr 2002 16:17
4	4	11g13487.d	1.	WG116964-04 8021 STD4 50PPB 5G ✓	7,1 S-92-(36,44)	30 Apr 2002 16:5[illegible]
5	5	11g13488.d	1.	WG116964-05 8021 STD5 100PP.. ✓	7,1 S-92-(36,44)	30 Apr 2002 17:2[illegible]
6	6	11g13489.d	1.	WG116964-06 8021 STD6 200PP... ✓	7,1 S-92-(36,44)	30 Apr 2002 18:0[illegible]
7	7	11g13490.d	1.	WG116964-07 8021 STD7 300PP... ✓	7,1 S-92-(36,44)	30 Apr 2002 18:3[illegible]
8	8	11g13491.d	1.	RINSE 5G	7,1 S-92-(36,44)	30 Apr 2002 19:1[illegible]
9	9	11g13492.d	1.	RINSE 5G	7,1 S-92-(36,44)	30 Apr 2002 19:4[illegible]
10	10	11g13493.d	1.	WG116964-08 ALT SOURCE 20PP...	7,1 S-92-(47,44)	30 Apr 2002 20:2[illegible]

Injection Log

WG120311

Directory: C:\HPCHEM\1\DATA\062102

ANALYST: CBN

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	11g13773.d	1.	WG120310-01 8021 STD 20PPB 5G ✓	7,1 S-(95-36,95-29)	21 Jun 2002 16:14
2	2	11g13774.d	1.	WG120311-01 SOIL BLANK 5G ✓	7,1 S-95-29	21 Jun 2002 16:53
3	3	11g13775.d	1.	WG120311-02 SOIL LCS 20PPB 5G ✓	7,1 S-(95-36,95-29)	21 Jun 2002 17:34
4	4	11g13776.d	1.	L0206416-01 A 5G ✓	7,1 S-95-29	21 Jun 2002 18:08
5	5	11g13777.d	1.	L0206417-03 A 5G HIGH SS	7,1 S-95-29	21 Jun 2002 18:43
6	6	11g13778.d	1.	RINSE 5G ✓	7,1 S-95-29	21 Jun 2002 19:17
7	7	11g13779.d	1.	5035 BLANK A 6/21/02 5G ✓	7,1 S-95-29	21 Jun 2002 19:51
8	8	11g13780.d	1.	WG120310-02 8021 STD 20PPB 5G ✓	7,1 S-(95-36,95-29)	21 Jun 2002 20:26
9	9	11g13781.d	1.	L0206417-01 A 5G RE @ 100x	7,1 S-95-29	21 Jun 2002 21:00
10	10	11g13782.d	1.	RINSE 5G ϕ	7,1 S-95-29	21 Jun 2002 21:35
11	11	11g13783.d	1.	RINSE 5G ϕ	7,1 S-95-29	21 Jun 2002 22:09
12	12	11g13784.d	1.	L0206417-02 A 5G RE @ 100x	7,1 S-95-29	21 Jun 2002 22:44
13	13	11g13785.d	1.	RINSE 5G c/o	7,1 S-95-29	21 Jun 2002 23:18
14	14	11g13786.d	1.	RINSE 5G ϕ	7,1 S-95-29	21 Jun 2002 23:53
15	15	11g13787.d	1.	RINSE 5G ϕ	7,1 S-95-29	22 Jun 2002 00:27
16	16	11g13788.d	1.	WG120310-03 8021 STD 20PPB 5G ✓	7,1 S-95-29	22 Jun 2002 01:02

KEMRON ENVIRONMENTAL SERVICES

METHOD BLANK SUMMARY

Login Number: L0206416
Blank File ID: 5G13816
Date Analyzed: 06/25/02
Time Analyzed: 07:10
Analyst: CBN

Work Group: WG120409
Blank Sample ID: WG120409-01
Instrument ID: HP5
Method: 8021B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG120409-02	5G13817	06/25/02 07:44	
062-CEF9-EQB-W-Q2-02	L0206416-02	5G13818	06/25/02 08:28	
062-CEF9-TB-W-Q2-02	L0206416-03	5G13819	06/25/02 09:03	

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0206416
Run Date: 06/25/2002
Sample ID: WG120409-01
Instrument ID: HP5
Run Time: 07:10
Method: 8021B
File ID: 5G13816
Analyst: CBN
Matrix: Water
Workgroup (AAB#): WG120409
Units: ug/L
Contract #:
Cal ID: HP5-22-APR-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
MTBE	0.500	1.00	0.500	1.00	ND
Benzene	0.500	1.00	0.500	1.00	ND
Toluene	0.500	1.00	0.500	1.00	ND
Ethylbenzene	0.500	1.00	0.500	1.00	ND
Total xylenes	0.500	1.00	0.500	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
TFT	101	70 - 130	PASS

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON FORMS - Modified 06/26/2002
Version 1.2
Report generated 06/28/2002 08:20

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0206416
Run Date: 06/25/2002
Sample ID: WG120409-02
Instrument ID: HP5
Run Time: 07:44
Method: 8021B
File ID: 5G13817
Analyst: CBN
Matrix: Water
Workgroup (AAB#): WG120409
Units: ug/L
Contract #:
Cal ID: HP5-22-APR-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
MTBE	20	20.9	105	41 - 161	
Benzene	20	21.9	109	80 - 122	
Toluene	20	21.9	110	80 - 124	
Ethylbenzene	20	22.3	111	80 - 125	
Total xylenes	60	62.8	105	80 - 121	

Surrogates	% Recovery	Surrogate Limits	Qualifier
TFT	102	70 - 130	PASS

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 06/19/2002
Version 1.3
Report generated

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8021B

AAB#: WG120409

Login Number: L0206416

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
062-CEF9-EQB-W-Q2-02	06/20/02	06/21/02	06/25/02	14	4.93	06/25/02	14	4.93	
062-CEF9-TB-W-Q2-02	06/20/02	06/21/02	06/25/02	14	5.38	06/25/02	14	5.38	

* EXT = MISSED EXTRACTION HOLD TIME
*ANAL = MISSED ANALYITICAL HOLD TIME

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0206416
Instrument Id: HP5
Workgroup (AAB#): WG120409

Method: 8021
Matrix: WATER

Sample Number	Dilution	Tag	1
L0206416-02	1.00		104
L0206416-03	1.00		104
WG120409-01	1.00		101
WG120409-02	1.00		102

Surrogates	Surrogate Limits		
1 - a,a,a-Trifluorotoluene	70	-	130

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON FORMS - Modified 03/07/2002
Version 1.2
Report generated

Calibration Table Report
Method: 602STY.M
Title: METHOD 602 - Water - 4/22/02
Last Calibration: Tue Apr 23 13:19:26 2002

Calibration Files

Compound	1 5G12946.D	10 5G12947.D	20 5G12948.D	50 5G12949.D	100 5G12950.D	200 5G12951.D	300 5G12952.D	Avg	%RSD
MTBE	11757	10818	10755	10474	10368	9314	9786	10467	7.475
Benzene	56328	57962	57511	56878	55019	53645	55284	56090	2.721
TFT	17096	18143	17902	17945	17550	17784	17670	17727	1.908
Toluene	48925	52420	52492	52169	50514	49507	51762	51113	2.865
Chlorobenzene	51700	55103	55327	54632	54267	53033	54687	54107	2.393
Ethylbenzene	42551	45390	45328	44841	43943	42762	44719	44219	2.647
m-,p-Xylene	54205	54424	54253	53567	52018	50050	51746	52895	3.138
Styrene	47957	56536	57281	57945	53412	56698	58360	55455	6.629
o-Xylene	55799	53727	52896	51677	50041	48060	48753	51565	5.422
BFB	44443	48214	47901	48728	48756	48262	48155	47780	3.147
1,3-Dichlorobenzene	37248	44261	44516	44585	44704	43991	45035	43477	6.363
1,4-Dichlorobenzene	40973	49874	49545	48373	47853	46102	46703	47061	6.406
1,2-Dichlorobenzene	35066	38633	38986	38656	38695	37217	37954	37887	3.641
BCB	45926	47411	46888	47241	47429	46214	46650	46823	1.263

Tue Apr 23 13:21:51 2002

Login Number: L0206416
File ID: 5G12955
ALT ID: WG116507-08
Units: ug/L

Instrument ID: HP5
Run Date: 04/22/2002
Run Time: 18:42
Analyst: CBN
Cal ID: HP5 - 22-APR-02

Analyte		Expected	Found	RF	%D	Q
1,2-Dichlorobenzene		20	21.6	40900	8.0	
1,4-Dichlorobenzene		20	21.6	50800	8.0	
1,3-Dichlorobenzene		20	21.3	46300	6.5	
o-Xylene		20	20.8	53600	4.0	
Styrene		20	21.0	58100	5.0	
m-,p-Xylene		40	42.1	55600	5.3	
Ethylbenzene		20	21.5	47600	7.5	
Chlorobenzene		20	20.9	56500	4.5	
Toluene		20	21.3	54400	6.5	
Benzene		20	21.2	59600	6.0	
MTBE		20	21.1	11100	5.5	

Login Number: L0206416
File ID: 5G13815
CCV ID: WG120408-01
Units: ug/L

Instrument ID: HP5
Run Date: 06/25/2002
Run Time: 06:35
Analyst: CBN
Cal ID: HP5 -

Analyte		Expected	Found	RF	%D	Q
1,2-Dichlorobenzene		20	22.0	41700	10.0	
1,4-Dichlorobenzene		20	22.5	52900	12.5	
1,3-Dichlorobenzene		20	21.2	46100	6.0	
o-Xylene		20	19.2	49400	4.0	
Styrene		20	17.8	49400	11.0	
m-,p-Xylene		40	43.5	57600	8.8	
Ethylbenzene		20	22.0	48700	10.0	
Chlorobenzene		20	21.8	59000	9.0	
Toluene		20	21.9	56000	9.5	
Benzene		20	21.4	60000	7.0	
MTBE		20	21.2	11100	6.0	

* Exceeds %D Limit

Login Number: L0206416
File ID: 5G13824
CCV ID: WG120408-02
Units: ug/L

Instrument ID: HP5
Run Date: 06/25/2002
Run Time: 11:57
Analyst: CBN
Cal ID: HP5 -

Analyte		Expected	Found	RF	%D	Q
1,2-Dichlorobenzene		20	21.9	41500	9.5	
1,4-Dichlorobenzene		20	22.2	52200	11.0	
1,3-Dichlorobenzene		20	21.9	47500	9.5	
o-Xylene		20	19.2	49500	4.0	
Styrene		20	17.9	49500	10.5	
m-,p-Xylene		40	43.8	58000	9.5	
Ethylbenzene		20	22.2	49100	11.0	
Chlorobenzene		20	21.6	58500	8.0	
Toluene		20	22.0	56200	10.0	
Benzene		20	22.0	61600	10.0	
MTBE		20	21.3	11200	6.5	

* Exceeds %D Limit

Injection Log

Directory: c:\hpchem\2\data\042202

Analyst: CBN

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	5g12946.d	1.	WG116507-01 STD1 1PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::2
2	2	5g12947.d	1.	WG116507-02 STD2 10PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::0
3	3	5g12948.d	1.	WG116507-03 STD3 20PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::3
4	4	5g12949.d	1.	WG116507-04 STD4 50PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::1
5	5	5g12950.d	1.	WG116507-05 STD5 100PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::4
6	6	5g12951.d	1.	WG116507-06 STD6 200PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::2
7	7	5g12952.d	1.	WG116507-07 STD7 300PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::5
8	8	5g12953.d	1.	RINSE	1,1 S-92-44	22 Apr 102 12::3
9	9	5g12954.d	1.	RINSE	1,1 S-92-44	22 Apr 102 12::0
10	10	5g12955.d	1.	WG116507-08 ALT SOURCE 20PPB 5ML✓	1,1 S-92-44	22 Apr 102 12::4

Injection Log

Directory: c:\hpchem\2\data\062502

WG120409

ANALYST: CBN

.ine	Vial	FileName	Multiplier		SampleName	Misc Info		Injected
	9	5g13815.d	1.		WG120408-01 8021 STD 20PPB 5ML ✓	1,1 S-95-(36,30)		25 Jun 102 12::3
:	10	5g13816.d	1.		WG120409-01 WATER BLANK 5ML ✓	1,1 S-95-30		25 Jun 102 12::1
;	11	5g13817.d	1.		WG120409-02 WATER LCS 20PPB 5ML ✓	1,1 S-95-(36,30)		25 Jun 102 12::4
.	1	5g13818.d	1.		L0206416-02 A 5ML ✓	1,1 S-95-30	pH<2	25 Jun 102 12::2
;	2	5g13819.d	1.		L0206416-03 A 5ML ✓	1,1 S-95-30		25 Jun 102 12::0
;	3	5g13820.d	1.		L0206417-04 A 5ML ✓	1,1 S-95-30		25 Jun 102 12::3
'	4	5g13821.d	1.		L0206417-06 A 5ML ✓	1,1 S-95-30		25 Jun 102 13::1
;	5	5g13822.d	1.	DNR	WG120409-04 L0206416-03 MS B 5ML	1,1 S-95-(36,30)		25 Jun 102 13::4
)	6	5g13823.d	1.		WG120409-05 L0206416-03 MSD B 5ML	1,1 S-95-(36,30)		25 Jun 102 13::2
0	7	5g13824.d	1.		WG120408-02 8021 STD 20PPB 5ML ✓	1,1 S-95-(36,30)		25 Jun 102 13::5
1	8	5g13825.d	1.		L0206450-01 A 5ML ✓	1,1 S-95-30	pH<2	25 Jun 102 12::4
2	9	5g13826.d	1.		WG120409-03 L0206452-01 A 5ML ✓	1,1 S-95-30		25 Jun 102 12::2
3	10	5g13827.d	1.		L0206454-01 A 5ML ✓	1,1 S-95-30		25 Jun 102 12::5
4	11	5g13828.d	1.		WG120409-04 L0206452-01 MS B 5ML ✓	1,1 S-95-(36,30)		25 Jun 102 12::3
5	12	5g13829.d	1.		WG120409-05 L0206452-01 MSD B 5ML ✓	1,1 S-95-(36,30)		25 Jun 102 12::0
6	13	5g13830.d	1.		WG120408-03 8021 STD 20PPB 5ML ✓	1,1 S-95-(36,30)		25 Jun 102 12::4

VOA - GC

Date: 6/21/02 **Analyst:** JLS **Method:** 8021 8015 602

Instrument: HP11 **Work Group:** WG 120311

	Analyst
Initial Calibration	✓
Average RF	✓
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	✓
Continuing Calibration / Check Standards	✓
Project / Client Specific Requirements	✓
Special Standards	NA
Blanks	✓
TCL's	✓
Surrogates	✓
LCS (Laboratory Control Sample)	✓
Recoveries	✓
Surrogates	✓
MS / MSD / Duplicates	✓
Samples	✓
TCL Hits	✓
Surrogates	✓
Calculations & Correct Factors	✓
Dilutions Run	NA
Reruns	✓
Excel Spreadsheets / FORMS	✓
Case Narrative	✓
Narrative Summary	✓
Results Reporting / Data Qualifiers	✓
Client Data Package Assembly	✓
Check for Completeness	✓

Primary Reviewers Initials & Date Checked: CBN 6/24/02

Secondary Reviewers Initials & Date Checked: GAB 6/25/02

_____ • Check for compliance with Method and project-specific requirements
_____ • Check the completeness of the reported information
_____ • Check the information for the report narrative
_____ • Check the reasonableness of results

Supervisory Review Initials & Date Checked: _____

Comments: _____

✓ = Checked & OK
NA = Not Applicable

VOA - GC

Date: 6/25/02 **Analyst:** CBN **Method:** (8021) 8015 602

Instrument: HPS **Work Group:** WG 120409

	Analyst
Initial Calibration	✓
Average RF	✓
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	✓
Continuing Calibration / Check Standards	✓
Project / Client Specific Requirements	✓
Special Standards	NA
Blanks	✓
TCL's	✓
Surrogates	✓
LCS (Laboratory Control Sample)	✓
Recoveries	✓
Surrogates	✓
MS / MSD / Duplicates	✓
Samples	✓
TCL Hits	✓
Surrogates	✓
Calculations & Correct Factors	✓
Dilutions Run	NA
Reruns	NA
Excel Spreadsheets / Forms	✓
Case Narrative	✓
Narrative Summary	✓
Results Reporting / Data Qualifiers	✓
Client Data Package Assembly	✓
Check for Completeness	✓

Primary Reviewers Initials & Date Checked: CBN 6/26/02

Secondary Reviewers Initials & Date Checked: JB 6/26/02

_____ • Check for compliance with Method and project-specific requirements
_____ • Check the completeness of the reported information
_____ • Check the information for the report narrative
_____ • Check the reasonableness of results

Supervisory Review Initials & Date Checked: _____

Comments: _____

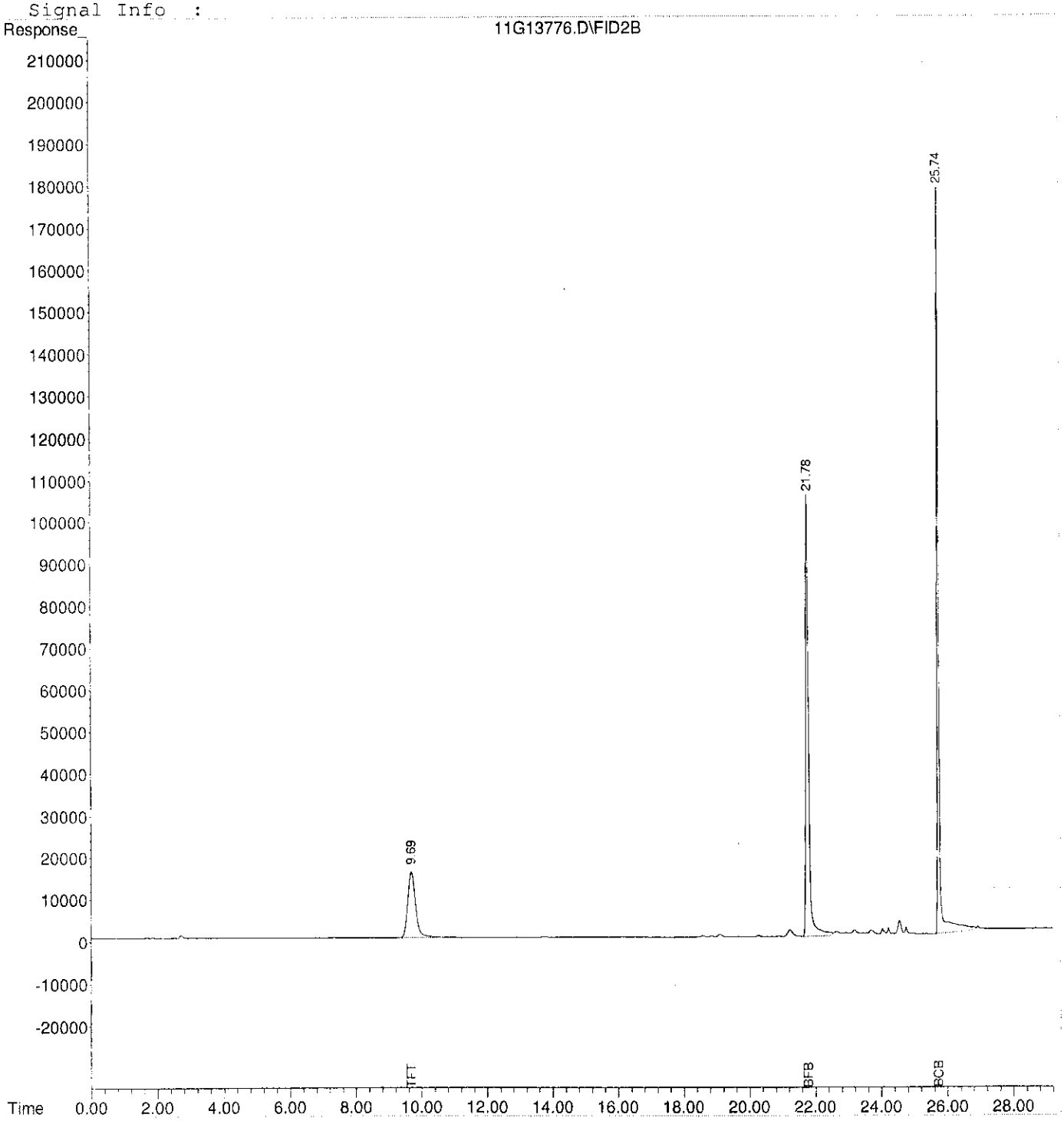
✓ = Checked & OK
NA = Not Applicable

2.1.3.2 Sample Data

Data File : C:\HPCHEM\1\DATA\062102\11G13776.D Vial: 4
Acq On : 21 Jun 2002 6:08 pm Operator: JLS
Sample : L0206416-01 A 5G Inst : HP11
Misc : 7,1 S-95-29 Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Jun 21 18:37 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062102\11G13776.D Vial: 4
Acq On : 21 Jun 2002 6:08 pm Operator: JLS
Sample : L0206416-01 A 5G Inst : HP11
Misc : 7,1 S-95-29 Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Jun 21 18:37 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

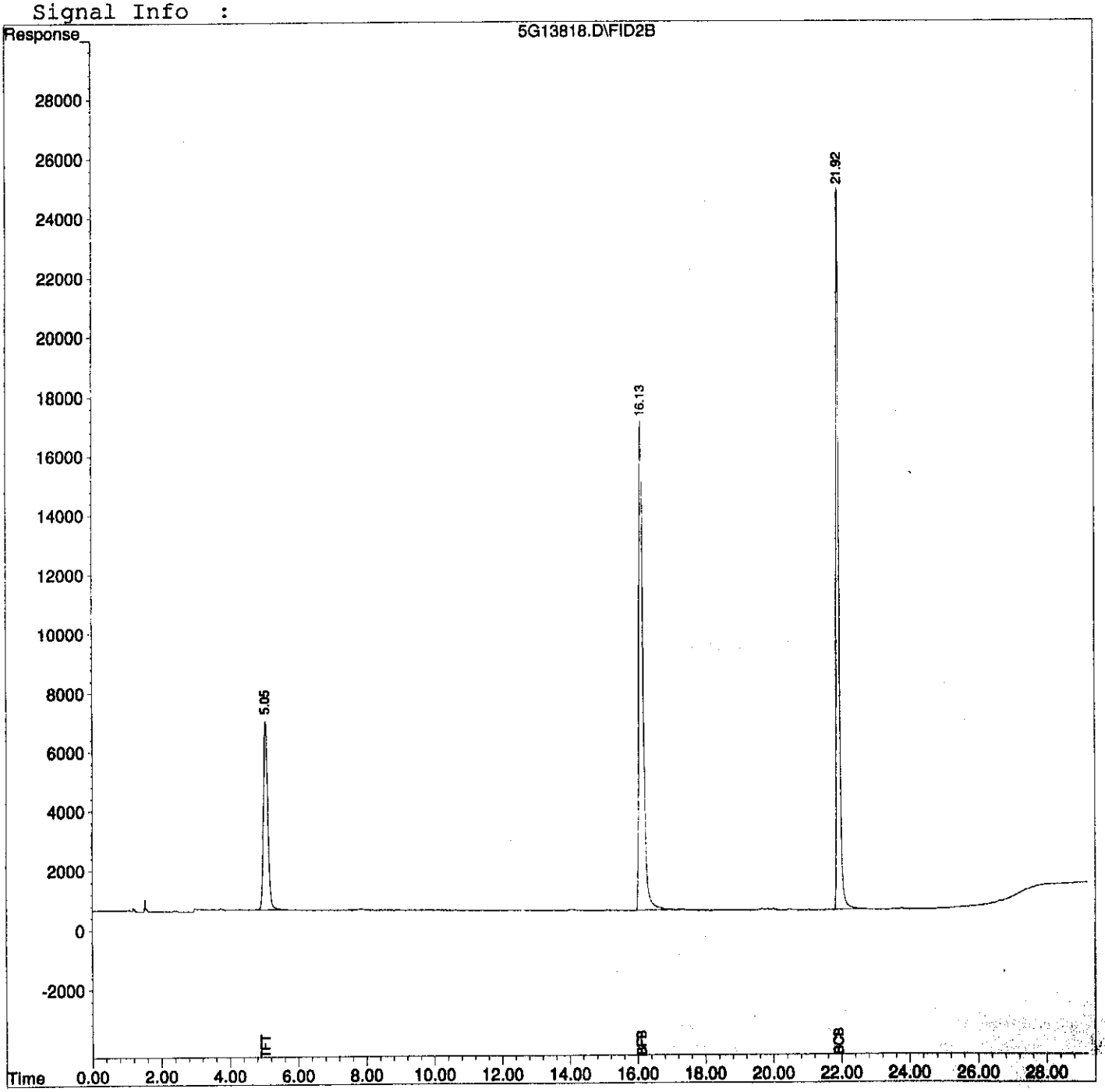
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	9.69	2594781	30.3465 UG/KG ✓
Spiked Amount 30.0000	Range 47 - 121	Recovery	= 101.16%
9) S BFB	21.79	6385173	27.4782 UG/KG
Spiked Amount 30.0000	Range 70 - 130	Recovery	= 91.59%
13) S BCB	25.74	6452089	27.2547 UG/KG
Spiked Amount 30.0000	Range 37 - 137	Recovery	= 90.85%
Target Compounds			
1) TM MTBE	0.00	0	N.D. UG/KG
2) TM Benzene	0.00	0	N.D. UG/KG
4) TM Toluene	0.00	0	N.D. UG/KG
5) TM Chlorobenzene	18.58	23683	<MDL UG/KG
6) TM Ethylbenzene	18.86	17111	<MDL UG/KG
7) TM m-,p-Xylene	19.11	52705	<MDL UG/KG
8) TM o-Xylene	20.28	23118	<MDL UG/KG
10) TM 1,3-Dichlorobenzene	24.05	89860	<MDL UG/KG
11) TM 1,4-Dichlorobenzene	24.23	69210	<MDL UG/KG
12) TM 1,2-Dichlorobenzene	24.76	86477	<MDL UG/KG

(f)=RT Delta > 1/2 Window (m)=manual int.
11G13776.D 8021S.M Fri Jun 21 18:37:51 2002 Page 1

Data File : C:\HPCHEM\2\DATA\062502\5G13818.D Vial: 1
Acq On : 25 Jun 2002 8:28 Operator: CBN
Sample : L0206416-02 A 5ML Inst : HP5
Misc : 1,1 S-95-30 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 25 8:58 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\062502\5G13818.D Vial: 1
Acq On : 25 Jun 2002 8:28 Operator: CBN
Sample : L0206416-02 A 5ML Inst : HP5
Misc : 1,1 S-95-30 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 25 8:58 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

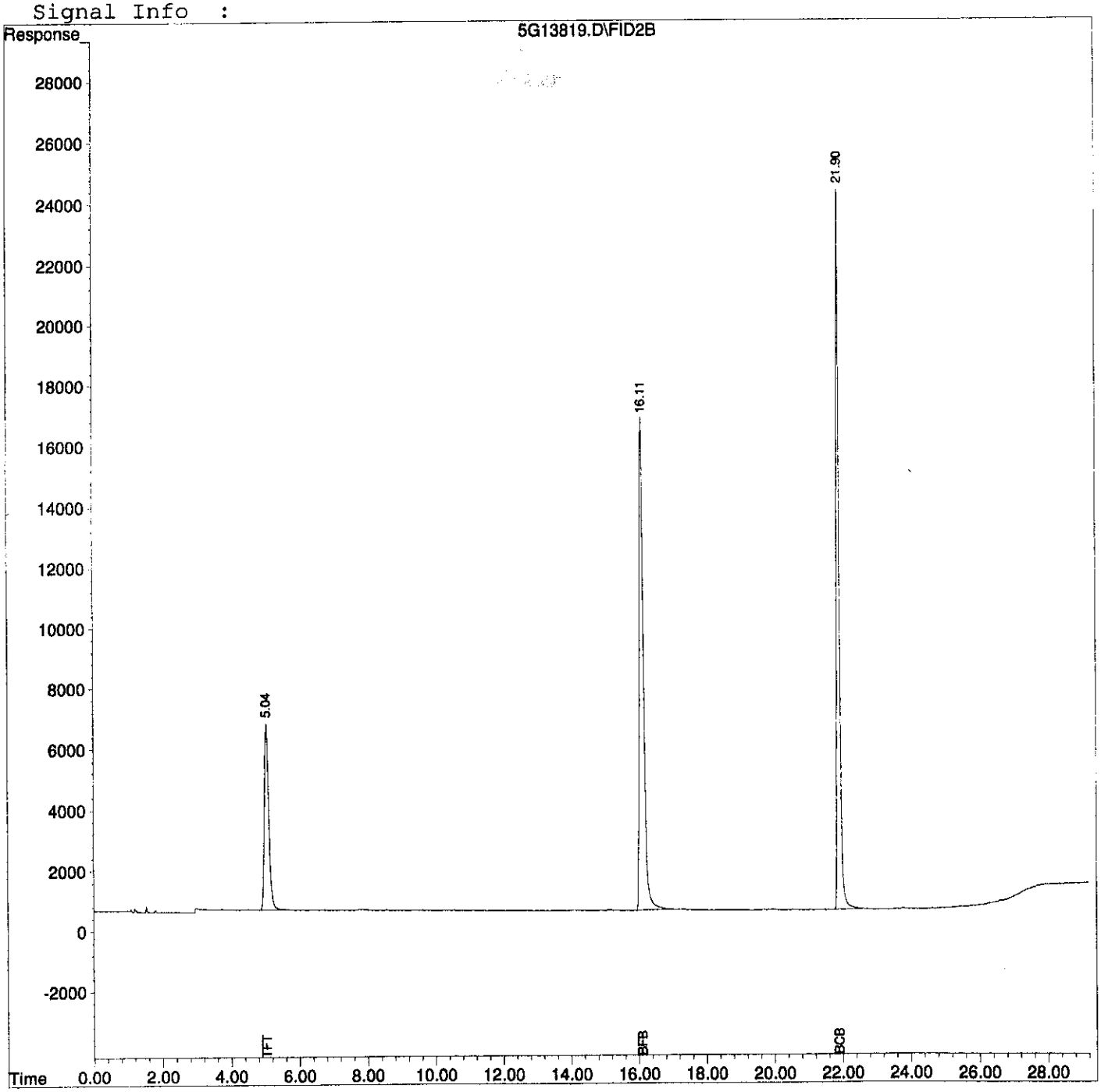
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.05	551686	31.1214 ug/L
Spiked Amount 30.000	Range 70 - 130	Recovery =	103.74%
10) S BFB	16.13	1417790	29.6732 ug/L
Spiked Amount 30.000		Recovery =	98.91%
14) S BCB	21.92	1329052	28.3847 ug/L
Spiked Amount 30.000	Range 37 - 137	Recovery =	94.62%
Target Compounds			
1) TM MTBE	0.00	0	N.D. ug/L
2) TM Benzene	0.00	0	N.D. ug/L
4) TM Toluene	0.00	0	N.D. ug/L
5) TM Chlorobenzene	0.00	0	N.D. ug/L
6) TM Ethylbenzene	0.00	0	N.D. ug/L
7) TM m-,p-Xylene	0.00	0	N.D. ug/L
8) TM Styrene	0.00	0	N.D. ug/L
9) TM o-Xylene	0.00	0	N.D. ug/L
11) TM 1,3-Dichlorobenzene	0.00	0	N.D. ug/L
12) TM 1,4-Dichlorobenzene	0.00	0	N.D. ug/L
13) TM 1,2-Dichlorobenzene	0.00	0	N.D. ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\062502\5G13819.D Vial: 2
Acq On : 25 Jun 2002 9:03 Operator: CBN
Sample : L0206416-03 A 5ML Inst : HP5
Misc : 1,1 S-95-30 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 25 9:32 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\062502\5G13819.D Vial: 2
Acq On : 25 Jun 2002 9:03 Operator: CBN
Sample : L0206416-03 A 5ML Inst : HP5
Misc : 1,1 S-95-30 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 25 9:32 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.04	553051	31.1984 ug/L
Spiked Amount 30.000	Range 70 - 130	Recovery =	103.99%
10) S BFB	16.11	1403174	29.3673 ug/L
Spiked Amount 30.000		Recovery =	97.89%
14) S BCB	21.90	1306764	27.9087 ug/L
Spiked Amount 30.000	Range 37 - 137	Recovery =	93.03%
Target Compounds			
1) TM MTBE	0.00	0	N.D. ug/L
2) TM Benzene	0.00	0	N.D. ug/L
4) TM Toluene	0.00	0	N.D. ug/L
5) TM Chlorobenzene	0.00	0	N.D. ug/L
6) TM Ethylbenzene	0.00	0	N.D. ug/L
7) TM m-,p-Xylene	0.00	0	N.D. ug/L
8) TM Styrene	0.00	0	N.D. ug/L
9) TM o-Xylene	0.00	0	N.D. ug/L
11) TM 1,3-Dichlorobenzene	0.00	0	N.D. ug/L
12) TM 1,4-Dichlorobenzene	0.00	0	N.D. ug/L
13) TM 1,2-Dichlorobenzene	0.00	0	N.D. ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

2.1.3.3 Standards Data

Calibration Table Report
Method: 602STY.M
Title: METHOD 602 - Water - 4/22/02
Last Calibration: Tue Apr 23 13:19:26 2002

Calibration Files

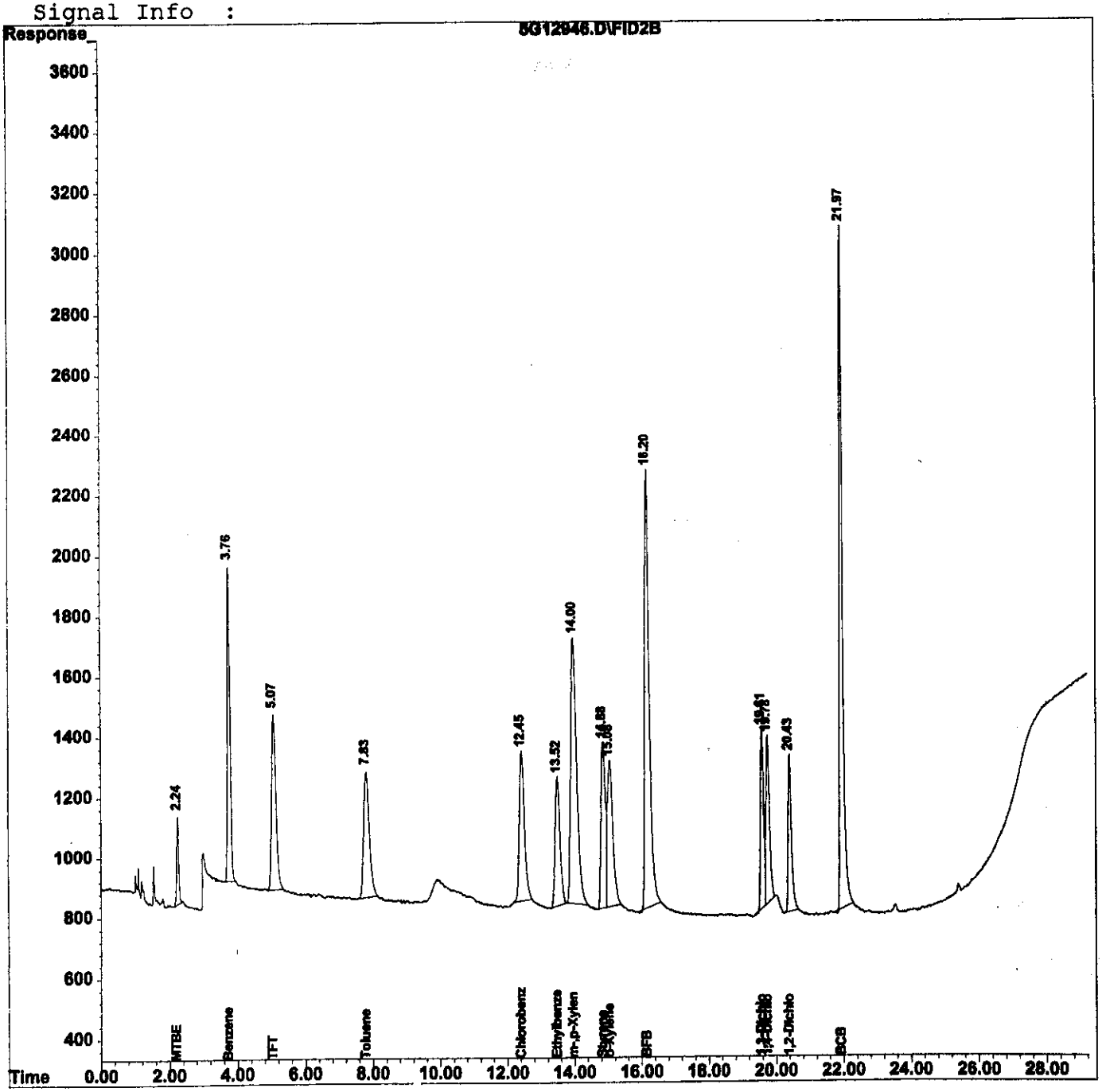
Compound	1 5G12946.D	10 5G12947.D	20 5G12948.D	50 5G12949.D	100 5G12950.D	200 5G12951.D	300 5G12952.D	Avg	%RSD
MTBE	11757	10818	10755	10474	10368	9314	9786	10467	7.475
Benzene	56328	57962	57511	56878	55019	53645	55284	56090	2.721
TFT	17096	18143	17902	17945	17550	17784	17670	17727	1.908
Toluene	48925	52420	52492	52169	50514	49507	51762	51113	2.865
Chlorobenzene	51700	55103	55327	54632	54267	53033	54687	54107	2.393
Ethylbenzene	42551	45390	45328	44841	43943	42762	44719	44219	2.647
m-,p-Xylene	54205	54424	54253	53567	52018	50050	51746	52895	3.138
Styrene	47957	56536	57281	57945	53412	56698	58360	55455	6.629
o-Xylene	55799	53727	52896	51677	50041	48060	48753	51565	5.422
BFB	44443	48214	47901	48728	48756	48262	48155	47780	3.147
1,3-Dichlorobenzene	37248	44261	44516	44585	44704	43991	45035	43477	6.363
1,4-Dichlorobenzene	40973	49874	49545	48373	47853	46102	46703	47061	6.406
1,2-Dichlorobenzene	35066	38633	38986	38656	38695	37217	37954	37887	3.641
BCB	45926	47411	46888	47241	47429	46214	46650	46823	1.263

Tue Apr 23 13:21:51 2002

Data File : C:\HPCHEM\2\DATA\042202\5G12946.D Vial: 1
Acq On : 22 Apr 2002 13:29 Operator: CBN
Sample : WG116507-01 STD1 1PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\042202\5G12946.D Vial: 1
Acq On : 22 Apr 2002 13:29 Operator: CBN
Sample : WG116507-01 STD1 1PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

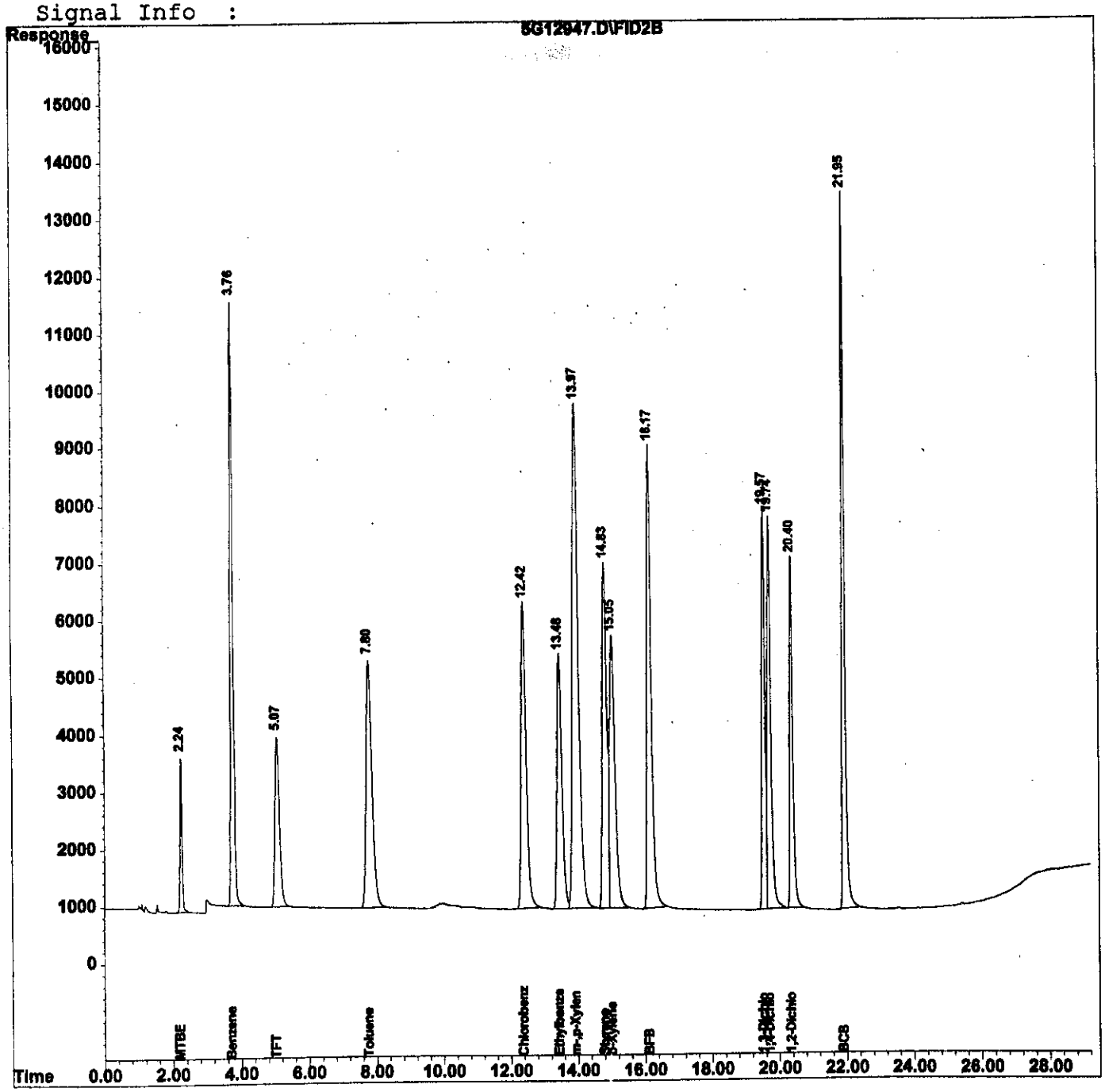
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.08	51288	2.8932 ug/L
Spiked Amount 30.000 Range 70 - 130		Recovery =	9.64%#
10) S BFB	16.20	133330	2.7905 ug/L
Spiked Amount 30.000		Recovery =	9.30%
14) S BCB	21.97	137779	2.9426 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery =	9.81%#
Target Compounds			
1) TM MTBE	2.24	11757	1.1232 ug/L
2) TM Benzene	3.76	56327	1.0042 ug/L
4) TM Toluene	7.83	48925	0.9572 ug/L
5) TM Chlorobenzene	12.45	51700	0.9555 ug/L
6) TM Ethylbenzene	13.52	42551	0.9623 ug/L
7) TM m-,p-Xylene	14.00	108410	2.0495 ug/L
8) TM Styrene	14.88	47957	0.8648 ug/L
9) TM o-Xylene	15.08	55799	1.0821 ug/L
11) TM 1,3-Dichlorobenzene	19.61	37248	0.7915 ug/L
12) TM 1,4-Dichlorobenzene	19.78	40973	0.8707 ug/L
13) TM 1,2-Dichlorobenzene	20.43	35066	0.9256 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\042202\5G12947.D Vial: 2
Acq On : 22 Apr 2002 14:04 Operator: CBN
Sample : WG116507-02 STD2 10PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\042202\5G12947.D Vial: 2
Acq On : 22 Apr 2002 14:04 Operator: CBN
Sample : WG116507-02 STD2 10PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

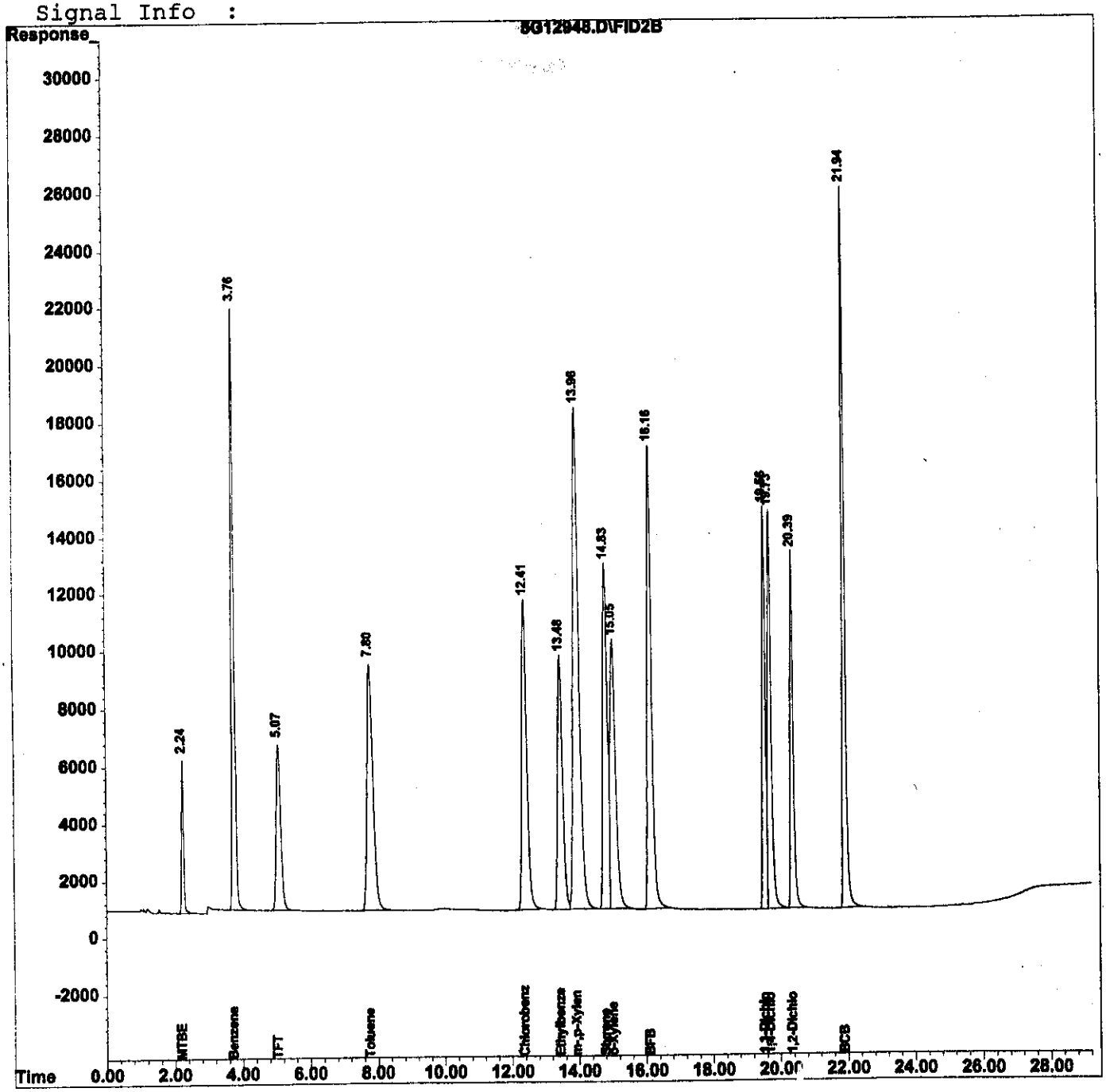
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	272138	15.3517 ug/L
Spiked Amount 30.000 Range 70 - 130 Recovery = 51.17%#			
10) S BFB	16.17	723215	15.1363 ug/L
Spiked Amount 30.000 Recovery = 50.45%			
14) S BCB	21.95	711170	15.1885 ug/L
Spiked Amount 30.000 Range 37 - 137 Recovery = 50.63%			
Target Compounds			
1) TM MTBE	2.24	108182	10.3351 ug/L
2) TM Benzene	3.76	579615	10.3338 ug/L
4) TM Toluene	7.80	524199	10.2557 ug/L
5) TM Chlorobenzene	12.42	551031	10.1841 ug/L
6) TM Ethylbenzene	13.48	453901	10.2648 ug/L
7) TM m-,p-Xylene	13.97	1088481	20.5783 ug/L
8) TM Styrene	14.84	565358	10.1948 ug/L
9) TM o-Xylene	15.06	537265	10.4193 ug/L
11) TM 1,3-Dichlorobenzene	19.57	442610	9.4051 ug/L
12) TM 1,4-Dichlorobenzene	19.74	498740	10.5978 ug/L
13) TM 1,2-Dichlorobenzene	20.40	386329	10.1969 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\042202\5G12948.D Vial: 3
Acq On : 22 Apr 2002 14:39 Operator: CBN
Sample : WG116507-03 STD3 20PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\042202\5G12948.D Vial: 3
Acq On : 22 Apr 2002 14:39 Operator: CBN
Sample : WG116507-03 STD3 20PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

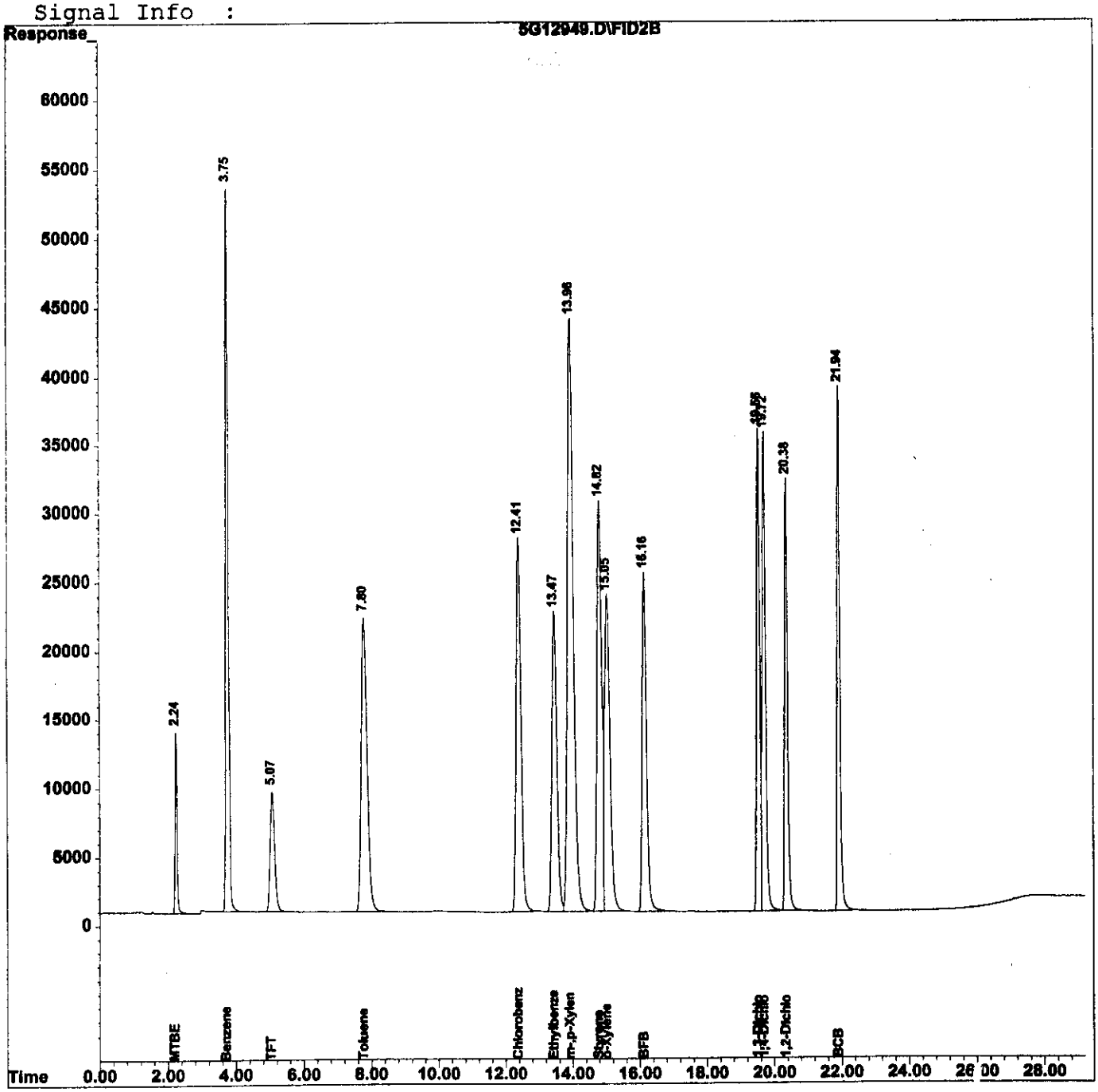
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	537047	30.2956 ug/L
Spiked Amount 30.000 Range 70 - 130 Recovery = 100.99%			
10) S BFB	16.16	1437037	30.0761 ug/L
Spiked Amount 30.000 Recovery = 100.25%			
14) S BCB	21.94	1406625	30.0414 ug/L
Spiked Amount 30.000 Range 37 - 137 Recovery = 100.14%			
Target Compounds			
1) TM MTBE	2.24	215108	20.5503 ug/L
2) TM Benzene	3.76	1150225	20.5070 ug/L
4) TM Toluene	7.80	1049846	20.5397 ug/L
5) TM Chlorobenzene	12.41	1106539	20.4509 ug/L
6) TM Ethylbenzene	13.48	906551	20.5014 ug/L
7) TM m-,p-Xylene	13.97	2170128	41.0274 ug/L
8) TM Styrene	14.83	1145612	20.6582 ug/L
9) TM o-Xylene	15.05	1057926	20.5165 ug/L
11) TM 1,3-Dichlorobenzene	19.57	890328	18.9188 ug/L
12) TM 1,4-Dichlorobenzene	19.73	990896	21.0558 ug/L
13) TM 1,2-Dichlorobenzene	20.39	779720	20.5803 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\042202\5G12949.D Vial: 4
Acq On : 22 Apr 2002 15:14 Operator: CBN
Sample : WG116507-04 STD4 50PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\042202\5G12949.D Vial: 4
Acq On : 22 Apr 2002 15:14 Operator: CBN
Sample : WG116507-04 STD4 50PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

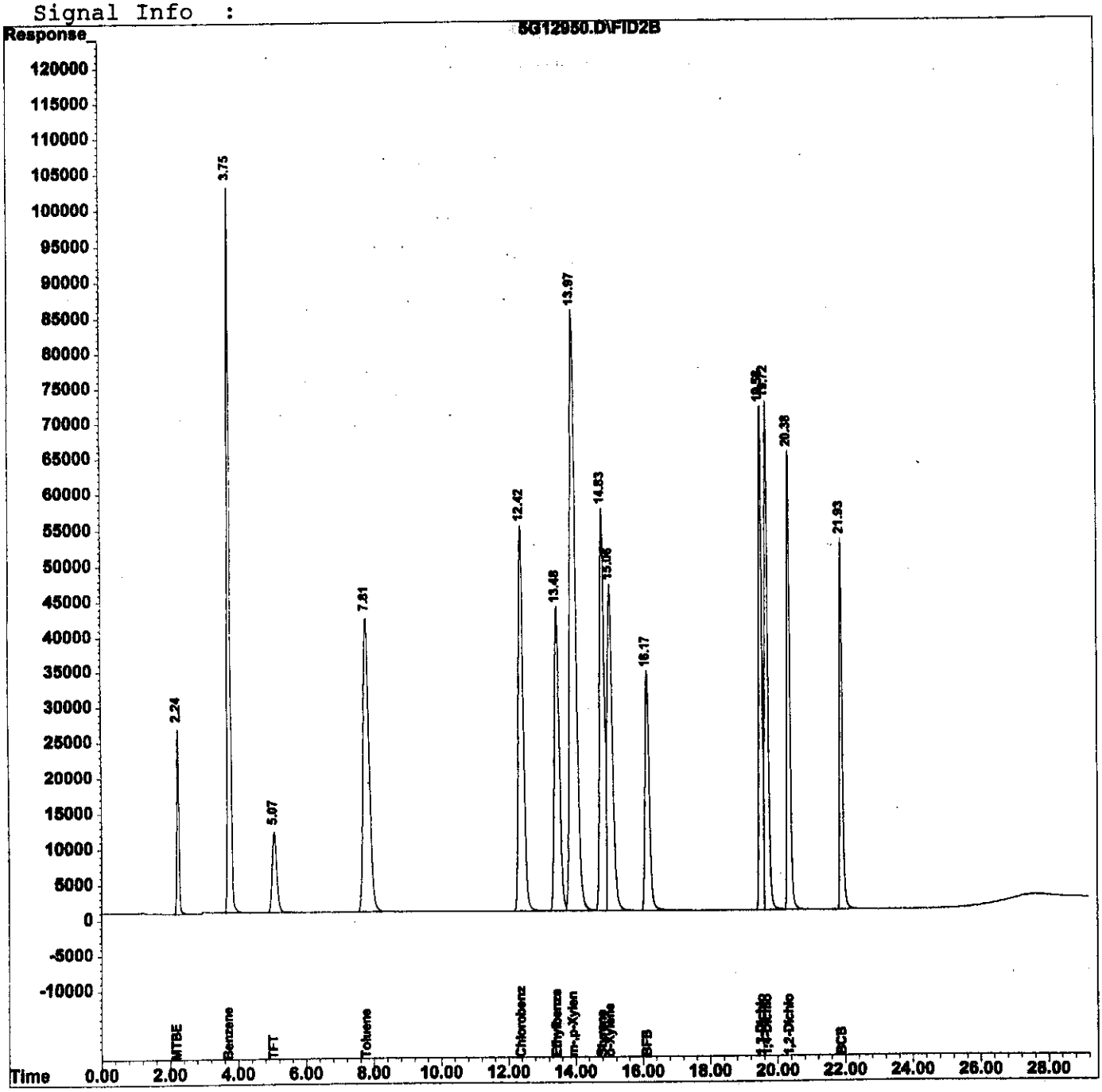
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	807512	45.5529 ug/L
Spiked Amount 30.000	Range 70 - 130	Recovery =	151.84%#
10) S BFB	16.16	2192778	45.8931 ug/L
Spiked Amount 30.000		Recovery =	152.98%
14) S BCB	21.94	2125866	45.4023 ug/L
Spiked Amount 30.000	Range 37 - 137	Recovery =	151.34%#
Target Compounds			
1) TM MTBE	2.24	523680	50.0297 ug/L
2) TM Benzene	3.76	2843877	50.7025 ug/L
4) TM Toluene	7.80	2608433	51.0328 ug/L
5) TM Chlorobenzene	12.41	2731610	50.4852 ug/L
6) TM Ethylbenzene	13.47	2242060	50.7035 ug/L
7) TM m-,p-Xylene	13.96	5356662	101.2705 ug/L
8) TM Styrene	14.82	2897265	52.2449 ug/L
9) TM o-Xylene	15.05	2583852	50.1091 ug/L
11) TM 1,3-Dichlorobenzene	19.56	2229246	47.3698 ug/L
12) TM 1,4-Dichlorobenzene	19.73	2418650	51.3944 ug/L
13) TM 1,2-Dichlorobenzene	20.38	1932782	51.0148 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\042202\5G12950.D Vial: 5
Acq On : 22 Apr 2002 15:48 Operator: CBN
Sample : WG116507-05 STD5 100PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\042202\5G12950.D Vial: 5
Acq On : 22 Apr 2002 15:48 Operator: CBN
Sample : WG116507-05 STD5 100PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

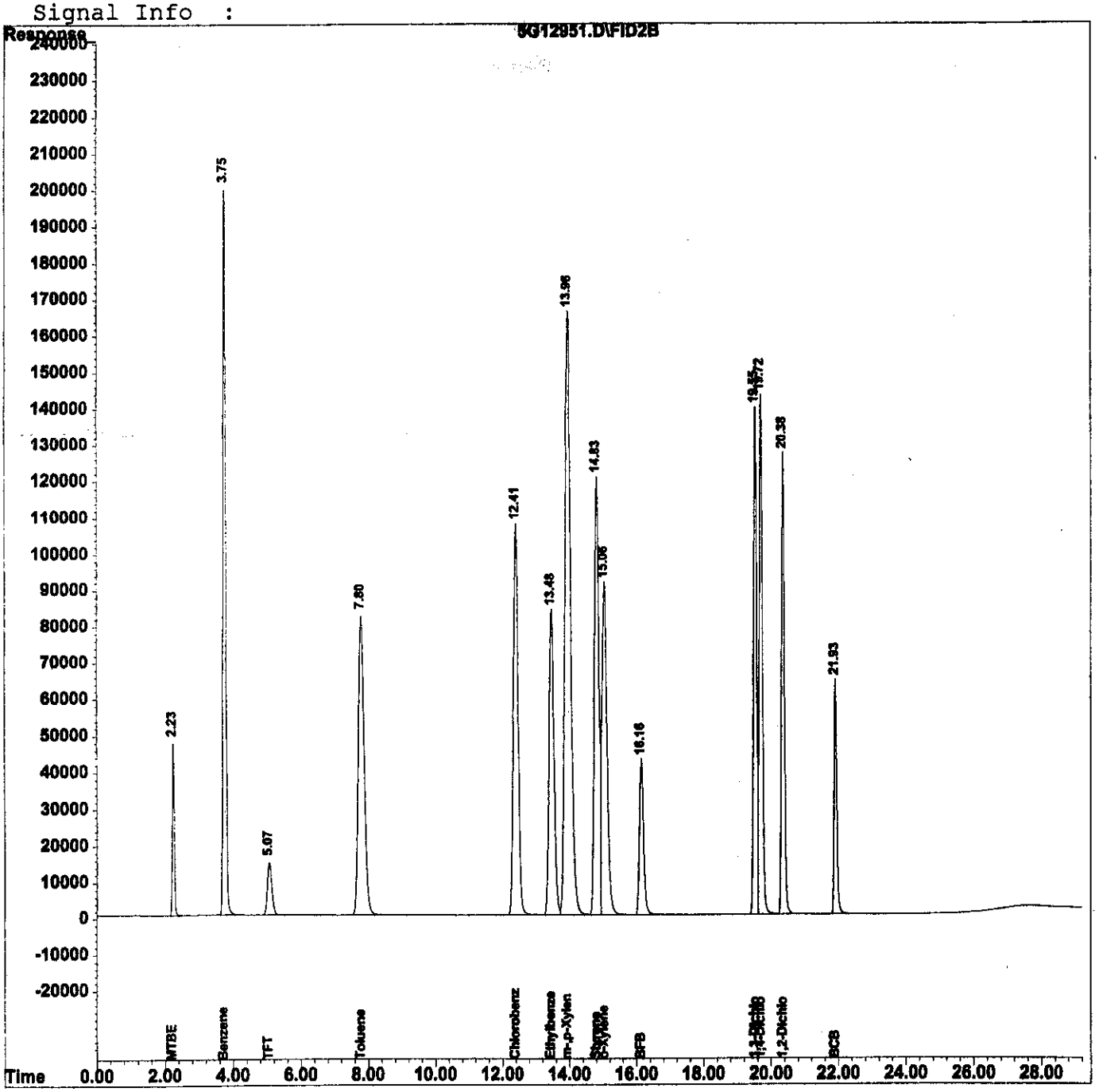
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.08	1052975	59.3998 ug/L
Spiked Amount 30.000 Range 70 - 130		Recovery	= 198.00%#
10) S BFB	16.17	2925355	61.2254 ug/L
Spiked Amount 30.000		Recovery	= 204.08%
14) S BCB	21.94	2845744	60.7768 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery	= 202.59%#
Target Compounds			
1) TM MTBE	2.24	1036822	99.0526 ug/L
2) TM Benzene	3.75	5501929	98.0920 ug/L
4) TM Toluene	7.81	5051424	98.8287 ug/L
5) TM Chlorobenzene	12.42	5426734	100.2960 ug/L
6) TM Ethylbenzene	13.49	4394325	99.3763 ug/L
7) TM m-,p-Xylene	13.97	10403552	196.6845 ug/L
8) TM Styrene	14.84	5341161	96.3145 ug/L
9) TM o-Xylene	15.06	5004098	97.0453 ug/L
11) TM 1,3-Dichlorobenzene	19.56	4470416	94.9929 ug/L
12) TM 1,4-Dichlorobenzene	19.72	4785322	101.6844 ug/L
13) TM 1,2-Dichlorobenzene	20.38	3869496	102.1334 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\042202\5G12951.D Vial: 6
Acq On : 22 Apr 2002 16:23 Operator: CBN
Sample : WG116507-06 STD6 200PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\042202\5G12951.D Vial: 6
Acq On : 22 Apr 2002 16:23 Operator: CBN
Sample : WG116507-06 STD6 200PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

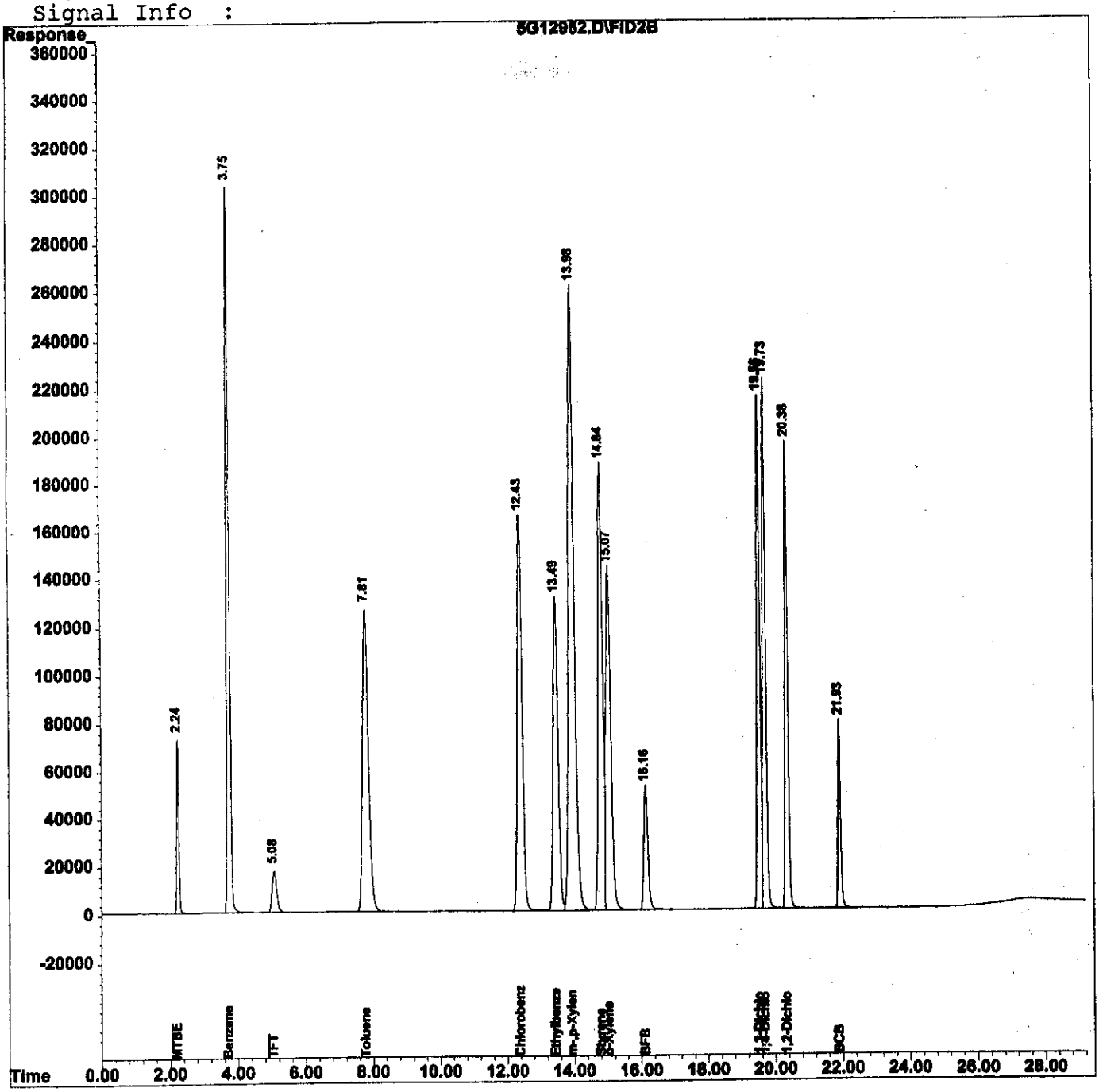
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	1333832	75.2433 ug/L
Spiked Amount 30.000 Range 70 - 130 Recovery = 250.81%#			
10) S BFB	16.16	3619677	75.7570 ug/L
Spiked Amount 30.000 Recovery = 252.52%			
14) S BCB	21.94	3466056	74.0249 ug/L
Spiked Amount 30.000 Range 37 - 137 Recovery = 246.75%#			
Target Compounds			
1) TM MTBE	2.24	1862797	177.9620 ug/L
2) TM Benzene	3.75	10728979	191.2832 ug/L
4) TM Toluene	7.80	9901450	193.7172 ug/L
5) TM Chlorobenzene	12.41	10606672	196.0308 ug/L
6) TM Ethylbenzene	13.48	8552369	193.4091 ug/L
7) TM m-,p-Xylene	13.97	20020076	378.4899 ug/L
8) TM Styrene	14.83	11339575	204.4809 ug/L
9) TM o-Xylene	15.06	9611978	186.4066 ug/L
11) TM 1,3-Dichlorobenzene	19.55	8798263	186.9563 ug/L
12) TM 1,4-Dichlorobenzene	19.72	9220416	195.9268 ug/L
13) TM 1,2-Dichlorobenzene	20.38	7443401	196.4647 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\042202\5G12952.D Vial: 7
Acq On : 22 Apr 2002 16:58 Operator: CBN
Sample : WG116507-07 STD7 300PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\042202\5G12952.D Vial: 7
Acq On : 22 Apr 2002 16:58 Operator: CBN
Sample : WG116507-07 STD7 300PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.08	1590258	89.7086 ug/L
Spiked Amount 30.000 Range 70 - 130		Recovery =	299.03%#
10) S BFB	16.17	4333947	90.7061 ug/L
Spiked Amount 30.000		Recovery =	302.35%
14) S BCB	21.93	4198503	89.6678 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery =	298.89%#
Target Compounds			
1) TM MTBE	2.24	2935664	280.4582 ug/L
2) TM Benzene	3.75	16585339	295.6942 ug/L
4) TM Toluene	7.81	15528746	303.8126 ug/L
5) TM Chlorobenzene	12.43	16406053	303.2140 ug/L
6) TM Ethylbenzene	13.49	13415617	303.3899 ug/L
7) TM m-,p-Xylene	13.98	31047355	586.9664 ug/L
8) TM Styrene	14.84	17507932	315.7119 ug/L
9) TM o-Xylene	15.07	14625810	283.6407 ug/L
11) TM 1,3-Dichlorobenzene	19.56	13510483	287.0874 ug/L
12) TM 1,4-Dichlorobenzene	19.73	14010936	297.7217 ug/L
13) TM 1,2-Dichlorobenzene	20.38	11386255	300.5344 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\042202\5G12955.D Vial: 10
Acq On : 22 Apr 2002 18:42 Operator: CBN
Sample : WG116507-08 ALT SOURCE 20PPB 5ML Inst : HP5
Misc : 1,1 S-92-44 Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:19:26 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	TM	MTBE	10.467	11.052 E3	-5.6	103	0.00
2	TM	Benzene	56.089	59.558 E3	-6.2	104	0.00
3	S	TFT	17.727	17.906 E3	-1.0	100	0.00
4	TM	Toluene	51.113	54.406 E3	-6.4	104	0.00
5	TM	Chlorobenzene	54.107	56.529 E3	-4.5	102	0.00
6	TM	Ethylbenzene	44.219	47.600 E3	-7.6	105	0.00
7	TM	m-,p-Xylene	52.895	55.632 E3	-5.2	103	0.00
8	TM	Styrene	55.455	58.150 E3	-4.9	102	0.00
9	TM	o-Xylene	51.565	53.613 E3	-4.0	101	-0.01
10	S	BFB	47.780	46.240 E3	3.2	97	-0.01
11	TM	1,3-Dichlorobenzene	43.477	46.342 E3	-6.6	104	-0.01
12	TM	1,4-Dichlorobenzene	47.061	50.837 E3	-8.0	103	-0.01
13	TM	1,2-Dichlorobenzene	37.887	40.945 E3	-8.1	105	0.00
14	S	BCB	46.823	46.651 E3	0.4	99	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G12955.D 602STY.M Tue Apr 23 13:21:12 2002 Page 1

Data File : C:\HPCHEM\2\DATA\042202\5G12955.D Vial: 10
Acq On : 22 Apr 2002 18:42 Operator: CBN
Sample : WG116507-08 ALT SOURCE 20PPB 5ML Inst : HP5
Misc : 1,1 S-92-44 Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:19:26 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	TM	MTBE	20.000	21.117	-5.6	103	0.00
2	TM	Benzene	20.000	21.237	-6.2	104	0.00
3	S	TFT	30.000	30.303	-1.0	100	0.00
4	TM	Toluene	20.000	21.288	-6.4	104	0.00
5	TM	Chlorobenzene	20.000	20.895	-4.5	102	0.00
6	TM	Ethylbenzene	20.000	21.529	-7.6	105	0.00
7	TM	m-,p-Xylene	40.000	42.070	-5.2	103	0.00
8	TM	Styrene	20.000	20.972	-4.9	102	0.00
9	TM	o-Xylene	20.000	20.795	-4.0	101	-0.01
10	S	BFB	30.000	29.033	3.2	97	-0.01
11	TM	1,3-Dichlorobenzene	20.000	21.318	-6.6	104	-0.01
12	TM	1,4-Dichlorobenzene	20.000	21.605	-8.0	103	-0.01
13	TM	1,2-Dichlorobenzene	20.000	21.614	-8.1	105	0.00
14	S	BCB	30.000	29.890	0.4	99	0.00

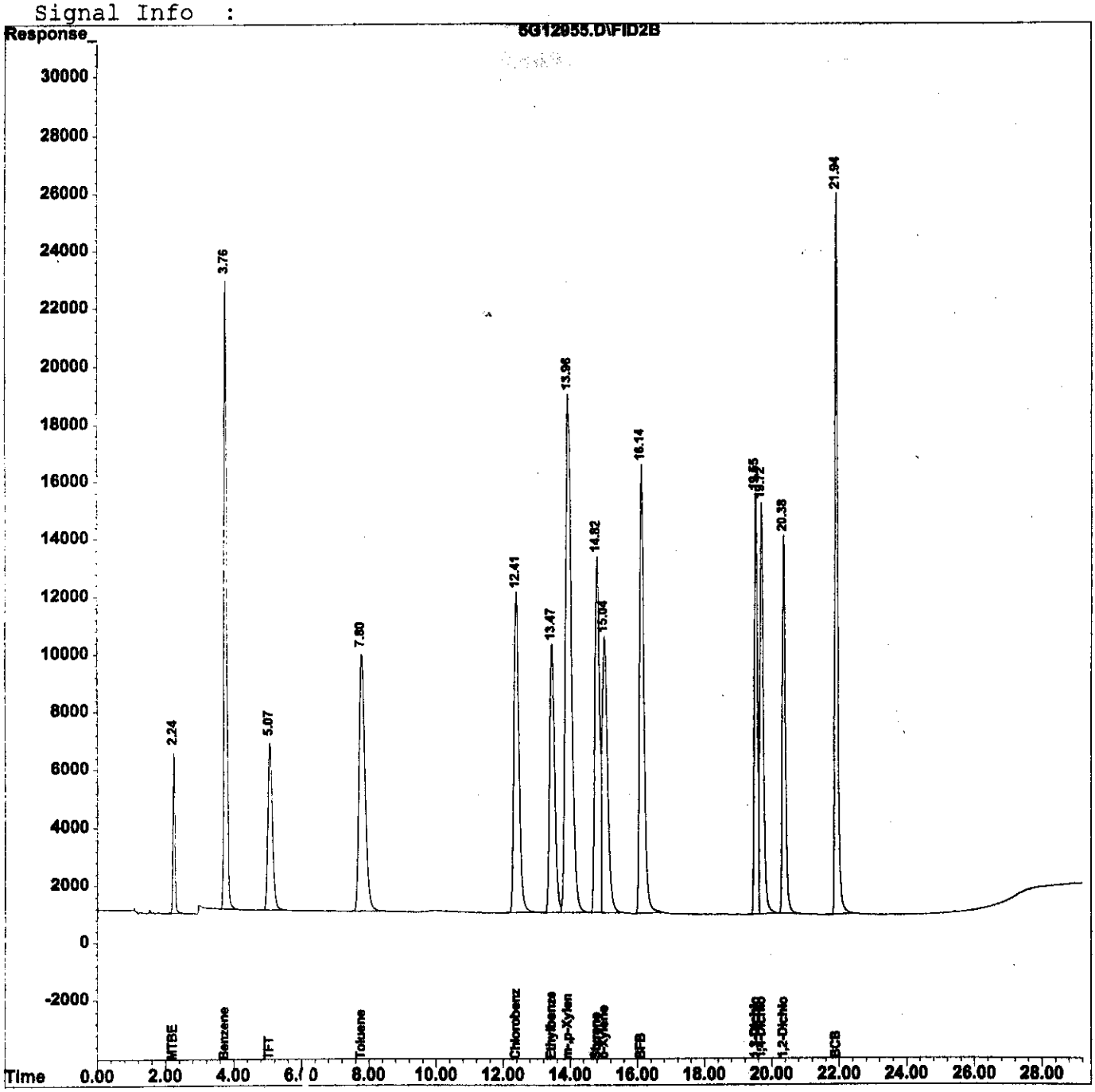
(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G12955.D 602STY.M Tue Apr 23 13:21:09 2002 Page 1

Quantitation Report

Data File : C:\HPCHEM\2\DATA\042202\5G12955.D Vial: 10
Acq On : 22 Apr 2002 18:42 Operator: CBN
Sample : WG116507-08 ALT SOURCE 20PPB 5ML Inst : HP5
Misc : 1,1 S-92-44 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:20 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\042202\5G12955.D Vial: 10
Acq On : 22 Apr 2002 18:42 Operator: CBN
Sample : WG116507-08 ALT SOURCE 20PPB 5ML Inst : HP5
Misc : 1,1 S-92-44 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:20 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	537186	30.3034 ug/L
Spiked Amount 30.000	Range 70 - 130	Recovery =	101.01%
10) S BFB	16.15	1387204	29.0331 ug/L
Spiked Amount 30.000		Recovery =	96.78%
14) S BCB	21.94	1399522	29.8897 ug/L
Spiked Amount 30.000	Range 37 - 137	Recovery =	99.63%
Target Compounds			
1) TM MTBE	2.24	221045	21.1175 ug/L
2) TM Benzene	3.76	1191168	21.2369 ug/L
4) TM Toluene	7.80	1088112	21.2884 ug/L
5) TM Chlorobenzene	12.41	1130584	20.8953 ug/L
6) TM Ethylbenzene	13.48	952001	21.5292 ug/L
7) TM m-,p-Xylene	13.96	2225281	42.0701 ug/L
8) TM Styrene	14.82	1162996	20.9717 ug/L
9) TM o-Xylene	15.04	1072269	20.7947 ug/L
11) TM 1,3-Dichlorobenzene	19.55	926849	21.3180 ug/L
12) TM 1,4-Dichlorobenzene	19.72	1016744	21.6050 ug/L
13) TM 1,2-Dichlorobenzene	20.38	818900	21.6144 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Calibration Table Report
Method: 8021S.M
Title: Method 8021B- Soil 4/30/02
Last Calibration: Wed May 01 09:30:22 2002

Calibration Files

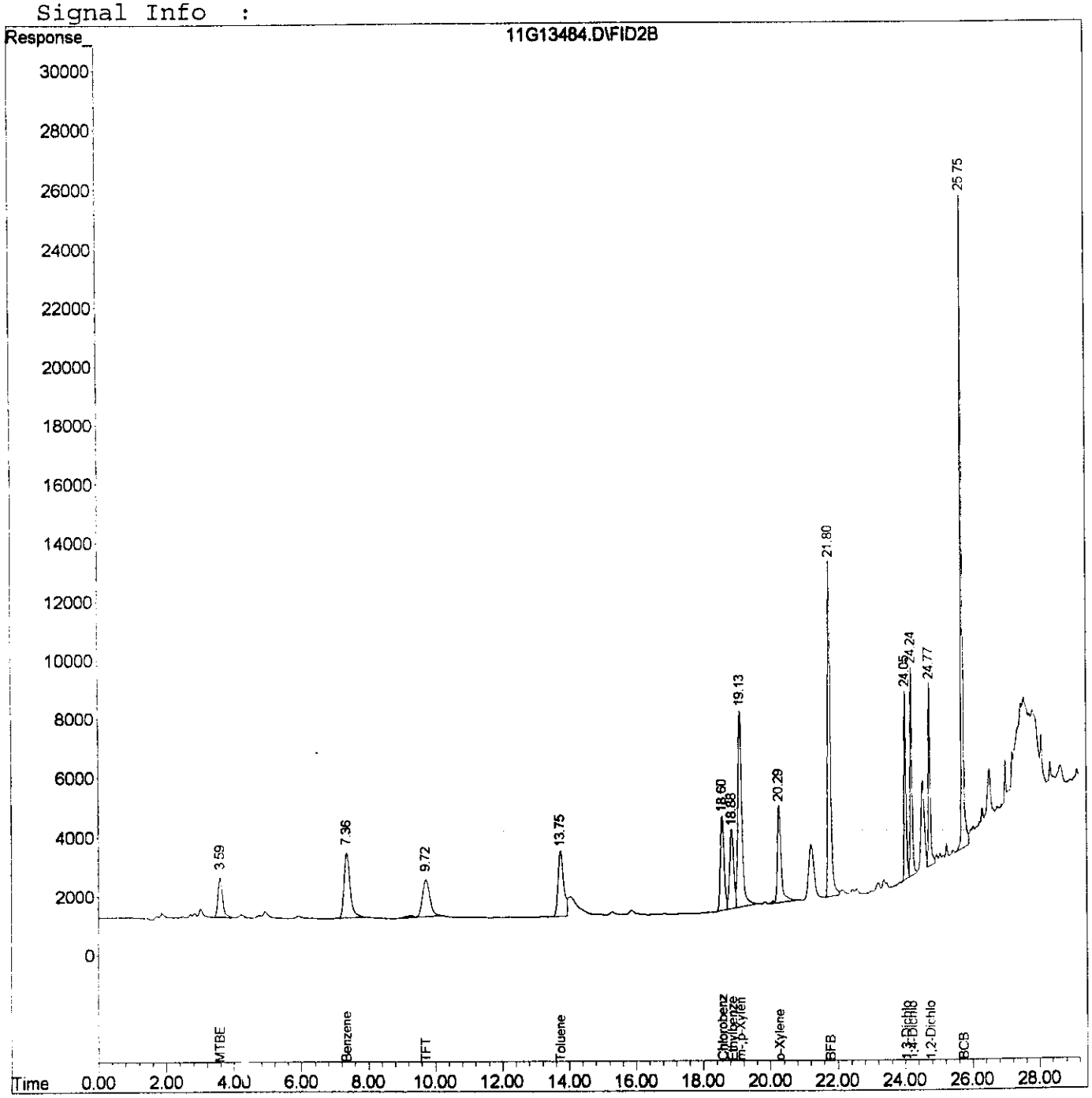
Compound	1 11G13484.D	10 11G13485.D	20 11G13486.D	50 11G13487.D	100 11G13488.D	200 11G13489.D	300 11G13490.D	Avg	%RSD
MTBE	130564.4	121945.8	118085.1	113558.8	117930.3	117525.0	117007.7	119517.0	4.561
Benzene	279113.8	268849.7	261094.0	253130.6	260157.9	258106.5	258096.1	262650.0	3.298
TFT	69260.2	88424.7	89870.6	87645.0	86019.6	89195.3	88120.0	85505.0	8.498
Toluene	259198.2	270831.2	272580.5	258699.4	261099.4	267050.4	261847.2	264472.0	2.140
Chlorobenzene	249596.2	263083.7	274302.8	266351.2	275208.6	280495.5	276123.7	269309.0	3.916
Ethylbenzene	217223.4	238323.7	243877.6	234407.7	240646.2	239754.2	236638.0	235839.0	3.706
m-,p-Xylene	275744.9	295029.5	294859.3	279070.4	285347.0	281979.0	276669.0	284100.0	2.844
o-Xylene	259615.7	262554.4	259540.1	245129.9	251145.2	249289.5	245123.9	253200.0	2.879
BFB	214211.4	225675.9	230793.0	232489.7	237922.4	243022.1	242490.5	232372.0	4.388
1,3-Dichlorobenzene	245015.0	228402.0	234891.6	228735.8	246888.1	250543.5	245202.9	239954.0	3.798
1,4-Dichlorobenzene	267249.8	238331.3	243679.5	233666.0	250309.3	251355.9	244594.6	247027.0	4.403
1,2-Dichlorobenzene	239096.9	211357.5	211951.1	201122.8	217264.0	213515.7	205864.1	214310.0	5.661
BCB	241933.0	217600.8	227469.0	227638.9	249625.9	248757.7	244103.5	236733.0	5.250

Wed May 01 09:31:03 2002

Data File : C:\HPCHEM\1\DATA\043002\11G13484.D Vial: 1
Acq On : 30 Apr 2002 3:07 pm Operator: CBN
Sample : WG116964-01 8021 STD1 1PPB 5G Inst : HP11
Misc : 7,1 S-92-(36,44) Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 30 15:37 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\043002\11G13484.D Vial: 1
Acq On : 30 Apr 2002 3:07 pm Operator: CBN
Sample : WG116964-01 8021 STD1 1PPB 5G Inst : HP11
Misc : 7,1 S-92-(36,44) Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 30 15:37 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound			R.T.	Response		Conc Units
System Monitoring Compounds						
3) S TFT			9.73	207781		4.2578 UG/KG
Spiked Amount	30.0000	Range	47 - 121	Recovery	=	14.19%#
9) S BFB			21.80	642634		4.8062 UG/KG
Spiked Amount	30.0000	Range	70 - 130	Recovery	=	16.02%#
13) S BCB			25.75	725799		5.3123 UG/KG
Spiked Amount	30.0000	Range	37 - 137	Recovery	=	17.71%#
Target Compounds						
1) TM MTBE			3.59	130564		1.8334 UG/KG
2) TM Benzene			7.36	279114		1.7561 UG/KG
4) TM Toluene			13.76	259198		1.7331 UG/KG
5) TM Chlorobenzene			18.60	249596		1.6477 UG/KG
6) TM Ethylbenzene			18.88	217223		1.6248 UG/KG
7) TM m-,p-Xylene			19.13	551490		3.3749 UG/KG
8) TM o-Xylene			20.30	259616		1.8351 UG/KG
10) TM 1,3-Dichlorobenzene			24.06	245015		1.8278 UG/KG
11) TM 1,4-Dichlorobenzene			24.24	267250		1.9412 UG/KG
12) TM 1,2-Dichlorobenzene			24.77	239097		1.8799 UG/KG

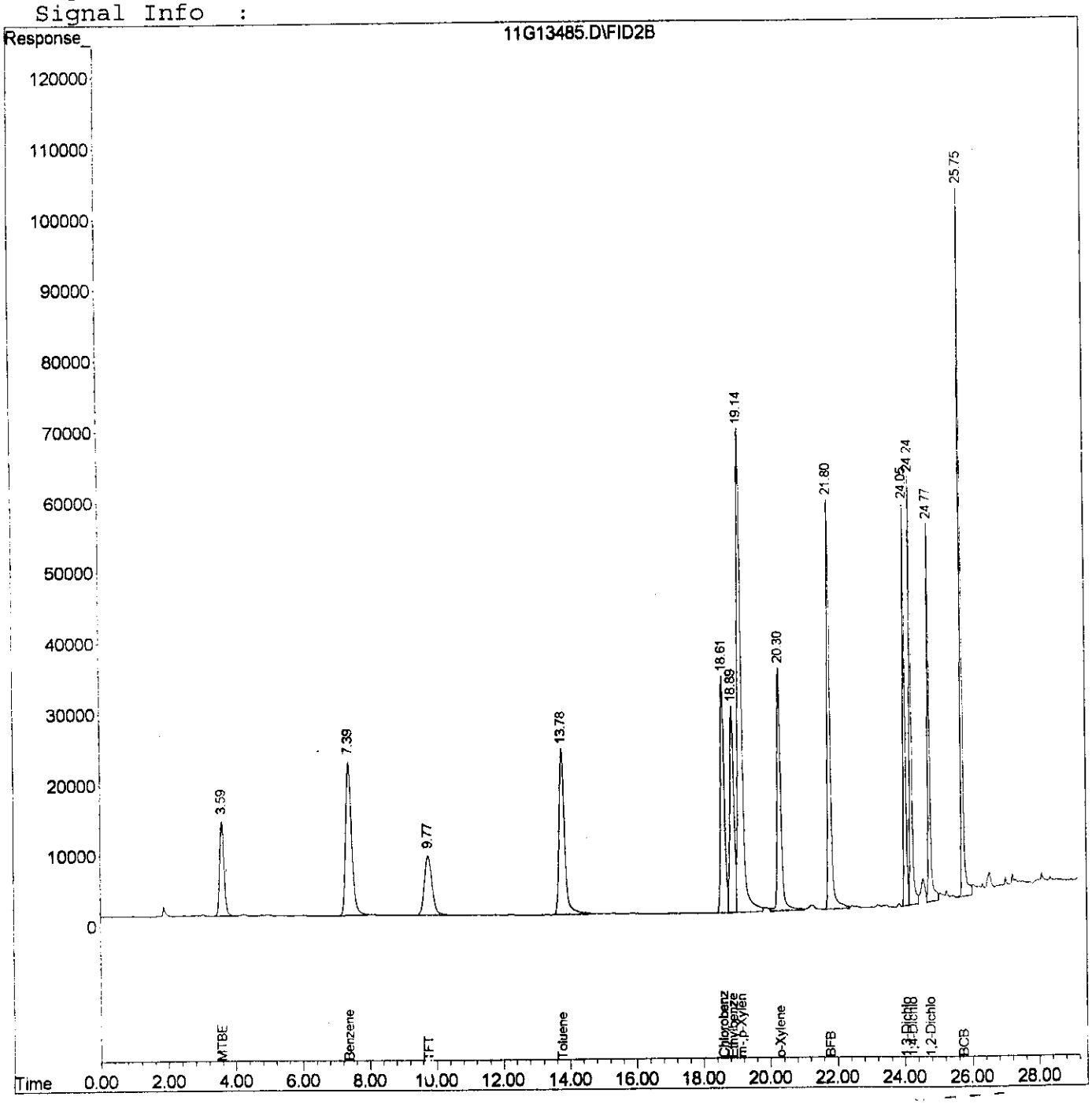
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\043002\11G13485.D
Acq On : 30 Apr 2002 3:42 pm
Sample : WG116964-02 8021 STD2 10PPB 5G
Misc : 7,1 S-92-(36,44)
IntFile : AUTOINT1.E
Quant Time: Apr 30 16:11 2002 Quant Results File: 8021S.RES

Vial: 2
Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\043002\11G13485.D
Acq On : 30 Apr 2002 3:42 pm
Sample : WG116964-02 8021 STD2 10PPB 5G
Misc : 7,1 S-92-(36,44)
IntFile : AUTOINT1.E
Quant Time: Apr 30 16:11 2002 Quant Results File: 8021S.RES

Vial: 2
Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	9.77	1326370	27.1797 UG/KG
Spiked Amount 30.0000	Range 47 - 121	Recovery	= 90.60%
9) S BFB	21.81	3385138	25.3171 UG/KG
Spiked Amount 30.0000	Range 70 - 130	Recovery	= 84.39%
13) S BCB	25.75	3264011	23.8900 UG/KG
Spiked Amount 30.0000	Range 37 - 137	Recovery	= 79.63%
Target Compounds			
1) TM MTBE	3.59	1219458	17.1234 UG/KG
2) TM Benzene	7.39	2688497	16.9148 UG/KG
4) TM Toluene	13.78	2708312	18.1091 UG/KG
5) TM Chlorobenzene	18.61	2630837	17.3677 UG/KG
6) TM Ethylbenzene	18.89	2383237	17.8258 UG/KG
7) TM m-,p-Xylene	19.14	5900590	36.1090 UG/KG
8) TM o-Xylene	20.30	2625544	18.5586 UG/KG
10) TM 1,3-Dichlorobenzene	24.06	2284019	17.0386 UG/KG
11) TM 1,4-Dichlorobenzene	24.24	2383313	17.3111 UG/KG
12) TM 1,2-Dichlorobenzene	24.77	2113575	16.6182 UG/KG

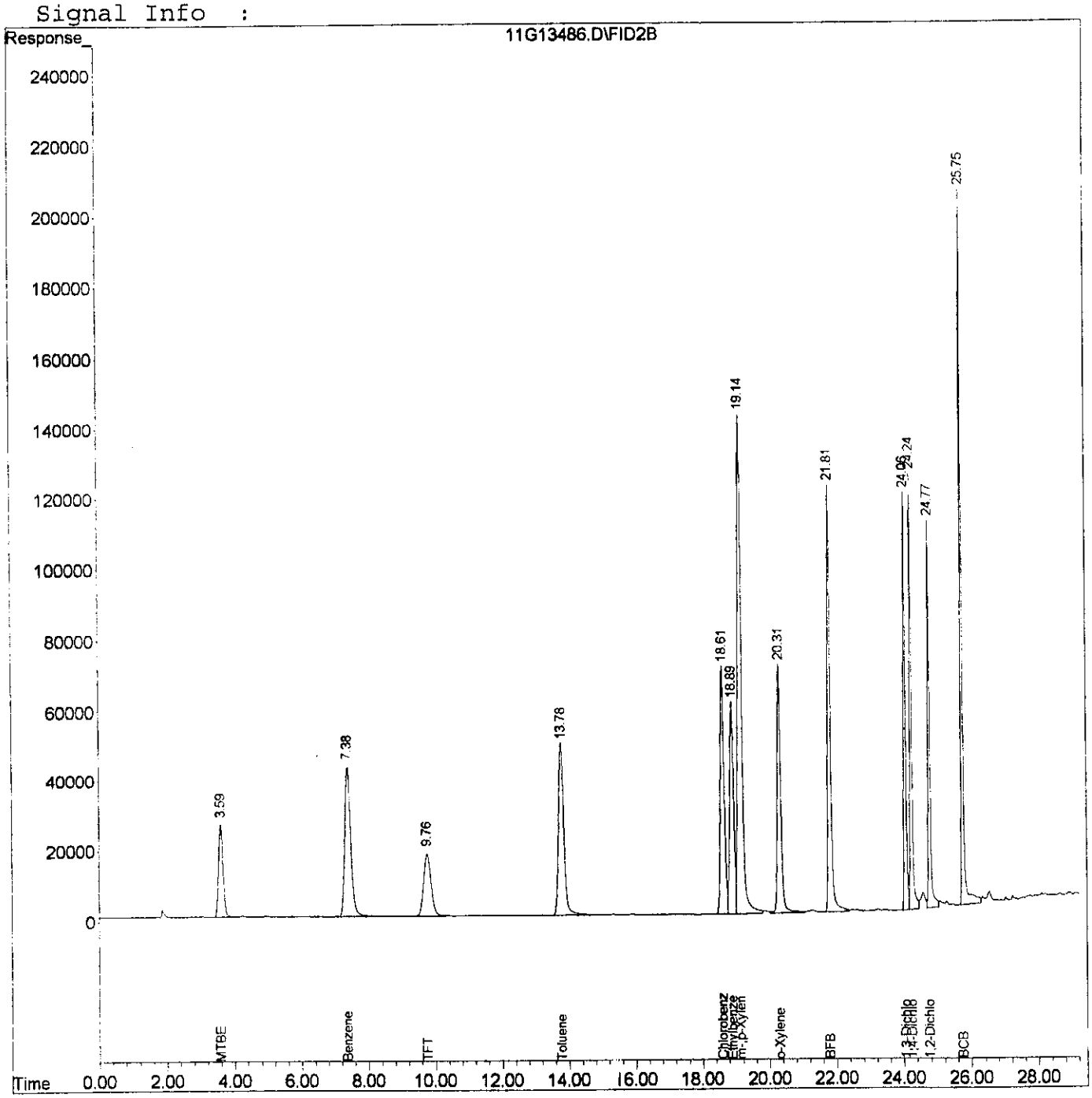
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\043002\11G13486.D
Acq On : 30 Apr 2002 4:17 pm
Sample : WG116964-03 8021 STD3 20PPB 5G
Misc : 7,1 S-92-(36,44)
IntFile : AUTOINT1.E
Quant Time: Apr 30 16:46 2002 Quant Results File: 8021S.RES

Vial: 3
Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\043002\11G13486.D
Acq On : 30 Apr 2002 4:17 pm
Sample : WG116964-03 8021 STD3 20PPB 5G
Misc : 7,1 S-92-(36,44)
IntFile : AUTOINT1.E
Quant Time: Apr 30 16:46 2002 Quant Results File: 8021S.RES

Vial: 3
Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	9.76	2696117	55.2483 UG/KG
Spiked Amount 30.0000	Range 47 - 121	Recovery	= 184.16%#
9) S BFB	21.81	6923789	51.7823 UG/KG
Spiked Amount 30.0000	Range 70 - 130	Recovery	= 172.61%#
13) S BCB	25.75	6824070	49.9469 UG/KG
Spiked Amount 30.0000	Range 37 - 137	Recovery	= 166.49%#
Target Compounds			
1) TM MTBE	3.59	2361701	33.1625 UG/KG
2) TM Benzene	7.39	5221880	32.8536 UG/KG
4) TM Toluene	13.78	5451609	36.4522 UG/KG
5) TM Chlorobenzene	18.61	5486057	36.2167 UG/KG
6) TM Ethylbenzene	18.90	4877551	36.4825 UG/KG
7) TM m-,p-Xylene	19.14	11794374	72.1764 UG/KG
8) TM o-Xylene	20.31	5190802	36.6910 UG/KG
10) TM 1,3-Dichlorobenzene	24.06	4697833	35.0455 UG/KG
11) TM 1,4-Dichlorobenzene	24.24	4873590	35.3992 UG/KG
12) TM 1,2-Dichlorobenzene	24.78	4239023	33.3298 UG/KG

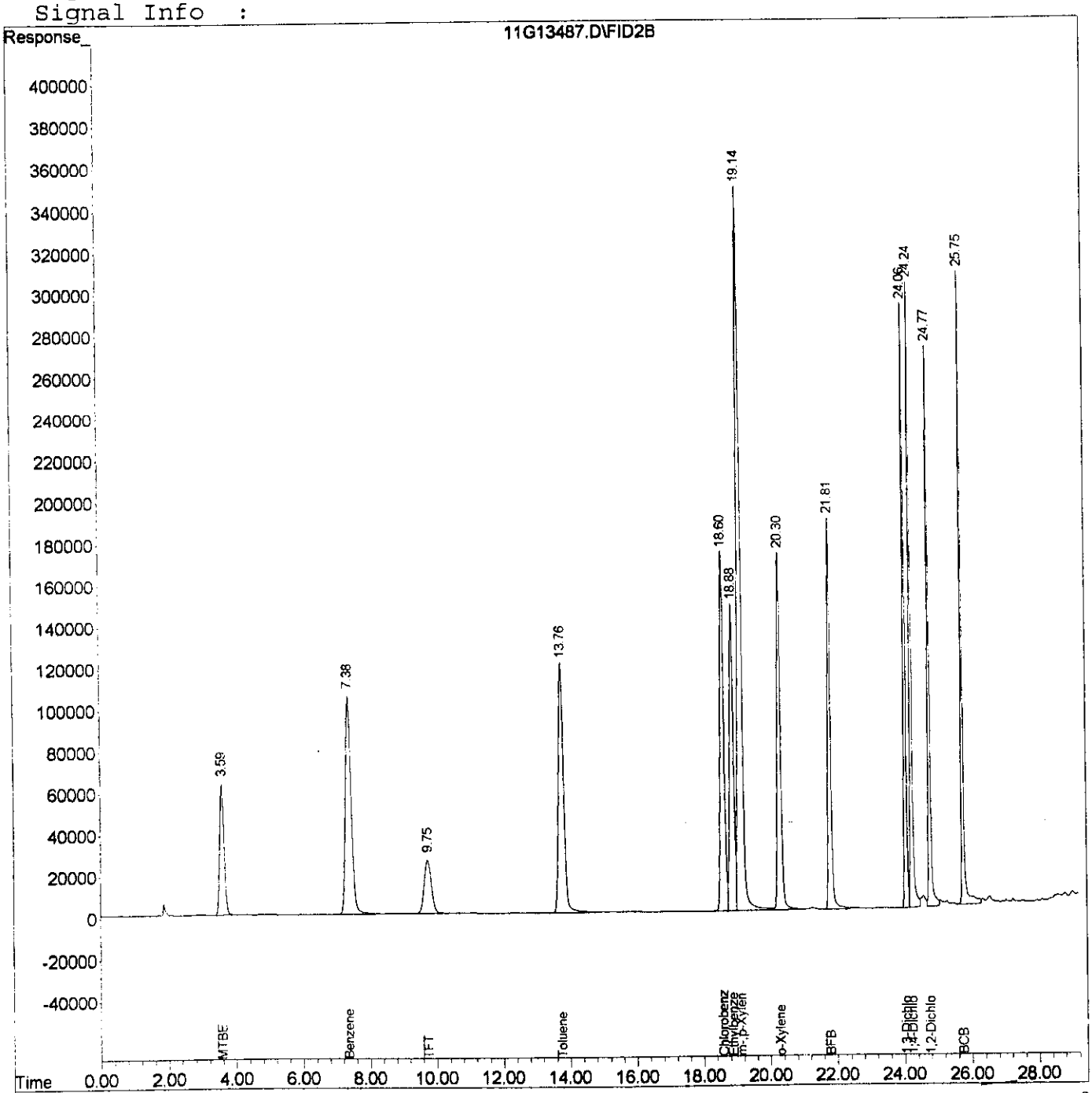
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\043002\11G13487.D
Acq On : 30 Apr 2002 4:51 pm
Sample : WG116964-04 8021 STD4 50PPB 5G
Misc : 7,1 S-92-(36,44)
IntFile : AUTOINT1.E
Quant Time: Apr 30 17:21 2002 Quant Results File: 8021S.RES

Vial: 4
Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\043002\11G13487.D Vial: 4
Acq On : 30 Apr 2002 4:51 pm Operator: CBN
Sample : WG116964-04 8021 STD4 50PPB 5G Inst : HP11
Misc : 7,1 S-92-(36,44) Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 30 17:21 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

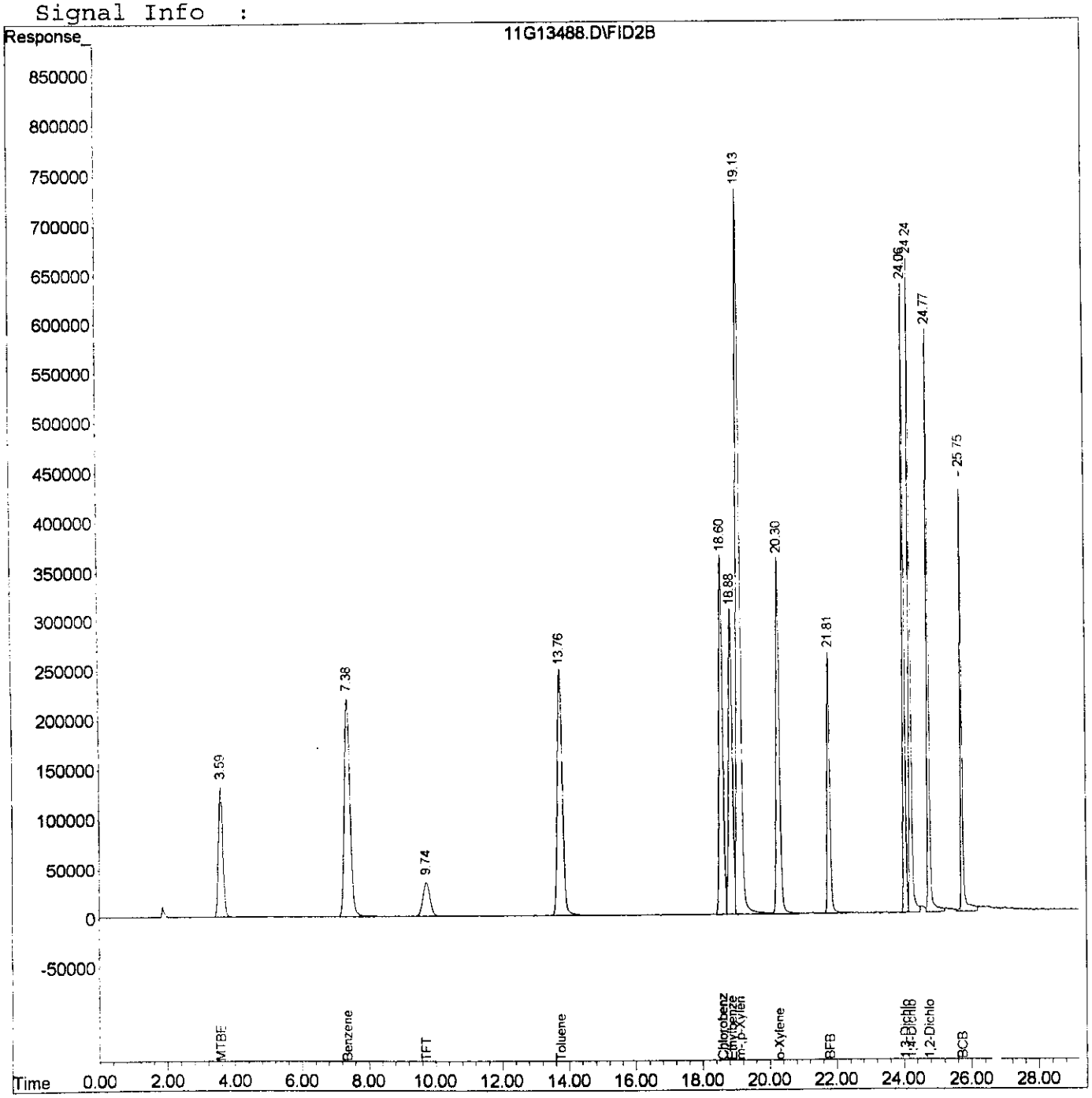
Compound			R.T.	Response	Conc Units
System Monitoring Compounds					
3) S TFT			9.74	3944024	80.8202 UG/KG
Spiked Amount	30.0000	Range	47 - 121	Recovery	= 269.40%#
9) S BFB			21.81	10462038	78.2445 UG/KG
Spiked Amount	30.0000	Range	70 - 130	Recovery	= 260.82%#
13) S BCB			25.75	10243749	74.9763 UG/KG
Spiked Amount	30.0000	Range	37 - 137	Recovery	= 249.92%#
Target Compounds					
1) TM MTBE			3.59	5677942	79.7284 UG/KG
2) TM Benzene			7.38	12656531	79.6289 UG/KG
4) TM Toluene			13.76	12934969	86.4896 UG/KG
5) TM Chlorobenzene			18.60	13317560	87.9170 UG/KG
6) TM Ethylbenzene			18.89	11720386	87.6647 UG/KG
7) TM m-,p-Xylene			19.14	27907041	170.7790 UG/KG
8) TM o-Xylene			20.30	12256496	86.6347 UG/KG
10) TM 1,3-Dichlorobenzene			24.06	11436788	85.3176 UG/KG
11) TM 1,4-Dichlorobenzene			24.24	11683301	84.8613 UG/KG
12) TM 1,2-Dichlorobenzene			24.78	10056142	79.0676 UG/KG

Data File : C:\HPCHEM\1\DATA\043002\11G13488.D
Acq On : 30 Apr 2002 5:26 pm
Sample : WG116964-05 8021 STD5 100PPB 5G
Misc : 7,1 S-92-(36,44)
IntFile : AUTOINT1.E
Quant Time: Apr 30 17:55 2002 Quant Results File: 8021S.RES

Vial: 5
Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\043002\11G13488.D
Acq On : 30 Apr 2002 5:26 pm
Sample : WG116964-05 8021 STD5 100PPB 5G
Misc : 7,1 S-92-(36,44)
IntFile : AUTOINT1.E
Quant Time: Apr 30 17:55 2002 Quant Results File: 8021S.RES

Vial: 5
Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

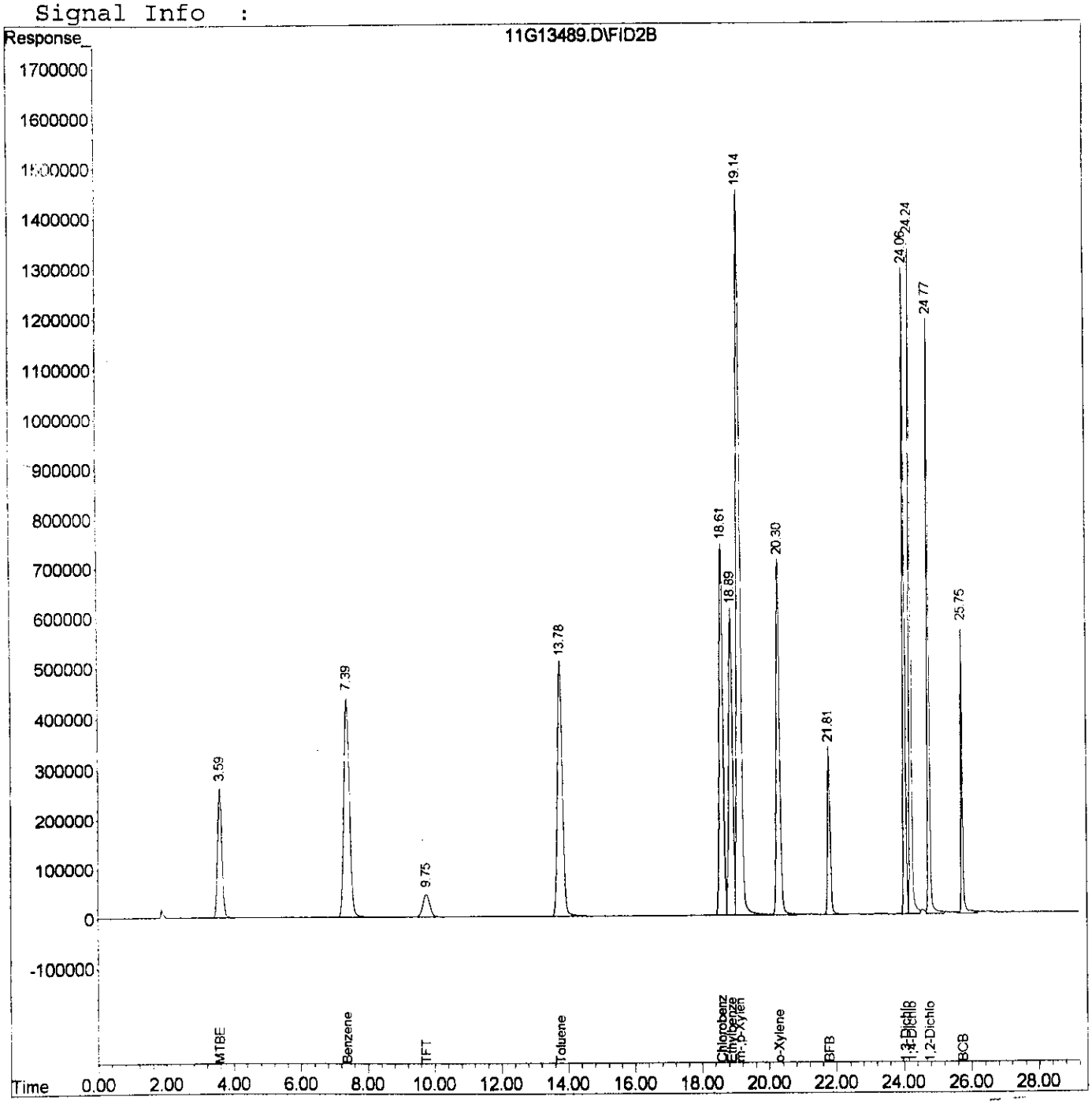
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	9.74	5161177	105.7619 UG/KG
Spiked Amount 30.0000	Range 47 - 121	Recovery	= 352.54%#
9) S BFB	21.81	14275345	106.7639 UG/KG
Spiked Amount 30.0000	Range 70 - 130	Recovery	= 355.88%#
13) S BCB	25.75	14977553	109.6241 UG/KG
Spiked Amount 30.0000	Range 37 - 137	Recovery	= 365.41%#
Target Compounds			
1) TM MTBE	3.59	11793031	165.5951 UG/KG
2) TM Benzene	7.38	26015792	163.6791 UG/KG
4) TM Toluene	13.76	26109936	174.5840 UG/KG
5) TM Chlorobenzene	18.60	27520859	181.6813 UG/KG
6) TM Ethylbenzene	18.89	24064618	179.9956 UG/KG
7) TM m-,p-Xylene	19.14	57069402	349.2399 UG/KG
8) TM o-Xylene	20.30	25114518	177.5213 UG/KG
10) TM 1,3-Dichlorobenzene	24.06	24688807	184.1766 UG/KG
11) TM 1,4-Dichlorobenzene	24.24	25030928	181.8113 UG/KG
12) TM 1,2-Dichlorobenzene	24.77	21726400	170.8263 UG/KG

Data File : C:\HPCHEM\1\DATA\043002\11G13489.D
Acq On : 30 Apr 2002 6:01 pm
Sample : WG116964-06 8021 STD6 200PPB 5G
Misc : 7,1 S-92-(36,44)
IntFile : AUTOINT1.E
Quant Time: Apr 30 18:30 2002 Quant Results File: 8021S.RES

Vial: 6
Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\043002\11G13489.D Vial: 6
Acq On : 30 Apr 2002 6:01 pm Operator: CBN
Sample : WG116964-06 8021 STD6 200PPB 5G Inst : HP11
Misc : 7,1 S-92-(36,44) Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 30 18:30 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

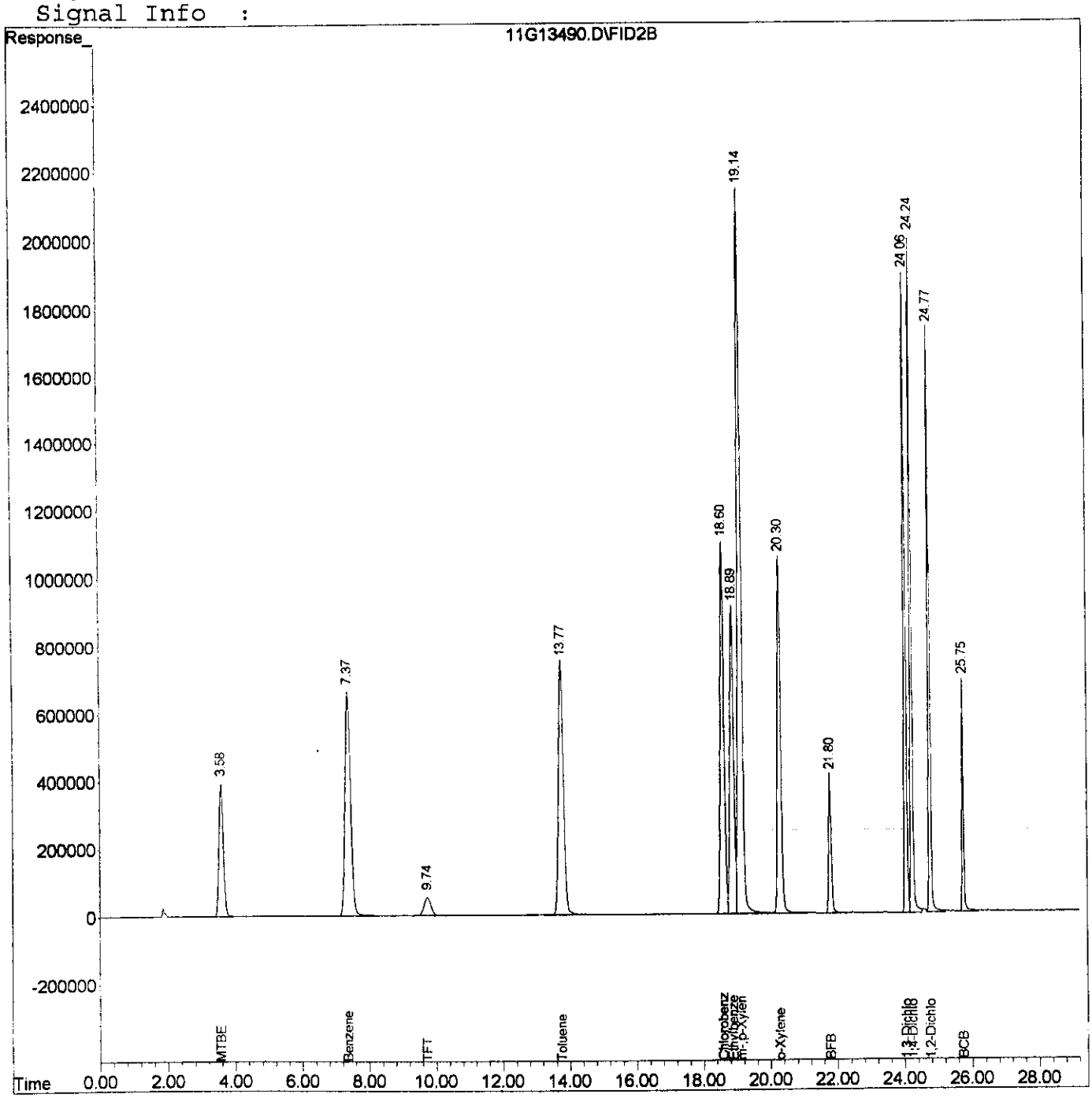
Compound			R.T.	Response	Conc Units
System Monitoring Compounds					
3) S TFT			9.76	6689645	137.0830 UG/KG
Spiked Amount	30.0000	Range	47 - 121	Recovery	= 456.94%#
9) S BFB			21.81	18226658	136.3154 UG/KG
Spiked Amount	30.0000	Range	70 - 130	Recovery	= 454.38%#
13) S BCB			25.75	18656827	136.5535 UG/KG
Spiked Amount	30.0000	Range	37 - 137	Recovery	= 455.18%#
Target Compounds					
1) TM MTBE			3.59	23505000	330.0519 UG/KG
2) TM Benzene			7.39	51621305	324.7769 UG/KG
4) TM Toluene			13.77	53410090	357.1264 UG/KG
5) TM Chlorobenzene			18.61	56099108	370.3431 UG/KG
6) TM Ethylbenzene			18.89	47950839	358.6569 UG/KG
7) TM m-,p-Xylene			19.14	112791602	690.2356 UG/KG
8) TM o-Xylene			20.30	49857900	352.4193 UG/KG
10) TM 1,3-Dichlorobenzene			24.06	50108703	373.8071 UG/KG
11) TM 1,4-Dichlorobenzene			24.24	50271173	365.1431 UG/KG
12) TM 1,2-Dichlorobenzene			24.78	42703135	335.7582 UG/KG

Data File : C:\HPCHEM\1\DATA\043002\11G13490.D
Acq On : 30 Apr 2002 6:36 pm
Sample : WG116964-07 8021 STD7 300PPB 5G
Misc : 7,1 S-92-(36,44)
IntFile : AUTOINT1.E
Quant Time: Apr 30 19:05 2002 Quant Results File: 8021S.RES

Vial: 7
Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\043002\11G13490.D Vial: 7
Acq On : 30 Apr 2002 6:36 pm Operator: CBN
Sample : WG116964-07 8021 STD7 300PPB 5G Inst : HP11
Misc : 7,1 S-92-(36,44) Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Apr 30 19:05 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 2/25/02
Last Update : Mon Feb 25 21:49:28 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound			R.T.	Response	Conc Units
System Monitoring Compounds					
3) S TFT			9.74	7930796	162.5164 UG/KG
Spiked Amount	30.0000	Range	47 - 121	Recovery	= 541.72%#
9) S BFB			21.80	21824147	163.2206 UG/KG
Spiked Amount	30.0000	Range	70 - 130	Recovery	= 544.07%#
13) S BCB			25.75	21969319	160.7983 UG/KG
Spiked Amount	30.0000	Range	37 - 137	Recovery	= 535.99%#
Target Compounds					
1) TM MTBE			3.58	35102298	492.8985 UG/KG
2) TM Benzene			7.38	77428822	487.1457 UG/KG
4) TM Toluene			13.76	78554157	525.2522 UG/KG
5) TM Chlorobenzene			18.61	82837121	546.8564 UG/KG
6) TM Ethylbenzene			18.89	70991394	530.9929 UG/KG
7) TM m-,p-Xylene			19.14	166001404	1015.8564 UG/KG
8) TM o-Xylene			20.30	73537158	519.7955 UG/KG
10) TM 1,3-Dichlorobenzene			24.06	73560883	548.7586 UG/KG
11) TM 1,4-Dichlorobenzene			24.24	73378372	532.9814 UG/KG
12) TM 1,2-Dichlorobenzene			24.77	61759236	485.5890 UG/KG

(f) RT Delta > 1/2 Window (m)=manual int

Data File : C:\HPCHEM\1\DATA\043002\11G13493.D
Acq On : 30 Apr 2002 20:20
Sample : WG116964-08 ALT SOURCE 20PPB 5G
Misc : 7,1 S-92-(47,44)
IntFile : AUTOINT1.E

Vial: 10
Operator: CBN
Inst : HP11
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	TM	MTBE	20.000	20.085	-0.4	102	0.00
2	TM	Benzene	20.000	20.556	-2.8	103	0.00
3	S	TFT	30.000	29.891	0.4	95	-0.02
4	TM	Toluene	20.000	20.111	-0.6	98	-0.01
5	TM	Chlorobenzene	20.000	19.769	1.2	97	-0.01
6	TM	Ethylbenzene	20.000	20.787	-3.9	101	-0.01
7	TM	m-,p-Xylene	40.000	40.799	-2.0	98	-0.01
8	TM	o-Xylene	20.000	19.857	0.7	97	-0.01
9	S	BFB	30.000	28.968	3.4	97	0.00
10	TM	1,3-Dichlorobenzene	20.000	19.171	4.1	98	0.00
11	TM	1,4-Dichlorobenzene	20.000	19.241	3.8	98	0.00
12	TM	1,2-Dichlorobenzene	20.000	20.002	-0.0	101	0.00
13	S	BCB	30.000	27.486	8.4	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\043002\11G13493.D
Acq On : 30 Apr 2002 20:20
Sample : WG116964-08 ALT SOURCE 20PPB 5G
Misc : 7,1 S-92-(47,44)
IntFile : AUTOINT1.E

Vial: 10
Operator: CBN
Inst : HP11
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	TM	MTBE	119.517	120.024 E3	-0.4	102	0.00
2	TM	Benzene	262.650	269.954 E3	-2.8	103	0.00
3	S	TFT	85.505	85.193 E3	0.4	95	-0.02
4	TM	Toluene	264.472	265.934 E3	-0.6	98	-0.01
5	TM	Chlorobenzene	269.309	266.192 E3	1.2	97	-0.01
6	TM	Ethylbenzene	235.839	245.116 E3	-3.9	101	-0.01
7	TM	m-,p-Xylene	284.100	289.778 E3	-2.0	98	-0.01
8	TM	o-Xylene	253.200	251.385 E3	0.7	97	-0.01
9	S	BFB	232.372	224.376 E3	3.4	97	0.00
10	TM	1,3-Dichlorobenzene	239.954	230.009 E3	4.1	98	0.00
11	TM	1,4-Dichlorobenzene	247.027	237.653 E3	3.8	98	0.00
12	TM	1,2-Dichlorobenzene	214.310	214.331 E3	-0.0	101	0.00
13	S	BCB	236.733	216.892 E3	8.4	95	0.00

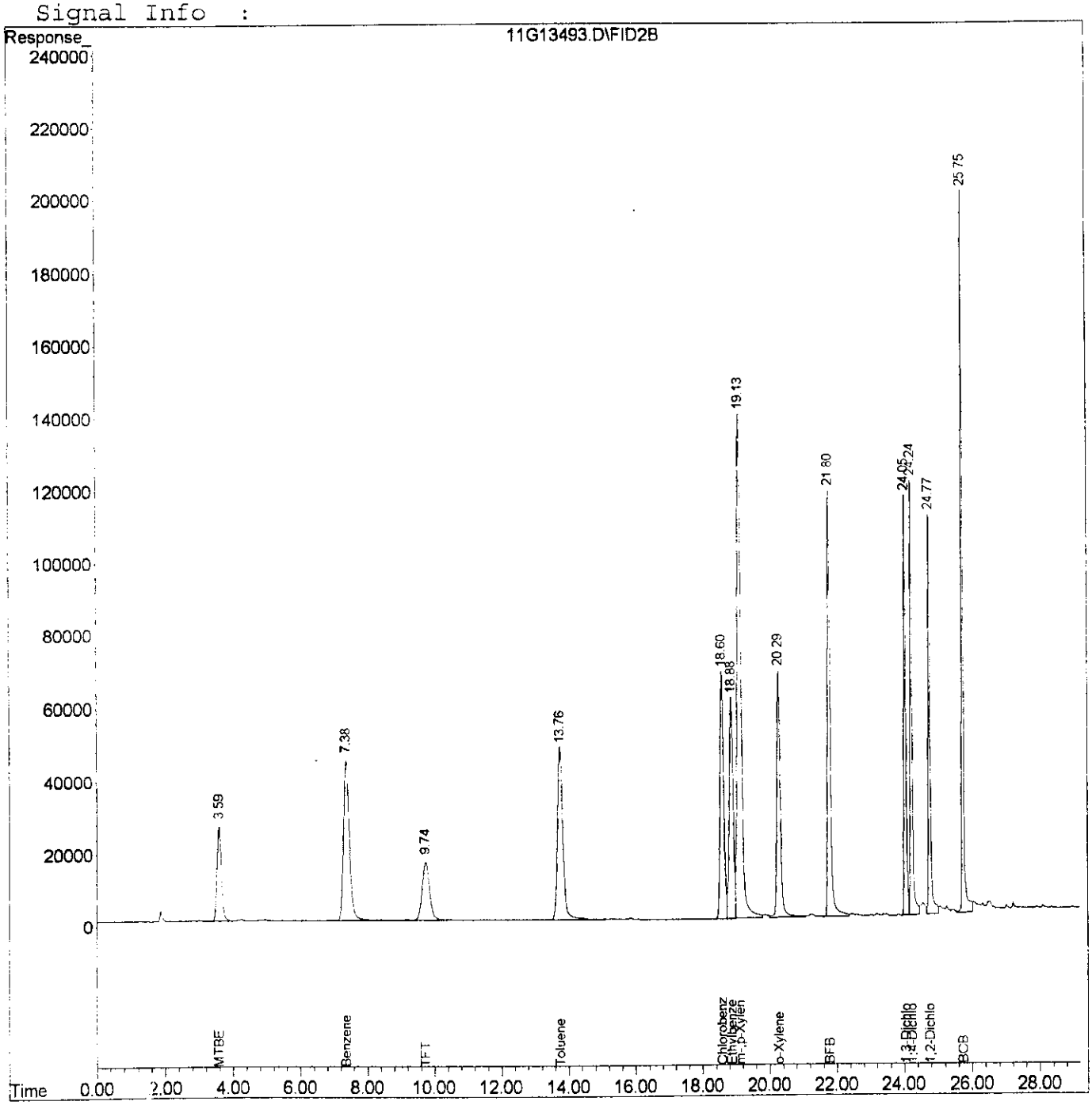
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\043002\11G13493.D
Acq On : 30 Apr 2002 20:20
Sample : WG116964-08 ALT SOURCE 20PPB 5G
Misc : 7,1 S-92-(47,44)
IntFile : AUTOINT1.E
Quant Time: May 1 9:33 2002 Quant Results File: 8021S.RES

Vial: 10
Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\043002\11G13493.D Vial: 10
Acq On : 30 Apr 2002 20:20 Operator: CBN
Sample : WG116964-08 ALT SOURCE 20PPB 5G Inst : HP11
Misc : 7,1 S-92-(47,44) Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: May 1 9:33 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	9.75	2555793	29.8906 UG/KG
Spiked Amount 30.0000	Range 47 - 121	Recovery	= 99.64%
9) S BFB	21.80	6731290	28.9677 UG/KG
Spiked Amount 30.0000	Range 70 - 130	Recovery	= 96.56%
13) S BCB	25.75	6506754	27.4857 UG/KG
Spiked Amount 30.0000	Range 37 - 137	Recovery	= 91.62%
Target Compounds			
1) TM MTBE	3.59	2400475	20.0848 UG/KG
2) TM Benzene	7.38	5399074	20.5562 UG/KG
4) TM Toluene	13.76	5318684	20.1105 UG/KG
5) TM Chlorobenzene	18.60	5323839	19.7685 UG/KG
6) TM Ethylbenzene	18.88	4902317	20.7867 UG/KG
7) TM m-,p-Xylene	19.13	11591132	40.7995 UG/KG
8) TM o-Xylene	20.30	5027702	19.8567 UG/KG
10) TM 1,3-Dichlorobenzene	24.05	4600176	19.1711 UG/KG
11) TM 1,4-Dichlorobenzene	24.24	4753061	19.2411 UG/KG
12) TM 1,2-Dichlorobenzene	24.77	4286616	20.0019 UG/KG

(f)=RT Delta > 1/2 Window (m)=manual int... 108

Data File : C:\HPCHEM\1\DATA\062102\11G13773.D
Acq On : 21 Jun 2002 16:14
Sample : WG120310-01 8021 STD 20PPB 5G
Misc : 7,1 S-(95-36,95-29)
IntFile : AUTOINT1.E

Vial: 1
Operator: JLS
Inst : HP11
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	TM	MTBE	119.517	111.074 E3	7.1	94	-0.04
2	TM	Benzene	262.650	240.514 E3	8.4	92	-0.06
3	S	TFT	85.505	84.848 E3	0.8	94	-0.07
4	TM	Toluene	264.472	263.868 E3	0.2	97	-0.05
5	TM	Chlorobenzene	269.309	253.350 E3	5.9	92	-0.03
6	TM	Ethylbenzene	235.839	233.045 E3	1.2	96	-0.03
7	TM	m-,p-Xylene	284.100	284.936 E3	-0.3	97	-0.03
8	TM	o-Xylene	253.200	243.326 E3	3.9	94	-0.02
9	S	BFB	232.372	221.840 E3	4.5	96	-0.02
10	TM	1,3-Dichlorobenzene	239.954	226.070 E3	5.8	96	-0.01
11	TM	1,4-Dichlorobenzene	247.027	238.786 E3	3.3	98	-0.01
12	TM	1,2-Dichlorobenzene	214.310	227.902 E3	-6.3	108	-0.01
13	S	BCB	236.733	223.282 E3	5.7	98	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0
11G13773.D 8021S.M Fri Jun 21 16:44:05 2002

Data File : C:\HPCHEM\1\DATA\062102\11G13773.D Vial: 1
Acq On : 21 Jun 2002 16:14 Operator: JLS
Sample : WG120310-01 8021 STD 20PPB 5G Inst : HP11
Misc : 7,1 S-(95-36,95-29) Multiplr: 1.00
IntFile : AUTOINT1.E

Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	TM	MTBE	20.000	18.587	7.1	94	-0.04
2	TM	Benzene	20.000	18.314	8.4	92	-0.06
3	S	TFT	30.000	29.769	0.8	94	-0.07
4	TM	Toluene	20.000	19.954	0.2	97	-0.05
5	TM	Chlorobenzene	20.000	18.815	5.9	92	-0.03
6	TM	Ethylbenzene	20.000	19.763	1.2	96	-0.03
7	TM	m-,p-Xylene	40.000	40.118	-0.3	97	-0.03
8	TM	o-Xylene	20.000	19.220	3.9	94	-0.02
9	S	BFB	30.000	28.640	4.5	96	-0.02
10	TM	1,3-Dichlorobenzene	20.000	18.843	5.8	96	-0.01
11	TM	1,4-Dichlorobenzene	20.000	19.333	3.3	98	-0.01
12	TM	1,2-Dichlorobenzene	20.000	21.268	-6.3	108	-0.01
13	S	BCB	30.000	28.296	5.7	98	-0.01

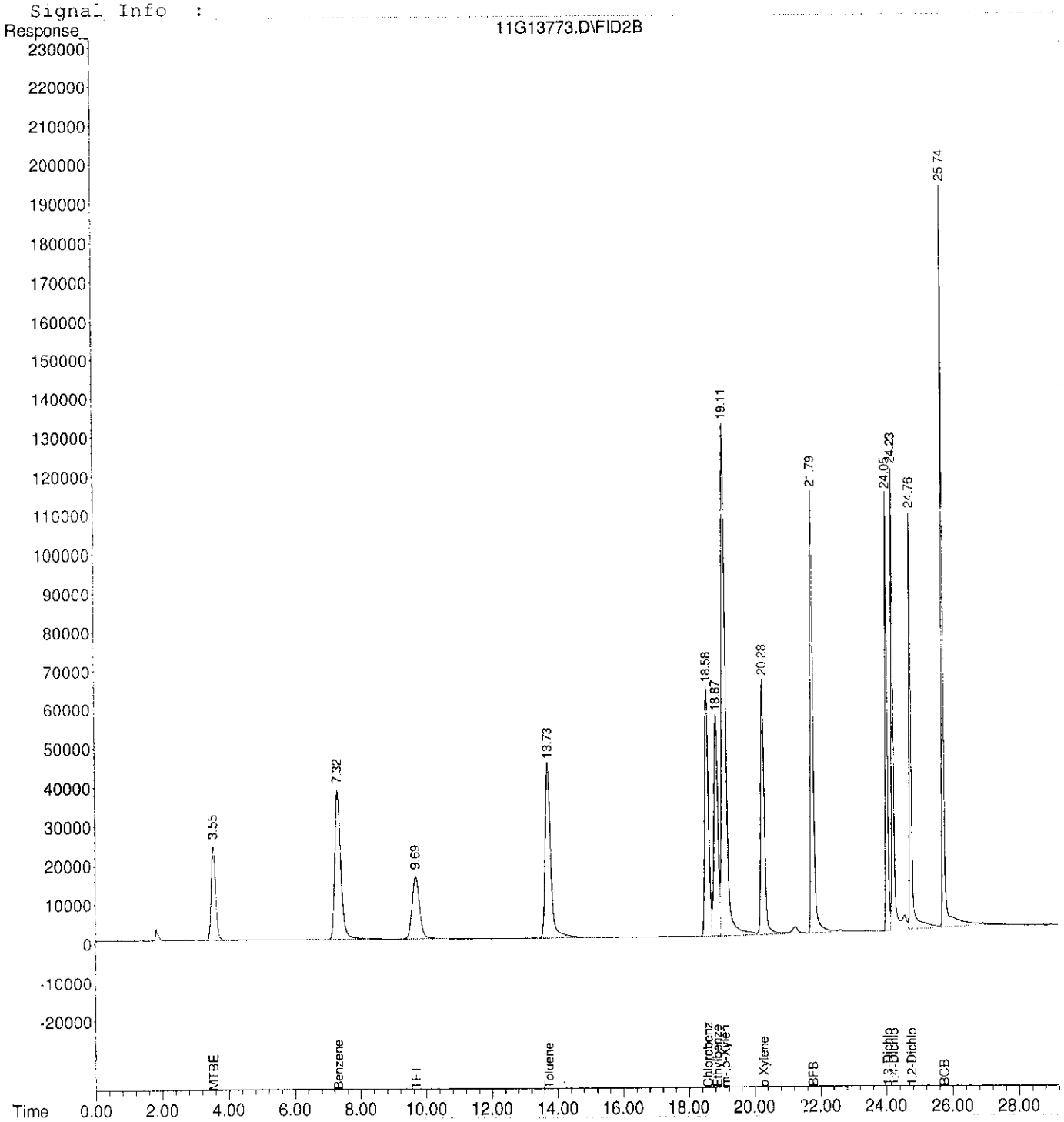
(#) = Out of Range SPCC's out = 0 CCC's out = 0
11G13773.D 8021S.M Fri Jun 21 16:43:59 2002 Page 1

Data File : C:\HPCHEM\1\DATA\062102\11G13773.D
Acq On : 21 Jun 2002 4:14 pm
Sample : WG120310-01 8021 STD 20PPB 5G
Misc : 7,1 S-(95-36,95-29)
IntFile : AUTOINT1.E
Quant Time: Jun 21 16:43 2002 Quant Results File: 8021S.RES

Vial: 1
Operator: JLS
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062102\11G13773.D Vial: 1
Acq On : 21 Jun 2002 4:14 pm Operator: JLS
Sample : WG120310-01 8021 STD 20PPB 5G Inst : HP11
Misc : 7,1 S-(95-36,95-29) Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Jun 21 16:43 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	9.69	2545435	29.7694 UG/KG
Spiked Amount 30.0000	Range 47 - 121	Recovery	= 99.23%
9) S BFB	21.79	6655200	28.6403 UG/KG
Spiked Amount 30.0000	Range 70 - 130	Recovery	= 95.47%
13) S BCB	25.74	6698475	28.2955 UG/KG
Spiked Amount 30.0000	Range 37 - 137	Recovery	= 94.32%
Target Compounds			
1) TM MTBE	3.55	2221482	18.5872 UG/KG
2) TM Benzene	7.32	4810287	18.3145 UG/KG
4) TM Toluene	13.73	5277355	19.9543 UG/KG
5) TM Chlorobenzene	18.59	5066996	18.8148 UG/KG
6) TM Ethylbenzene	18.87	4660908	19.7631 UG/KG
7) TM m-,p-Xylene	19.12	11397449	40.1178 UG/KG
8) TM o-Xylene	20.29	4866528	19.2201 UG/KG
10) TM 1,3-Dichlorobenzene	24.05	4521399	18.8428 UG/KG
11) TM 1,4-Dichlorobenzene	24.23	4775726	19.3328 UG/KG
12) TM 1,2-Dichlorobenzene	24.77	4558031	21.2684 UG/KG

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\062102\11G13780.D
Acq On : 21 Jun 2002 20:26
Sample : WG120310-02 8021 STD 20PPB 5G
Misc : 7,1 S-(95-36,95-29)
IntFile : AUTOINT1.E

Vial: 8
Operator: JLS
Inst : HP11
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF		%Dev	Area%	Dev(min)
1	TM	MTBE	119.517	105.087	E3	12.1	89	-0.03
2	TM	Benzene	262.650	257.285	E3	2.0	99	-0.05
3	S	TFT	85.505	95.530	E3	-11.7	106	-0.06
4	TM	Toluene	264.472	256.011	E3	3.2	94	-0.04
5	TM	Chlorobenzene	269.309	250.404	E3	7.0	91	-0.03
6	TM	Ethylbenzene	235.839	228.760	E3	3.0	94	-0.03
7	TM	m-,p-Xylene	284.100	279.538	E3	1.6	95	-0.03
8	TM	o-Xylene	253.200	243.176	E3	4.0	94	-0.03
9	S	BFB	232.372	240.969	E3	-3.7	104	-0.02
10	TM	1,3-Dichlorobenzene	239.954	221.297	E3	7.8	94	-0.01
11	TM	1,4-Dichlorobenzene	247.027	230.808	E3	6.6	95	-0.01
12	TM	1,2-Dichlorobenzene	214.310	213.872	E3	0.2	101	-0.01
13	S	ECB	236.733	234.408	E3	1.0	103	-0.01

Data File : C:\HPCHEM\1\DATA\062102\11G13780.D
Acq On : 21 Jun 2002 20:26
Sample : WG120310-02 8021 STD 20PPB 5G
Misc : 7,1 S-(95-36,95-29)
IntFile : AUTOINT1.E

Vial: 8
Operator: JLS
Inst : HP11
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Multiple Level Calibration

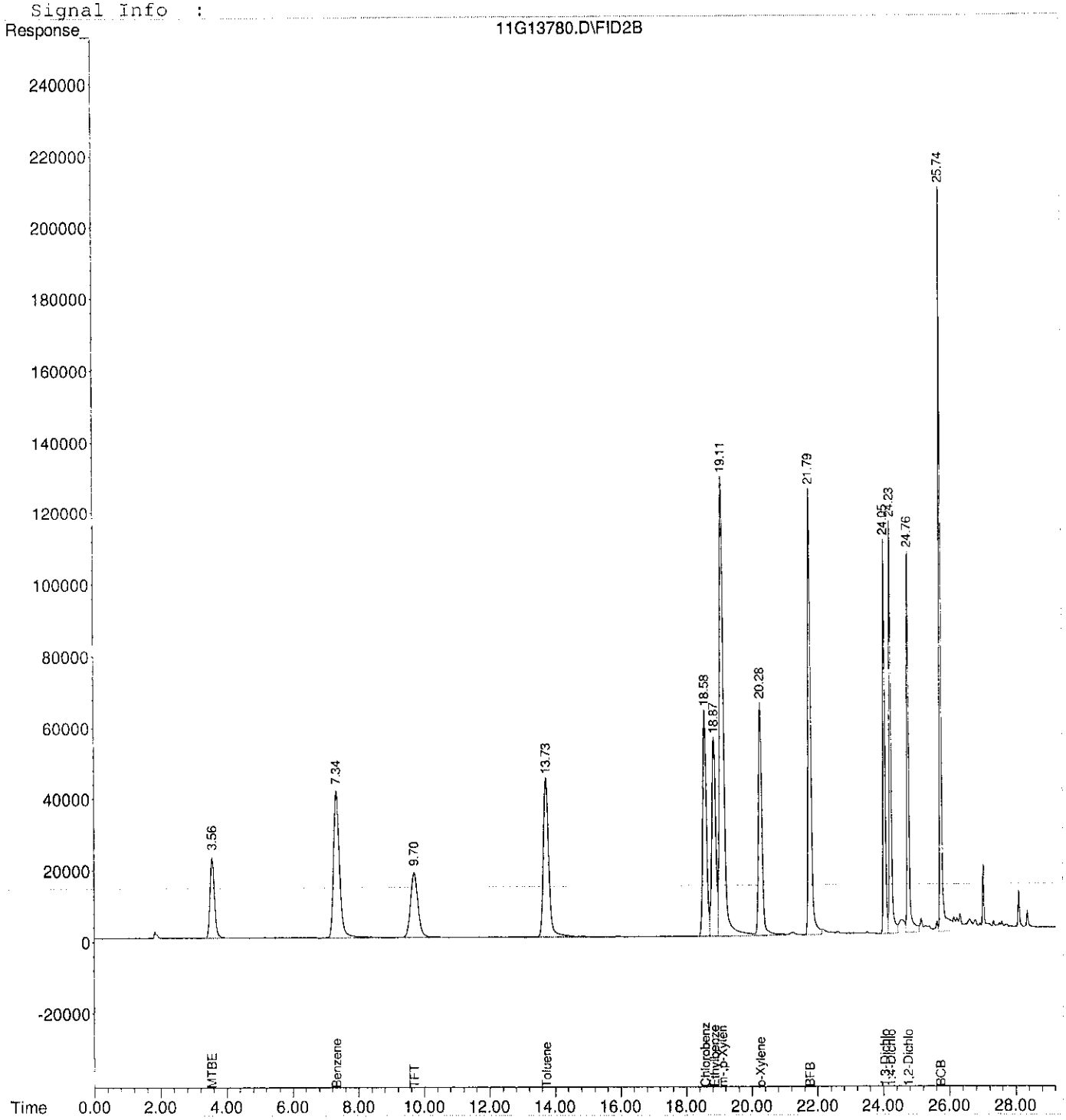
Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	TM	MTBE	20.000	17.585	12.1	89	-0.03
2	TM	Benzene	20.000	19.591	2.0	99	-0.05
3	S	TFT	30.000	33.517	-11.7	106	-0.06
4	TM	Toluene	20.000	19.360	3.2	94	-0.04
5	TM	Chlorobenzene	20.000	18.596	7.0	91	-0.03
6	TM	Ethylbenzene	20.000	19.400	3.0	94	-0.03
7	TM	m-,p-Xylene	40.000	39.358	1.6	95	-0.03
8	TM	o-Xylene	20.000	19.208	4.0	94	-0.03
9	S	BFB	30.000	31.110	-3.7	104	-0.02
10	TM	1,3-Dichlorobenzene	20.000	18.445	7.8	94	-0.01
11	TM	1,4-Dichlorobenzene	20.000	18.687	6.6	95	-0.01
12	TM	1,2-Dichlorobenzene	20.000	19.959	0.2	101	-0.01
13	S	BCB	30.000	29.705	1.0	103	-0.01

Data File : C:\HPCHEM\1\DATA\062102\11G13780.D Vial: 8
Acq On : 21 Jun 2002 8:26 pm Operator: JLS
Sample : WG120310-02 8021 STD 20PPB 5G Inst : HP11
Misc : 7,1 S-(95-36,95-29) Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Jun 21 20:55 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062102\11G13780.D Vial: 8
Acq On : 21 Jun 2002 8:26 pm Operator: JLS
Sample : WG120310-02 8021 STD 20PPB 5G Inst : HP11
Misc : 7,1 S-(95-36,95-29) Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Jun 21 20:55 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	9.70	2865897	33.5173 UG/KG
Spiked Amount 30.0000	Range 47 - 121	Recovery	= 111.72%
9) S BFB	21.79	7229080	31.1099 UG/KG
Spiked Amount 30.0000	Range 70 - 130	Recovery	= 103.70%
13) S BCB	25.74	7032252	29.7055 UG/KG
Spiked Amount 30.0000	Range 37 - 137	Recovery	= 99.02%
Target Compounds			
1) TM MTBE	3.56	2101740	17.5853 UG/KG
2) TM Benzene	7.34	5145691	19.5915 UG/KG
4) TM Toluene	13.74	5120229	19.3602 UG/KG
5) TM Chlorobenzene	18.58	5008086	18.5961 UG/KG
6) TM Ethylbenzene	18.87	4575194	19.3997 UG/KG
7) TM m-,p-Xylene	19.11	11181528	39.3577 UG/KG
8) TM o-Xylene	20.28	4863515	19.2082 UG/KG
10) TM 1,3-Dichlorobenzene	24.05	4425943	18.4450 UG/KG
11) TM 1,4-Dichlorobenzene	24.23	4616152	18.6869 UG/KG
12) TM 1,2-Dichlorobenzene	24.76	4277435	19.9591 UG/KG

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\062502\5G13815.D
Acq On : 25 Jun 2002 6:35
Sample : WG120408-01 8021 STD 20PPB 5ML
Misc : 1,1 S-95-(36,30)
IntFile : autoint1.e

Vial: 9
Operator: CBN
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:19:26 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	TM	MTBE	10.467	11.073 E3	-5.8	103	0.00
2	TM	Benzene	56.089	60.013 E3	-7.0	104	0.00
3	S	TFT	17.727	18.232 E3	-2.8	102	0.09
4	TM	Toluene	51.113	56.006 E3	-9.6	107	0.11
5	TM	Chlorobenzene	54.107	58.958 E3	-9.0	107	0.05
6	TM	Ethylbenzene	44.219	48.680 E3	-10.1	107	0.06
7	TM	m-,p-Xylene	52.895	57.581 E3	-8.9	106	0.09
8	TM	Styrene	55.455	49.385 E3	10.9	86	0.29
9	TM	o-Xylene	51.565	49.385 E3	4.2	93	0.07
10	S	BFB	47.780	47.875 E3	-0.2	100	0.02
11	TM	1,3-Dichlorobenzene	43.477	46.064 E3	-6.0	103	0.00
12	TM	1,4-Dichlorobenzene	47.061	52.862 E3	-12.3	107	-0.01
13	TM	1,2-Dichlorobenzene	37.887	41.661 E3	-10.0	107	0.00
14	S	BCB	46.823	44.423 E3	5.1	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G13815.D 602STY.M Tue Jun 25 07:07:26 2002 Page 1

Data File : C:\HPCHEM\2\DATA\062502\5G13815.D
Acq On : 25 Jun 2002 6:35
Sample : WG120408-01 8021 STD 20PPB 5ML
Misc : 1,1 S-95-(36,30)
IntFile : autoint1.e

Vial: 9
Operator: CBN
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:19:26 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

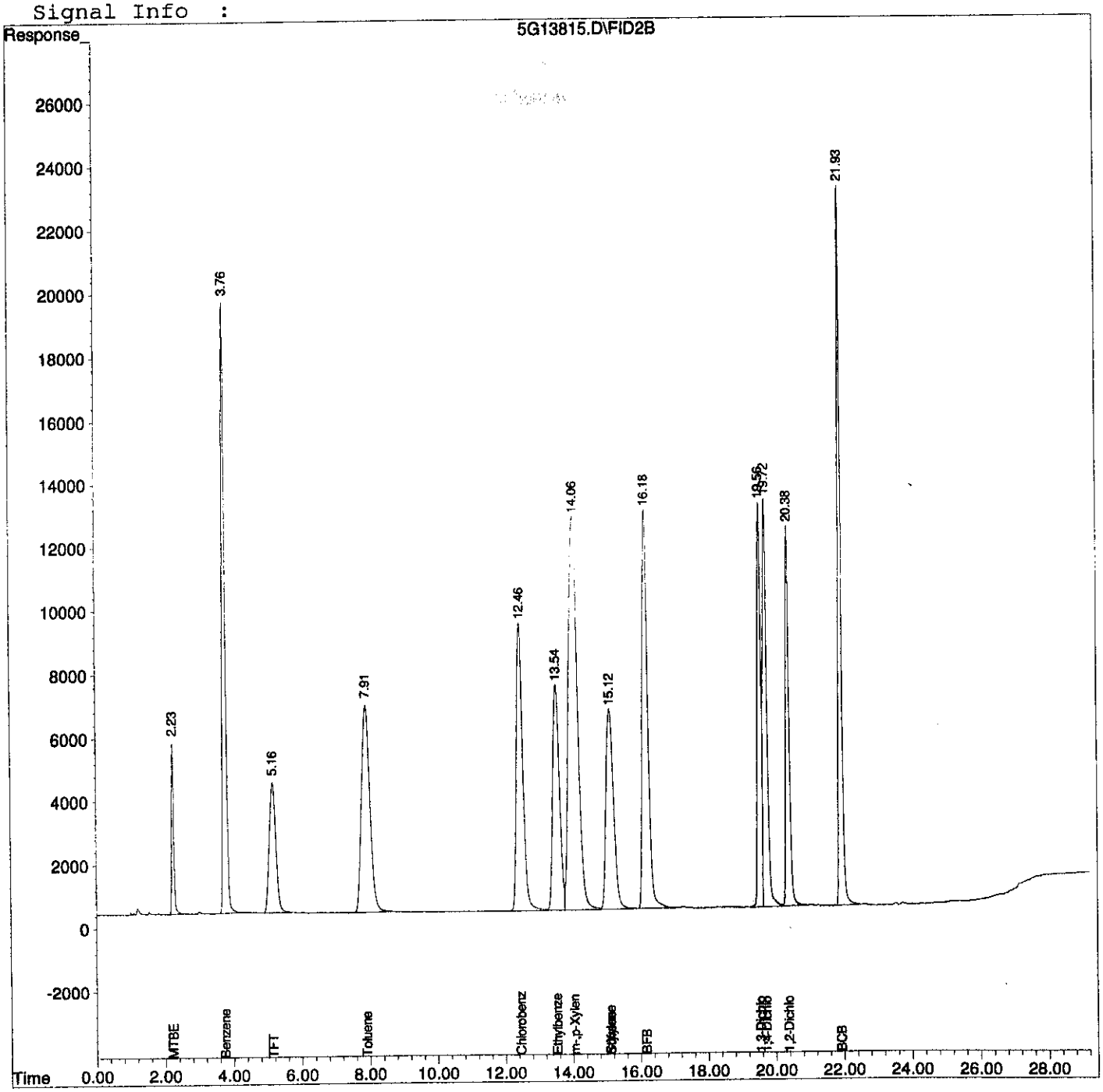
		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	TM	MTBE	20.000	21.158	-5.8	103	0.00
2	TM	Benzene	20.000	21.399	-7.0	104	0.00
3	S	TFT	30.000	30.855	-2.9	102	0.09
4	TM	Toluene	20.000	21.914	-9.6	107	0.11
5	TM	Chlorobenzene	20.000	21.793	-9.0	107	0.05
6	TM	Ethylbenzene	20.000	22.018	-10.1	107	0.06
7	TM	m-,p-Xylene	40.000	43.544	-8.9	106	0.09
8	TM	Styrene	20.000	17.811	10.9	86	0.29
9	TM	o-Xylene	20.000	19.155	4.2	93	0.07
10	S	BFB	30.000	30.060	-0.2	100	0.02
11	TM	1,3-Dichlorobenzene	20.000	21.190	-6.0	103	0.00
12	TM	1,4-Dichlorobenzene	20.000	22.465	-12.3	107	-0.01
13	TM	1,2-Dichlorobenzene	20.000	21.992	-10.0	107	0.00
14	S	BCB	30.000	28.462	5.1	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G13815.D 602STY.M Tue Jun 25 07:07:24 2002 Page 1

Data File : C:\HPCHEM\2\DATA\062502\5G13815.D Vial: 9
Acq On : 25 Jun 2002 6:35 Operator: CBN
Sample : WG120408-01 8021 STD 20PPB 5ML Inst : HP5
Misc . 1,1 S-95-(36,30) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 25 7:07 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\062502\5G13815.D Vial: 9
Acq On : 25 Jun 2002 6:35 Operator: CBN
Sample : WG120408-01 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-95-(36,30) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 25 7:07 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.16	546958	30.8546 ug/L
Spiked Amount 30.000 Range 70 - 130 Recovery = 102.85%			
10) S BFB	16.18	1436260	30.0598 ug/L
Spiked Amount 30.000 Recovery = 100.20%			
14) S BCB	21.93	1332675	28.4621 ug/L
Spiked Amount 30.000 Range 37 - 137 Recovery = 94.87%			
Target Compounds			
1) TM MTBE	2.24	221464	21.1575 ug/L
2) TM Benzene	3.76	1200264	21.3991 ug/L
4) TM Toluene	7.91	1120113	21.9145 ug/L
5) TM Chlorobenzene	12.46	1179156	21.7930 ug/L
6) TM Ethylbenzene	13.54	973604	22.0177 ug/L
7) TM m-,p-Xylene	14.06	2303258	43.5443 ug/L
8) TM Styrene	15.12f	987709	17.8109 ug/L
9) TM o-Xylene	15.12	987709	19.1548 ug/L
11) TM 1,3-Dichlorobenzene	19.56	921290	21.1902 ug/L
12) TM 1,4-Dichlorobenzene	19.72	1057236	22.4655 ug/L
13) TM 1,2-Dichlorobenzene	20.38	833216	21.9923 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\062502\5G13824.D Vial: 7
Acq On : 25 Jun 2002 11:57 Operator: CBN
Sample : WG120408-02 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-95-(36,30) Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	TM	MTBE	10.467	11.152 E3	-6.5	104	-0.01
2	TM	Benzene	56.089	61.559 E3	-9.8	107	-0.03
3	S	TFT	17.727	18.450 E3	-4.1	103	-0.04
4	TM	Toluene	51.113	56.234 E3	-10.0	107	-0.06
5	TM	Chlorobenzene	54.107	58.523 E3	-8.2	106	-0.05
6	TM	Ethylbenzene	44.219	49.117 E3	-11.1	108	-0.05
7	TM	m-,p-Xylene	52.895	57.966 E3	-9.6	107	-0.05
8	TM	Styrene	55.455	49.514 E3	10.7	86	0.19
9	TM	o-Xylene	51.565	49.514 E3	4.0	94	-0.04
10	S	BFB	47.780	48.228 E3	-0.9	101	-0.04
11	TM	1,3-Dichlorobenzene	43.477	47.526 E3	-9.3	107	-0.03
12	TM	1,4-Dichlorobenzene	47.061	52.164 E3	-10.8	105	-0.03
13	TM	1,2-Dichlorobenzene	37.887	41.520 E3	-9.6	106	-0.03
14	S	BCB	46.823	44.509 E3	4.9	95	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G13824.D 602STY.M Tue Jun 25 13:02:43 2002 Page 1

Data File : C:\HPCHEM\2\DATA\062502\5G13824.D Vial: 7
Acq On : 25 Jun 2002 11:57 Operator: CBN
Sample : WG120408-02 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-95-(36,30) Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	TM	MTBE	20.000	21.308	-6.5	104	-0.01
2	TM	Benzene	20.000	21.950	-9.7	107	-0.03
3	S	TFT	30.000	31.224	-4.1	103	-0.04
4	TM	Toluene	20.000	22.004	-10.0	107	-0.06
5	TM	Chlorobenzene	20.000	21.632	-8.2	106	-0.05
6	TM	Ethylbenzene	20.000	22.215	-11.1	108	-0.05
7	TM	m-,p-Xylene	40.000	43.835	-9.6	107	-0.05
8	TM	Styrene	20.000	17.857	10.7	86	0.19
9	TM	o-Xylene	20.000	19.205	4.0	94	-0.04
10	S	BFB	30.000	30.282	-0.9	101	-0.04
11	TM	1,3-Dichlorobenzene	20.000	21.862	-9.3	107	-0.03
12	TM	1,4-Dichlorobenzene	20.000	22.169	-10.8	105	-0.03
13	TM	1,2-Dichlorobenzene	20.000	21.918	-9.6	106	-0.03
14	S	BCB	30.000	28.518	4.9	95	-0.02

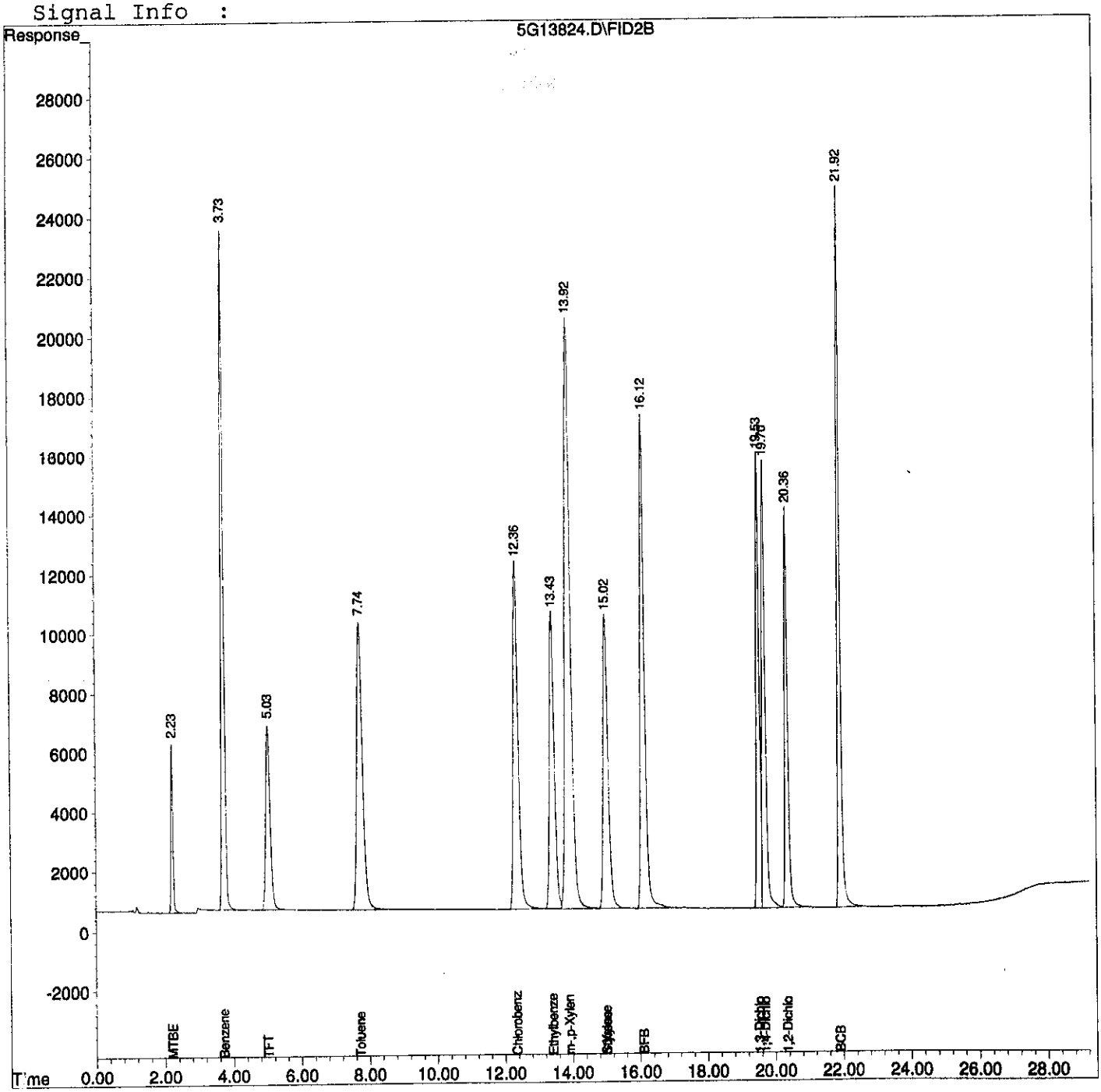
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\2\DATA\062502\5G13824.D
Acq On : 25 Jun 2002 11:57
Sample : WG120408-02 8021 STD 20PPB 5ML
Misc : 1,1 S-95-(36,30)
IntFile : autoint1.e
Quant Time: Jun 25 12:26 2002 Quant Results File: 602STY.RES

Vial: 7
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\062502\5G13824.D Vial: 7
Acq On : 25 Jun 2002 11:57 Operator: CBN
Sample : WG120408-02 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-95-(36,30) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 25 12:26 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.03	553509	31.2242 ug/L
Spiked Amount 30.000 Range 70 - 130 Recovery = 104.08%			
10) S BFB	16.12	1446855	30.2815 ug/L
Spiked Amount 30.000 Recovery = 100.94%			
14) S BCB	21.92	1335271	28.5175 ug/L
Spiked Amount 30.000 Range 37 - 137 Recovery = 95.06%			
Target Compounds			
1) TM MTBE	2.23	223040	21.3081 ug/L
2) TM Benzene	3.73	1231172	21.9501 ug/L
4) TM Toluene	7.74	1124679	22.0038 ug/L
5) TM Chlorobenzene	12.36	1170469	21.6324 ug/L
6) TM Ethylbenzene	13.43	982332	22.2151 ug/L
7) TM m-,p-Xylene	13.92	2318621	43.8347 ug/L
8) TM Styrene	15.02	990288	17.8574 ug/L
9) TM o-Xylene	15.02	990288	19.2048 ug/L
11) TM 1,3-Dichlorobenzene	19.53	950516	21.8624 ug/L
12) TM 1,4-Dichlorobenzene	19.70	1043289	22.1691 ug/L
13) TM 1,2-Dichlorobenzene	20.37	830391	21.9177 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

DAILY RETENTION TIME
WINDOW DETERMINATION
GC VOLATILES

Date of Analysis: 21-Jun-02
Filename: 11G13773
Sub Directory: 062102
Instrument: HP11
Matrix: SOIL

Analyte Name	STD RT	From RT	To RT
methyl-tert-butyl-ether	3.551	**3.530**	**3.572**
benzene	7.325	**7.280**	**7.370**
1,1,1-trifluorotoluene (SS)	9.692	**9.627**	**9.757**
toluene	13.732	**13.676**	**13.788**
chlorobenzene	18.586	**18.536**	**18.636**
ethylbenzene	18.870	**18.822**	**18.918**
m+p-xylene	19.117	**19.070**	**19.164**
o-xylene	20.285	**20.243**	**20.327**
bromofluorobenzene (SS)	21.792	**21.754**	**21.830**
1,3-dichlorobenzene	24.048	**24.025**	**24.071**
1,4-dichlorobenzene	24.231	**24.223**	**24.254**
1,2-dichlorobenzene	24.766	**24.743**	**24.789**

INSTRUMENT: HP11 **MATRIX:** SOIL
CONT STD #1: 11G13143 **DATE #1:** 1/14/2002
CONT STD #2: 11G13159 **DATE #2:** 1/14/2002
CONT STD #3: 11G13183 **DATE #3:** 1/15/2002

Analyte Name	RT #1	RT #2	RT #3	Mean	STD DEV	RT Window
methyl-tert-butyl-ether	3.584	3.598	3.589	3.590	0.007	**0.021**
benzene	7.471	7.496	7.469	7.479	0.015	**0.045**
1,1,1-trifluorotoluene (SS)	9.902	9.927	9.884	9.904	0.022	**0.065**
toluene	13.936	13.958	13.921	13.938	0.019	**0.056**
chlorobenzene	18.775	18.795	18.762	18.777	0.017	**0.050**
ethylbenzene	19.054	19.074	19.042	19.057	0.016	**0.048**
m+p-xylene	19.298	19.318	19.287	19.301	0.016	**0.047**
o-xylene	20.454	20.471	20.443	20.456	0.014	**0.042**
bromofluorbenzene (SS)	21.949	21.965	21.940	21.951	0.013	**0.038**
1,3-dichlorobenzene	24.169	24.180	24.165	24.171	0.008	**0.023**
1,4-dichlorobenzene	24.349	24.359	24.344	24.351	0.008	**0.023**
1,2-dichlorobenzene	24.878	24.888	24.873	24.880	0.008	**0.023**

DAILY RETENTION TIME
WINDOW DETERMINATION
GC VOLATILES

Date of Analysis: 25-Jun-02
Filename: 5G13815
Sub Directory: 062502
Instrument: HP5
Matrix: WATER

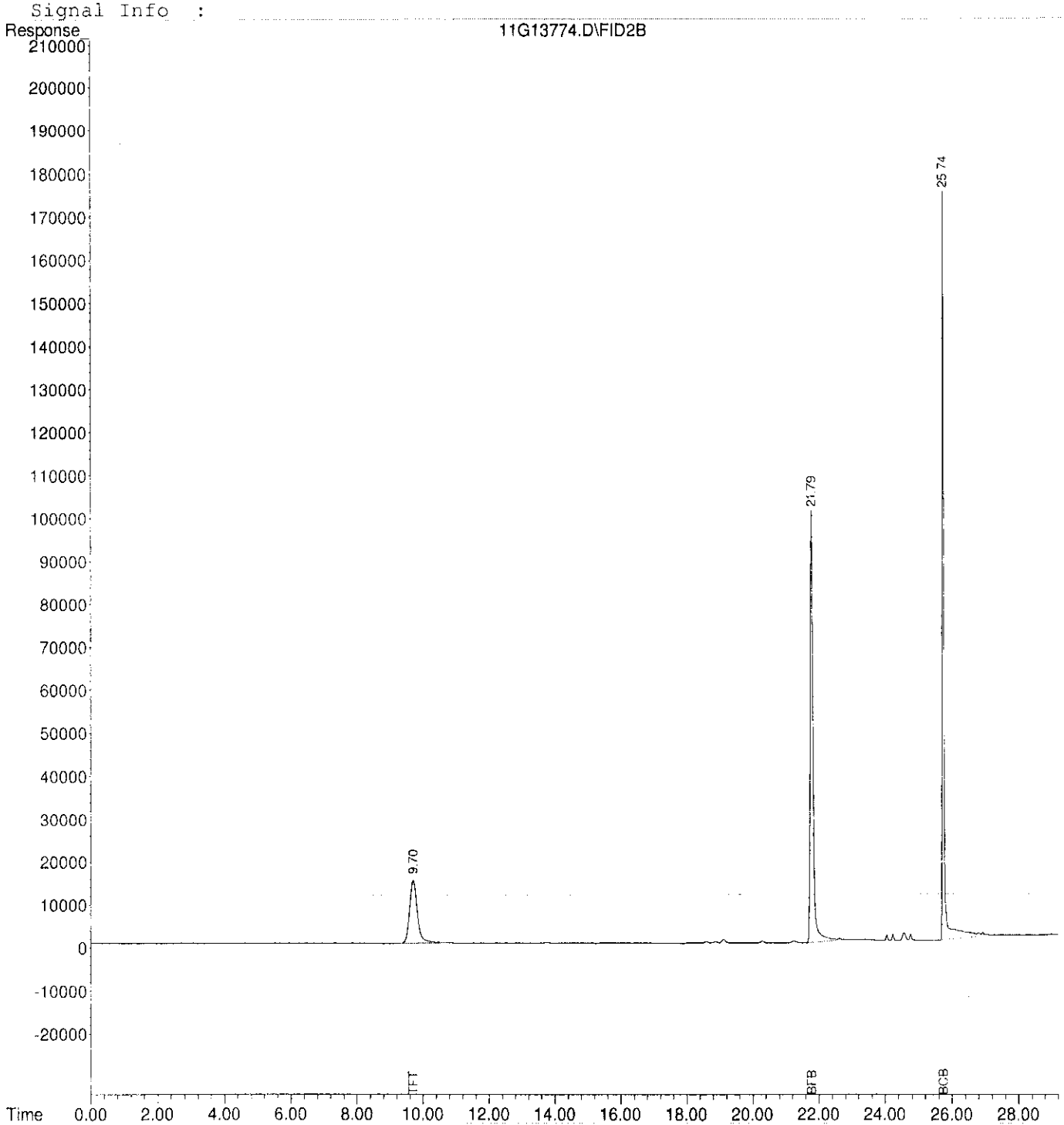
Analyte Name	STD RT	From RT	To RT
methyl-tert-butyl-ether	2.236	**2.213**	**2.259**
benzene	3.759	**3.729**	**3.789**
1,1,1-trifluorotoluene (SS)	5.162	**5.118**	**5.206**
toluene	7.909	**7.841**	**7.977**
chlorobenzene	12.461	**12.384**	**12.538**
ethylbenzene	13.540	**13.454**	**13.626**
m+p-xylene	14.055	**13.952**	**14.158**
o-xylene	15.121	**15.018**	**15.224**
bromofluorobenzene (SS)	16.181	**16.095**	**16.267**
1,3-dichlorobenzene	19.557	**19.492**	**19.622**
1,4-dichlorobenzene	19.721	**19.657**	**19.785**
1,2-dichlorobenzene	20.382	**20.325**	**20.439**
bromochlorobenzene (SS)	21.934	**21.881**	**21.987**

INSTRUMENT: HP5 **MATRIX:** WATER
CONT STD #1: 5G11797 **DATE #1:** 9-Jan-02
CONT STD #2: 5G11808 **DATE #2:** 10-Jan-02
CONT STD #3: 5G11824 **DATE #3:** 10-Jan-02

Analyte Name	RT #1	RT #2	RT #3	Mean	STD DEV	RT Window
methyl-tert-butyl-ether	2.319	2.304	2.312	2.312	0.008	**0.023**
benzene	3.883	3.863	3.875	3.874	0.010	**0.030**
1,1,1-trifluorotoluene (SS)	5.246	5.217	5.231	5.231	0.015	**0.044**
toluene	8.082	8.039	8.049	8.057	0.023	**0.068**
chlorobenzene	12.683	12.635	12.643	12.654	0.026	**0.077**
ethylbenzene	13.748	13.695	13.702	13.715	0.029	**0.086**
m+p-xylene	14.244	14.182	14.187	14.204	0.034	**0.103**
o-xylene	15.328	15.266	15.271	15.288	0.034	**0.103**
bromofluorobenzene (SS)	16.400	16.347	16.355	16.367	0.029	**0.086**
1,3-dichlorobenzene	19.750	19.710	19.715	19.725	0.022	**0.065**
1,4-dichlorobenzene	19.915	19.876	19.880	19.890	0.021	**0.064**
1,2-dichlorobenzene	20.561	20.526	20.530	20.539	0.019	**0.057**
bromochlorobenzene (SS)	22.097	22.064	22.069	22.077	0.018	**0.053**

2.1.3.4 Raw Data

```
Data File : C:\HPCHEM\1\DATA\062102\11G13774.D          Vial: 2
Acq On    : 21 Jun 2002   4:59 pm                   Operator: JLS
Sample    : WG120311-01 SOIL BLANK 5G               Inst    : HP11
Misc      : 7,1 S-95-29                             Multiplr: 1.00
IntFile   : AUTOINT1.E
Quant Time: Jun 21 17:29 2002  Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title        : Method 8021B- Soil 4/30/02
Last Update  : Wed May 01 09:30:22 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj.  :
Signal Phase :
Signal Info  :
```



Data File : C:\HPCHEM\1\DATA\062102\11G13774.D Vial: 2
Acq On : 21 Jun 2002 4:59 pm Operator: JLS
Sample : WG120311-01 SOIL BLANK 5G Inst : HP11
Misc : 7,1 S-95-29 Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Jun 21 17:29 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

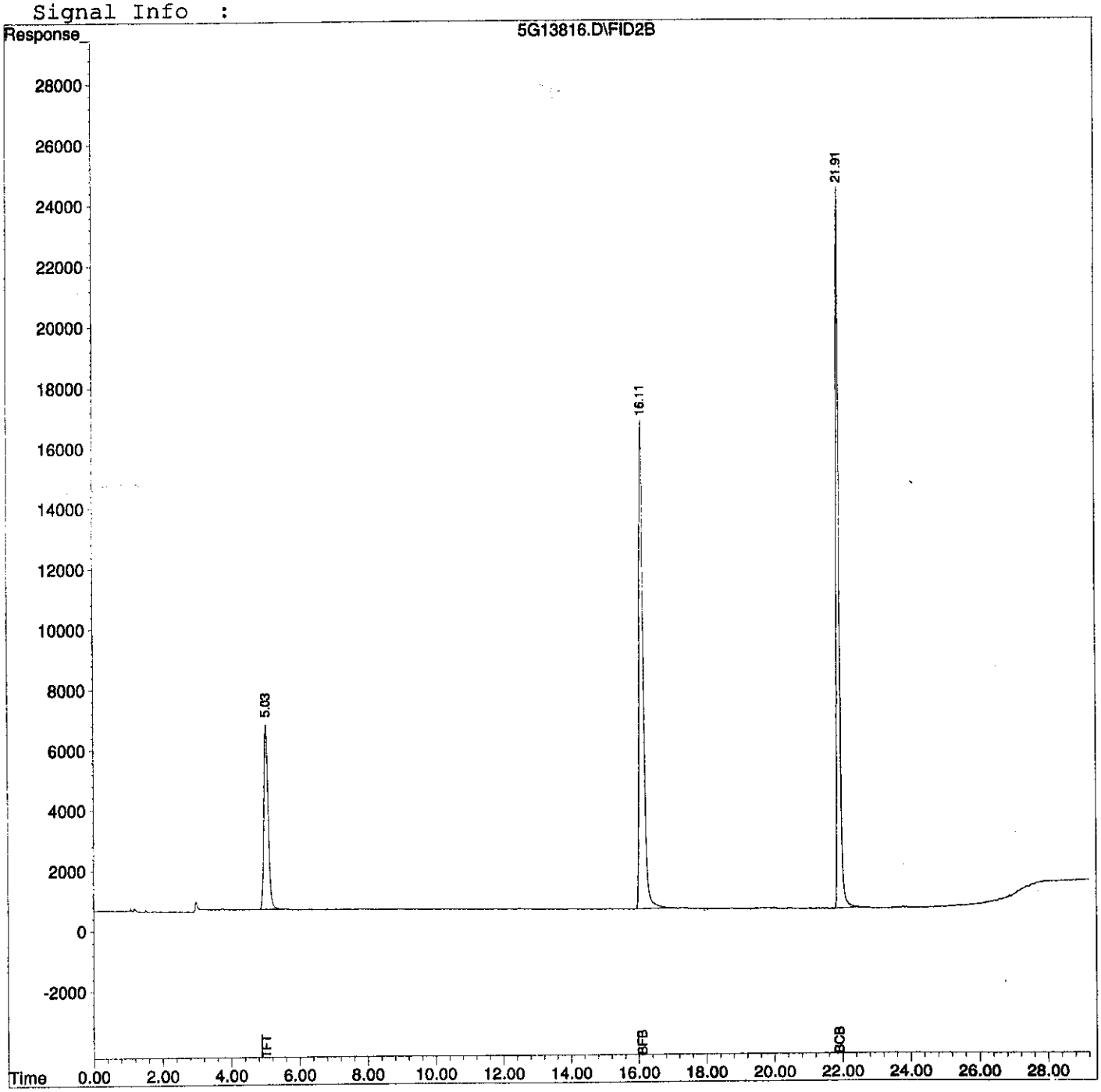
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	9.70	2430038	28.4198 UG/KG ✓
Spiked Amount 30.0000	Range 47 - 121	Recovery	= 94.73%
9) S BFB	21.79	6005792	25.8456 UG/KG
Spiked Amount 30.0000	Range 70 - 130	Recovery	= 86.15%
13) S BCB	25.74	6264553	26.4626 UG/KG
Spiked Amount 30.0000	Range 37 - 137	Recovery	= 88.21%
Target Compounds			
1) TM MTBE	0.00	0	N.D. UG/KG
2) TM Benzene	0.00	0	N.D. UG/KG
4) TM Toluene	13.74	19921	<MDL UG/KG
5) TM Chlorobenzene	18.59	25448	<MDL UG/KG
6) TM Ethylbenzene	18.87	21819	<MDL UG/KG
7) TM m-,p-Xylene	19.12	67908	<MDL UG/KG
8) TM o-Xylene	20.29	27163	<MDL UG/KG
10) TM 1,3-Dichlorobenzene	24.05	47885	<MDL UG/KG
11) TM 1,4-Dichlorobenzene	24.23	57740	<MDL UG/KG
12) TM 1,2-Dichlorobenzene	24.77	63641	<MDL UG/KG

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\062502\5G13816.D Vial: 10
Acq On : 25 Jun 2002 7:10 Operator: CBN
Sample : WG120409-01 WATER BLANK 5ML Inst : HP5
Misc : 1,1 S-95-30 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 25 7:39 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\062502\5G13816.D Vial: 10
Acq On : 25 Jun 2002 7:10 Operator: CBN
Sample : WG120409-01 WATER PLANK 5ML Inst : HP5
Misc : 1,1 S-95-30 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 25 7:39 2002 Quant Results File: 602STY.RES

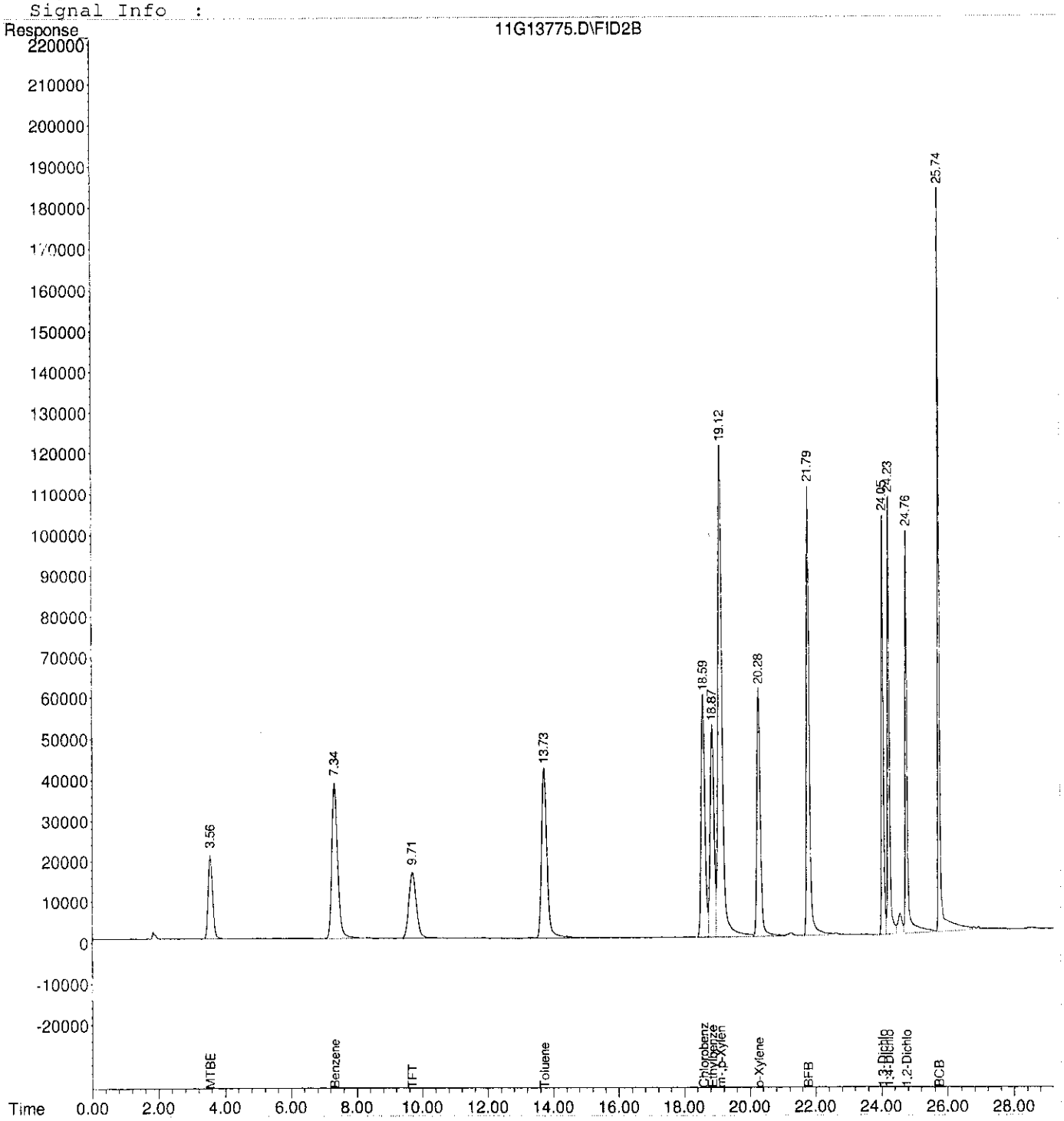
Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.03	536775	30.2802 ug/L
Spiked Amount 30.000 Range 70 - 130 Recovery = 100.93%			
10) S BFB	16.11	1402550	29.3543 ug/L
Spiked Amount 30.000 Recovery = 97.85%			
14) S BCB	21.91	1313976	28.0627 ug/L
Spiked Amount 30.000 Range 37 - 137 Recovery = 93.54%			
Target Compounds			
1) TM MTBE	0.00	0	N.D. ug/L
2) TM Benzene	0.00	0	N.D. ug/L
4) TM Toluene	0.00	0	N.D. ug/L
5) TM Chlorobenzene	0.00	0	N.D. ug/L
6) TM Ethylbenzene	0.00	0	N.D. ug/L
7) TM m-,p-Xylene	0.00	0	N.D. ug/L
8) TM Styrene	0.00	0	N.D. ug/L
9) TM o-Xylene	0.00	0	N.D. ug/L
11) TM 1,3-Dichlorobenzene	0.00	0	N.D. ug/L
12) TM 1,4-Dichlorobenzene	0.00	0	N.D. ug/L
13) TM 1,2-Dichlorobenzene	0.00	0	N.D. ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

```
Data File : C:\HPCHEM\1\DATA\062102\11G13775.D          Vial: 3
Acq On    : 21 Jun 2002   5:34 pm                    Operator: JLS
Sample    : WG120311-02 SOIL LCS 20PPB 5G            Inst    : HP11
Misc      : 7,1 S-(95-36,95-29)                      Multiplr: 1.00
IntFile   : AUTOINT1.E
Quant Time: Jun 21 18:03 2002  Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title        : Method 8021B- Soil 4/30/02
Last Update  : Wed May 01 09:30:22 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj.  :
Signal Phase :
Signal Info  :
```



Data File : C:\HPCHEM\1\DATA\062102\11G13775.D Vial: 3
Acq On : 21 Jun 2002 5:34 pm Operator: JLS
Sample : WG120311-02 SOIL LCS 20PPB 5G Inst : HP11
Misc : 7,1 S-(95-36,95-29) Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Jun 21 18:03 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 4/30/02
Last Update : Wed May 01 09:30:22 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

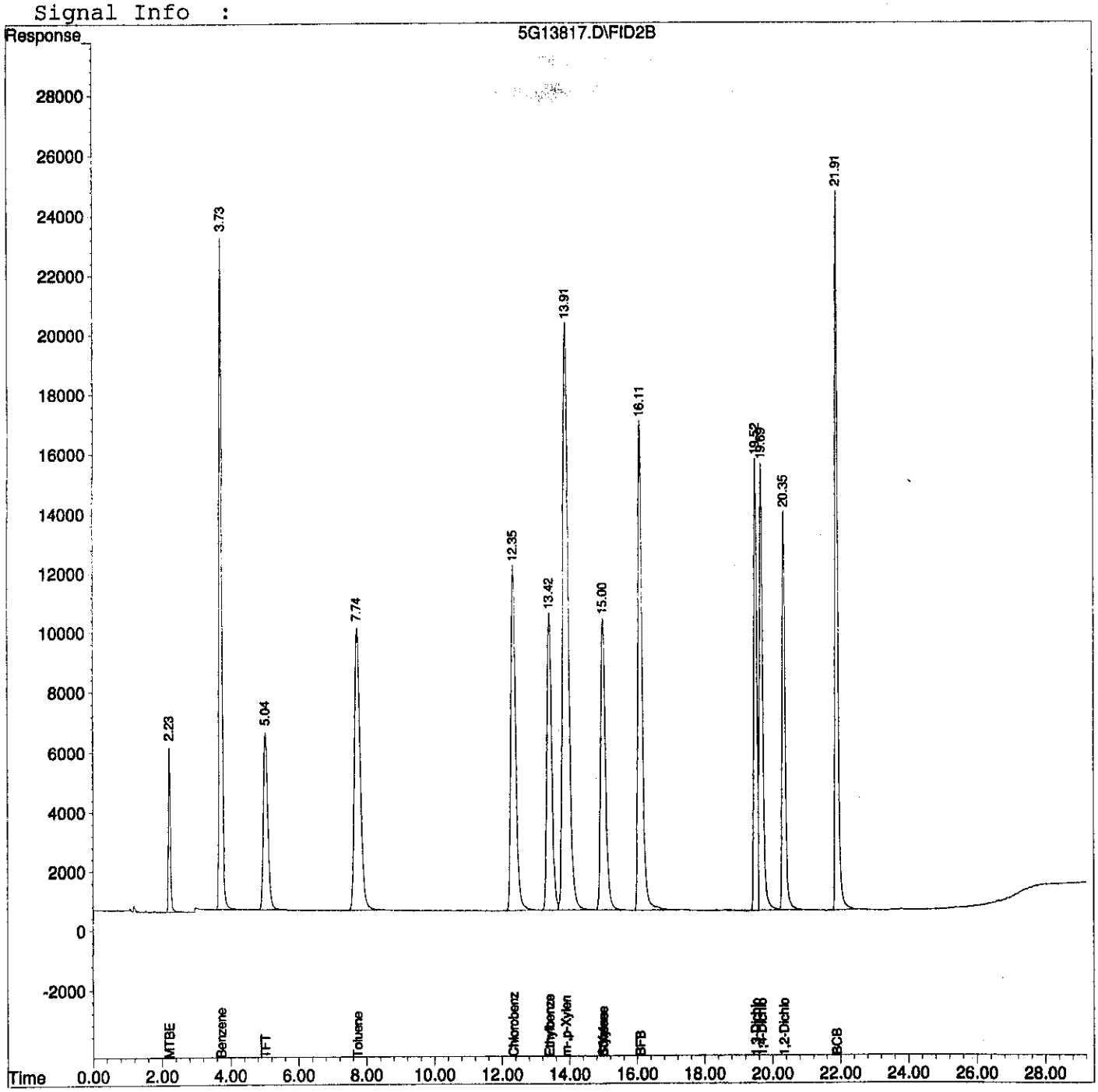
Compound			R.T.	Response	Conc Units
System Monitoring Compounds					
3) S TFT			9.71	2586437	30.2489 UG/KG ✓
Spiked Amount	30.0000	Range	47 - 121	Recovery	= 100.83%
9) S BFB			21.79	6457790	27.7907 UG/KG
Spiked Amount	30.0000	Range	70 - 130	Recovery	= 92.64%
13) S BCB			25.74	6467492	27.3198 UG/KG
Spiked Amount	30.0000	Range	37 - 137	Recovery	= 91.07%
Target Compounds					
1) TM MTBE			3.56	1901689	15.9115 UG/KG
2) TM Benzene			7.34	4772138	18.1692 UG/KG
4) TM Toluene			13.74	4786030	18.0965 UG/KG
5) TM Chlorobenzene			18.59	4707660	17.4805 UG/KG
6) TM Ethylbenzene			18.87	4288898	18.1857 UG/KG
7) TM m-,p-Xylene			19.12	10551982	37.1418 UG/KG
8) TM o-Xylene			20.29	4545356	17.9517 UG/KG
10) TM 1,3-Dichlorobenzene			24.05	4110312	17.1296 UG/KG
11) TM 1,4-Dichlorobenzene			24.23	4300381	17.4086 UG/KG
12) TM 1,2-Dichlorobenzene			24.76	4185065	19.5281 UG/KG

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\062502\5G13817.D Vial: 11
Acq On : 25 Jun 2002 7:44 Operator: CBN
Sample : WG120409-02 WATER LCS 20PPB 5ML Inst : HP5
Misc : 1,1 S-95-(36,30) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 25 8:14 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\062502\5G13817.D Vial: 11
Acq On : 25 Jun 2002 7:44 Operator: CBN
Sample : WG120409-02 WATER LCS 20PPB 5ML Inst : HP5
Misc : 1,1 S-95-(36,30) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 25 8:14 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.04	544119	30.6945 ug/L
Spiked Amount 30.000 Range 70 - 130 Recovery = 102.32%			
10) S BFB	16.11	1431070	29.9512 ug/L
Spiked Amount 30.000 Recovery = 99.84%			
14) S BCB	21.91	1319203	28.1743 ug/L
Spiked Amount 30.000 Range 37 - 137 Recovery = 93.91%			
Target Compounds			
1) TM MTBE	2.23	219233	20.9444 ug/L
2) TM Benzene	3.74	1226211	21.8617 ug/L
4) TM Toluene	7.74	1119462	21.9017 ug/L
5) TM Chlorobenzene	12.35	1161801	21.4722 ug/L
6) TM Ethylbenzene	13.42	984992	22.2753 ug/L
7) TM m-,p-Xylene	13.91	2313238	43.7330 ug/L
8) TM Styrene	15.01	983352	17.7323 ug/L
9) TM o-Xylene	15.01	983352	19.0703 ug/L
11) TM 1,3-Dichlorobenzene	19.52	941155	21.6471 ug/L
12) TM 1,4-Dichlorobenzene	19.69	1030569	21.8988 ug/L
13) TM 1,2-Dichlorobenzene	20.35	824653	21.7663 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Directory: c:\hpchem\2\data\042202

Analyst: CBN

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	5g12946.d	1.	WG116507-01 STD1 1PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::2
2	2	5g12947.d	1.	WG116507-02 STD2 10PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::0
3	3	5g12948.d	1.	WG116507-03 STD3 20PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::3
4	4	5g12949.d	1.	WG116507-04 STD4 50PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::1
5	5	5g12950.d	1.	WG116507-05 STD5 100PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::4
6	6	5g12951.d	1.	WG116507-06 STD6 200PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::2
7	7	5g12952.d	1.	WG116507-07 STD7 300PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::5
8	8	5g12953.d	1.	RINSE	1,1 S-92-44	22 Apr 102 12::3
9	9	5g12954.d	1.	RINSE	1,1 S-92-44	22 Apr 102 12::0
10	10	5g12955.d	1.	WG116507-08 ALT SOURCE 20PPB 5ML✓	1,1 S-92-44	22 Apr 102 12::4

Directory: C:\HPCHEM\1\DATA\043002

Analyst : CBN

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	11g13484.d	1.	WG116964-01 8021 STD1 1PPB 5G ✓	7,1 S-92-(36,44)	30 Apr 2002 15:07
2	2	11g13485.d	1.	WG116964-02 8021 STD2 10PPB 5G ✓	7,1 S-92-(36,44)	30 Apr 2002 15:42
3	3	11g13486.d	1.	WG116964-03 8021 STD3 20PPB 5G ✓	7,1 S-92-(36,44)	30 Apr 2002 16:17
4	4	11g13487.d	1.	WG116964-04 8021 STD4 50PPB 5G ✓	7,1 S-92-(36,44)	30 Apr 2002 16:51
5	5	11g13488.d	1.	WG116964-05 8021 STD5 100PP... ✓	7,1 S-92-(36,44)	30 Apr 2002 17:26
6	6	11g13489.d	1.	WG116964-06 8021 STD6 200PP... ✓	7,1 S-92-(36,44)	30 Apr 2002 18:01
7	7	11g13490.d	1.	WG116964-07 8021 STD7 300PP... ✓	7,1 S-92-(36,44)	30 Apr 2002 18:36
8	8	11g13491.d	1.	RINSE 5G	7,1 S-92-(36,44)	30 Apr 2002 19:10
9	9	11g13492.d	1.	RINSE 5G	7,1 S-92-(36,44)	30 Apr 2002 19:45
10	10	11g13493.d	1.	WG116964-08 ALT SOURCE 20PP...	7,1 S-92-(47,44)	30 Apr 2002 20:20

Directory: C:\HPCHEM\1\DATA\062102 WG120311 ANALYST: CBN

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	11g13773.d	1.	WG120310-01 8021 STD 20PPB 5G ✓	7,1 S-(95-36,95-29)	21 Jun 2002 16:14
2	2	11g13774.d	1.	WG120311-01 SOIL BLANK 5G ✓	7,1 S-95-29	21 Jun 2002 16:59
3	3	11g13775.d	1.	WG120311-02 SOIL LCS 20PPB 5G ✓	7,1 S-(95-36,95-29)	21 Jun 2002 17:34
4	4	11g13776.d	1.	L0206416-01 A 5G ✓	7,1 S-95-29	21 Jun 2002 18:08
5	5	11g13777.d	1.	L0206417-03 A 5G HIGH SS	7,1 S-95-29	21 Jun 2002 18:43
6	6	11g13778.d	1.	RINSE 5G ✓	7,1 S-95-29	21 Jun 2002 19:17
7	7	11g13779.d	1.	5035 BLANK A 6/21/02 5G ✓	7,1 S-95-29	21 Jun 2002 19:51
8	8	11g13780.d	1.	WG120310-02 8021 STD 20PPB 5G ✓	7,1 S-(95-36,95-29)	21 Jun 2002 20:26
9	9	11g13781.d	1.	L0206417-01 A 5G RL @ 100x	7,1 S-95-29	21 Jun 2002 21:00
10	10	11g13782.d	1.	RINSE 5G ϕ	7,1 S-95-29	21 Jun 2002 21:35
11	11	11g13783.d	1.	RINSE 5G ϕ	7,1 S-95-29	21 Jun 2002 22:09
12	12	11g13784.d	1.	L0206417-02 A 5G RL @ 100x	7,1 S-95-29	21 Jun 2002 22:44
13	13	11g13785.d	1.	RINSE 5G ϕ	7,1 S-95-29	21 Jun 2002 23:18
14	14	11g13786.d	1.	RINSE 5G ϕ	7,1 S-95-29	21 Jun 2002 23:53
15	15	11g13787.d	1.	RINSE 5G ϕ	7,1 S-95-29	22 Jun 2002 00:27
16	16	11g13788.d	1.	WG120310-03 8021 STD 20PPB 5G ✓	7,1 S-95-29	22 Jun 2002 01:02

Directory: c:\hpchem\2\data\062502

WG120409

ANALYST: CBN

Line	Vial	FileName	Multiplier		SampleName	Misc Info		Injected
1	9	5g13815.d	1.		WG120408-01 8021 STD 20PPB 5ML ✓	1,1 S-95-(36,30)		25 Jun 102 12::3
2	10	5g13816.d	1.		WG120409-01 WATER BLANK 5ML ✓	1,1 S-95-30		25 Jun 102 12::1
3	11	5g13817.d	1.		WG120409-02 WATER LCS 20PPB 5ML ✓	1,1 S-95-(36,30)		25 Jun 102 12::4
4	1	5g13818.d	1.		L0206416-02 A 5ML ✓	1,1 S-95-30	pH<2	25 Jun 102 12::2
5	2	5g13819.d	1.		L0206416-03 A 5ML ✓	1,1 S-95-30		25 Jun 102 12::0
6	3	5g13820.d	1.		L0206417-04 A 5ML ✓	1,1 S-95-30		25 Jun 102 12::3
7	4	5g13821.d	1.		L0206417-06 A 5ML ✓	1,1 S-95-30		25 Jun 102 13::1
8	5	5g13822.d	1.	DNR	WG120409-04 L0206416-03 MS B 5ML	1,1 S-95-(36,30)		25 Jun 102 13::4
9	6	5g13823.d	1.		WG120409-05 L0206416-03 MSD B 5ML	1,1 S-95-(36,30)		25 Jun 102 13::2
10	7	5g13824.d	1.		WG120408-02 8021 STD 20PPB 5ML ✓	1,1 S-95-(36,30)		25 Jun 102 13::5
11	8	5g13825.d	1.		L0206450-01 A 5ML ✓	1,1 S-95-30	pH<2	25 Jun 102 12::4
12	9	5g13826.d	1.		WG120409-03 L0206452-01 A 5ML ✓	1,1 S-95-30		25 Jun 102 12::2
13	10	5g13827.d	1.		L0206454-01 A 5ML ✓	1,1 S-95-30		25 Jun 102 12::5
14	11	5g13828.d	1.		WG120409-04 L0206452-01 MS B 5ML ✓	1,1 S-95-(36,30)		25 Jun 102 12::3
15	12	5g13829.d	1.		WG120409-05 L0206452-01 MSD B 5ML ✓	1,1 S-95-(36,30)		25 Jun 102 12::0
16	13	5g13830.d	1.		WG120408-03 8021 STD 20PPB 5ML ✓	1,1 S-95-(36,30)		25 Jun 102 12::4

Method 5035 Preservation and Extraction Log
VOA Laboratory

Client	Sample #	Fraction ID	Date Collected	Time Collected (Time Zone)	Date Preserved	Time Preserved (EST)	Sample Weight (g)	Volume of Water	Volume of Methanol	Analyst Initials	Comments
KEMRON-DUNBAR	L0206264-01	A	6-12-02	1230	6-14-02	0815	3.40	5mL	NA	CBN	
	-01	B		⊥		⊥	4.62				
	-02	A		1415		0818	4.61				
	-02	B		⊥		⊥	4.85				
	-03	A		1730		0820	5.65				●
	-03	B		⊥		⊥	5.20				●
BLANK	BLANK	A	NA	NA		0822	5.00				
⊥	⊥	B	⊥	⊥	⊥	⊥	⊥	⊥	⊥	⊥	
ITCORPTN	L0206370-01	A	6-19-02	1620	6-20-02	1400	4.71	5mL	—	MES	
	-01	B				1404	4.80	⊥	—		
	-01	C				1406	4.83	—	10mL		
BLANK	BLANK	A	NA	NA		1408	5.00	5mL	—		
		B				1410		⊥	—		
⊥	⊥	C	⊥	⊥	⊥	1412	⊥	—	10mL	—	
CCI-630	L0206416-01	A	6/20/02	1000	6/21/02	1620	5.08	5ml	—	QS	□
	01	B				1621	4.92	⊥	—		● EF
	01	C				1622	4.82	—	10ml		
	L0206417-01	A		1255		1623	5.01	5ml	—		□ ▲
	01	B				~~1629~~ 1635	~~4.69~~ 4.66	⊥	—		
	01	C				1636	~~4.46~~ 4.48	—	10ml		
	02	A		1235		1624	4.67	5ml	—		□ ▲
	02	B				1637	4.46	⊥	—		
	02	C				1638	4.41	—	10ml		
	03	A		1400		1625	5.12	5ml	—		□
	03	B				1639	4.96	⊥	—		
	03	C				1640	4.92	—	10ml		
Blank	Blank	A	NA	NA		1641	5.00	5ml	—		□
		B				1642		⊥	—		
⊥	⊥	C	⊥	⊥	⊥	1643	⊥	—	10ml	⊥	

Comments: ● → PLUNGER NOT TURNED. TSR NOTIFIED - CBN 6/14/02

Supervisor Review: _____

* = improperly sealed cap

● = improperly sealed plunger

▲ = hydrocarbon odor

★ = samples preserved out of hold (past 48 hours from time of collection)

EF = sample effervesced

2.2 Semivolatiles Data

2.2.6 Method 8011

REPORT NARRATIVE
GC PRO RANGE ORGANICS

KEMRON Report No.: L0206416

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8015

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: The MS/MSD results were not associated with sample delivery group .

SAMPLES

Samples: All acceptance criteria were met.
Surrogates: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: HV REVIEWED: _____ DATE: 7/1/02

Rev. 7/14/00

TRPH – GC DATA (FLA-PRO)

Login Number L0206416

A. QC Summary

- ✓ Method Blank Summary
- Method Blank Results
- Laboratory Control Sample (LCS)
- ✓ Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- ✓ Holding Time Summary
- Surrogate Recovery Summary
- Initial Calibration Summary
- Initial Calibration Verification (ICV) Form (Second Source)
- Continuing Calibration Verification (CCV)
- Instrument Run Log
- Extraction Bench Sheet

B. Sample Data

- ✓ Target compound and surrogate results summary (See Summary Report)
- ✓ Chromatograms and quantitation report

C. Standards Data

- ✓ Initial calibration (ICAL) summary form
- Chromatograms and quantitation report for ICAL standards
- Initial calibration verification (ICV/second source) summary forms
- Initial calibration verification (ICV/second source) quantitation reports and chromatograms
- Continuing Calibration Verification (CCV) summary forms
- Continuing Calibration Verification (CCV) quantitation reports and chromatograms
- Retention Time Window Summary (If applicable)

D. Raw QC Data

- ✓ Method blank chromatogram and quantitation report
- ✓ LCS chromatogram and quantitation report
- ✓ MS/MSD chromatogram and quantitation report
- Instrument Run Log
- Extraction Bench Sheet
- Daily Checklist
- Example Calculations

Checked By: HV Date: 6/28/07

2.2.6.1 QC Summary

METHOD BLANK SUMMARY

Login Number: L0206416
Blank File ID: 2G20648
Date Analyzed: 06/27/02
Time Analyzed: 13:59
Analyst: HV

Work Group: WG120442
Blank Sample ID: WG120337-01
Instrument ID: HP2
Method: 8015 MOD

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG120337-02	2G20649	06/27/02 14:14	01
LCS2	WG120337-03	2G20650	06/27/02 14:47	01
062-CEF9-SB1-S-Q2-02	L0206416-01	2G20656	06/27/02 16:18	01

KEMRON FORMS - Modified 01/11/2002
Version 1.1
Report generated 06/28/2002 08:37

METHOD BLANK SUMMARY

Login Number: L0206416
Blank File ID: 2G20642
Date Analyzed: 06/27/02
Time Analyzed: 12:15
Analyst: HV

Work Group: WG120443
Blank Sample ID: WG120327-01
Instrument ID: HP2
Method: 8015 MOD

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG120327-02	2G20643	06/27/02 12:30	01
LCS2	WG120327-03	2G20644	06/27/02 12:45	01
062-CEF9-EQB-W-Q2-02	L0206416-02	2G20645	06/27/02 13:00	01

KEMRON FORMS - Modified 01/11/2002
Version 1.1
Report generated 06/28/2002 08:37

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0206416
Run Date: 06/27/2002
Sample ID: WG120337-01
Instrument ID: HP2
Run Time: 13:59
Method: 8015 MOD
File ID: 2G20648
Analyst: HV
Matrix: Solid
Workgroup (AAB#): WG120442
Units: ug/kg
Contract #:
Cal ID: HP2-27-JUN-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	5000	10000	5000	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
o-Terphenyl	83.9	43 - 136	PASS

* Analyte detected above RDL

KEMRON FORMS - Modified 06/26/2002
Version 1.2
Report generated 06/28/2002 08:38

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0206416
Run Date: 06/27/2002
Sample ID: WG120327-01
Instrument ID: HP2
Run Time: 12:15
Method: 8015 MOD
File ID: 2G20642
Analyst: HV
Matrix: Water
Workgroup (AAB#): WG120443
Units: ug/L
Contract #:
Cal ID: HP2-27-JUN-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	250	500	250	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
o-Terphenyl	91.3	49 - 174	PASS

* Analyte detected above RDL

KEMRON FORMS - Modified 06/26/2002
Version 1.2
Report generated 06/28/2002 08:38

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0206416
Instrument ID: HP2
File ID: 2G20649
Workgroup (AAB#): WG120442
Contract #:

Run Date: 06/27/2002
Run Time: 14:14
Analyst: HV

Sample ID: WG120337-02
Method: 8015 MOD
Matrix: Solid
Units: ug/kg
Cal ID: HP2-27-JUN-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
TRPH-Florida PRO	136000	92700	68.2	63 - 153	

Surrogates	% Recovery	Surrogate Limits	Qualifier
o-Terphenyl	96.7	43 - 136	PASS

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 06/19/2002
Version 1.3
Report generated 06/28/2002 08:38

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0206416
Instrument ID: HP2
File ID: 2G20643
Workgroup (AAB#): WG120443
Contract #:

Run Date: 06/27/2002
Run Time: 12:30
Analyst: HV

Sample ID: WG120327-02
Method: 8015 MOD
Matrix: Water
Units: ug/L
Cal ID: HP2-27-JUN-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
TRPH-Florida PRO	3400	2890	84.9	50 - 150	

Surrogates	% Recovery	Surrogate Limits	Qualifier
o-Terphenyl	116	49 - 174	PASS

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 06/19/2002
Version 1.3
Report generated 06/28/2002 08:38

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES

Loginnum: L0206416 Worknum: WG120442 Method: 8015 MOD
Instrument ID: HP2 Cal ID: HP2-27-JUN-2002 Matrix: Solid
Analyst: HV Contract #: Units: ug/kg
Sample ID: WG120337-02 LCS File ID: 2G20649 Run Date: 06/27/2002 14:14
Sample ID: WG120337-03 LCS2 File ID: 2G20650 Run Date: 06/27/2002 14:47

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
TRPH-Florida PRO	136000	92700	68.2	136000	98000	72.3	5.5	63 - 153	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
o-Terphenyl	96.7	104	43 - 136	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/14/2002
Version 1.2
Report generated 06/28/2002 08:39

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES

Loginnum: L0206416 Worknum: WG120443 Method: 8015 MOD
Instrument ID: HP2 Cal ID: HP2-27-JUN-2002 Matrix: Water
Analyst: HV Contract #: Units: ug/L
Sample ID: WG120327-02 LCS File ID: 2G20643 Run Date: 06/27/2002 12:30
Sample ID: WG120327-03 LCS2 File ID: 2G20644 Run Date: 06/27/2002 12:45

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
TRPH-Florida PRO	3400	2890	84.9	3400	2880	84.6	.349	50 - 150	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
o-Terphenyl	116	115	49 - 174	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 06/14/2002
Version 1.2
Report generated 06/28/2002 08:39

SURROGATE STANDARDS

Login Number: L0206416
Instrument Id: HP2
Workgroup (AAB#): WG120442

Method: FLA-PRO
Matrix: SOLID

Sample Number	Dilution	Tag	1
L0206416-01	1.00	01	112
WG120337-01	1.00	01	83.9
WG120337-02	1.00	01	96.7
WG120337-03	1.00	01	104

Surrogates	Surrogate Limits		
1 - o-Terphenyl	43	-	136

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON FORMS - Modified 03/07/2002
Version 1.2
Report generated 06/28/2002 08:39

SURROGATE STANDARDS

Login Number: L0206416
Instrument Id: HP2
Workgroup (AAB#): WG120443

Method: FLA-PRO
Matrix: WATER

Sample Number	Dilution	Tag	1
L0206416-02	1.00	01	87.6
WG120327-01	1.00	01	91.3
WG120327-02	1.00	01	116
WG120327-03	1.00	01	115

Surrogates	Surrogate Limits		
1 - o-Terphenyl	49	-	174

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON FORMS - Modified 03/07/2002
Version 1.2
Report generated 06/28/2002 08:39

Response Factor Report HP2

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 20 08:20:27 2002

Calibration Files

5	=2G20640.D	50	=2G20639.D	100	=2G20638.D
200	=2G20637.D	400	=2G20636.D	600	=2G20635.D

		Compound	5	50	100	200	400	600	Avg		%RSD
1)	H	Petroleum Range	2.036	2.416	2.469	2.542	2.609	2.532	2.434	E4	8.46
2)	s	O-Terphenyl	2.044	2.204	2.179	2.057	2.089	2.043	2.103	E4	3.38
3)	s	n-Nonatriacontane							0.000	0	-1.00

#) = Out of Range

Data File : C:\HPCHEM\1\DATA\062702\2G20641.D Vial: 8
Acq On : 27 Jun 2002 11:58 Operator: HV
Sample : WG120634-07 ALT PRO @200ppm Inst : HP2
Misc : 1,1 SOS60-35 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 20 08:20:27 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Petroleum Range	3400.000	3240.212	4.7	91	0.00
2	s	O-Terphenyl	200.000	3.838	98.1#	2	0.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\062702\2G20647.D
Acq On : 27 Jun 2002 13:30
Sample : WG120634-08 PRO CCV @200ppm
Misc : 1,1 SOS60-34
IntFile : PETRO.E

Vial: 14
Operator: HV
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 15:54:30 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Petroleum Range	3400.000	3633.820	-6.9	102	0.00
2	s	O-Terphenyl	200.000	201.558	-0.8	103	0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\062702\2G20654.D
Acq On : 27 Jun 2002 15:48
Sample : WG120634-09 PRO CCV @200ppm
Misc : 1,1 SOS60-34
IntFile : PETRO.E

Vial: 21
Operator: HV
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 20 08:20:27 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Petroleum Range	3400.000	3720.495	-9.4	105	0.00
2	s	O-Terphenyl	200.000	201.162	-0.6	103	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\062702\2G20658.D Vial: 25
Acq On : 27 Jun 2002 16:48 Operator: HV
Sample : WG120634-10 PRO CCV @200ppm Inst : HP2
Misc : 1,1 SOS60-34 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 20 08:20:27 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Petroleum Range	3400.000	3536.428	-4.0	100	0.00
2	s	O-Terphenyl	200.000	223.542	-11.8	114	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Directory: c:\hpchem\1\data\062702

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	2g20634.d	1.	mecl2	1,1	27 Jun 102 13::0
2	2	2g20635.d	1.	WG120634-06 PRO @600ppm	1,1 SOS60-34	27 Jun 102 13::2
3	3	2g20636.d	1.	WG120634-05 PRO @400ppm	1,1 SOS60-34	27 Jun 102 13::3
4	4	2g20637.d	1.	WG120634-04 PRO @200ppm	1,1 SOS60-34	27 Jun 102 13::5
5	5	2g20638.d	1.	WG120634-03 PRO @100ppm	1,1 SOS60-34	27 Jun 102 13::0
6	6	2g20639.d	1.	WG120634-02 PRO @50ppm	1,1 SOS60-34	27 Jun 102 13::2
7	7	2g20640.d	1.	WG120634-01 PRO @5ppm	1,1 SOS60-34	27 Jun 102 13::3
8	8	2g20641.d	1.	WG120634-07 ALT PRO @200ppm	1,1 SOS60-35	27 Jun 102 13::5
9	9	2g20642.d	1.	WG120327-01 BLK V186-P101	1,1 water	27 Jun 102 13::1
10	10	2g20643.d	1.	WG120327-02 LCS V186-P101	1,1 water	27 Jun 102 13::3
11	11	2g20644.d	1.	WG120327-03 LCS DUP V186-P101	1,1 water	27 Jun 102 13::4
12	12	2g20645.d	1.	L0206416-02 PRO water	1,1 water	27 Jun 102 12::0
13	13	2g20646.d	1.	L0206417-04 PRO water	1,1 water	27 Jun 102 12::1
14	14	2g20647.d	1.	WG120634-08 PRO CCV @200ppm	1,1 SOS60-34	27 Jun 102 12::3
15	15	2g20648.d	1.	WG120337-01 BLK V186-P105	7,1 soil	27 Jun 102 12::5
16	16	2g20649.d	1.	WG120337-02 LCS V186-P105	7,1 soil	27 Jun 102 12::1
17	17	2g20650.d	1.	WG120337-03 LCS DUP V186-P105	7,1 soil	27 Jun 102 12::4
18	18	2g20651.d	1.	L0206417-01 PRO soil	7,1 soil	27 Jun 102 12::0
19	19	2g20652.d	1.	RR L0206417-02 PRO soil - RR @ 5X	7,1 soil	27 Jun 102 12::1
20	20	2g20653.d	1.	L0206417-03 PRO soil	7,1 soil	27 Jun 102 12::3
21	21	2g20654.d	1.	WG120634-09 PRO CCV @200ppm	1,1 SOS60-34	27 Jun 102 12::4
22	22	2g20655.d	1.	RR L0206416-01 10X PRO soil - RR str.	7,10 soil	27 Jun 102 12::0
23	23	2g20656.d	1.	L0206416-01 PRO soil	7,1 soil	27 Jun 102 12::1
24	24	2g20657.d	1.	L0206417-02 5X PRO soil	7,5 soil	27 Jun 102 12::3
25	25	2g20658.d	1.	WG120634-10 PRO CCV @200ppm	1,1 SOS60-34	27 Jun 102 12::4

HV 6/28/02

KEMRON ENVIRONMENTAL SERVICES
Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 6-27-02 Instrument ID HP2 Column ID RTX-5 Data Subdirectory 062702
Analyst Initials HV

SOP # GCS09 Rev. # ___ 8081A ____
SOP # GCS04 Rev. # ___ 8151A ____
SOP # GCS03 Rev. # 2 PRO ✓
SOP # GCS02 Rev. # ___ 8015B Mod (Alcohol) ____

SOP # GCS10 Rev. # ___ 8082 ____
SOP # GCS05 Rev. # ___ TNRCC 1005 ____
SOP # GCS02 Rev. # ___ 8015B Mod (DRO) ____
SOP # GCS07 Rev. # ___ 8011 ____

Analysis Date/Time _____ Instrument ID _____ Column ID _____ Data Subdirectory _____

Daily Check
- ☑ Gases >500 psi

Preventative Maintenance
- ☐ Change o-ring
- ☑ Change liner
- ☑ Change septum
- ☐ Clip column (___cm)
- ☐ Injection port seal (goldseal)
- ☐ Change gases _____

Returned To Control?
Yes ___ No ____

Additional Maintenance
Problem: _____

Action Taken: _____

Comments

Parameter: FLA-PRO-H2O SOP #: EXPRO Revision #: 3
Extraction Analyst(s): DP, RCK TV/KD Analyst(s): DP
Date/Time Extracted: 06/24/02 @ 0900 Date TV/KD: 06/24/02
Spike/Surrogate Analyst: DP Witness: RV
Surrogate #: ES50041-31 Earliest Hold Date: 06/27/02
Spike #: A = ES50041-07 Spike #: B = —

Extraction Work Group WG 120327
Analytical Work Group WG 120443

Extract Relinquished By: DP
Extract Received By & Date: RV 6/24/02

	Sample ID	Test Code	pH √ <2	N	>12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	BN	N	Comments
1	Blank		✓			1L	1mL		1mL	T				WG 120327-01
2	LCS		✓					1mL						WG -02
3	LCS DUP		✓											WG -03
4	06-416-02	FLA-PRO	✓			950 mL								
5	06-417-04		✓			940 mL								
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

DP 06/24/02

Methylene Chloride Lot #: 42015
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: 1:1 HCL Lot #: ER2199
Florisil Lot #: —
Silica Gel Lot #: V32555
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: ER2152

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C	✓	Other	
Acid 3664A		N/A	
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 6-24-02

Extraction Notes For Volume # 186 Page # 101

General Comments: None

Extraction Anomalies: None

Concentration Anomalies: None

Clean-Up Anomalies: None

Supervisor Review: _____ Date: _____

Parameter: PRO-S SOP #: EXPRO Revision #: 3
Extraction Analyst(s): CAF TV/KD Analyst(s): CAF
Date/Time Extracted: 6-24-02 @ 09:00 Date TV/KD: 6-24-02
Spike/Surrogate Analyst: CAF Witness: [illegible]
Surrogate #: ESS0041-31 Earliest Hold Date: 7/04/02
Spike #: A= ESS0041-07 Spike #: B = —

Extraction Work Group WG 120337
Analytical Work Group WG 120442
Extract Relinquished By: CAF
Extract Received By & Date: [illegible] 6/24/02

	Sample ID	Test Code	pH √ <2	N	>12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	BN	N	Comments
1	Blank					25.01 g	1 mL		1 mL	T				WG 120337-
2	LCS					.00 g		1 mL		C				WG 120332
3	LCS Dup					.09 g				C				WG 120337-0
4	06-41601	FLA-PRO				.08 g				O				
5	06-417-01					.09 g				C				
6	-02					.02 g				C				
7	-03					.01 g				C				
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

CAF 6-24-02

Methylene Chloride Lot #: 42015
Hexane Lot #: ~~41304~~ CAF 6-24-02
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: ER2152

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C					
Sonication	3550B	✓				
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C	✓	Other	
Acid 3664A		N/A	
Sulfur 3660B			

Peer Reviewed By: _____ Date: _____

Extraction Notes For Volume # 186 Page # 105

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: NONE

Supervisor Review: _____ Date: _____

2.2.6.2 Sample Data

Data File : C:\HPCHEM\1\DATA\062702\2G20656.D Vial: 23
Acq On : 27 Jun 2002 16:18 Operator: HV
Sample : L0206416-01 PRO soil Inst : HP2
Misc : 7,1 soil Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 28 8:06 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Fri Jun 28 08:06:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.84	471314	22.414 ppb
Spiked Amount 20.000 Range 43 - 136 Recovery = 112.07%			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 800.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.66	68795770	2826.588 ppb

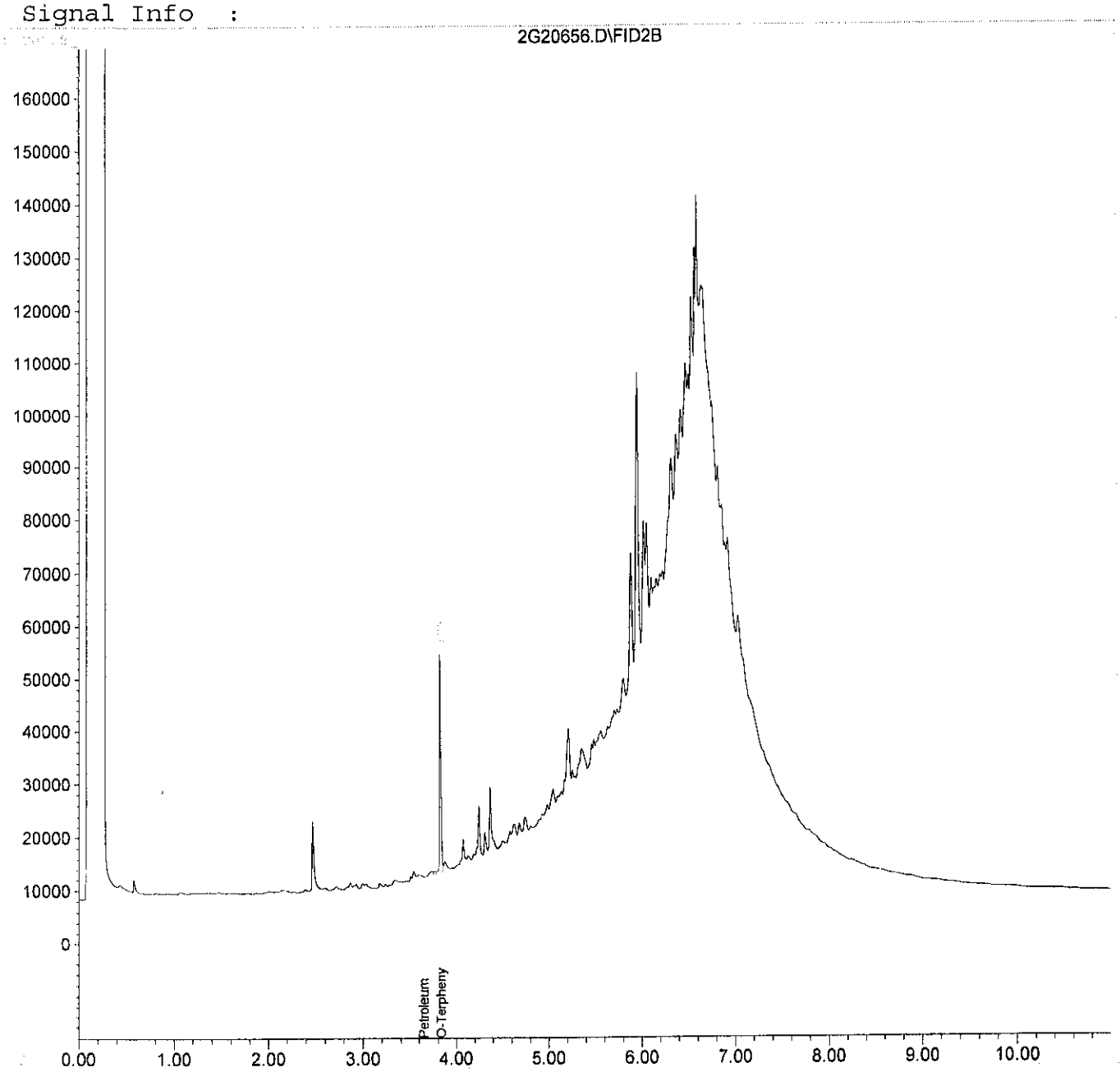
(f)=RT Delta > 1/2 Window (m)=manual int.
2G20656.D FLASHPRO.M Fri Jun 28 08:06:59 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\062702\2G20656.D
Acq On : 27 Jun 2002 16:18
Sample : L0206416-01 PRO soil
Misc : 7,1 soil
IntFile : PETRO.E
Quant Time: Jun 28 8:06 2002 Quant Results File: FLASHPRO.RES

Vial: 23
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Fri Jun 28 08:06:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

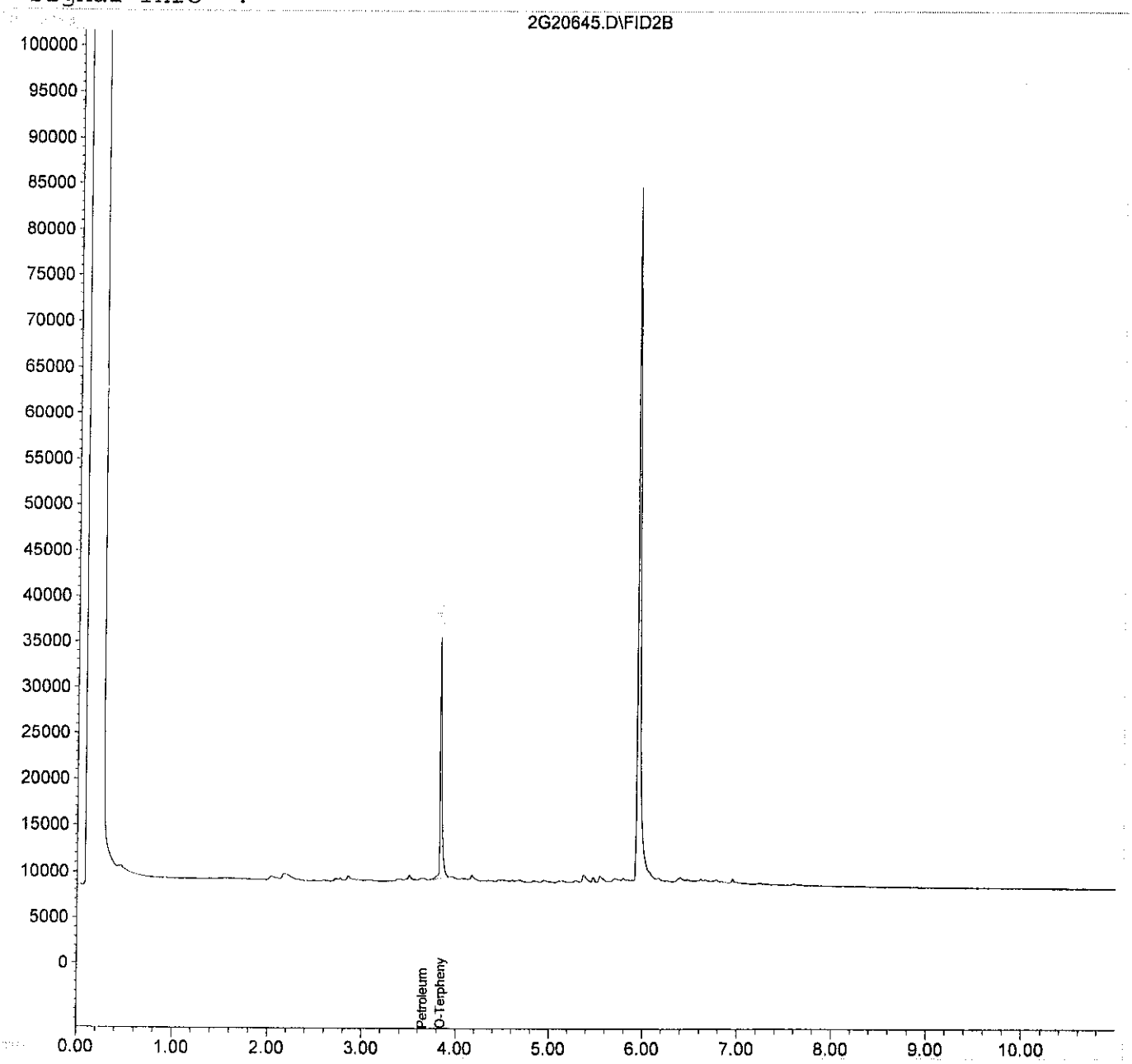


```
Data File : C:\HPCHEM\1\DATA\062702\2G20645.D            Vial: 12
Acq On    : 27 Jun 2002  13:00                       Operator: HV
Sample    : L0206416-02 PRO water                    Inst     : HP2
Misc      : 1,1 water                                Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Jun 27 14:14 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 06/27/02
Last Update  : Thu Jun 27 11:47:00 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj.  :
Signal Phase :
Signal Info  :

     Compound                          R.T.       Response    Conc Units
---------------------------------------------------------------------------

  System Monitoring Compounds
 2) s   O-Terphenyl                    3.84         368234   17.512 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    =   87.56%
 3) s   n-Nonatriacontane              0.00              0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

  Target Compounds
 1) H   Petroleum Range                3.66        1593052   65.453 ppb
```

Data File : C:\HPCHEM\1\DATA\062702\2G20645.D Vial: 12
Acq On : 27 Jun 2002 13:00 Operator: HV
Sample : L0206416-02 PRO water Inst : HP2
Misc : 1,1 water Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 27 14:14 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



2.2.6.3 Standards Data

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 20 08:20:27 2002

Calibration Files

5	=2G20640.D	50	=2G20639.D	100	=2G20638.D
200	=2G20637.D	400	=2G20636.D	600	=2G20635.D

		Compound	5	50	100	200	400	600	Avg		%RSD
1)	H	Petroleum Range	2.036	2.416	2.469	2.542	2.609	2.532	2.434	E4	8.46
2)	s	O-Terphenyl	2.044	2.204	2.179	2.057	2.089	2.043	2.103	E4	3.38
3)	s	n-Nonatriacontane							0.000	0	-1.00

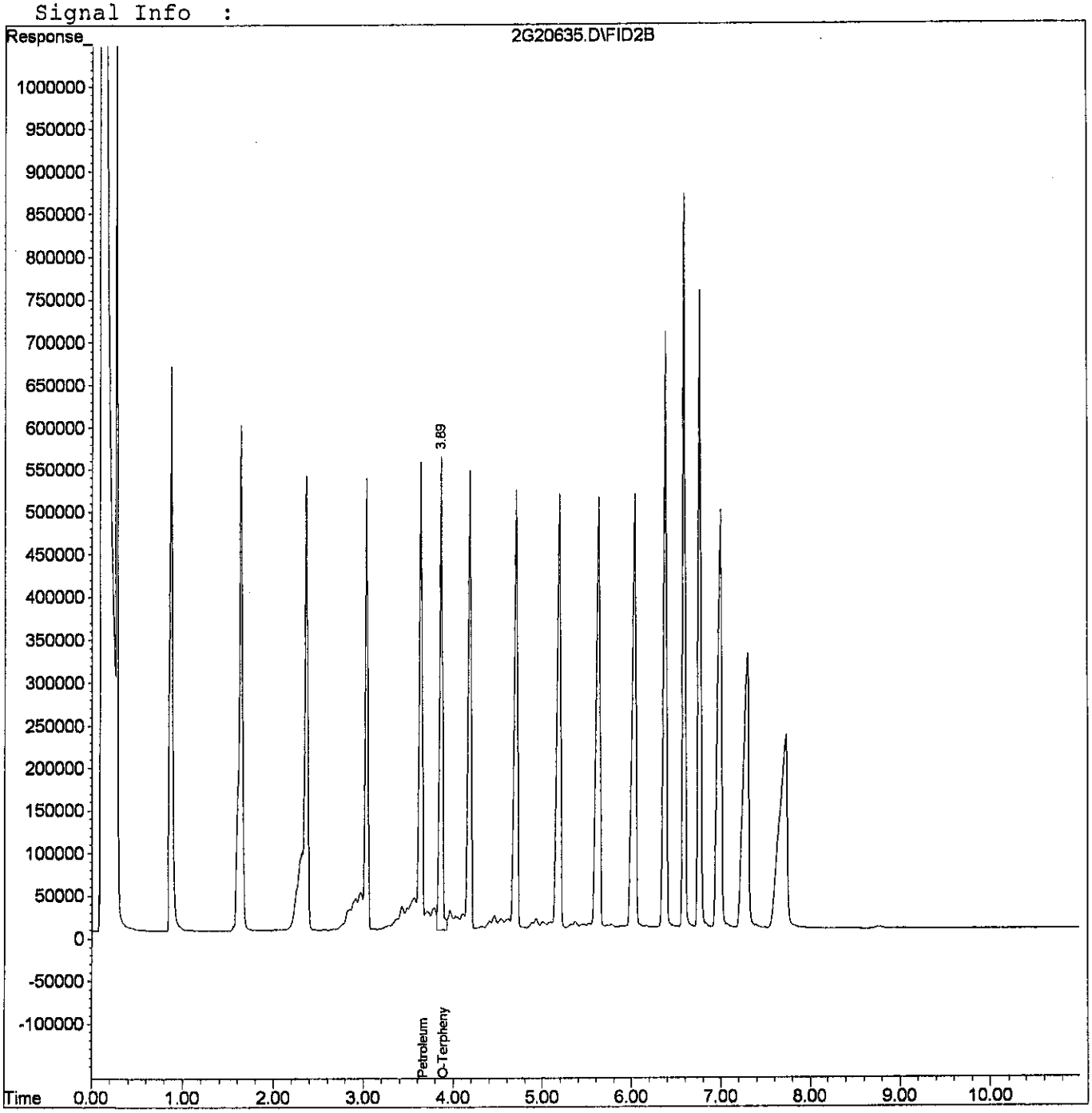
(#) = Out of Range

```
Data File : C:\HPCHEM\1\DATA\062702\2G20635.D          Vial: 2
Acq On    : 27 Jun 2002  10:21                       Operator: HV
Sample    : WG120634-06 PRO @600ppm                  Inst    : HP2
Misc      : 1,1 SOS60-34                             Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Jun 27 11:47 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 06/27/02
Last Update  : Thu Jun 27 11:47:00 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj.  :
Signal Phase :
Signal Info  :

     Compound                        R.T.       Response    Conc Units
   ---------------------------------------------------------------------

   System Monitoring Compounds
 2) s   O-Terphenyl                  3.89       12259296  739.056 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    = 3695.28%#
 3) s   n-Nonatriacontane            0.00              0    N.D.  ppm
Spiked Amount   20.000                   Recovery      =    0.00%

   Target Compounds
 1) H   Petroleum Range              3.66      258301296 13718.091 ppb
```

Data File : C:\HPCHEM\1\DATA\062702\2G20635.D Vial: 2
Acq On : 27 Jun 2002 10:21 Operator: HV
Sample : WG120634-06 PRO @600ppm Inst : HP2
Misc : 1,1 SOS60-34 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 27 11:47 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



```
Data File : C:\HPCHEM\1\DATA\062702\2G20636.D          Vial: 3
Acq On    : 27 Jun 2002  10:36                      Operator: HV
Sample    : WG120634-05 PRO @400ppm                 Inst    : HP2
Misc      : 1,1 SOS60-34                            Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Jun 27 11:47 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 06/27/02
Last Update  : Thu Jun 27 11:47:00 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj.  :
Signal Phase :
Signal Info  :

     Compound                        R.T.       Response    Conc Units
  ---------------------------------------------------------------------

  System Monitoring Compounds
 2) s   O-Terphenyl                  3.88        8356637  503.783 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    = 2518.92%#
 3) s   n-Nonatriacontane            0.00              0    N.D.  ppm
Spiked Amount   20.000                   Recovery      =    0.00%

  Target Compounds
 1) H   Petroleum Range              3.66      177378665 9420.381 ppb
```

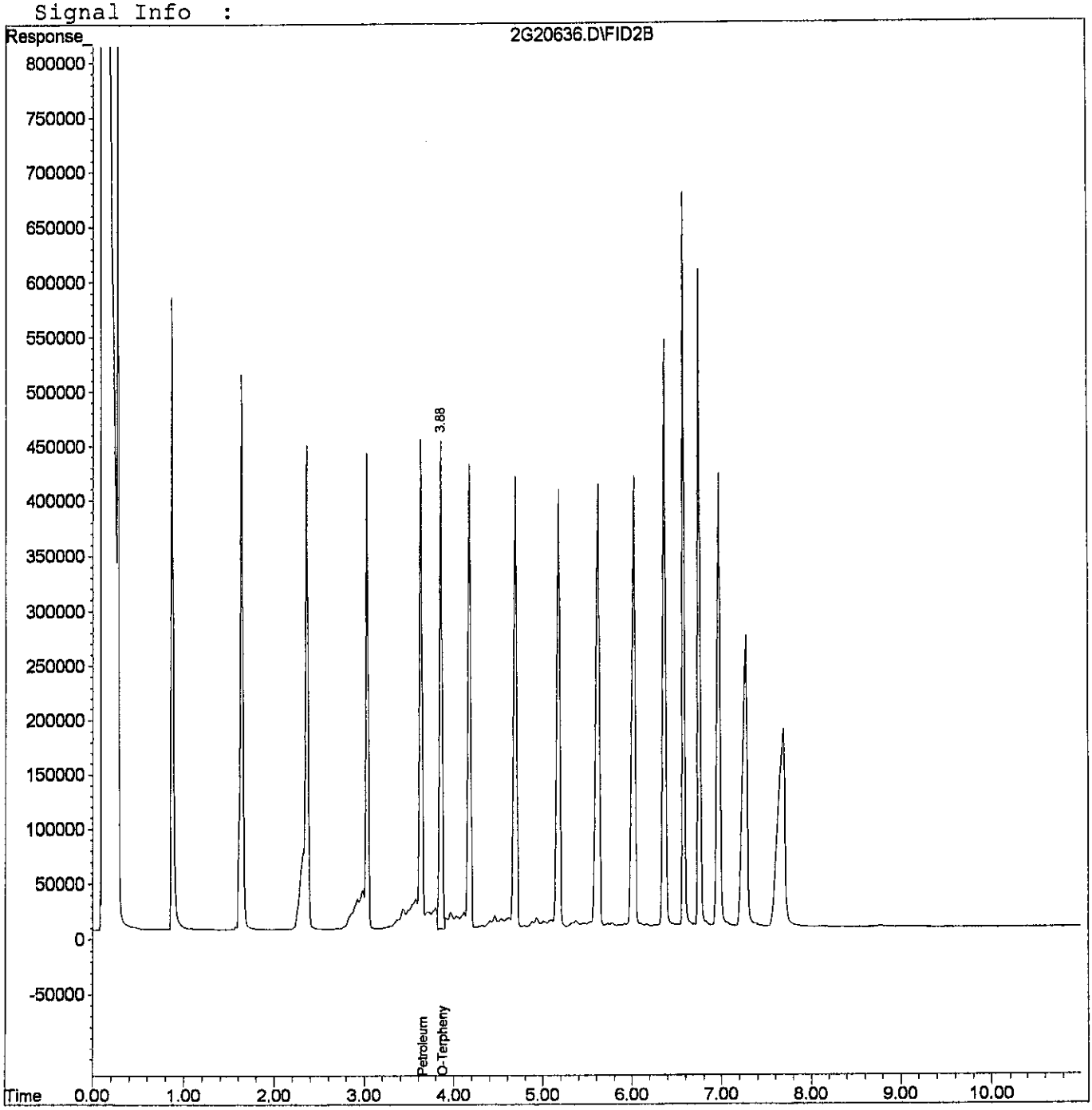
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\062702\2G20636.D
Acq On : 27 Jun 2002 10:36
Sample : WG120634-05 PRO @400ppm
Misc : 1,1 SOS60-34
IntFile : PETRO.E
Quant Time: Jun 27 11:47 2002 Quant Results File: FLASHPRO.RES

Vial: 3
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062702\2G20637.D Vial: 4
Acq On : 27 Jun 2002 10:52 Operator: HV
Sample : WG120634-04 PRO @200ppm Inst : HP2
Misc : 1,1 SOS60-34 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 27 11:47 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

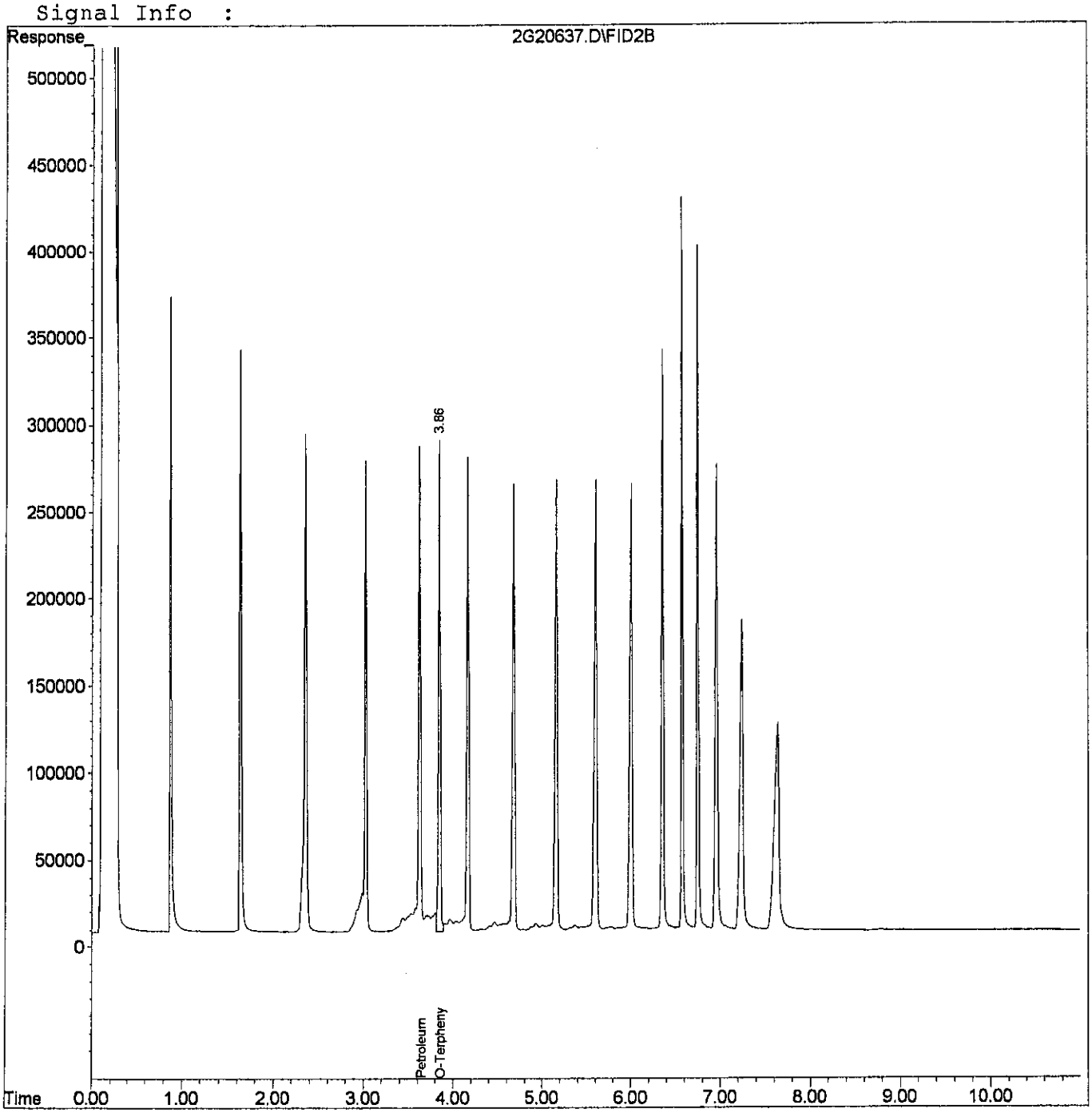
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.86	4114688	248.056 ppb
Spiked Amount 20.000 Range 49 - 174		Recovery	= 1240.28%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery	= 0.00%
Target Compounds			
1) H Petroleum Range	3.66	86433135	4590.366 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\062702\2G20637.D Vial: 4
Acq On : 27 Jun 2002 10:52 Operator: HV
Sample : WG120634-04 PRO @200ppm Inst : HP2
Misc : 1,1 SOS60-34 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 27 11:47 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

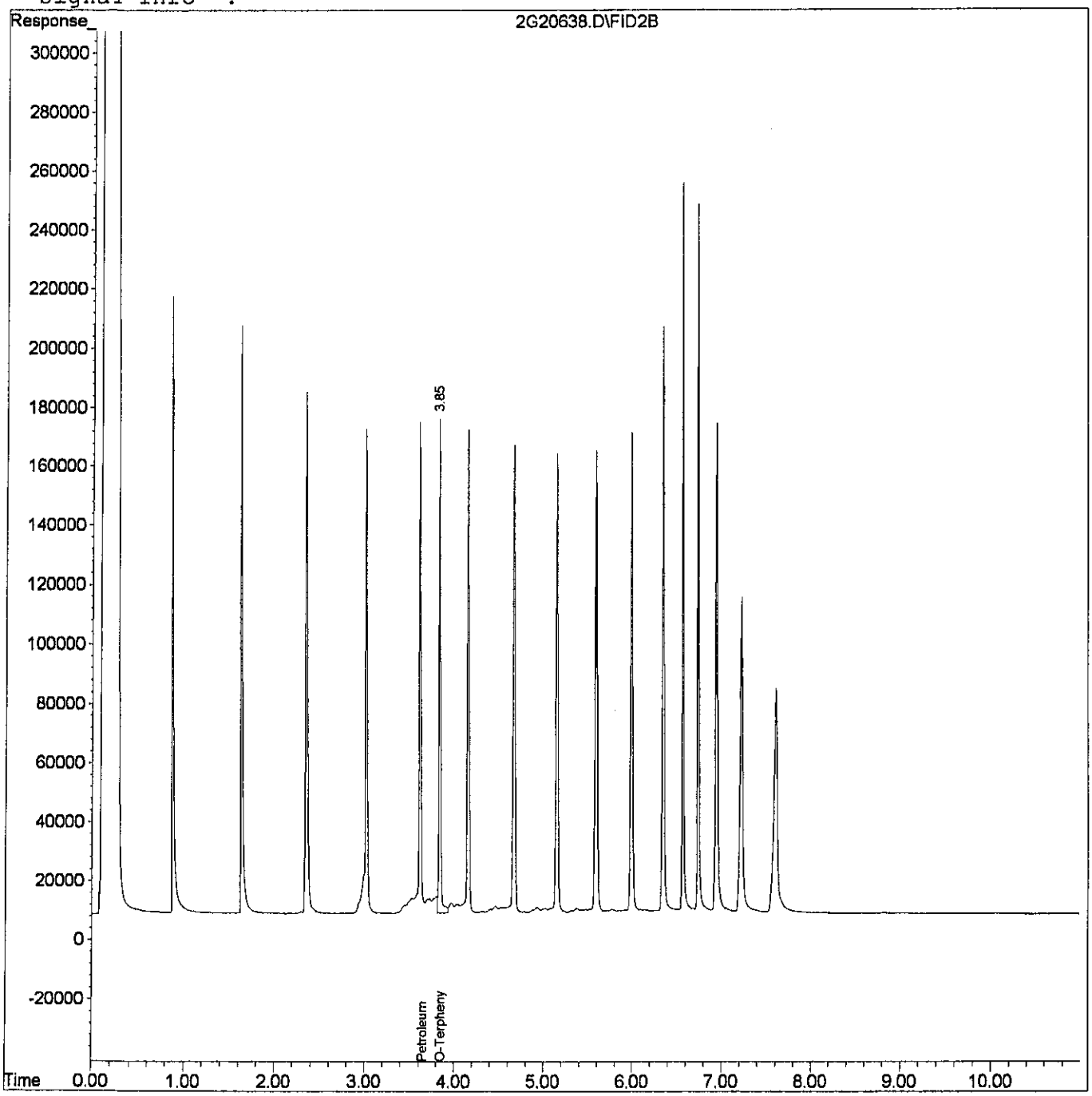


```
Data File : C:\HPCHEM\1\DATA\062702\2G20638.D            Vial: 5
Acq On    : 27 Jun 2002  11:07                        Operator: HV
Sample    : WG120634-03 PRO @100ppm                   Inst    : HP2
Misc      : 1,1 SOS60-34                              Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Jun 27 11:48 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 06/27/02
Last Update  : Thu Jun 27 11:47:00 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj.  :
Signal Phase :
Signal Info  :

     Compound                          R.T.       Response    Conc Units
   ------------------------------------------------------------------------

   System Monitoring Compounds
 2) s   O-Terphenyl                    3.85        2179198  131.374 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    =  656.87%#
 3) s   n-Nonatriacontane              0.00              0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

   Target Compounds
 1) H   Petroleum Range                3.66       41969778 2228.968 ppb
```

Data File : C:\HPCHEM\1\DATA\062702\2G20638.D Vial: 5
Acq On : 27 Jun 2002 11:07 Operator: HV
Sample : WG120634-03 PRO @100ppm Inst : HP2
Misc : 1,1 SOS60-34 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 27 11:48 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



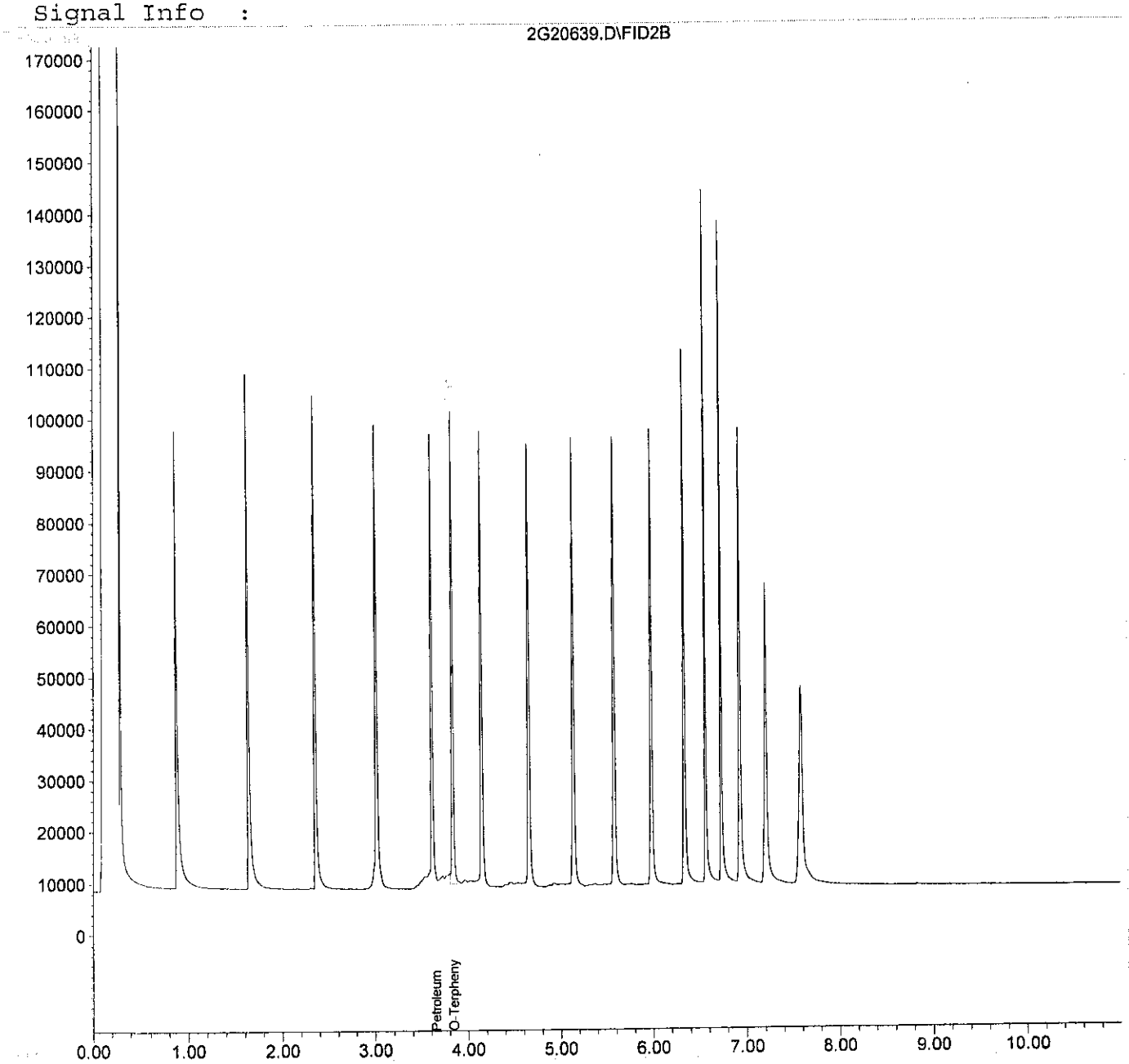
```
Data File : C:\HPCHEM\1\DATA\062702\2G20639.D                Vial: 6
Acq On    : 27 Jun 2002  11:23                            Operator: HV
Sample    : WG120634-02 PRO @50ppm                        Inst     : HP2
Misc      : 1,1 SOS60-34                                  Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Jun 27 11:48 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 06/27/02
Last Update  : Thu Jun 27 11:47:00 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj.  :
Signal Phase :
Signal Info  :

     Compound                          R.T.        Response    Conc Units
   ---------------------------------------------------------------------------

   System Monitoring Compounds
 2) s   O-Terphenyl                    3.84         1101924   66.430 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    =  332.15%#
 3) s   n-Nonatriacontane              0.00               0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

   Target Compounds
 1) H   Petroleum Range                3.66        20532291 1090.447 ppb
```

Data File : C:\HPCHEM\1\DATA\062702\2G20639.D
Acq On : 27 Jun 2002 11:23
Sample : WG120634-02 PRO @50ppm
Misc : 1,1 SOS60-34
IntFile : PETRO.E
Quant Time: Jun 27 11:48 2002 Quant Results File: FLASHPRO.RES

Vial: 6
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



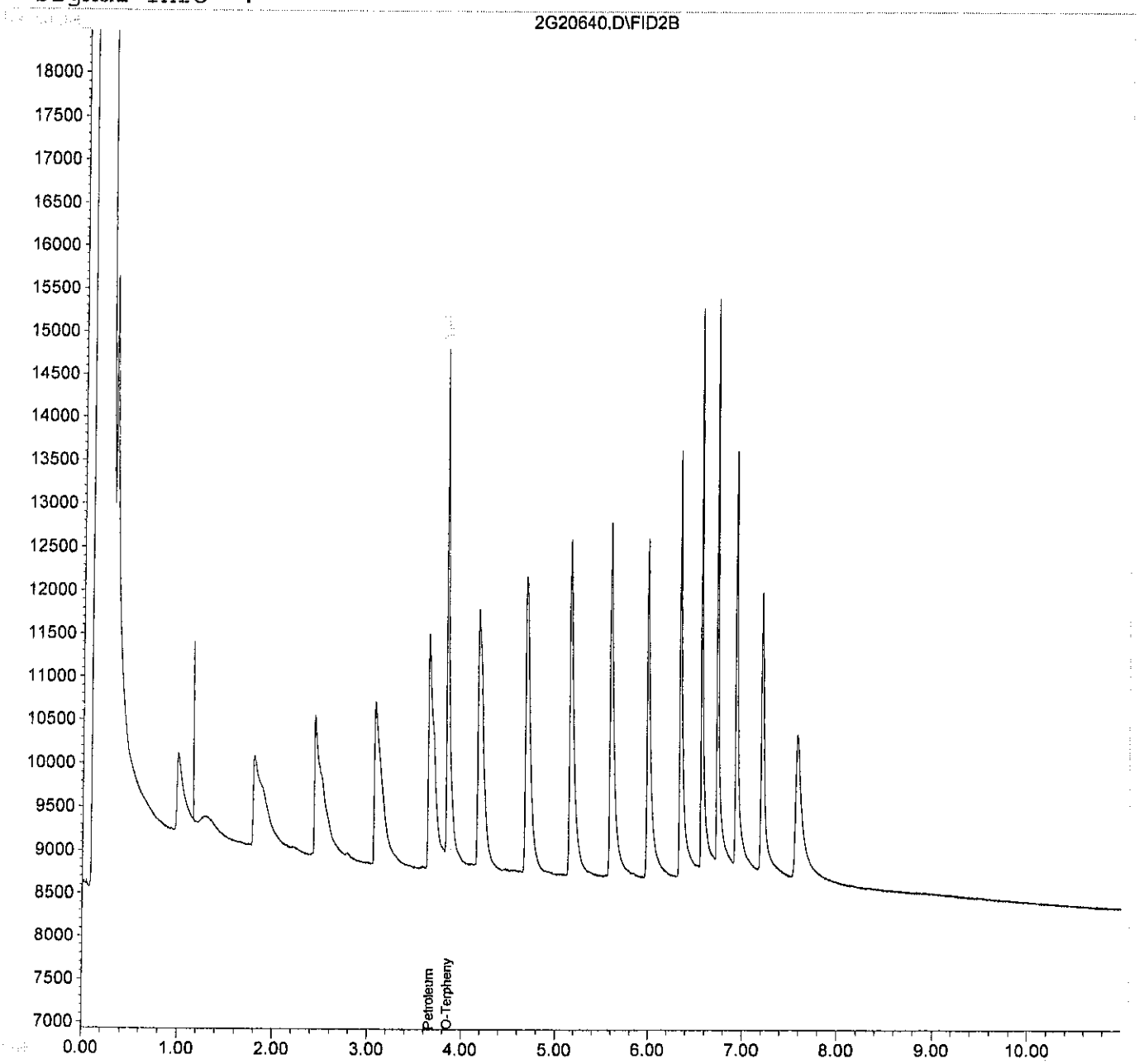
```
Data File : C:\HPCHEM\1\DATA\062702\2G20640.D            Vial: 7
Acq On    : 27 Jun 2002  11:38                        Operator: HV
Sample    : WG120634-01 PRO @5ppm                     Inst     : HP2
Misc      : 1,1 SOS60-34                              Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Jun 27 12:05 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 06/27/02
Last Update  : Thu Jun 27 11:47:00 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj.  :
Signal Phase :
Signal Info  :

     Compound                        R.T.       Response    Conc Units
---------------------------------------------------------------------------

  System Monitoring Compounds
 2) s   O-Terphenyl                  3.85         102201    4.860 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery   =   24.30%#
 3) s   n-Nonatriacontane            0.00              0    N.D.  ppm
Spiked Amount   20.000                   Recovery      =    0.00%

  Target Compounds
 1) H   Petroleum Range              3.66        1730497   71.100 ppb
```

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\062702\2G20640.D Vial: 7
Acq On : 27 Jun 2002 11:38 Operator: HV
Sample : WG120634-01 PRO @5ppm Inst : HP2
Misc : 1,1 SOS60-34 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 27 12:05 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062702\2G20641.D Vial: 8
Acq On : 27 Jun 2002 11:58 Operator: HV
Sample : WG120634-07 ALT PRO @200ppm Inst : HP2
Misc : 1,1 SOS60-35 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 20 08:20:27 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Petroleum Range	3400.000	3240.212	4.7	91	0.00
2	s	O-Terphenyl	200.000	3.838	98.1#	2	0.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\062702\2G20641.D Vial: 8
Acq On : 27 Jun 2002 11:58 Operator: HV
Sample : WG120634-07 ALT PRO @200ppm Inst : HP2
Misc : 1,1 SOS60-35 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 20 08:20:27 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
3 s	n-Nonatriacontane	200.000	0.000	100.0#	0	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\062702\2G20641.D Vial: 8
Acq On : 27 Jun 2002 11:58 Operator: HV
Sample : WG120634-07 ALT PRO @200ppm Inst : HP2
Misc : 1,1 SOS60-35 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 27 12:09 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

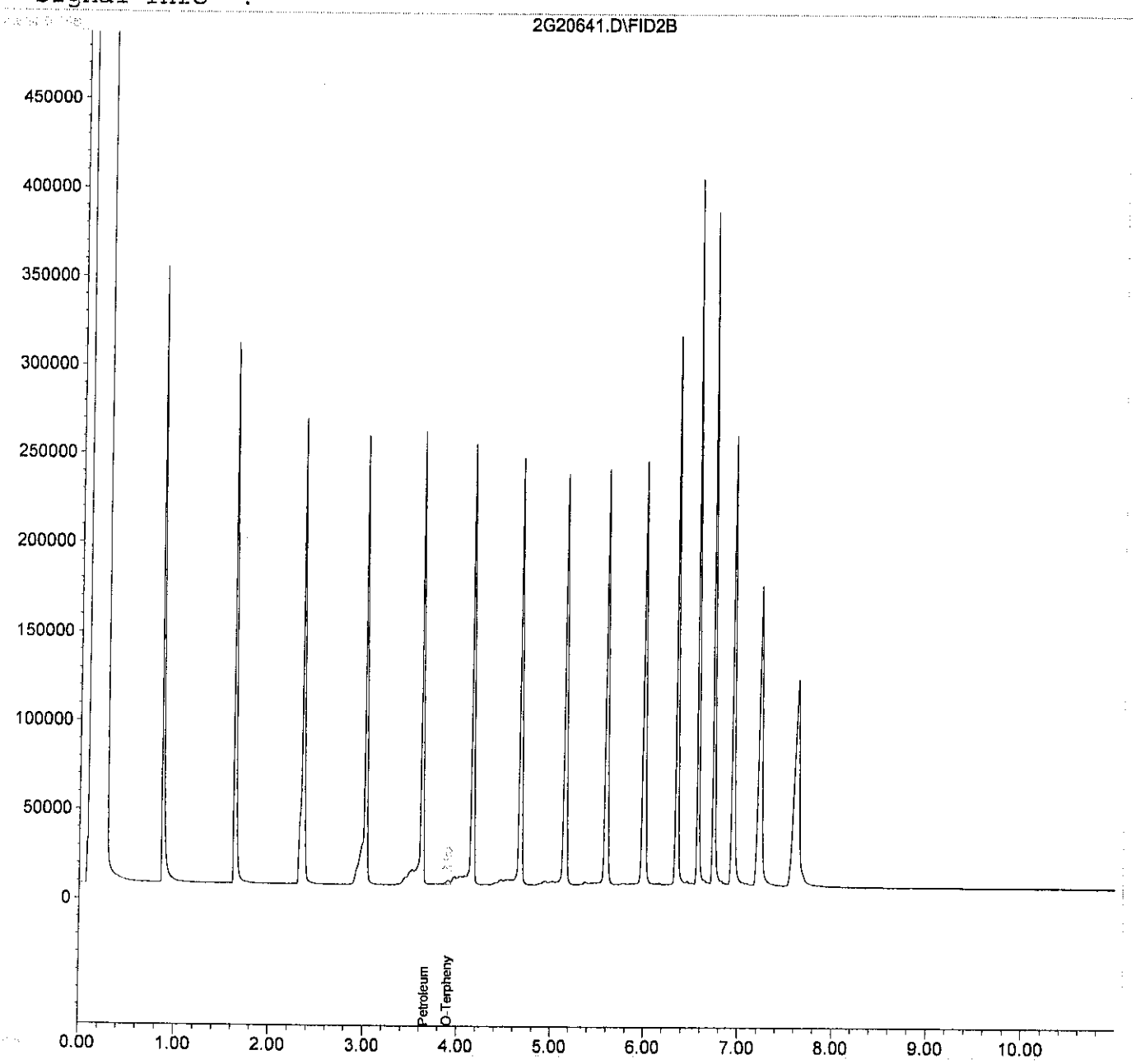
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.90	80702	3.838 ppb
Spiked Amount 20.000 Range 49 - 174 Recovery = 19.19%#			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.66	78862882	3240.212 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20641.D FLASHPRO.M

Data File : C:\HPCHEM\1\DATA\062702\2G20641.D Vial: 8
Acq On : 27 Jun 2002 11:58 Operator: HV
Sample : WG120634-07 ALT PRO @200ppm Inst : HP2
Misc : 1,1 SOS60-35 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 27 12:09 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062702\2G20647.D Vial: 14
Acq On : 27 Jun 2002 13:30 Operator: HV
Sample : WG120634-08 PRO CCV @200ppm Inst : HP2
Misc : 1,1 SOS60-34 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 15:54:30 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Petroleum Range	3400.000	3633.820	-6.9	102	0.00
2	s	O-Terphenyl	200.000	201.558	-0.8	103	0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\062702\2G20647.D Vial: 14
Acq On : 27 Jun 2002 13:30 Operator: HV
Sample : WG120634-08 PRO CCV @200ppm Inst : HP2
Misc : 1,1 SOS60-34 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 15:54:30 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
3	s	n-Nonatriacontane	200.000	0.000	100.0#	0	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\062702\2G20647.D Vial: 14
Acq On : 27 Jun 2002 13:30 Operator: HV
Sample : WG120634-08 PRO CCV @200ppm Inst : HP2
Misc : 1,1 SOS60-34 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 27 13:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

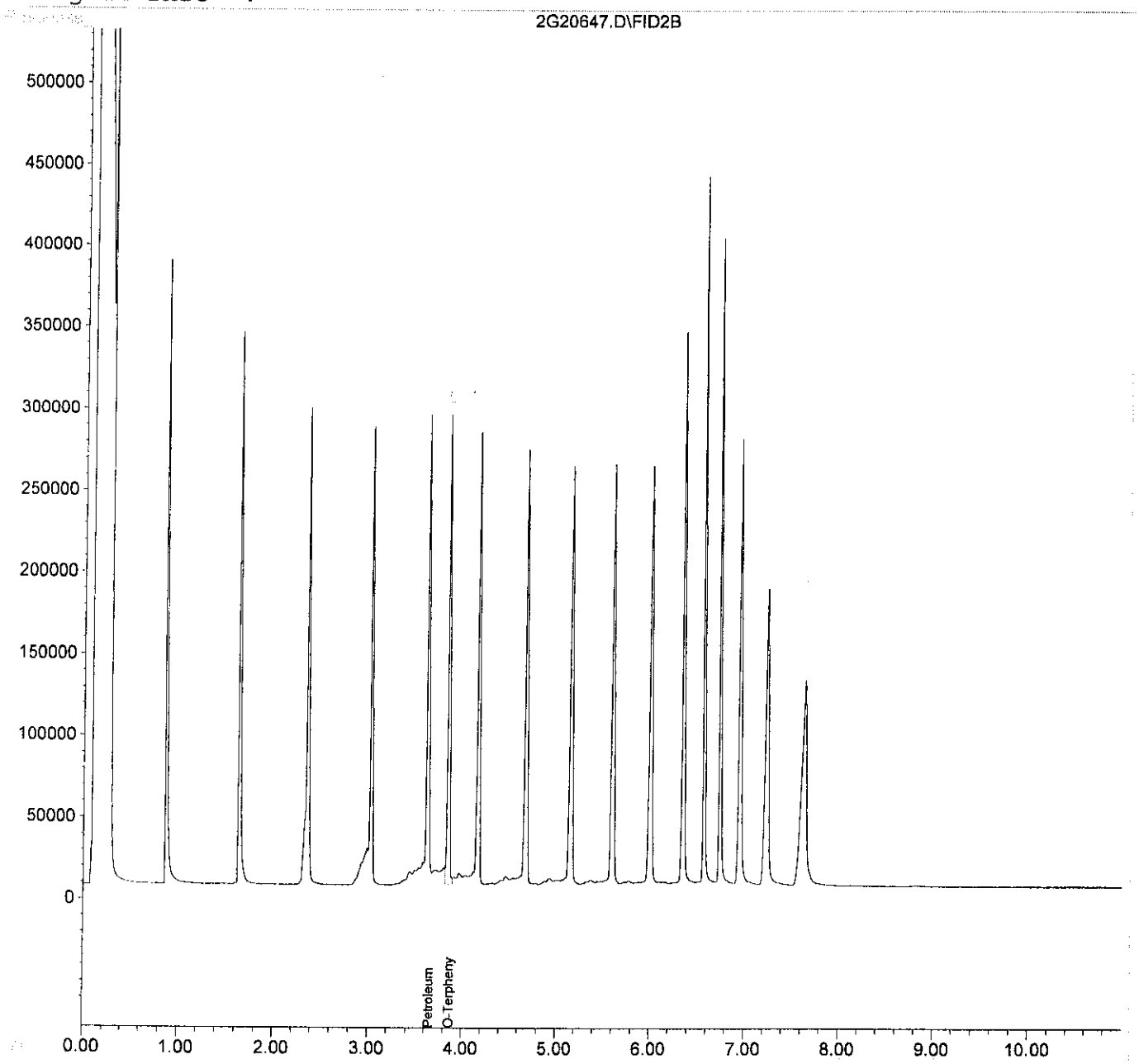
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.87	4238354	201.558 ppb
Spiked Amount 20.000 Range 49 - 174 Recovery = 1007.79%#			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.66	88442814	3633.820 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20647.D FLASHPRO.M Thu Jun 27 14:56:12 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\062702\2G20647.D Vial: 14
Acq On : 27 Jun 2002 13:30 Operator: HV
Sample : WG120634-08 PRO CCV @200ppm Inst : HP2
Misc : 1,1 SOS60-34 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 27 13:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062702\2G20654.D
Acq On : 27 Jun 2002 15:48
Sample : WG120634-09 PRO CCV @200ppm
Misc : 1,1 SOS60-34
IntFile : PETRO.E

Vial: 21
Operator: HV
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 20 08:20:27 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Petroleum Range	3400.000	3720.495	-9.4	105	0.00
2	s	O-Terphenyl	200.000	201.162	-0.6	103	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\062702\2G20654.D
Acq On : 27 Jun 2002 15:48
Sample : WG120634-09 PRO CCV @200ppm
Misc : 1,1 SOS60-34
IntFile : PETRO.E

Vial: 21
Operator: HV
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 20 08:20:27 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
3 s	n-Nonatriacontane	200.000	0.000	100.0#	0	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

```
Data File : C:\HPCHEM\1\DATA\062702\2G20654.D          Vial: 21
Acq On    : 27 Jun 2002  15:48                      Operator: HV
Sample    : WG120634-09 PRO CCV @200ppm             Inst    : HP2
Misc      : 1,1 SOS60-34                            Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Jun 27 15:59 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 06/27/02
Last Update  : Thu Jun 27 15:54:30 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj.  :
Signal Phase :
Signal Info  :

     Compound                          R.T.       Response    Conc Units
---------------------------------------------------------------------------

  System Monitoring Compounds
 2) s   O-Terphenyl                    3.86        4230018  201.162 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    = 1005.81%#
 3) s   n-Nonatriacontane              0.00              0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

  Target Compounds
 1) H   Petroleum Range                3.66       90552377 3720.495 ppb
```

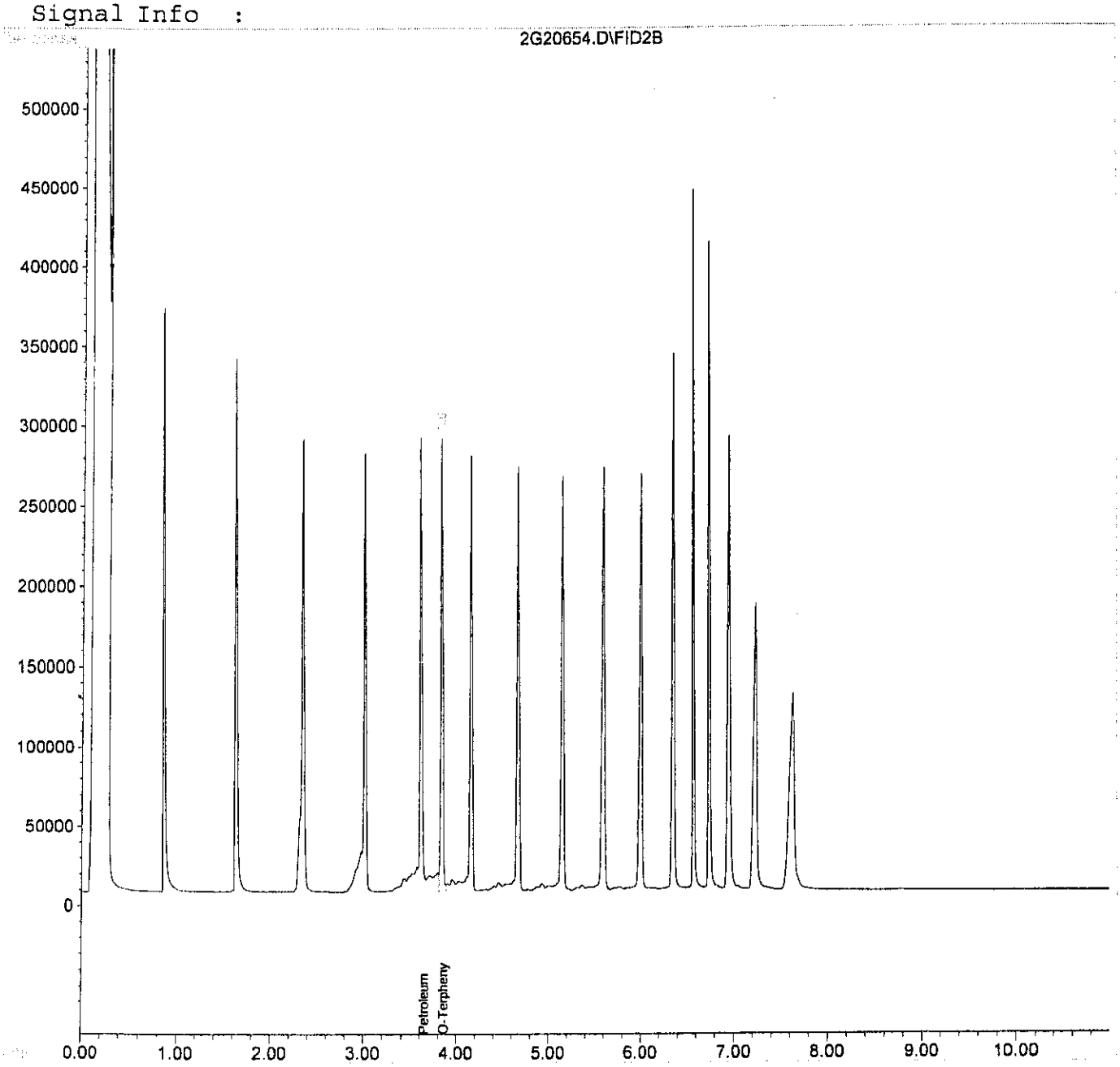
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\062702\2G20654.D
Acq On : 27 Jun 2002 15:48
Sample : WG120634-09 PRO CCV @200ppm
Misc : 1,1 SOS60-34
IntFile : PETRO.E
Quant Time: Jun 27 15:59 2002 Quant Results File: FLASHPRO.RES

Vial: 21
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 15:54:30 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062702\2G20658.D
Acq On : 27 Jun 2002 16:48
Sample : WG120634-10 PRO CCV @200ppm
Misc : 1,1 SOS60-34
IntFile : PETRO.E

Vial: 25
Operator: HV
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 20 08:20:27 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Petroleum Range	3400.000	3536.428	-4.0	100	0.00
2	s	O-Terphenyl	200.000	223.542	-11.8	114	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\062702\2G20658.D Vial: 25
Acq On : 27 Jun 2002 16:48 Operator: HV
Sample : WG120634-10 PRO CCV @200ppm Inst : HP2
Misc : 1,1 SOS60-34 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 20 08:20:27 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
3 s	n-Nonatriacontane	200.000	0.000	100.0#	0	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\062702\2G20658.D Vial: 25
Acq On : 27 Jun 2002 16:48 Operator: HV
Sample : WG120634-10 PRO CCV @200ppm Inst : HP2
Misc : 1,1 SOS60-34 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 27 17:00 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 15:54:30 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.87	4700628	223.542 ppb
Spiked Amount 20.000 Range 49 - 174		Recovery	= 1117.71%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery	= 0.00%
Target Compounds			
1) H Petroleum Range	3.66	86072417	3536.428 ppb

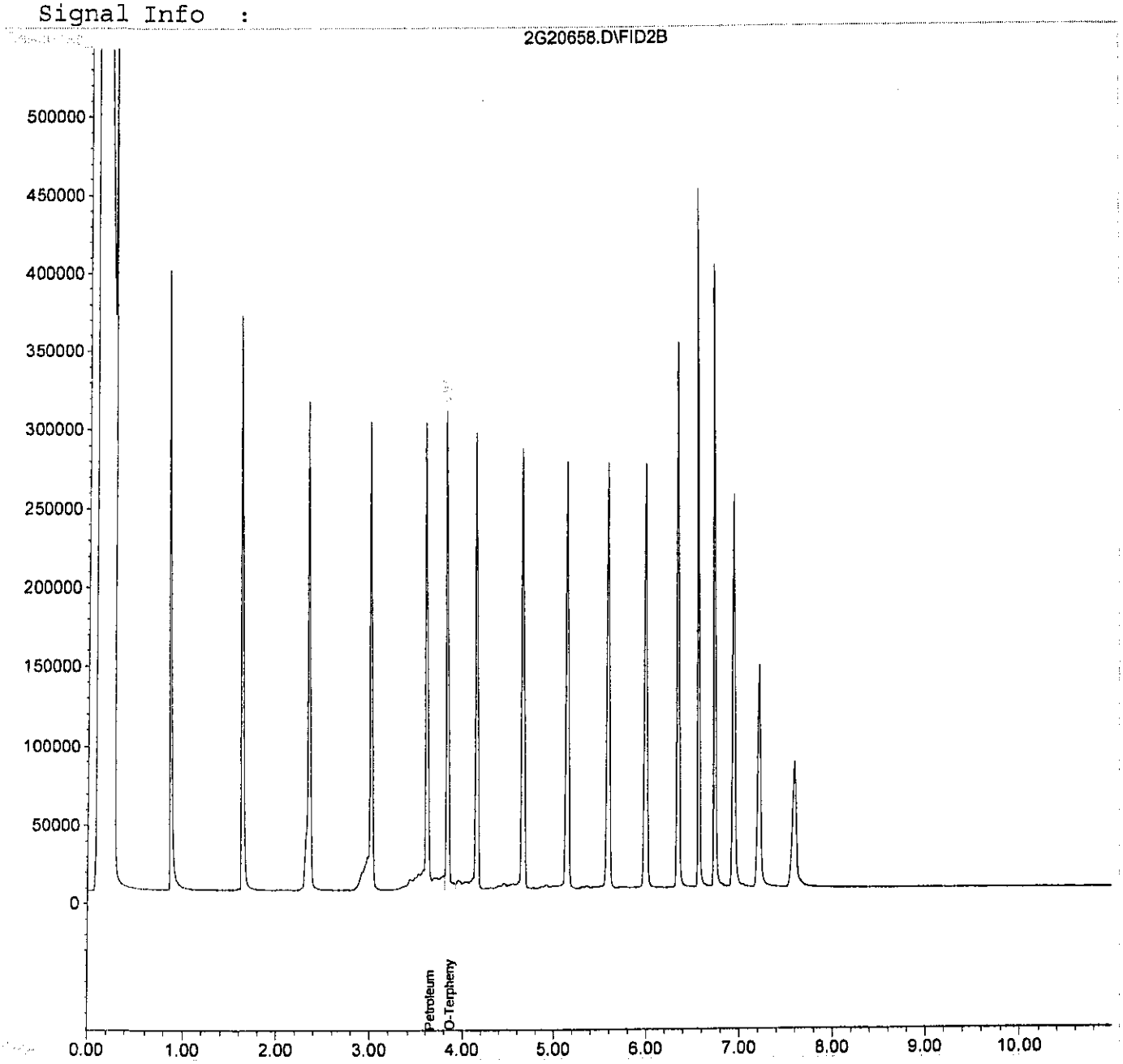
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\062702\2G20658.D
Acq On : 27 Jun 2002 16:48
Sample : WG120634-10 PRO CCV @200ppm
Misc : 1,1 SOS60-34
IntFile : PETRO.E
Quant Time: Jun 27 17:00 2002 Quant Results File: FLASHPRO.RES

Vial: 25
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 15:54:30 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



RETENTION TIME WINDOWS

Lab Name: Kemron Environmental Services

Instrument ID: HP-2

GC Column: RTX-5

	WIN.STD #1	WIN.STD #2	WIN.STD #3
Date Run	01-23-02	01-24-02	01-25-02
File #	2g18031	2g18074	2g18121

COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
Petroleum Range				
PRO - C8 #1	0.28	0.26	0.26	0.035
PRO - C40 #2	7.97	7.75	7.88	0.332
Surrogates				
O-Terphenyl (C28)	3.81	3.72	3.75	0.137

2.2.6.4 Raw QC Data

Data File : C:\HPCHEM\1\DATA\062702\2G20642.D
Acq On : 27 Jun 2002 12:15
Sample : WG120327-01 BLK V186-P101
Misc : 1,1 water
IntFile : PETRO.E
Quant Time: Jun 27 14:13 2002 Quant Results File: FLASHPRO.RES

Vial: 9
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.84	383689	18.247 ppb
Spiked Amount 20.000 Range 49 - 174	Recovery	=	91.24%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000	Recovery	=	0.00%
Target Compounds			
1) H Petroleum Range	3.66	1491021	61.261 ppb

(f)=RT Delta > 1/2 Window (m)=manual int

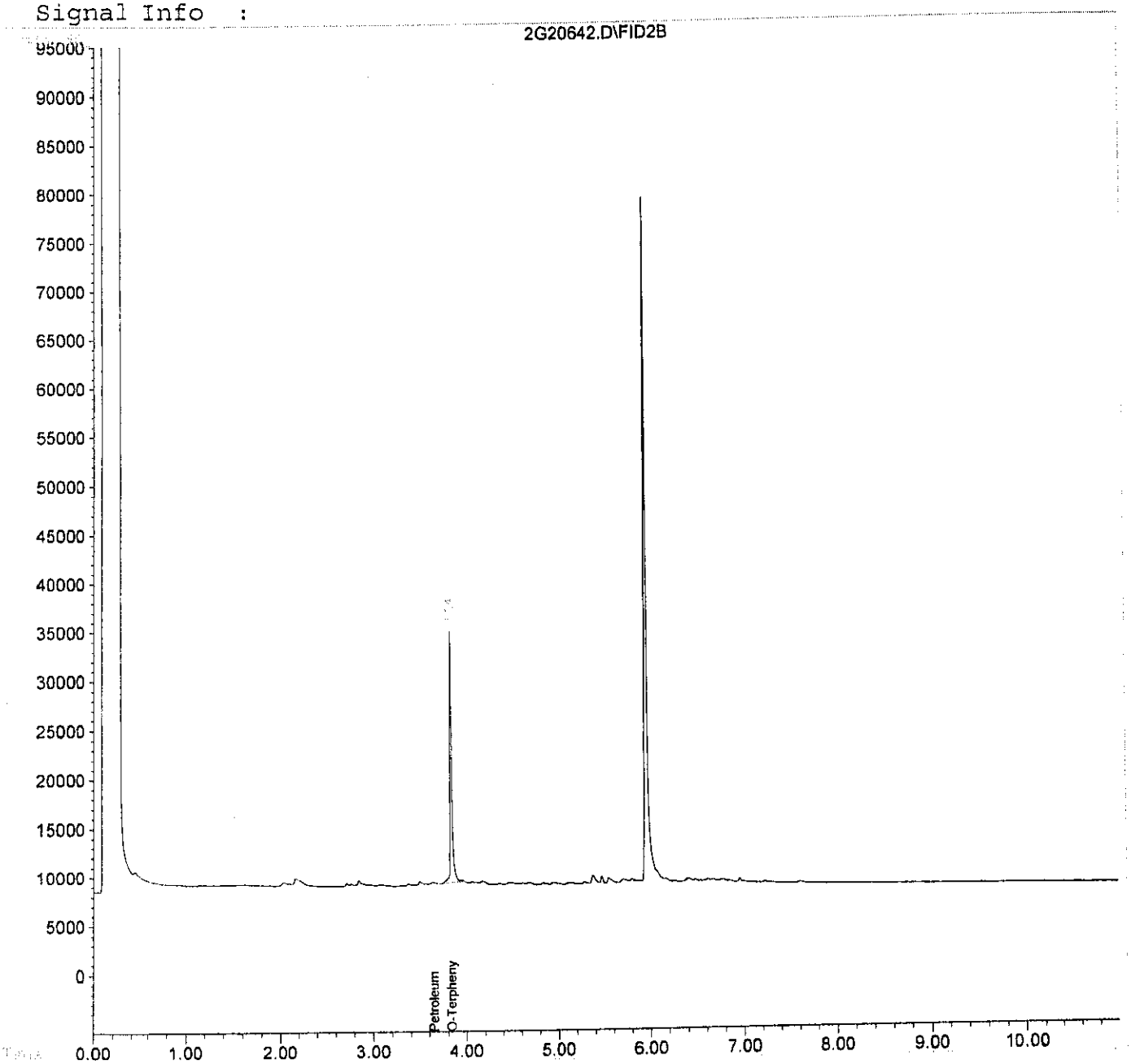
204

Data File : C:\HPCHEM\1\DATA\062702\2G20642.D
Acq On : 27 Jun 2002 12:15
Sample : WG120327-01 BLK V186-P101
Misc : 1,1 water
IntFile : PETRO.E
Quant Time: Jun 27 14:13 2002 Quant Results File: FLASHPRO.RES

Vial: 9
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062702\2G20643.D
Acq On : 27 Jun 2002 12:30
Sample : WG120327-02 LCS V186-P101
Misc : 1,1 water
IntFile : PETRO.E
Quant Time: Jun 27 14:13 2002 Quant Results File: FLASHPRO.RES

Vial: 10
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.84	486537	23.138 ppb
Spiked Amount 20.000 Range 49 - 174		Recovery =	115.69%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.66	70286820	2887.851 ppb

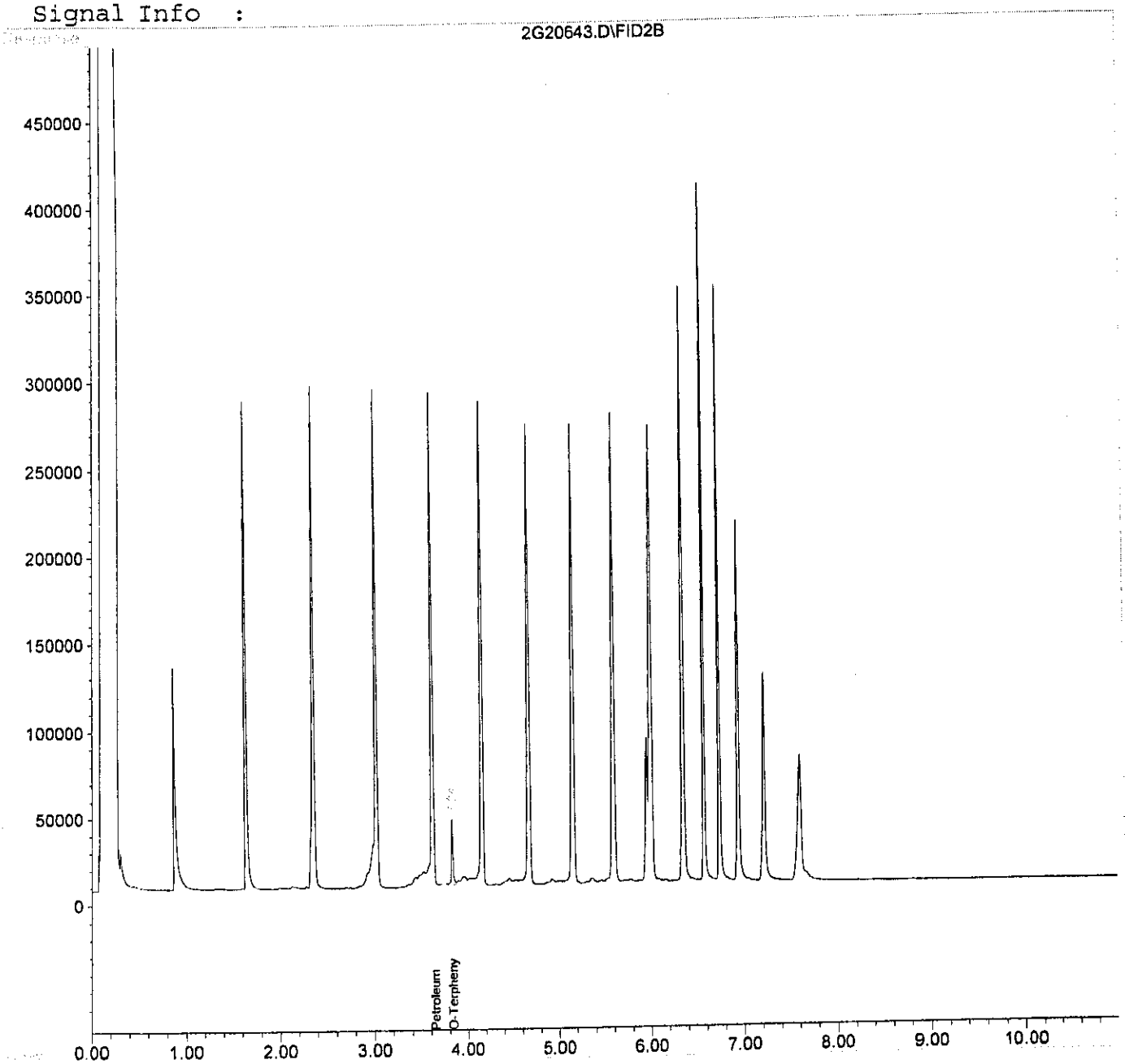
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\062702\2G20643.D
Acq On : 27 Jun 2002 12:30
Sample : WG120327-02 LCS V186-P101
Misc : 1,1 water
IntFile : PETRO.E
Quant Time: Jun 27 14:13 2002 Quant Results File: FLASHPRO.RES

Vial: 10
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062702\2G20644.D
Acq On : 27 Jun 2002 12:45
Sample : WG120327-03 LCS DUP V186-P101
Misc : 1,1 water
IntFile : PETRO.E
Quant Time: Jun 27 14:14 2002 Quant Results File: FLASHPRO.RES

Vial: 11
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.84	482716	22.956 ppb
Spiked Amount 20.000 Range 49 - 174		Recovery =	114.78%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.66	70042406	2877.809 ppb

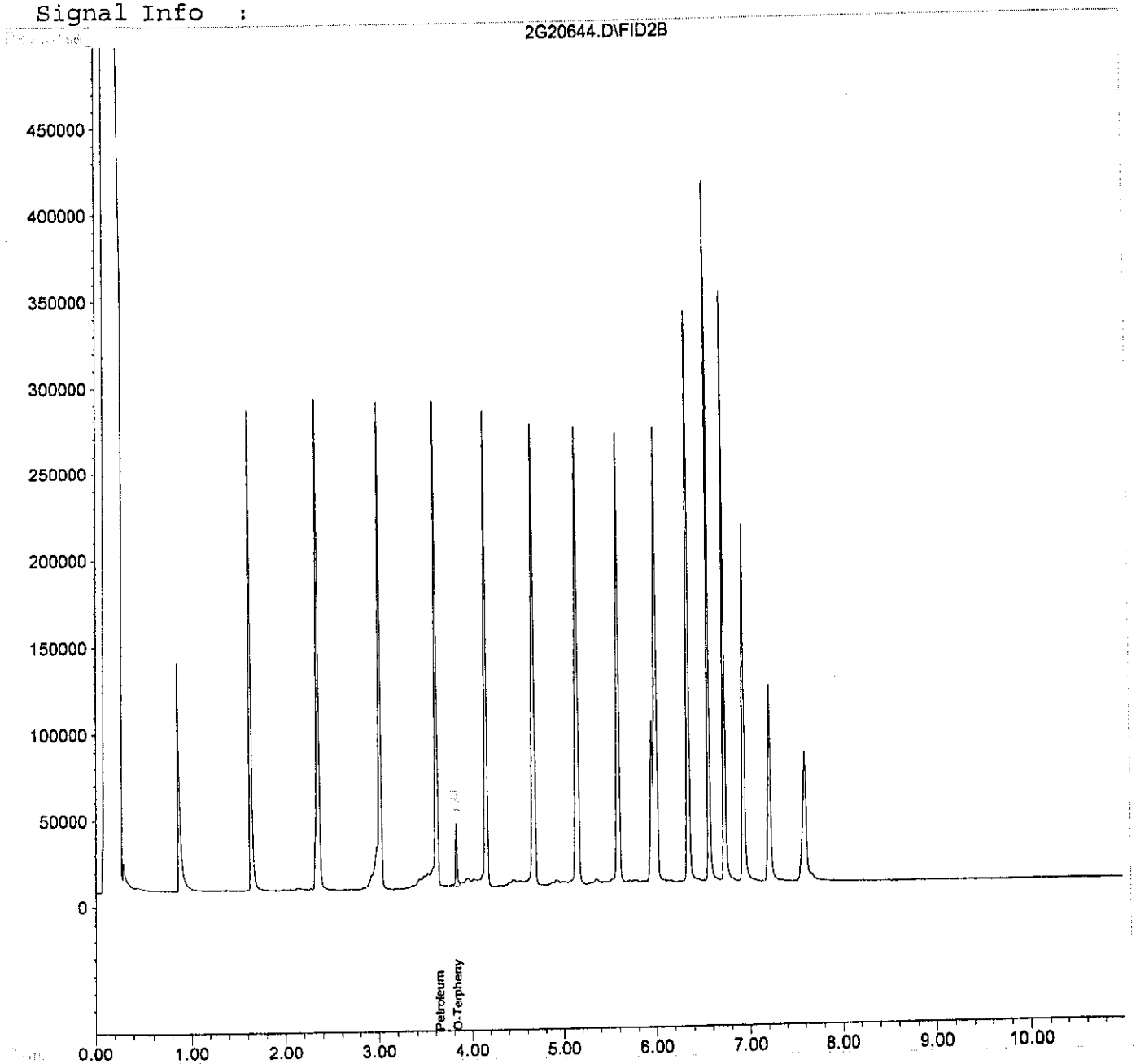
(f) RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\062702\2G20644.D
Acq On : 27 Jun 2002 12:45
Sample : WG120327-03 LCS DUP V186-P101
Misc : 1,1 water
IntFile : PETRO.E
Quant Time: Jun 27 14:14 2002 Quant Results File: FLASHPRO.RES

Vial: 11
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 11:47:00 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062702\2G20648.D
Acq On : 27 Jun 2002 13:59
Sample : WG120337-01 BLK V186-P105
Misc : 7,1 soil
IntFile : PETRO.E
Quant Time: Jun 27 15:55 2002 Quant Results File: FLASHPRO.RES

Vial: 15
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 15:54:30 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.84	352609	16.769 ppb
Spiked Amount 20.000 Range 43 - 136		Recovery =	83.85%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 800.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.66	615714	25.298 ppb

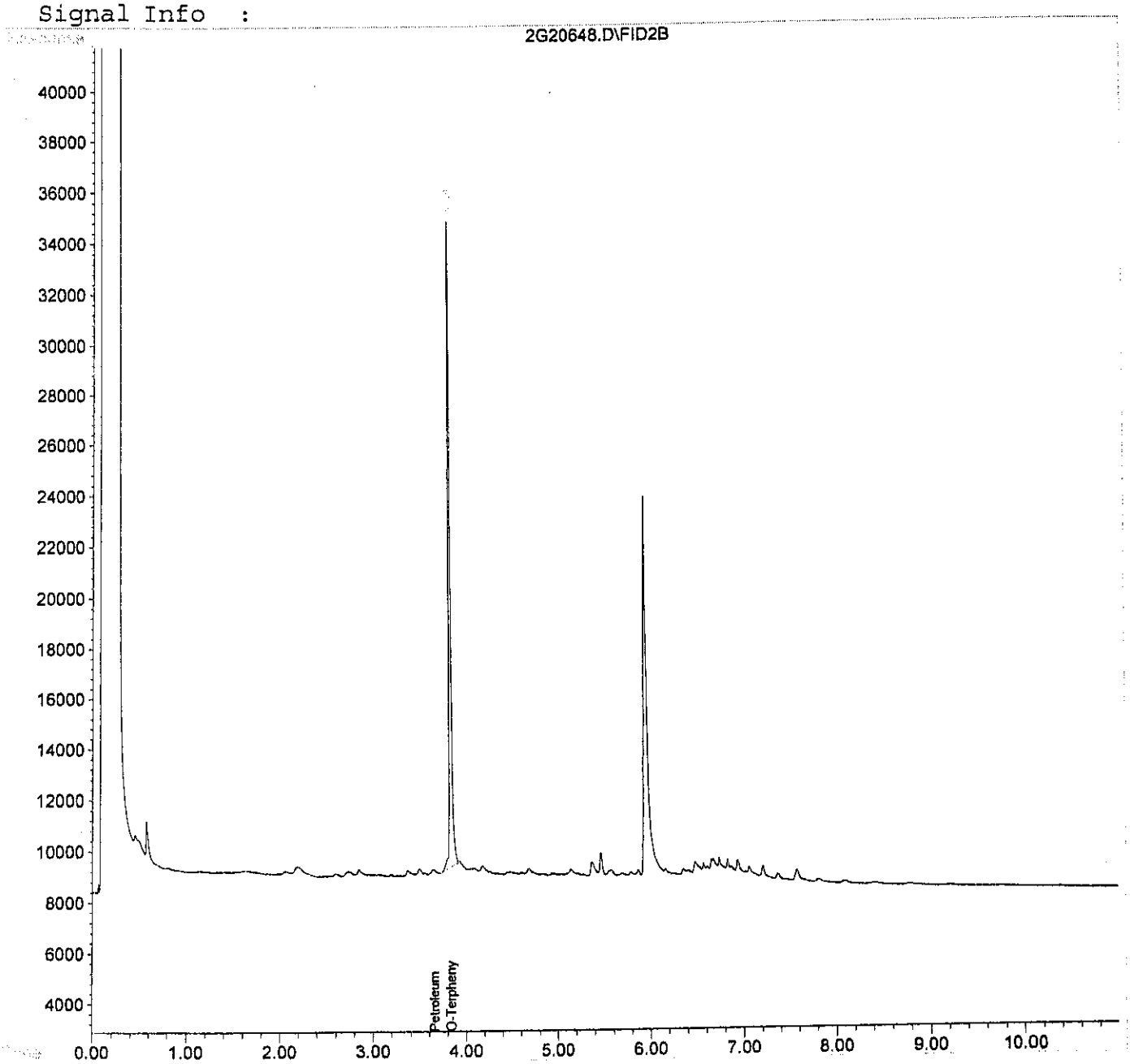
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\062702\2G20648.D
Acq On : 27 Jun 2002 13:59
Sample : WG120337-01 BLK V186-P105
Misc : 7,1 soil
IntFile : PETRO.E
Quant Time: Jun 27 15:55 2002 Quant Results File: FLASHPRO.RES

Vial: 15
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 15:54:30 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062702\2G20649.D
Acq On : 27 Jun 2002 14:14
Sample : WG120337-02 LCS V186-P105
Misc : 7,1 soil
IntFile : PETRO.E
Quant Time: Jun 27 15:56 2002 Quant Results File: FLASHPRO.RES

Vial: 16
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 15:54:30 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.84	406697	19.341 ppb
Spiked Amount 20.000 Range 43 - 136		Recovery =	96.71%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 800.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.66	56426841	2318.390 ppb

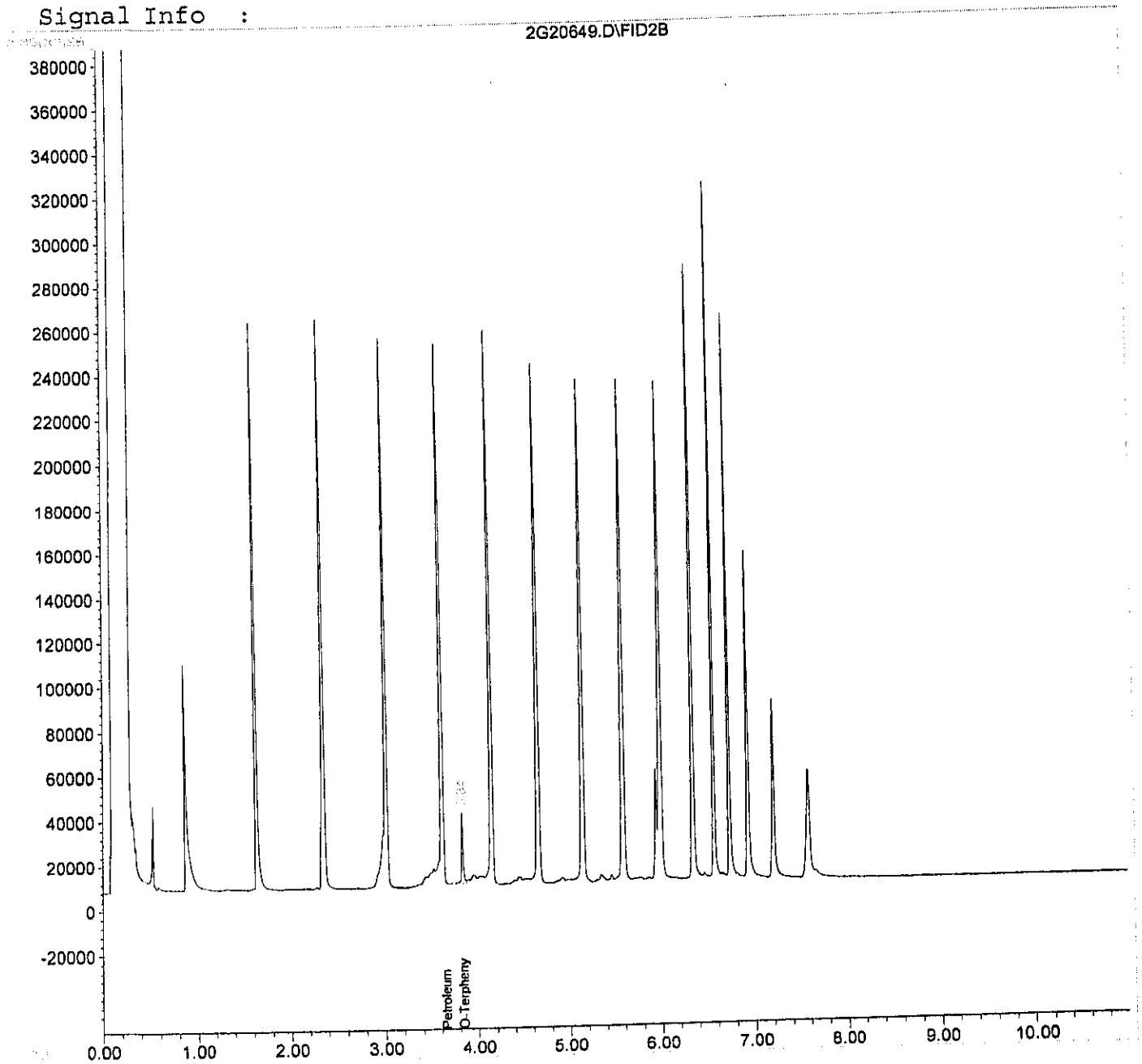
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\062702\2G20649.D
Acq On : 27 Jun 2002 14:14
Sample : WG120337-02 LCS V186-P105
Misc : 7,1 soil
IntFile : PETRO.E
Quant Time: Jun 27 15:56 2002 Quant Results File: FLASHPRO.RES

Vial: 16
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 15:54:30 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\062702\2G20650.D
Acq On : 27 Jun 2002 14:47
Sample : WG120337-03 LCS DUP V186-P105
Misc : 7,1 soil
IntFile : PETRO.E
Quant Time: Jun 27 15:56 2002 Quant Results File: FLASHPRO.RES

Vial: 17
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 15:54:30 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.83	437662	20.813 ppb
Spiked Amount 20.000 Range 43 - 136	Recovery = 104.07%		
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 800.000	Recovery = 0.00%		
Target Compounds			
1) H Petroleum Range	3.66	59833053	2458.340 ppb

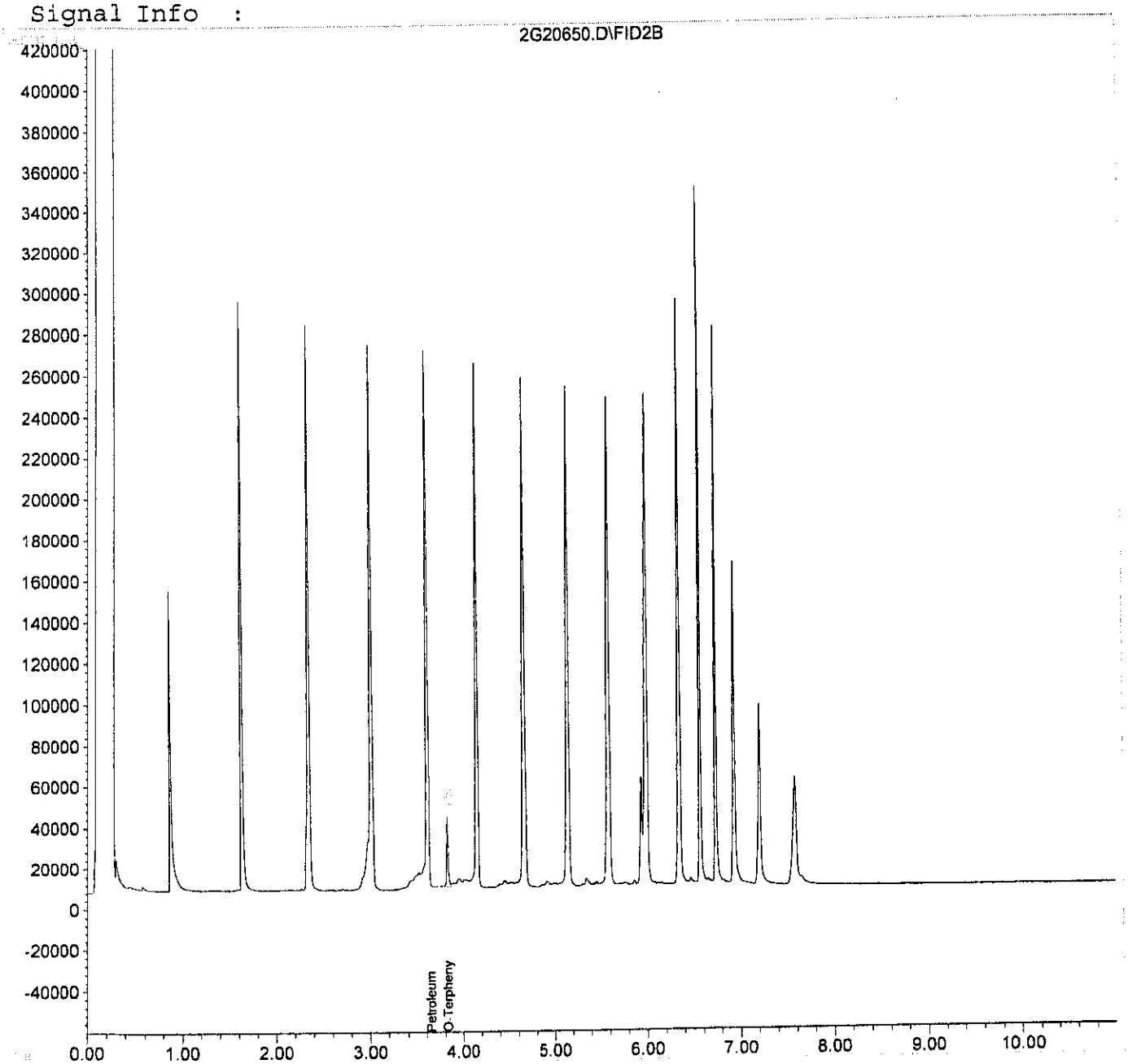
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\062702\2G20650.D
Acq On : 27 Jun 2002 14:47
Sample : WG120337-03 LCS DUP V186-P105
Misc : 7,1 soil
IntFile : PETRO.E
Quant Time: Jun 27 15:56 2002 Quant Results File: FLASHPRO.RES

Vial: 17
Operator: HV
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/27/02
Last Update : Thu Jun 27 15:54:30 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Directory: c:\hpchem\1\data\062702

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	2g20634.d	1.	mecl2	1,1	27 Jun 102 13::0
2	2	2g20635.d	1.	WG120634-06 PRO @600ppm	1,1 SOS60-34	27 Jun 102 13::2
3	3	2g20636.d	1.	WG120634-05 PRO @400ppm	1,1 SOS60-34	27 Jun 102 13::3
4	4	2g20637.d	1.	WG120634-04 PRO @200ppm	1,1 SOS60-34	27 Jun 102 13::5
5	5	2g20638.d	1.	WG120634-03 PRO @100ppm	1,1 SOS60-34	27 Jun 102 13::0
6	6	2g20639.d	1.	WG120634-02 PRO @50ppm	1,1 SOS60-34	27 Jun 102 13::2
7	7	2g20640.d	1.	WG120634-01 PRO @5ppm	1,1 SOS60-34	27 Jun 102 13::3
8	8	2g20641.d	1.	WG120634-07 ALT PRO @200ppm	1,1 SOS60-35	27 Jun 102 13::5
9	9	2g20642.d	1.	WG120327-01 BLK V186-P101	1,1 water	27 Jun 102 13::1
10	10	2g20643.d	1.	WG120327-02 LCS V186-P101	1,1 water	27 Jun 102 13::3
11	11	2g20644.d	1.	WG120327-03 LCS DUP V186-P101	1,1 water	27 Jun 102 13::4
12	12	2g20645.d	1.	L0206416-02 PRO water	1,1 water	27 Jun 102 12::0
13	13	2g20646.d	1.	L0206417-04 PRO water	1,1 water	27 Jun 102 12::1
14	14	2g20647.d	1.	WG120634-08 PRO CCV @200ppm	1,1 SOS60-34	27 Jun 102 12::3
15	15	2g20648.d	1.	WG120337-01 BLK V186-P105	7,1 soil	27 Jun 102 12::5
16	16	2g20649.d	1.	WG120337-02 LCS V186-P105	7,1 soil	27 Jun 102 12::1
17	17	2g20650.d	1.	WG120337-03 LCS DUP V186-P105	7,1 soil	27 Jun 102 12::4
18	18	2g20651.d	1.	L0206417-01 PRO soil	7,1 soil	27 Jun 102 12::0
19	19	2g20652.d	1.	RR L0206417-02 PRO soil - RR @ 5X	7,1 soil	27 Jun 102 12::1
20	20	2g20653.d	1.	L0206417-03 PRO soil	7,1 soil	27 Jun 102 12::3
21	21	2g20654.d	1.	WG120634-09 PRO CCV @200ppm	1,1 SOS60-34	27 Jun 102 12::4
22	22	2g20655.d	1.	RR L0206416-01 10X PRO soil - RR str.	7,10 soil	27 Jun 102 12::0
23	23	2g20656.d	1.	L0206416-01 PRO soil	7,1 soil	27 Jun 102 12::1
24	24	2g20657.d	1.	L0206417-02 5X PRO soil	7,5 soil	27 Jun 102 12::3
25	25	2g20658.d	1.	WG120634-10 PRO CCV @200ppm	1,1 SOS60-34	27 Jun 102 12::4

HV 6/28/02

mdeGlerlw

KEMRON ENVIRONMENTAL SERVICES
Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 6-27-02 Instrument ID HP2 Column ID RTX-5 Data Subdirectory 062702
Analyst Initials HV

SOP # GCS09 Rev. # ___ 8081A ____
SOP # GCS04 Rev. # ___ 8151A ____
SOP # GCS03 Rev. # 2 PRO ✓
SOP # GCS02 Rev. # ___ 8015B Mod (Alcohol) ____

SOP # GCS10 Rev. # ___ 8082 ____
SOP # GCS05 Rev. # ___ TNRCC 1005 ____
SOP # GCS02 Rev. # ___ 8015B Mod (DRO) ____
SOP # GCS07 Rev. # ___ 8011 ____

Analysis Date/Time _____ Instrument ID _____ Column ID _____ Data Subdirectory _____

Daily Check
- ☑ Gases>500 psi

Preventative Maintenance
- ☐ Change o-ring
- ☑ Change liner
- ☑ Change septum
- ☐ Clip column (___cm)
- ☐ Injection port seal (goldseal)
- ☐ Change gases _____

Returned To Control?
Yes ___ No ____

Additional Maintenance
Problem: _____

Action Taken: _____

Comments

Parameter: PRO-S SOP #: EXPRO Revision #: 3
Extraction Analyst(s): CAF TV/KD Analyst(s): CAF
Date/Time Extracted: 6-24-02 @ 09:00 Date TV/KD: 6-24-02
Spike/Surrogate Analyst: CAF Witness: [illegible]
Surrogate #: ES50041-31 Earliest Hold Date: 7/04/02
Spike #: A = ES50041-07 Spike #: B = —

Extraction Work Group WG 120337
Analytical Work Group WG 120442

Extract Relinquished By: CAF
Extract Received By & Date: [illegible] 6/24/02

	Sample ID	Test Code	pH √ <2	pH √ N	pH √ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	Emulsions √ BN	Emulsions √ N	Comments
1	Blank					25.01 g	1 mL		1 mL	T				WG 120337-
2	LCS					.00 g		1 mL		C				WG 120332
3	LCS Dup					.09 g				C				WG 120337-2
4	06-416-01	FLA-PRO				.08 g				O				
5	06-417-01					.09 g				C				
6	-02					.02 g				C				
7	-03					.01 g				C				
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

CAF 6-24-02

Methylene Chloride Lot #: 42015
Hexane Lot #: 41304 CAF 6-24-02
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: ER2152

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C					
Sonication	3550B	✓				
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C	✓	Other	
Acid 3664A		N/A	
Sulfur 3660B			

Peer Reviewed By: _____ Date: _____

Extraction Notes For Volume # 18 b Page # 125

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: NONE

Supervisor Review: _____ Date: _____

Volume 186
Page 105

Parameter: PRO-S SOP #: EXPRO Revision #: 3
Extraction Analyst(s): CAF TV/KD Analyst(s): CAF
Date/Time Extracted: 6-24-02 @ 09:00 Date TV/KD: 6-24-02
Spike/Surrogate Analyst: CAF Witness: [illegible]
Surrogate #: ES5004 1-31 Earliest Hold Date: 7/04/02
Spike #: A = ES5004 1-07 Spike #: B = —

Extraction Work Group WG 120337
Analytical Work Group WG 120442

Extract Relinquished By: CAF
Extract Received By & Date: [illegible] 6/24/02

	Sample ID	Test Code	pH √ <2	pH √ N	pH √ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	Emulsions √ BN	Emulsions √ N	Comments
1	Blank					25.01 g	1 mL		1 mL	T				WG 120337-
2	LCS					.00 g		1 mL		C				WG 120332
3	LCS Dup					.09 g				C				WG 120337-2
4	06-41601	FLA-PRO				.08 g				O				
5	06-417-01					.09 g				C				
6	-02					.02 g				C				
7	-03					.01 g				C				
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

CAF 6-24-02

Methylene Chloride Lot #: 42015
Hexane Lot #: ~~41304~~ CAF 6-24-02
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: ER2152

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C					
Sonication	3550B	✓				
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C	✓	Other	
Acid 3664A		N/A	
Sulfur 3660B			

Peer Reviewed By: _____ Date: _____

Extraction Notes For Volume # 186 Page # 125

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: NONE

Supervisor Review: _____ Date: _____

Date: 6-27-02
Analyst: HV
Method: TLA-PRD - water & soil - 06416 > level-4
06417
Instrument: HP2
Work Group: WG120443
WG120442

	Analyst
System Performance Check	✓
Endrin & DDT Breakdown	NA
Initial Calibration	✓
Average RF	✓
Linear Reg or Higher Order Curve	
Second Source Standard % Difference	✓
Check Standards	✓
Project / Client Specific Requirements	
Special Standards	
Blanks	✓
TCL's	
Surrogates	
LCS (Laboratory Control Sample)	✓
Recoveries	
Surrogates	
MS / MSD / Duplicates	NA
Samples	✓
TCL Hits	
Surrogates	✓
Calculations & Correct Factors	
Dilutions Run	✓
Reruns	✓
Check Sample Histories	
Ending Check Standards	✓
Excel Spreadsheets	
Case Narrative	✓
Corrective Action	
Results Reporting / Data Qualifiers	
WorkGroups Traceability	
Client Data Package Assembly	✓
Check for Completeness	✓

Primary Reviewer Initials & Date Checked HV 6/28/02

Secondary Reviewer Initials & Date Checked [illegible] 6/28/02

- Check for compliance with Method and project-specific requirements
- Check the completeness of the reported information
- Check the information for the report narrative
- Check the reasonableness of results

Supervisory Review Initials & Date Checked [illegible] 6/28/02

Comments: sample fraction 06417-02 was analyzed at 5x dilution.

✓ - Checked & OK
NA - Not Applicable
DL - Diluted Out

Example FLA-PRO Calculations

1.0 Calulating the Response Factor (RF) from the initial calibration (ICAL) data:

RF = As/ Cs

Where:		Example:
	As = Area of the compound being measured in the standard	10000
	Cs = Concentration of the compound being measured (ng/ml).	100
	RF	**100**

2.0 Calculating the concentration (C) of a compound in water using data from prep log and quantitation report:

C = [(Ax)(Vf)(D)] / [(RF)(Vi)]

Where:		Example:
	Ax = Area of the compound being measured	10000
	Vf = Final volume of sample extract (mL). (prep log)	1
	D = Dilution factor for sample as a multiplier (10X = 10).	1
	RF = Response factor from ICAL calculated above.	**100**
	Vi = Initial volume of sample (mL). (prep log)	1000
	C (ug/L) =	**0.1**

3.0 Calculating the concentration (C) of a compound in soil using data from prep log and quantitation report: C = [(Ax)(Vf)(D)] / [(RF)(Vi)]

Where:		Example:
	Ax = Area of the compound being measured	10000
	Vf = Final volume of sample extract (mL).	1
	D = Dilution factor for sample as a multiplier (10X = 10).	1
	RF = Response factor from ICAL calculated above.	100
	Wi = Initial weight of sample (g).	30
	C (ug/kg)	**3.333333**

2.2.7 PAH HPLC DATA (8310)

REPORT NARRATIVE
PAH HPLC

KEMRON Login No.: L0206416

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8310

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds linear equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples: The percent reproducibility for the LCS/LCS2 analyzed with the water fractions was above the advisory limit for dibenz(a,h)anthracene.
Matrix Spikes: The MS/MSD results were not associated with this sample delivery group.

SAMPLES

Surrogates: Fraction 01 yielded a percent recovery for the surrogate by the fluorescence detector which was above the advisory limit. For the same fraction all acceptance criteria were met for the surrogate by the UV detector.
Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: RDC REVIEWED: _____ DATE: 7/3/02

Rev. 7/14/00

PAH HPLC DATA (8310)

Login Number L0206416

A. QC Summary

- ✓ Method Blank Summary
- ✓ Method Blank Results
- ✓ Laboratory Control Sample (LCS)
- NA Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- ✓ Holding Time Summary
- ✓ Surrogate Recovery Summary
- ✓ Initial Calibration Summary
- ✓ Initial Calibration Verification (ICV) Form (Second Source)
- ✓ Continuing Calibration Verification (CCV)
- ✓ Instrument Run Log
- ✓ Extraction Bench Sheet

B. Sample Data

- ___ Target compound and surrogate results summary (See Summary Report)
- ✓ Chromatograms and quantitation report

C. Standards Data

- ✓ Initial calibration (ICAL) summary form
- ✓ Chromatograms and quantitation report for ICAL standards
- ✓ Initial calibration verification (ICV/second source) summary forms
- ✓ Initial calibration verification (ICV/second source) quantitation reports and chromatograms
- ✓ Continuing Calibration Verification (CCV) summary forms
- ✓ Continuing Calibration Verification (CCV) quantitation reports and chromatograms
- ✓ Retention Time Window Summary

D. Raw QC Data

- ✓ Method blank chromatogram and quantitation report
- ✓ LCS chromatogram and quantitation report
- NA MS/MSD chromatogram and quantitation report
- ✓ Instrument Run Log
- ✓ Extraction Bench Sheet
- ✓ Daily Checklist
- ✓ Example Calculations

Checked By: TSL Date: 7/2/02

2.2.7.1 QC Summary

METHOD BLANK SUMMARY

Login Number: L0206416
Blank File ID: 4L003218.R
Date Analyzed: 06/25/02
Time Analyzed: 22:24
Analyst: RDC

Work Group: WG120425
Blank Sample ID: WG120336-01
Instrument ID: HPLC4
Method: 8310

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG120336-02	4L003219.R	06/25/02 23:21	01
LCS2	WG120336-03	4L003220.R	06/26/02 00:17	01
062-CEF9-SB1-S-Q2-02	L0206416-01	4L003222.R	06/26/02 02:11	01

KEMRON ENVIRONMENTAL SERVICES

METHOD BLANK SUMMARY

Login Number: L0206416
Blank File ID: 4L003218.F
Date Analyzed: 06/25/02
Time Analyzed: 22:24
Analyst: RDC

Work Group: WG120425
Blank Sample ID: WG120336-01
Instrument ID: HPLC4
Method: 8310

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG120336-02	4L003219.F	06/25/02 23:21	CF01
LCS2	WG120336-03	4L003220.F	06/26/02 00:17	CF01
062-CEF9-SB1-S-Q2-02	L0206416-01	4L003222.F	06/26/02 02:11	CF01

KEMRON ENVIRONMENTAL SERVICES
METHOD BLANK SUMMARY

Login Number: L0206416
Blank File ID: 4L003213.F
Date Analyzed: 06/25/02
Time Analyzed: 17:41
Analyst: RDC

Work Group: WG120426
Blank Sample ID: WG120326-01
Instrument ID: HPLC4
Method: 8310

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG120326-02	4L003214.F	06/25/02 18:37	CF01
LCS2	WG120326-03	4L003215.F	06/25/02 19:34	CF01

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0206416
Instrument ID: HPLC4
File ID: 4L003218.R
Workgroup (AAB#): WG120425
Contract #:

Run Date: 06/25/2002
Run Time: 22:24
Analyst: RDC

Sample ID: WG120336-01
Method: 8310
Matrix: Solid
Units: ug/kg
Cal ID: HPLC4-19-JUN-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Acenaphthene	55.9	165	55.9	1.00	ND
Acenaphthylene	44.9	165	44.9	1.00	ND
Anthracene	40.9	165	40.9	1.00	ND
Benzo(a)anthracene	3.79	16.5	3.79	1.00	ND
Benzo[a]pyrene	2.90	16.5	2.90	1.00	ND
Benzo(b)Fluoranthene	4.79	16.5	4.79	1.00	ND
Benzo[ghi]perylene	3.60	16.5	3.60	1.00	ND
Benzo[k]fluoranthene	2.00	16.5	2.00	1.00	ND
Chrysene	3.79	16.5	3.79	1.00	ND
Dibenz(a,h)Anthracene	4.49	16.5	4.49	1.00	ND
Fluoranthene	3.70	16.5	3.70	1.00	ND
Fluorene	56.9	165	56.9	1.00	ND
Indeno(1,2,3-cd)pyrene	3.20	16.5	3.20	1.00	ND
Naphthalene	62.9	165	62.9	1.00	ND
2-Methylnaphthalene	4.56	165	4.56	1.00	ND
Phenanthrene	46.9	165	46.9	1.00	ND
Pyrene	3.70	16.5	3.70	1.00	ND
1-Methylnaphthalene	5.24	165	5.24	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
p-terphenyl-d14	88.3	50 - 150	PASS

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON FORMS - Modified 06/26/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0206416
Instrument ID: HPLC4
File ID: 4L003218.F
Workgroup (AAB#): WG120425
Contract #:

Run Date: 06/25/2002
Run Time: 22:24
Analyst: RDC

Sample ID: WG120336-01
Method: 8310
Matrix: Solid
Units: ug/kg
Cal ID: HPLC4-19-JUN-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Acenaphthene	55.9	165	55.9	1.00	ND
Acenaphthylene	44.9	165	44.9	1.00	ND
Anthracene	40.9	165	40.9	1.00	ND
Benzo(a)anthracene	3.79	16.5	3.79	1.00	ND
Benzo[a]pyrene	2.90	16.5	2.90	1.00	ND
Benzo(b)Fluoranthene	4.79	16.5	4.79	1.00	ND
Benzo[ghi]perylene	3.60	16.5	3.60	1.00	ND
Benzo[k]fluoranthene	2.00	16.5	2.00	1.00	ND
Chrysene	3.79	16.5	3.79	1.00	ND
Dibenz(a,h)Anthracene	4.49	16.5	4.49	1.00	ND
Fluoranthene	3.70	16.5	3.70	1.00	ND
Fluorene	56.9	165	56.9	1.00	ND
Indeno(1,2,3-cd)pyrene	3.20	16.5	3.20	1.00	ND
Naphthalene	62.9	165	62.9	1.00	ND
2-Methylnaphthalene	4.56	165	4.56	1.00	ND
Phenanthrene	46.9	165	46.9	1.00	ND
Pyrene	3.70	16.5	3.70	1.00	ND
1-Methylnaphthalene	5.24	165	5.24	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
p-terphenyl-d14	87.2	50 - 150	PASS

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON FORMS - Modified 06/26/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0206416
Instrument ID: HPLC4
File ID: 4L003213.R
Workgroup (AAB#): WG120426
Contract #:

Run Date: 06/25/2002
Run Time: 17:41
Analyst: RDC

Sample ID: WG120326-01
Method: 8310
Matrix: Water
Units: ug/L
Cal ID: HPLC4-19-JUN-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Acenaphthene	4.15	10.0	4.15	1.00	ND
Acenaphthylene	3.51	10.0	3.51	1.00	ND
Anthracene	2.85	10.0	2.85	1.00	ND
Benzo(a)anthracene	0.300	2.00	0.300	1.00	ND
Benzo[a]pyrene	0.530	2.00	0.530	1.00	ND
Benzo(b)Fluoranthene	0.340	2.00	0.340	1.00	ND
Benzo[ghi]perylene	0.500	2.00	0.500	1.00	ND
Benzo[k]fluoranthene	0.720	2.00	0.720	1.00	ND
Chrysene	0.240	2.00	0.240	1.00	ND
Dibenz(a,h)Anthracene	0.770	2.00	0.770	1.00	ND
Fluoranthene	0.500	2.00	0.500	1.00	ND
Fluorene	5.59	10.0	5.59	1.00	ND
Indeno(1,2,3-cd)pyrene	0.800	2.00	0.800	1.00	ND
Naphthalene	3.59	10.0	3.59	1.00	ND
2-Methylnaphthalene	3.36	10.0	3.36	1.00	ND
1-Methylnaphthalene	3.62	10.0	3.62	1.00	ND
Phenanthrene	2.87	10.0	2.87	1.00	ND
Pyrene	0.680	2.00	0.680	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
p-terphenyl-d14	81.2	40 - 132	PASS

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON FORMS - Modified 06/26/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0206416
Instrument ID: HPLC4
File ID: 4L003213.F
Workgroup (AAB#): WG120426
Contract #:

Run Date: 06/25/2002
Run Time: 17:41
Analyst: RDC

Sample ID: WG120326-01
Method: 8310
Matrix: Water
Units: ug/L
Cal ID: HPLC4-19-JUN-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Acenaphthene	4.15	10.0	4.15	1.00	ND
Acenaphthylene	3.51	10.0	3.51	1.00	ND
Anthracene	2.85	10.0	2.85	1.00	ND
Benzo(a)anthracene	0.300	2.00	0.300	1.00	ND
Benzo[a]pyrene	0.530	2.00	0.530	1.00	ND
Benzo(b)Fluoranthene	0.340	2.00	0.340	1.00	ND
Benzo[ghi]perylene	0.500	2.00	0.500	1.00	ND
Benzo[k]fluoranthene	0.720	2.00	0.720	1.00	ND
Chrysene	0.240	2.00	0.240	1.00	ND
Dibenz(a,h)Anthracene	0.770	2.00	0.770	1.00	ND
Fluoranthene	0.500	2.00	0.500	1.00	ND
Fluorene	5.59	10.0	5.59	1.00	ND
Indeno(1,2,3-cd)pyrene	0.800	2.00	0.800	1.00	ND
Naphthalene	3.59	10.0	3.59	1.00	ND
2-Methylnaphthalene	3.36	10.0	3.36	1.00	ND
1-Methylnaphthalene	3.62	10.0	3.62	1.00	ND
Phenanthrene	2.87	10.0	2.87	1.00	ND
Pyrene	0.680	2.00	0.680	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
p-terphenyl-d14	80.6	40 - 132	PASS

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON FORMS - Modified 06/26/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0206416
Instrument ID: HPLC4
File ID: 4L003219.R
Workgroup (AAB#): WG120425
Contract #:

Run Date: 06/25/2002
Run Time: 23:21
Analyst: RDC

Sample ID: WG120336-02
Method: 8310
Matrix: Solid
Units: ug/kg
Cal ID: HPLC4-19-JUN-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acenaphthene	1660	795	47.8	24 - 100	
Acenaphthylene	1660	782	47.0	26 - 94	
Anthracene	1660	987	59.4	40 - 92	
Benzo(a)anthracene	166	139	83.7	60 - 107	
Benzo[a]pyrene	166	120	72.0	51 - 101	
Benzo(b)Fluoranthene	166	142	85.1	61 - 108	
Benzo[ghi]perylene	166	140	84.4	53 - 118	
Benzo[k]fluoranthene	83.1	71.4	85.8	59 - 112	
Chrysene	166	145	87.2	60 - 104	
Dibenz(a,h)Anthracene	166	142	85.4	58 - 113	
Fluoranthene	166	121	73.1	54 - 105	
Fluorene	1660	847	50.9	28 - 98	
Indeno(1,2,3-cd)pyrene	166	141	85.1	58 - 105	
Naphthalene	1660	796	47.9	22 - 85	
2-Methylnaphthalene	1660	787	47.3	26 - 94	
Phenanthrene	1660	889	53.5	38 - 102	
Pyrene	166	125	75.0	50 - 108	
1-Methylnaphthalene	1660	776	46.7	26 - 94	

Surrogates	% Recovery	Surrogate Limits	Qualifier
p-terphenyl-d14	88.6	50 - 150	PASS

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 06/19/2002
Version 1.3

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0206416
Instrument ID: HPLC4
File ID: 4L003219.F
Workgroup (AAB#): WG120425
Contract #:

Run Date: 06/25/2002
Run Time: 23:21
Analyst: RDC

Sample ID: WG120336-02
Method: 8310
Matrix: Solid
Units: ug/kg
Cal ID: HPLC4-19-JUN-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acenaphthene	1660	793	47.7	24 - 100	
Acenaphthylene	1660		0	26 - 94	*
Anthracene	1660	967	58.2	40 - 92	
Benzo(a)anthracene	166	138	83.2	60 - 107	
Benzo[a]pyrene	166	121	72.5	51 - 101	
Benzo(b)Fluoranthene	166	143	86.0	61 - 108	
Benzo[ghi]perylene	166	141	84.7	53 - 118	
Benzo[k]fluoranthene	83.1	71.1	85.5	59 - 112	
Chrysene	166	142	85.2	60 - 104	
Dibenz(a,h)Anthracene	166	141	84.7	58 - 113	
Fluoranthene	166	126	75.6	54 - 105	
Fluorene	1660	834	50.1	28 - 98	
Indeno(1,2,3-cd)pyrene	166	140	84.4	58 - 105	
Naphthalene	1660	767	46.1	22 - 85	
2-Methylnaphthalene	1660	785	47.2	26 - 94	
Phenanthrene	1660	901	54.2	38 - 102	
Pyrene	166	131	78.7	50 - 108	
1-Methylnaphthalene	1660	781	47.0	26 - 94	

Surrogates	% Recovery	Surrogate Limits	Qualifier
p-terphenyl-d14	89.7	50 - 150	PASS

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 06/19/2002
Version 1.3

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0206416
Instrument ID: HPLC4
File ID: 4L003214.R
Workgroup (AAB#): WG120426
Contract #:

Run Date: 06/25/2002
Run Time: 18:37
Analyst: RDC

Sample ID: WG120326-02
Method: 8310
Matrix: Water
Units: ug/L
Cal ID: HPLC4-19-JUN-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acenaphthene	50	20.2	40.5	25 - 78	
Acenaphthylene	50	20.3	40.5	25 - 77	
Anthracene	50	36.0	72.0	47 - 101	
Benzo(a)anthracene	5	4.05	80.9	50 - 115	
Benzo[a]pyrene	5	3.04	60.8	29 - 113	
Benzo(b)Fluoranthene	5	3.36	67.2	41 - 110	
Benzo[ghi]perylene	5	1.85	37.0	11 - 84	
Benzo[k]fluoranthene	2.5	1.42	56.9	25 - 107	
Chrysene	5	3.61	72.2	39 - 120	
Dibenz(a,h)Anthracene	5	1.76	35.2	10 - 92	
Fluoranthene	5	3.77	75.5	55 - 104	
Fluorene	50	24.3	48.6	29 - 84	
Indeno(1,2,3-cd)pyrene	5	2.25	44.9	16 - 98	
Naphthalene	50	19.4	38.7	25 - 68	
2-Methylnaphthalene	50	19.8	39.6	26 - 72	
1-Methylnaphthalene	50	19.3	38.6	26 - 71	
Phenanthrene	50	27.4	54.8	39 - 95	
Pyrene	5	3.85	76.9	56 - 104	

Surrogates	% Recovery	Surrogate Limits	Qualifier
p-terphenyl-d14	64.2	40 - 132	PASS

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 06/19/2002
Version 1.3

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0206416
Instrument ID: HPLC4
File ID: 4L003214.F
Workgroup (AAB#): WG120426
Contract #:

Run Date: 06/25/2002
Run Time: 18:37
Analyst: RDC

Sample ID: WG120326-02
Method: 8310
Matrix: Water
Units: ug/L
Cal ID: HPLC4-19-JUN-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acenaphthene	50	20.2	40.4	25 - 78	
Acenaphthylene	50		0	25 - 77	*
Anthracene	50	35.0	70.0	47 - 101	
Benzo(a)anthracene	5	4.03	80.6	50 - 115	
Benzo[a]pyrene	5	3.06	61.1	29 - 113	
Benzo(b)Fluoranthene	5	3.34	66.8	41 - 110	
Benzo[ghi]perylene	5	1.86	37.2	11 - 84	
Benzo[k]fluoranthene	2.5	1.41	56.2	25 - 107	
Chrysene	5	3.66	73.2	39 - 120	
Dibenz(a,h)Anthracene	5	1.79	35.7	10 - 92	
Fluoranthene	5	3.83	76.6	55 - 104	
Fluorene	50	23.8	47.5	29 - 84	
Indeno(1,2,3-cd)pyrene	5	2.13	42.6	16 - 98	
Naphthalene	50	18.7	37.4	25 - 68	
2-Methylnaphthalene	50	19.6	39.2	26 - 72	
1-Methylnaphthalene	50	19.2	38.4	26 - 71	
Phenanthrene	50	27.8	55.6	39 - 95	
Pyrene	5	4.01	80.2	56 - 104	

Surrogates	% Recovery	Surrogate Limits	Qualifier
p-terphenyl-d14	63.5	40 - 132	PASS

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 06/19/2002
Version 1.3

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES

Loginnum: L0206416
Worknum: WG120425
Method: 8310
Instrument ID: HPLC4
Cal ID: HPLC4-19-JUN-2002
Matrix: Solid
Analyst: RDC
Contract #:
Units: ug/kg
Sample ID: WG120336-02 LCS File ID: 4L003219.R Run Date: 06/25/2002 23:21
Sample ID: WG120336-03 LCS2 File ID: 4L003220.R Run Date: 06/26/2002 00:17

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
Acenaphthene	1660	795	47.8	1660	873	52.5	9.37	24 - 100	40	
Acenaphthylene	1660	782	47.0	1660	856	51.5	9.04	26 - 94	40	
Anthracene	1660	987	59.4	1660	1180	70.8	17.6	40 - 92	40	
Benzo(a)anthracene	166	139	83.7	166	146	88.0	5.07	60 - 107	40	
Benzo[a]pyrene	166	120	72.0	166	128	77.2	7.03	51 - 101	40	
Benzo(b)Fluoranthene	166	142	85.1	166	150	90.0	5.66	61 - 108	40	
Benzo[ghi]perylene	166	140	84.4	166	147	88.4	4.69	53 - 118	40	
Benzo[k]fluoranthene	83.1	71.4	85.8	83.2	75.3	90.5	5.35	59 - 112	40	
Chrysene	166	145	87.2	166	152	91.5	4.81	60 - 104	40	
Dibenz(a,h)Anthracene	166	142	85.4	166	150	90.4	5.71	58 - 113	40	
Fluoranthene	166	121	73.1	166	136	82.0	11.5	54 - 105	40	
Fluorene	1660	847	50.9	1660	995	59.8	16.1	28 - 98	40	
Indeno(1,2,3-cd)pyrene	166	141	85.1	166	150	89.9	5.59	58 - 105	40	
Naphthalene	1660	796	47.9	1660	846	50.9	6.09	22 - 85	40	
2-Methylnaphthalene	1660	787	47.3	1660	850	51.1	7.63	26 - 94	40	
Phenanthrene	1660	889	53.5	1660	1090	65.5	20.3	38 - 102	40	
Pyrene	166	125	75.0	166	138	83.0	10.3	50 - 108	40	
1-Methylnaphthalene	1660	776	46.7	1660	835	50.2	7.31	26 - 94	40	

Surogates	LCS % Recovery	LCS2 % Recovery	Surrogate Limits	Qualifier
p-terphenyl-d14	88.6	92.1	50 - 150	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES

Loginnum: L0206416
Instrument ID: HPLC4
Analyst: RDC

Worknum: WG120425
Cal ID: HPLC4-19-JUN-2002
Contract #:

Method: 8310
Matrix: Solid
Units: ug/kg

Sample ID: WG120336-02 LCS File ID: 4L003219.F Run Date: 06/25/2002 23:21
Sample ID: WG120336-03 LCS2 File ID: 4L003220.F Run Date: 06/26/2002 00:17

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
Acenaphthene	1660	793	47.7	1660	870	52.3	9.29	24 - 100	40	
Acenaphthylene	1660			1660				26 - 94	40	*
Anthracene	1660	967	58.2	1660	1150	69.3	17.5	40 - 92	40	
Benzo(a)anthracene	166	138	83.2	166	146	87.7	5.31	60 - 107	40	
Benzo[a]pyrene	166	121	72.5	166	129	77.4	6.59	51 - 101	40	
Benzo(b)Fluoranthene	166	143	86.0	166	150	90.3	4.96	61 - 108	40	
Benzo[ghi]perylene	166	141	84.7	166	147	88.6	4.57	53 - 118	40	
Benzo[k]fluoranthene	83.1	71.1	85.5	83.2	74.7	89.8	4.88	59 - 112	40	
Chrysene	166	142	85.2	166	148	89.0	4.48	60 - 104	40	
Dibenz(a,h)Anthracene	166	141	84.7	166	148	89.0	4.98	58 - 113	40	
Fluoranthene	166	126	75.6	166	141	84.9	11.7	54 - 105	40	
Fluorene	1660	834	50.1	1660	984	59.2	16.6	28 - 98	40	
Indeno(1,2,3-cd)pyrene	166	140	84.4	166	148	89.1	5.41	58 - 105	40	
Naphthalene	1660	767	46.1	1660	815	49.0	6.08	22 - 85	40	
2-Methylnaphthalene	1660	785	47.2	1660	848	51.0	7.61	26 - 94	40	
Phenanthrene	1660	901	54.2	1660	1110	66.5	20.5	38 - 102	40	
Pyrene	166	131	78.7	166	143	86.2	9.15	50 - 108	40	
1-Methylnaphthalene	1660	781	47.0	1660	840	50.5	7.23	26 - 94	40	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
p-terphenyl-d14	89.7	91.8	-	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/14/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES

Loginnum: L0206416
Worknum: WG120426
Method: 8310
Instrument ID: HPLC4
Cal ID: HPLC4-19-JUN-2002
Matrix: Water
Analyst: RDC
Contract #:
Units: ug/L
Sample ID: WG120326-02 LCS File ID: 4L003214.R Run Date: 06/25/2002 18:37
Sample ID: WG120326-03 LCS2 File ID: 4L003215.R Run Date: 06/25/2002 19:34

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
Acenaphthene	50.0	20.2	40.5	50.0	20.4	40.7	.643	25 - 78	50	
Acenaphthylene	50.0	20.3	40.5	50.0	20.4	40.7	.521	25 - 77	50	
Anthracene	50.0	36.0	72.0	50.0	37.4	74.8	3.85	47 - 101	50	
Benzo(a)anthracene	5.00	4.05	80.9	5.00	4.61	92.2	13	50 - 115	50	
Benzo[a]pyrene	5.00	3.04	60.8	5.00	3.76	75.2	21.2	29 - 113	50	
Benzo(b)Fluoranthene	5.00	3.36	67.2	5.00	3.99	79.8	17.1	41 - 110	50	
Benzo[ghi]perylene	5.00	1.85	37.0	5.00	3.08	61.7	49.9	11 - 84	50	
Benzo[k]fluoranthene	2.50	1.42	56.9	2.50	1.86	74.4	26.7	25 - 107	50	
Chrysene	5.00	3.61	72.2	5.00	4.47	89.4	21.2	39 - 120	50	
Dibenz(a,h)Anthracene	5.00	1.76	35.2	5.00	3.04	60.7	53.1	10 - 92	50	#
Fluoranthene	5.00	3.77	75.5	5.00	4.02	80.4	6.27	55 - 104	50	
Fluorene	50.0	24.3	48.6	50.0	24.6	49.2	1.17	29 - 84	50	
Indeno(1,2,3-cd)pyrene	5.00	2.25	44.9	5.00	3.20	63.9	35	16 - 98	50	
Naphthalene	50.0	19.4	38.7	50.0	19.2	38.5	.618	25 - 68	50	
2-Methylnaphthalene	50.0	19.8	39.6	50.0	19.7	39.5	.423	26 - 72	50	
1-Methylnaphthalene	50.0	19.3	38.6	50.0	19.2	38.5	.244	26 - 71	50	
Phenanthrene	50.0	27.4	54.8	50.0	28.6	57.1	4.2	39 - 95	50	
Pyrene	5.00	3.85	76.9	5.00	4.12	82.5	6.93	56 - 104	50	

Surogates	LCS % Recovery	LCS2 % Recovery	Surrogate Limits	Qualifier
p-terphenyl-d14	64.2	85.6	40 - 132	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/14/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES

Loginnum: L0206416
Worknum: WG120426
Method: 8310
Instrument ID: HPLC4
Cal ID: HPLC4-19-JUN-2002
Matrix: Water
Analyst: RDC
Contract #:
Units: ug/L
Sample ID: WG120326-02 LCS File ID: 4L003214.F Run Date: 06/25/2002 18:37
Sample ID: WG120326-03 LCS2 File ID: 4L003215.F Run Date: 06/25/2002 19:34

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Limit	Q
	Known	Found	% REC	Known	Found	% REC				
Acenaphthene	50.0	20.2	40.4	50.0	20.4	40.8	.975	25 - 78	50	
Acenaphthylene	50.0			50.0				25 - 77	50	*
Anthracene	50.0	35.0	70.0	50.0	36.4	72.9	4.07	47 - 101	50	
Benzo(a)anthracene	5.00	4.03	80.6	5.00	4.61	92.2	13.4	50 - 115	50	
Benzo[a]pyrene	5.00	3.06	61.1	5.00	3.81	76.3	22.1	29 - 113	50	
Benzo(b)Fluoranthene	5.00	3.34	66.8	5.00	3.99	79.8	17.8	41 - 110	50	
Benzo[ghi]perylene	5.00	1.86	37.2	5.00	3.17	63.4	52.2	11 - 84	50	#
Benzo[k]fluoranthene	2.50	1.41	56.2	2.50	1.85	74.1	27.4	25 - 107	50	
Chrysene	5.00	3.66	73.2	5.00	4.54	90.9	21.6	39 - 120	50	
Dibenz(a,h)Anthracene	5.00	1.79	35.7	5.00	3.07	61.4	52.9	10 - 92	50	#
Fluoranthene	5.00	3.83	76.6	5.00	4.11	82.2	6.98	55 - 104	50	
Fluorene	50.0	23.8	47.5	50.0	24.1	48.2	1.3	29 - 84	50	
Indeno(1,2,3-cd)pyrene	5.00	2.13	42.6	5.00	3.17	63.4	39.1	16 - 98	50	
Naphthalene	50.0	18.7	37.4	50.0	18.7	37.4	.0733	25 - 68	50	
2-Methylnaphthalene	50.0	19.6	39.2	50.0	19.6	39.2	.0769	26 - 72	50	
1-Methylnaphthalene	50.0	19.2	38.4	50.0	19.2	38.5	.114	26 - 71	50	
Phenanthrene	50.0	27.8	55.6	50.0	29.0	57.9	4.16	39 - 95	50	
Pyrene	5.00	4.01	80.2	5.00	4.34	86.9	7.95	56 - 104	50	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
p-terphenyl-d14	63.5	84.0	40 - 132	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/14/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

AAB#: WG120425

Analytical Method: 8310

Login Number: L0206416

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
062-CEF9-SB1-S-Q2-02	06/20/02	06/21/02	06/24/02	14	3.97	06/26/02	40	1.71	

* EXT = MISSED EXTRACTION HOLD TIME
*ANAL = MISSED ANALYITICAL HOLD TIME

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

AAB#: WG120426

Analytical Method: 8310

Login Number: L0206416

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
062-CEF9-EQB-W-Q2-02	06/20/02	06/21/02	06/24/02	7	3.95	06/25/02	40	1.48	

* EXT = MISSED EXTRACTION HOLD TIME
*ANAL = MISSED ANALYITICAL HOLD TIME

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0206416
Instrument Id: HPLC4
Workgroup (AAB#): WG120425

Method: 8310
Matrix: SOLID

Sample Number	Dilution	Tag	1
L0206416-01	1.00	01	70.6
L0206416-01	1.00	CF01	208
WG120336-01	1.00	01	88.3
WG120336-01	1.00	CF01	87.2
WG120336-02	1.00	01	88.6
WG120336-02	1.00	CF01	89.7
WG120336-03	1.00	01	92.1
WG120336-03	1.00	CF01	91.8

Surrogates	Surrogate Limits		
1 - p-terphenyl-d14	50	-	150

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON ENVIRONMENTAL SERVICES

SURROGATE STANDARDS

Login Number: L0206416

Instrument Id: HPLC4

Workgroup (AAB#): WG120426

Method: 8310

Matrix: WATER

Sample Number	Dilution	Tag	1
L0206416-02	1.00	01	90.0
WG120326-01	1.00	01	81.2
WG120326-01	1.00	CF01	80.6
WG120326-02	1.00	01	64.2
WG120326-02	1.00	CF01	63.5
WG120326-03	1.00	01	85.6
WG120326-03	1.00	CF01	84.0

Surrogates	Surrogate Limits		
1 - p-terphenyl-d14	40	-	132

Underline = Result out of surrogate limits

DL = surrogate diluted out

HPLC4 8310 CALIBRATION

Calib. Data Modified : 6/20/2002 8:52:08 AM

Calculate : External Standard
Based on : Peak Area

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.300 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.300 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Included
Weight : Equal

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)

Signal 1: FLD1 A, Ex=270, Em=335, TT
Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Sig	Lvl	Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
9.370	2	1	1.00000	121.88613	8.20438e-3			Naphthalene #1
		2	5.00000	604.13025	8.27636e-3			
		3	10.00000	1256.01123	7.96171e-3			
		4	20.00000	2522.50317	7.92863e-3			
		5	50.00000	6248.73438	8.00162e-3			
		6	100.00000	1.21595e4	8.22402e-3			
9.388	1	1	1.00000	35.50560	2.81646e-2			Naphthalene #1
		2	5.00000	180.32388	2.77279e-2			
		3	10.00000	372.80032	2.68240e-2			
		4	20.00000	753.95251	2.65269e-2			
		5	50.00000	1881.29065	2.65775e-2			
		6	100.00000	3818.87573	2.61857e-2			
10.995	2	1	1.00000	31.70620	3.15396e-2			Acenaphthylene #2
		2	5.00000	161.28902	3.10003e-2			
		3	10.00000	327.28607	3.05543e-2			
		4	20.00000	658.61700	3.03667e-2			
		5	50.00000	1646.95264	3.03591e-2			
		6	100.00000	3352.51904	2.98283e-2			
11.942	2	1	1.00000	72.22427	1.38458e-2			1-Methylnaphthalene #3

[min]	Sig		[ug/L]			
		2	5.00000	369.24078	1.35413e-2	
		3	10.00000	764.27496	1.30843e-2	
		4	20.00000	1542.24731	1.29681e-2	
		5	50.00000	3853.44678	1.29754e-2	
		6	100.00000	7760.07324	1.28865e-2	
11.959	1	1	1.00000	40.92273	2.44363e-2	1-Methylnaphthalene #3
		2	5.00000	206.59302	2.42022e-2	
		3	10.00000	427.56720	2.33881e-2	
		4	20.00000	858.01282	2.33097e-2	
		5	50.00000	2153.76392	2.32152e-2	
		6	100.00000	4358.92773	2.29414e-2	
12.516	2	1	1.00000	85.91975	1.16388e-2	2-Methylnaphthalene #4
		2	5.00000	431.87616	1.15774e-2	
		3	10.00000	893.57037	1.11911e-2	
		4	20.00000	1796.91260	1.11302e-2	
		5	50.00000	4472.15283	1.11803e-2	
		6	100.00000	8891.12988	1.12472e-2	
12.534	1	1	1.00000	53.13324	1.88206e-2	2-Methylnaphthalene #4
		2	5.00000	268.34698	1.86326e-2	
		3	10.00000	555.46735	1.80029e-2	
		4	20.00000	1119.16992	1.78704e-2	
		5	50.00000	2790.36157	1.79188e-2	
		6	100.00000	5631.00635	1.77588e-2	
12.994	2	1	1.00000	46.04076	2.17199e-2	Acenaphthene #5
		2	5.00000	232.43697	2.15112e-2	
		3	10.00000	481.32138	2.07761e-2	
		4	20.00000	969.13959	2.06369e-2	
		5	50.00000	2425.16016	2.06172e-2	
		6	100.00000	4910.46826	2.03647e-2	
13.012	1	1	1.00000	67.65919	1.47800e-2	Acenaphthene #5
		2	5.00000	339.82239	1.47136e-2	
		3	10.00000	703.58374	1.42129e-2	
		4	20.00000	1418.85522	1.40959e-2	
		5	50.00000	3535.51440	1.41422e-2	
		6	100.00000	7085.17041	1.41140e-2	
13.645	2	1	1.00000	52.90672	1.89012e-2	Fluorene #6
		2	5.00000	269.75366	1.85354e-2	
		3	10.00000	559.61633	1.78694e-2	
		4	20.00000	1129.35339	1.77092e-2	
		5	50.00000	2832.44678	1.76526e-2	
		6	100.00000	5749.89111	1.73916e-2	
13.663	1	1	1.00000	146.98784	6.80328e-3	Fluorene #6
		2	5.00000	734.63800	6.80607e-3	
		3	10.00000	1519.39380	6.58157e-3	
		4	20.00000	3055.26025	6.54609e-3	
		5	50.00000	7607.03076	6.57287e-3	
		6	100.00000	1.51592e4	6.59665e-3	
15.028	2	1	1.00000	59.91370	1.66907e-2	Phenanthrene #7
		2	5.00000	277.70538	1.80047e-2	
		3	10.00000	576.95782	1.73323e-2	
		4	20.00000	1164.06238	1.71812e-2	
		5	50.00000	2921.47241	1.71147e-2	
		6	100.00000	5932.12939	1.68574e-2	
15.046	1	1	1.00000	6.79399	1.47189e-1	Phenanthrene #7
		2	5.00000	27.54959	1.81491e-1	
		3	10.00000	57.20443	1.74812e-1	

Retime [min]	Lvl Sig		Amount [ug/L]			
		4	20.00000	113.53256	1.76161e-1	
		5	50.00000	286.03766	1.74802e-1	
		6	100.00000	586.44727	1.70518e-1	
16.431	2	1	1.00000	96.05915	1.04103e-2	Anthracene #8
		2	5.00000	483.02975	1.03513e-2	
		3	10.00000	1002.81183	9.97196e-3	
		4	20.00000	2019.75476	9.90219e-3	
		5	50.00000	5037.00098	9.92654e-3	
		6	100.00000	9947.86328	1.00524e-2	
16.450	1	1	1.00000	3.26255	3.06509e-1	Anthracene #8
		2	5.00000	15.88479	3.14767e-1	
		3	10.00000	32.94457	3.03540e-1	
		4	20.00000	66.23384	3.01960e-1	
		5	50.00000	165.22198	3.02623e-1	
		6	100.00000	335.92169	2.97688e-1	
17.806	2	1	1.00000e-1	4.17519	2.39510e-2	Fluoranthene #9
		2	5.00000e-1	21.38802	2.33776e-2	
		3	1.00000	44.70066	2.23710e-2	
		4	2.00000	90.59781	2.20756e-2	
		5	5.00000	227.65421	2.19631e-2	
		6	10.00000	464.57758	2.15249e-2	
17.824	1	1	1.00000e-1	3.92421	2.54828e-2	Fluoranthene #9
		2	5.00000e-1	18.78860	2.66119e-2	
		3	1.00000	38.41879	2.60289e-2	
		4	2.00000	78.11402	2.56036e-2	
		5	5.00000	195.60518	2.55617e-2	
		6	10.00000	397.42139	2.51622e-2	
18.809	2	1	1.00000e-1	6.27601	1.59337e-2	Pyrene #10
		2	5.00000e-1	30.01324	1.66593e-2	
		3	1.00000	67.82222	1.47444e-2	
		4	2.00000	137.22350	1.45748e-2	
		5	5.00000	345.94687	1.44531e-2	
		6	10.00000	706.87067	1.41469e-2	
18.828	1	1	1.00000e-1	2.23386	4.47655e-2	Pyrene #10
		2	5.00000e-1	11.53121	4.33606e-2	
		3	1.00000	23.72331	4.21526e-2	
		4	2.00000	47.68803	4.19392e-2	
		5	5.00000	120.33789	4.15497e-2	
21.150	2	1	1.00000	14.27093	7.00725e-2	p-Terphenyl d14 #11*
		2	5.00000	72.39475	6.90658e-2	
		3	10.00000	150.41772	6.64815e-2	
		4	20.00000	304.47540	6.56868e-2	
		5	50.00000	771.85547	6.47790e-2	
		6	100.00000	1553.84106	6.43566e-2	
21.166	1	1	1.00000	3.57698	2.79566e-1	p-Terphenyl d14 #11*
		2	5.00000	16.05081	3.11511e-1	
		3	10.00000	33.17809	3.01404e-1	
		4	20.00000	67.05980	2.98241e-1	
		5	50.00000	170.11554	2.93918e-1	
		6	100.00000	343.67426	2.90973e-1	
22.466	2	1	1.00000e-1	4.39682	2.27437e-2	Benzo(a)anthracene #12
		2	5.00000e-1	21.07132	2.37289e-2	
		3	1.00000	43.86306	2.27982e-2	
		4	2.00000	88.71733	2.25435e-2	
		5	5.00000	223.22693	2.23987e-2	
		6	10.00000	457.02676	2.18806e-2	

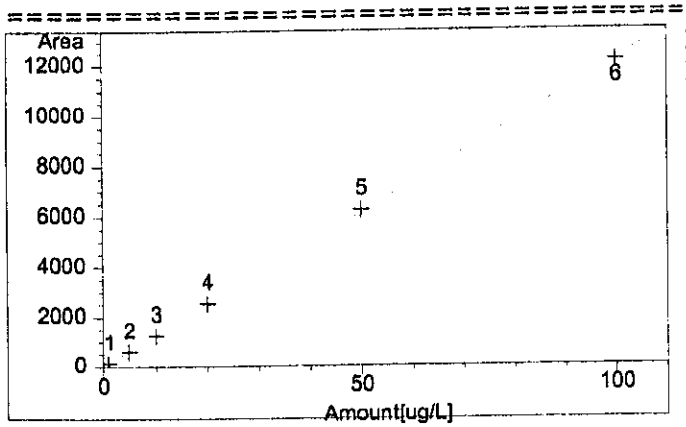
Retime [min]	Lvl Sig		Amount [ug/L]				
22.485	1	1	1.00000e-1	11.92573	8.38523e-3		Benzo(a)anthracene #12
		2	5.00000e-1	57.40008	8.71079e-3		
		3	1.00000	118.62704	8.42978e-3		
		4	2.00000	240.55975	8.31394e-3		
		5	5.00000	604.25543	8.27465e-3		
		6	10.00000	1235.15466	8.09615e-3		
23.337	2	1	1.00000e-1	6.15006	1.62600e-2		Chrysene #13
		2	5.00000e-1	30.91224	1.61748e-2		
		3	1.00000	64.16498	1.55848e-2		
		4	2.00000	130.01958	1.53823e-2		
		5	5.00000	327.80472	1.52530e-2		
		6	10.00000	668.69543	1.49545e-2		
23.357	1	1	1.00000e-1	2.37958	4.20241e-2		Chrysene #13
		2	5.00000e-1	11.79001	4.24088e-2		
		3	1.00000	24.51306	4.07946e-2		
		4	2.00000	49.27580	4.05879e-2		
		5	5.00000	123.19585	4.05858e-2		
		6	10.00000	252.46683	3.96092e-2		
26.064	2	1	1.00000e-1	4.57150	2.18747e-2		Benzo(b)fluoranthene #
		2	5.00000e-1	22.64764	2.20774e-2		
		3	1.00000	46.88808	2.13274e-2		
		4	2.00000	95.03743	2.10443e-2		
		5	5.00000	238.78767	2.09391e-2		
		6	10.00000	487.47803	2.05137e-2		
26.079	1	1	1.00000e-1	5.48437	1.82336e-2		Benzo(b)fluoranthene #
		2	5.00000e-1	27.72870	1.80319e-2		
		3	1.00000	57.64222	1.73484e-2		
		4	2.00000	116.48901	1.71690e-2		
		5	5.00000	292.99271	1.70653e-2		
		6	10.00000	595.50562	1.67925e-2		
27.495	2	1	5.00000e-2	2.19067	2.28241e-2		Benzo(k)fluoranthene #
		2	2.50000e-1	10.30655	2.42564e-2		
		3	5.00000e-1	21.77243	2.29648e-2		
		4	1.00000	43.78368	2.28396e-2		
		5	2.50000	109.96069	2.27354e-2		
		6	5.00000	224.33841	2.22878e-2		
27.510	1	1	5.00000e-2	16.92470	2.95426e-3		Benzo(k)fluoranthene #
		2	2.50000e-1	83.46227	2.99537e-3		
		3	5.00000e-1	174.54939	2.86452e-3		
		4	1.00000	351.08521	2.84831e-3		
		5	2.50000	882.24713	2.83367e-3		
		6	5.00000	1792.05200	2.79010e-3		
28.596	2	1	1.00000e-1	3.90243	2.56251e-2		Benzo(a)pyrene #16
		2	5.00000e-1	16.74469	2.98602e-2		
		3	1.00000	36.86427	2.71265e-2		
		4	2.00000	74.65511	2.67899e-2		
		5	5.00000	189.32166	2.64101e-2		
		6	10.00000	390.50266	2.56080e-2		
28.614	1	1	1.00000e-1	19.55420	5.11399e-3		Benzo(a)pyrene #16
		2	5.00000e-1	97.80115	5.11241e-3		
		3	1.00000	203.63187	4.91082e-3		
		4	2.00000	413.85422	4.83262e-3		
		5	5.00000	1045.54724	4.78218e-3		
		6	10.00000	2137.81030	4.67768e-3		
30.454	2	1	1.00000e-1	1.00112	9.98882e-2		Dibenz(a,h)anthracene
		2	5.00000e-1	5.15278	9.70350e-2		

[min]	Sig		[ug/L]			
		3	1.00000	11.97529	8.35053e-2	
		4	2.00000	21.19111	9.43792e-2	
		5	5.00000	52.23464	9.57219e-2	
		6	10.00000	107.04004	9.34230e-2	
30.474	1	1	1.00000e-1	2.22269	4.49905e-2	Dibenz(a,h)anthracene
		2	5.00000e-1	11.53541	4.33448e-2	
		3	1.00000	23.79175	4.20314e-2	
		4	2.00000	48.37757	4.13415e-2	
		5	5.00000	122.97315	4.06593e-2	
		6	10.00000	251.97131	3.96871e-2	
31.264	2	1	1.00000e-1	2.34328	4.26753e-2	Benzo(g,h,i)perylene #
		2	5.00000e-1	9.25292	5.40370e-2	
		3	1.00000	18.48934	5.40852e-2	
		4	2.00000	36.61276	5.46258e-2	
		5	5.00000	92.88844	5.38280e-2	
		6	10.00000	190.01508	5.26274e-2	
31.287	1	1	1.00000e-1	3.18651	3.13823e-2	Benzo(g,h,i)perylene #
		2	5.00000e-1	16.16728	3.09267e-2	
		3	1.00000	33.82579	2.95632e-2	
		4	2.00000	68.83204	2.90562e-2	
		5	5.00000	174.47961	2.86566e-2	
		6	10.00000	358.59521	2.78866e-2	
32.225	2	1	1.00000e-1	3.42590	2.91894e-2	Indeno(1,2,3-cd)pyrene
		2	5.00000e-1	21.58914	2.31598e-2	
		3	1.00000	46.04763	2.17166e-2	
		4	2.00000	94.45714	2.11736e-2	
		5	5.00000	240.26486	2.08104e-2	
		6	10.00000	492.90811	2.02878e-2	
32.233	1	1	1.00000e-1	6.77440	1.47614e-2	Indeno(1,2,3-cd)pyrene
		2	5.00000e-1	33.25379	1.50359e-2	
		3	1.00000	68.94070	1.45052e-2	
		4	2.00000	139.75822	1.43104e-2	
		5	5.00000	351.40439	1.42286e-2	
		6	10.00000	717.39240	1.39394e-2	

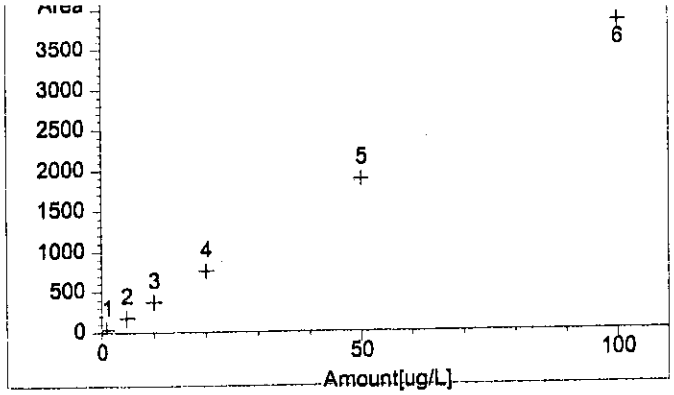
Peak Sum Table

No Entries in table

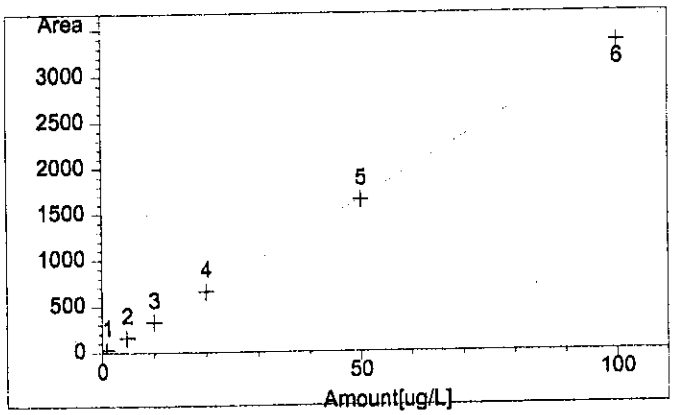
Calibration Curves



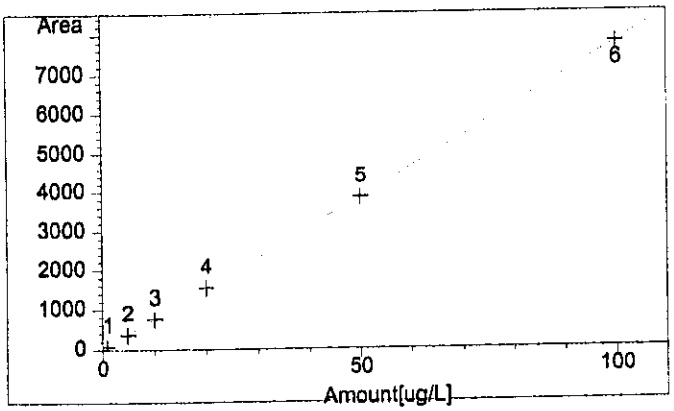
Naphthalene #1 at exp. RT: 9.370
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99990
Residual Std. Dev.: 70.57790
Formula: y = mx + b
m: 121.93837
b: 33.17626
x: Amount [ug/L]
y: Area



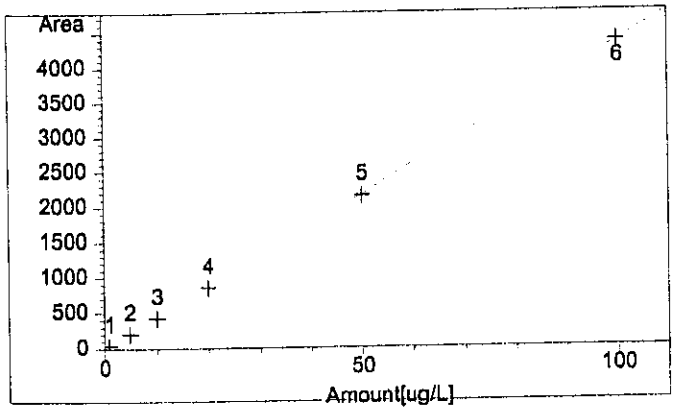
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 10.65995
Formula: y = mx + b
m: 38.17062
b: -8.14096
x: Amount [ug/L]
y: Area



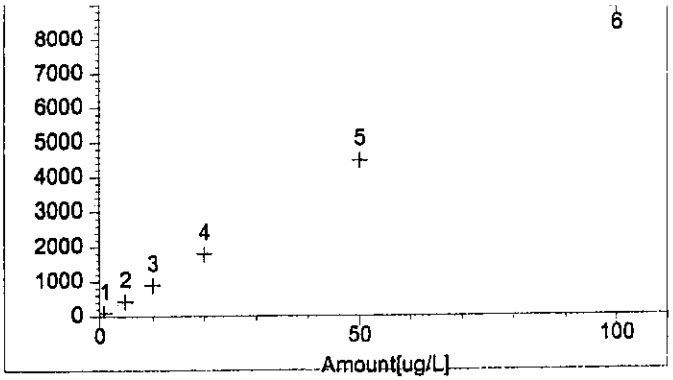
Acenaphthylene #2 at exp. RT: 10.995
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99997
Residual Std. Dev.: 11.19977
Formula: y = mx + b
m: 33.48891
b: -7.22387
x: Amount [ug/L]
y: Area



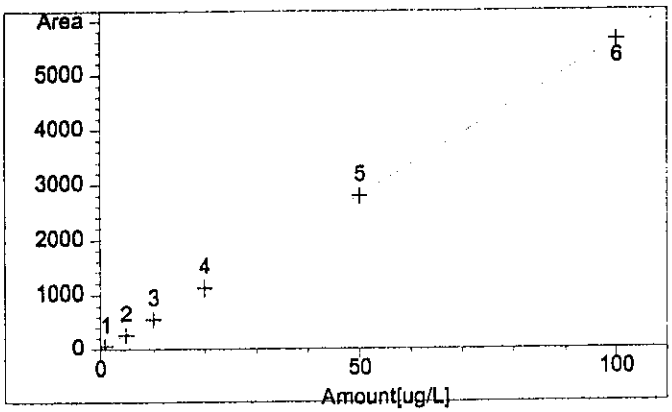
1-Methylnaphthalene #3 at exp. RT: 11.942
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 10.69411
Formula: y = mx + b
m: 77.62274
b: -10.90308
x: Amount [ug/L]
y: Area



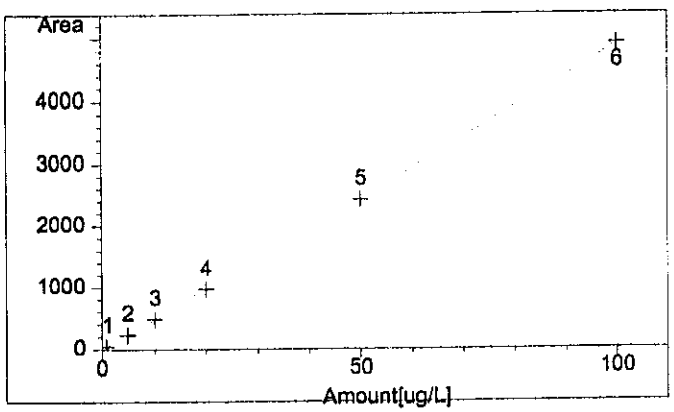
1-Methylnaphthalene #3 at exp. RT: 11.959
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 10.09079
Formula: y = mx + b
m: 43.58179
b: -8.63216
x: Amount [ug/L]
y: Area



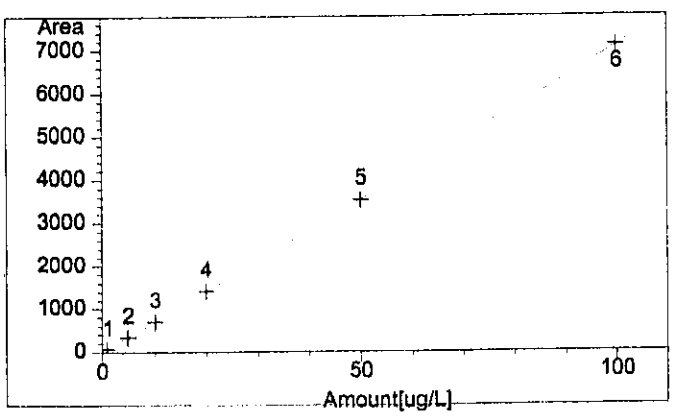
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 14.18056
Formula: y = mx + b
m: 89.00733
b: 2.31405
x: Amount [ug/L]
y: Area



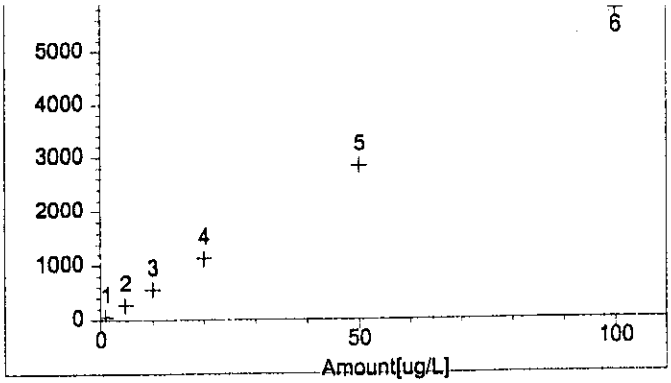
2-Methylnaphthalene #4 at exp. RT: 12.534
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99999
Residual Std. Dev.: 9.72550
Formula: y = mx + b
m: 56.30384
b: -7.86135
x: Amount [ug/L]
y: Area



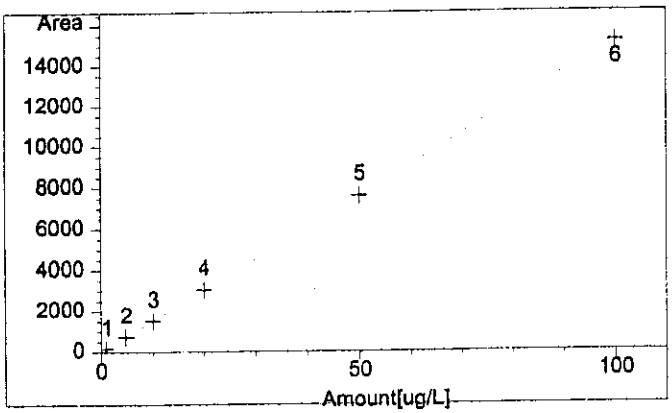
Acenaphthene #5 at exp. RT: 12.994
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99998
Residual Std. Dev.: 11.55898
Formula: y = mx + b
m: 49.09260
b: -9.52241
x: Amount [ug/L]
y: Area



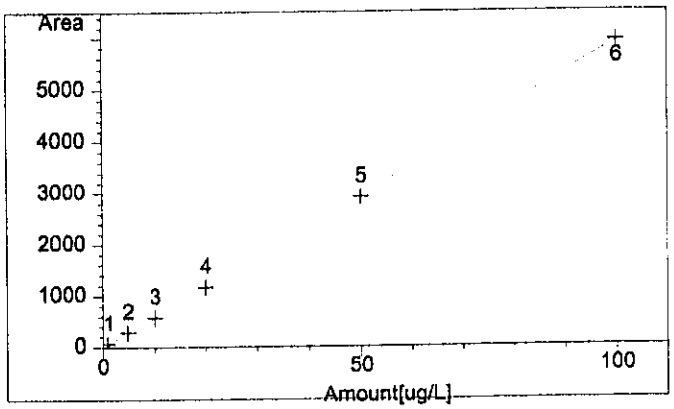
Acenaphthene #5 at exp. RT: 13.012
FLD1 A, Ex=270, Em=335, TT
Correlation: 1.00000
Residual Std. Dev.: 5.91307
Formula: y = mx + b
m: 70.88847
b: -4.94990
x: Amount [ug/L]
y: Area



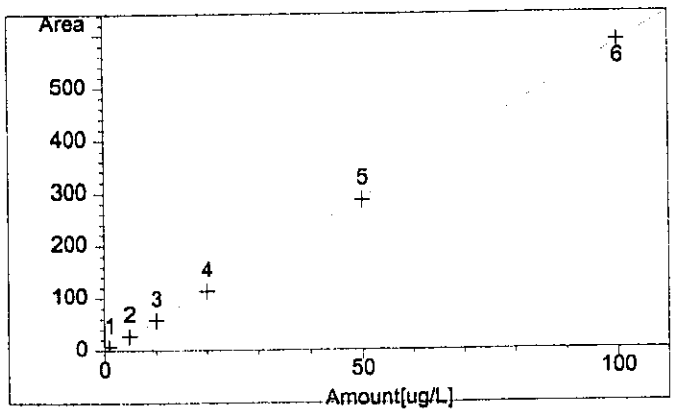
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99997
Residual Std. Dev.: 16.43131
Formula: y = mx + b
m: 57.48589
b: -14.05816
x: Amount [ug/L]
y: Area



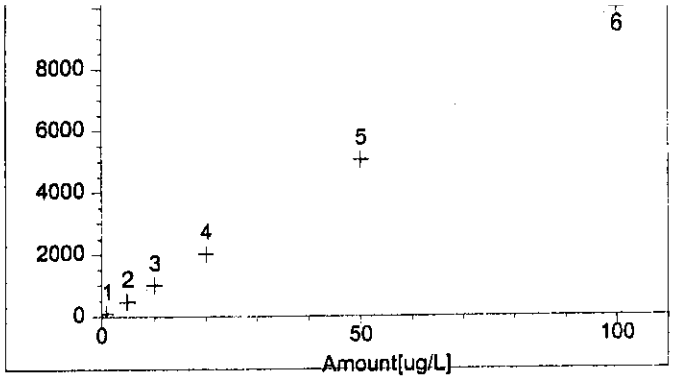
Fluorene #6 at exp. RT: 13.663
FLD1 A, Ex=270, Em=335, TT
Correlation: 1.00000
Residual Std. Dev.: 18.11896
Formula: y = mx + b
m: 151.72220
b: 3.12530e-1
x: Amount [ug/L]
y: Area



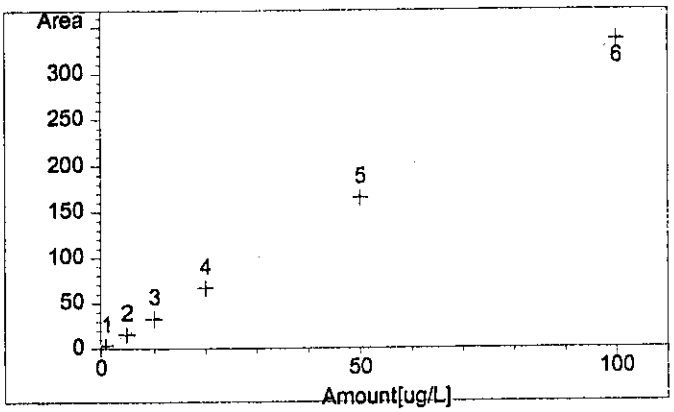
Phenanthrene #7 at exp. RT: 15.028
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99997
Residual Std. Dev.: 18.06229
Formula: y = mx + b
m: 59.29212
b: -13.72762
x: Amount [ug/L]
y: Area



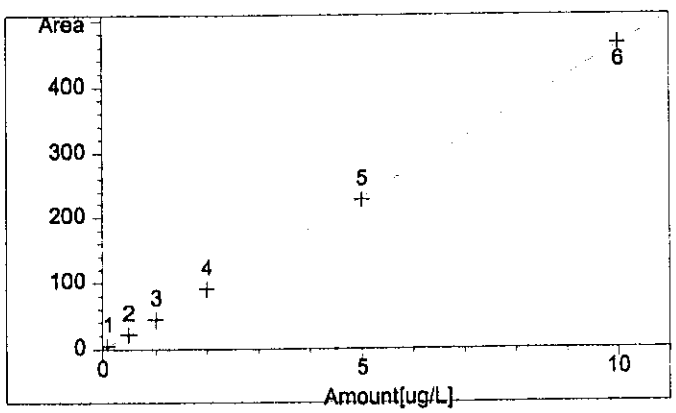
Phenanthrene #7 at exp. RT: 15.046
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 3.01563
Formula: y = mx + b
m: 5.85144
b: -1.54327
x: Amount [ug/L]
y: Area



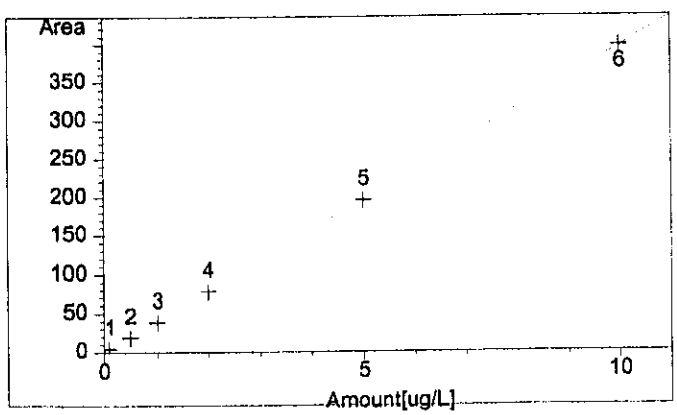
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99998
Residual Std. Dev.: 27.85848
Formula: y = mx + b
m: 99.66958
b: 6.85395
x: Amount [ug/L]
y: Area



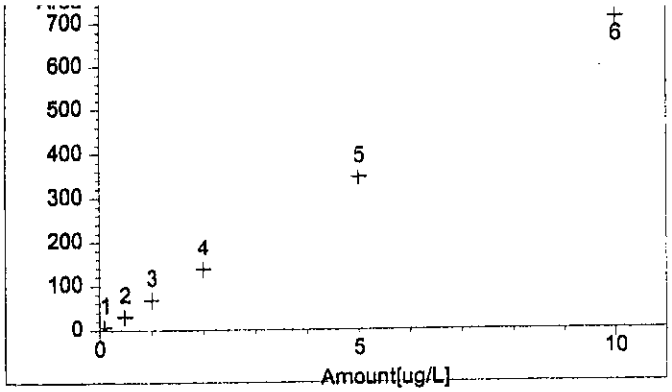
Anthracene #8 at exp. RT: 16.450
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 1.04930
Formula: y = mx + b
m: 3.35612
b: -6.81187e-1
x: Amount [ug/L]
y: Area



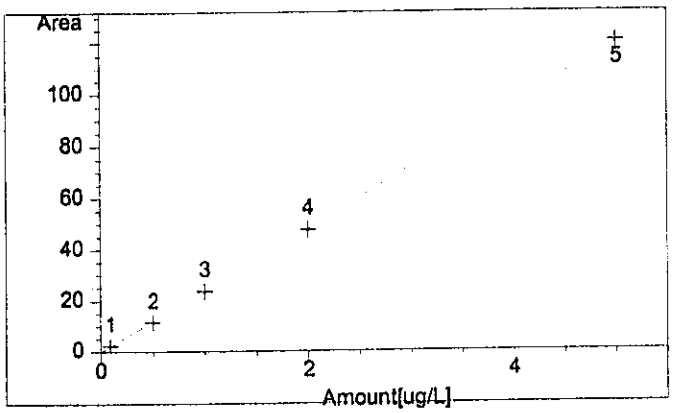
Fluoranthene #9 at exp. RT: 17.806
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99995
Residual Std. Dev.: 1.79879
Formula: y = mx + b
m: 46.44231
b: -1.53335
x: Amount [ug/L]
y: Area



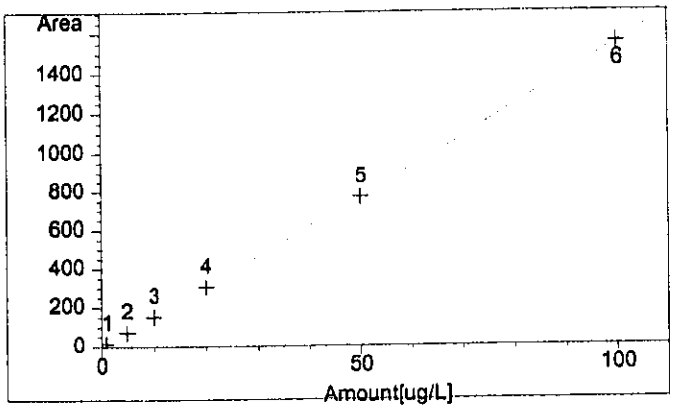
Fluoranthene #9 at exp. RT: 17.824
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 1.22857
Formula: y = mx + b
m: 39.72087
b: -9.33708e-1
x: Amount [ug/L]
y: Area



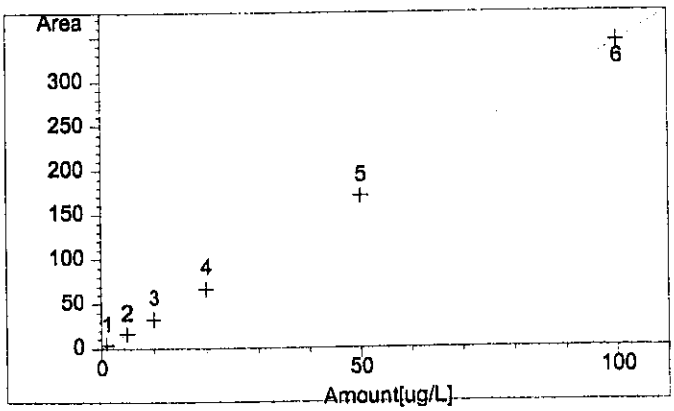
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99994
Residual Std. Dev.: 3.15034
Formula: y = mx + b
m: 70.72982
b: -3.06030
x: Amount [ug/L]
y: Area



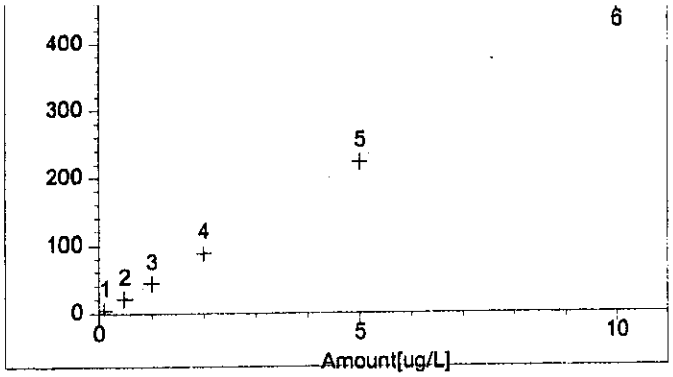
Pyrene #10 at exp. RT: 18.828
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99999
Residual Std. Dev.: 0.23587
Formula: y = mx + b
m: 24.10078
b: -2.92066e-1
x: Amount [ug/L]
y: Area



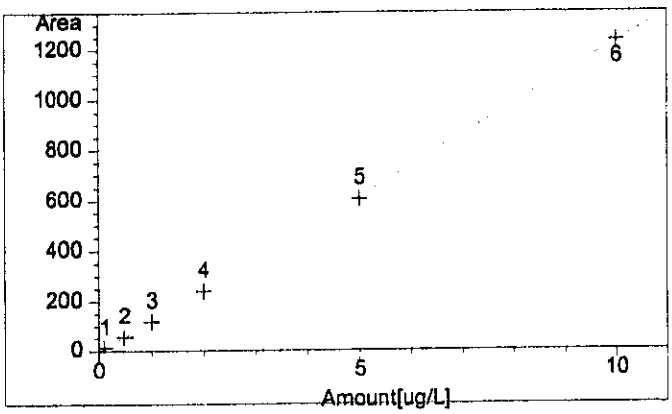
p-Terphenyl d14 #11* at exp. RT: 21.150
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 2.89474
Formula: y = mx + b
m: 15.55717
b: -3.76840
x: Amount [ug/L]
y: Area



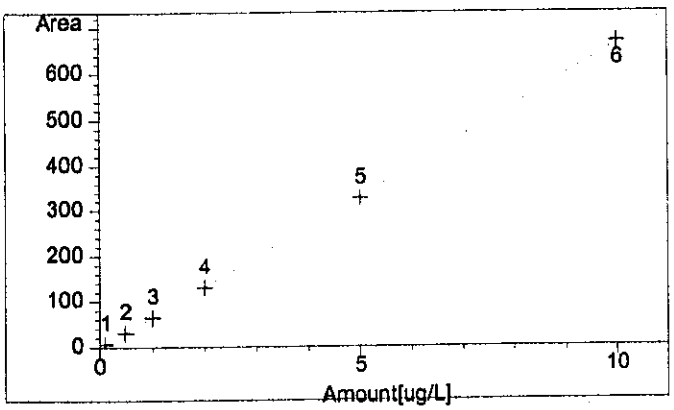
p-Terphenyl d14 #11* at exp. RT: 21.166
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 0.89731
Formula: y = mx + b
m: 3.43813
b: -8.33877e-1
x: Amount [ug/L]
y: Area



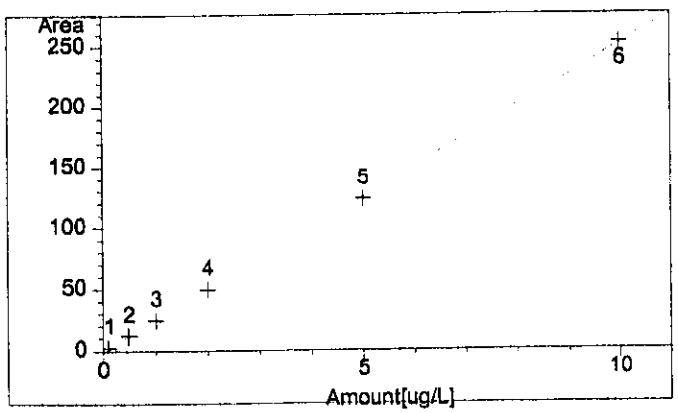
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99994
Residual Std. Dev.: 2.08992
Formula: y = mx + b
m: 45.66201
b: -1.57303
x: Amount [ug/L]
y: Area



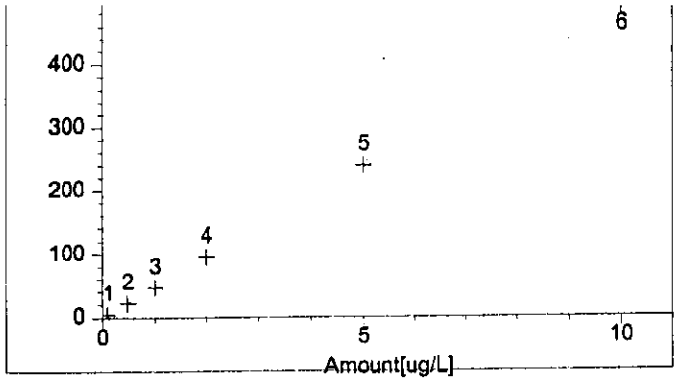
Benzo(a)anthracene #12 at exp. RT: 22.485
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99994
Residual Std. Dev.: 5.24449
Formula: y = mx + b
m: 123.41194
b: -3.93419
x: Amount [ug/L]
y: Area



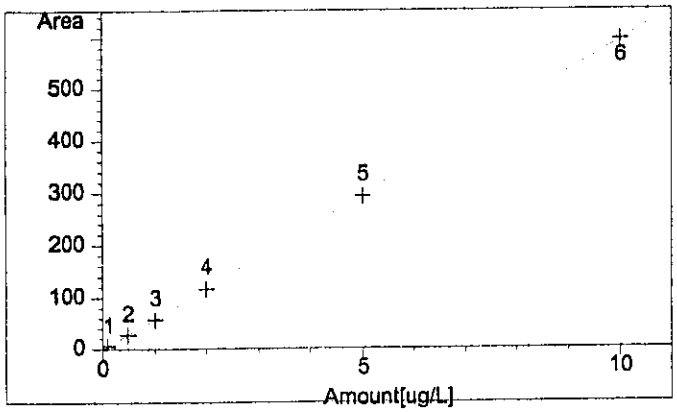
Chrysene #13 at exp. RT: 23.337
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99995
Residual Std. Dev.: 2.60337
Formula: y = mx + b
m: 66.84989
b: -2.23727
x: Amount [ug/L]
y: Area



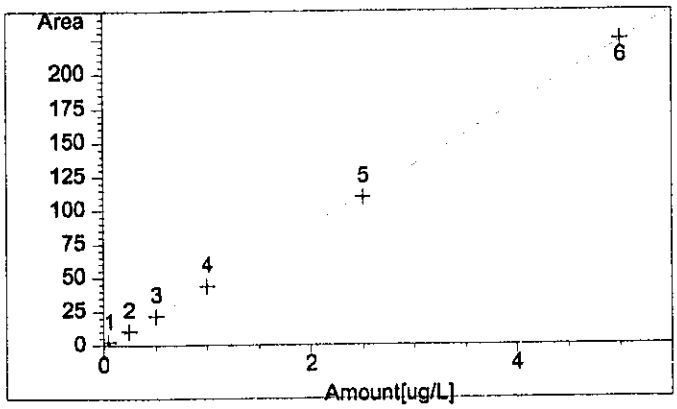
Chrysene #13 at exp. RT: 23.357
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99993
Residual Std. Dev.: 1.16361
Formula: y = mx + b
m: 25.21041
b: -7.56072e-1
x: Amount [ug/L]
y: Area



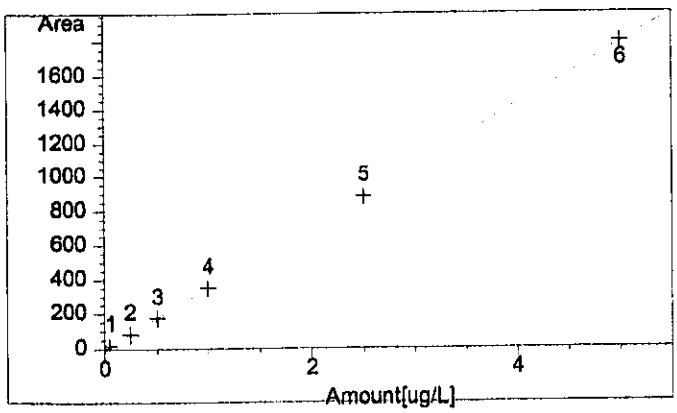
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99995
Residual Std. Dev.: 1.93804
Formula: y = mx + b
m: 48.71807
b: -1.53510
x: Amount [ug/L]
y: Area



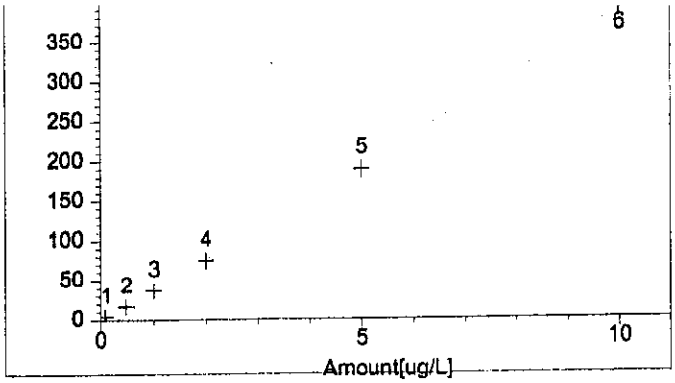
Benzo(b)fluoranthene #14 at exp. RT: 26.0
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 1.87852
Formula: y = mx + b
m: 59.54246
b: -1.66387
x: Amount [ug/L]
y: Area



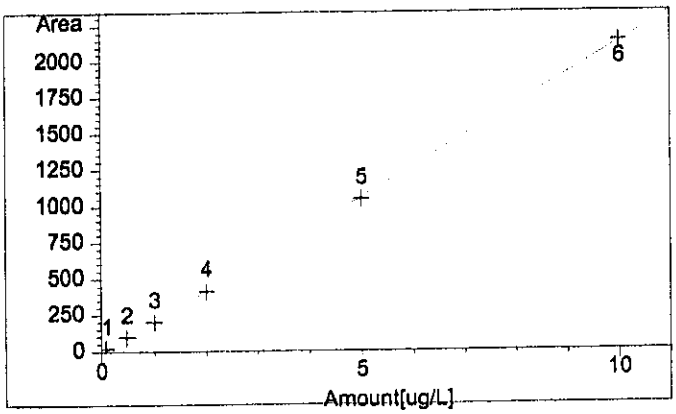
Benzo(k)fluoranthene #15 at exp. RT: 27.4
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99995
Residual Std. Dev.: 0.87725
Formula: y = mx + b
m: 44.83633
b: -6.60775e-1
x: Amount [ug/L]
y: Area



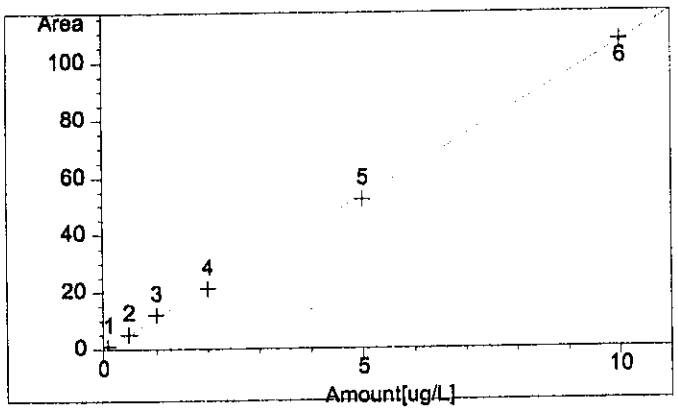
Benzo(k)fluoranthene #15 at exp. RT: 27.5
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 5.46079
Formula: y = mx + b
m: 358.31240
b: -4.56924
x: Amount [ug/L]
y: Area



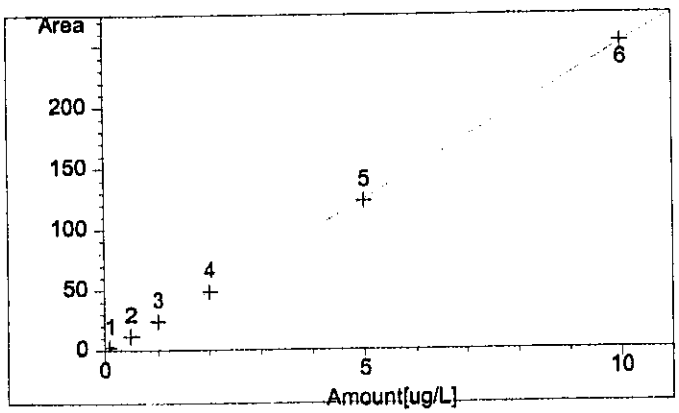
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99988
Residual Std. Dev.: 2.45350
Formula: y = mx + b
m: 39.02551
b: -1.98338
x: Amount [ug/L]
y: Area



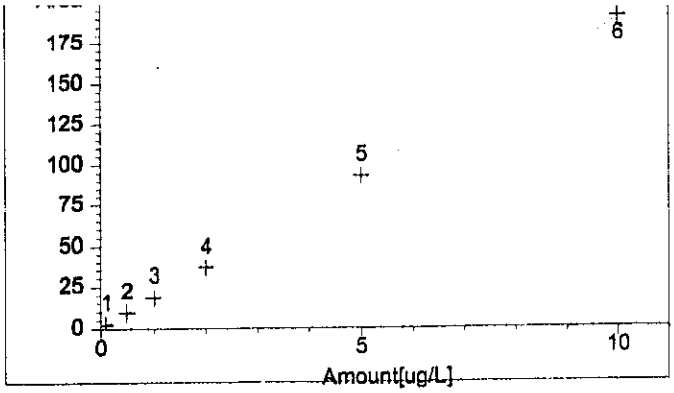
Benzo(a)pyrene #16 at exp. RT: 28.614
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99994
Residual Std. Dev.: 9.37532
Formula: y = mx + b
m: 213.72380
b: -8.15195
x: Amount [ug/L]
y: Area



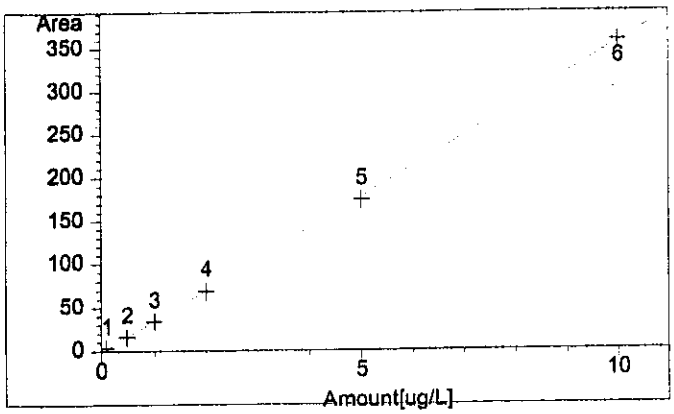
Dibenz(a,h)anthracene #17 at exp. RT: 30.
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99983
Residual Std. Dev.: 0.78590
Formula: y = mx + b
m: 10.64996
b: 7.22431e-2
x: Amount [ug/L]
y: Area



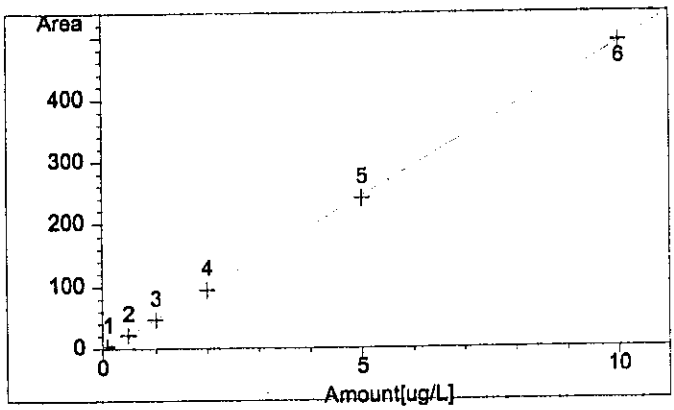
Dibenz(a,h)anthracene #17 at exp. RT: 30.
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99993
Residual Std. Dev.: 1.23730
Formula: y = mx + b
m: 25.19279
b: -1.10201
x: Amount [ug/L]
y: Area



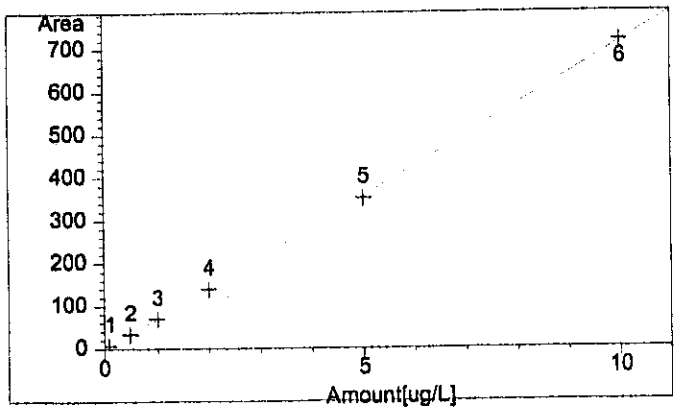
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99992
Residual Std. Dev.: 0.96678
Formula: y = mx + b
m: 18.95449
b: -4.21667e-1
x: Amount [ug/L]
y: Area



Benzo(g,h,i)perylene #18 at exp. RT: 31.2
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99991
Residual Std. Dev.: 1.93390
Formula: y = mx + b
m: 35.84471
b: -1.66074
x: Amount [ug/L]
y: Area



Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99992
Residual Std. Dev.: 2.46375
Formula: y = mx + b
m: 49.34055
b: -2.72022
x: Amount [ug/L]
y: Area



Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99995
Residual Std. Dev.: 2.87271
Formula: y = mx + b
m: 71.69796
b: -2.29402
x: Amount [ug/L]
y: Area

==========

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\061902\4L003191.D Sample Name: WG120164-08 ALT
HPLC4 6/20/2002 9:17:38 AM RDC

1,1 SOS0060-26/60-27 LEVEL 4 ALT STD @ 20 ppm

==========

Injection Date : 6/19/2002 11:39:56 PM Seq. Line : 9

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.387	20.0	19.539	-2.3
1-Methylnaphthalene #3	11.957	20.0	19.522	-2.4
2-Methylnaphthalene #4	12.532	20.0	19.193	-4.0
Acenaphthene #5	13.010	20.0	20.092	0.5
Fluorene #6	13.663	20.0	19.978	-0.1
Phenanthrene #7	15.046	20.0	19.187	-4.1
Anthracene #8	16.447	20.0	20.188	0.9
Fluoranthene #9	17.820	2.0	1.994	-0.3
Pyrene #10	18.822	2.0	1.884	-5.8
p-Terphenyl d14 #11*	Not Found	20.0	Not Found	
Benzo(a)anthracene #12	22.478	2.0	1.838	-8.1
Chrysene #13	23.345	2.0	1.912	-4.4
Benzo(b)fluoranthene #14	26.064	2.0	1.959	-2.0
Benzo(k)fluoranthene #15	27.495	1.0	0.882	-11.8
Benzo(a)pyrene #16	28.603	2.0	2.046	2.3
Dibenz(a,h)anthracene #1	30.467	2.0	2.145	7.3
Benzo(g,h,i)perylene #18	31.284	2.0	1.972	-1.4
Indeno(1,2,3-cd)pyrene #	32.234	2.0	1.897	-5.2

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.372	20.0	20.073	0.4
Acenaphthylene #2	10.995	20.0	19.000	-5.0
1-Methylnaphthalene #3	11.942	20.0	19.740	-1.3
2-Methylnaphthalene #4	12.517	20.0	19.492	-2.5
Acenaphthene #5	12.996	20.0	20.090	0.4
Fluorene #6	13.647	20.0	19.779	-1.1
Phenanthrene #7	15.030	20.0	18.845	-5.8
Anthracene #8	16.432	20.0	20.458	2.3
Fluoranthene #9	17.804	2.0	1.944	-2.8
Pyrene #10	18.806	2.0	1.915	-4.3
p-Terphenyl d14 #11*	Not Found	20.0	Not Found	
Benzo(a)anthracene #12	22.462	2.0	1.853	-7.4
Chrysene #13	23.330	2.0	1.921	-4.0
Benzo(b)fluoranthene #14	26.048	2.0	1.966	-1.7
Benzo(k)fluoranthene #15	27.480	1.0	0.880	-12.0
Benzo(a)pyrene #16	28.587	2.0	2.026	1.3
Dibenz(a,h)anthracene #1	30.451	2.0	2.159	7.9
Benzo(g,h,i)perylene #18	31.267	2.0	1.941	-2.9
Indeno(1,2,3-cd)pyrene #	32.219	2.0	1.894	-5.3

= Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\062502\4L003212.D Sample Name: WG120427-01 CCV
HPLC4 6/26/2002 2:09:40 PM RDC

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========

Injection Date : 6/25/2002 4:44:37 PM Seq. Line : 2

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.333	20.0	19.728	-1.4
1-Methylnaphthalene #3	11.897	20.0	19.771	-1.1
2-Methylnaphthalene #4	12.467	20.0	19.792	-1.0
Acenaphthene #5	12.944	20.0	19.807	-1.0
Fluorene #6	13.592	20.0	19.798	-1.0
Phenanthrene #7	14.976	20.0	19.634	-1.8
Anthracene #8	16.374	20.0	19.484	-2.6
Fluoranthene #9	17.745	2.0	2.008	0.4
Pyrene #10	18.749	2.0	2.035	1.8
p-Terphenyl d14 #11*	21.081	20.0	19.443	-2.8
Benzo(a)anthracene #12	22.399	2.0	1.963	-1.9
Chrysene #13	23.260	2.0	1.987	-0.7
Benzo(b)fluoranthene #14	25.973	2.0	1.955	-2.3
Benzo(k)fluoranthene #15	27.399	1.0	0.980	-2.0
Benzo(a)pyrene #16	28.510	2.0	1.958	-2.1
Dibenz(a,h)anthracene #1	30.358	2.0	1.983	-0.9
Benzo(g,h,i)perylene #18	31.167	2.0	2.000	0.0
Indeno(1,2,3-cd)pyrene #	32.113	2.0	1.927	-3.6

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.318	20.0	20.271	1.4
Acenaphthylene #2	10.939	20.0	19.824	-0.9
1-Methylnaphthalene #3	11.882	20.0	19.856	-0.7
2-Methylnaphthalene #4	12.452	20.0	20.029	0.1
Acenaphthene #5	12.928	20.0	19.833	-0.8
Fluorene #6	13.577	20.0	19.776	-1.1
Phenanthrene #7	14.961	20.0	19.356	-3.2
Anthracene #8	16.358	20.0	19.902	-0.5
Fluoranthene #9	17.728	2.0	1.964	-1.8
Pyrene #10	18.732	2.0	1.974	-1.3
p-Terphenyl d14 #11*	21.067	20.0	19.691	-1.5
Benzo(a)anthracene #12	22.384	2.0	1.954	-2.3
Chrysene #13	23.245	2.0	1.961	-1.9
Benzo(b)fluoranthene #14	25.957	2.0	1.962	-1.9
Benzo(k)fluoranthene #15	27.383	1.0	0.995	-0.5
Benzo(a)pyrene #16	28.494	2.0	2.026	1.3
Dibenz(a,h)anthracene #1	30.342	2.0	1.976	-1.2
Benzo(g,h,i)perylene #18	31.151	2.0	1.979	-1.1
Indeno(1,2,3-cd)pyrene #	32.094	2.0	1.998	-0.1

= Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\062502\4L003221.D Sample Name: WG120427-02 CCV
HPLC4 6/26/2002 2:14:23 PM RDC

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========

Injection Date : 6/26/2002 1:14:27 AM Seq. Line : 11

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.380	20.0	20.108	0.5
1-Methylnaphthalene #3	11.950	20.0	20.175	0.9
2-Methylnaphthalene #4	12.524	20.0	20.195	1.0
Acenaphthene #5	13.002	20.0	20.167	0.8
Fluorene #6	13.655	20.0	20.098	0.5
Phenanthrene #7	15.043	20.0	20.050	0.3
Anthracene #8	16.450	20.0	19.771	-1.1
Fluoranthene #9	17.827	2.0	2.001	0.0
Pyrene #10	18.832	2.0	2.026	1.3
p-Terphenyl d14 #11*	21.174	20.0	19.419	-2.9
Benzo(a)anthracene #12	22.496	2.0	1.979	-1.1
Chrysene #13	23.368	2.0	1.978	-1.1
Benzo(b)fluoranthene #14	26.091	2.0	2.007	0.4
Benzo(k)fluoranthene #15	27.532	1.0	0.997	-0.3
Benzo(a)pyrene #16	28.641	2.0	1.961	-1.9
Dibenz(a,h)anthracene #1	30.508	2.0	1.974	-1.3
Benzo(g,h,i)perylene #18	31.312	2.0	1.948	-2.6
Indeno(1,2,3-cd)pyrene #	32.259	2.0	1.970	-1.5

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.361	20.0	20.476	2.4
Acenaphthylene #2	10.985	20.0	19.979	-0.1
1-Methylnaphthalene #3	11.930	20.0	20.102	0.5
2-Methylnaphthalene #4	12.504	20.0	20.269	1.3
Acenaphthene #5	12.982	20.0	20.056	0.3
Fluorene #6	13.635	20.0	19.946	-0.3
Phenanthrene #7	15.023	20.0	19.552	-2.2
Anthracene #8	16.429	20.0	20.036	0.2
Fluoranthene #9	17.806	2.0	1.984	-0.8
Pyrene #10	18.811	2.0	1.992	-0.4
p-Terphenyl d14 #11*	21.155	20.0	19.807	-1.0
Benzo(a)anthracene #12	22.476	2.0	1.980	-1.0
Chrysene #13	23.348	2.0	1.986	-0.7
Benzo(b)fluoranthene #14	26.070	2.0	1.983	-0.8
Benzo(k)fluoranthene #15	27.511	1.0	0.990	-1.0
Benzo(a)pyrene #16	28.620	2.0	1.956	-2.2
Dibenz(a,h)anthracene #1	30.487	2.0	1.977	-1.1
Benzo(g,h,i)perylene #18	31.291	2.0	2.024	1.2
Indeno(1,2,3-cd)pyrene #	32.241	2.0	1.974	-1.3

= Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\062502\4L003226.D Sample Name: WG120427-03 CCV
HPLC4 6/26/2002 4:26:01 PM RDC

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========

Injection Date : 6/26/2002 5:57:33 AM Seq. Line : 16

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.381	20.0	19.911	-0.4
1-Methylnaphthalene #3	11.954	20.0	19.968	-0.2
2-Methylnaphthalene #4	12.528	20.0	20.023	0.1
Acenaphthene #5	13.006	20.0	20.053	0.3
Fluorene #6	13.659	20.0	20.096	0.5
Phenanthrene #7	15.044	20.0	19.594	-2.0
Anthracene #8	16.450	20.0	19.752	-1.2
Fluoranthene #9	17.829	2.0	1.971	-1.4
Pyrene #10	18.834	2.0	1.963	-1.9
p-Terphenyl d14 #11*	21.172	20.0	19.586	-2.1
Benzo(a)anthracene #12	22.494	2.0	1.958	-2.1
Chrysene #13	23.368	2.0	1.942	-2.9
Benzo(b)fluoranthene #14	26.094	2.0	1.973	-1.4
Benzo(k)fluoranthene #15	27.530	1.0	0.993	-0.7
Benzo(a)pyrene #16	28.636	2.0	1.945	-2.8
Dibenz(a,h)anthracene #1	30.495	2.0	1.849	-7.6
Benzo(g,h,i)perylene #18	31.300	2.0	1.951	-2.4
Indeno(1,2,3-cd)pyrene #	32.241	2.0	2.001	0.0

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.363	20.0	20.528	2.6
Acenaphthylene #2	10.991	20.0	19.979	-0.1
1-Methylnaphthalene #3	11.937	20.0	20.116	0.6
2-Methylnaphthalene #4	12.511	20.0	20.278	1.4
Acenaphthene #5	12.989	20.0	20.055	0.3
Fluorene #6	13.641	20.0	19.947	-0.3
Phenanthrene #7	15.026	20.0	19.535	-2.3
Anthracene #8	16.432	20.0	20.001	0.0
Fluoranthene #9	17.810	2.0	1.987	-0.6
Pyrene #10	18.816	2.0	1.995	-0.2
p-Terphenyl d14 #11*	21.155	20.0	19.827	-0.9
Benzo(a)anthracene #12	22.476	2.0	1.975	-1.3
Chrysene #13	23.351	2.0	1.973	-1.3
Benzo(b)fluoranthene #14	26.075	2.0	2.227	11.3
Benzo(k)fluoranthene #15	27.512	1.0	0.973	-2.7
Benzo(a)pyrene #16	28.617	2.0	1.949	-2.5
Dibenz(a,h)anthracene #1	30.479	2.0	1.848	-7.6
Benzo(g,h,i)perylene #18	31.281	2.0	2.003	0.1
Indeno(1,2,3-cd)pyrene #	32.225	2.0	1.990	-0.5

= Failed 15.0% Criteria

Sequence Table:

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	accn blk	8310	1	Sample		
2	2	WG120164-01 STD6	8310	1	Sample		
3	3	WG120164-02 STD6	8310	1	Sample		
4	4	WG120164-03 STD5	8310	1	Sample		
5	5	WG120164-04 STD4	8310	1	Sample		
6	6	WG120164-05 STD3	8310	1	Sample		
7	7	WG120164-06 STD2	8310	1	Sample		
8	8	WG120164-07 STD1	8310	1	Sample		
9	9	WG120164-08 ALT	8310	1	Sample		
10	10	WG120073-01 WBLK	8310	1	Sample		
11	11	WG120073-02 WLCS	8310	1	Sample		
12	12	WG120073-03 WLCS	8310	1	Sample		
13	13	L0206140-11 REEX	8310	1	Sample		
14	14	L0206140-12 REEX	8310	1	Sample		
15	15	L0206146-01 REEX	8310	1	Sample		
16	16	L0206146-02 REEX	8310	1	Sample		
17	17	WG120174-01 CCV	8310	1	Sample		

No	1	1	8310	4L003183	01:01		accn blk
No	2	2	8310	4L003184	02:01	SOS 58-26	WG120164-01 ST
No	3	3	8310	4L003185	03:01	SOS 59-38	WG120164-02 ST
No	4	4	8310	4L003186	04:01	DIL'N of SOS 58-26/ 59-38	WG120164-03 ST
No	5	5	8310	4L003187	05:01		WG120164-04 ST
No	6	6	8310	4L003188	06:01		WG120164-05 ST
No	7	7	8310	4L003189	07:01		WG120164-06 ST
No	8	8	8310	4L003190	08:01		WG120164-07 ST
No	9	9	8310	4L003191	09:01	SOS 60-26/60-27 DIL'N	WG120164-08 AL
No	10	10	8310	4L003192	10:01		WG120073-01 WB
No	11	11	8310	4L003193	11:01		WG120073-02 WL
No	12	12	8310	4L003194	12:01		WG120073-03 WL
No	13	13	8310	4L003195	13:01	SURR. LOW	L0206140-11 RE
No	14	14	8310	4L003196	14:01	SURR. LOW	L0206140-12 RE
No	15	15	8310	4L003197	15:01	SURR. LOW	L0206146-01 RE
No	16	16	8310	4L003198	16:01		L0206146-02 RE
No	17	17	8310	4L003199	17:01	SOS 58-26/59-38 DIL'N.	WG120174-01 CC

RDC 6/20/02

6/20/02

HPLC Laboratory Maintenance Log

Analysis Date/Time June 19, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 061902
Analyst Initials RDC SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ___ ___ 8330

Daily Check
- ☑ Mobile phase reservoir
- ☑ System pressure 117 bar
- ☑ Waste container

Returned to Control?
Yes ____ No ____

Additional Maintenance
Problem: Column re-installed

Action Taken: Re-calibration

Comments

Re-extracts of L0206140-11 & 12 and L0206164-01 confirm the low % recovery of surrogate.

L0206164-02 surr. recovery was within limits & will be reported out of holding time.

RDC

Reviewed By: DR 6/20/02

1/28/12

Sequence Table:

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	accn blk	8310	1	Sample		
2	2	WG120427-01 CCV	8310	1	Sample		
3	3	WG120326-01 WBLK	8310	1	Sample		
4	4	WG120326-02 WLCS	8310	1	Sample		
5	5	WG120326-03 WLCS	8310	1	Sample		
6	6	L0206416-02 831W	8310	1	Sample		
7	7	L0206417-04 831W	8310	1	Sample		
8	8	WG120336-01 SBLK	8310	1	Sample		
9	9	WG120336-02 SLCS	8310	1	Sample		
10	10	WG120336-03 SLCS	8310	1	Sample		
11	11	WG120427-02 CCV	8310	1	Sample		
12	12	L0206416-01 831S	8310	1	Sample		
13	13	L0206417-01 831S	8310	1	Sample		
14	14	L0206417-02 831S	8310	1	Sample		
15	15	L0206417-03 831S	8310	1	Sample		
16	11	WG120427-03 CCV	8310	1	Sample		

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310	4L003211	01:01		accn blk
No	2	2	8310	4L003212	02:01	SOS 59-38/58-26	WG120427-01 CC
No	3	3	8310	4L003213	03:01		WG120326-01 WB
No	4	4	8310	4L003214	04:01		WG120326-02 WL
No	5	5	8310	4L003215	05:01		WG120326-03 WL
No	6	6	8310	4L003216	06:01		L0206416-02 83
No	7	7	8310	4L003217	07:01		L0206417-04 83
No	8	8	8310	4L003218	08:01		WG120336-01 SB
No	9	9	8310	4L003219	09:01		WG120336-02 SL
No	10	10	8310	4L003220	10:01		WG120336-03 SL
No	11	11	8310	4L003221	11:01	SOS 59-38/58-26	WG120427-02 CC
No	12	12	8310	4L003222	12:01		L0206416-01 83
No	13	13	8310	4L003223	13:01	Re 5X	L0206417-01 83
No	14	14	8310	4L003224	14:01		L0206417-02 83
No	15	15	8310	4L003225	15:01		L0206417-03 83
No	16	11	8310	4L003226	16:01	SOS 59-38/58-26	WG120427-03 CC

RDC 6/26/02

6/28/02

KEMRON ENVIRONMENTAL SERVICES
HPLC Laboratory Maintenance Log

Analysis Date/Time June 25, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 062502
Analyst Initials BHC SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ____ 8330

Daily Check
- ☑ Mobile phase reservoir
- ☑ System pressure 118 bar
- ☑ Waste container

Returned to Control?
Yes ____ No ____

Additional Maintenance
Problem: _____

Action Taken: _____

Comments

Reviewed By: RK 6/27/02

Volume 186
Page 107

Parameter: 8310-S SOP #: EXHPLC2 Revision #: 6a
Extraction Analyst(s): CAF TV/KD Analyst(s): CAF
Date/Time Extracted: 6-24-02 @ 0945 Date TV/KD: 6-24-02
Spike/Surrogate Analyst: CAF Witness: DD
Surrogate #: ESS0040-50 Earliest Hold Date: 7-04-02
Spike #: A = ESS0040-34 Spike #: B = —

Extraction Work Group WG 120336
Analytical Work Group WG 120425

Extract Relinquished By: CAF
Extract Received By & Date: Trac 6/24/02

	Sample ID	Test Code	pH √ <2	pH √ N	pH √ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	Emulsions √ BN	Emulsions √ N	Comments
1	Blank					30.04 g	100 ul		1 mL	T				WG 120336-
2	LCS					.07 g		500 ul		C				WG 120336-
3	LCS Dup					.06 g				C				WG 120336-
4	06-416-01 6-24-01 CAF	8310				.01 g				C				X
5	06-417-01					.02 g				C				
6	-02					.04 g				C				
7	-03					.04 g				C				
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

CAF 6-24-02

Methylene Chloride Lot #: 42015
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetone, tr. K Lot #: 41264
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: EK2152

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C					
Sonication	3550B	✓				
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3664A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: [signature] Date: 06/24/02

Extraction Notes For Volume # 186 Page # 127

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: ~~NONE~~ CAF 6-24-02
* SX06-416-01 Thick + Stuck to Side of Zymark as it concentrated to 1ml

Clean-Up Anomalies: N/A

Supervisor Review: _____ Date: _____

Parameter: 8310 H,O SOP #: EXHPLC1 Revision #: 6
Extraction Analyst(s): RLK, DP TV/KD Analyst(s): DP
Date/Time Extracted: 06/24/02 0900 Date TV/KD: 06/24/02
Spike/Surrogate Analyst: RLK/DP Witness: DP/MD
Surrogate #: ES50040-50 Earliest Hold Date: 06/27/02
Spike #: A = ES50041-01 Spike #: B = —

Extraction Work Group WG 120326
Analytical Work Group WG 120424

Extract Relinquished By: CAF
Extract Received By & Date: RLK 6/24/02

	Sample ID	Test Code	pH √ <2	N	>12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	BN	N	Comments
1	Blank			✓		1L	100 uL		1 mL	T				WG 120326-01
2	LCS			✓		↓	↓	500 uL	↓	C				WG ↓ -02
3	LCS DUP			✓		↓	↓	↓	↓	C				W/G ↓ -03
4	06-416-02	8310		✓		960 mL	↓		↓	T				
5	06-417-04	↓		✓		890 mL	↓		↓	T				
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

CAF 6-24-02

Methylene Chloride Lot #: 1/2015
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: 41264
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: Fortified Lot #: ER2183
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: ER2152

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3664A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 6-24-02

Extraction Notes For Volume # 186 Page # 099

General Comments: None

Extraction Anomalies: None

Concentration Anomalies: NONE

Clean-Up Anomalies: NA

Supervisor Review: _____ Date: _____

2.2.7.2 Sample Data

7,1

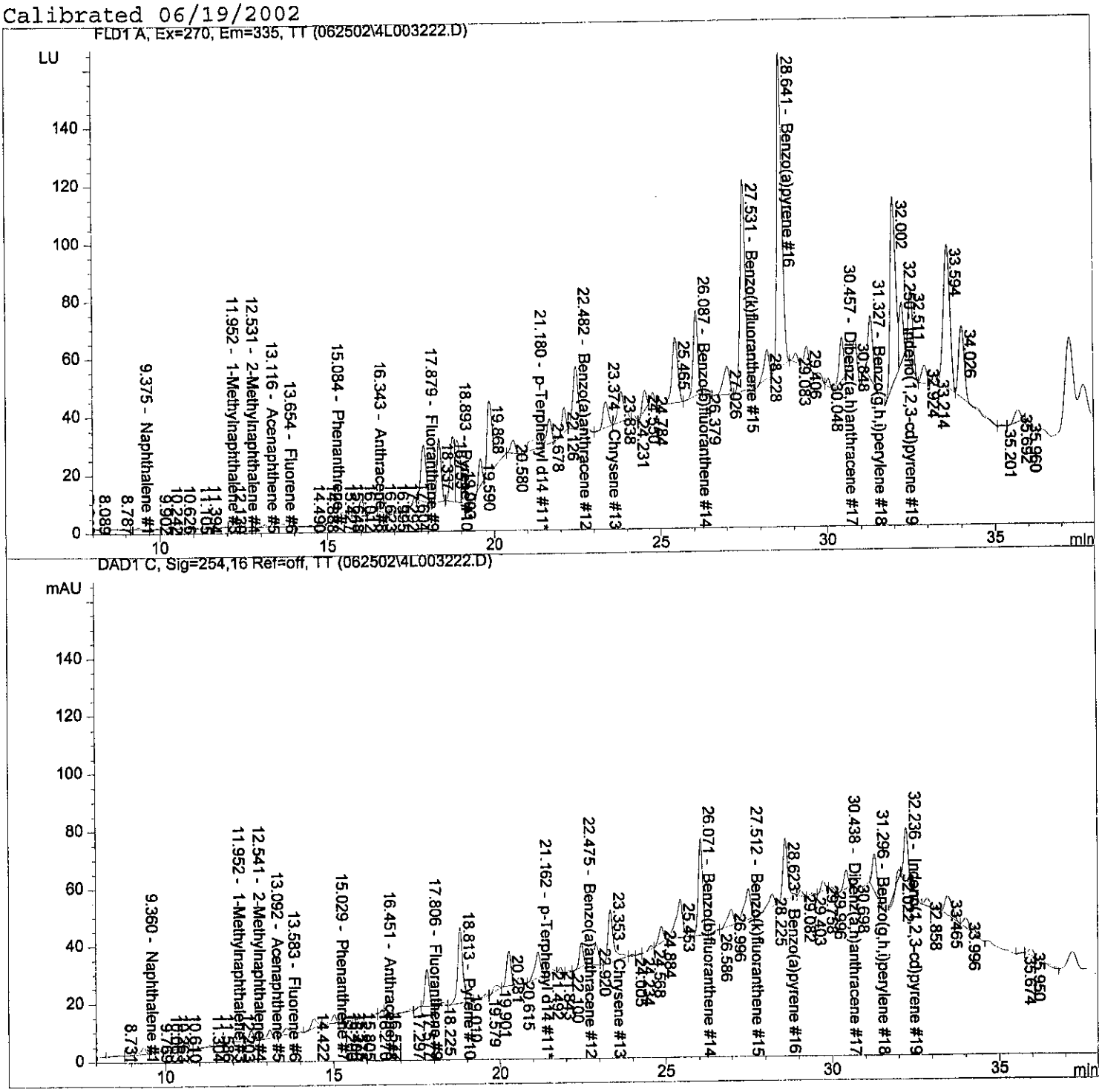
==========

Injection Date : 6/26/2002 2:11:00 AM
Sample Name : L0206416-01 831S
Acq. Operator : RDC

Seq. Line : 12
Vial : 12
Inj : 1
Inj Volume : 8 µl

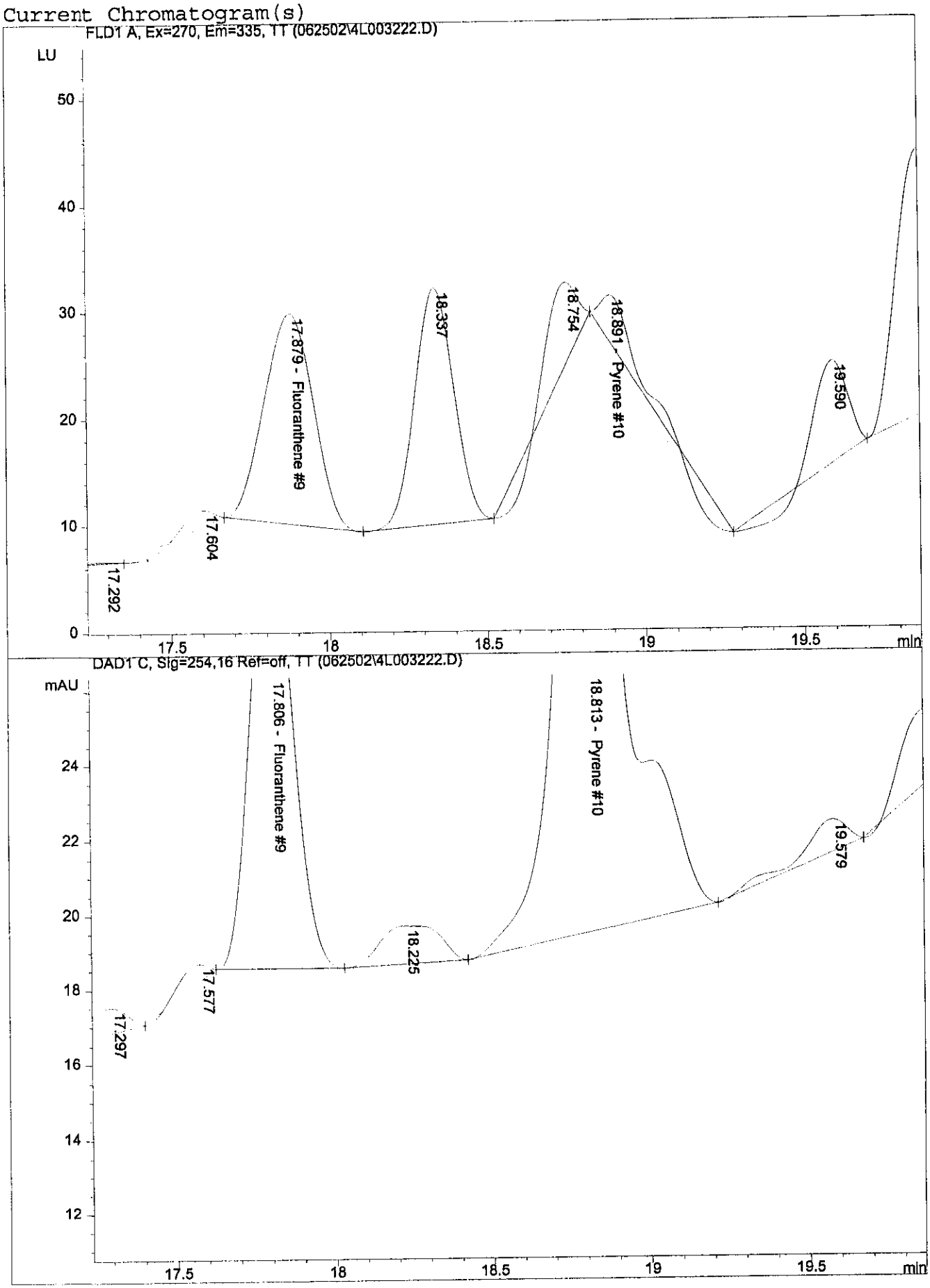
Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/26/2002 2:22:38 PM by RDC
(modified after loading)

Calibrated 06/19/2002

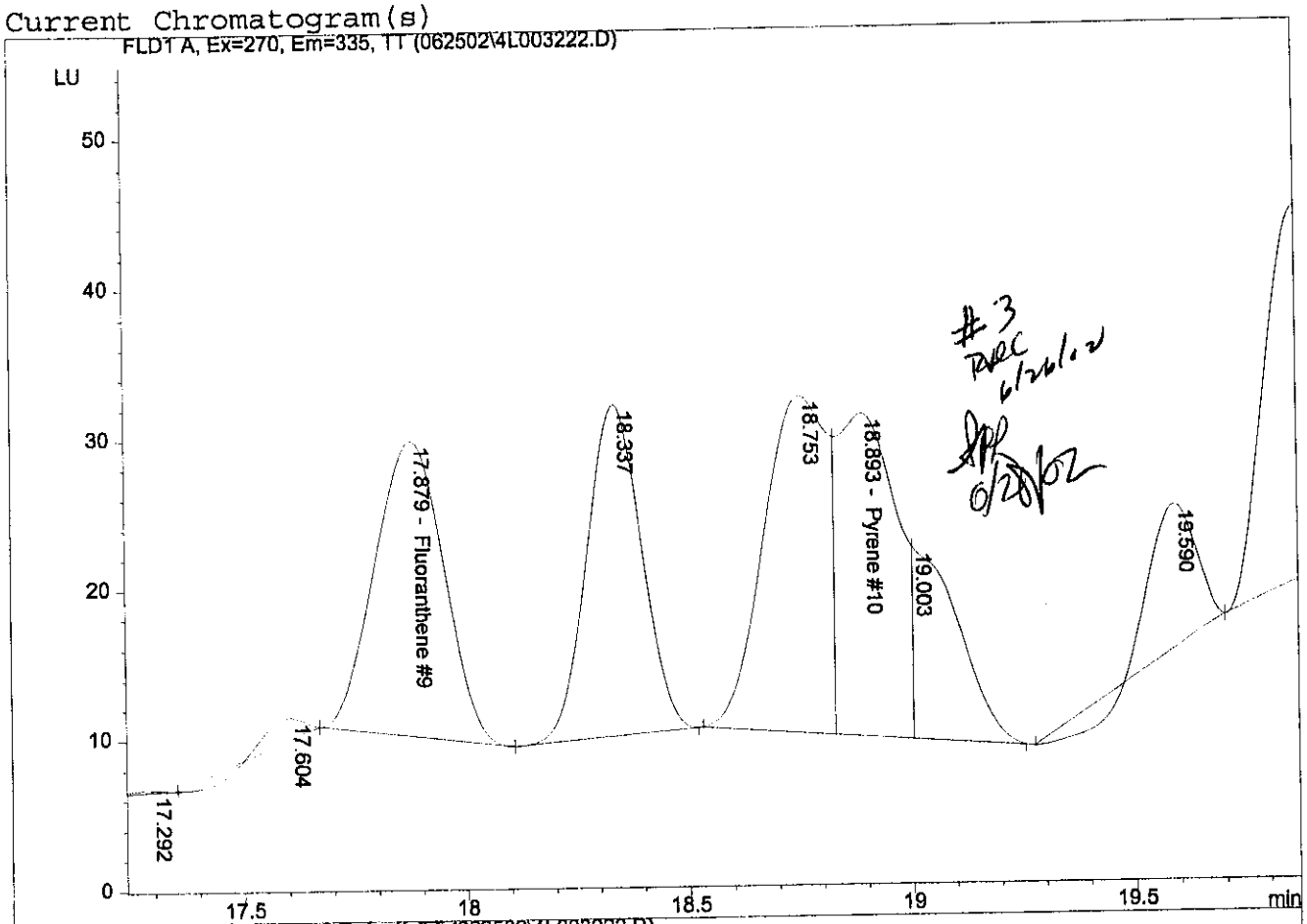


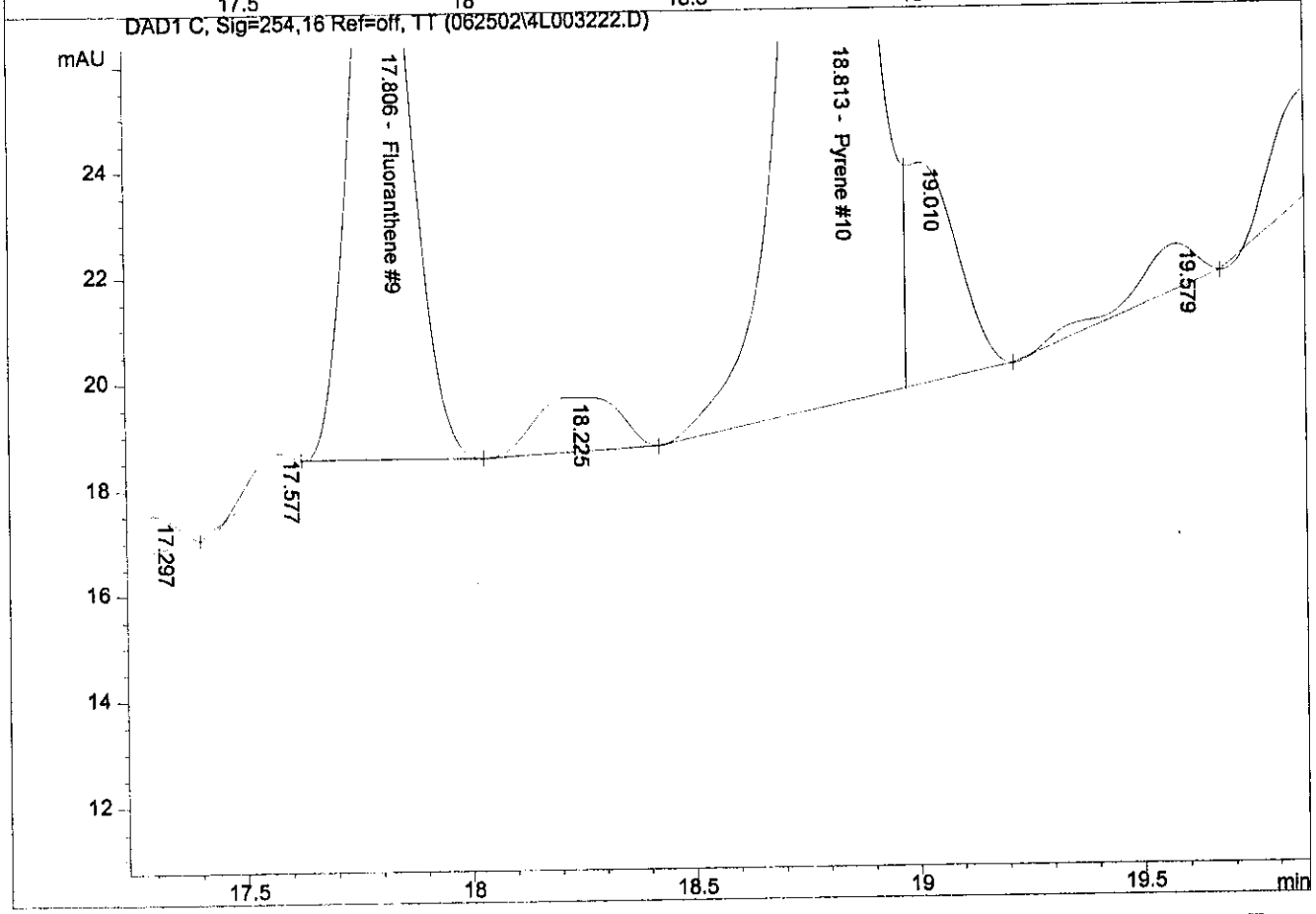
277

Current Chromatogram(s)

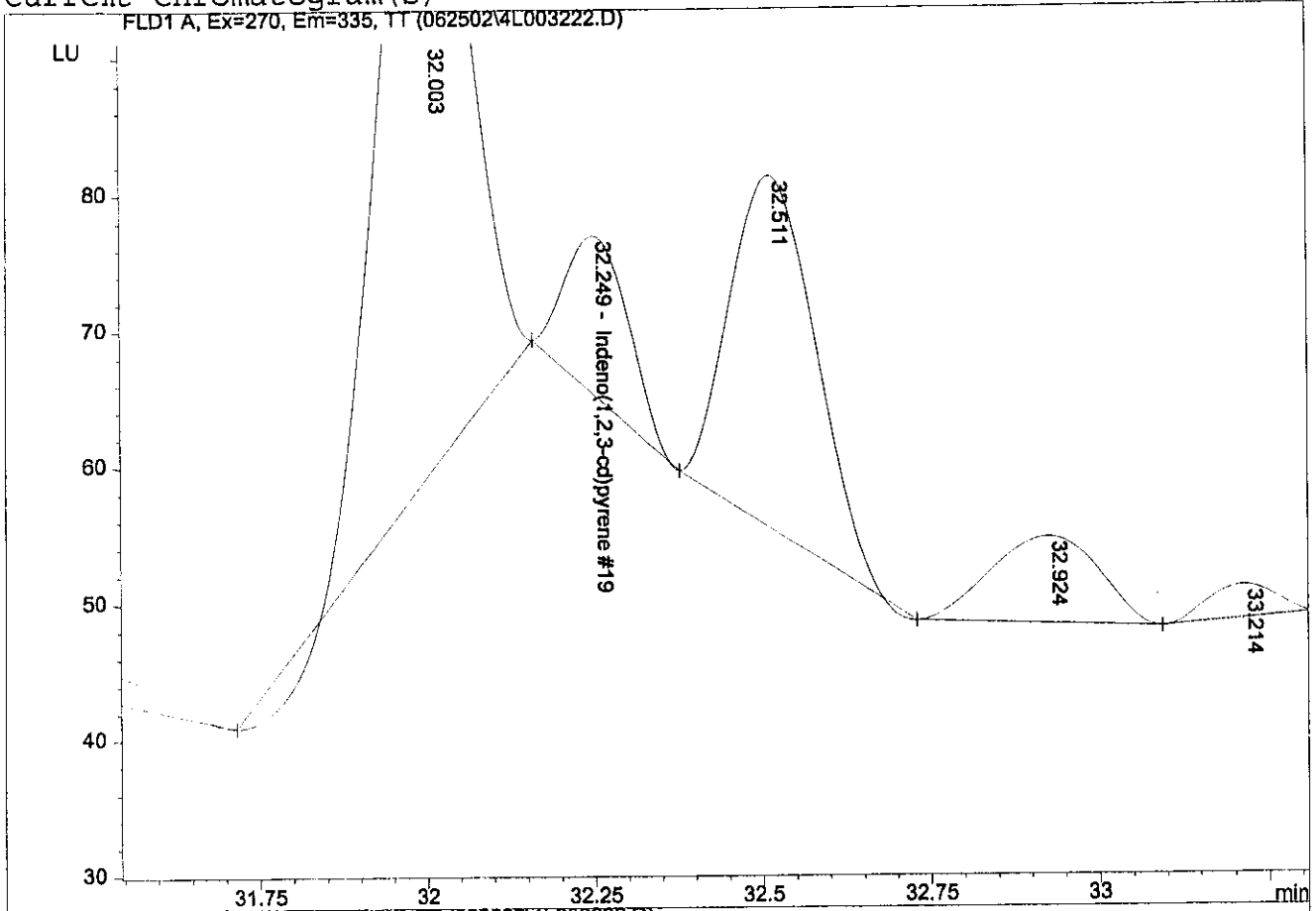


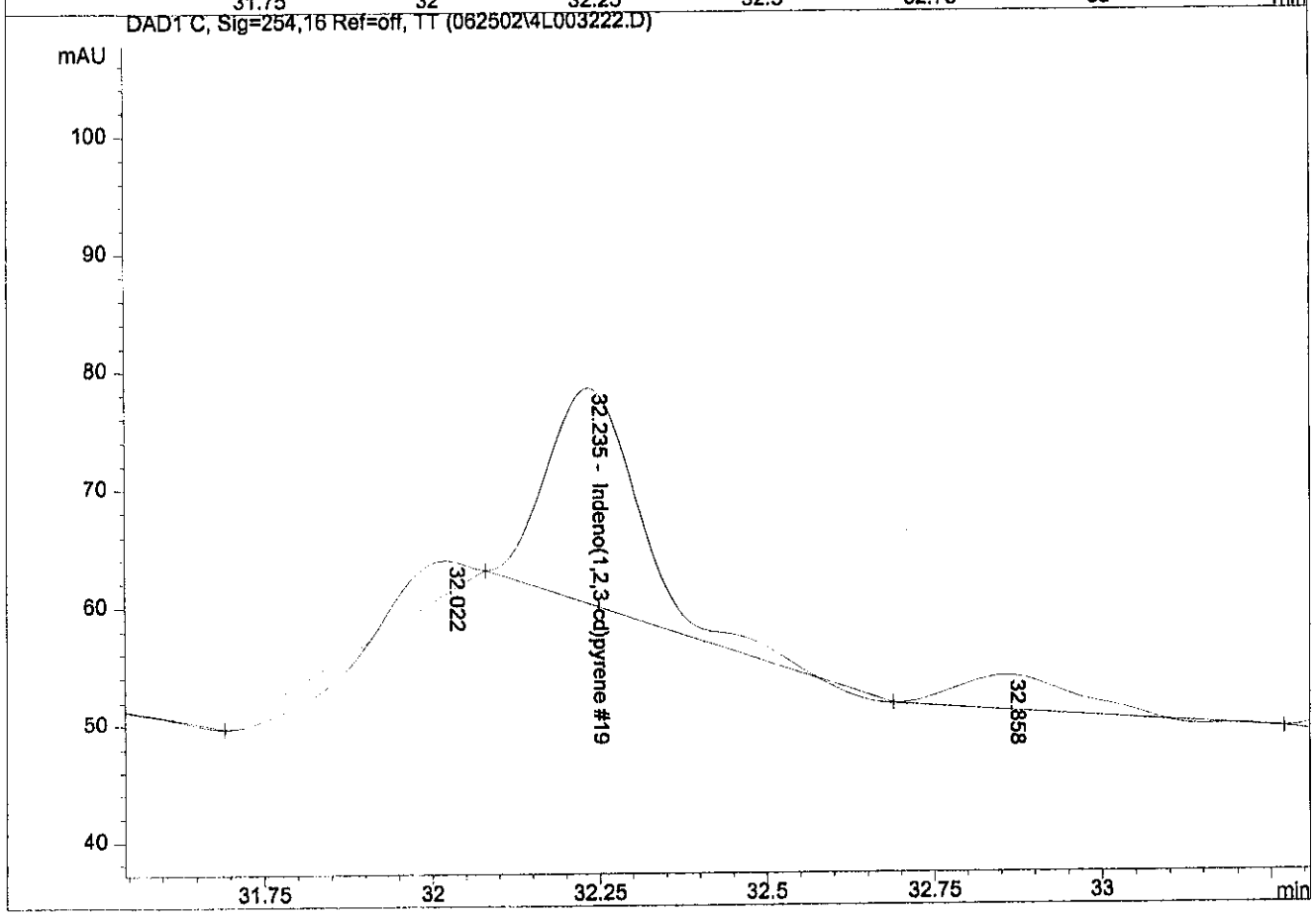
Current Chromatogram(s)



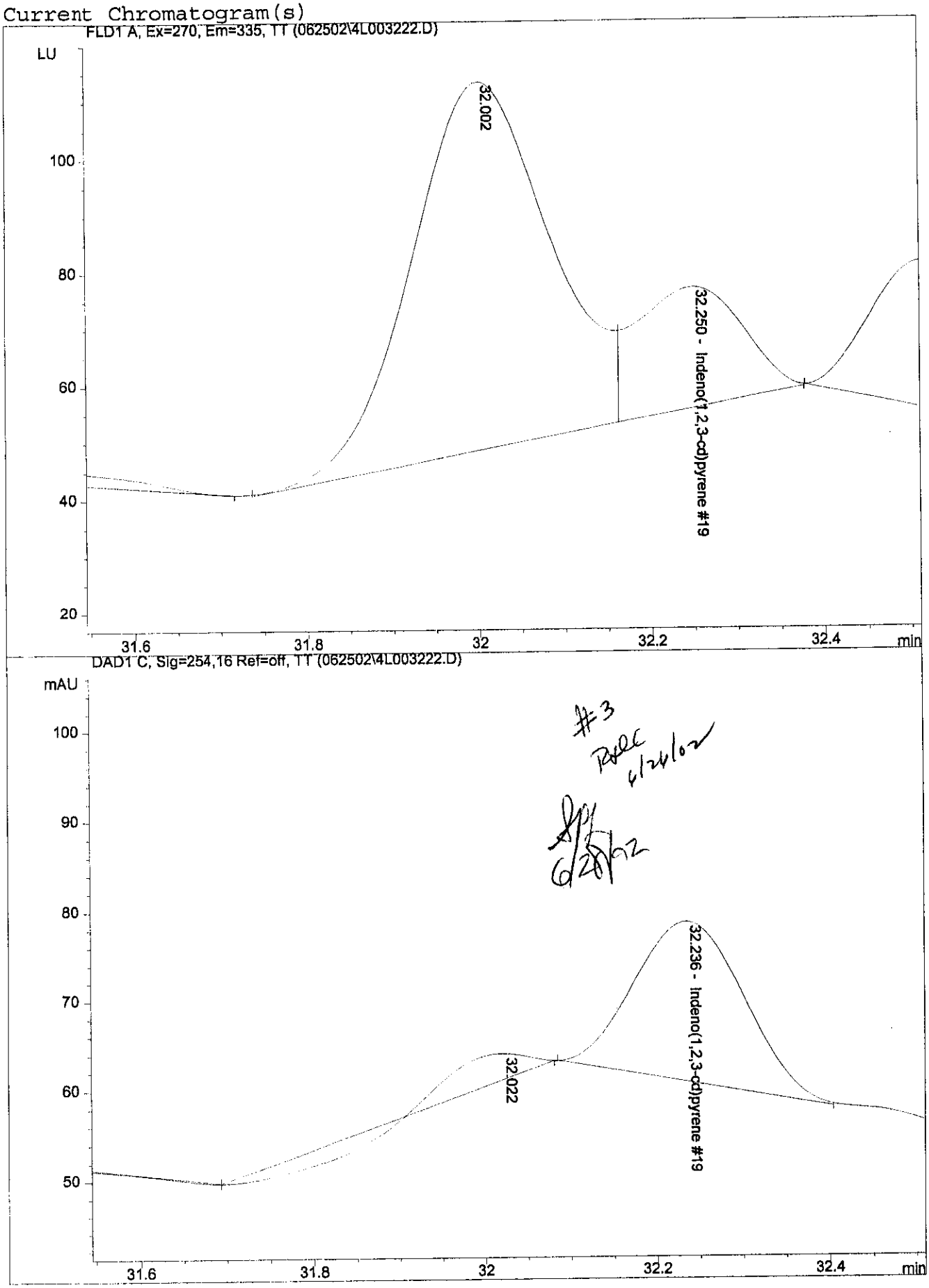


Current Chromatogram(s)





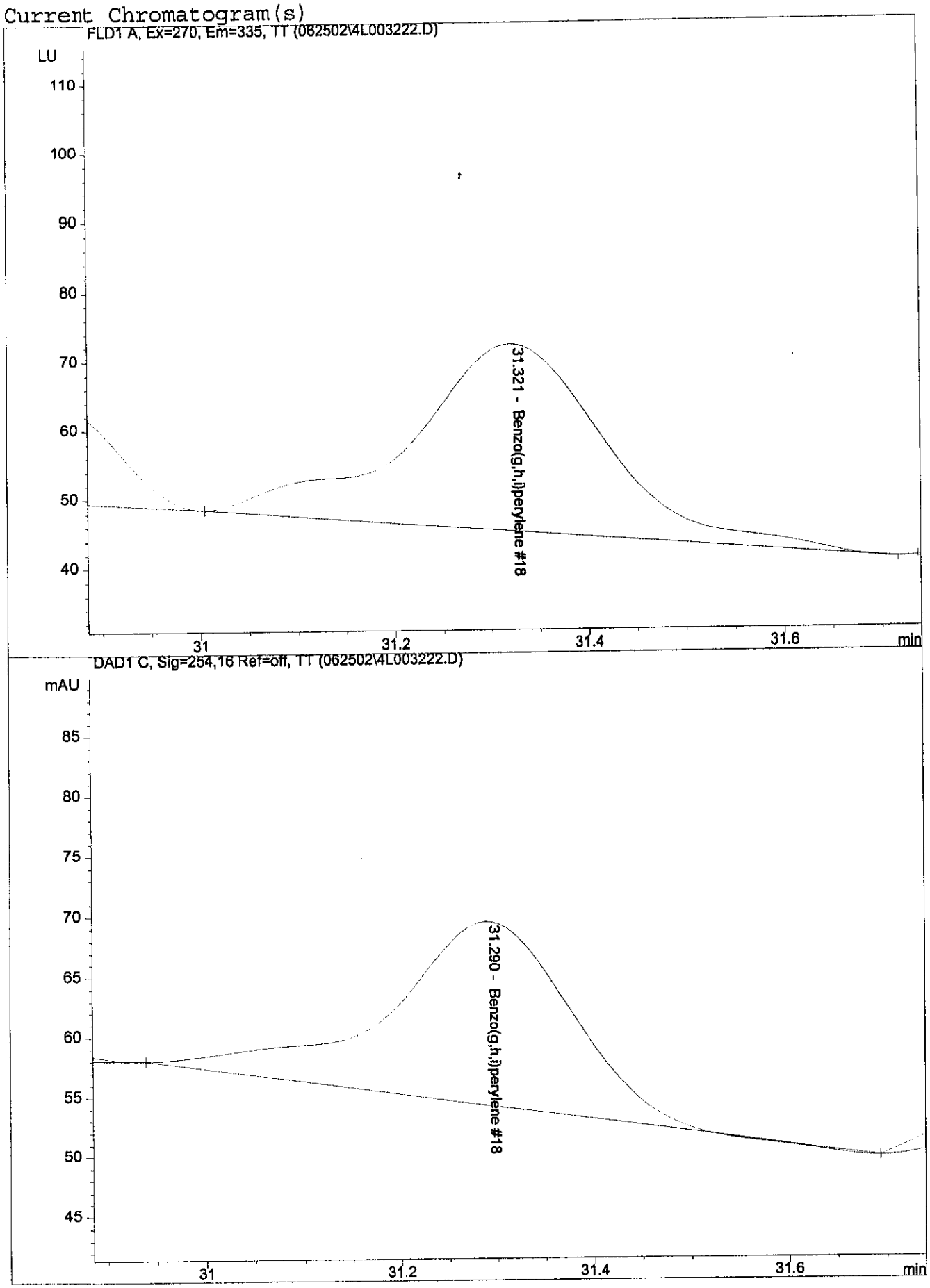
Current Chromatogram(s)



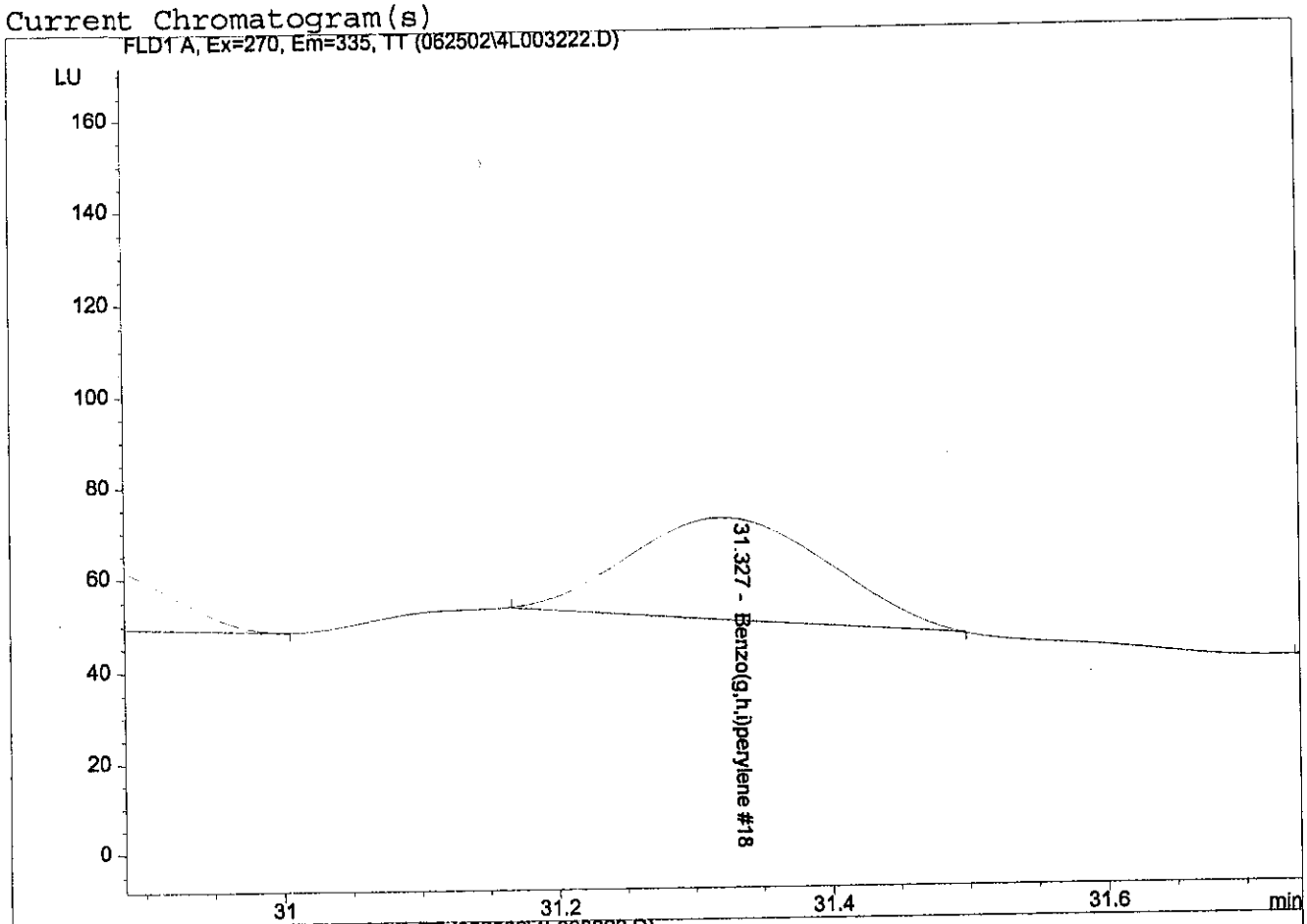
#3
RALC
6/26/02

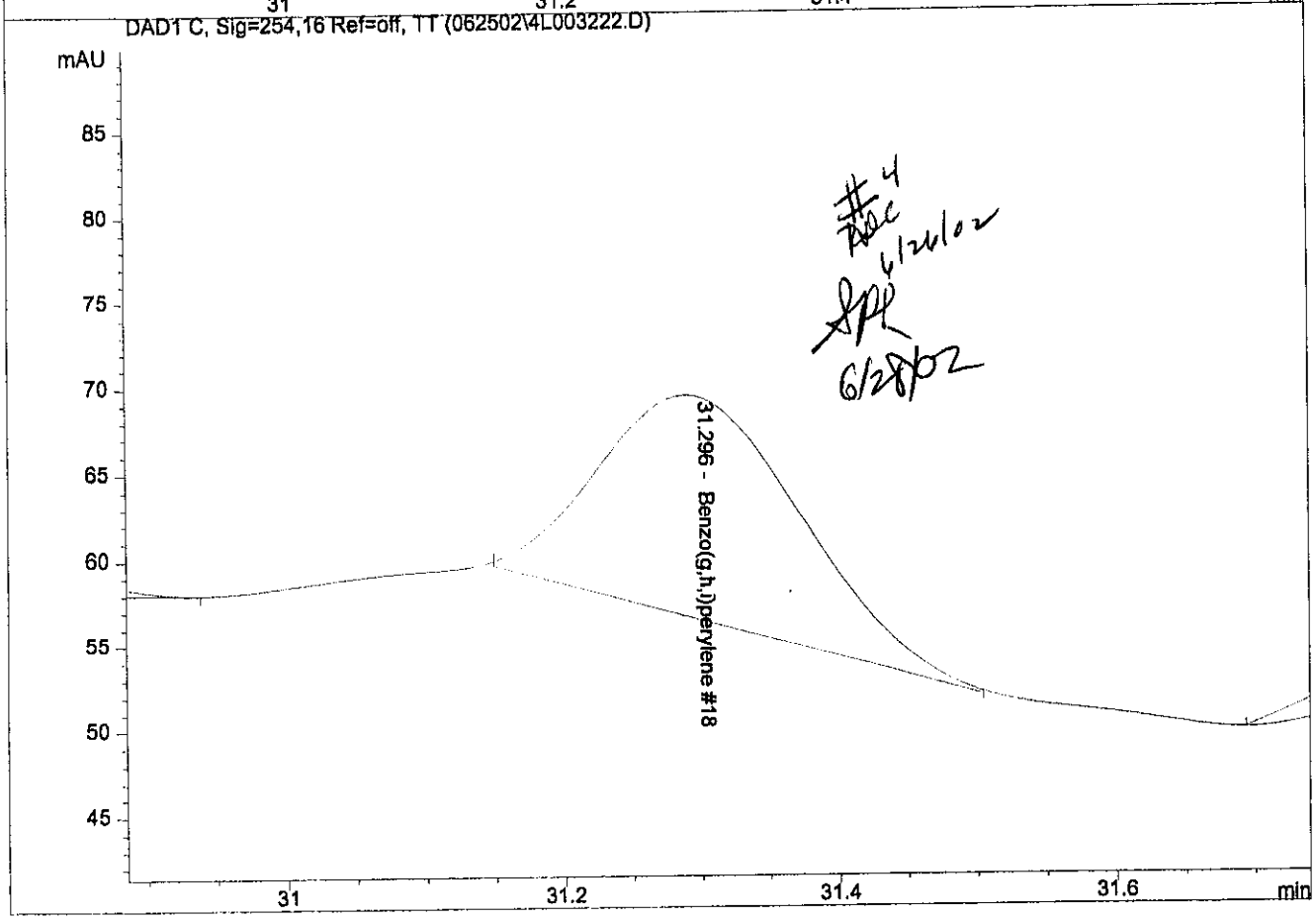
6/28/02

Current Chromatogram(s)



Current Chromatogram(s)





#4
6/26/02
6/28/02

External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/20/2002 8:52:08 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.375	BB	7.54035	5.44831e-2	4.10821e-1		Naphthalene #1
11.952	BB	8.03258e-1	2.69526e-1	2.16499e-1		1-Methylnaphthalene #3
12.531	BB	9.43799	3.25546e-2	3.07250e-1	F	2-Methylnaphthalene #4
13.116	BB	10.92202	2.04999e-2	2.23900e-1		Acenaphthene #5
13.654	BB	12.41791	6.42511e-3	7.97865e-2		Fluorene #6
15.084	BB	4.00850	2.36694e-1	9.48786e-1		Phenanthrene #7
16.343	BB	26.84510	3.05524e-1	8.20183		Anthracene #8
17.879	BB	212.76910	2.52862e-2	5.38011	C	Fluoranthene #9 (P)
18.893	MF	195.24062	4.15545e-2	8.11313	C	Pyrene #10 (P)
21.180	BB	70.70310	2.94286e-1	20.80693	103% *	p-Terphenyl d14 #11*
22.482	BB	251.39713	8.22975e-3	2.06894	C	Benzo(a)anthracene #12
23.374	BB	93.75275	3.99860e-2	3.74880	C	Chrysene #13
26.087	BB	303.25595	1.68869e-2	5.12105	C	Benzo(b)fluoranthene #14
27.531	BB	791.28455	2.80698e-3	2.22112	C	Benzo(k)fluoranthene #15
28.641	BB	1140.16003	4.71239e-3	5.37288	C	Benzo(a)pyrene #16
30.457	BB	144.23335	3.99972e-2	5.76893	C	Dibenz(a,h)anthracene #17
31.327	MM	221.47406	2.81073e-2	6.22504	C	Benzo(g,h,i)perylene #18
32.250	VM	182.04335	1.41232e-2	2.57103	C	Indeno(1,2,3-cd)pyrene #1

Totals : 77.78682

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

X333

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.360	BB	29.45660	0.00000	0.00000		Naphthalene #1
10.995		-	-	-		Acenaphthylene #2
11.952	BB	3.42062	5.39463e-2	1.84530e-1	F, MDL	1-Methylnaphthalene #3
12.541	BB	34.52554	1.04820e-2	3.61897e-1	F	2-Methylnaphthalene #4
13.092	BB	28.94721	2.70704e-2	7.83613e-1	MDL	Acenaphthene #5
13.583	BB	33.39726	2.47180e-2	8.25514e-1		Fluorene #6
15.029	BB	30.58143	2.44364e-2	7.47301e-1		Phenanthrene #7
16.451	BB	3.12179	0.00000	0.00000		Anthracene #8
17.806	BB	113.18849	2.18238e-2	2.47020		Fluoranthene #9 (P)
18.813	MF	276.56998	1.42948e-2	3.95350		Pyrene #10 (P)
21.162	BB	106.05508	6.65630e-2	7.05935	70.0%	p-Terphenyl d14 #11*
22.475	BB	68.42636	2.24035e-2	1.53299		Benzo(a)anthracene #12
23.353	BB	218.98926	1.51117e-2	3.30930		Chrysene #13
26.071	BB	324.86877	2.06233e-2	6.69985		Benzo(b)fluoranthene #14
27.512	BB	141.91353	2.24072e-2	3.17988		Benzo(k)fluoranthene #15
28.623	BB	222.47420	2.58527e-2	5.75156		Benzo(a)pyrene #16
30.438	BB	56.66366	9.37773e-2	5.31377		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.296	MM	132.17165	5.29263e-2	6.99535	✓	Benzo(g,h,i)perylene #18
32.236	MM	156.90993	2.06187e-2	3.23527	✓	Indeno(1,2,3-cd)pyrene #1

Totals : 52.40388

Results obtained with enhanced integrator!
4 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed
Warning : Negative results set to zero (cal. curve intercept), (Naphthalene
Warning : Negative results set to zero (cal. curve intercept), (Anthracene #

==========

*** End of Report ***

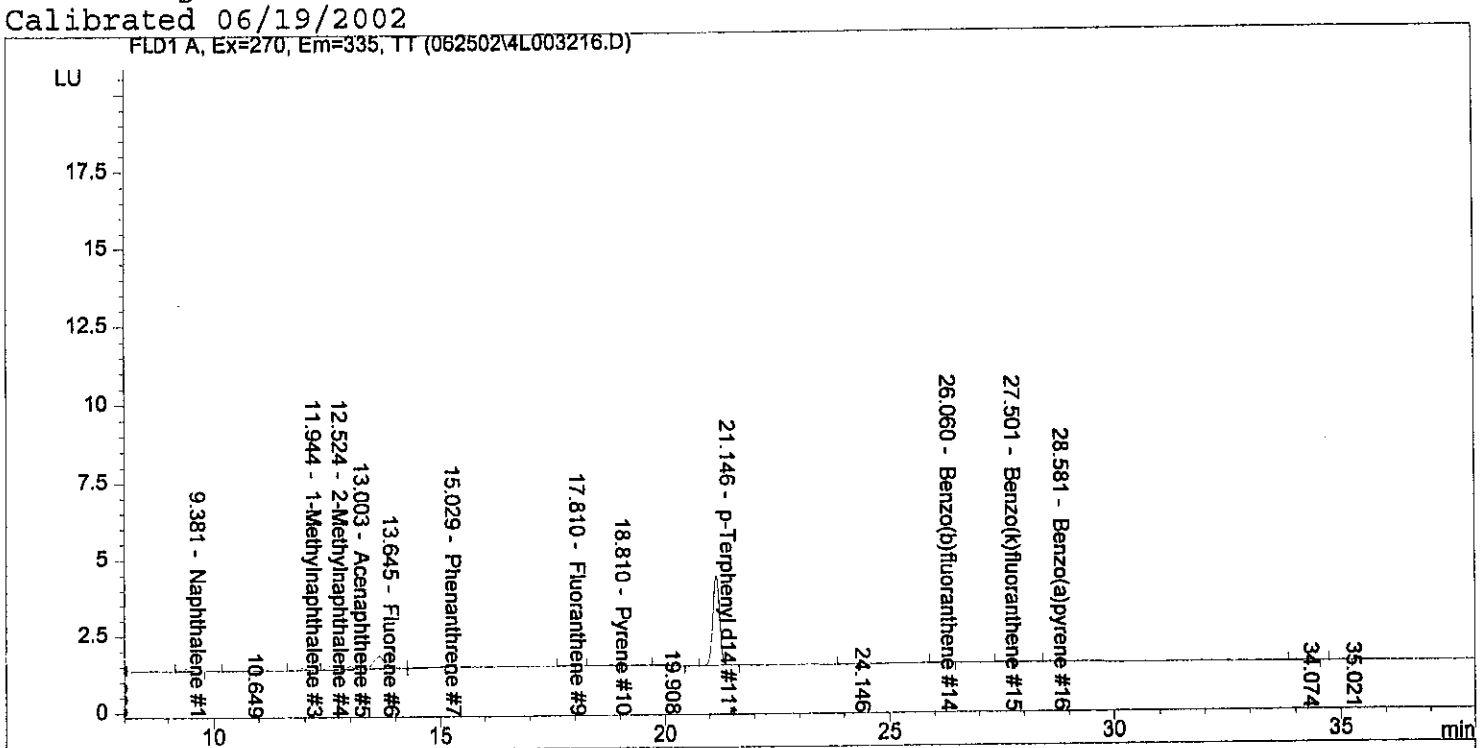
1,1

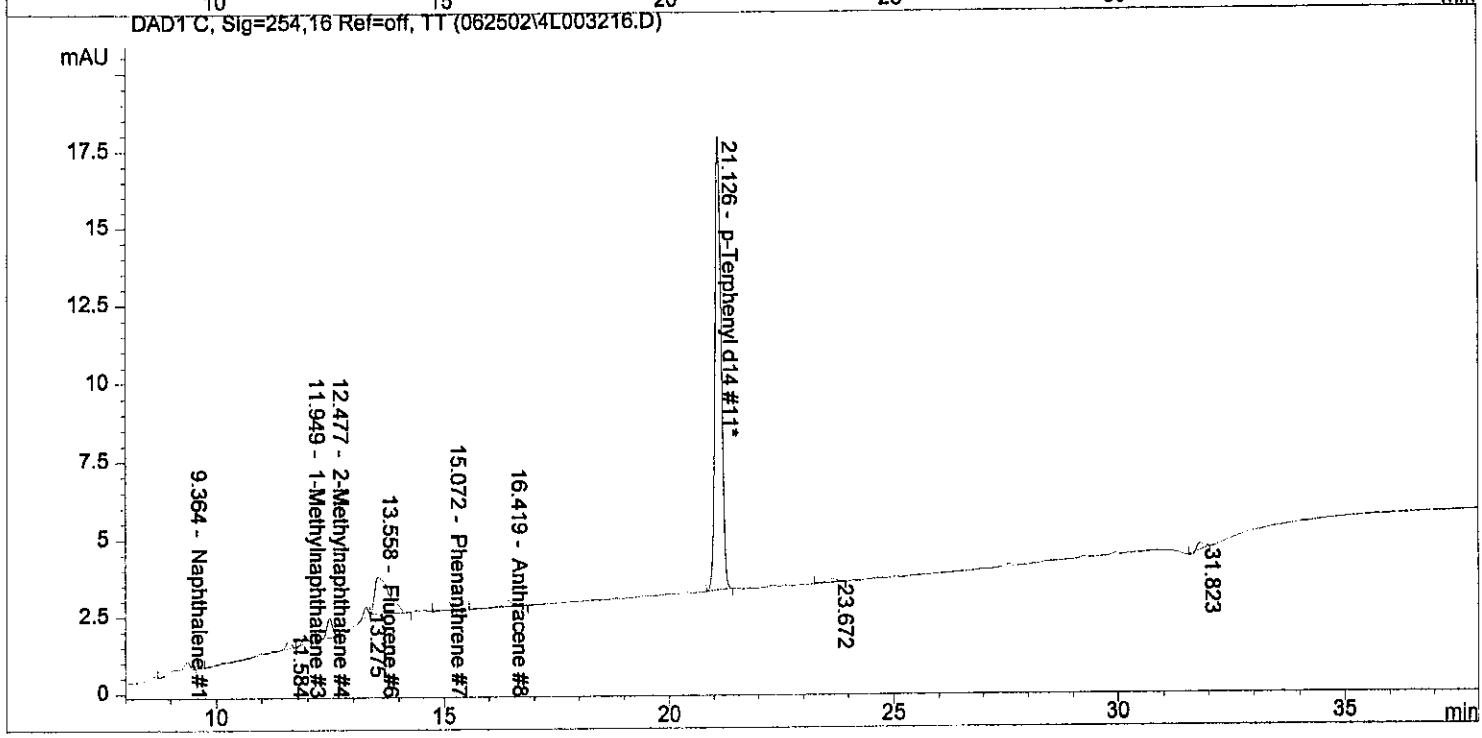
==========

Injection Date : 6/25/2002 8:31:05 PM
Sample Name : L0206416-02 831W
Acq. Operator : RDC

Seq. Line : 6
Vial : 6
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:52:39 AM by RDC
Calibrated 06/19/2002





External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/20/2002 8:52:08 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.381	BB	1.10574	2.19081e-1	2.42246e-1		Naphthalene #1
11.944	BB	6.89570e-1	3.10179e-1	2.13890e-1		1-Methylnaphthalene #3
12.524	BB	1.11453	1.43037e-1	1.59419e-1		2-Methylnaphthalene #4
13.003	BB	9.39039e-1	8.84662e-2	8.30733e-2		Acenaphthene #5
13.645	BB	7.83131	6.32796e-3	4.95562e-2		Fluorene #6
15.029	BB	3.25836e-1	9.80328e-1	3.19426e-1	PK shoulder	Phenanthrene #7
16.450		-	-	-		Anthracene #8
17.810	PBA	2.67337e-1	1.13105e-1	3.02371e-2		Fluoranthene #9
18.810	PBA	2.90436e-1	8.32178e-2	2.41694e-2		Pyrene #10
21.146	BB	30.10714	2.98911e-1	8.99937		p-Terphenyl d14 #11*
22.485		-	-	-		Benzo(a)anthracene #12
23.357		-	-	-		Chrysene #13
26.060	BBA	3.19847e-1	1.04163e-1	3.33161e-2		Benzo(b)fluoranthene #14
27.501	BBA	1.92049e-1	6.91910e-2	1.32881e-2		Benzo(k)fluoranthene #15
28.581	BBA	2.12121e-1	1.84494e-1	3.91349e-2		Benzo(a)pyrene #16
30.474		-	-	-		Dibenz(a,h)anthracene #17
31.287		-	-	-		Benzo(g,h,i)perylene #18
32.233		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 10.20713

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.364	BB	5.11915	0.00000	0.00000		Naphthalene #1
10.995		-	-	-		Acenaphthylene #2
11.949	BB	1.29147	1.21644e-1	1.57100e-1	L max	1-Methylnaphthalene #3
12.477	BB	5.63064	6.61773e-3	3.72621e-2	↓	2-Methylnaphthalene #4
12.994		-	-	-		Acenaphthene #5
13.558	BB	26.57407	2.65981e-2	7.06821e-1	NC	Fluorene #6
15.072	BB	3.94024	7.56248e-2	2.97980e-1	NC	Phenanthrene #7
16.419	BB	3.36463	0.00000	0.00000		Anthracene #8
17.806		-	-	-		Fluoranthene #9
18.809		-	-	-		Pyrene #10
21.126	BBA	136.25099	6.60568e-2	9.00031		p-Terphenyl d14 #11*
22.466		-	-	-		Benzo(a)anthracene #12
23.337		-	-	-	90.0%	Chrysene #13
26.064		-	-	-		Benzo(b)fluoranthene #14
27.495		-	-	-		Benzo(k)fluoranthene #15
28.596		-	-	-		Benzo(a)pyrene #16
30.454		-	-	-		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.264		-	-	-		Benzo(g,h,i)perylene #18
32.225		-	-	-		Indeno(1,2,3-cd)pyrene #1
Totals :				10.19947		

Results obtained with enhanced integrator!
4 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed
Warning : Negative results set to zero (cal. curve intercept), (Naphthalene
Warning : Negative results set to zero (cal. curve intercept), (Anthracene #

==========

*** End of Report ***

2.2.7.3 Standards Data

Calibration Table

==========

HPLC4 8310 CALIBRATION

Calib. Data Modified : 6/20/2002 8:52:08 AM

Calculate : External Standard
Based on : Peak Area

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.300 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.300 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Included
Weight : Equal

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)

Signal 1: FLD1 A, Ex=270, Em=335, TT
Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Sig	Lvl	Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
9.370	2	1	1.00000	121.88613	8.20438e-3			Naphthalene #1
		2	5.00000	604.13025	8.27636e-3			
		3	10.00000	1256.01123	7.96171e-3			
		4	20.00000	2522.50317	7.92863e-3			
		5	50.00000	6248.73438	8.00162e-3			
		6	100.00000	1.21595e4	8.22402e-3			
9.388	1	1	1.00000	35.50560	2.81646e-2			Naphthalene #1
		2	5.00000	180.32388	2.77279e-2			
		3	10.00000	372.80032	2.68240e-2			
		4	20.00000	753.95251	2.65269e-2			
		5	50.00000	1881.29065	2.65775e-2			
		6	100.00000	3818.87573	2.61857e-2			
10.995	2	1	1.00000	31.70620	3.15396e-2			Acenaphthylene #2
		2	5.00000	161.28902	3.10003e-2			
		3	10.00000	327.28607	3.05543e-2			
		4	20.00000	658.61700	3.03667e-2			
		5	50.00000	1646.95264	3.03591e-2			
		6	100.00000	3352.51904	2.98283e-2			
11.942	2	1	1.00000	72.22427	1.38458e-2			1-Methylnaphthalene #3

RetTime [min]	Sig	Lvl	Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
		2	5.00000	369.24078	1.35413e-2			
		3	10.00000	764.27496	1.30843e-2			
		4	20.00000	1542.24731	1.29681e-2			
		5	50.00000	3853.44678	1.29754e-2			
		6	100.00000	7760.07324	1.28865e-2			
11.959	1	1	1.00000	40.92273	2.44363e-2			1-Methylnaphthalene #3
		2	5.00000	206.59302	2.42022e-2			
		3	10.00000	427.56720	2.33881e-2			
		4	20.00000	858.01282	2.33097e-2			
		5	50.00000	2153.76392	2.32152e-2			
		6	100.00000	4358.92773	2.29414e-2			
12.516	2	1	1.00000	85.91975	1.16388e-2			2-Methylnaphthalene #4
		2	5.00000	431.87616	1.15774e-2			
		3	10.00000	893.57037	1.11911e-2			
		4	20.00000	1796.91260	1.11302e-2			
		5	50.00000	4472.15283	1.11803e-2			
		6	100.00000	8891.12988	1.12472e-2			
12.534	1	1	1.00000	53.13324	1.88206e-2			2-Methylnaphthalene #4
		2	5.00000	268.34698	1.86326e-2			
		3	10.00000	555.46735	1.80029e-2			
		4	20.00000	1119.16992	1.78704e-2			
		5	50.00000	2790.36157	1.79188e-2			
		6	100.00000	5631.00635	1.77588e-2			
12.994	2	1	1.00000	46.04076	2.17199e-2			Acenaphthene #5
		2	5.00000	232.43697	2.15112e-2			
		3	10.00000	481.32138	2.07761e-2			
		4	20.00000	969.13959	2.06369e-2			
		5	50.00000	2425.16016	2.06172e-2			
		6	100.00000	4910.46826	2.03647e-2			
13.012	1	1	1.00000	67.65919	1.47800e-2			Acenaphthene #5
		2	5.00000	339.82239	1.47136e-2			
		3	10.00000	703.58374	1.42129e-2			
		4	20.00000	1418.85522	1.40959e-2			
		5	50.00000	3535.51440	1.41422e-2			
		6	100.00000	7085.17041	1.41140e-2			
13.645	2	1	1.00000	52.90672	1.89012e-2			Fluorene #6
		2	5.00000	269.75366	1.85354e-2			
		3	10.00000	559.61633	1.78694e-2			
		4	20.00000	1129.35339	1.77092e-2			
		5	50.00000	2832.44678	1.76526e-2			
		6	100.00000	5749.89111	1.73916e-2			
13.663	1	1	1.00000	146.98784	6.80328e-3			Fluorene #6
		2	5.00000	734.63800	6.80607e-3			
		3	10.00000	1519.39380	6.58157e-3			
		4	20.00000	3055.26025	6.54609e-3			
		5	50.00000	7607.03076	6.57287e-3			
		6	100.00000	1.51592e4	6.59665e-3			
15.028	2	1	1.00000	59.91370	1.66907e-2			Phenanthrene #7
		2	5.00000	277.70538	1.80047e-2			
		3	10.00000	576.95782	1.73323e-2			
		4	20.00000	1164.06238	1.71812e-2			
		5	50.00000	2921.47241	1.71147e-2			
		6	100.00000	5932.12939	1.68574e-2			
15.046	1	1	1.00000	6.79399	1.47189e-1			Phenanthrene #7
		2	5.00000	27.54959	1.81491e-1			
		3	10.00000	57.20443	1.74812e-1			

RetTime [min]	Lvl Sig		Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
		4	20.00000	113.53256	1.76161e-1			
		5	50.00000	286.03766	1.74802e-1			
		6	100.00000	586.44727	1.70518e-1			
16.431	2	1	1.00000	96.05915	1.04103e-2			Anthracene #8
		2	5.00000	483.02975	1.03513e-2			
		3	10.00000	1002.81183	9.97196e-3			
		4	20.00000	2019.75476	9.90219e-3			
		5	50.00000	5037.00098	9.92654e-3			
		6	100.00000	9947.86328	1.00524e-2			
16.450	1	1	1.00000	3.26255	3.06509e-1			Anthracene #8
		2	5.00000	15.88479	3.14767e-1			
		3	10.00000	32.94457	3.03540e-1			
		4	20.00000	66.23384	3.01960e-1			
		5	50.00000	165.22198	3.02623e-1			
		6	100.00000	335.92169	2.97688e-1			
17.806	2	1	1.00000e-1	4.17519	2.39510e-2			Fluoranthene #9
		2	5.00000e-1	21.38802	2.33776e-2			
		3	1.00000	44.70066	2.23710e-2			
		4	2.00000	90.59781	2.20756e-2			
		5	5.00000	227.65421	2.19631e-2			
		6	10.00000	464.57758	2.15249e-2			
17.824	1	1	1.00000e-1	3.92421	2.54828e-2			Fluoranthene #9
		2	5.00000e-1	18.78860	2.66119e-2			
		3	1.00000	38.41879	2.60289e-2			
		4	2.00000	78.11402	2.56036e-2			
		5	5.00000	195.60518	2.55617e-2			
		6	10.00000	397.42139	2.51622e-2			
18.809	2	1	1.00000e-1	6.27601	1.59337e-2			Pyrene #10
		2	5.00000e-1	30.01324	1.66593e-2			
		3	1.00000	67.82222	1.47444e-2			
		4	2.00000	137.22350	1.45748e-2			
		5	5.00000	345.94687	1.44531e-2			
		6	10.00000	706.87067	1.41469e-2			
18.828	1	1	1.00000e-1	2.23386	4.47655e-2			Pyrene #10
		2	5.00000e-1	11.53121	4.33606e-2			
		3	1.00000	23.72331	4.21526e-2			
		4	2.00000	47.68803	4.19392e-2			
		5	5.00000	120.33789	4.15497e-2			
21.150	2	1	1.00000	14.27093	7.00725e-2			p-Terphenyl d14 #11*
		2	5.00000	72.39475	6.90658e-2			
		3	10.00000	150.41772	6.64815e-2			
		4	20.00000	304.47540	6.56868e-2			
		5	50.00000	771.85547	6.47790e-2			
		6	100.00000	1553.84106	6.43566e-2			
21.166	1	1	1.00000	3.57698	2.79566e-1			p-Terphenyl d14 #11*
		2	5.00000	16.05081	3.11511e-1			
		3	10.00000	33.17809	3.01404e-1			
		4	20.00000	67.05980	2.98241e-1			
		5	50.00000	170.11554	2.93918e-1			
		6	100.00000	343.67426	2.90973e-1			
22.466	2	1	1.00000e-1	4.39682	2.27437e-2			Benzo(a)anthracene #12
		2	5.00000e-1	21.07132	2.37289e-2			
		3	1.00000	43.86306	2.27982e-2			
		4	2.00000	88.71733	2.25435e-2			
		5	5.00000	223.22693	2.23987e-2			
		6	10.00000	457.02676	2.18806e-2			

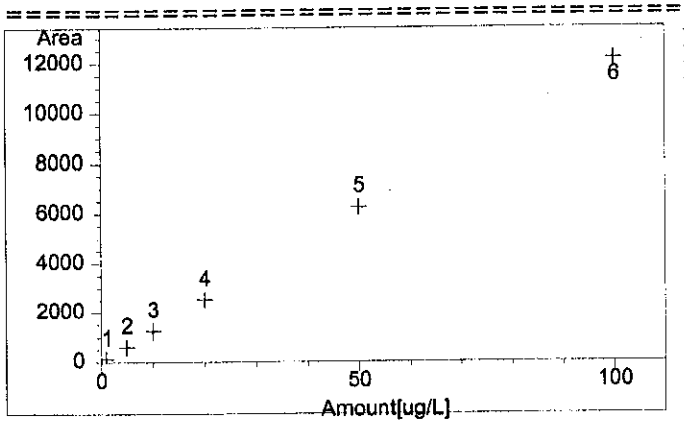
RetTime [min]	Lvl Sig		Amount [ug/L]	Area	Amt/Area	Ret Grp	Name
22.485	1	1	1.00000e-1	11.92573	8.38523e-3		Benzo(a)anthracene #12
		2	5.00000e-1	57.40008	8.71079e-3		
		3	1.00000	118.62704	8.42978e-3		
		4	2.00000	240.55975	8.31394e-3		
		5	5.00000	604.25543	8.27465e-3		
		6	10.00000	1235.15466	8.09615e-3		
23.337	2	1	1.00000e-1	6.15006	1.62600e-2		Chrysene #13
		2	5.00000e-1	30.91224	1.61748e-2		
		3	1.00000	64.16498	1.55848e-2		
		4	2.00000	130.01958	1.53823e-2		
		5	5.00000	327.80472	1.52530e-2		
		6	10.00000	668.69543	1.49545e-2		
23.357	1	1	1.00000e-1	2.37958	4.20241e-2		Chrysene #13
		2	5.00000e-1	11.79001	4.24088e-2		
		3	1.00000	24.51306	4.07946e-2		
		4	2.00000	49.27580	4.05879e-2		
		5	5.00000	123.19585	4.05858e-2		
		6	10.00000	252.46683	3.96092e-2		
26.064	2	1	1.00000e-1	4.57150	2.18747e-2		Benzo(b)fluoranthene #
		2	5.00000e-1	22.64764	2.20774e-2		
		3	1.00000	46.88808	2.13274e-2		
		4	2.00000	95.03743	2.10443e-2		
		5	5.00000	238.78767	2.09391e-2		
		6	10.00000	487.47803	2.05137e-2		
26.079	1	1	1.00000e-1	5.48437	1.82336e-2		Benzo(b)fluoranthene #
		2	5.00000e-1	27.72870	1.80319e-2		
		3	1.00000	57.64222	1.73484e-2		
		4	2.00000	116.48901	1.71690e-2		
		5	5.00000	292.99271	1.70653e-2		
		6	10.00000	595.50562	1.67925e-2		
27.495	2	1	5.00000e-2	2.19067	2.28241e-2		Benzo(k)fluoranthene #
		2	2.50000e-1	10.30655	2.42564e-2		
		3	5.00000e-1	21.77243	2.29648e-2		
		4	1.00000	43.78368	2.28396e-2		
		5	2.50000	109.96069	2.27354e-2		
		6	5.00000	224.33841	2.22878e-2		
27.510	1	1	5.00000e-2	16.92470	2.95426e-3		Benzo(k)fluoranthene #
		2	2.50000e-1	83.46227	2.99537e-3		
		3	5.00000e-1	174.54939	2.86452e-3		
		4	1.00000	351.08521	2.84831e-3		
		5	2.50000	882.24713	2.83367e-3		
		6	5.00000	1792.05200	2.79010e-3		
28.596	2	1	1.00000e-1	3.90243	2.56251e-2		Benzo(a)pyrene #16
		2	5.00000e-1	16.74469	2.98602e-2		
		3	1.00000	36.86427	2.71265e-2		
		4	2.00000	74.65511	2.67899e-2		
		5	5.00000	189.32166	2.64101e-2		
		6	10.00000	390.50266	2.56080e-2		
28.614	1	1	1.00000e-1	19.55420	5.11399e-3		Benzo(a)pyrene #16
		2	5.00000e-1	97.80115	5.11241e-3		
		3	1.00000	203.63187	4.91082e-3		
		4	2.00000	413.85422	4.83262e-3		
		5	5.00000	1045.54724	4.78218e-3		
		6	10.00000	2137.81030	4.67768e-3		
30.454	2	1	1.00000e-1	1.00112	9.98882e-2		Dibenz(a,h)anthracene
		2	5.00000e-1	5.15278	9.70350e-2		

RetTime [min]	Sig	Lvl	Amount [ug/L]	Area	Amt/Area	Use	Cal	Name
		3	1.00000	11.97529	8.35053e-2			
		4	2.00000	21.19111	9.43792e-2			
		5	5.00000	52.23464	9.57219e-2			
		6	10.00000	107.04004	9.34230e-2			
30.474	1	1	1.00000e-1	2.22269	4.49905e-2			Dibenz(a,h)anthracene
		2	5.00000e-1	11.53541	4.33448e-2			
		3	1.00000	23.79175	4.20314e-2			
		4	2.00000	48.37757	4.13415e-2			
		5	5.00000	122.97315	4.06593e-2			
		6	10.00000	251.97131	3.96871e-2			
31.264	2	1	1.00000e-1	2.34328	4.26753e-2			Benzo(g,h,i)perylene #
		2	5.00000e-1	9.25292	5.40370e-2			
		3	1.00000	18.48934	5.40852e-2			
		4	2.00000	36.61276	5.46258e-2			
		5	5.00000	92.88844	5.38280e-2			
		6	10.00000	190.01508	5.26274e-2			
31.287	1	1	1.00000e-1	3.18651	3.13823e-2			Benzo(g,h,i)perylene #
		2	5.00000e-1	16.16728	3.09267e-2			
		3	1.00000	33.82579	2.95632e-2			
		4	2.00000	68.83204	2.90562e-2			
		5	5.00000	174.47961	2.86566e-2			
		6	10.00000	358.59521	2.78866e-2			
32.225	2	1	1.00000e-1	3.42590	2.91894e-2			Indeno(1,2,3-cd)pyrene
		2	5.00000e-1	21.58914	2.31598e-2			
		3	1.00000	46.04763	2.17166e-2			
		4	2.00000	94.45714	2.11736e-2			
		5	5.00000	240.26486	2.08104e-2			
		6	10.00000	492.90811	2.02878e-2			
32.233	1	1	1.00000e-1	6.77440	1.47614e-2			Indeno(1,2,3-cd)pyrene
		2	5.00000e-1	33.25379	1.50359e-2			
		3	1.00000	68.94070	1.45052e-2			
		4	2.00000	139.75822	1.43104e-2			
		5	5.00000	351.40439	1.42286e-2			
		6	10.00000	717.39240	1.39394e-2			

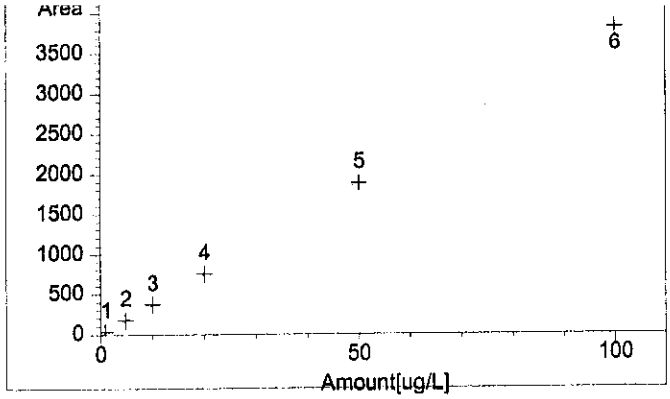
Peak Sum Table

No Entries in table

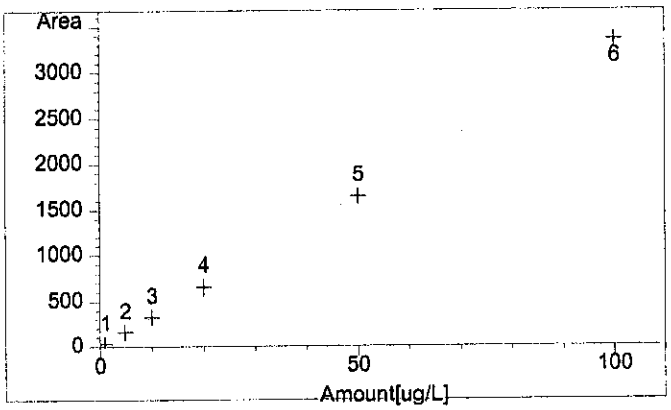
Calibration Curves



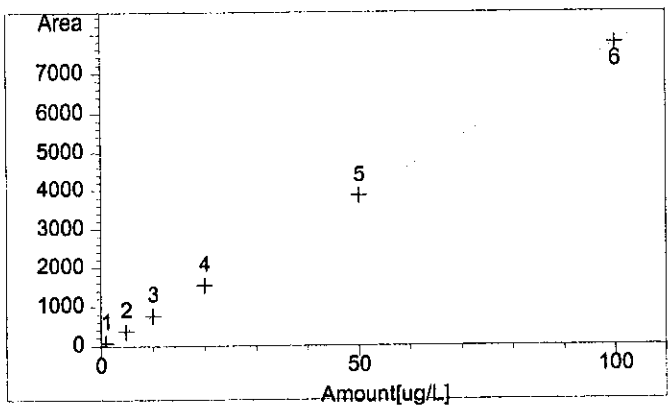
Naphthalene #1 at exp. RT: 9.370
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99990
Residual Std. Dev.: 70.57790
Formula: y = mx + b
m: 121.93837
b: 33.17626
x: Amount [ug/L]
y: Area



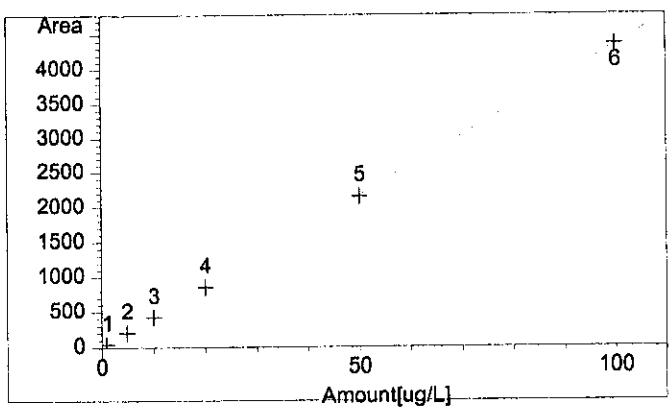
Naphthalene #1 at exp. RT: 9.500
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 10.65995
Formula: y = mx + b
m: 38.17062
b: -8.14096
x: Amount [ug/L]
y: Area



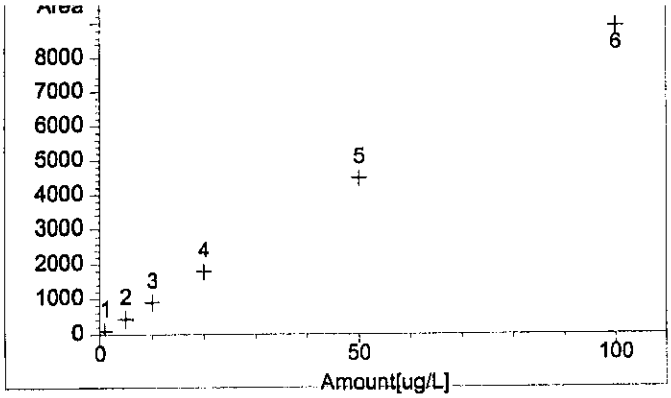
Acenaphthylene #2 at exp. RT: 10.995
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99997
Residual Std. Dev.: 11.19977
Formula: y = mx + b
m: 33.48891
b: -7.22387
x: Amount [ug/L]
y: Area



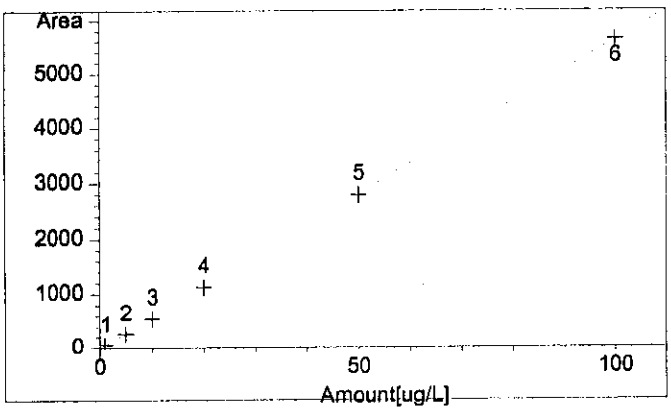
1-Methylnaphthalene #3 at exp. RT: 11.942
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 10.69411
Formula: y = mx + b
m: 77.62274
b: -10.90308
x: Amount [ug/L]
y: Area



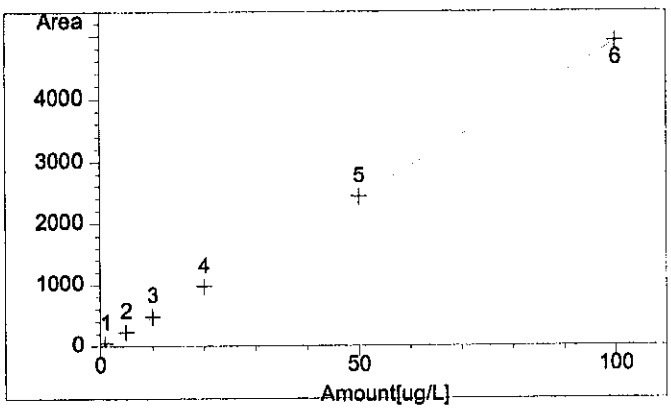
1-Methylnaphthalene #3 at exp. RT: 11.959
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 10.09079
Formula: y = mx + b
m: 43.58179
b: -8.63216
x: Amount [ug/L]
y: Area



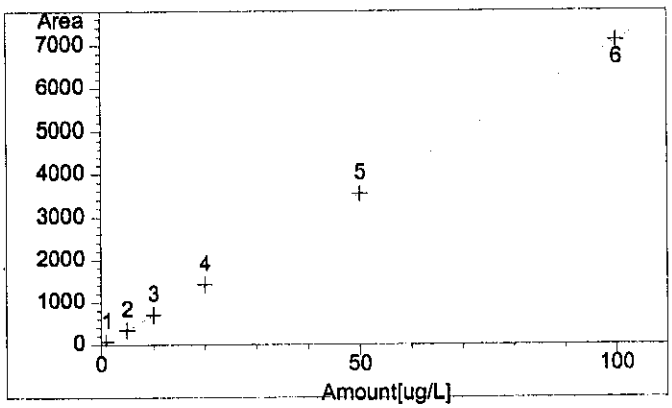
2-Methylnaphthalene #4 at exp. RT: [illegible]
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 14.18056
Formula: y = mx + b
m: 89.00733
b: 2.31405
x: Amount [ug/L]
y: Area



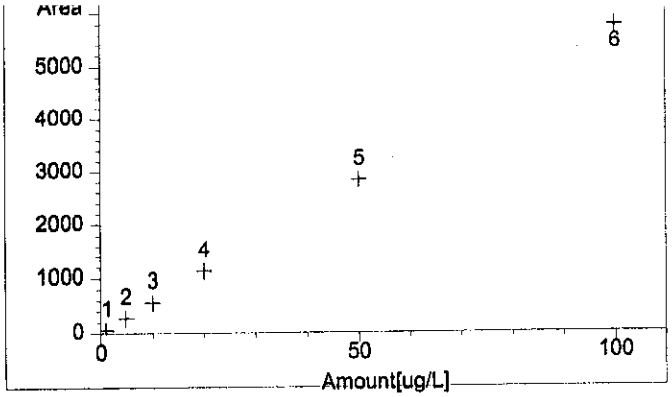
2-Methylnaphthalene #4 at exp. RT: 12.534
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99999
Residual Std. Dev.: 9.72550
Formula: y = mx + b
m: 56.30384
b: -7.86135
x: Amount [ug/L]
y: Area



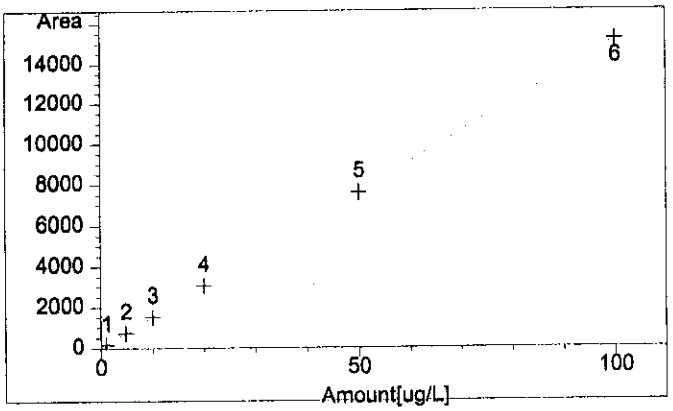
Acenaphthene #5 at exp. RT: 12.994
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99998
Residual Std. Dev.: 11.55898
Formula: y = mx + b
m: 49.09260
b: -9.52241
x: Amount [ug/L]
y: Area



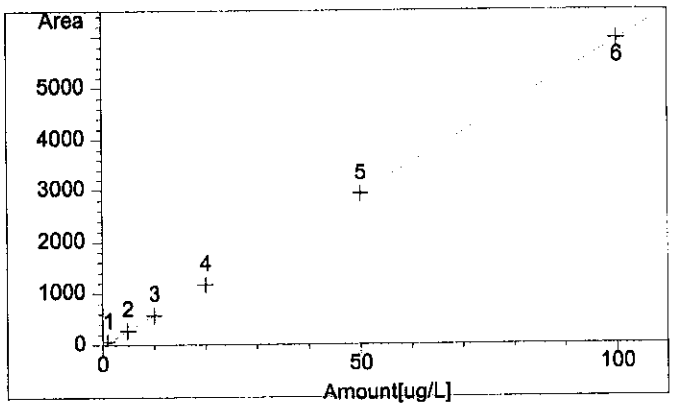
Acenaphthene #5 at exp. RT: 13.012
FLD1 A, Ex=270, Em=335, TT
Correlation: 1.00000
Residual Std. Dev.: 5.91307
Formula: y = mx + b
m: 70.88847
b: -4.94990
x: Amount [ug/L]
y: Area



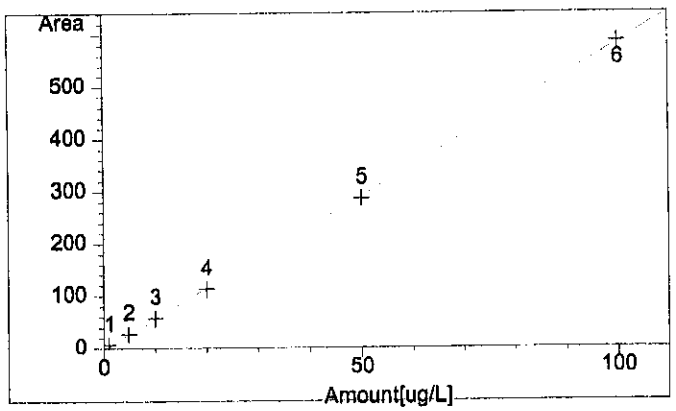
Fluorene #6 at exp. RT: [illegible]
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99997
Residual Std. Dev.: 16.43131
Formula: y = mx + b
m: 57.48589
b: -14.05816
x: Amount [ug/L]
y: Area



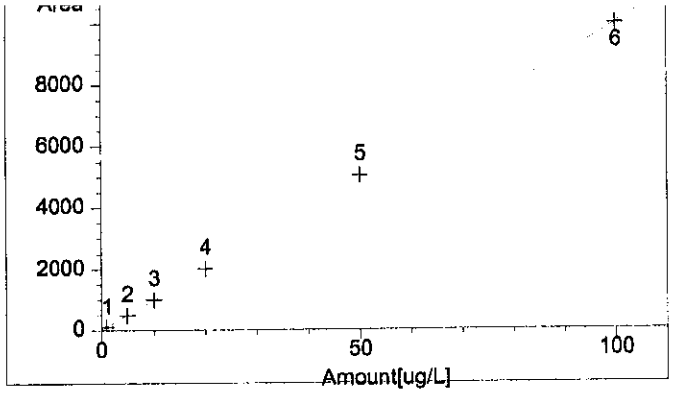
Fluorene #6 at exp. RT: 13.663
FLD1 A, Ex=270, Em=335, TT
Correlation: 1.00000
Residual Std. Dev.: 18.11896
Formula: y = mx + b
m: 151.72220
b: 3.12530e-1
x: Amount [ug/L]
y: Area



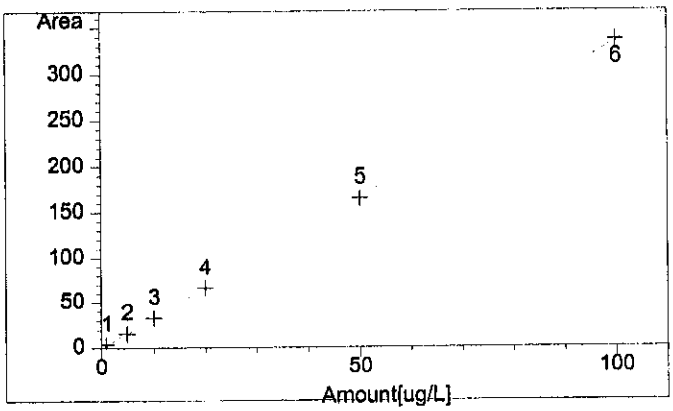
Phenanthrene #7 at exp. RT: 15.028
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99997
Residual Std. Dev.: 18.06229
Formula: y = mx + b
m: 59.29212
b: -13.72762
x: Amount [ug/L]
y: Area



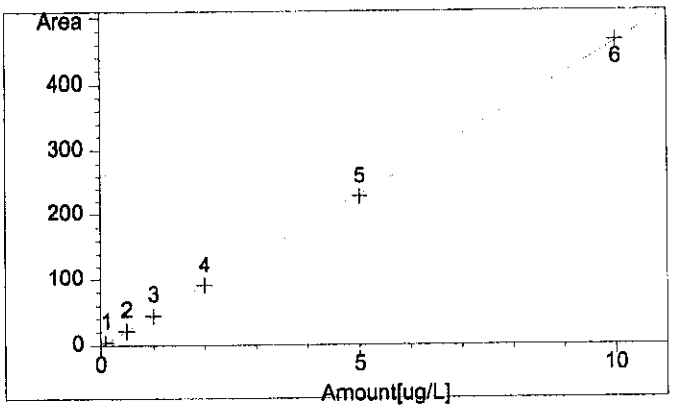
Phenanthrene #7 at exp. RT: 15.046
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 3.01563
Formula: y = mx + b
m: 5.85144
b: -1.54327
x: Amount [ug/L]
y: Area



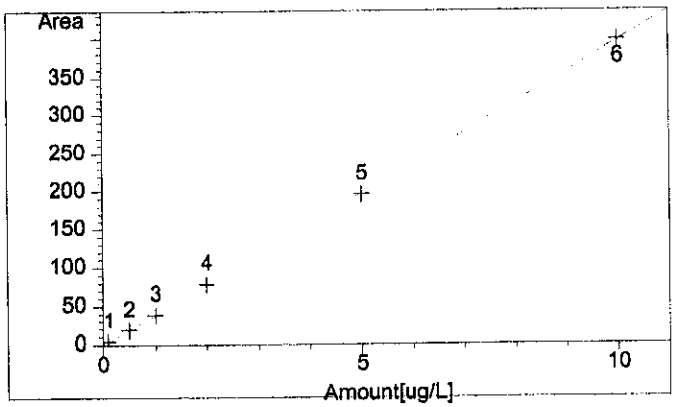
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99998
Residual Std. Dev.: 27.85848
Formula: y = mx + b
m: 99.66958
b: 6.85395
x: Amount [ug/L]
y: Area



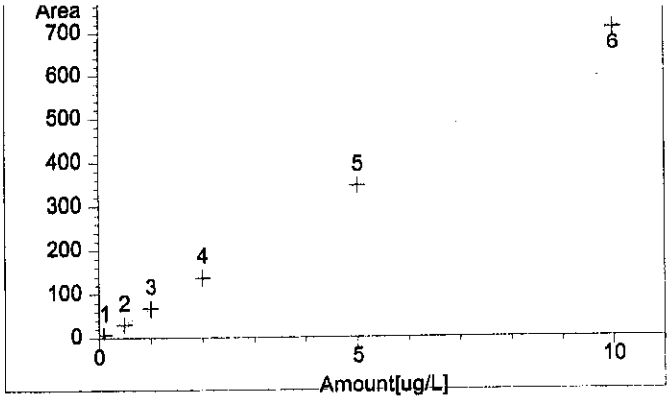
Anthracene #8 at exp. RT: 16.450
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 1.04930
Formula: y = mx + b
m: 3.35612
b: -6.81187e-1
x: Amount [ug/L]
y: Area



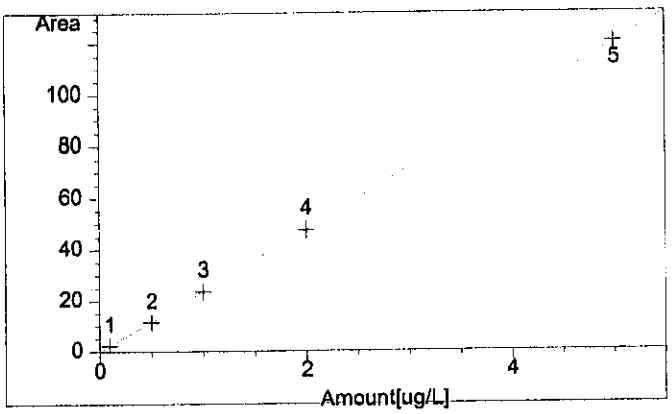
Fluoranthene #9 at exp. RT: 17.806
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99995
Residual Std. Dev.: 1.79879
Formula: y = mx + b
m: 46.44231
b: -1.53335
x: Amount [ug/L]
y: Area



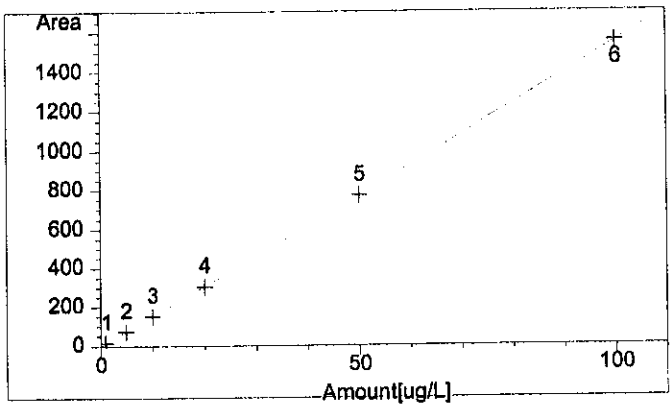
Fluoranthene #9 at exp. RT: 17.824
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 1.22857
Formula: y = mx + b
m: 39.72087
b: -9.33708e-1
x: Amount [ug/L]
y: Area



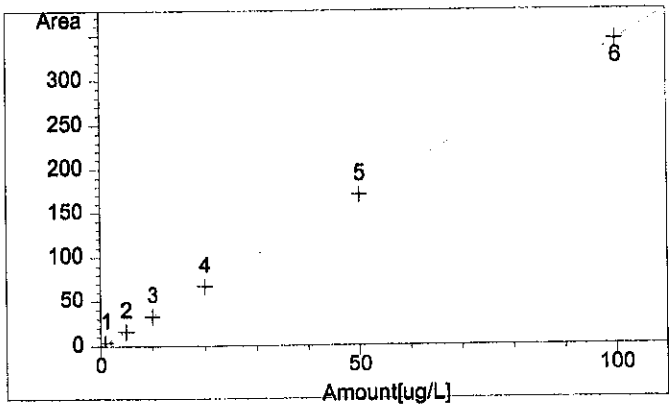
Pyrene #10 at exp. RT: 18.[illegible]
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99994
Residual Std. Dev.: 3.15034
Formula: y = mx + b
m: 70.72982
b: -3.06030
x: Amount [ug/L]
y: Area



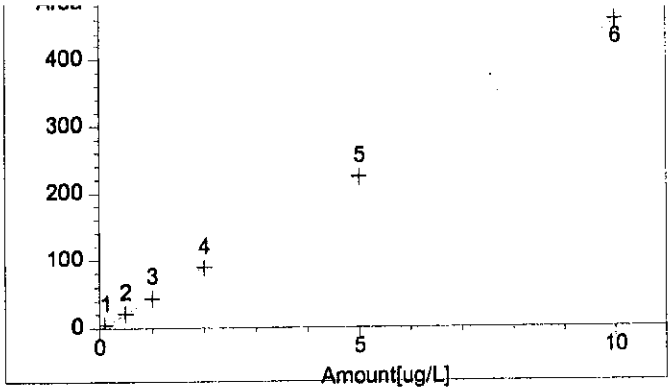
Pyrene #10 at exp. RT: 18.828
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99999
Residual Std. Dev.: 0.23587
Formula: y = mx + b
m: 24.10078
b: -2.92066e-1
x: Amount [ug/L]
y: Area



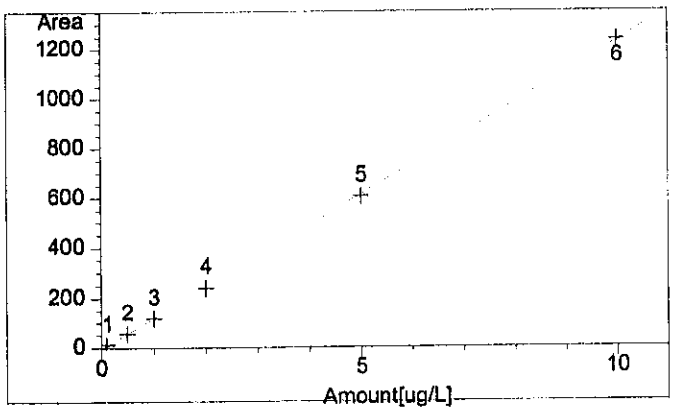
p-Terphenyl d14 #11* at exp. RT: 21.150
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 2.89474
Formula: y = mx + b
m: 15.55717
b: -3.76840
x: Amount [ug/L]
y: Area



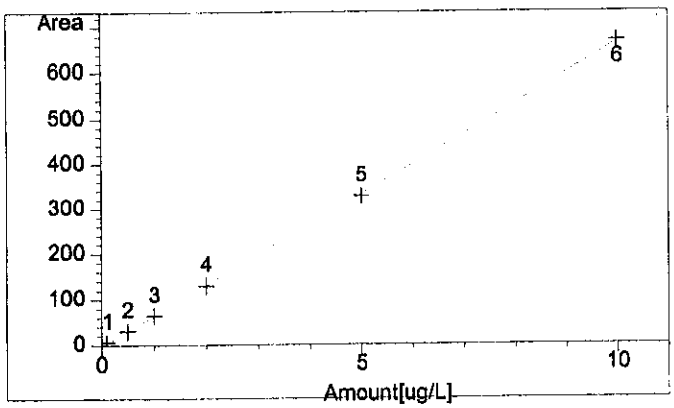
p-Terphenyl d14 #11* at exp. RT: 21.166
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 0.89731
Formula: y = mx + b
m: 3.43813
b: -8.33877e-1
x: Amount [ug/L]
y: Area



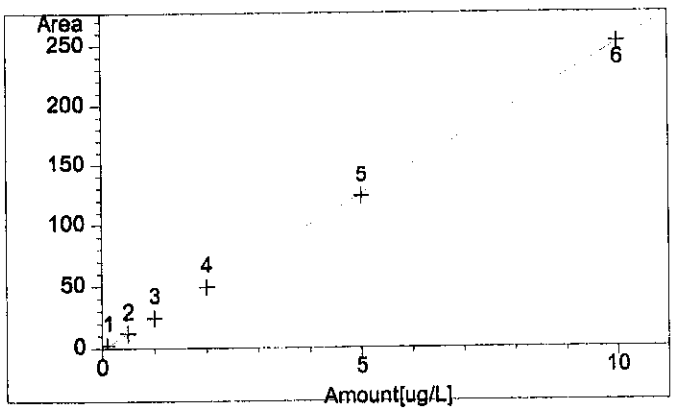
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99994
Residual Std. Dev.: 2.08992
Formula: y = mx + b
m: 45.66201
b: -1.57303
x: Amount [ug/L]
y: Area



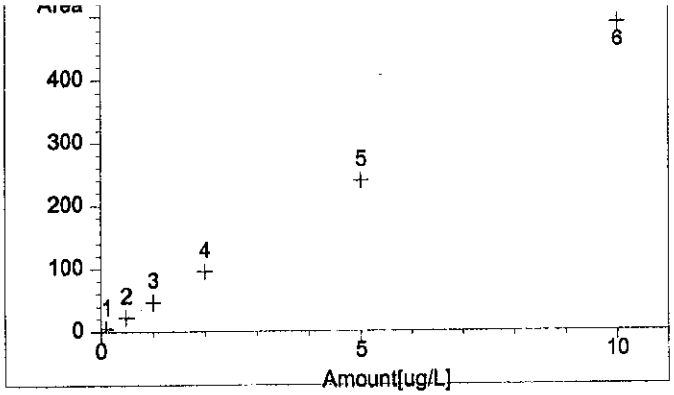
Benzo(a)anthracene #12 at exp. RT: 22.485
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99994
Residual Std. Dev.: 5.24449
Formula: y = mx + b
m: 123.41194
b: -3.93419
x: Amount [ug/L]
y: Area



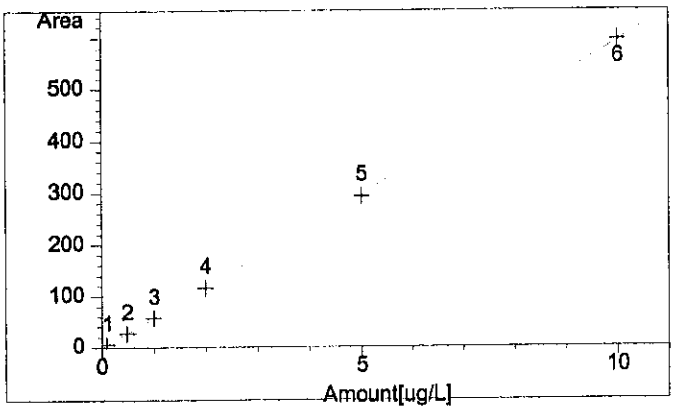
Chrysene #13 at exp. RT: 23.337
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99995
Residual Std. Dev.: 2.60337
Formula: y = mx + b
m: 66.84989
b: -2.23727
x: Amount [ug/L]
y: Area



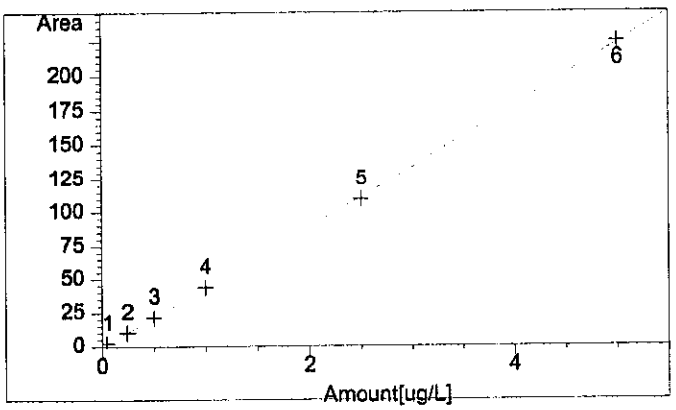
Chrysene #13 at exp. RT: 23.357
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99993
Residual Std. Dev.: 1.16361
Formula: y = mx + b
m: 25.21041
b: -7.56072e-1
x: Amount [ug/L]
y: Area



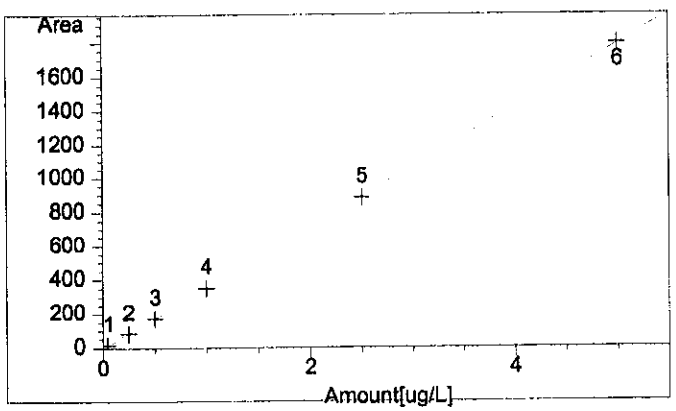
Benzo(b)fluoranthene #14 at exp. RT: 26.0
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99995
Residual Std. Dev.: 1.93804
Formula: y = mx + b
m: 48.71807
b: -1.53510
x: Amount[ug/L]
y: Area



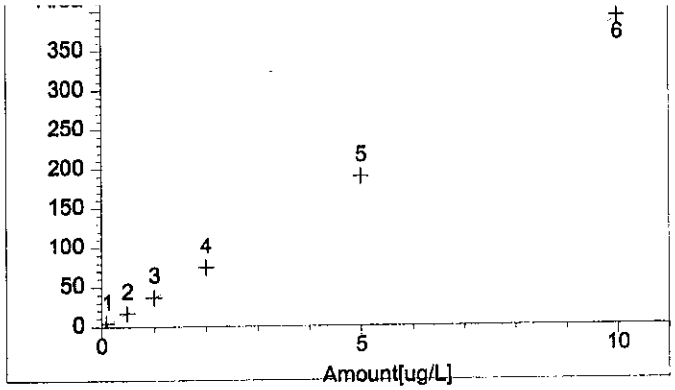
Benzo(b)fluoranthene #14 at exp. RT: 26.0
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 1.87852
Formula: y = mx + b
m: 59.54246
b: -1.66387
x: Amount[ug/L]
y: Area



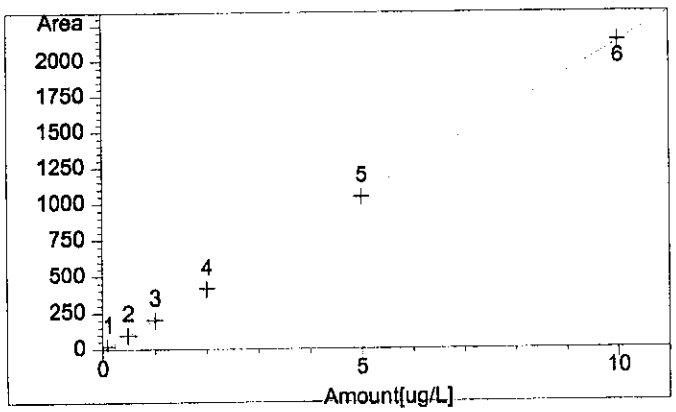
Benzo(k)fluoranthene #15 at exp. RT: 27.4
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99995
Residual Std. Dev.: 0.87725
Formula: y = mx + b
m: 44.83633
b: -6.60775e-1
x: Amount[ug/L]
y: Area



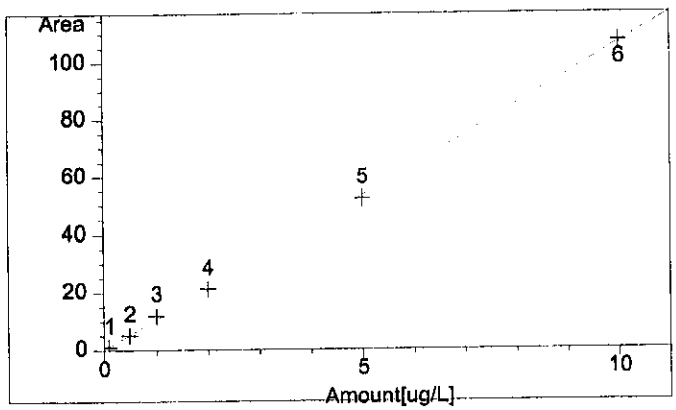
Benzo(k)fluoranthene #15 at exp. RT: 27.5
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 5.46079
Formula: y = mx + b
m: 358.31240
b: -4.56924
x: Amount[ug/L]
y: Area



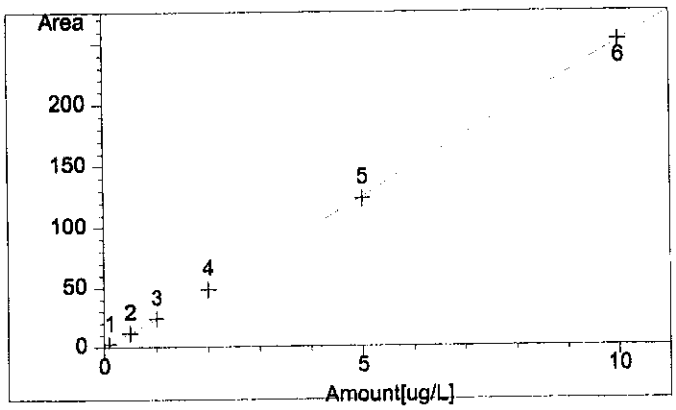
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99988
Residual Std. Dev.: 2.45350
Formula: y = mx + b
m: 39.02551
b: -1.98338
x: Amount [ug/L]
y: Area



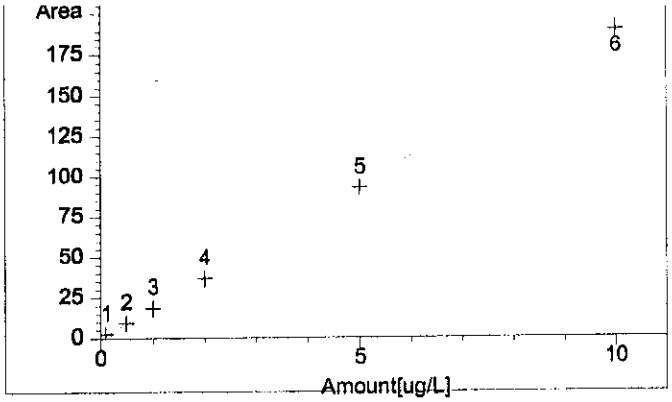
Benzo(a)pyrene #16 at exp. RT: 28.614
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99994
Residual Std. Dev.: 9.37532
Formula: y = mx + b
m: 213.72380
b: -8.15195
x: Amount [ug/L]
y: Area



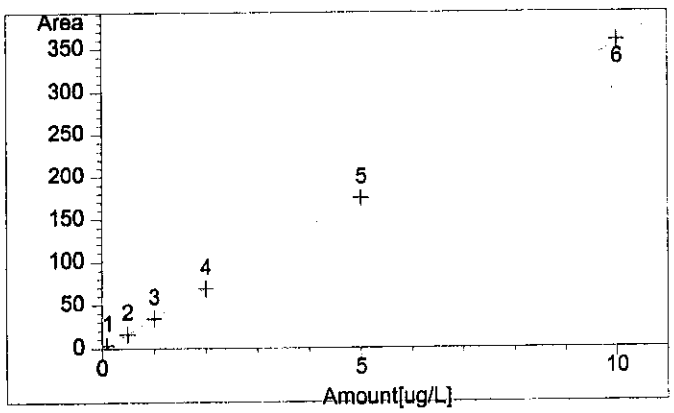
Dibenz(a,h)anthracene #17 at exp. RT: 30.
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99983
Residual Std. Dev.: 0.78590
Formula: y = mx + b
m: 10.64996
b: 7.22431e-2
x: Amount [ug/L]
y: Area



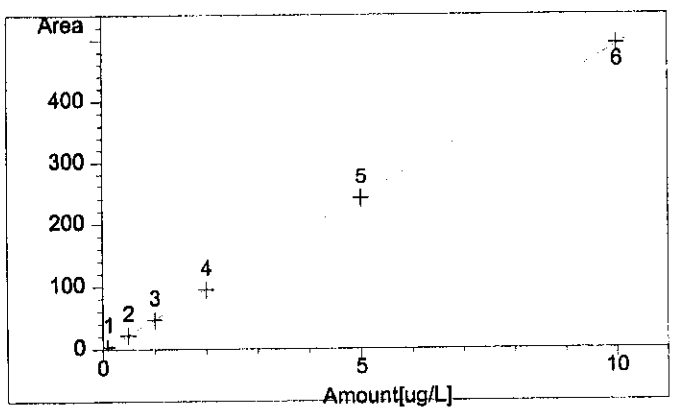
Dibenz(a,h)anthracene #17 at exp. RT: 30.
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99993
Residual Std. Dev.: 1.23730
Formula: y = mx + b
m: 25.19279
b: -1.10201
x: Amount [ug/L]
y: Area



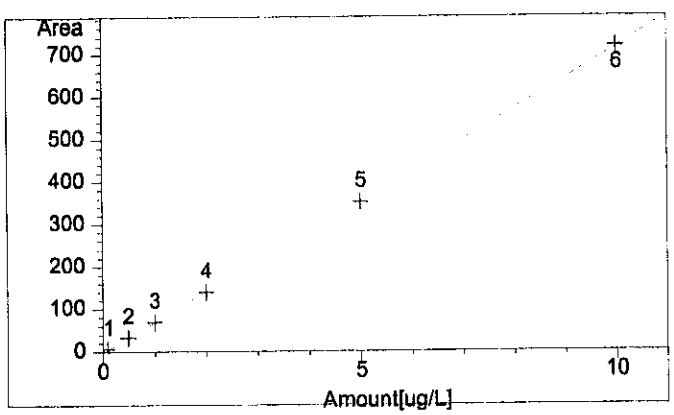
Benzo(g,h,i)perylene #18 at exp. RT: 31.2
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99992
Residual Std. Dev.: 0.96678
Formula: y = mx + b
m: 18.95449
b: -4.21667e-1
x: Amount [ug/L]
y: Area



Benzo(g,h,i)perylene #18 at exp. RT: 31.2
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99991
Residual Std. Dev.: 1.93390
Formula: y = mx + b
m: 35.84471
b: -1.66074
x: Amount [ug/L]
y: Area



Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99992
Residual Std. Dev.: 2.46375
Formula: y = mx + b
m: 49.34055
b: -2.72022
x: Amount [ug/L]
y: Area



Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99995
Residual Std. Dev.: 2.87271
Formula: y = mx + b
m: 71.69796
b: -2.29402
x: Amount [ug/L]
y: Area

==========

1,1 SOS58-26 LEVEL 6 SURROGATE @ 100 ppm

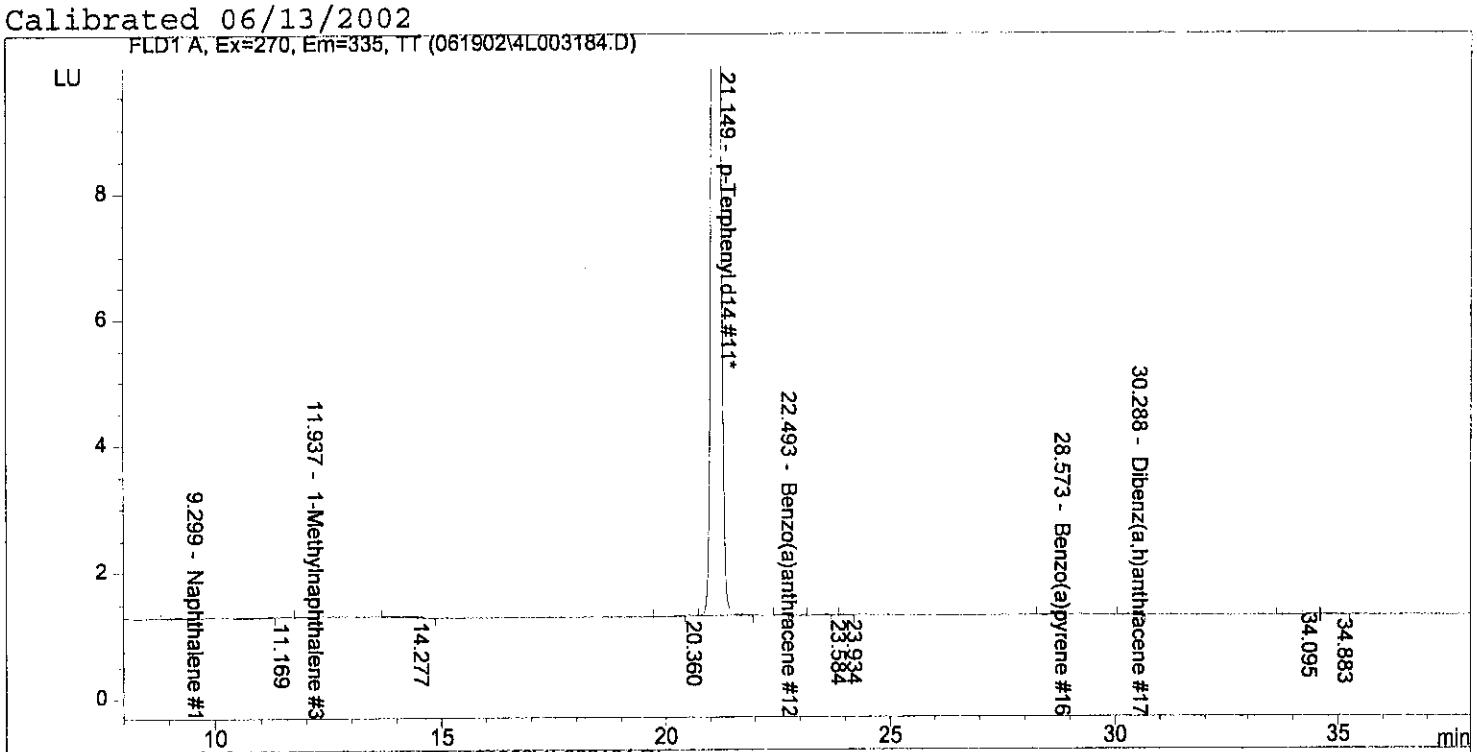
==========

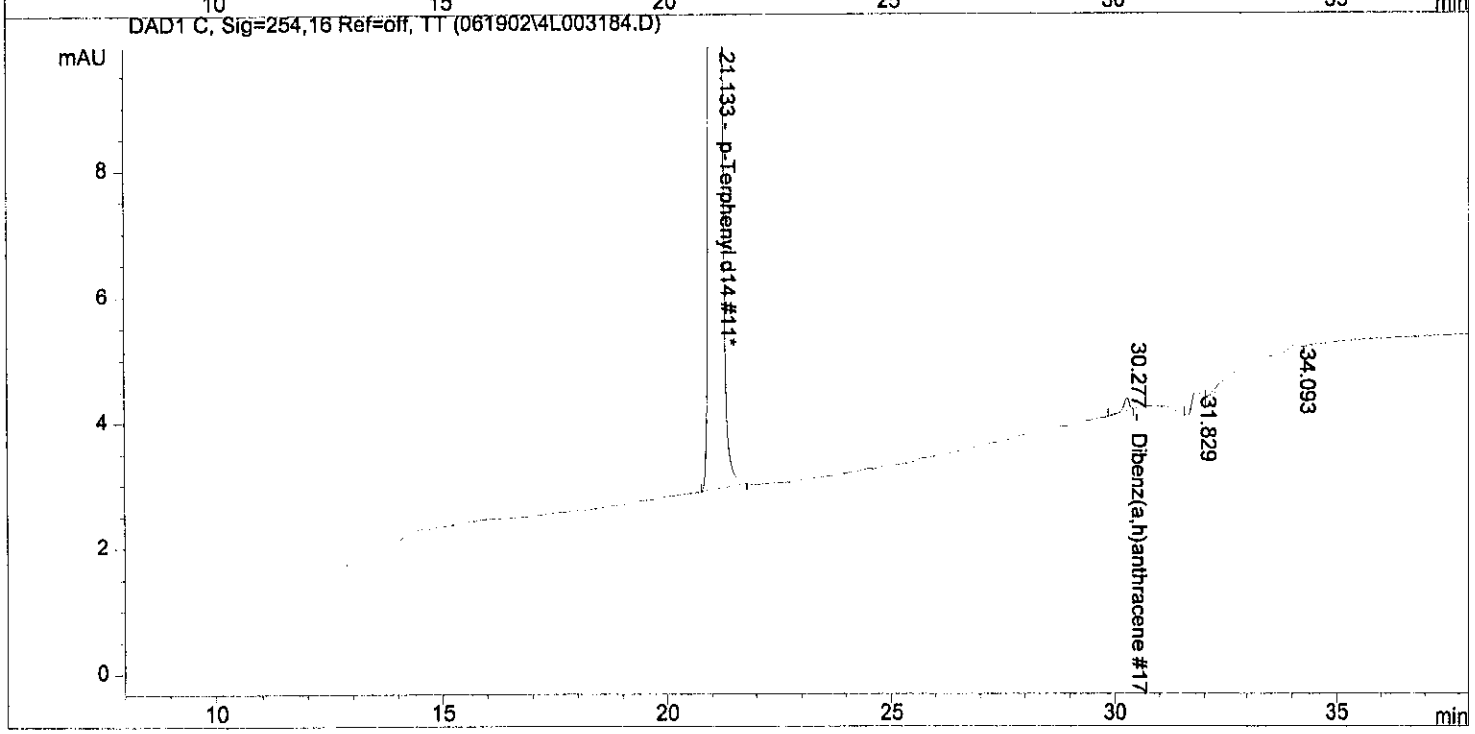
Injection Date : 6/19/2002 5:03:30 PM
Sample Name : WG120164-01 STD6
Acq. Operator : RDC

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:42:11 AM by RDC
(modified after loading)

Calibrated 06/13/2002





External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, June 20, 2002 8:42:06 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.299	BB	2.77743e-1	0.00000	0.00000		Naphthalene #1
11.937	BB	1.78093e-1	0.00000	0.00000		1-Methylnaphthalene #3
12.497		-	-	-		2-Methylnaphthalene #4
12.974		-	-	-		Acenaphthene #5
13.625		-	-	-		Fluorene #6
15.006		-	-	-		Phenanthrene #7
16.405		-	-	-		Anthracene #8
17.779		-	-	-		Fluoranthene #9
18.779		-	-	-		Pyrene #10
21.149	BBA	343.67426	2.91907e-1	100.32083		p-Terphenyl d14 #11*
22.493	BB	2.04240e-1	0.00000	0.00000		Benzo(a)anthracene #12
23.280		-	-	-		Chrysene #13
26.003		-	-	-		Benzo(b)fluoranthene #14
27.438		-	-	-		Benzo(k)fluoranthene #15
28.573	PBA	1.70233e-1	0.00000	0.00000		Benzo(a)pyrene #16
30.288	PB	3.06192e-1	0.00000	0.00000		Dibenz(a,h)anthracene #17
31.227		-	-	-		Benzo(g,h,i)perylene #18
32.172		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 100.32083

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.335		-	-	-		Naphthalene #1
10.959		-	-	-		Acenaphthylene #2
11.906		-	-	-		1-Methylnaphthalene #3
12.479		-	-	-		2-Methylnaphthalene #4
12.956		-	-	-		Acenaphthene #5
13.606		-	-	-		Fluorene #6
14.988		-	-	-		Phenanthrene #7
16.387		-	-	-		Anthracene #8
17.762		-	-	-		Fluoranthene #9
18.761		-	-	-		Pyrene #10
21.133	PBA	1553.84106	6.45287e-2	100.26737		p-Terphenyl d14 #11*
22.401		-	-	-		Benzo(a)anthracene #12
23.266		-	-	-		Chrysene #13
25.984		-	-	-		Benzo(b)fluoranthene #14
27.418		-	-	-		Benzo(k)fluoranthene #15
28.535		-	-	-		Benzo(a)pyrene #16
30.277	PBA	1.63578	0.00000	0.00000		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Sig	Name
31.206		-	-	-		Benzo(g,h,i)perylene #18
32.159		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 100.26737

Results obtained with enhanced integrator!
7 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Negative results set to zero (cal. curve intercept), (Naphthalene
Warning : Negative results set to zero (cal. curve intercept), (1-Methylnaph
Warning : Negative results set to zero (cal. curve intercept), (Benzo(a)anth
Warning : Negative results set to zero (cal. curve intercept), (Benzo(a)pyre
Warning : Negative results set to zero (cal. curve intercept), (Dibenz(a,h)a
Warning : Negative results set to zero (cal. curve intercept), (Dibenz(a,h)a

==========

*** End of Report ***

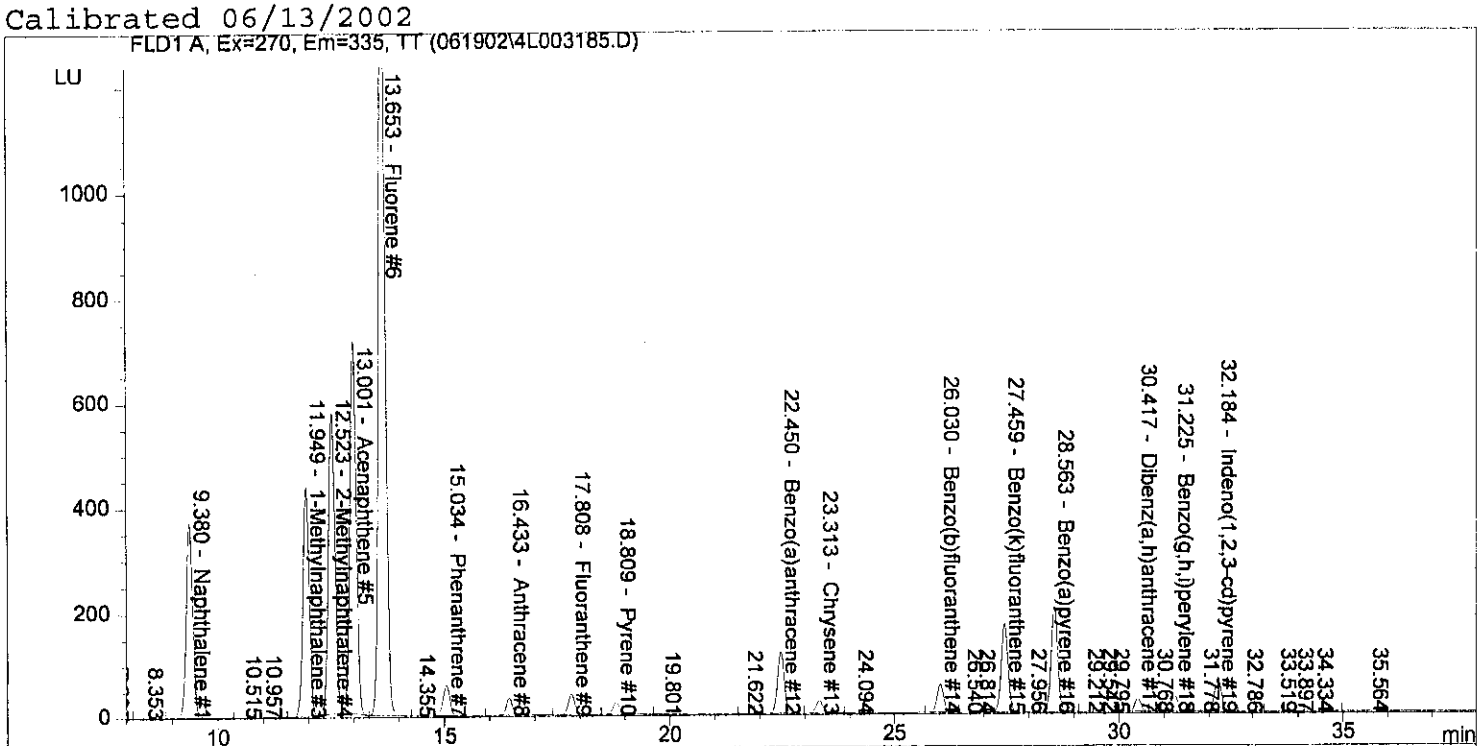
==========

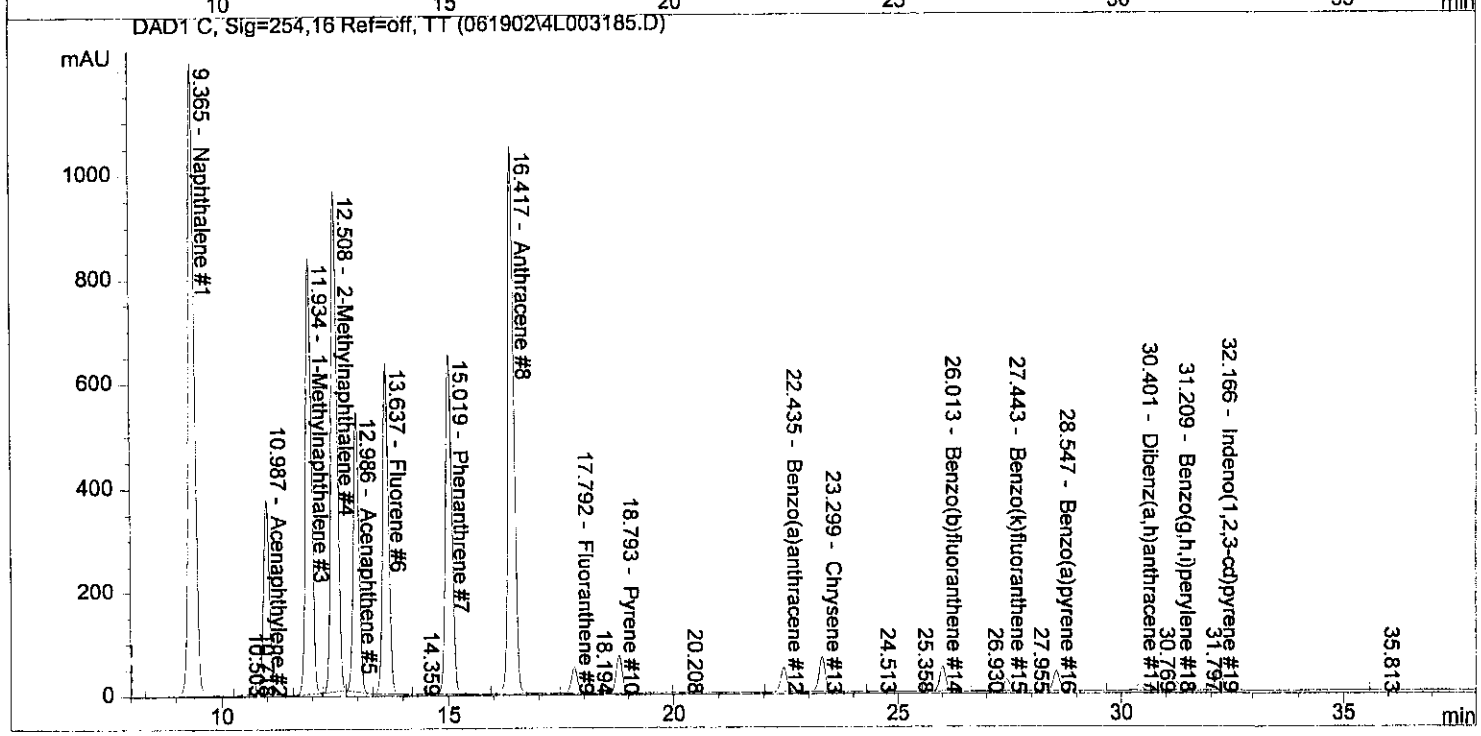
Injection Date : 6/19/2002 6:00:05 PM
Sample Name : WG120164-02 STD6
Acq. Operator : RDC

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:42:54 AM by RDC
(modified after loading)

Calibrated 06/13/2002





External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, June 20, 2002 8:42:48 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.380	BB	3818.87573	2.62437e-2	100.22159		Naphthalene #1
11.949	BB	4358.92773	2.29707e-2	100.12780		1-Methylnaphthalene #3
12.523	BB	5631.00635	1.77559e-2	99.98355		2-Methylnaphthalene #4
13.001	BB	7085.17041	1.41037e-2	99.92711		Acenaphthene #5
13.653	BB	1.51592e4	6.59341e-3	99.95082		Fluorene #6
15.034	BBA	586.44727	1.71254e-1	100.43156		Phenanthrene #7
16.433	BB	335.92169	2.98537e-1	100.28501		Anthracene #8
17.808	BB	397.42139	2.52545e-2	10.03667		Fluoranthene #9
18.809	BBA	245.56323	4.14121e-2	10.16929		Pyrene #10
21.149		-	-	-		p-Terphenyl d14 #11*
22.450	BB	1235.15466	8.12984e-3	10.04161		Benzo(a)anthracene #12
23.313	BB	252.46683	3.97636e-2	10.03898		Chrysene #13
26.030	BB	595.50562	1.68622e-2	10.04154		Benzo(b)fluoranthene #14
27.459	BB	1792.05200	2.79946e-3	5.01678		Benzo(k)fluoranthene #15
28.563	BB	2137.81030	4.70006e-3	10.04783		Benzo(a)pyrene #16
30.417	BB	251.97131	3.98946e-2	10.05230		Dibenz(a,h)anthracene #17
31.225	BB	358.59521	2.80699e-2	10.06575		Benzo(g,h,i)perylene #18
32.184	BB	717.39240	1.39874e-2	10.03448		Indeno(1,2,3-cd)pyrene #1
Totals :				796.47265		

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.365	BB	1.21595e4	8.19195e-3	99.61008		Naphthalene #1
10.987	BB	3352.51904	2.99467e-2	100.39688		Acenaphthylene #2
11.934	BB	7760.07324	1.29190e-2	100.25243		1-Methylnaphthalene #3
12.508	BB	8891.12988	1.12465e-2	99.99414		2-Methylnaphthalene #4
12.986	BB	4910.46826	2.04258e-2	100.30002		Acenaphthene #5
13.637	BB	5749.89111	1.74664e-2	100.42973		Fluorene #6
15.019	BBA	5932.12939	1.69982e-2	100.83579		Phenanthrene #7
16.417	BBA	9947.86328	1.00415e-2	99.89152		Anthracene #8
17.792	PB	464.57758	2.16306e-2	10.04910		Fluoranthene #9
18.793	BBA	706.87067	1.42266e-2	10.05634		Pyrene #10
21.133		-	-	-		p-Terphenyl d14 #11*
22.435	BB	457.02676	2.20189e-2	10.06322		Benzo(a)anthracene #12
23.299	BBA	668.69543	1.50409e-2	10.05776		Chrysene #13
26.013	BBA	487.47803	2.06231e-2	10.05330		Benzo(b)fluoranthene #14
27.443	BB	224.33841	2.24204e-2	5.02976		Benzo(k)fluoranthene #15
28.547	BB	390.50266	2.57763e-2	10.06572		Benzo(a)pyrene #16
30.401	BB	107.04004	9.35045e-2	10.00873		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.209	BB	190.01508	5.28975e-2	10.05133		Benzo(g,h,i)perylene #18
32.166	BBA	492.90811	2.04215e-2	10.06594		Indeno(1,2,3-cd)pyrene #1

Totals : 897.21179

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

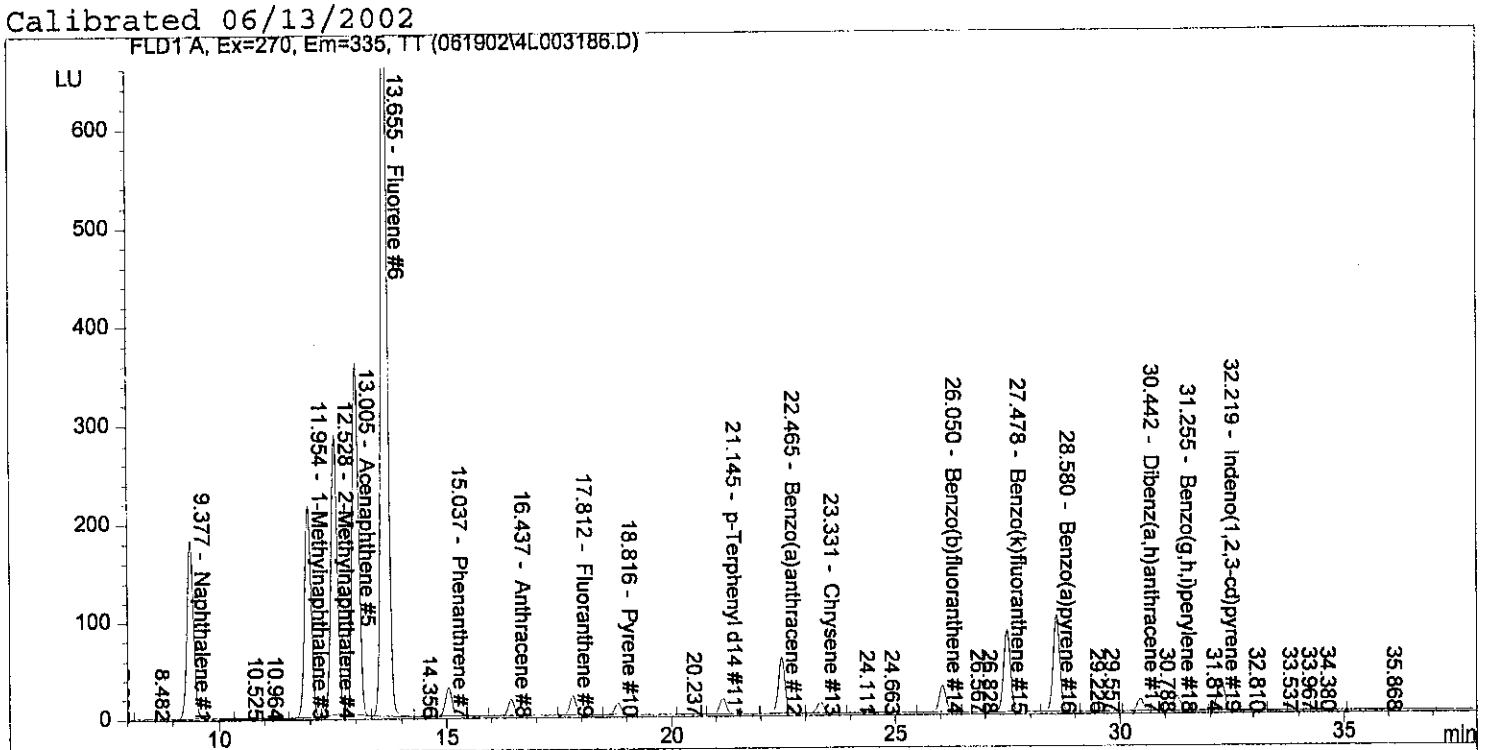
==========

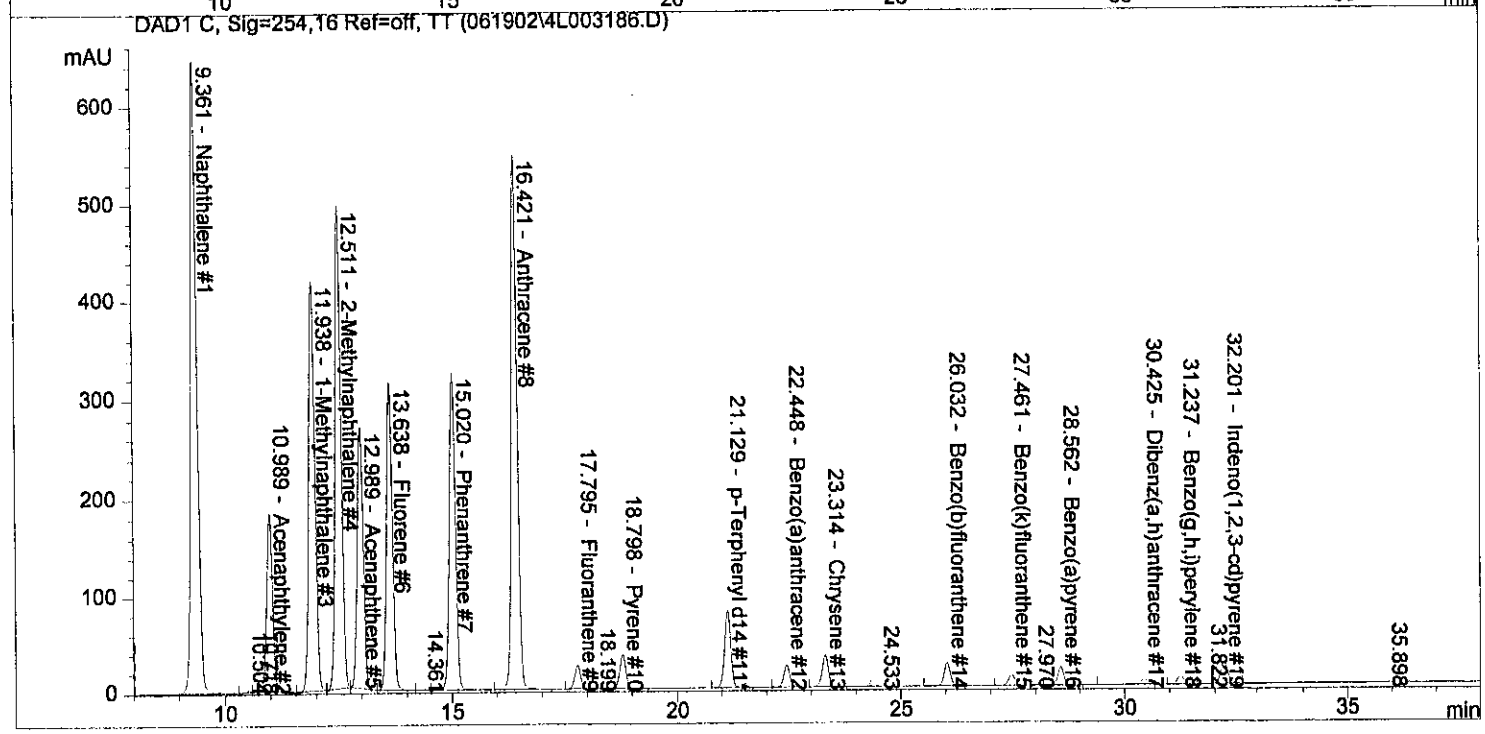
Injection Date : 6/19/2002 6:56:44 PM
Sample Name : WG120164-03 STD5
Acq. Operator : RDC

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:43:28 AM by RDC
(modified after loading)

Calibrated 06/13/2002





==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Thursday, June 20, 2002 8:43:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.377	BB	1881.29065	2.63131e-2	49.50264		Naphthalene #1
11.954	BB	2153.76392	2.30283e-2	49.59744		1-Methylnaphthalene #3
12.528	BB	2790.36157	1.78058e-2	49.68456		2-Methylnaphthalene #4
13.005	BB	3535.51440	1.41219e-2	49.92802		Acenaphthene #5
13.655	BB	7607.03076	6.58907e-3	50.12324		Fluorene #6
15.037	BBA	286.03766	1.71937e-1	49.18044		Phenanthrene #7
16.437	PB	165.22198	2.99107e-1	49.41899		Anthracene #8
17.812	PB	195.60518	2.53087e-2	4.95052		Fluoranthene #9
18.816	BBA	120.33789	4.15558e-2	5.00074		Pyrene #10
21.145	BBA	170.11554	2.92305e-1	49.72557		p-Terphenyl d14 #11*
22.465	BB	604.25543	8.15514e-3	4.92779		Benzo(a)anthracene #12
23.331	BBA	123.19585	3.99046e-2	4.91608		Chrysene #13
26.050	PB	292.99271	1.68934e-2	4.94964		Benzo(b)fluoranthene #14
27.478	BB	882.24713	2.80542e-3	2.47507		Benzo(k)fluoranthene #15
28.580	BB	1045.54724	4.71635e-3	4.93116		Benzo(a)pyrene #16
30.442	BB	122.97315	4.00415e-2	4.92403		Dibenz(a,h)anthracene #17
31.255	BB	174.47961	2.81717e-2	4.91540		Benzo(g,h,i)perylene #18
32.219	BB	351.40439	1.40377e-2	4.93292		Indeno(1,2,3-cd)pyrene #1
Totals :				444.08425		

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.361	BBA	6248.73438	8.16646e-3	51.03002		Naphthalene #1
10.989	BB	1646.95264	3.00001e-2	49.40870		Acenaphthylene #2
11.938	BB	3853.44678	1.29242e-2	49.80286		1-Methylnaphthalene #3
12.511	BB	4472.15283	1.12330e-2	50.23561		2-Methylnaphthalene #4
12.989	BB	2425.16016	2.04531e-2	49.60203		Acenaphthene #5
13.638	BB	2832.44678	1.74887e-2	49.53595		Fluorene #6
15.020	BBA	2921.47241	1.69744e-2	49.59022		Phenanthrene #7
16.421	BBA	5037.00098	1.00204e-2	50.47291		Anthracene #8
17.795	PB	227.65421	2.16931e-2	4.93852		Fluoranthene #9
18.798	BBA	345.94687	1.42645e-2	4.93476		Pyrene #10
21.129	BBA	771.85547	6.46190e-2	49.87651		p-Terphenyl d14 #11*
22.448	PBA	223.22693	2.20610e-2	4.92460		Benzo(a)anthracene #12
23.314	BBA	327.80472	1.50602e-2	4.93681		Chrysene #13
26.032	BBA	238.78767	2.06928e-2	4.94118		Benzo(b)fluoranthene #14
27.461	BB	109.96069	2.24624e-2	2.46999		Benzo(k)fluoranthene #15
28.562	BB	189.32166	2.59120e-2	4.90571		Benzo(a)pyrene #16
30.425	BB	52.23464	9.42516e-2	4.92320		Dibenz(a,h)anthracene #17

Rettime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]		
31.237	BB	92.88844	5.27344e-2	4.89842		Benzo(g,h,i)perylene #18
32.201	BBA	240.26486	2.05147e-2	4.92897		Indeno(1,2,3-cd)pyrene #1

Totals : 496.35698

Results obtained with enhanced integrator!

*** End of Report ***

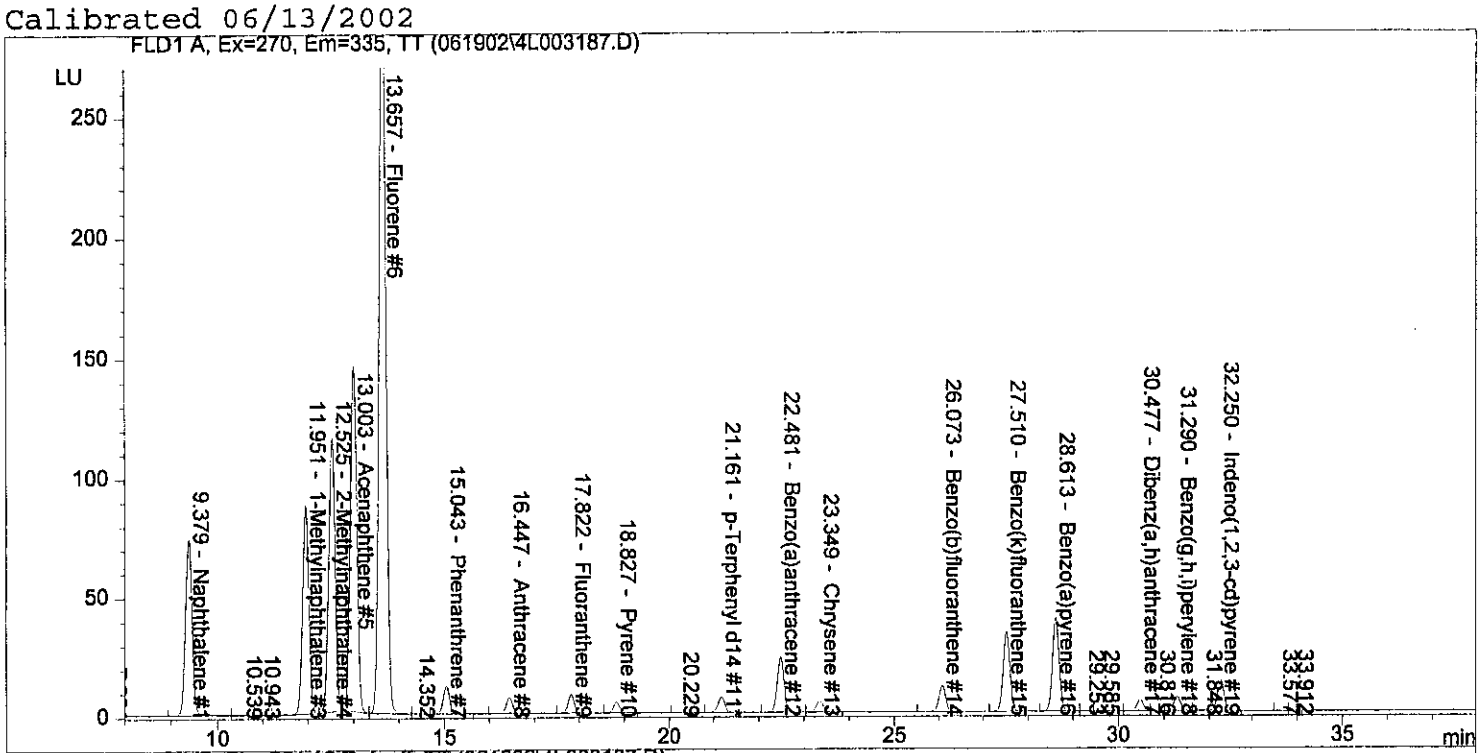
1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

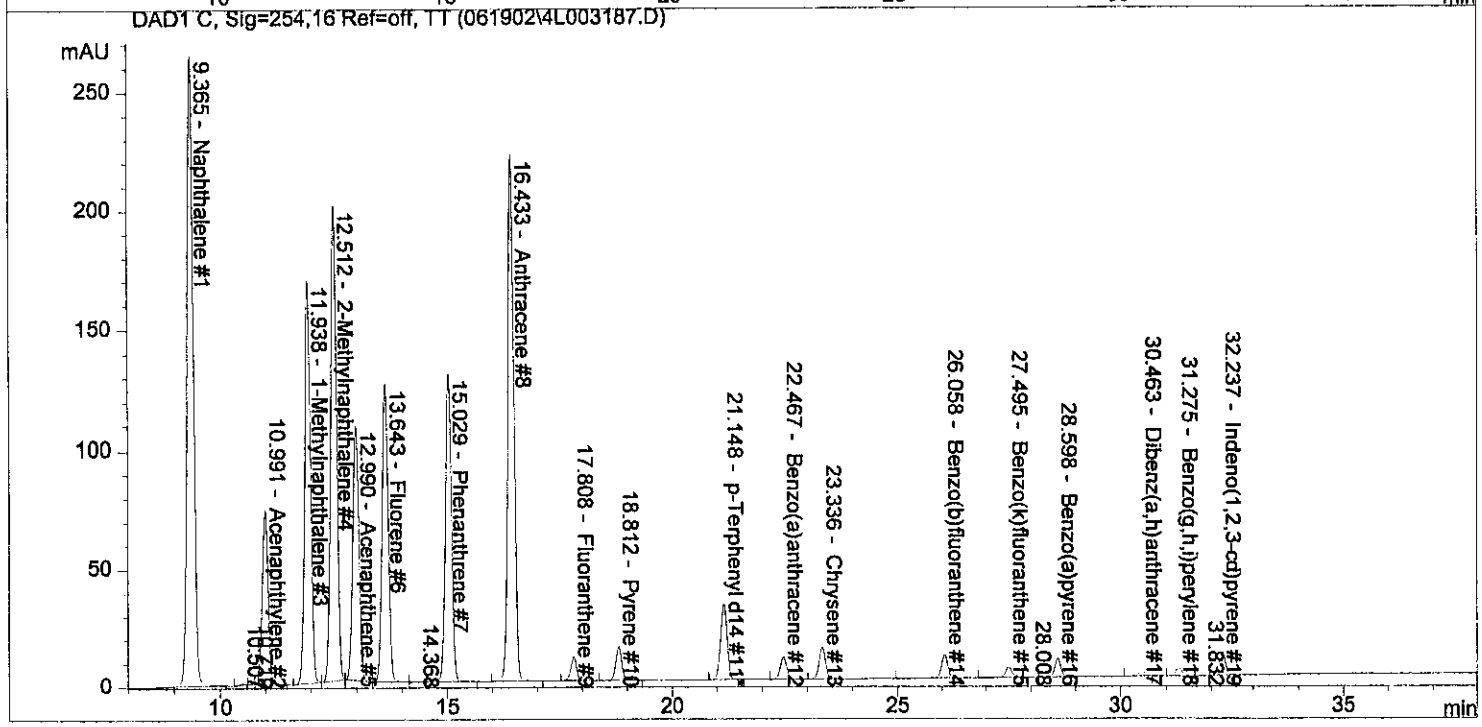
==========

Injection Date	: 6/19/2002 7:53:21 PM	Seq. Line	: 5
Sample Name	: WG120164-04 STD4	Vial	: 5
Acq. Operator	: RDC	Inj	: 1
		Inj Volume	: 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:44:13 AM by RDC
(modified after loading)

Calibrated 06/13/2002





External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, June 20, 2002 8:44:09 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.379	BB	753.95251	2.64927e-2	19.97423		Naphthalene #1
11.951	BB	858.01282	2.31793e-2	19.88811		1-Methylnaphthalene #3
12.525	BB	1119.16992	1.78859e-2	20.01739		2-Methylnaphthalene #4
13.003	BB	1418.85522	1.41532e-2	20.08132		Acenaphthene #5
13.657	BB	3055.26025	6.59083e-3	20.13672		Fluorene #6
15.043	BBA	113.53256	1.73929e-1	19.74655		Phenanthrene #7
16.447	PBA	66.23384	3.01005e-1	19.93674		Anthracene #8
17.822	PB	78.11402	2.54898e-2	1.99111		Fluoranthene #9
18.827	BBA	47.68803	4.18033e-2	1.99352		Pyrene #10
21.161	BB	67.05980	2.94501e-1	19.74918		p-Terphenyl d14 #11*
22.481	BB	240.55975	8.23501e-3	1.98101		Benzo(a)anthracene #12
23.349	BB	49.27580	4.03067e-2	1.98615		Chrysene #13
26.073	PB	116.48901	1.70374e-2	1.98467		Benzo(b)fluoranthene #14
27.510	BB	351.08521	2.82853e-3	9.93056e-1		Benzo(k)fluoranthene #15
28.613	BB	413.85422	4.77227e-3	1.97503		Benzo(a)pyrene #16
30.477	BB	48.37757	4.05591e-2	1.96215		Dibenz(a,h)anthracene #17
31.290	BB	68.83204	2.85657e-2	1.96623		Benzo(g,h,i)perylene #18
32.250	BB	139.75822	1.41788e-2	1.98160		Indeno(1,2,3-cd)pyrene #1
Totals :				178.34476		

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.365	BBA	2522.50317	8.11604e-3	20.47273		Naphthalene #1
10.991	BBA	658.61700	3.02252e-2	19.90686		Acenaphthylene #2
11.938	PB	1542.24731	1.29857e-2	20.02717		1-Methylnaphthalene #3
12.512	BB	1796.91260	1.12303e-2	20.17988		2-Methylnaphthalene #4
12.990	BB	969.13959	2.05833e-2	19.94806		Acenaphthene #5
13.643	BB	1129.35339	1.76278e-2	19.90797		Fluorene #6
15.029	BBA	1164.06238	1.71101e-2	19.91720		Phenanthrene #7
16.433	BBA	2019.75476	1.00006e-2	20.19869		Anthracene #8
17.808	PB	90.59781	2.19570e-2	1.98925		Fluoranthene #9
18.812	BBA	137.22350	1.44595e-2	1.98419		Pyrene #10
21.148	PBA	304.47540	6.50902e-2	19.81837		p-Terphenyl d14 #11*
22.467	BBA	88.71733	2.22988e-2	1.97829		Benzo(a)anthracene #12
23.336	BBA	130.01958	1.51969e-2	1.97589		Chrysene #13
26.058	BBA	95.03743	2.09855e-2	1.99441		Benzo(b)fluoranthene #14
27.495	PBA	43.78368	2.26996e-2	9.93871e-1		Benzo(k)fluoranthene #15
28.598	BBA	74.65511	2.63487e-2	1.96706		Benzo(a)pyrene #16
30.463	BB	21.19111	9.52662e-2	2.01880		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.275	BB	36.61276	5.26000e-2	1.92583		Benzo(g,h,i)perylene #18
32.237	BB	94.45714	2.08931e-2	1.97350		Indeno(1,2,3-cd)pyrene #1

Totals : 199.17802

Results obtained with enhanced integrator!

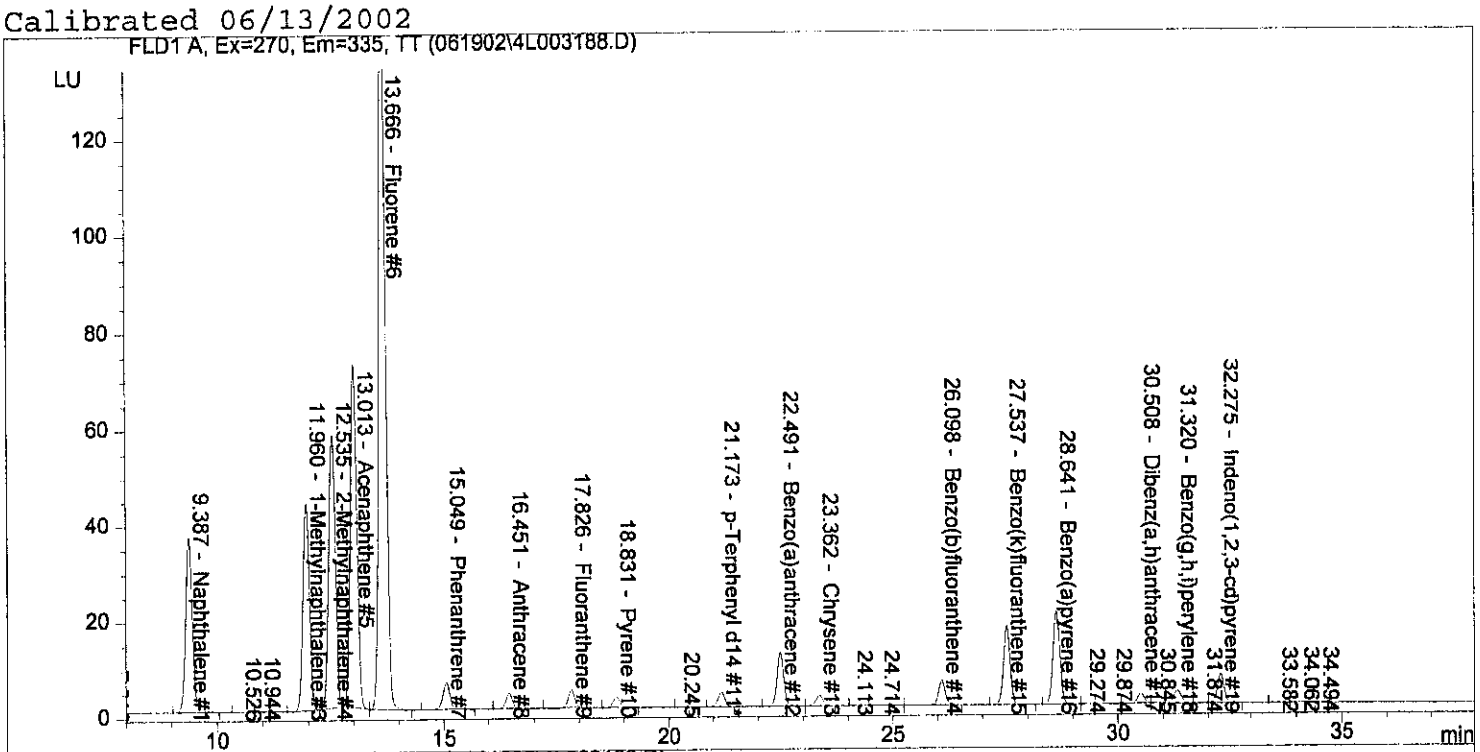
*** End of Report ***

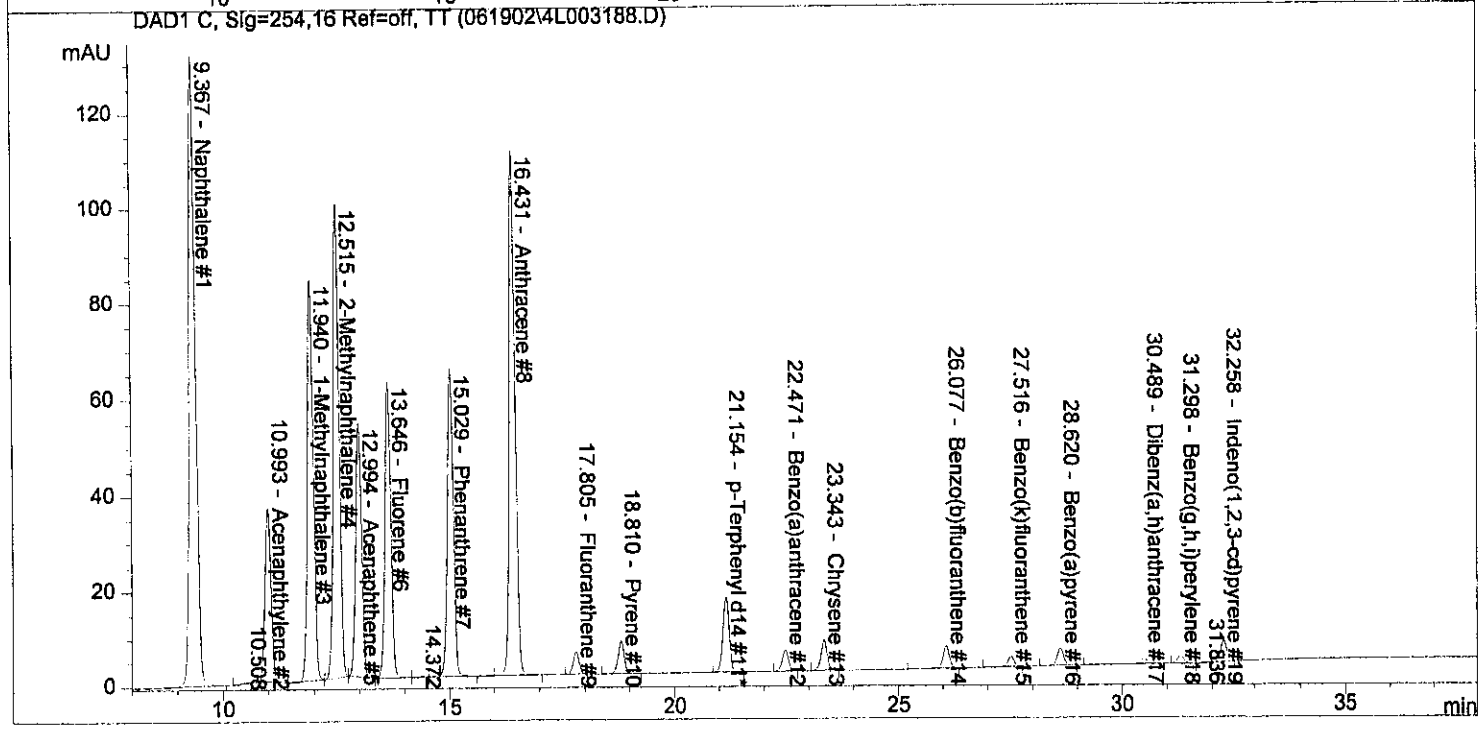
==========

Injection Date	: 6/19/2002 8:49:59 PM	Seq. Line	: 6
Sample Name	: WG120164-05 STD3	Vial	: 6
Acq. Operator	: RDC	Inj	: 1
		Inj Volume	: 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:44:50 AM by RDC
(modified after loading)

Calibrated 06/13/2002





External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Thursday, June 20, 2002 8:44:47 AM
Multiplier	:	1.0000
Dilution	:	1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.387	BB	372.80032	2.67856e-2	9.98566		Naphthalene #1
11.960	BB	427.56720	2.34118e-2	10.01011		1-Methylnaphthalene #3
12.535	BB	555.46735	1.80126e-2	10.00542		2-Methylnaphthalene #4
13.013	BB	703.58374	1.42041e-2	9.99375		Acenaphthene #5
13.666	BB	1519.39380	6.59104e-3	10.01438		Fluorene #6
15.049	BBA	57.20443	1.76518e-1	10.09759		Phenanthrene #7
16.451	BBA	32.94457	3.04050e-1	10.01681		Anthracene #8
17.826	PB	38.41879	2.58349e-2	9.92545e-1		Fluoranthene #9
18.831	BBA	23.72331	4.20555e-2	9.97697e-1		Pyrene #10
21.173	BB	33.17809	2.98544e-1	9.90512		p-Terphenyl d14 #11*
22.491	BB	118.62704	8.37669e-3	9.93702e-1		Benzo(a)anthracene #12
23.362	BB	24.51306	4.08600e-2	1.00160		Chrysene #13
26.098	BB	57.64222	1.72859e-2	9.96397e-1		Benzo(b)fluoranthene #14
27.537	PBA	174.54939	2.86391e-3	4.99893e-1		Benzo(k)fluoranthene #15
28.641	BB	203.63187	4.86675e-3	9.91025e-1		Benzo(a)pyrene #16
30.508	BB	23.79175	4.14859e-2	9.87021e-1		Dibenz(a,h)anthracene #17
31.320	BB	33.82579	2.92449e-2	9.89233e-1		Benzo(g,h,i)perylene #18
32.275	BBA	68.94070	1.44207e-2	9.94171e-1		Indeno(1,2,3-cd)pyrene #1
Totals :				89.47213		

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.367	PBA	1256.01123	7.99501e-3	10.04182		Naphthalene #1
10.993	BB	327.28607	3.05782e-2	10.00783		Acenaphthylene #2
11.940	BB	764.27496	1.30750e-2	9.99287		1-Methylnaphthalene #3
12.515	BB	893.57037	1.12157e-2	10.02200		2-Methylnaphthalene #4
12.994	BB	481.32138	2.07914e-2	10.00732		Acenaphthene #5
13.646	BB	559.61633	1.78466e-2	9.98725		Fluorene #6
15.029	BBA	576.95782	1.73039e-2	9.98360		Phenanthrene #7
16.431	BBA	1002.81183	9.97595e-3	10.00400		Anthracene #8
17.805	BBA	44.70066	2.23857e-2	1.00066		Fluoranthene #9
18.810	BBA	67.82222	1.47614e-2	1.00115		Pyrene #10
21.154	BBA	150.41772	6.58969e-2	9.91207		p-Terphenyl d14 #11*
22.471	BBA	43.86306	2.26669e-2	9.94240e-1		Benzo(a)anthracene #12
23.343	BBA	64.16498	1.54198e-2	9.89412e-1		Chrysene #13
26.077	BBA	46.88808	2.12232e-2	9.95115e-1		Benzo(b)fluoranthene #14
27.516	PBA	21.77243	2.30482e-2	5.01816e-1		Benzo(k)fluoranthene #15
28.620	BBA	36.86427	2.70988e-2	9.98976e-1		Benzo(a)pyrene #16
30.489	BBA	11.97529	9.44798e-2	1.13142		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Cap	Name
31.298	BB	18.48934	5.35680e-2	9.90436e-1		Benzo(g,h,i)perylene #18
32.258	BBA	46.04763	2.15335e-2	9.91566e-1		Indeno(1,2,3-cd)pyrene #1

Totals : 99.55356

Results obtained with enhanced integrator!

*** End of Report ***

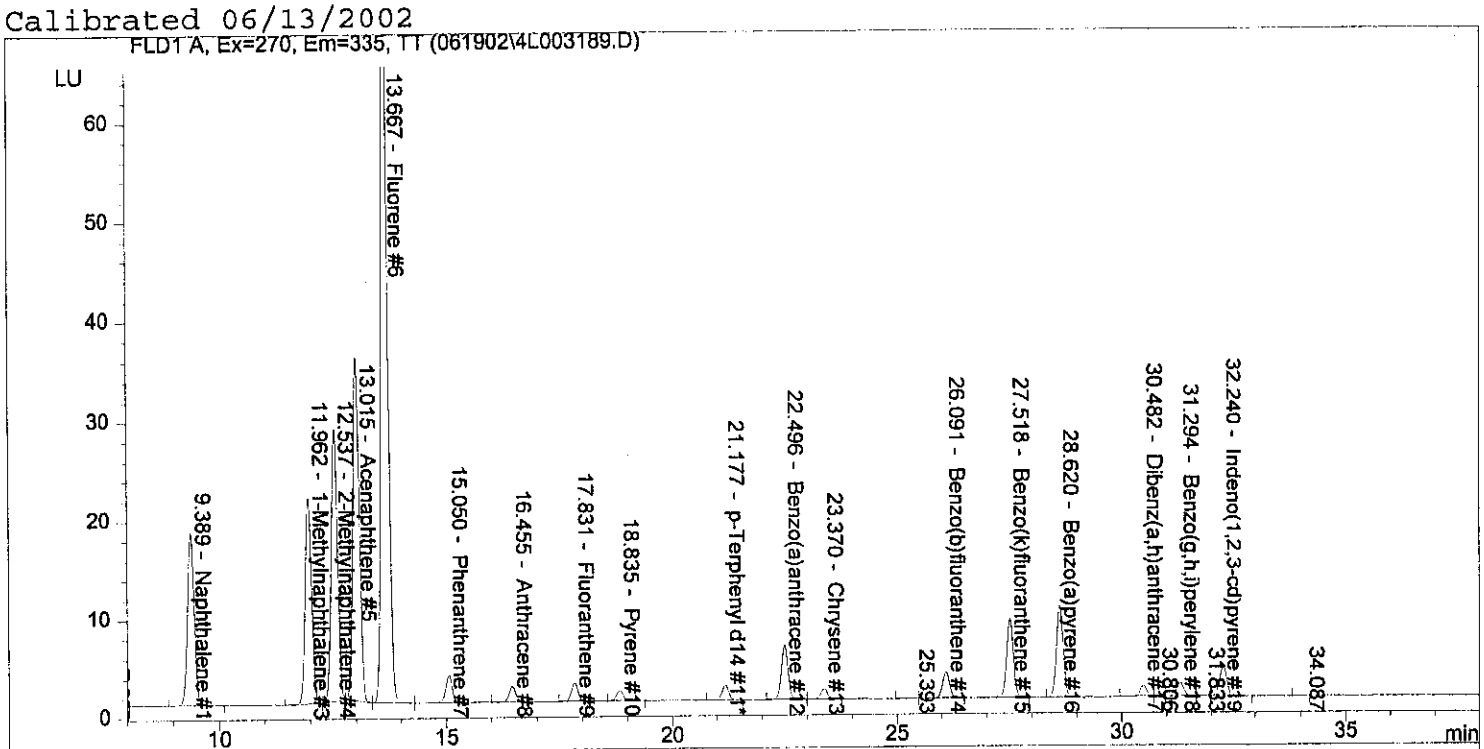
==========

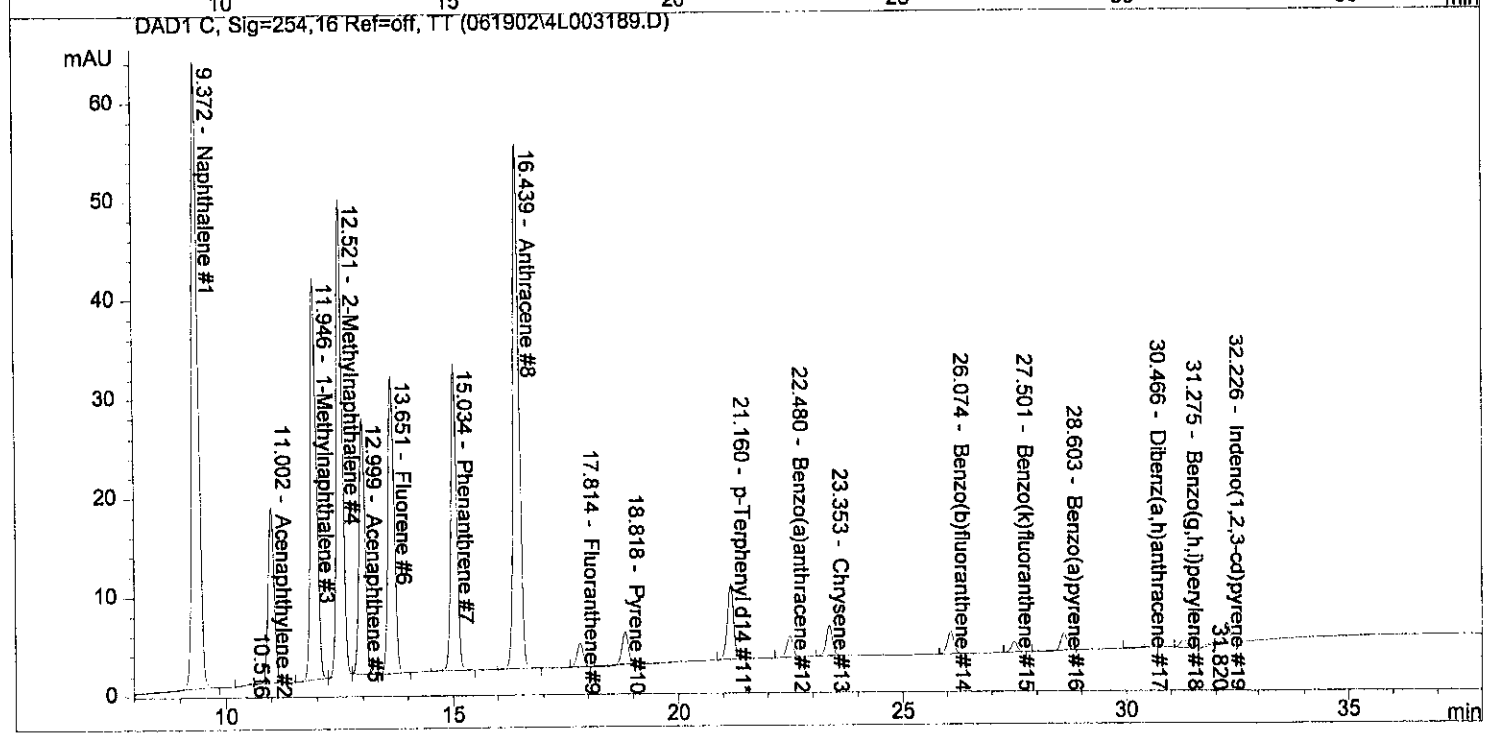
Injection Date : 6/19/2002 9:46:37 PM
Sample Name : WG120164-06 STD2
Acq. Operator : RDC

Seq. Line : 7
Vial : 7
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:45:23 AM by RDC
(modified after loading)

Calibrated 06/13/2002





External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	Thursday, June 20, 2002 8:45:20 AM
Multiplier	:	1.0000
Dilution	:	1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.389	BBA	180.32388	2.73749e-2	4.93634		Naphthalene #1
11.962	BB	206.59302	2.38973e-2	4.93702		1-Methylnaphthalene #3
12.537	BB	268.34698	1.82743e-2	4.90387		2-Methylnaphthalene #4
13.015	BB	339.82239	1.43081e-2	4.86222		Acenaphthene #5
13.667	BB	734.63800	6.58745e-3	4.83939		Fluorene #6
15.050	BBA	27.54959	1.82175e-1	5.01885		Phenanthrene #7
16.455	PBA	15.88479	3.10694e-1	4.93531		Anthracene #8
17.831	PB	18.78860	2.64718e-2	4.97369e-1		Fluoranthene #9
18.835	BBA	11.53121	4.25437e-2	4.90580e-1		Pyrene #10
21.177	BBA	16.05081	3.06498e-1	4.91953		p-Terphenyl d14 #11*
22.496	BB	57.40008	8.66535e-3	4.97392e-1		Benzo(a)anthracene #12
23.370	BB	11.79001	4.22270e-2	4.97857e-1		Chrysene #13
26.091	BBA	27.72870	1.77868e-2	4.93204e-1		Benzo(b)fluoranthene #14
27.518	PBA	83.46227	2.94334e-3	2.45658e-1		Benzo(k)fluoranthene #15
28.620	PB	97.80115	5.06761e-3	4.95618e-1		Benzo(a)pyrene #16
30.482	BB	11.53541	4.34070e-2	5.00718e-1		Dibenz(a,h)anthracene #17
31.294	BB	16.16728	3.07342e-2	4.96888e-1		Benzo(g,h,i)perylene #18
32.240	BBA	33.25379	1.49021e-2	4.95551e-1		Indeno(1,2,3-cd)pyrene #1
Totals :				44.06336		

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.372	PBA	604.13025	7.76042e-3	4.68830		Naphthalene #1
11.002	BBA	161.28902	3.11731e-2	5.02788		Acenaphthylene #2
11.946	PB	369.24078	1.32537e-2	4.89379		1-Methylnaphthalene #3
12.521	BB	431.87616	1.11748e-2	4.82614		2-Methylnaphthalene #4
12.999	BB	232.43697	2.12095e-2	4.92988		Acenaphthene #5
13.651	BBA	269.75366	1.83088e-2	4.93887		Fluorene #6
15.034	BBA	277.70538	1.77090e-2	4.91789		Phenanthrene #7
16.439	PBA	483.02975	9.90100e-3	4.78248		Anthracene #8
17.814	BBA	21.38802	2.33539e-2	4.99493e-1		Fluoranthene #9
18.818	BBA	30.01324	1.56292e-2	4.69082e-1		Pyrene #10
21.160	PBA	72.39475	6.76238e-2	4.89561		p-Terphenyl d14 #11*
22.480	BBA	21.07132	2.35836e-2	4.96939e-1		Benzo(a)anthracene #12
23.353	BBA	30.91224	1.58965e-2	4.91397e-1		Chrysene #13
26.074	BBA	22.64764	2.18898e-2	4.95751e-1		Benzo(b)fluoranthene #14
27.501	BBA	10.30655	2.38100e-2	2.45399e-1		Benzo(k)fluoranthene #15
28.603	BBA	16.74469	2.87600e-2	4.81577e-1		Benzo(a)pyrene #16
30.466	BBA	5.15278	9.32878e-2	4.80691e-1		Dibenz(a,h)anthracene #17

[min]		[mAU*s]		[ug/L]		
31.275	BB	9.25292	5.39457e-2	4.99155e-1		Benzo(g,h,i)perylene #18
32.226	BB	21.58914	2.28197e-2	4.92657e-1		Indeno(1,2,3-cd)pyrene #1
Totals :				48.55298		

Results obtained with enhanced integrator!

*** End of Report ***

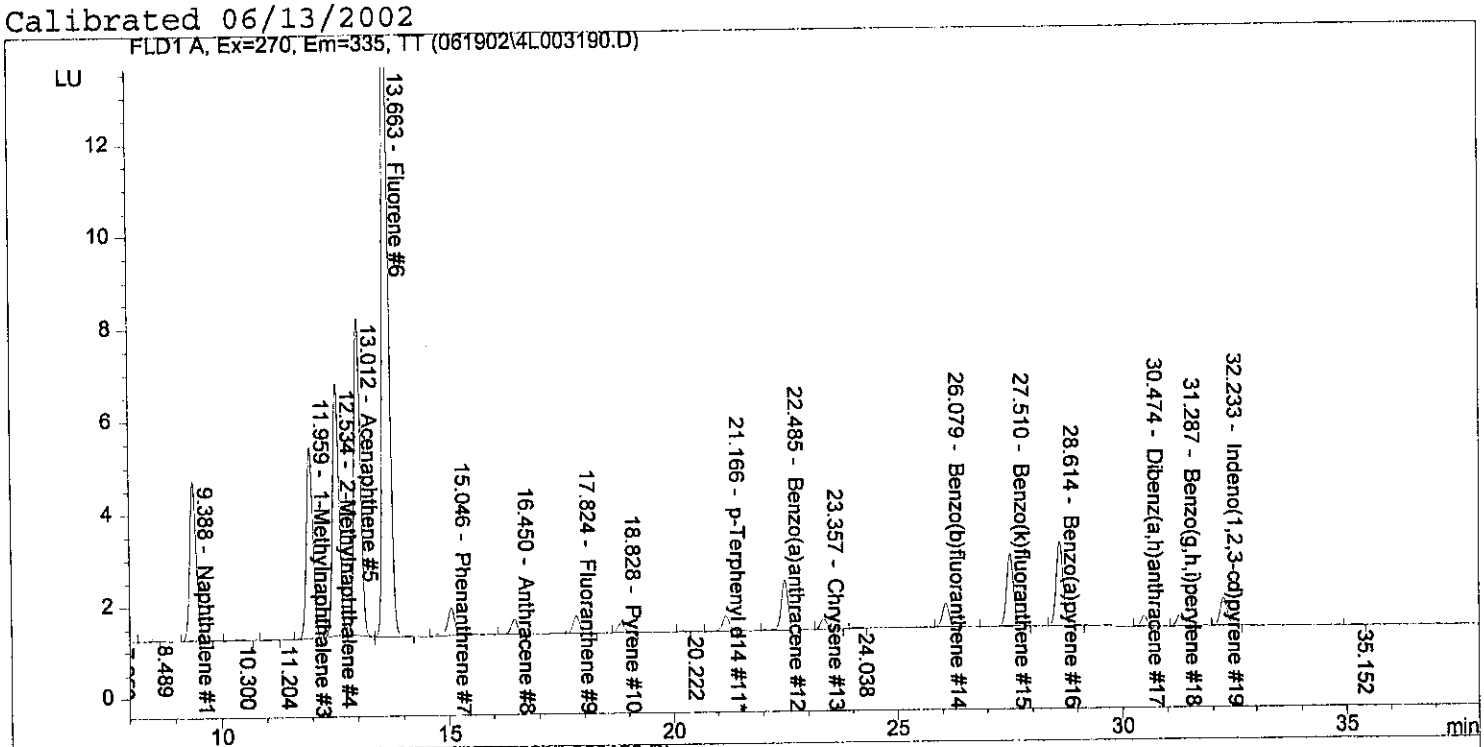
==========

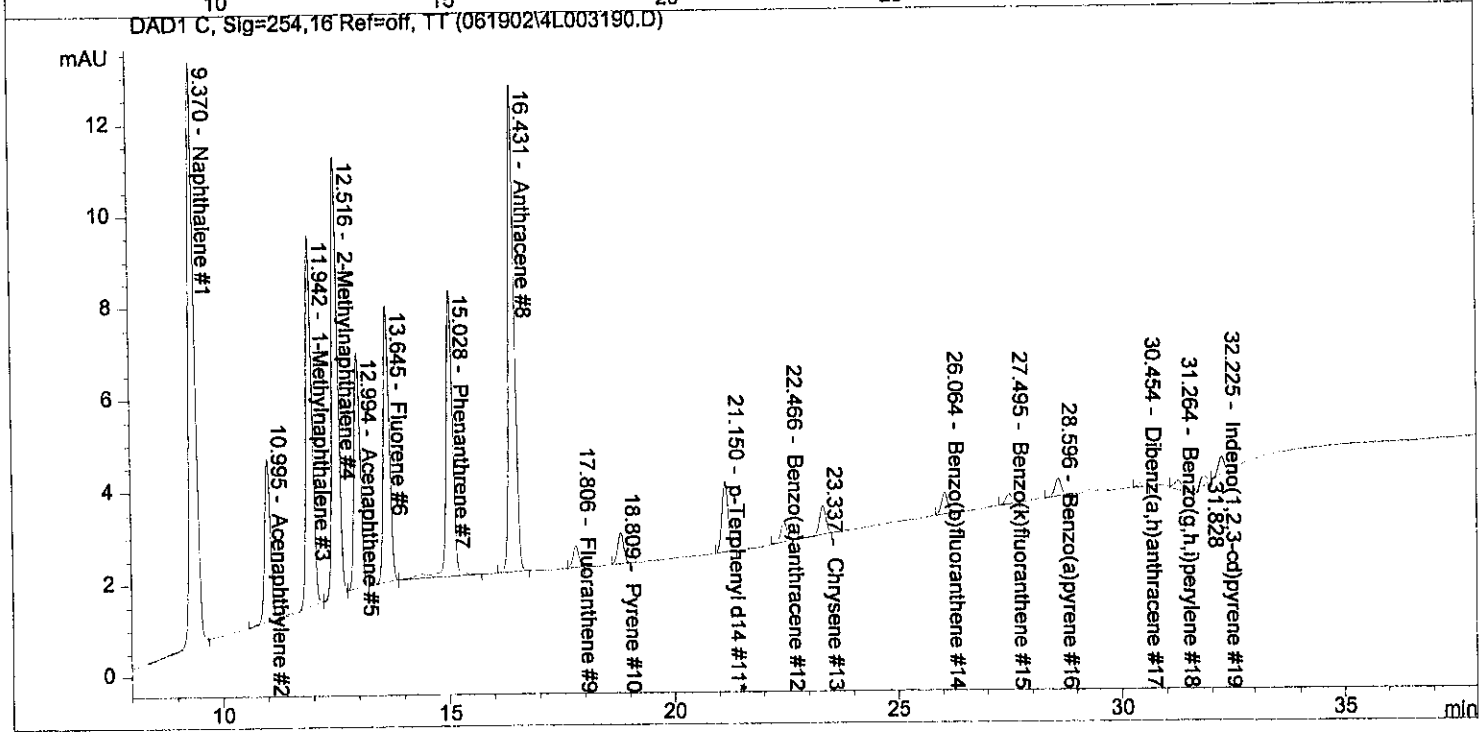
Injection Date : 6/19/2002 10:43:19 PM
Sample Name : WG120164-07 STD1
Acq. Operator : RDC

Seq. Line : 8
Vial : 8
Inj : 1
Inj Volume : 8 µl

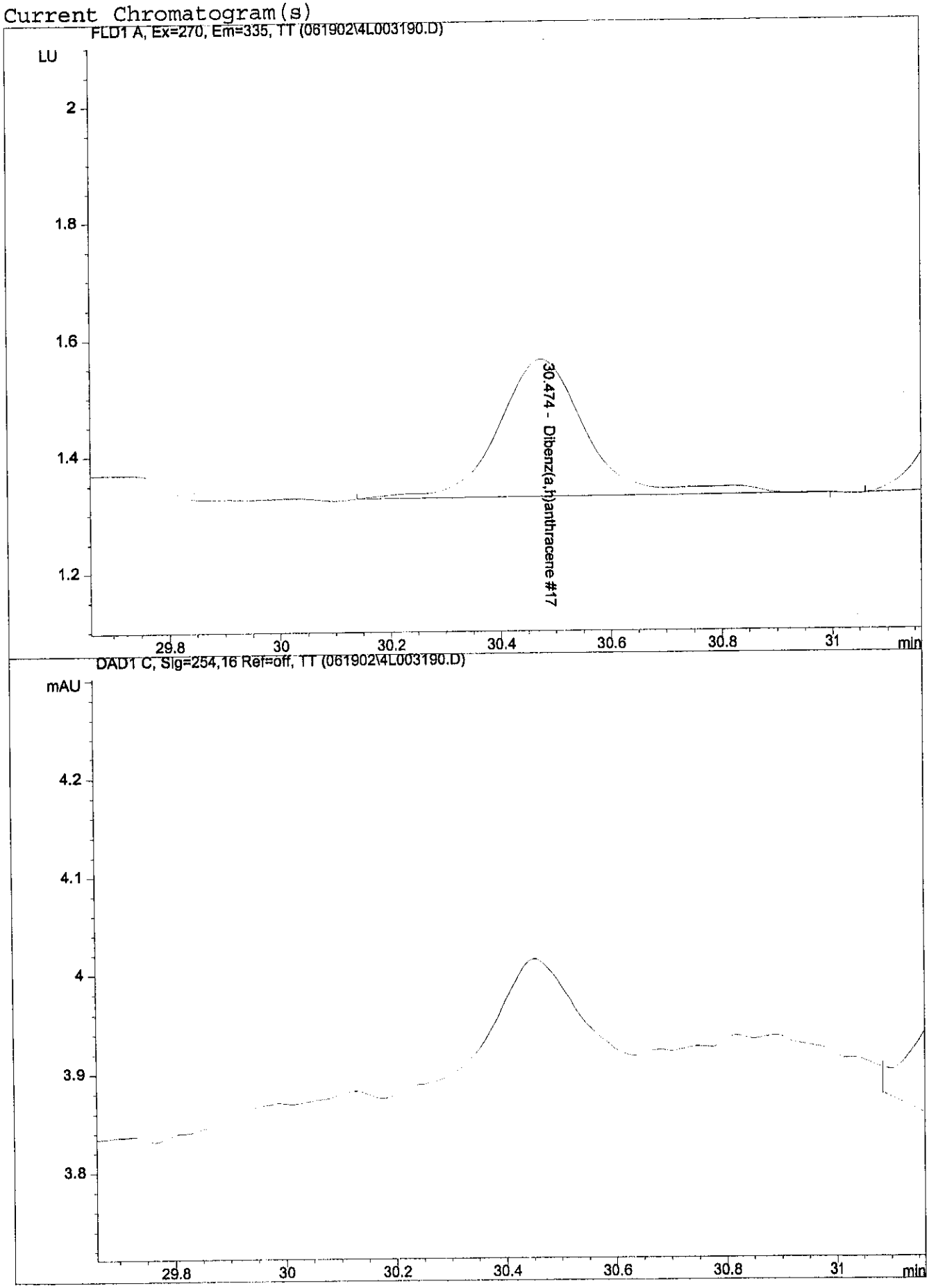
Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:50:59 AM by RDC
(modified after loading)

Calibrated 06/13/2002

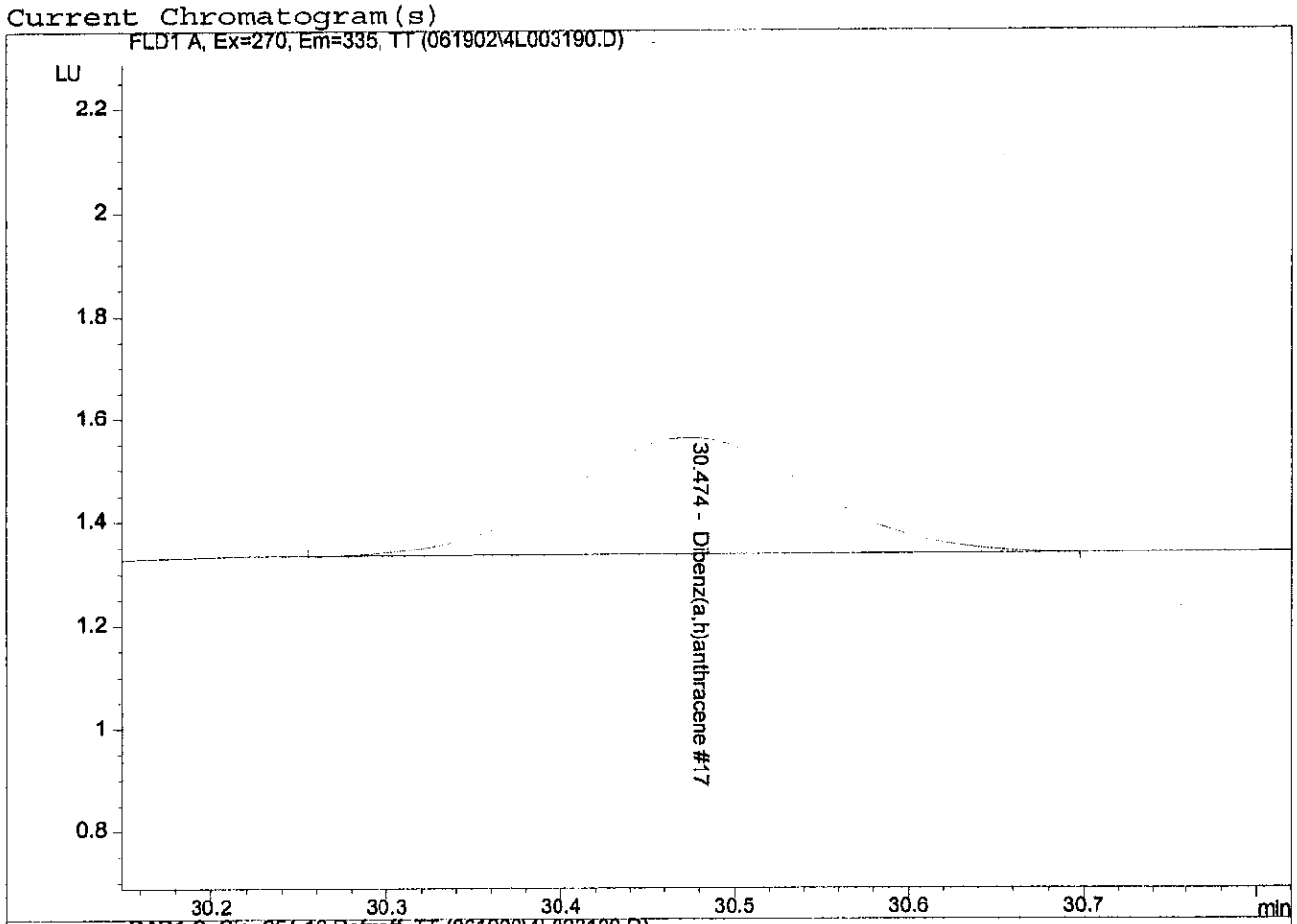


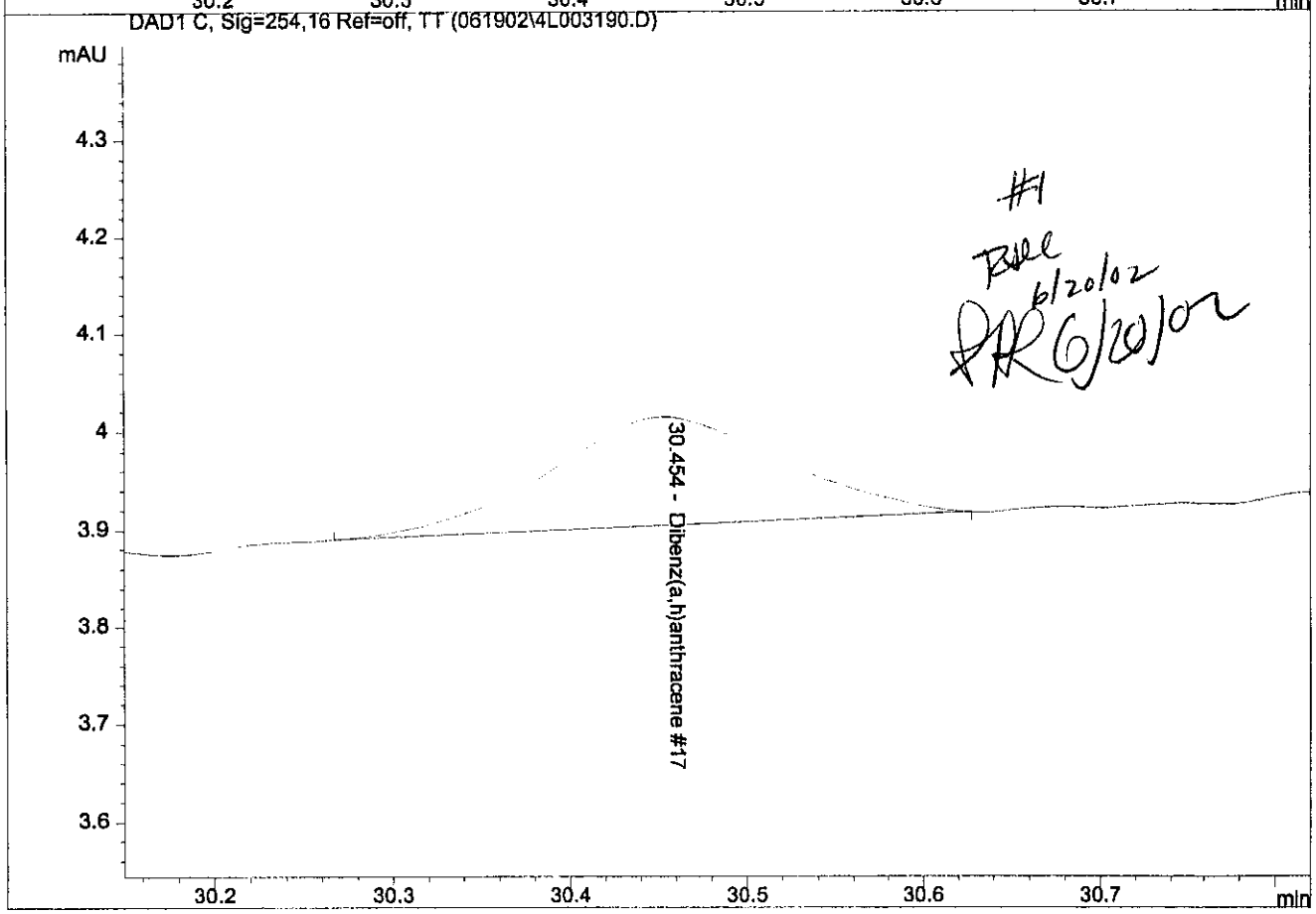


Current Chromatogram(s)



Current Chromatogram(s)





#1
BWL 6/20/02
PAR 6/20/02

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Thursday, June 20, 2002 8:50:56 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.388	BBA	35.50560	3.22050e-2	1.14346		Naphthalene #1
11.959	BB	40.92273	2.77854e-2	1.13705		1-Methylnaphthalene #3
12.534	BB	53.13324	2.03886e-2	1.08331		2-Methylnaphthalene #4
13.012	BB	67.65919	1.51387e-2	1.02427		Acenaphthene #5
13.663	BB	146.98784	6.57698e-3	9.66736e-1		Fluorene #6
15.046	BBA	6.79399	2.09718e-1	1.42482		Phenanthrene #7
16.450	BBA	3.26255	3.60175e-1	1.17509		Anthracene #8
17.824	BBA	3.92421	3.11659e-2	1.22302e-1		Fluoranthene #9
18.828	BBA	2.23386	4.69174e-2	1.04807e-1		Pyrene #10
21.166	BB	3.57698	3.58661e-1	1.28292		p-Terphenyl d14 #11*
22.485	BB	11.92573	1.07760e-2	1.28512e-1		Benzo(a)anthracene #12
23.357	BB	2.37958	5.22694e-2	1.24379e-1		Chrysene #13
26.079	BBA	5.48437	2.18900e-2	1.20053e-1		Benzo(b)fluoranthene #14
27.510	PBA	16.92470	3.54432e-3	5.99866e-2		Benzo(k)fluoranthene #15
28.614	BBA	19.55420	6.62954e-3	1.29635e-1		Benzo(a)pyrene #16
30.474	MM	2.22269	5.93741e-2	1.31970e-1		Dibenz(a,h)anthracene #17
31.287	PBA	3.18651	4.24380e-2	1.35229e-1		Benzo(g,h,i)perylene #18
32.233	BB	6.77440	1.86704e-2	1.26481e-1		Indeno(1,2,3-cd)pyrene #1

Totals : 10.42102

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.370	PBA	121.88613	5.96867e-3	7.27498e-1		Naphthalene #1
10.995	BB	31.70620	3.66640e-2	1.16248		Acenaphthylene #2
11.942	BB	72.22427	1.48276e-2	1.07092		1-Methylnaphthalene #3
12.516	BB	85.91975	1.09324e-2	9.39313e-1		2-Methylnaphthalene #4
12.994	BB	46.04076	2.45826e-2	1.13180		Acenaphthene #5
13.645	BB	52.90672	2.20179e-2	1.16489		Fluorene #6
15.028	BBA	59.91370	2.07300e-2	1.24201		Phenanthrene #7
16.431	BBA	96.05915	9.31727e-3	8.95009e-1		Anthracene #8
17.806	BBA	4.17519	2.94398e-2	1.22917e-1		Fluoranthene #9
18.809	BBA	6.27601	2.10324e-2	1.32000e-1		Pyrene #10
21.150	BBA	14.27093	8.12526e-2	1.15955		p-Terphenyl d14 #11*
22.466	PBA	4.39682	2.97351e-2	1.30740e-1		Benzo(a)anthracene #12
23.337	BBA	6.15006	2.04006e-2	1.25465e-1		Chrysene #13
26.064	BBA	4.57150	2.74189e-2	1.25346e-1		Benzo(b)fluoranthene #14
27.495	BB	2.19067	2.90307e-2	6.35967e-2		Benzo(k)fluoranthene #15
28.596	BB	3.90243	3.86476e-2	1.50819e-1		Benzo(a)pyrene #16
30.454	MM	1.00112	8.71212e-2	8.72187e-2		Dibenz(a,h)anthracene #17

[min]		[mAU*s]		[ug/L]		
31.264	BBA	2.34328	6.22516e-2	1.45873e-1		Benzo(g,h,i)perylene #18
32.225	BB	3.42590	3.63599e-2	1.24565e-1		Indeno(1,2,3-cd)pyrene #1

Totals : 10.70201

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\061902\4L003191.D Sample Name: WG120164-08 ALT
HPLC4 6/20/2002 9:17:38 AM RDC

1,1 SOS0060-26/60-27 LEVEL 4 ALT STD @ 20 ppm

==========

Injection Date : 6/19/2002 11:39:56 PM Seq. Line : 9

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.387	20.0	19.539	-2.3
1-Methylnaphthalene #3	11.957	20.0	19.522	-2.4
2-Methylnaphthalene #4	12.532	20.0	19.193	-4.0
Acenaphthene #5	13.010	20.0	20.092	0.5
Fluorene #6	13.663	20.0	19.978	-0.1
Phenanthrene #7	15.046	20.0	19.187	-4.1
Anthracene #8	16.447	20.0	20.188	0.9
Fluoranthene #9	17.820	2.0	1.994	-0.3
Pyrene #10	18.822	2.0	1.884	-5.8
p-Terphenyl d14 #11*	Not Found	20.0	Not Found	
Benzo(a)anthracene #12	22.478	2.0	1.838	-8.1
Chrysene #13	23.345	2.0	1.912	-4.4
Benzo(b)fluoranthene #14	26.064	2.0	1.959	-2.0
Benzo(k)fluoranthene #15	27.495	1.0	0.882	-11.8
Benzo(a)pyrene #16	28.603	2.0	2.046	2.3
Dibenz(a,h)anthracene #1	30.467	2.0	2.145	7.3
Benzo(g,h,i)perylene #18	31.284	2.0	1.972	-1.4
Indeno(1,2,3-cd)pyrene #	32.234	2.0	1.897	-5.2

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.372	20.0	20.073	0.4
Acenaphthylene #2	10.995	20.0	19.000	-5.0
1-Methylnaphthalene #3	11.942	20.0	19.740	-1.3
2-Methylnaphthalene #4	12.517	20.0	19.492	-2.5
Acenaphthene #5	12.996	20.0	20.090	0.4
Fluorene #6	13.647	20.0	19.779	-1.1
Phenanthrene #7	15.030	20.0	18.845	-5.8
Anthracene #8	16.432	20.0	20.458	2.3
Fluoranthene #9	17.804	2.0	1.944	-2.8
Pyrene #10	18.806	2.0	1.915	-4.3
p-Terphenyl d14 #11*	Not Found	20.0	Not Found	
Benzo(a)anthracene #12	22.462	2.0	1.853	-7.4
Chrysene #13	23.330	2.0	1.921	-4.0
Benzo(b)fluoranthene #14	26.048	2.0	1.966	-1.7
Benzo(k)fluoranthene #15	27.480	1.0	0.880	-12.0
Benzo(a)pyrene #16	28.587	2.0	2.026	1.3
Dibenz(a,h)anthracene #1	30.451	2.0	2.159	7.9
Benzo(g,h,i)perylene #18	31.267	2.0	1.941	-2.9
Indeno(1,2,3-cd)pyrene #	32.219	2.0	1.894	-5.3

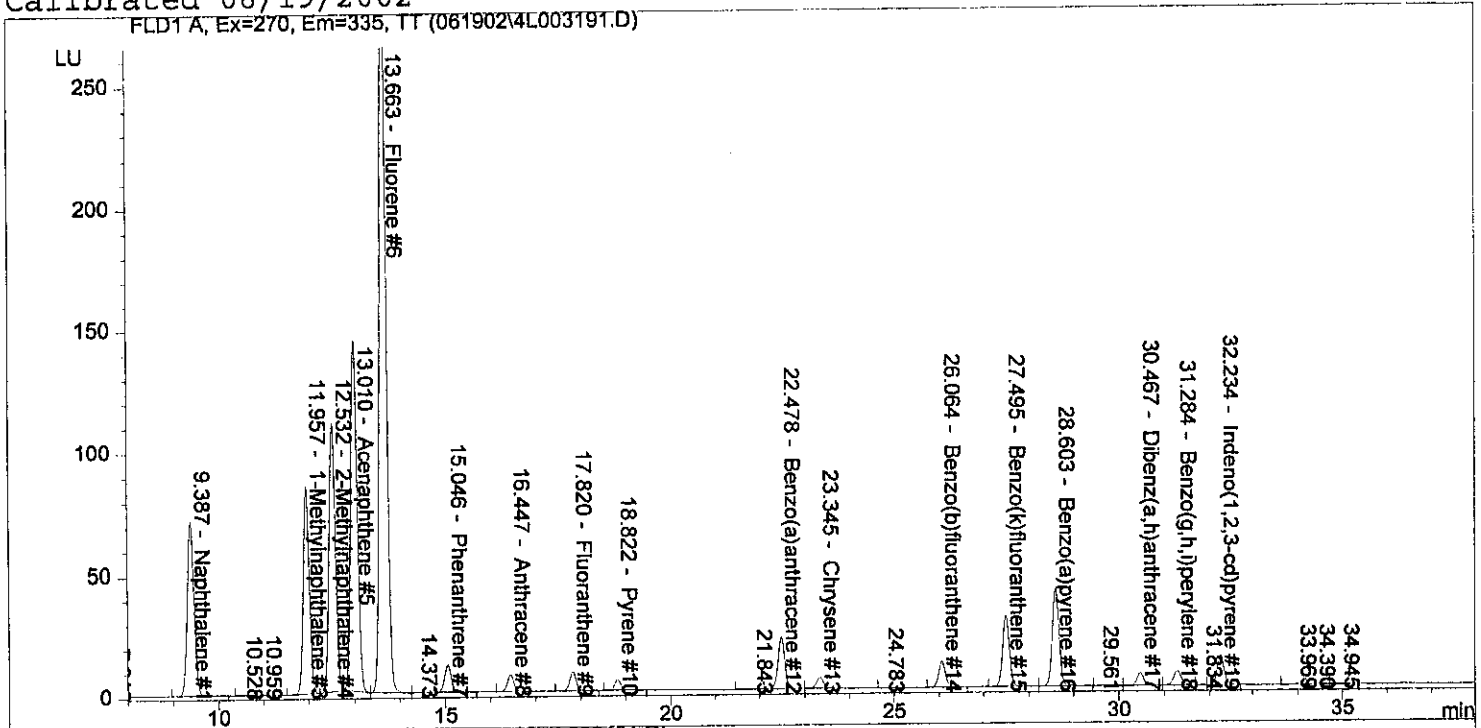
= Failed 15.0% Criteria

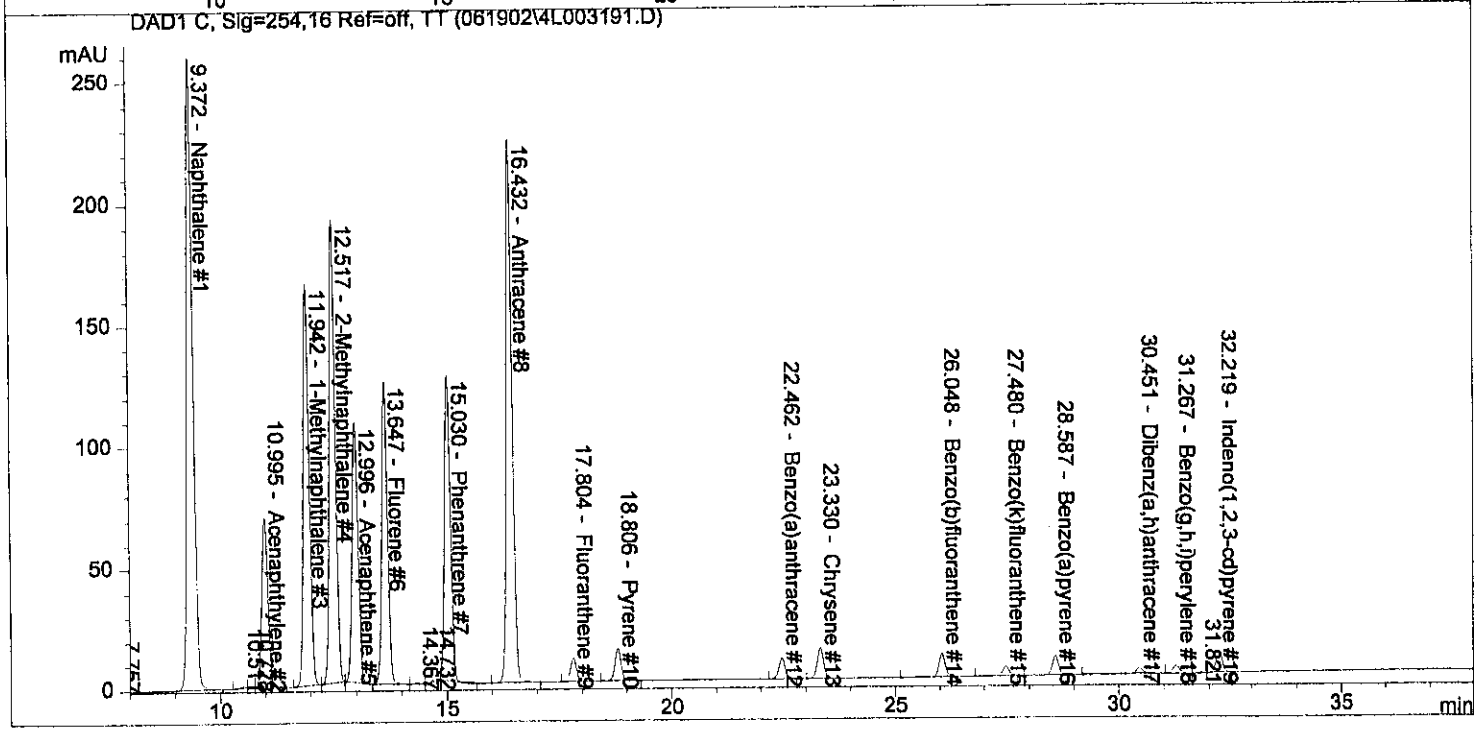
==========

Injection Date : 6/19/2002 11:39:56 PM
Sample Name : WG120164-08 ALT
Acq. Operator : RDC

Seq. Line : 9
Vial : 9
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:52:22 AM by RDC
Calibrated 06/19/2002





External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/20/2002 8:52:08 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.387	BBA	737.66528	2.64873e-2	19.53875		Naphthalene #1
11.957	BB	842.18378	2.31805e-2	19.52228		1-Methylnaphthalene #3
12.532	BB	1072.79504	1.78909e-2	19.19330		2-Methylnaphthalene #4
13.010	BB	1419.36682	1.41559e-2	20.09236		Acenaphthene #5
13.663	BB	3031.48169	6.59031e-3	19.97841		Fluorene #6
15.046	BBA	110.72682	1.73280e-1	19.18674		Phenanthrene #7
16.447	PBA	67.07290	3.00989e-1	20.18824		Anthracene #8
17.820	BBA	78.28062	2.54760e-2	1.99427		Fluoranthene #9
18.822	BBA	45.12201	4.17610e-2	1.88434		Pyrene #10
21.166		-	-	-		p-Terphenyl d14 #11*
22.478	BB	222.92839	8.24594e-3	1.83825		Benzo(a)anthracene #12
23.345	BB	47.43394	4.02984e-2	1.91151		Chrysene #13
26.064	BBA	114.99720	1.70377e-2	1.95929		Benzo(b)fluoranthene #14
27.495	BB	311.48776	2.83180e-3	8.82071e-1		Benzo(k)fluoranthene #15
28.603	BBA	429.06128	4.76783e-3	2.04569		Benzo(a)pyrene #16
30.467	BB	52.93916	4.05202e-2	2.14510		Dibenz(a,h)anthracene #17
31.284	BB	69.01328	2.85695e-2	1.97167		Benzo(g,h,i)perylene #18
32.234	BB	133.70982	1.41867e-2	1.89690		Indeno(1,2,3-cd)pyrene #1
Totals :				156.22920		

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.372	BBA	2480.78638	8.09119e-3	20.07252		Naphthalene #1
10.995	BBA	629.07135	3.02035e-2	19.00018		Acenaphthylene #2
11.942	PB	1521.38184	1.29751e-2	19.74016		1-Methylnaphthalene #3
12.517	BB	1737.28711	1.12201e-2	19.49247		2-Methylnaphthalene #4
12.996	BB	976.73950	2.05683e-2	20.08983		Acenaphthene #5
13.647	BB	1122.93054	1.76134e-2	19.77857		Fluorene #6
15.030	BBA	1103.63745	1.70754e-2	18.84509		Phenanthrene #7
16.432	PBA	2045.92957	9.99954e-3	20.45835		Anthracene #8
17.804	PB	88.76682	2.19040e-2	1.94435		Fluoranthene #9
18.806	BBA	132.37604	1.44652e-2	1.91484		Pyrene #10
21.150		-	-	-		p-Terphenyl d14 #11*
22.462	BBA	83.02850	2.23150e-2	1.85278		Benzo(a)anthracene #12
23.330	BBA	126.16646	1.52241e-2	1.92078		Chrysene #13
26.048	PBA	94.24934	2.08606e-2	1.96610		Benzo(b)fluoranthene #14
27.480	PBA	38.80268	2.26831e-2	8.80167e-1		Benzo(k)fluoranthene #15
28.587	BBA	77.06660	2.62837e-2	2.02560		Benzo(a)pyrene #16
30.451	BBA	23.06487	9.36030e-2	2.15894		Dibenz(a,h)anthracene #17

[min]		[mAU*s]		[ug/L]		
31.267	BB	36.37280	5.33696e-2	1.94120		Benzo(g,h,i)perylene #18
32.219	BB	90.73181	2.08749e-2	1.89402		Indeno(1,2,3-cd)pyrene #1

Totals : 175.97593

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\062502\4L003212.D Sample Name: WG120427-01 CCV
HPLC4 6/26/2002 2:09:40 PM RDC

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========

Injection Date : 6/25/2002 4:44:37 PM Seq. Line : 2

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.333	20.0	19.728	-1.4
1-Methylnaphthalene #3	11.897	20.0	19.771	-1.1
2-Methylnaphthalene #4	12.467	20.0	19.792	-1.0
Acenaphthene #5	12.944	20.0	19.807	-1.0
Fluorene #6	13.592	20.0	19.798	-1.0
Phenanthrene #7	14.976	20.0	19.634	-1.8
Anthracene #8	16.374	20.0	19.484	-2.6
Fluoranthene #9	17.745	2.0	2.008	0.4
Pyrene #10	18.749	2.0	2.035	1.8
p-Terphenyl d14 #11*	21.081	20.0	19.443	-2.8
Benzo(a)anthracene #12	22.399	2.0	1.963	-1.9
Chrysene #13	23.260	2.0	1.987	-0.7
Benzo(b)fluoranthene #14	25.973	2.0	1.955	-2.3
Benzo(k)fluoranthene #15	27.399	1.0	0.980	-2.0
Benzo(a)pyrene #16	28.510	2.0	1.958	-2.1
Dibenz(a,h)anthracene #1	30.358	2.0	1.983	-0.9
Benzo(g,h,i)perylene #18	31.167	2.0	2.000	0.0
Indeno(1,2,3-cd)pyrene #	32.113	2.0	1.927	-3.6

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.318	20.0	20.271	1.4
Acenaphthylene #2	10.939	20.0	19.824	-0.9
1-Methylnaphthalene #3	11.882	20.0	19.856	-0.7
2-Methylnaphthalene #4	12.452	20.0	20.029	0.1
Acenaphthene #5	12.928	20.0	19.833	-0.8
Fluorene #6	13.577	20.0	19.776	-1.1
Phenanthrene #7	14.961	20.0	19.356	-3.2
Anthracene #8	16.358	20.0	19.902	-0.5
Fluoranthene #9	17.728	2.0	1.964	-1.8
Pyrene #10	18.732	2.0	1.974	-1.3
p-Terphenyl d14 #11*	21.067	20.0	19.691	-1.5
Benzo(a)anthracene #12	22.384	2.0	1.954	-2.3
Chrysene #13	23.245	2.0	1.961	-1.9
Benzo(b)fluoranthene #14	25.957	2.0	1.962	-1.9
Benzo(k)fluoranthene #15	27.383	1.0	0.995	-0.5
Benzo(a)pyrene #16	28.494	2.0	2.026	1.3
Dibenz(a,h)anthracene #1	30.342	2.0	1.976	-1.2
Benzo(g,h,i)perylene #18	31.151	2.0	1.979	-1.1
Indeno(1,2,3-cd)pyrene #	32.094	2.0	1.998	-0.1

= Failed 15.0% Criteria

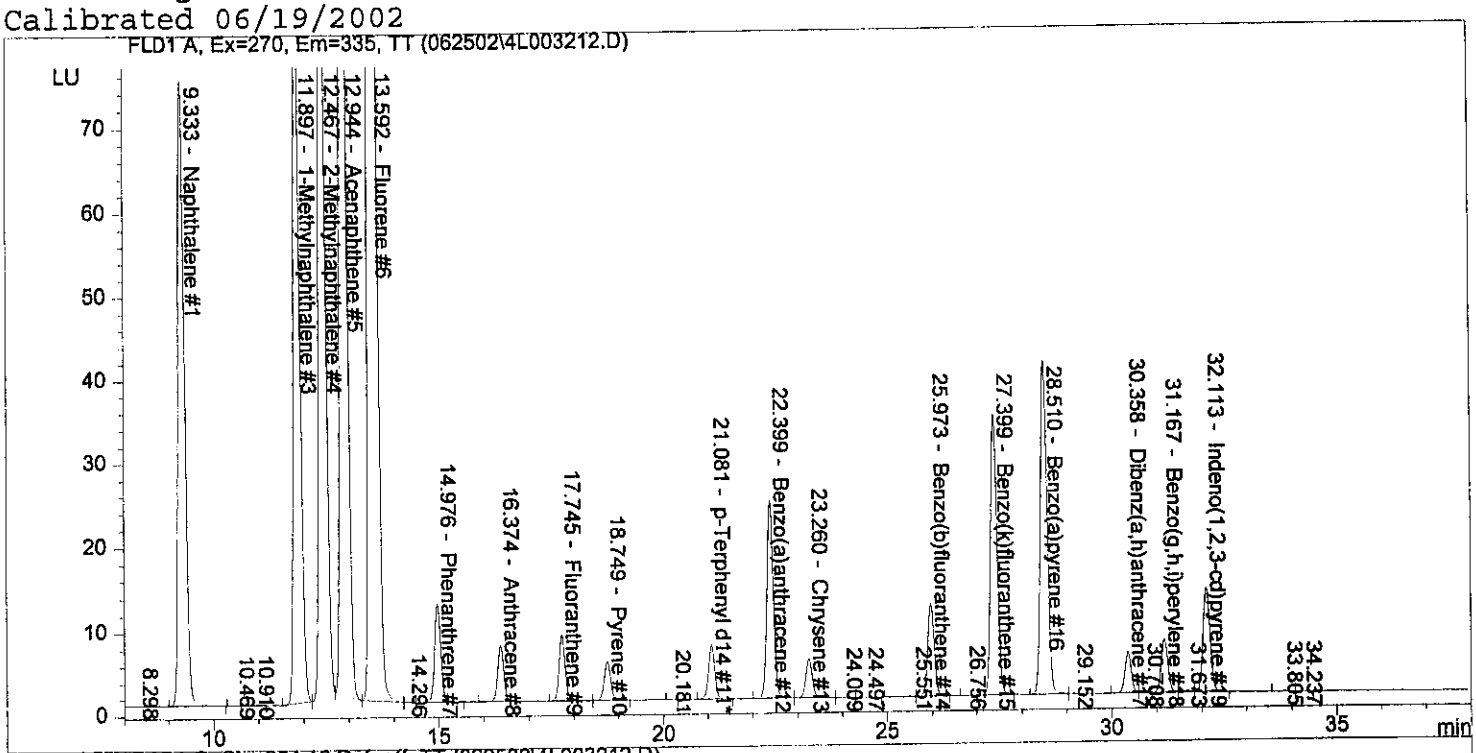
1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

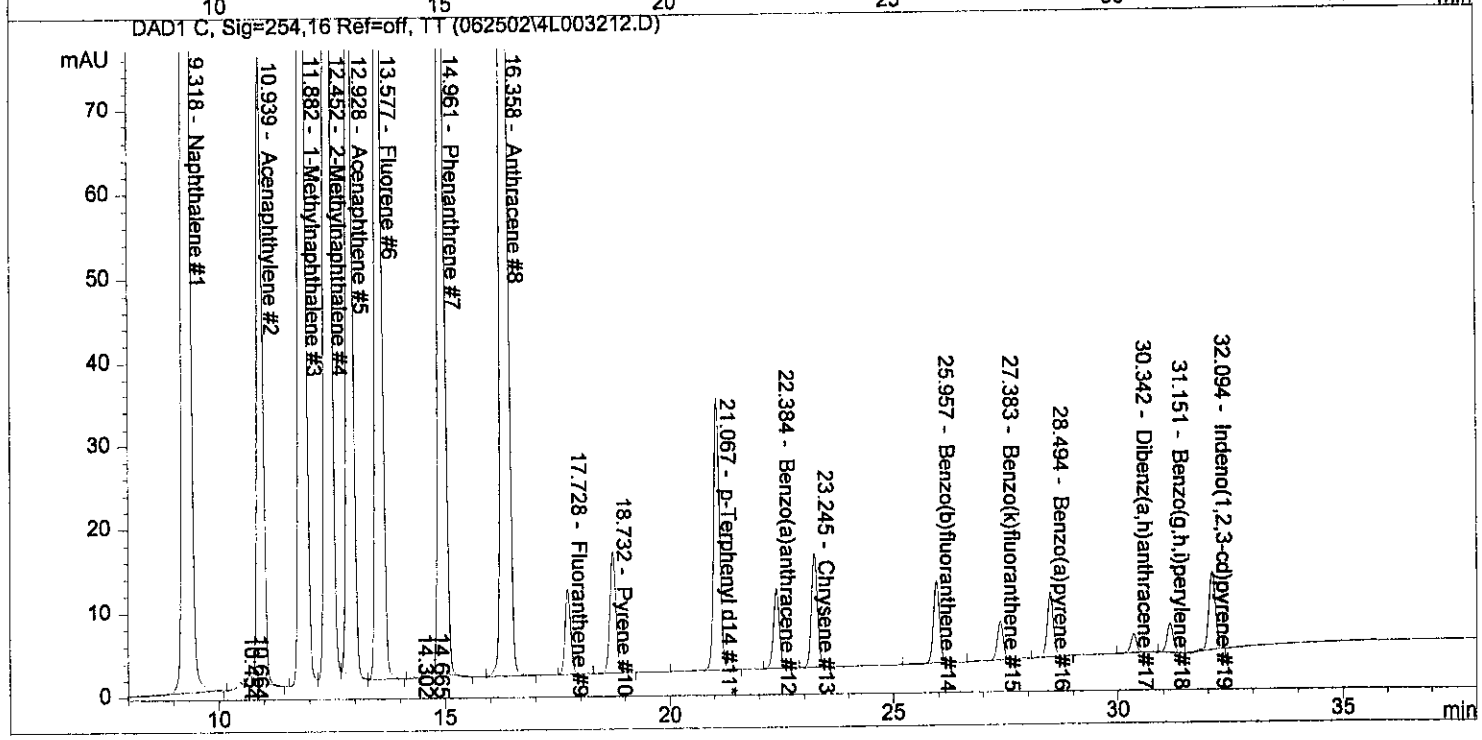
==========

Injection Date : 6/25/2002 4:44:37 PM
Sample Name : WG120427-01 CCV
Acq. Operator : RDC

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:52:39 AM by RDC
Calibrated 06/19/2002





External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/20/2002 8:52:08 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.333	PBA	744.88635	2.64845e-2	19.72793		Naphthalene #1
11.897	BB	853.00787	2.31776e-2	19.77064		1-Methylnaphthalene #3
12.467	BB	1106.49597	1.78870e-2	19.79185		2-Methylnaphthalene #4
12.944	BB	1399.10583	1.41566e-2	19.80655		Acenaphthene #5
13.592	BB	3004.09033	6.59031e-3	19.79788		Fluorene #6
14.976	BBA	113.34530	1.73225e-1	19.63423		Phenanthrene #7
16.374	BBA	64.70977	3.01100e-1	19.48411		Anthracene #8
17.745	BB	78.83427	2.54739e-2	2.00821		Fluoranthene #9
18.749	BBA	48.76380	4.17409e-2	2.03545		Pyrene #10
21.081	BB	66.01328	2.94530e-1	19.44287		p-Terphenyl d14 #11*
22.399	BB	238.27878	8.23673e-3	1.96264		Benzo(a)anthracene #12
23.260	BB	49.33612	4.02740e-2	1.98696		Chrysene #13
25.973	BB	114.74129	1.70383e-2	1.95499		Benzo(b)fluoranthene #14
27.399	BB	346.43771	2.82767e-3	9.79611e-1		Benzo(k)fluoranthene #15
28.510	BB	410.40375	4.77187e-3	1.95840		Benzo(a)pyrene #16
30.358	BB	48.85048	4.05893e-2	1.98281		Dibenz(a,h)anthracene #17
31.167	BB	70.01462	2.85599e-2	1.99961		Benzo(g,h,i)perylene #18
32.113	BB	135.88257	1.41829e-2	1.92720		Indeno(1,2,3-cd)pyrene #1

Totals : 176.25195

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.318	BBA	2504.95068	8.09225e-3	20.27069		Naphthalene #1
10.939	BBA	656.65472	3.01891e-2	19.82383		Acenaphthylene #2
11.882	PB	1530.34875	1.29746e-2	19.85568		1-Methylnaphthalene #3
12.452	BB	1785.00684	1.12205e-2	20.02861		2-Methylnaphthalene #4
12.928	BB	964.14740	2.05708e-2	19.83333		Acenaphthene #5
13.577	BBA	1122.76746	1.76134e-2	19.77573		Fluorene #6
14.961	BBA	1133.93921	1.70698e-2	19.35614		Phenanthrene #7
16.358	PBA	1990.49414	9.99860e-3	19.90216		Anthracene #8
17.728	BB	89.69545	2.19002e-2	1.96435		Fluoranthene #9
18.732	BBA	136.57634	1.44551e-2	1.97423		Pyrene #10
21.067	PBA	302.57129	6.50796e-2	19.69122		p-Terphenyl d14 #11*
22.384	PBA	87.66633	2.22930e-2	1.95435		Benzo(a)anthracene #12
23.245	BBA	128.88681	1.52186e-2	1.96147		Chrysene #13
25.957	PBA	94.03175	2.08614e-2	1.96163		Benzo(b)fluoranthene #14
27.383	PBA	43.93678	2.26388e-2	9.94675e-1		Benzo(k)fluoranthene #15
28.494	BB	77.07747	2.62836e-2	2.02588		Benzo(a)pyrene #16
30.342	PB	21.11235	9.35758e-2	1.97560		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.151	BB	37.08899	5.33578e-2	1.97899		Benzo(g,h,i)perylene #18
32.094	BB	95.86693	2.08424e-2	1.99810		Indeno(1,2,3-cd)pyrene #1
Totals :				197.32665		

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\062502\4L003221.D Sample Name: WG120427-02 CCV
HPLC4 6/26/2002 2:14:23 PM RDC

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========

Injection Date : 6/26/2002 1:14:27 AM Seq. Line : 11

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.380	20.0	20.108	0.5
1-Methylnaphthalene #3	11.950	20.0	20.175	0.9
2-Methylnaphthalene #4	12.524	20.0	20.195	1.0
Acenaphthene #5	13.002	20.0	20.167	0.8
Fluorene #6	13.655	20.0	20.098	0.5
Phenanthrene #7	15.043	20.0	20.050	0.3
Anthracene #8	16.450	20.0	19.771	-1.1
Fluoranthene #9	17.827	2.0	2.001	0.0
Pyrene #10	18.832	2.0	2.026	1.3
p-Terphenyl d14 #11*	21.174	20.0	19.419	-2.9
Benzo(a)anthracene #12	22.496	2.0	1.979	-1.1
Chrysene #13	23.368	2.0	1.978	-1.1
Benzo(b)fluoranthene #14	26.091	2.0	2.007	0.4
Benzo(k)fluoranthene #15	27.532	1.0	0.997	-0.3
Benzo(a)pyrene #16	28.641	2.0	1.961	-1.9
Dibenz(a,h)anthracene #1	30.508	2.0	1.974	-1.3
Benzo(g,h,i)perylene #18	31.312	2.0	1.948	-2.6
Indeno(1,2,3-cd)pyrene #	32.259	2.0	1.970	-1.5

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.361	20.0	20.476	2.4
Acenaphthylene #2	10.985	20.0	19.979	-0.1
1-Methylnaphthalene #3	11.930	20.0	20.102	0.5
2-Methylnaphthalene #4	12.504	20.0	20.269	1.3
Acenaphthene #5	12.982	20.0	20.056	0.3
Fluorene #6	13.635	20.0	19.946	-0.3
Phenanthrene #7	15.023	20.0	19.552	-2.2
Anthracene #8	16.429	20.0	20.036	0.2
Fluoranthene #9	17.806	2.0	1.984	-0.8
Pyrene #10	18.811	2.0	1.992	-0.4
p-Terphenyl d14 #11*	21.155	20.0	19.807	-1.0
Benzo(a)anthracene #12	22.476	2.0	1.980	-1.0
Chrysene #13	23.348	2.0	1.986	-0.7
Benzo(b)fluoranthene #14	26.070	2.0	1.983	-0.8
Benzo(k)fluoranthene #15	27.511	1.0	0.990	-1.0
Benzo(a)pyrene #16	28.620	2.0	1.956	-2.2
Dibenz(a,h)anthracene #1	30.487	2.0	1.977	-1.1
Benzo(g,h,i)perylene #18	31.291	2.0	2.024	1.2
Indeno(1,2,3-cd)pyrene #	32.241	2.0	1.974	-1.3

= Failed 15.0% Criteria

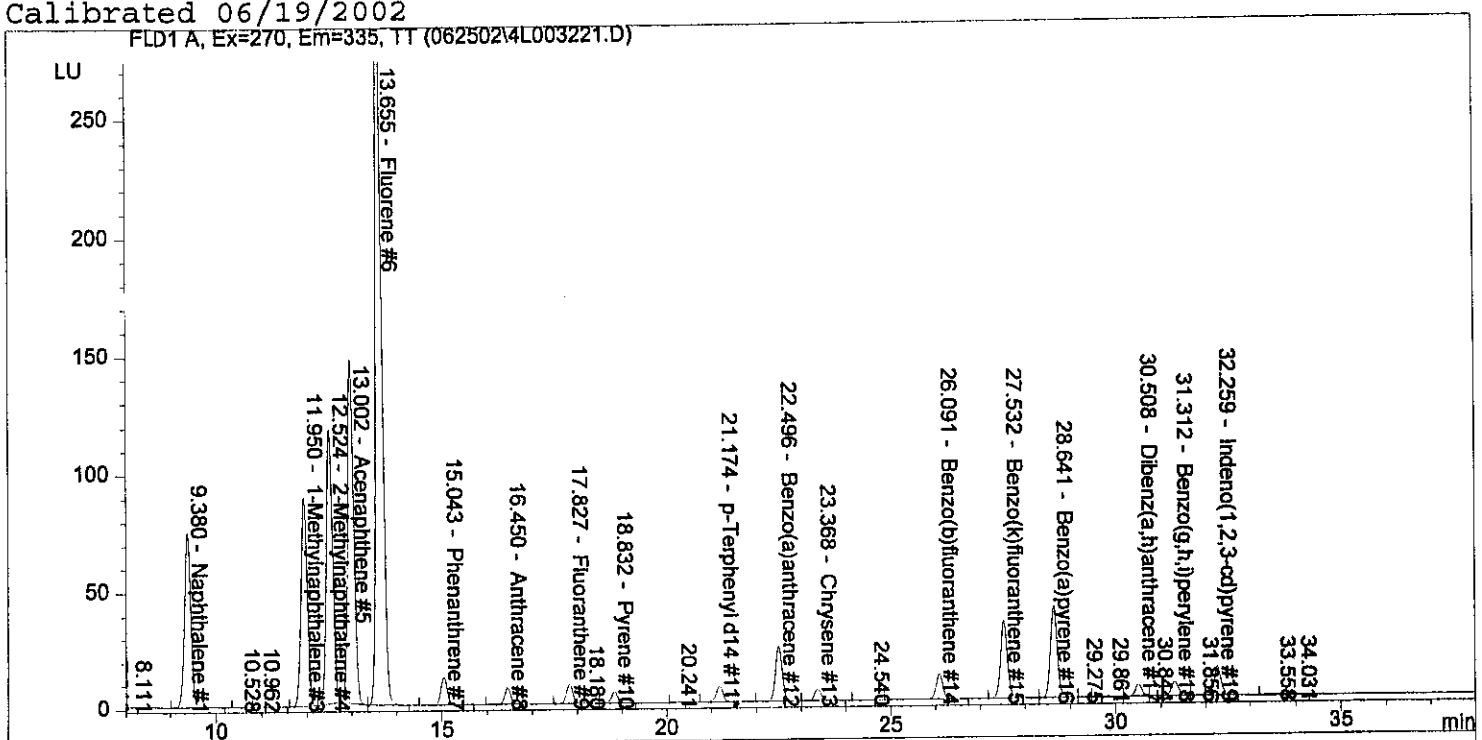
1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

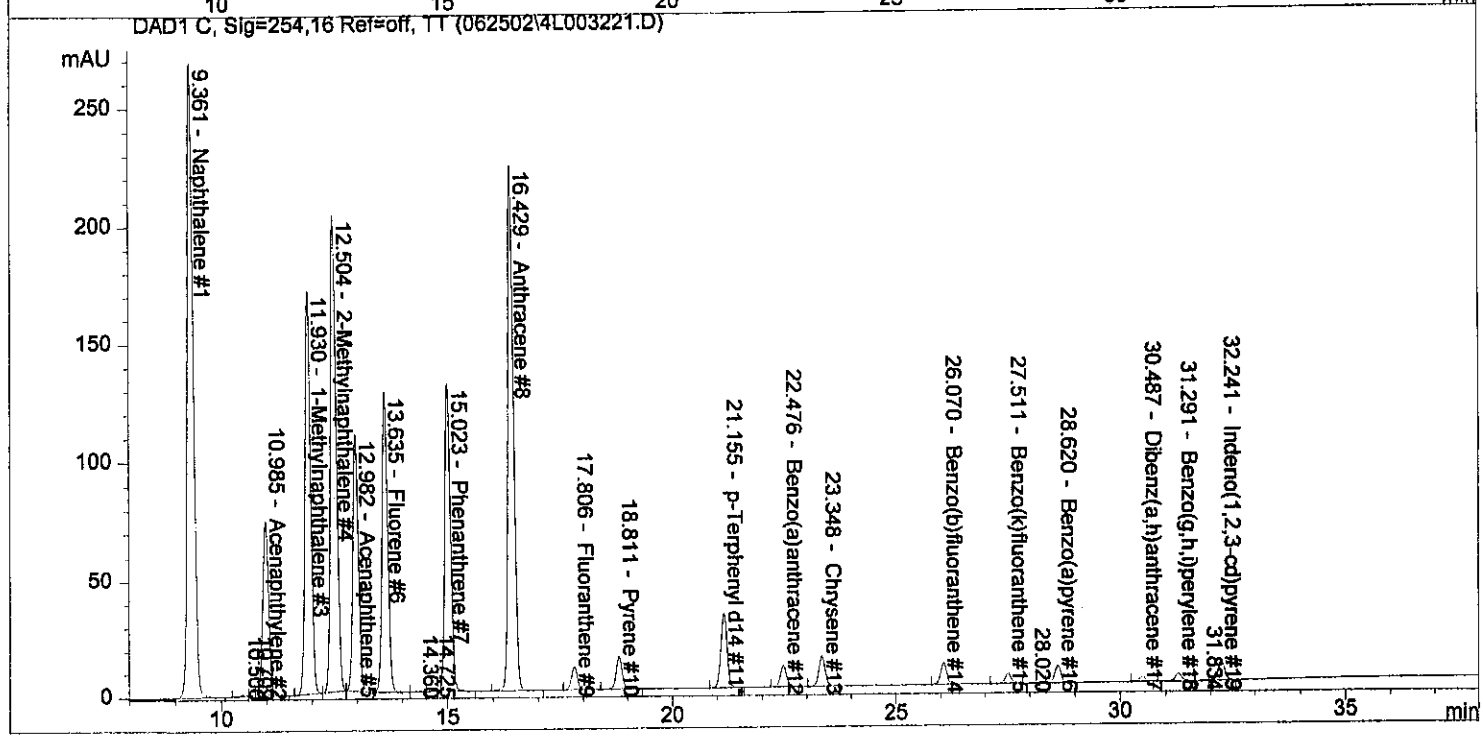
==========

Injection Date : 6/26/2002 1:14:27 AM
Sample Name : WG120427-02 CCV
Acq. Operator : RDC

Seq. Line : 11
Vial : 11
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:52:39 AM by RDC
Calibrated 06/19/2002





External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/20/2002 8:52:08 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.380	BB	759.37537	2.64790e-2	20.10751		Naphthalene #1
11.950	PB	870.62311	2.31729e-2	20.17483		1-Methylnaphthalene #3
12.524	BB	1129.20325	1.78844e-2	20.19515		2-Methylnaphthalene #4
13.002	BB	1424.65479	1.41557e-2	20.16696		Acenaphthene #5
13.655	BB	3049.61328	6.59032e-3	20.09792		Fluorene #6
15.043	BBA	115.78040	1.73176e-1	20.05038		Phenanthrene #7
16.450	PBA	65.67242	3.01054e-1	19.77095		Anthracene #8
17.827	PB	78.54680	2.54750e-2	2.00098		Fluoranthene #9
18.832	BBA	48.53543	4.17421e-2	2.02597		Pyrene #10
21.174	BBA	65.93216	2.94534e-1	19.41927		p-Terphenyl d14 #11*
22.496	BB	240.29626	8.23561e-3	1.97899		Benzo(a)anthracene #12
23.368	BB	49.11829	4.02767e-2	1.97832		Chrysene #13
26.091	BBA	117.85667	1.70318e-2	2.00732		Benzo(b)fluoranthene #14
27.532	BB	352.50262	2.82704e-3	9.96538e-1		Benzo(k)fluoranthene #15
28.641	BB	411.04123	4.77173e-3	1.96138		Benzo(a)pyrene #16
30.508	BB	48.62401	4.05935e-2	1.97382		Dibenz(a,h)anthracene #17
31.312	BB	68.16312	2.85778e-2	1.94795		Benzo(g,h,i)perylene #18
32.259	BB	138.94594	1.41777e-2	1.96993		Indeno(1,2,3-cd)pyrene #1

Totals : 178.82417

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.361	BBA	2529.98877	8.09332e-3	20.47602		Naphthalene #1
10.985	BBA	661.86664	3.01865e-2	19.97947		Acenaphthylene #2
11.930	PB	1549.45911	1.29735e-2	20.10187		1-Methylnaphthalene #3
12.504	BB	1806.39270	1.12206e-2	20.26888		2-Methylnaphthalene #4
12.982	BB	975.05908	2.05686e-2	20.05560		Acenaphthene #5
13.635	BB	1132.54700	1.76115e-2	19.94585		Fluorene #6
15.023	BBA	1145.53577	1.70678e-2	19.55173		Phenanthrene #7
16.429	PBA	2003.85034	9.99883e-3	20.03617		Anthracene #8
17.806	PB	90.60416	2.18965e-2	1.98391		Fluoranthene #9
18.811	BBA	137.86732	1.44521e-2	1.99248		Pyrene #10
21.155	BBA	304.37439	6.50749e-2	19.80712		p-Terphenyl d14 #11*
22.476	PBA	88.83562	2.22878e-2	1.97995		Benzo(a)anthracene #12
23.348	BBA	130.49362	1.52154e-2	1.98551		Chrysene #13
26.070	BBA	95.07347	2.08577e-2	1.98301		Benzo(b)fluoranthene #14
27.511	BBA	43.73114	2.26403e-2	9.90088e-1		Benzo(k)fluoranthene #15
28.620	BBA	74.34456	2.63079e-2	1.95585		Benzo(a)pyrene #16
30.487	BBA	21.13054	9.35760e-2	1.97731		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.291	BB	37.93689	5.33444e-2	2.02372		Benzo(g,h,i)perylene #18
32.241	BB	94.66889	2.08497e-2	1.97381		Indeno(1,2,3-cd)pyrene #1

Totals : 199.06835

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\062502\4L003226.D Sample Name: WG120427-03 CCV
HPLC4 6/26/2002 4:26:01 PM RDC

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========

Injection Date : 6/26/2002 5:57:33 AM Seq. Line : 16

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.381	20.0	19.911	-0.4
1-Methylnaphthalene #3	11.954	20.0	19.968	-0.2
2-Methylnaphthalene #4	12.528	20.0	20.023	0.1
Acenaphthene #5	13.006	20.0	20.053	0.3
Fluorene #6	13.659	20.0	20.096	0.5
Phenanthrene #7	15.044	20.0	19.594	-2.0
Anthracene #8	16.450	20.0	19.752	-1.2
Fluoranthene #9	17.829	2.0	1.971	-1.4
Pyrene #10	18.834	2.0	1.963	-1.9
p-Terphenyl d14 #11*	21.172	20.0	19.586	-2.1
Benzo(a)anthracene #12	22.494	2.0	1.958	-2.1
Chrysene #13	23.368	2.0	1.942	-2.9
Benzo(b)fluoranthene #14	26.094	2.0	1.973	-1.4
Benzo(k)fluoranthene #15	27.530	1.0	0.993	-0.7
Benzo(a)pyrene #16	28.636	2.0	1.945	-2.8
Dibenz(a,h)anthracene #1	30.495	2.0	1.849	-7.6
Benzo(g,h,i)perylene #18	31.300	2.0	1.951	-2.4
Indeno(1,2,3-cd)pyrene #	32.241	2.0	2.001	0.0

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.363	20.0	20.528	2.6
Acenaphthylene #2	10.991	20.0	19.979	-0.1
1-Methylnaphthalene #3	11.937	20.0	20.116	0.6
2-Methylnaphthalene #4	12.511	20.0	20.278	1.4
Acenaphthene #5	12.989	20.0	20.055	0.3
Fluorene #6	13.641	20.0	19.947	-0.3
Phenanthrene #7	15.026	20.0	19.535	-2.3
Anthracene #8	16.432	20.0	20.001	0.0
Fluoranthene #9	17.810	2.0	1.987	-0.6
Pyrene #10	18.816	2.0	1.995	-0.2
p-Terphenyl d14 #11*	21.155	20.0	19.827	-0.9
Benzo(a)anthracene #12	22.476	2.0	1.975	-1.3
Chrysene #13	23.351	2.0	1.973	-1.3
Benzo(b)fluoranthene #14	26.075	2.0	2.227	11.3
Benzo(k)fluoranthene #15	27.512	1.0	0.973	-2.7
Benzo(a)pyrene #16	28.617	2.0	1.949	-2.5
Dibenz(a,h)anthracene #1	30.479	2.0	1.848	-7.6
Benzo(g,h,i)perylene #18	31.281	2.0	2.003	0.1
Indeno(1,2,3-cd)pyrene #	32.225	2.0	1.990	-0.5

= Failed 15.0% Criteria

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

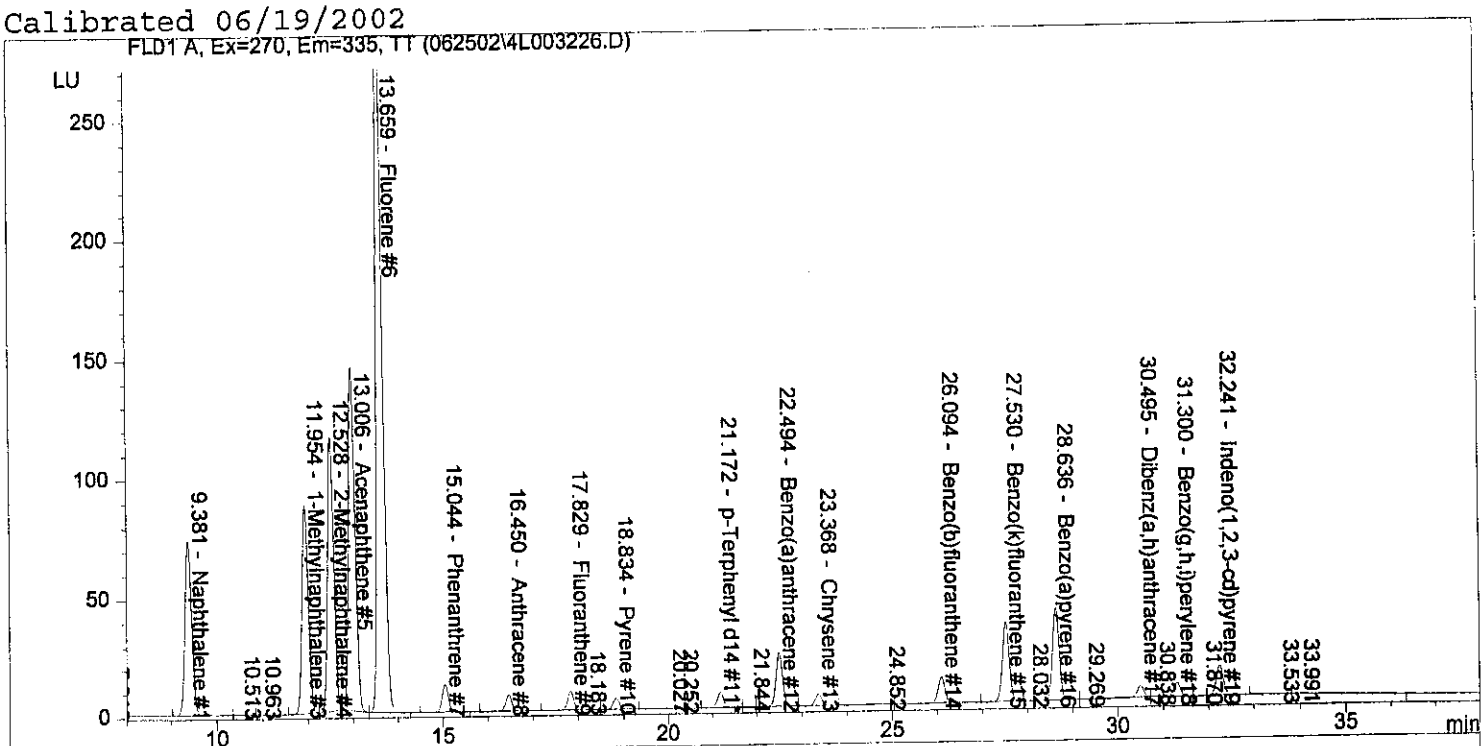
==========

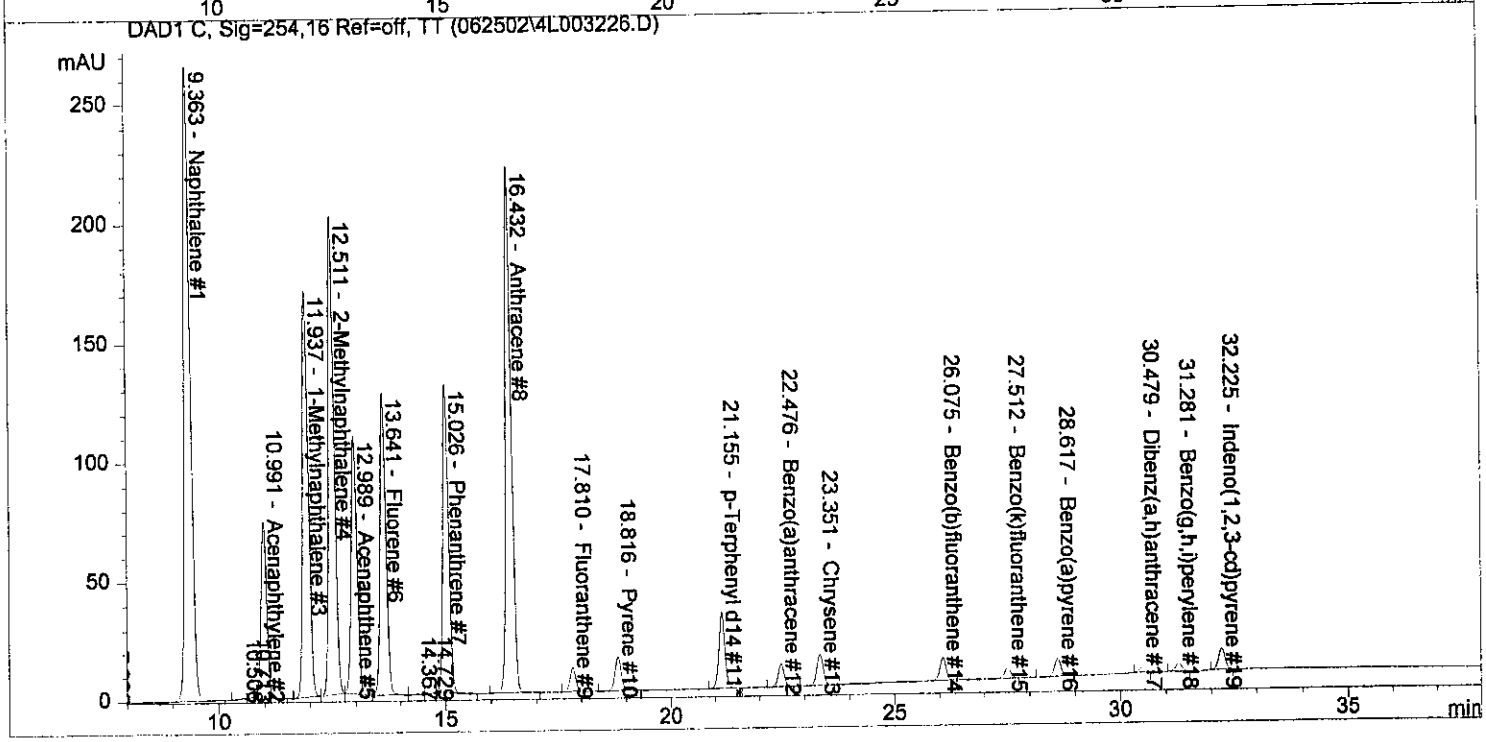
Injection Date : 6/26/2002 5:57:33 AM
Sample Name : WG120427-03 CCV
Acq. Operator : RDC

Seq. Line : 16
Vial : 11
Inj : 1
Inj Volume : 8 µl

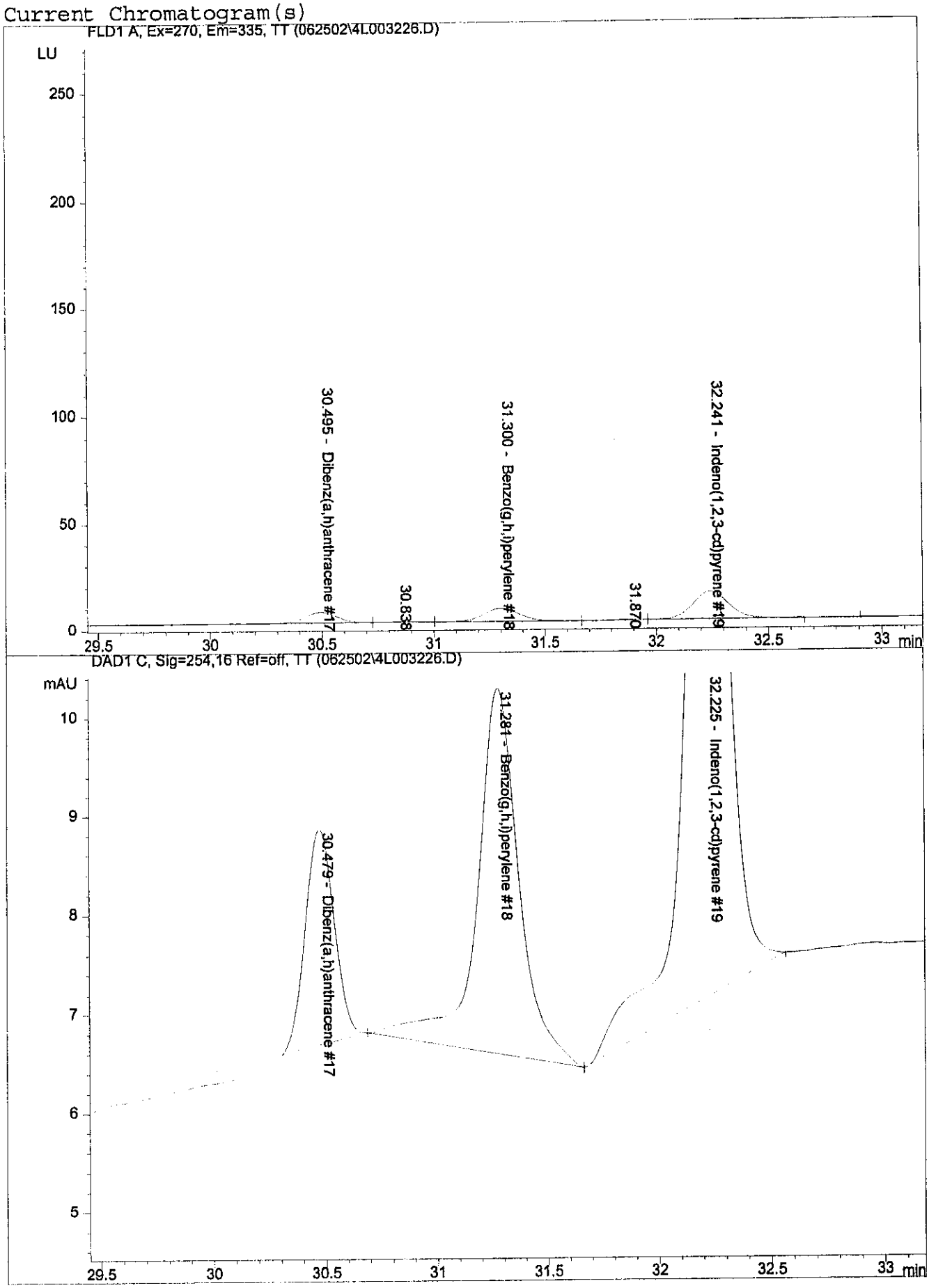
Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/26/2002 4:24:19 PM by RDC
(modified after loading)

Calibrated 06/19/2002

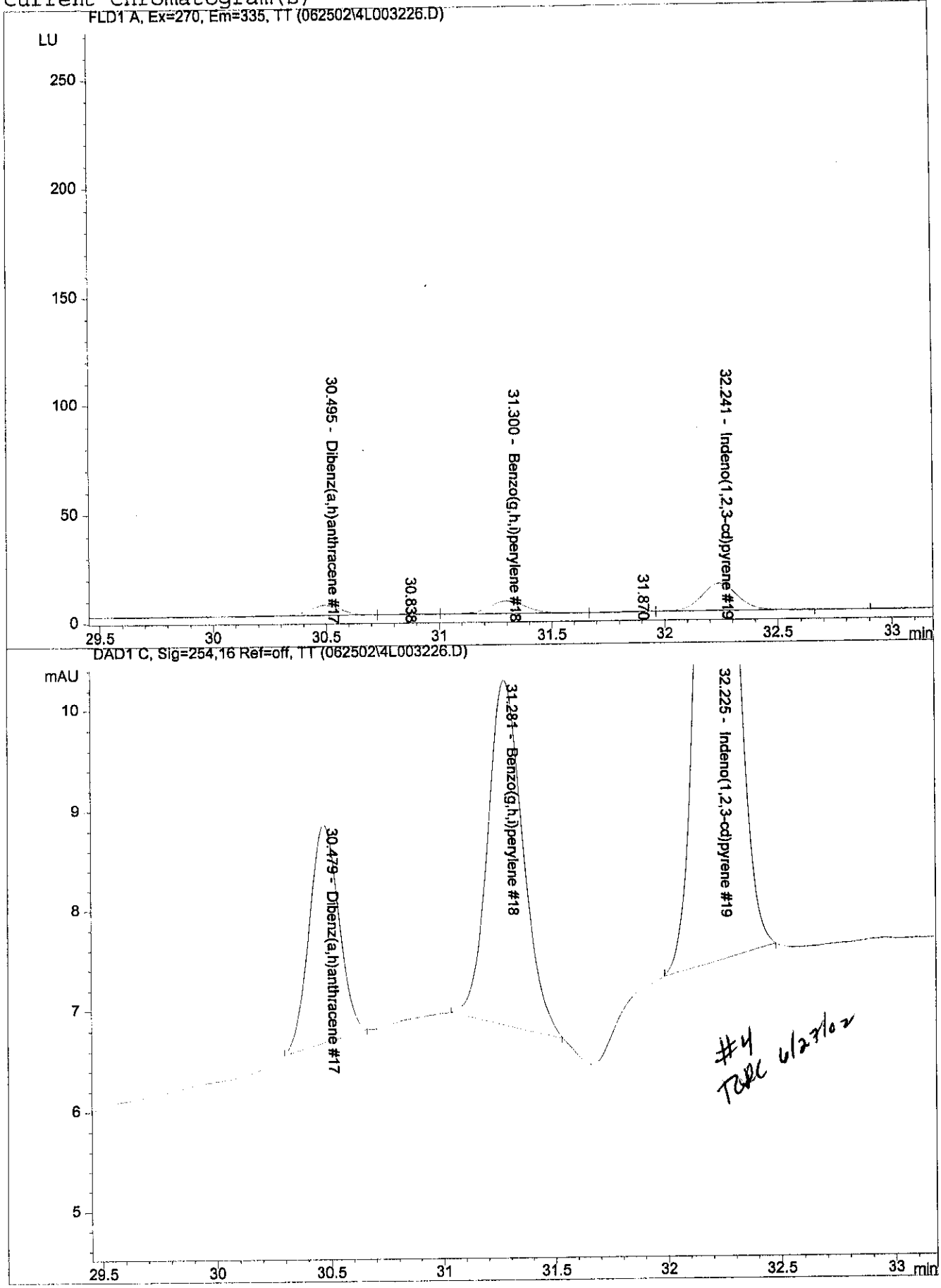




Current Chromatogram(s)



Current Chromatogram(s)



External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/20/2002 8:52:08 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.381	BB	751.88837	2.64818e-2	19.91137		Naphthalene #1
11.954	BB	861.60657	2.31752e-2	19.96794		1-Methylnaphthalene #3
12.528	BB	1119.51892	1.78855e-2	20.02315		2-Methylnaphthalene #4
13.006	BB	1416.56824	1.41560e-2	20.05288		Acenaphthene #5
13.659	BB	3049.28271	6.59032e-3	20.09574		Fluorene #6
15.044	BBA	113.10786	1.73230e-1	19.59365		Phenanthrene #7
16.450	PB	65.60823	3.01057e-1	19.75182		Anthracene #8
17.829	PB	77.37089	2.54795e-2	1.97137		Fluoranthene #9
18.834	BBA	47.01522	4.17502e-2	1.96289		Pyrene #10
21.172	BB	66.50472	2.94503e-1	19.58581		p-Terphenyl d14 #11*
22.494	BB	237.68289	8.23707e-3	1.95781		Benzo(a)anthracene #12
23.368	BBA	48.20382	4.02883e-2	1.94205		Chrysene #13
26.094	BB	115.79095	1.70361e-2	1.97262		Benzo(b)fluoranthene #14
27.530	BB	351.17334	2.82717e-3	9.92828e-1		Benzo(k)fluoranthene #15
28.636	BB	407.52356	4.77253e-3	1.94492		Benzo(a)pyrene #16
30.495	BB	45.47454	4.06558e-2	1.84880		Dibenz(a,h)anthracene #17
31.300	BB	68.28902	2.85766e-2	1.95147		Benzo(g,h,i)perylene #18
32.241	BB	141.17171	1.41740e-2	2.00097		Indeno(1,2,3-cd)pyrene #1

Totals : 177.52811

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.363	BBA	2536.37305	8.09360e-3	20.52838		Naphthalene #1
10.991	BBA	661.85907	3.01865e-2	19.97924		Acenaphthylene #2
11.937	PB	1550.54456	1.29734e-2	20.11585		1-Methylnaphthalene #3
12.511	BB	1807.20361	1.12206e-2	20.27799		2-Methylnaphthalene #4
12.989	BB	975.05225	2.05686e-2	20.05546		Acenaphthene #5
13.641	BB	1132.62939	1.76115e-2	19.94729		Fluorene #6
15.026	BBA	1144.56458	1.70679e-2	19.53535		Phenanthrene #7
16.432	PBA	2000.30469	9.99877e-3	20.00059		Anthracene #8
17.810	PB	90.75709	2.18959e-2	1.98721		Fluoranthene #9
18.816	BBA	138.07491	1.44517e-2	1.99541		Pyrene #10
21.155	PBA	304.68637	6.50740e-2	19.82717		p-Terphenyl d14 #11*
22.476	PBA	88.60715	2.22888e-2	1.97495		Benzo(a)anthracene #12
23.351	PBA	129.66599	1.52170e-2	1.97313		Chrysene #13
26.075	PB	106.94010	2.08209e-2	2.22659		Benzo(b)fluoranthene #14
27.512	BB	42.94455	2.26465e-2	9.72544e-1		Benzo(k)fluoranthene #15
28.617	BB	74.08288	2.63103e-2	1.94914		Benzo(a)pyrene #16
30.479	MM	19.75456	9.35537e-2	1.84811		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.281	MM	37.53590	5.33506e-2	2.00256		Benzo(g,h,i)perylene #18
32.225	MM	95.45327	2.08449e-2	1.98971		Indeno(1,2,3-cd)pyrene #1
Totals :				199.18668		

Results obtained with enhanced integrator!

*** End of Report ***

Lab Name: Kemron Environmental Services

Instrument ID: HPLC4 Method: 8310

Column: LC-PAH

	STD #1	STD #2	STD #3
Date Run	10/30/2001	10/31/2001	11/2/2001
File #	4L002247	4L002275	4L002311
Time	0:54	3:51	14:47

COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
Naphthalene (FLD)	9.337	9.362	9.352	0.038
1-Methylnaphthalene (FLD)	11.935	11.941	11.940	0.010
2-Methylnaphthalene (FLD)	12.517	12.523	12.521	0.009
Acenaphthene (FLD)	13.001	13.006	13.005	0.008
Fluorene (FLD)	13.664	13.667	13.669	0.008
Phenanthrene (FLD)	15.062	15.066	15.071	0.014
Anthracene (FLD)	16.475	16.483	16.493	0.027
Fluoranthene (FLD)	17.860	17.869	17.883	0.035
Pyrene (FLD)	18.868	18.881	18.897	0.044
p-Terphenyl-d14 (FLD)	21.217	21.244	21.262	0.068
Benzo(a)anthracene (FLD)	22.535	22.572	22.587	0.080
Chrysene (FLD)	23.401	23.449	23.467	0.102
Benzo(b)fluoranthene (FLD)	26.119	26.182	26.204	0.132
Benzo(k)fluoranthene (FLD)	27.554	27.629	27.650	0.151
Benzo(a)pyrene (FLD)	28.666	28.739	28.758	0.146
Dibenz(a,h)anthracene (FLD)	30.532	30.615	30.635	0.164
Benzo(g,h,i)perylene (FLD)	31.340	31.420	31.445	0.165
Indeno(1,2,3-cd)pyrene (FLD)	32.285	32.355	32.382	0.150
Naphthalene (VWD)	9.318	9.341	9.330	0.035
Acenaphthylene (VWD)	10.959	10.965	10.968	0.014
1-Methylnaphthalene (VWD)	11.916	11.920	11.922	0.009
2-Methylnaphthalene (VWD)	12.498	12.502	12.502	0.007
Acenaphthene (VWD)	12.982	12.986	12.986	0.007
Fluorene (VWD)	13.644	13.646	13.649	0.008
Phenanthrene (VWD)	15.042	15.045	15.052	0.015
Anthracene (VWD)	16.456	16.462	16.474	0.027
Fluoranthene (VWD)	17.840	17.848	17.863	0.035
Pyrene (VWD)	18.848	18.859	18.876	0.042
p-Terphenyl-d14 (VWD)	21.198	21.223	21.243	0.068
Benzo(a)anthracene (VWD)	22.516	22.551	22.568	0.080
Chrysene (VWD)	23.382	23.428	23.448	0.102
Benzo(b)fluoranthene (VWD)	26.099	26.160	26.184	0.131
Benzo(k)fluoranthene (VWD)	27.535	27.609	27.632	0.152
Benzo(a)pyrene (VWD)	28.646	28.717	28.738	0.145
Dibenz(a,h)anthracene (VWD)	30.513	30.595	30.617	0.164
Benzo(g,h,i)perylene (VWD)	31.320	31.398	31.426	0.165
Indeno(1,2,3-cd)pyrene (VWD)	32.266	32.338	32.367	0.156

2.2.7.4 Raw QC Data

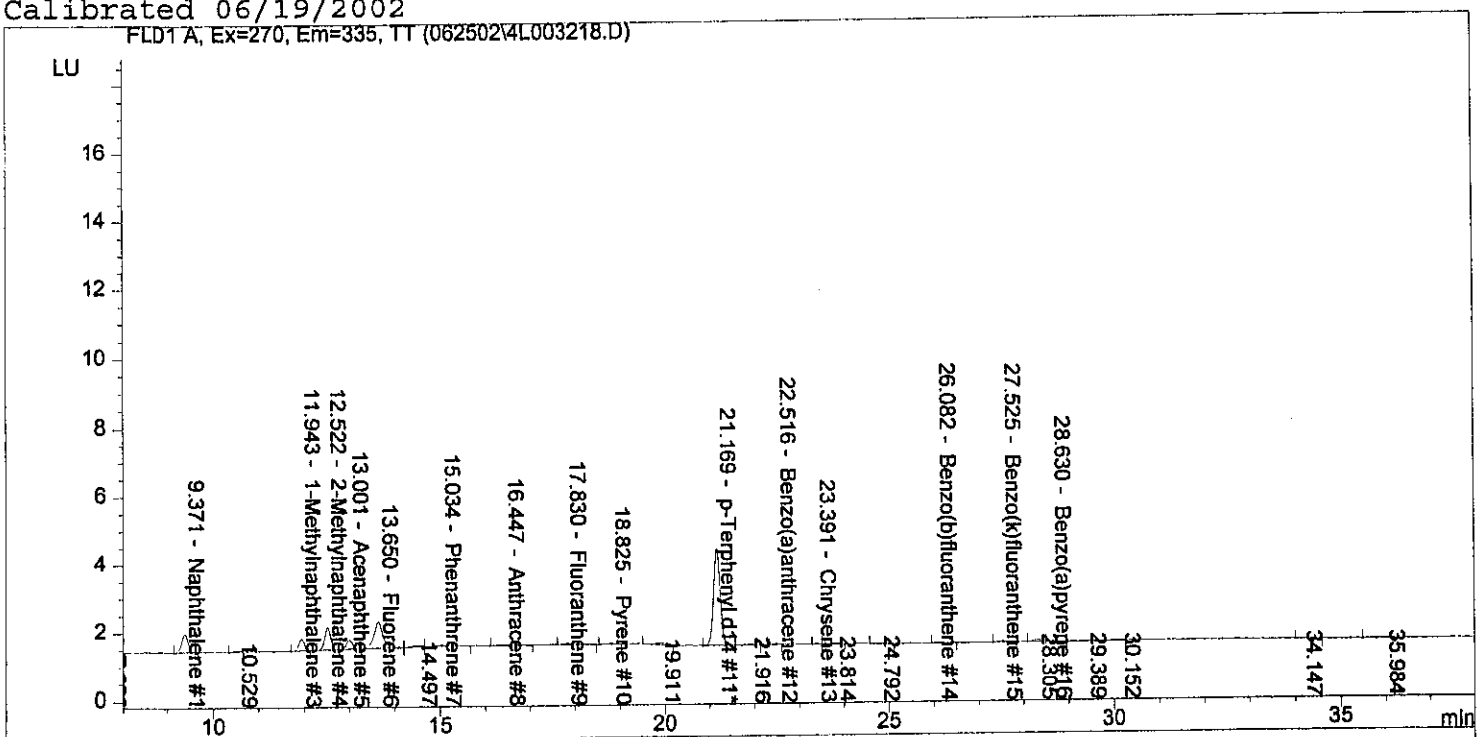
7,1 V186P107 BLK 062402 @ 0915

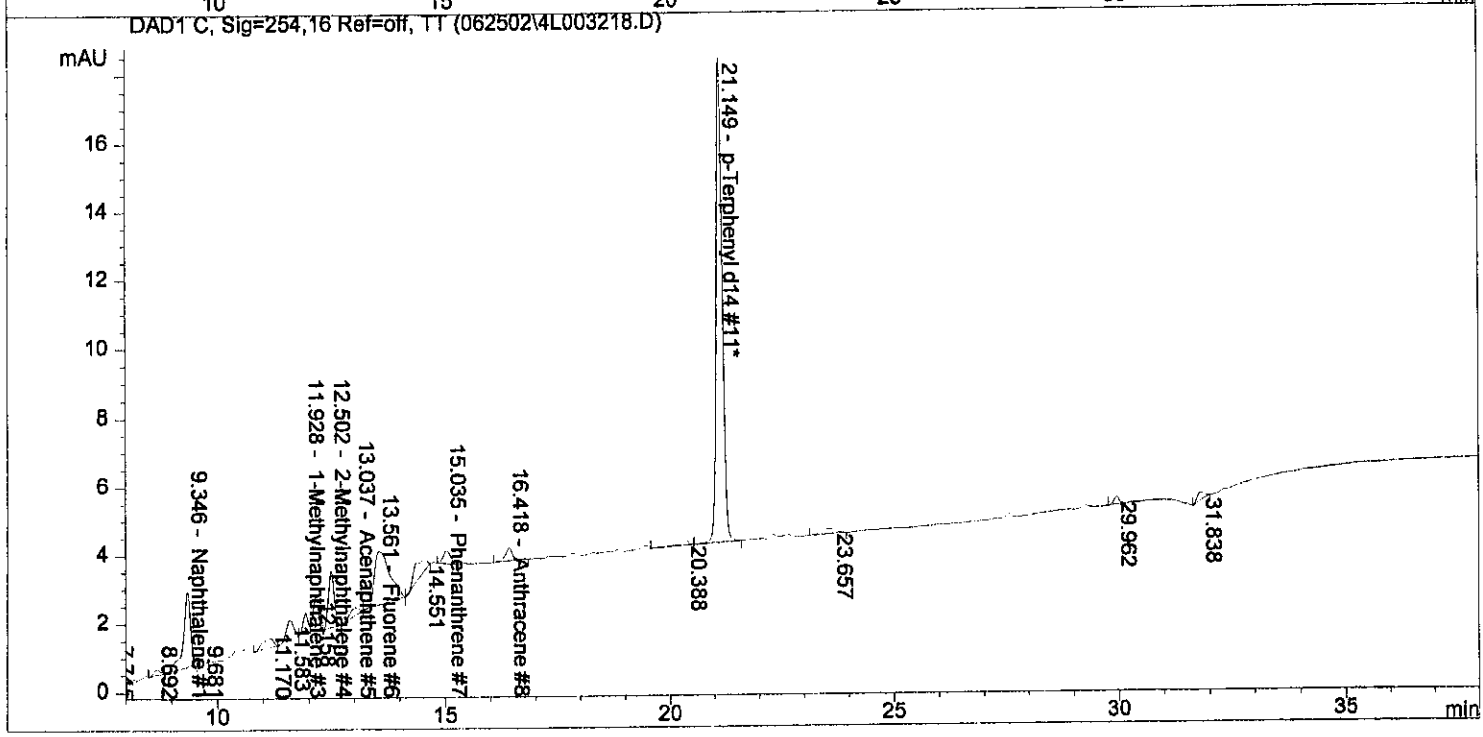
==========

Injection Date : 6/25/2002 10:24:27 PM
Sample Name : WG120336-01 SBLK
Acq. Operator : RDC

Seq. Line : 8
Vial : 8
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:52:39 AM by RDC
Calibrated 06/19/2002





External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/20/2002 8:52:08 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.371	BBA	5.51295	6.48849e-2	3.57707e-1		Naphthalene #1
11.943	BB	3.10013	8.68356e-2	2.69202e-1		1-Methylnaphthalene #3
12.522	BB	6.60244	3.89081e-2	2.56888e-1		2-Methylnaphthalene #4
13.001	BB	2.63870	4.05692e-2	1.07050e-1		Acenaphthene #5
13.650	BB	11.59723	6.41337e-3	7.43774e-2		Fluorene #6
15.034	BB	4.69488e-1	7.32661e-1	3.43976e-1		Phenanthrene #7
16.447	BB	3.39862e-1	8.95174e-1	3.04235e-1		Anthracene #8
17.830	BBA	7.63329e-1	5.59707e-2	4.27241e-2		Fluoranthene #9
18.825	BBA	3.35084e-1	7.76581e-2	2.60220e-2		Pyrene #10
21.169	BB	29.14772	2.99177e-1	8.72032	97.2%	p-Terphenyl d14 #11*
22.516	BB	1.86656e-1	1.78891e-1	3.33910e-2		Benzo(a)anthracene #12
23.391	BB	1.56634e-1	2.31135e-1	3.62035e-2		Chrysene #13
26.082	BBA	1.83567e-1	1.69025e-1	3.10273e-2		Benzo(b)fluoranthene #14
27.525	BBA	4.44101e-1	3.15053e-2	1.39915e-2		Benzo(k)fluoranthene #15
28.630	BB	2.06519e-1	1.89371e-1	3.91087e-2		Benzo(a)pyrene #16
30.474		-	-	-		Dibenz(a,h)anthracene #17
31.287		-	-	-		Benzo(g,h,i)perylene #18
32.233		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 10.65622

Results obtained with enhanced integrator!

X33.3

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.346	BB	25.22323	0.00000	0.00000		Naphthalene #1
10.995		-	-	-		Acenaphthylene #2
11.928	BB	3.25947	5.59765e-2	1.82454e-1		1-Methylnaphthalene #3
12.502	BB	14.94408	9.49532e-3	1.41899e-1		2-Methylnaphthalene #4
13.037	BB	3.49474	7.58726e-2	2.65155e-1		Acenaphthene #5
13.561	BB	37.63962	2.38927e-2	8.99313e-1		Fluorene #6
15.035	BB	4.05199	7.40044e-2	2.99865e-1		Phenanthrene #7
16.418	PB	4.37042	0.00000	0.00000		Anthracene #8
17.806		-	-	-		Fluoranthene #9
18.809		-	-	-		Pyrene #10
21.149	BBA	133.56685	6.60926e-2	8.82778		p-Terphenyl d14 #11*
22.466		-	-	-		Benzo(a)anthracene #12
23.337		-	-	-	98.3%	Chrysene #13
26.064		-	-	-		Benzo(b)fluoranthene #14
27.495		-	-	-		Benzo(k)fluoranthene #15
28.596		-	-	-		Benzo(a)pyrene #16
30.454		-	-	-		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.264		-	-	-		Benzo(g,h,i)perylene #18
32.225		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 10.61646

Results obtained with enhanced integrator!
4 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed
Warning : Negative results set to zero (cal. curve intercept), (Naphthalene
Warning : Negative results set to zero (cal. curve intercept), (Anthracene #

==========

*** End of Report ***

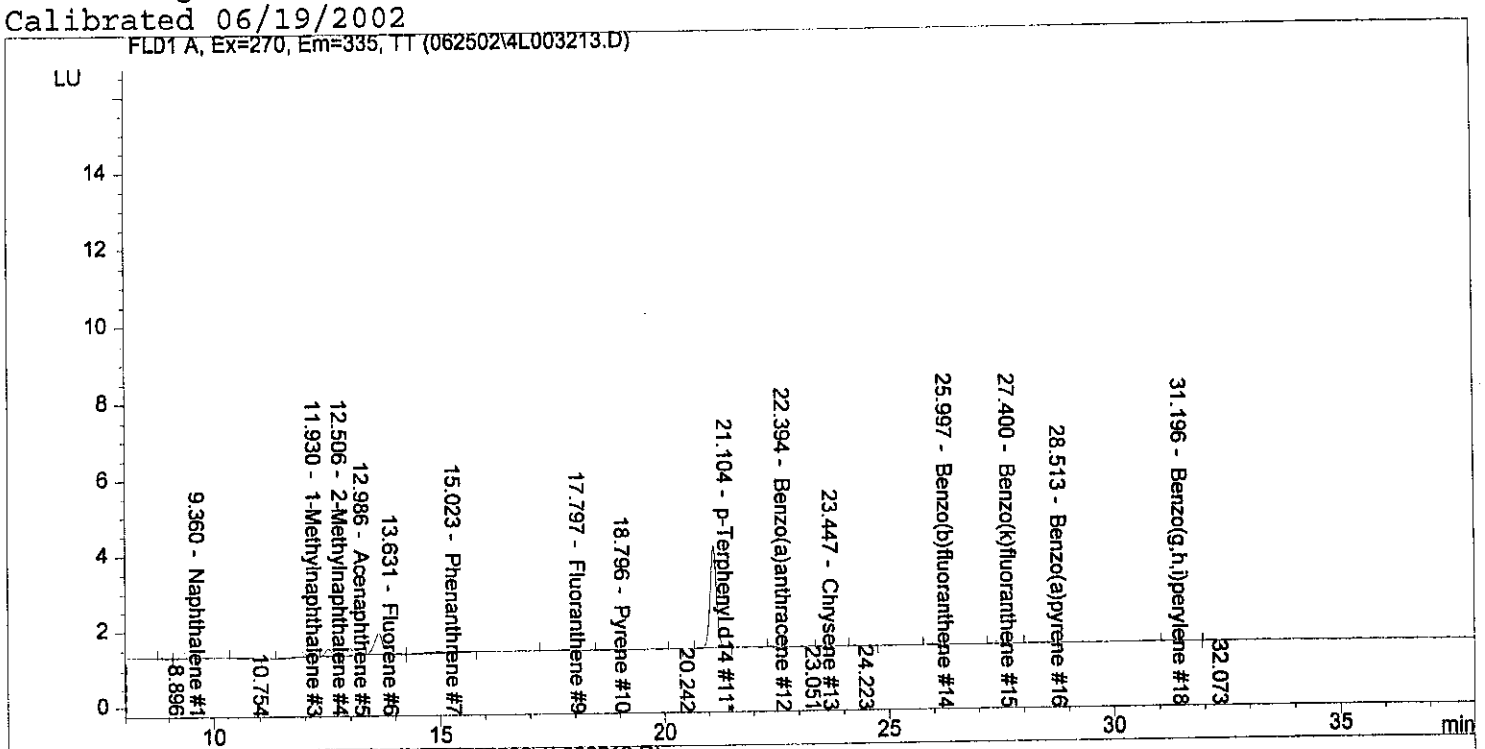
1,1 V186P99 BLK 062402 @ 0900

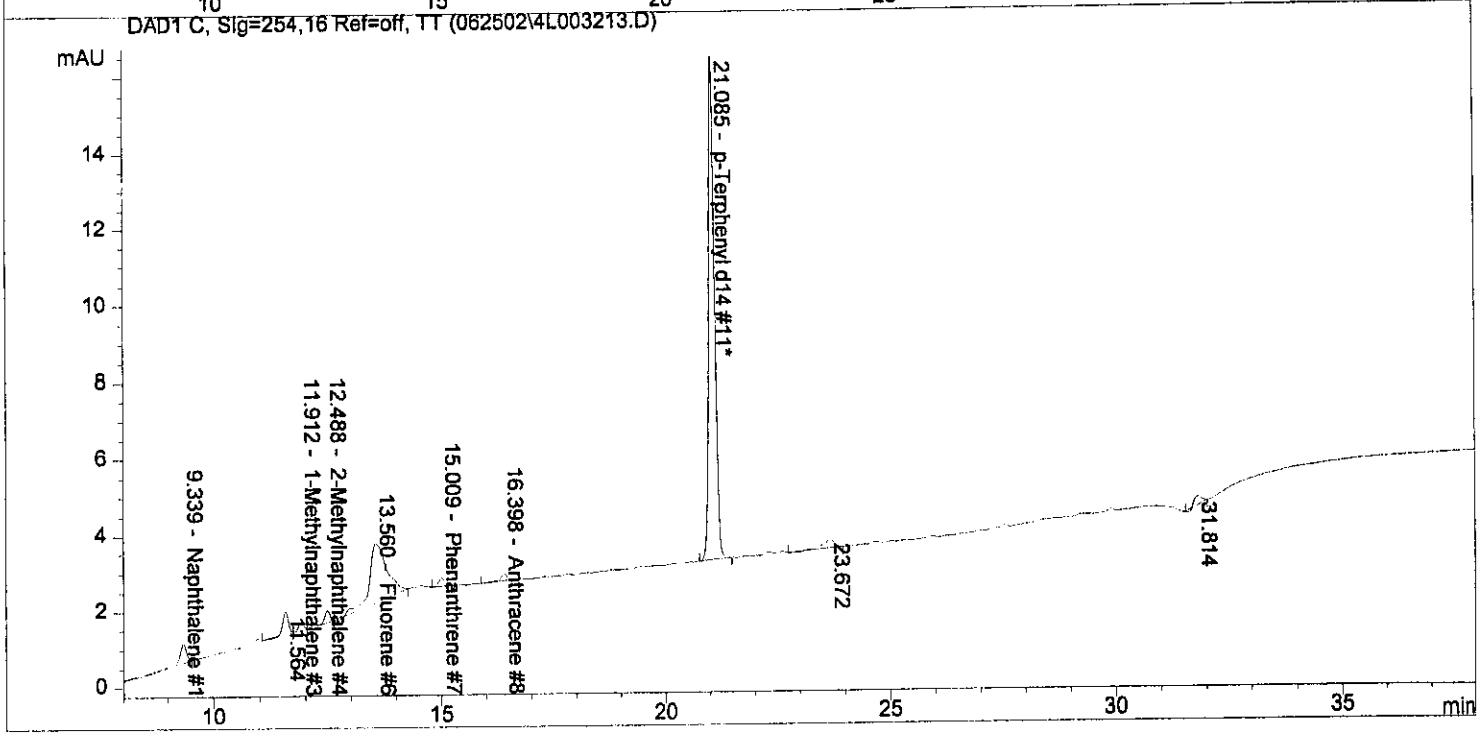
==========

Injection Date : 6/25/2002 5:41:16 PM
Sample Name : WG120326-01 WBLK
Acq. Operator : RDC

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:52:39 AM by RDC
Calibrated 06/19/2002





External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/20/2002 8:52:08 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.360	BB	1.63196	1.56887e-1	2.56032e-1		Naphthalene #1
11.930	BBA	1.40179	1.64242e-1	2.30233e-1		1-Methylnaphthalene #3
12.506	PB	2.02040	8.68677e-2	1.75508e-1		2-Methylnaphthalene #4
12.986	BB	1.72020	5.46987e-2	9.40929e-2		Acenaphthene #5
13.631	BB	8.91476	6.35993e-3	5.66972e-2		Fluorene #6
15.023	BB	2.22740	2.89306e-1	6.44399e-1		Phenanthrene #7
16.450		-	-	-		Anthracene #8
17.797	BBA	3.47259e-1	9.28680e-2	3.22492e-2		Fluoranthene #9
18.796	PB	2.87312e-1	8.36714e-2	2.40398e-2		Pyrene #10
21.104	BBA	26.86296	2.99884e-1	8.05578		p-Terphenyl d14 #11*
22.394	BB	1.66262e-1	1.99840e-1	3.32257e-2		Benzo(a)anthracene #12
23.447	BB	1.55623e-1	2.32378e-1	3.61635e-2		Chrysene #13
25.997	BBA	2.17066e-1	1.45531e-1	3.15899e-2		Benzo(b)fluoranthene #14
27.400	BBA	7.71231e-1	1.93256e-2	1.49045e-2		Benzo(k)fluoranthene #15
28.513	BBA	4.19131e-1	9.56825e-2	4.01035e-2		Benzo(a)pyrene #16
30.474		-	-	-		Dibenz(a,h)anthracene #17
31.196	BBA	2.79019e-1	1.93950e-1	5.41157e-2		Benzo(g,h,i)perylene #18
32.233		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 9.77913

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.339	BB	4.58741	0.00000	0.00000		Naphthalene #1
10.995		-	-	-		Acenaphthylene #2
11.912	BB	1.72657	9.42363e-2	1.62706e-1		1-Methylnaphthalene #3
12.488	BB	3.41810	3.62894e-3	1.24041e-2		2-Methylnaphthalene #4
12.994		-	-	-		Acenaphthene #5
13.560	BB	41.89005	2.32335e-2	9.73251e-1		Fluorene #6
15.009	BB	2.33483	1.16027e-1	2.70904e-1		Phenanthrene #7
16.398	PBA	1.79552	0.00000	0.00000		Anthracene #8
17.806		-	-	-		Fluoranthene #9
18.809		-	-	-		Pyrene #10
21.085	PBA	122.49126	6.62566e-2	8.11585		p-Terphenyl d14 #11*
22.466		-	-	-		Benzo(a)anthracene #12
23.337		-	-	-		Chrysene #13
26.064		-	-	-		Benzo(b)fluoranthene #14
27.495		-	-	-		Benzo(k)fluoranthene #15
28.596		-	-	-		Benzo(a)pyrene #16
30.454		-	-	-		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.264		-	-	-		Benzo(g,h,i)perylene #18
32.225		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 9.53511

Results obtained with enhanced integrator!
4 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed
Warning : Negative results set to zero (cal. curve intercept), (Naphthalene
Warning : Negative results set to zero (cal. curve intercept), (Anthracene #

==========

*** End of Report ***

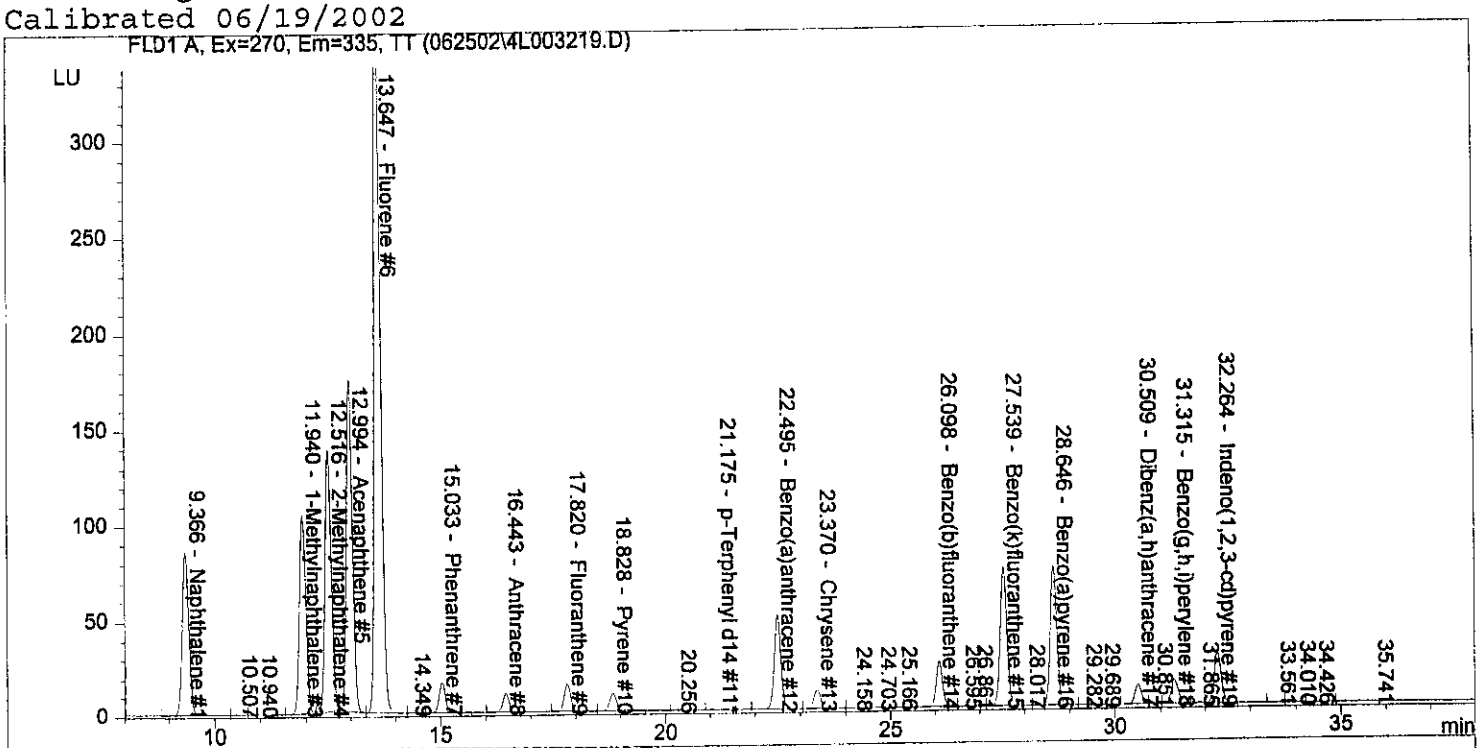
7,1 V186P107 LCS 062402 @ 0915

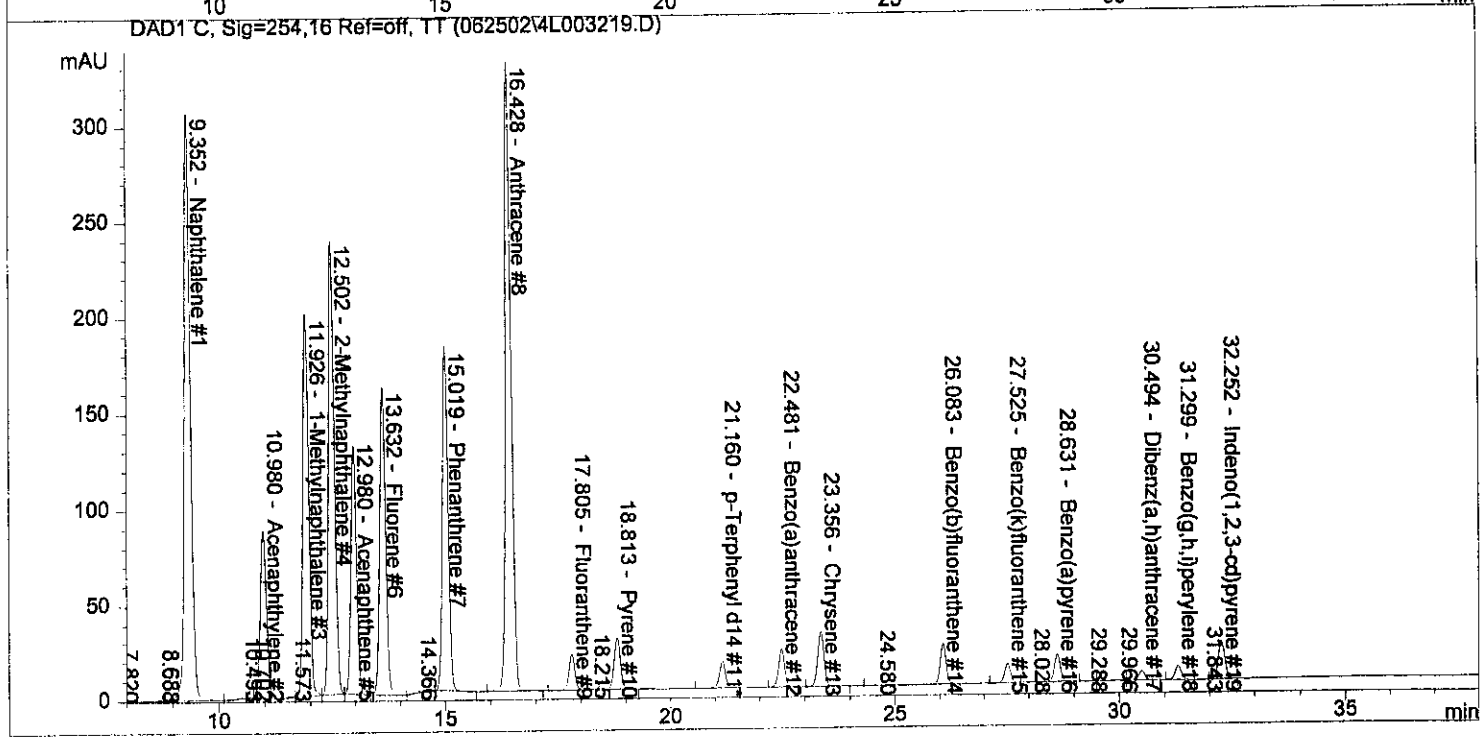
==========

Injection Date : 6/25/2002 11:21:06 PM
Sample Name : WG120336-02 SLCS
Acq. Operator : RDC

Seq. Line : 9
Vial : 9
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:52:39 AM by RDC
Calibrated 06/19/2002





External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/20/2002 8:52:08 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.366	BB	871.74731	2.64428e-2	23.05145		Naphthalene #1
11.940	PB	1015.26685	2.31405e-2	23.49374		1-Methylnaphthalene #3
12.516	BB	1321.91956	1.78664e-2	23.61794		2-Methylnaphthalene #4
12.994	BB	1684.69006	1.41481e-2	23.83519		Acenaphthene #5
13.647	BB	3803.18579	6.59045e-3	25.06471		Fluorene #6
15.033	BBA	157.04648	1.72577e-1	27.10267		Phenanthrene #7
16.443	BB	96.92073	3.00058e-1	29.08180		Anthracene #8
17.820	BB	149.20990	2.53332e-2	3.77997		Fluoranthene #9
18.828	BBA	94.57947	4.16206e-2	3.93645		Pyrene #10
21.175	PB	30.00640	2.98938e-1	8.97007 89.7%		p-Terphenyl d14 #11*
22.495	BB	509.63394	8.16550e-3	4.16141		Benzo(a)anthracene #12
23.370	BB	106.58517	3.99475e-2	4.25781		Chrysene #13
26.098	BB	254.26047	1.69046e-2	4.29818		Benzo(b)fluoranthene #14
27.539	BB	761.50879	2.80761e-3	2.13802		Benzo(k)fluoranthene #15
28.646	BB	766.42084	4.72870e-3	3.62418		Benzo(a)pyrene #16
30.509	BB	105.59469	4.01081e-2	4.23521		Dibenz(a,h)anthracene #17
31.315	BB	150.10710	2.82068e-2	4.23404		Benzo(g,h,i)perylene #18
32.264	BB	300.31924	1.40539e-2	4.22067		Indeno(1,2,3-cd)pyrene #1
Totals :				223.10351		

Results obtained with enhanced integrator!

X33.3

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.352	BB	2951.79785	8.10869e-3	23.93522		Naphthalene #1
10.980	BB	780.15906	3.01371e-2	23.51175		Acenaphthylene #2
11.926	BB	1799.79883	1.29609e-2	23.32695		1-Methylnaphthalene #3
12.502	BB	2109.10107	1.12227e-2	23.66982		2-Methylnaphthalene #4
12.980	BB	1164.48120	2.05362e-2	23.91406		Acenaphthene #5
13.632	BB	1449.33862	1.75643e-2	25.45663		Fluorene #6
15.019	BBA	1571.33105	1.70130e-2	26.73304		Phenanthrene #7
16.428	PBA	2965.44922	1.00100e-2	29.68403		Anthracene #8
17.805	BB	168.13913	2.17285e-2	3.65340		Fluoranthene #9
18.813	BBA	262.01230	1.43034e-2	3.74768		Pyrene #10
21.160	BBA	134.05229	6.60860e-2	8.85898 88.6%		p-Terphenyl d14 #11*
22.481	PBA	189.48531	2.20818e-2	4.18419		Benzo(a)anthracene #12
23.356	BBA	289.34131	1.50746e-2	4.36169		Chrysene #13
26.083	BBA	205.77737	2.06794e-2	4.25535		Benzo(b)fluoranthene #14
27.525	BB	95.55919	2.24576e-2	2.14603		Benzo(k)fluoranthene #15
28.631	BBA	138.50111	2.59912e-2	3.59981		Benzo(a)pyrene #16
30.494	BB	45.53100	9.37481e-2	4.26844		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.299	BB	79.57197	5.30375e-2	4.22030		Benzo(g,h,i)perylene #18
32.252	BBA	207.11911	2.05335e-2	4.25288		Indeno(1,2,3-cd)pyrene #1
Totals :				247.78025		

Results obtained with enhanced integrator!

*** End of Report ***

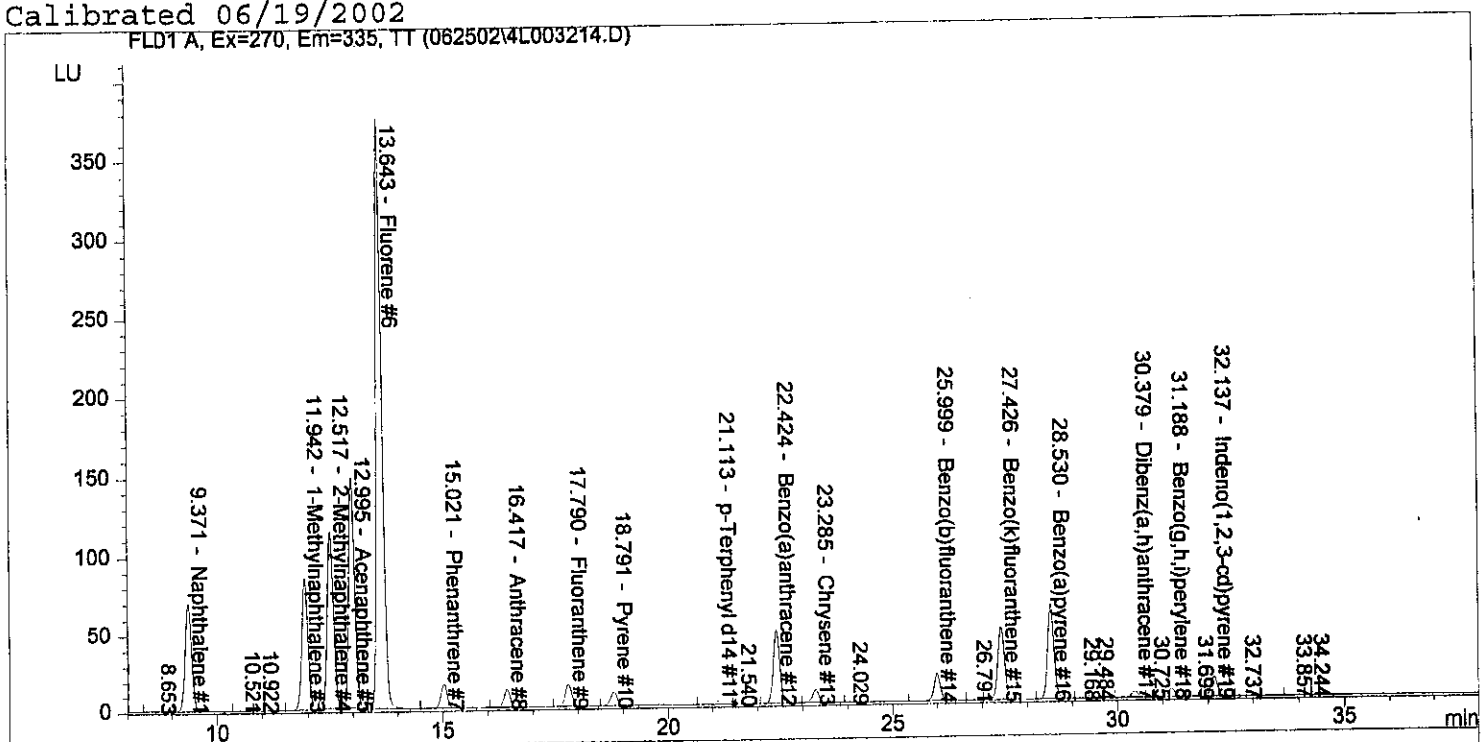
1,1 V186P99 LCS 062402 @ 0900

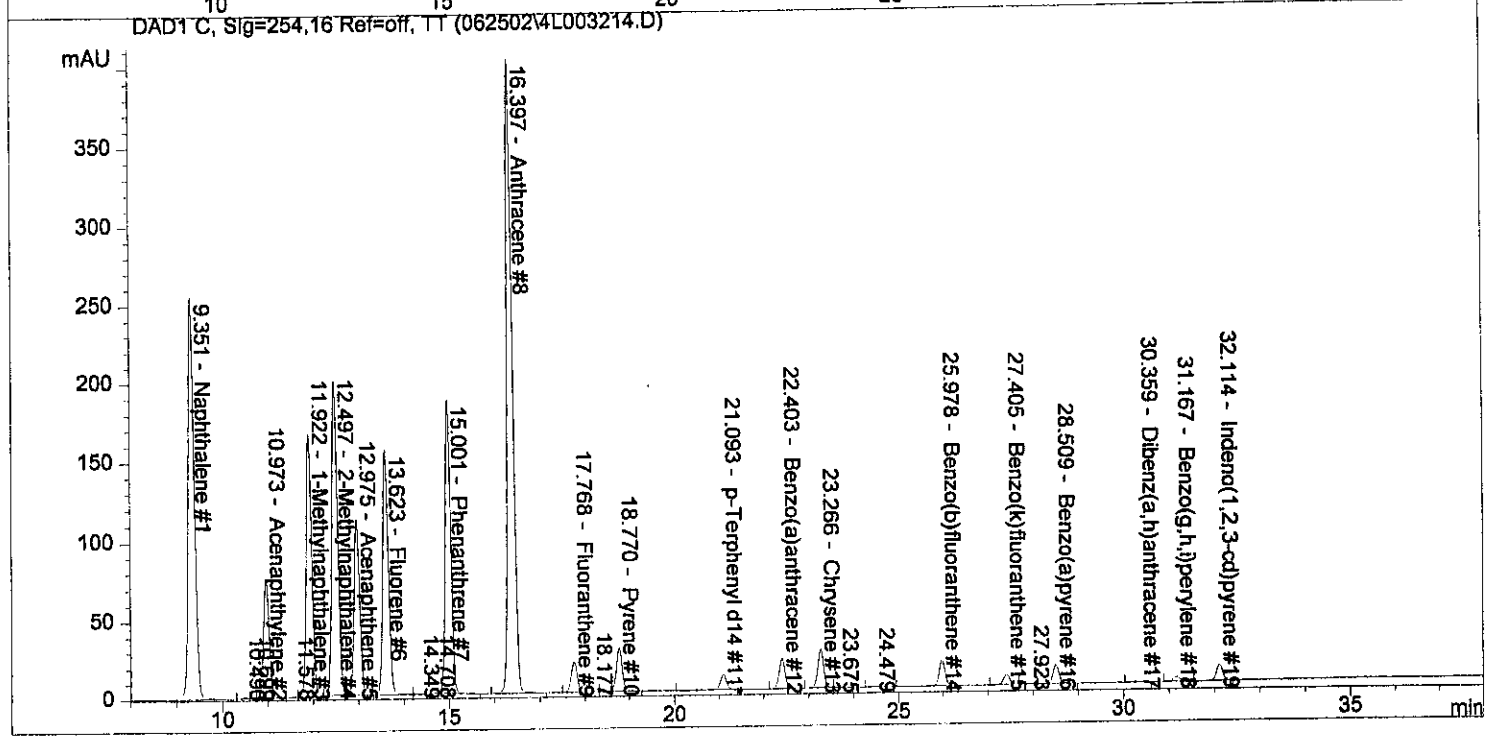
==========

Injection Date : 6/25/2002 6:37:52 PM
Sample Name : WG120326-02 WLCS
Acq. Operator : RDC

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:52:39 AM by RDC
Calibrated 06/19/2002





External Standard Report

Sorted By : Signal
Calib. Data Modified : 6/20/2002 8:52:08 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.371	BBA	705.40643	2.65005e-2	18.69363		Naphthalene #1
11.942	BB	828.94836	2.31843e-2	19.21859		1-Methylnaphthalene #3
12.517	BB	1094.49158	1.78883e-2	19.57864		2-Methylnaphthalene #4
12.995	BB	1427.73779	1.41556e-2	20.21045		Acenaphthene #5
13.643	BB	3605.92847	6.59042e-3	23.76459		Fluorene #6
15.021	BBA	161.05334	1.72536e-1	27.78744		Phenanthrene #7
16.417	BB	116.72163	2.99702e-1	34.98174		Anthracene #8
17.790	BBA	151.24452	2.53311e-2	3.83119		Fluoranthene #9
18.791	BBA	96.40156	4.16181e-2	4.01205		Pyrene #10
21.113	BB	21.00584	3.02402e-1	6.35220		p-Terphenyl d14 #11*
22.424	BB	493.68933	8.16752e-3	4.03222		Benzo(a)anthracene #12
23.285	BBA	91.47693	3.99940e-2	3.65853		Chrysene #13
25.999	PBA	197.10146	1.69365e-2	3.33821		Benzo(b)fluoranthene #14
27.426	BB	498.88510	2.81642e-3	1.40507		Benzo(k)fluoranthene #15
28.530	BB	644.93231	4.73808e-3	3.05574		Benzo(a)pyrene #16
30.379	BB	43.87551	4.06909e-2	1.78533		Dibenz(a,h)anthracene #17
31.188	BB	64.96667	2.86113e-2	1.85878		Benzo(g,h,i)perylene #18
32.137	BB	150.56540	1.41599e-2	2.13199		Indeno(1,2,3-cd)pyrene #1

Totals : 199.69640

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.351	BBA	2393.20654	8.08718e-3	19.35429		Naphthalene #1
10.973	BB	671.00494	3.01821e-2	20.25234		Acenaphthylene #2
11.922	BB	1486.24292	1.29773e-2	19.28747		1-Methylnaphthalene #3
12.497	BB	1766.10046	1.12203e-2	19.81619		2-Methylnaphthalene #4
12.975	BB	984.23474	2.05667e-2	20.24250		Acenaphthene #5
13.623	BB	1382.59326	1.75725e-2	24.29555		Fluorene #6
15.001	BBA	1610.76294	1.70094e-2	27.39808		Phenanthrene #7
16.397	PBA	3593.69751	1.00140e-2	35.98734		Anthracene #8
17.768	PB	173.75417	2.17221e-2	3.77431		Fluoranthene #9
18.770	BBA	269.03427	1.42991e-2	3.84696		Pyrene #10
21.093	PBA	96.09270	6.67998e-2	6.41897	64.2%	p-Terphenyl d14 #11*
22.403	PBA	183.13789	2.20881e-2	4.04518		Benzo(a)anthracene #12
23.266	PB	239.16266	1.50988e-2	3.61107		Chrysene #13
25.978	BBA	162.25658	2.07205e-2	3.36203		Benzo(b)fluoranthene #14
27.405	BB	63.11502	2.25368e-2	1.42241		Benzo(k)fluoranthene #15
28.509	BBA	116.62412	2.60600e-2	3.03923		Benzo(a)pyrene #16
30.359	BB	18.82584	9.35367e-2	1.76091		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.167	BB	34.64827	5.34000e-2	1.85022		Benzo(g,h,i)perylene #18
32.114	BB	108.06081	2.07775e-2	2.24523		Indeno(1,2,3-cd)pyrene #1

Totals : 222.01030

Results obtained with enhanced integrator!

*** End of Report ***

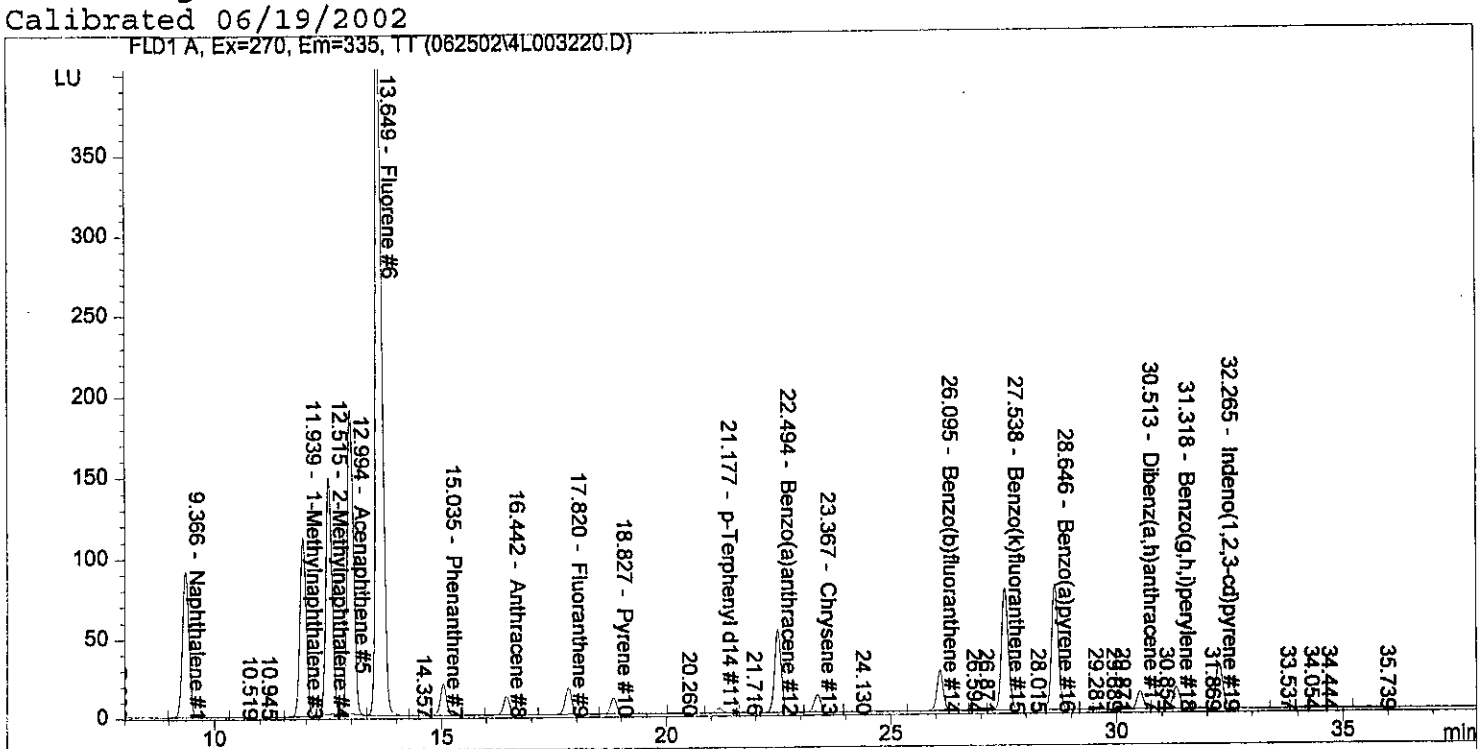
7,1 V186P107 LCS2 062402 @ 0915

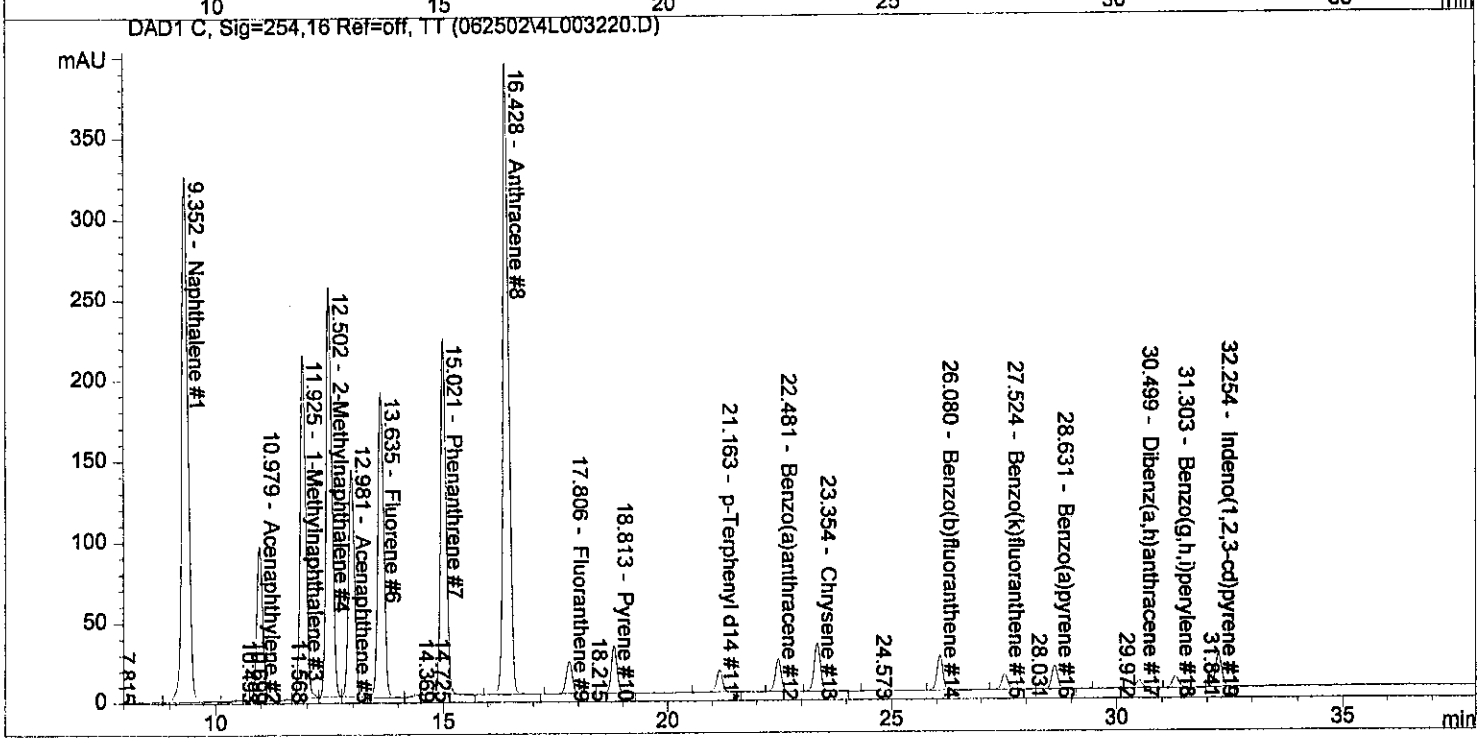
==========

Injection Date : 6/26/2002 12:17:47 AM
Sample Name : WG120336-03 SLCS
Acq. Operator : RDC

Seq. Line : 10
Vial : 10
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:52:39 AM by RDC
Calibrated 06/19/2002





==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 6/20/2002 8:52:08 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.366	BB	926.59985	2.64283e-2	24.48849		Naphthalene #1
11.939	BB	1091.74011	2.31268e-2	25.24844		1-Methylnaphthalene #3
12.515	BB	1426.60596	1.78586e-2	25.47725		2-Methylnaphthalene #4
12.994	BB	1848.63953	1.41444e-2	26.14797		Acenaphthene #5
13.649	BB	4490.03076	6.59053e-3	29.59170		Fluorene #6
15.035	BBA	193.11792	1.72264e-1	33.26721		Phenanthrene #7
16.442	BB	115.65257	2.99718e-1	34.66320		Anthracene #8
17.820	BB	167.69110	2.53159e-2	4.24524		Fluoranthene #9
18.827	BBA	103.62965	4.16094e-2	4.31197		Pyrene #10
21.177	BB	30.73192	2.98748e-1	9.18109	91.8%	p-Terphenyl d14 #11*
22.494	BB	537.45074	8.16226e-3	4.38681		Benzo(a)anthracene #12
23.367	BB	111.47395	3.99352e-2	4.45173		Chrysene #13
26.095	PB	267.22446	1.68993e-2	4.51591		Benzo(b)fluoranthene #14
27.538	BB	799.58496	2.80681e-3	2.24428		Benzo(k)fluoranthene #15
28.646	BB	819.11029	4.72550e-3	3.87071		Benzo(a)pyrene #16
30.513	BB	110.99148	4.00880e-2	4.44943		Dibenz(a,h)anthracene #17
31.318	BB	157.14165	2.81930e-2	4.43029		Benzo(g,h,i)perylene #18
32.265	BB	317.00488	1.40483e-2	4.45339		Indeno(1,2,3-cd)pyrene #1

Totals : 249.42512

Results obtained with enhanced integrator!

X333

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.352	BB	3133.95410	8.11405e-3	25.42906		Naphthalene #1
10.979	BB	854.43073	3.01131e-2	25.72955		Acenaphthylene #2
11.925	BB	1936.49988	1.29554e-2	25.08805		1-Methylnaphthalene #3
12.502	BB	2275.43994	1.12236e-2	25.53864		2-Methylnaphthalene #4
12.981	BB	1279.41296	2.05213e-2	26.25519		Acenaphthene #5
13.635	BB	1705.85864	1.75389e-2	29.91894		Fluorene #6
15.021	BBA	1929.45178	1.69856e-2	32.77298		Phenanthrene #7
16.428	PBA	3534.01978	1.00137e-2	35.38859		Anthracene #8
17.806	BB	188.88318	2.17069e-2	4.10007		Fluoranthene #9
18.813	BBA	290.48450	1.42873e-2	4.15023		Pyrene #10
21.163	BBA	139.52486	6.60151e-2	9.21075	92.1%	p-Terphenyl d14 #11*
22.481	PBA	199.36491	2.20728e-2	4.40055		Benzo(a)anthracene #12
23.354	BBA	303.65930	1.50691e-2	4.57587		Chrysene #13
26.080	PBA	217.80634	2.06709e-2	4.50226		Benzo(b)fluoranthene #14
27.524	BB	100.80994	2.24495e-2	2.26314		Benzo(k)fluoranthene #15
28.631	BBA	148.67596	2.59661e-2	3.86054		Benzo(a)pyrene #16
30.499	BB	48.18657	9.37563e-2	4.51779		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.303	BB	83.39004	5.30247e-2	4.42173		Benzo(g,h,i)perylene #18
32.254	BB	219.14429	2.05189e-2	4.49660		Indeno(1,2,3-cd)pyrene #1
Totals :				276.62051		

Results obtained with enhanced integrator!

*** End of Report ***

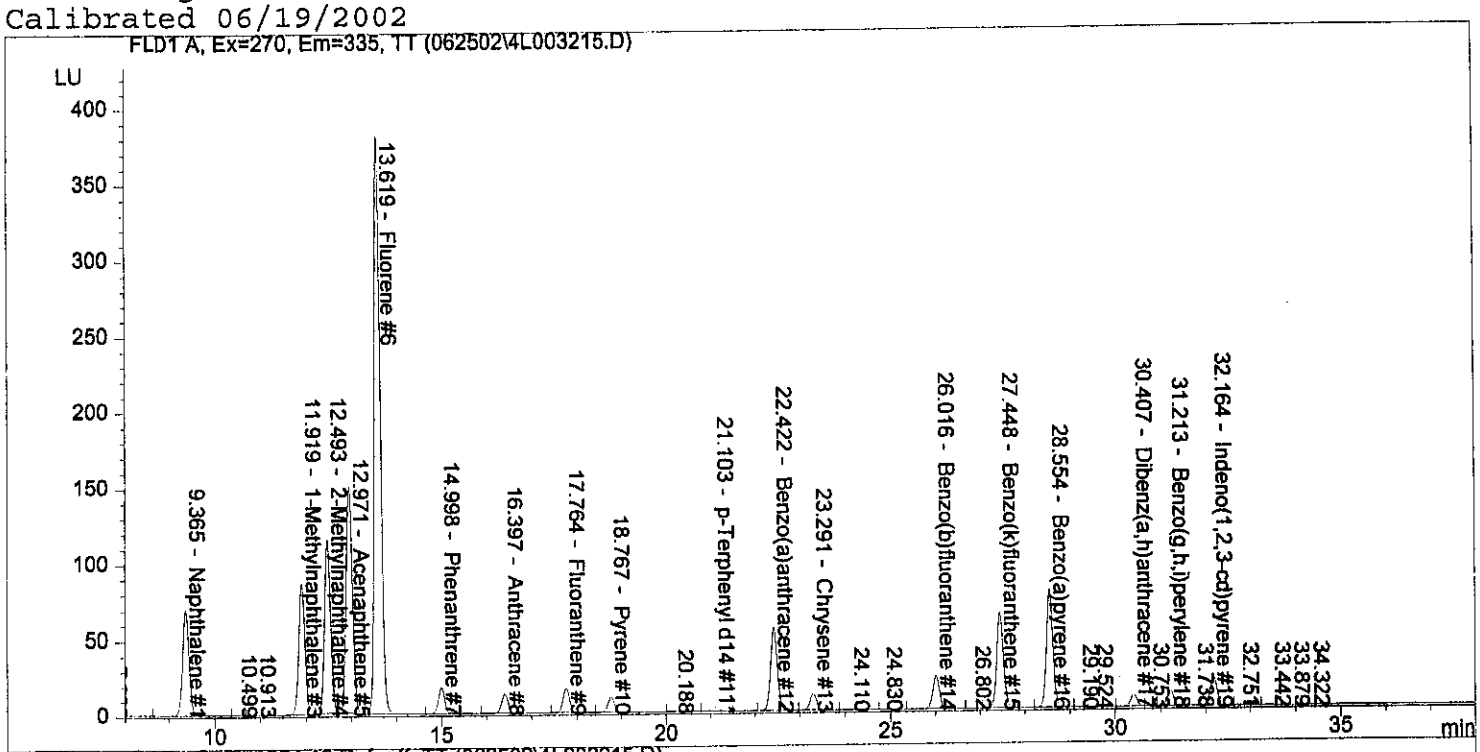
1,1 V186P99 LCS2 062402 @ 0900

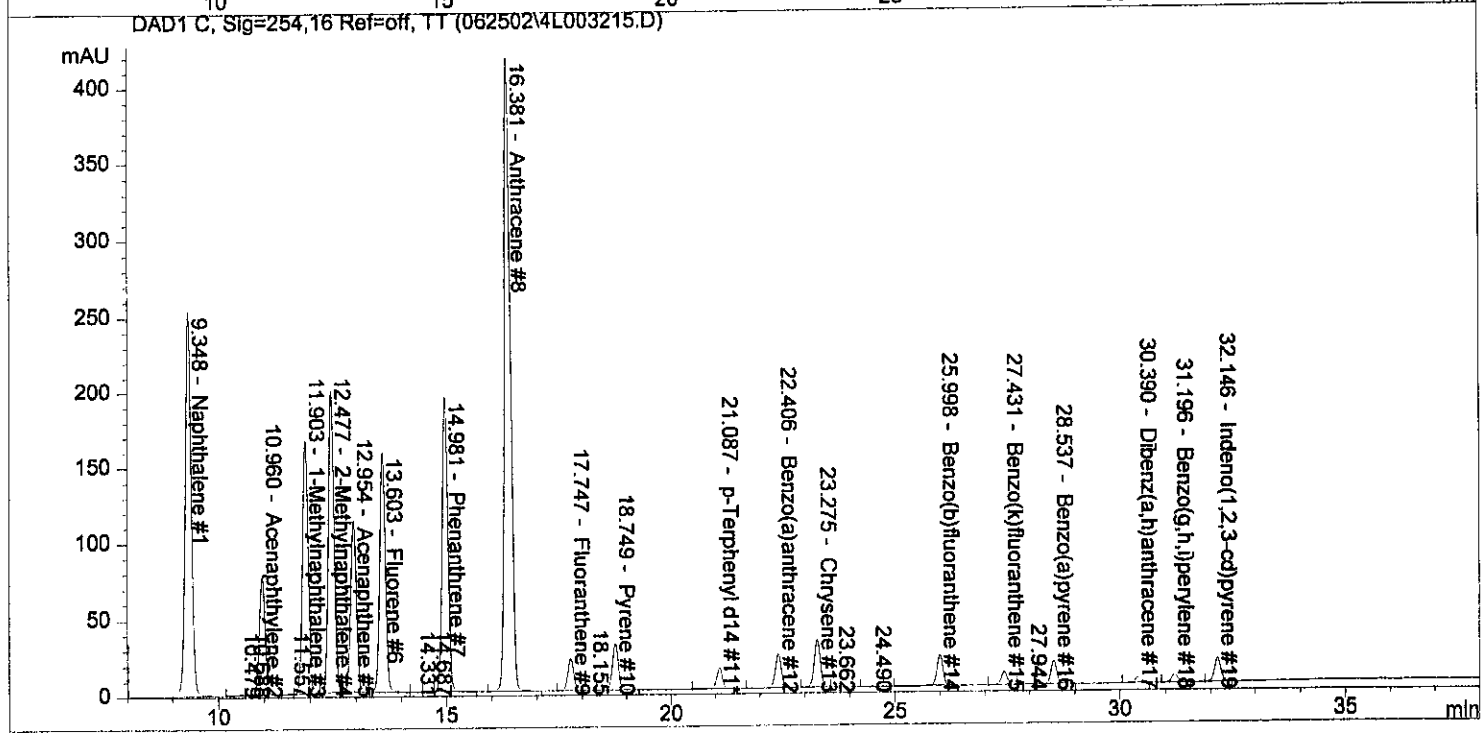
==========

Injection Date : 6/25/2002 7:34:28 PM
Sample Name : WG120326-03 WLCS
Acq. Operator : RDC

Seq. Line : 5
Vial : 5
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/20/2002 8:52:39 AM by RDC
Calibrated 06/19/2002





External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	6/20/2002 8:52:08 AM
Multiplier	:	1.0000
Dilution	:	1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.365	BB	704.88330	2.65007e-2	18.67992		Naphthalene #1
11.919	BB	829.89972	2.31840e-2	19.24042		1-Methylnaphthalene #3
12.493	BB	1095.33997	1.78882e-2	19.59371		2-Methylnaphthalene #4
12.971	BB	1441.76514	1.41551e-2	20.40833		Acenaphthene #5
13.619	BB	3653.04370	6.59043e-3	24.07513		Fluorene #6
14.998	BBA	167.96434	1.72468e-1	28.96851		Phenanthrene #7
16.397	PB	121.60254	2.99633e-1	36.43608		Anthracene #8
17.764	BB	162.24701	2.53206e-2	4.10819		Fluoranthene #9
18.767	BBA	104.41298	4.16085e-2	4.34447		Pyrene #10
21.103	BB	28.05103	2.99502e-1	8.40134		p-Terphenyl d14 #11*
22.422	BB	564.90613	8.15938e-3	4.60928		Benzo(a)anthracene #12
23.291	BB	113.77366	3.99298e-2	4.54295		Chrysene #13
26.016	BB	235.99696	1.69131e-2	3.99145		Benzo(b)fluoranthene #14
27.448	BB	658.99780	2.81021e-3	1.85192		Benzo(k)fluoranthene #15
28.554	BB	806.82849	4.72621e-3	3.81324		Benzo(a)pyrene #16
30.407	BB	76.25021	4.02676e-2	3.07041		Dibenz(a,h)anthracene #17
31.213	BB	111.91734	2.83121e-2	3.16861		Benzo(g,h,i)perylene #18
32.164	BB	224.89011	1.40897e-2	3.16863		Indeno(1,2,3-cd)pyrene #1
Totals :				212.47259		

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.348	BBA	2378.66577	8.08648e-3	19.23504		Naphthalene #1
10.960	BB	674.54877	3.01804e-2	20.35816		Acenaphthylene #2
11.903	BB	1482.59192	1.29776e-2	19.24043		1-Methylnaphthalene #3
12.477	BB	1758.63855	1.12202e-2	19.73236		2-Methylnaphthalene #4
12.954	BB	990.64746	2.05655e-2	20.37313		Acenaphthene #5
13.603	BB	1398.95923	1.75704e-2	24.58025		Fluorene #6
14.981	BBA	1680.53174	1.70034e-2	28.57478		Phenanthrene #7
16.381	PBA	3734.46411	1.00147e-2	37.39968		Anthracene #8
17.747	PB	185.11255	2.17104e-2	4.01888		Fluoranthene #9
18.749	BBA	288.58810	1.42882e-2	4.12342		Pyrene #10
21.087	BBA	129.36073	6.61515e-2	8.55741 75.6%		p-Terphenyl d14 #11*
22.406	PBA	208.82341	2.20650e-2	4.60769		Benzo(a)anthracene #12
23.275	PB	296.52298	1.50718e-2	4.46912		Chrysene #13
25.998	BBA	192.89604	2.06896e-2	3.99095		Benzo(b)fluoranthene #14
27.431	BB	82.73071	2.24815e-2	1.85991		Benzo(k)fluoranthene #15
28.537	BBA	144.74895	2.59754e-2	3.75991		Benzo(a)pyrene #16
30.390	BB	32.40711	9.36877e-2	3.03615		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.196	BB	58.02102	5.31414e-2	3.08332		Benzo(g,h,i)perylene #18
32.146	BB	154.96771	2.06231e-2	3.19591		Indeno(1,2,3-cd)pyrene #1
Totals :				234.19648		

Results obtained with enhanced integrator!

*** End of Report ***

Sequence Table:

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	accn blk	8310	1	Sample		
2	2	WG120164-01 STD6	8310	1	Sample		
3	3	WG120164-02 STD6	8310	1	Sample		
4	4	WG120164-03 STD5	8310	1	Sample		
5	5	WG120164-04 STD4	8310	1	Sample		
6	6	WG120164-05 STD3	8310	1	Sample		
7	7	WG120164-06 STD2	8310	1	Sample		
8	8	WG120164-07 STD1	8310	1	Sample		
9	9	WG120164-08 ALT	8310	1	Sample		
10	10	WG120073-01 WBLK	8310	1	Sample		
11	11	WG120073-02 WLCS	8310	1	Sample		
12	12	WG120073-03 WLCS	8310	1	Sample		
13	13	L0206140-11 REEX	8310	1	Sample		
14	14	L0206140-12 REEX	8310	1	Sample		
15	15 RDC 6/20/02	L0206146-01 REEX	8310	1	Sample		
16	16	L0206146-02 REEX	8310	1	Sample		
17	17	WG120174-01 CCV	8310	1	Sample		

RDC 6/20/02

No	1	1	8310	4L003183	01:01		accn blk
No	2	2	8310	4L003184	02:01	SOS 58-24	WG120164-01 ST
No	3	3	8310	4L003185	03:01	SOS 59-38	WG120164-02 ST
No	4	4	8310	4L003186	04:01	DIL'N of SOS 58-26/ 59-38	WG120164-03 ST
No	5	5	8310	4L003187	05:01		WG120164-04 ST
No	6	6	8310	4L003188	06:01		WG120164-05 ST
No	7	7	8310	4L003189	07:01		WG120164-06 ST
No	8	8	8310	4L003190	08:01		WG120164-07 ST
No	9	9	8310	4L003191	09:01	SOS 60-26/60-27 DIL'N	WG120164-08 AL
No	10	10	8310	4L003192	10:01		WG120073-01 WB
No	11	11	8310	4L003193	11:01		WG120073-02 WL
No	12	12	8310	4L003194	12:01		WG120073-03 WL
No	13	13	8310	4L003195	13:01	SURR. LOW	L0206140-11 RE
No	14	14	8310	4L003196	14:01	SURR. LOW	L0206140-12 RE
No	15	15	8310	4L003197	15:01	SURR. LOW	L0206146-01 RE
No	16	16	8310	4L003198	16:01		L0206146-02 RE
No	17	17	8310	4L003199	17:01	SOS 57-24/59-38 DIL'N.	WG120174-01 CC

RDC 6/20/02

6/20/02

KEMRON ENVIRONMENTAL SERVICES
HPLC Laboratory Maintenance Log

Analysis Date/Time June 19, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 061902
Analyst Initials RDC SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ____ 8330

Daily Check
- ☑ Mobile phase reservoir
- ☑ System pressure 117 bar
- ☑ Waste container

Returned to Control?
Yes ____ No ____

Additional Maintenance
Problem: Column re-installed

Action Taken: re-calibration

Comments

Re-extracts of L0206140-11 & 12 and L0206164-01 confirm the low % recovery of surrogate

L0206164-02 surr. recovery was within limits & will be reported out of holding time.
RDC

Reviewed By: DR 6/20/02

1/18bar

Sequence Table:

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	accn blk	8310	1	Sample		
2	2	WG120427-01 CCV	8310	1	Sample		
3	3	WG120326-01 WBLK	8310	1	Sample		
4	4	WG120326-02 WLCS	8310	1	Sample		
5	5	WG120326-03 WLCS	8310	1	Sample		
6	6	L0206416-02 831W	8310	1	Sample		
7	7	L0206417-04 831W	8310	1	Sample		
8	8	WG120336-01 SBLK	8310	1	Sample		
9	9	WG120336-02 SLCS	8310	1	Sample		
10	10	WG120336-03 SLCS	8310	1	Sample		
11	11	WG120427-02 CCV	8310	1	Sample		
12	12	L0206416-01 831S	8310	1	Sample		
13	13	L0206417-01 831S	8310	1	Sample		
14	14	L0206417-02 831S	8310	1	Sample		
15	15	L0206417-03 831S	8310	1	Sample		
16	11	WG120427-03 CCV	8310	1	Sample		

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310	4L003211	01:01		accn blk
No	2	2	8310	4L003212	02:01	SOS 59-38/58-26	WG120427-01 CC
No	3	3	8310	4L003213	03:01		WG120326-01 WB
No	4	4	8310	4L003214	04:01		WG120326-02 WL
No	5	5	8310	4L003215	05:01		WG120326-03 WL
No	6	6	8310	4L003216	06:01		L0206416-02 83
No	7	7	8310	4L003217	07:01		L0206417-04 83
No	8	8	8310	4L003218	08:01		WG120336-01 SB
No	9	9	8310	4L003219	09:01		WG120336-02 SL
No	10	10	8310	4L003220	10:01		WG120336-03 SL
No	11	11	8310	4L003221	11:01	SOS 59-38/58-26	WG120427-02 CC
No	12	12	8310	4L003222	12:01		L0206416-01 83
No	13	13	8310	4L003223	13:01	RL 5X	L0206417-01 83
No	14	14	8310	4L003224	14:01		L0206417-02 83
No	15	15	8310	4L003225	15:01		L0206417-03 83
No	16	11	8310	4L003226	16:01	SOS 59-38/58-26	WG120427-03 CC

RDC 6/26/02

6/28/02

KEMRON ENVIRONMENTAL SERVICES
HPLC Laboratory Maintenance Log

Analysis Date/Time June 25, 200 **Instrument ID** HPLC4 **Column ID** LC-PAH **Data Subdirectory** 062502
Analyst Initials BWC **SOP # HPLC01 Rev. #** 3 ✓ **8310** **SOP # HPLC02 Rev. #** ____ **8330**

Daily Check
- ☑ Mobile phase reservoir
- ☑ System pressure 118 bar
- ☑ Waste container

Returned to Control?
Yes ____ No ____

Additional Maintenance
Problem: _____

Action Taken: _____

Comments

Reviewed By: RK 6/27/02

Parameter: 8310-S SOP #: EXHPAC2 Revision #: 6
Extraction Analyst(s): CAF TV/KD Analyst(s): CAF
Date/Time Extracted: 6-24-02 @ 0915 Date TV/KD: 6-24-02
Spike/Surrogate Analyst: CAF Witness: [illegible]
Surrogate #: ESS0040-50 Earliest Hold Date: 7-04-02
Spike #: A = ESS0040-34 Spike #: B = —

Extraction Work Group WG 120336
Analytical Work Group WG 120425

Extract Relinquished By: CAF
Extract Received By & Date: [illegible] 6/24/02

	Sample ID	Test Code	pH √ <2	pH √ N	pH √ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	Emulsions √ BN	Emulsions √ N	Comments
1	Blank					30.04 g	100 uL		1 mL	T				WG 120336-
2	LCS					.07 g		500 uL		C				WG 120336-
3	LCS Dup					.06 g				C				WG 120336-
4	06-416 01	8310				.01 g				C				X
5	06-417 01					.02 g				C				
6	-02					.04 g				C				
7	-03					.04 g				C				
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

CAF 6-24-02

Methylene Chloride Lot #: 42015
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetone, Tr. IR Lot #: 41264
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: EK2152

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C					
Sonication	3550B	✓				
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3664A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: [signature] Date: 06/24/02

Extraction Notes For Volume # 18b Page # 127

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: ~~NONE~~ CAF 6-24-02
* SX06-416-01 Thick + Stuck to Side of zymark as it concentrated to 1mL

Clean-Up Anomalies: N/A

Supervisor Review: _____ Date: _____

Parameter: 8310 H_2O SOP #: EXHPLC1 Revision #: 6
Extraction Analyst(s): RLK, DP TV/KD Analyst(s): DP
Date/Time Extracted: 06/24/02 0900 Date TV/KD: 06/24/02
Spike/Surrogate Analyst: RLK/DP Witness: DP/MA
Surrogate #: ES50040-50 Earliest Hold Date: 06/27/02
Spike #: A = ES50041-01 Spike #: B = —

Extraction Work Group WG 120326
Analytical Work Group WG 120424

Extract Relinquished By: CAF
Extract Received By & Date: RLK 6/24/02

	Sample ID	Test Code	pH ✓ <2	pH ✓ N	pH ✓ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions ✓ A	Emulsions ✓ BN	Emulsions ✓ N	Comments
1	Blank			✓		1L	100uL		1mL	T				WG120326-01
2	LCS			✓		↓	↓	500uL	↓	C				WG ↓ -02
3	LCS DUP			✓		↓	↓	↓	↓	C				WG ↓ -03
4	06-416-02	8310		✓		960mL	↓		↓	T				
5	06-417-04	↓		✓		890mL	↓		↓	T				
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

CAF 6-24-02

Methylene Chloride Lot #: 4/2015
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: 41264
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: Fortified Lot #: ER2183
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: ER2152

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3664A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 6-24-02

Extraction Notes For Volume # 186 Page # 099

General Comments: None

Extraction Anomalies: None

Concentration Anomalies: NONE

Clean-Up Anomalies: NA

Supervisor Review: _____ Date: _____

Run Date: 19-Jun-02

Analyst: RDC

Instrument: HPLC4

Workorders:	Due Date:	Priority:
WG120172 06-140	6/14/2002	
WG120172 06-164	6/17/2002	

		Analyst
Initial Calibration:	Average RF	NA
	Linear or quadratic regression	√
	Alt Source Check	√
Continuing Calibration:	Continuing Calibration	√
	Client Specific Requirements	√
	Special Standards	NA
Blanks:	Quant Report/Chromatogram	√
	Surrogates	√
Laboratory Control Sample:	Quant Report/Chromatogram	√
	Surrogates	√
	Spike Compounds	√
	MS/MSD	NA
	Excel Spreadsheet	NA
Samples:	TCL Hits	√
	Surrogates	√
	Correct Factors	√
	Dilutions	NA
	Check Sample Histories	NA
	Corrective Action	NA
Data Package:	Level 2	
	Level 3	
	Level 4	
	Case narrative	

	Supervisor
Case Narrative:	
Corrective Action:	
Results Reporting/Data Qualifiers:	
Client Data Package Assembly:	
Check for Completeness:	
Check for compliance with method and project requirements:	
Check the reasonableness of results:	

Comments:

Samples were re-extracted out of holding time. Three samples confirmed the previous low surr. recovery results. L0206164-02 surrogate recovery met the acceptance criteria. This sample will be reported.

Recalibration following re-installation of the LC-PAH column is included.

Primary Reviewer: RDC 6/20/02

Secondary Reviewer: PR 6/20/02

Supervisor Review: PR 6/20/02

√ = Checked & OK

NA = Not Applicable

Semi-Volatile 8310 Checklist

Run Date: 25-Jun-02

Analyst: RDC

Instrument: HPLC4

Workorders:	Due Date:	Priority:
WG120425 06-416	6/28/2002	
WG120425 06-417	6/28/2002	
WG120426 06-416	6/28/2002	
WG120426 06-417	6/28/2002	

		Analyst
Initial Calibration:	Average RF	NA
	Linear or quadriatic regression	NA
	Alt Source Check	NA
Continuing Calibration:	Continuing Calibration	√
	Client Specific Requirements	√
	Special Standards	NA
Blanks:	Quant Report/Chromatogram	√
	Surrogates	√
Laboratory Control Sample:	Quant Report/Chromatogram	√
	Surrogates	√
	Spike Compounds	√
	MS/MSD	NA
	Excel Spreadsheet	√
Samples:	TCL Hits	√
	Surrogates	√
	Correct Factors	√
	Dilutions	NA
	Check Sample Histories	NA
	Corrective Action	NA
Data Package:	Level 2	
	Level 3	
	Level 4	
	Case narrative	

	Supervisor
Case Narrative:	
Corrective Action:	
Results Reporting/Data Qualifiers:	
Client Data Package Assembly:	
Check for Completeness:	
Check for compliance with method and project requirements:	
Check the reasonableness of results:	

Comments:

L0206416-01 and L0206417-01,02 soils yielded percent recoveries for the surrogate by the confirming FLD which were above advisory limits. UV detector recovery met all acceptance criteria for the surrogate.

LCS/LCS DUP for water fractions yielded % RPD for dibenz(a,h)anthracene which was above the advisory limit.

L0206417-01, 02, & 03 will required re-analysis at 5X dilution.

Primary Reviewer: RDC 6/27/02

Secondary Reviewer: 6/27/02

Supervisor Review: 6/28/02

√ = Checked & OK

NA = Not Applicable

Example 8310 Calculations

1.0 Calulating the Calibration Factor (CF) from the initial calibration (ICAL) data:

CF = Cs/As

Where:		Example:
	As = Area of the compound being measured in the standard	10000
	Cs = Concentration of the compound being measured (ug/ml).	100
	CF	**0.01**

2.0 Calculating the concentration (C) of a compound in water using data from prep log and quantitation report:

C = [(Ax)(Vf)(D)(CF)(1000)] / Vi

Where:		Example:
	Ax = Area of the compound being measured	10000
	Vf = Final volume of sample extract (mL). (prep log)	1
	D = Dilution factor for sample as a multiplier (10X = 10).	1
	CF = Calibration factor from ICAL calculated above.	**0.01**
	Vi = Initial volume of sample (mL). (prep log)	1000
	1000 = conversion to ppb	
	C (ug/L) =	**0.1**

3.0 Calculating the concentration (C) of a compound in soil using data from prep log and quantitation report: C = [(Ax)(Vf)(D)(Cf)] / Vi

Where:		Example:
	Ax = Area of the compound being measured	10000
	Vf = Final volume of sample extract (mL).	1
	D = Dilution factor for sample as a multiplier (10X = 10).	1
	CF = Calibration factor from ICAL calculated above.	0.01
	Wi = Initial weight of sample (g).	30
	C (ug/kg)	**3.333333**

2.4 General Chemistry Data

PERCENT SOLIDS

Workgroup: 120398 3 Approval: dh 6/26/02
ADT (on): Imm 6/24/02 @ 1400 ADT (off): dh 6/25/02 0900

Sample	Empty Pan WT 1	WET WT 2	DRY WT 3A	DRY WT 3B	DRY WT 3C
06-416-01	1.29	26.21	24.46		
06-417-01	1.28	25.50	23.94		
02	1.27	30.87	29.43		
03	1.27	22.59	20.51		
06-423-06	1.26	19.26	3.87		
07	1.30	17.17	3.72		
08	1.27	19.68	10.38		
09	1.28	17.11	6.21		
Duplicate 06-416-01	1.26	22.07	20.60		

Workgroup: 120516 Approval:
ADT (on): Imm 6/26/02 @ 830 ADT (off):

Sample	Empty Pan WT 1	WET WT 2	DRY WT 3A	DRY WT 3B	DRY WT 3C
06-475-01	1.26	27.50			
02-03-04	1.26	26.56			
05	1.27	21.80			
06	1.27	24.01			
07	1.27	23.41			
08	1.26	28.67			

PERCENT SOLID REPORT

Workgroup (AAB#):WG120393 Run Date:06/24/2002

Method:D2216-90 Run Time:14:00

Analyst:TMM

SAMPLE NUMBER	Pan WT.	Int WT.	Fnl WT.	% Solid	UNITS
L0206416-01	1.290	26.21	24.46	92.98	%
L0206417-01	1.280	25.50	23.94	93.56	%
L0206417-02	1.270	30.87	29.43	95.14	%
L0206417-03	1.270	22.59	20.51	90.24	%
L0206423-06	1.260	19.26	3.870	14.50	%
L0206423-07	1.300	17.17	3.720	15.25	%
L0206423-08	1.270	19.68	10.38	49.48	%
L0206423-09	1.280	17.11	6.210	31.14	%
WG120393-01	1.290	26.21	24.46	92.98	%
WG120393-02	1.260	22.07	20.60	92.94	%

KEMRON FORMS - Modified 03/05/2002
Version 1.2
Report generated 06/26/2002 09:58

Appendix B

Laboratory Analytical Reports for Groundwater Samples

KEMRON REPORT L0206102

PREPARED FOR CCI

WORK ID: NAS CECIL FIELD

Summary Report 1
Laboratory Report 2
Attachments 70

Full Sample Data Package..... 82
Volatiles Data 83
BTEX GC Data (8021) 84
QC Summary..... 87
Sample Data..... 109
Standards Data 130
Raw Data..... 163
Semivolatiles Data 170
Method 8011 171
QC Summary..... 174
Sample Data..... 189
Standards Data 208
Raw QC Data 236
PAH HPLC DATA (8310) 247
QC Summary..... 250
Sample Data..... 282
Standards Data 320
Raw QC Data 380
General Chemistry Data..... 398
Common Anions (9056) 399
QC Summary..... 402
Sample Data..... 418
Standards Data 428
Raw QC Data 448

1.0 Summary Report

1.1 Laboratory Report

Cover Page
Laboratory Narrative
Laboratory Results

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

L0206102

CHAIN OF CUSTODY:

The chain of custody number was 163151-047.

SHIPMENT CONDITIONS:

The chain of custody forms were received sealed in a cooler. The cooler temperatures were 1, 0, 1, 1 and 2 ° C.

SAMPLE MANAGEMENT:

All samples received were intact.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

REVIEWED Stephanie L Lyse DATE: 6/7/02

REPORT NARRATIVE
GC VOLATILE ORGANICS - BETX

KEMRON Login No: L0206102

METHOD

Preparation: SW- 846 5030B
Analysis: SW-846 8021B

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Sample: All acceptance criteria were met.
Matrix Spikes: All acceptance criteria were met in the MS/MSD analyses of fraction 04.

SAMPLES

Surrogates: All acceptance criteria were met.
Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CSH REVIEWED: _____ DATE: 6/13/02

Rev. 6/00

4

REPORT NARRATIVE
PAH HPLC

KEMRON Login No.: L0206102

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8310

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples:All acceptance criteria were met.
Matrix Spikes: The MS/MSD results were not associated with this sample delivery group.

SAMPLES

Surrogates: All acceptance criteria were met.
Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: RDC REVIEWED: _____ DATE: 6/27/01

Rev. 7/14/00

REPORT NARRATIVE
GC PETROLEUM RANGE ORGANICS

KEMRON Report No.: L0206102

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8015

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: Sample 04 was chosen by the client for MS/MSD analysis. All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.
Surrogates: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CLK REVIEWED: _____ DATE: 6/13/02

Rev. 7/14/00

REPORT NARRATIVE
COMMON ANIONS

KEMRON Report No.: L0206102

METHOD

Analysis: SW-846 9056

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: All acceptance criteria were met.

SAMPLES

All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: xxx REVIEWED: dh DATE: 6/28/02

Rev. 7/14/00

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA PACKAGE

Analytical Method : **8021B**

Lab Name : **Kemron Environmental Services**

Base/Command : **NAS Cecil Field Jacksonville (**

AAB # : **WG119272**

Contract # : **Colleen Kurtz**

Prime Contractor : **CCI**

Field sample ID		Lab Sample ID
062-CEF9-2S-Q2-02-18		L0206102-01
062-CEF9-3S-Q2-02-18		L0206102-02
062-CEF9-5S-Q2-02-18		L0206102-03
062-CEF9-7D-Q2-02-18	RS01	L0206102-04
062-CEF9-7D-Q2-02-18	MS01	L0206102-05
062-CEF9-7D-Q2-02-18	SD01	L0206102-06
062-CEF9-9S-Q2-02-18		L0206102-07
062-9DUP-Q2-02-18		L0206102-08
062-9EQB-Q2-02-18		L0206102-09
062-9TB-Q2-02-18		L0206102-10

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner

Name: **David L. Bumgarner**

Date: **09-JUL-02**

Title: **Laboratory Director**

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG119272

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-2S-Q2-02-18 Lab Sample ID: L0206102-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 22-APR-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 12:50

Concentration Units: ug/L File ID: 5G13656

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.500	1.0	0.500	1	ND
Ethylbenzene	0.500	1.0	0.500	1	ND
Methyl tert-butyl ether	0.500	1.0	0.500	1	ND
Toluene	0.500	1.0	1.10	1	
Xylenes, Total	0.500	1.0	0.500	1	ND

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	106	70 - 130	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG119272

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-3S-Q2-02-18 Lab Sample ID: L0206102-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 22-APR-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 13:25

Concentration Units: ug/L File ID: 5G13657

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.500	1.0	0.500	1	ND
Ethylbenzene	0.500	1.0	2.50	1	
Methyl tert-butyl ether	0.500	1.0	0.500	1	ND
Toluene	0.500	1.0	1.20	1	
Xylenes, Total	0.500	1.0	0.500	1	ND

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	106	70 - 130	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG119272

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-5S-Q2-02-18 Lab Sample ID: L0206102-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 22-APR-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 14:00

Concentration Units: ug/L File ID: 5G13658

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.500	1.0	0.500	1	ND
Ethylbenzene	0.500	1.0	0.500	1	ND
Methyl tert-butyl ether	0.500	1.0	0.500	1	ND
Toluene	0.500	1.0	0.500	1	ND
Xylenes, Total	0.500	1.0	0.500	1	ND

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	104	70 - 130	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG119272

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 22-APR-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 14:35

Concentration Units: ug/L File ID: 5G13659

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.500	1.0	0.500	1	ND
Ethylbenzene	0.500	1.0	0.500	1	ND
Methyl tert-butyl ether	0.500	1.0	0.500	1	ND
Toluene	0.500	1.0	0.500	1	ND
Xylenes, Total	0.500	1.0	0.500	1	ND

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	103	70 - 130	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG119272

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 22-APR-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 15:11

Concentration Units: ug/L File ID: 5G13660

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.500	1.0	22.0	1	
Ethylbenzene	0.500	1.0	22.0	1	
Methyl tert-butyl ether	0.500	1.0	20.0	1	
Toluene	0.500	1.0	22.0	1	
Xylenes, Total	0.500	1.0	63.0	1	

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	98.6	70 - 130	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG119272

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-02-02-18 Lab Sample ID: L0206102-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 22-APR-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 16:46

Concentration Units: ug/L File ID: 5G13661

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.500	1.0	21.0	1	
Ethylbenzene	0.500	1.0	22.0	1	
Methyl tert-butyl ether	0.500	1.0	20.0	1	
Toluene	0.500	1.0	22.0	1	
Xylenes, Total	0.500	1.0	61.0	1	

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	104	70 - 130	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG119272

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-9S-Q2-02-18 Lab Sample ID: L0206102-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 22-APR-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 17:56

Concentration Units: ug/L File ID: 5G13663

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.500	1.0	1.40	1	
Ethylbenzene	0.500	1.0	39.0	1	
Methyl tert-butyl ether	0.500	1.0	0.500	1	ND
Toluene	0.500	1.0	1.70	1	
Xylenes, Total	0.500	1.0	55.0	1	

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	114	70 - 130	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG119272

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9DUP-Q2-02-18 Lab Sample ID: L0206102-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 22-APR-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 18:30

Concentration Units: ug/L File ID: 5G13664

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.500	1.0	1.90	1	
Ethylbenzene	0.500	1.0	45.0	1	
Methyl tert-butyl ether	0.500	1.0	0.500	1	ND
Toluene	0.500	1.0	2.40	1	
Xylenes, Total	0.500	1.0	65.0	1	

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	114	70 - 130	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG119272

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9EQB-Q2-02-18 Lab Sample ID: L0206102-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 22-APR-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 19:05

Concentration Units: ug/L File ID: 5G13665

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.500	1.0	0.500	1	ND
Ethylbenzene	0.500	1.0	0.500	1	ND
Methyl tert-butyl ether	0.500	1.0	0.500	1	ND
Toluene	0.500	1.0	0.500	1	ND
Xylenes, Total	0.500	1.0	0.500	1	ND

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	104	70 - 130	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG119272

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9TB-02-02-18 Lab Sample ID: L0206102-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 22-APR-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 19:40

Concentration Units: ug/L File ID: 5G13666

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Benzene	0.500	1.0	0.500	1	ND
Ethylbenzene	0.500	1.0	0.500	1	ND
Methyl tert-butyl ether	0.500	1.0	0.500	1	ND
Toluene	0.500	1.0	1.80	1	
Xylenes, Total	0.500	1.0	0.500	1	ND

Surrogate	Recovery	Control Limits	Qualifier
a,a,a-Trifluorotoluene	104	70 - 130	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA PACKAGE

Analytical Method : 8015 MOD

Lab Name : Kemron Environmental Services

Base/Command : NAS Cecil Field Jacksonville (

AAB # : WG119397

Contract # : Colleen Kurtz

Prime Contractor : CCI

Field sample ID		Lab Sample ID
062-CEF9-2S-Q2-02-18		L0206102-01
062-CEF9-3S-Q2-02-18		L0206102-02
062-CEF9-5S-Q2-02-18		L0206102-03
062-CEF9-7D-Q2-02-18	RS01	L0206102-04
062-CEF9-7D-Q2-02-18	MS01	L0206102-05
062-CEF9-7D-Q2-02-18	SD01	L0206102-06
062-CEF9-9S-Q2-02-18		L0206102-07
062-9DUP-Q2-02-18		L0206102-08
062-9EQB-Q2-02-18		L0206102-09

Comments:

RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.

Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner

Name: David L. Bumgarner

Date: 09-JUL-02

Title: Laboratory Director

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG119397

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-2S-Q2-02-18 Lab Sample ID: L0206102-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 06-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 10-JUN-02 17:15

Concentration Units: ug/L File ID: 2G20392

Analyte	MDL	RL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	260	520	310	1	J

Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	67.0	49 – 174	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG119397

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-3S-Q2-02-18 Lab Sample ID: L0206102-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 06-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 10-JUN-02 17:30

Concentration Units: ug/L File ID: 2G20393

Analyte	MDL	RL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	263	530	680	1	

Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	107	49 - 174	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG119397

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-5S-Q2-02-18 Lab Sample ID: L0206102-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 06-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 10-JUN-02 17:45

Concentration Units: ug/L File ID: 2G20394

Analyte	MDL	RL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	263	530	263	1	ND

Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	101	49 - 174	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG119397

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 06-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 10-JUN-02 18:01

Concentration Units: ug/L File ID: 2G20395

Analyte	MDL	RL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	255	510	255	1	ND

Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	94.3	49 - 174	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG119397

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 06-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 10-JUN-02 18:16

Concentration Units: ug/L File ID: 2G20396

Analyte	MDL	RL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	260	520	2600	1	

Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	97.3	49 - 174	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG119397

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 06-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 10-JUN-02 18:31

Concentration Units: ug/L File ID: 2G20397

Analyte	MDL	RL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	260	520	2700	1	

Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	97.6	49 - 174	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG119397

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-9S-Q2-02-18 Lab Sample ID: L0206102-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 10-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 10-JUN-02 19:16

Concentration Units: ug/L File ID: 2G20400

Analyte	MDL	RL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	263	530	860	1	

Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	107	49 - 174	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG119397

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9DUP-Q2-02-18 Lab Sample ID: L0206102-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 10-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 10-JUN-02 19:32

Concentration Units: ug/L File ID: 2G20401

Analyte	MDL	RL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	260	520	880	1	

Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	106	49 - 174	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG119397

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9EQB-Q2-02-18 Lab Sample ID: L0206102-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 10-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 10-JUN-02 19:47

Concentration Units: ug/L File ID: 2G20402

Analyte	MDL	RL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	263	530	263	1	ND

Surrogate	Recovery	Control Limits	Qualifier
o-Terphenyl	90.4	49 - 174	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 8310
Lab Name : Kemron Environmental Services
Base/Command : NAS Cecil Field Jacksonville (

AAB # : WG119449
Contract # : Colleen Kurtz
Prime Contractor : CCI

Field sample ID		Lab Sample ID
062-CEF9-2S-Q2-02-18		L0206102-01
062-CEF9-3S-Q2-02-18		L0206102-02
062-CEF9-5S-Q2-02-18		L0206102-03
062-CEF9-7D-Q2-02-18	RS01	L0206102-04
062-CEF9-7D-Q2-02-18	MS01	L0206102-05
062-CEF9-7D-Q2-02-18	SD01	L0206102-06
062-CEF9-9S-Q2-02-18		L0206102-07
062-9DUP-Q2-02-18		L0206102-08
062-9EQB-Q2-02-18		L0206102-09

Comments:
RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.
Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner
Name: David L. Bumgarner

Date: 09-JUL-02
Title: Laboratory Director

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-2S-Q2-02-18 Lab Sample ID: L0206102-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 14-JUN-02 21:49

Concentration Units: ug/L File ID: 4L003142.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.362	1.0	0.362	1	ND
2-Methylnaphthalene	0.336	1.0	0.336	1	ND
Acenaphthene	0.415	1.0	0.415	1	ND
Acenaphthylene	0.351	1.0	0.351	1	ND
Anthracene	0.285	1.0	0.285	1	ND
Benzo(a)anthracene	0.0300	0.20	0.0300	1	ND
Benzo(a)pyrene	0.0530	0.20	0.0530	1	ND
Benzo(b)fluoranthene	0.0340	0.20	0.120	1	J
Benzo(g,h,i)perylene	0.0500	0.20	0.0500	1	ND
Benzo(k)fluoranthene	0.0720	0.20	0.0910	1	J
Chrysene	0.0240	0.20	0.0240	1	ND
Dibenzo(a,h)anthracene	0.0770	0.20	0.0770	1	ND
Fluoranthene	0.0500	0.20	0.0500	1	ND
Fluorene	0.559	1.0	0.559	1	ND
Indeno(1,2,3-cd)pyrene	0.0800	0.20	0.0940	1	J
Naphthalene	0.359	1.0	1.30	1	
Phenanthrene	0.287	1.0	0.287	1	ND
Pyrene	0.0680	0.20	0.0680	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-2S-Q2-02-18 Lab Sample ID: L0206102-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 14-JUN-02 21:49

Concentration Units: % Recovery File ID: 4L003142.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	76.8	40 – 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-2S-Q2-02-18 Lab Sample ID: L0206102-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 14-JUN-02 21:49

Concentration Units: ug/L File ID: 4L003142.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.362	1.0	0.362	1	ND
2-Methylnaphthalene	0.336	1.0	0.336	1	ND
Acenaphthene	0.415	1.0	0.415	1	ND
Acenaphthylene	0.351	1.0	0.351	1	ND
Anthracene	0.285	1.0	0.285	1	ND
Benzo(a)anthracene	0.0300	0.20	0.0300	1	ND
Benzo(a)pyrene	0.0530	0.20	0.0530	1	ND
Benzo(b)fluoranthene	0.0340	0.20	0.150	1	J
Benzo(g,h,i)perylene	0.0500	0.20	0.0500	1	ND
Benzo(k)fluoranthene	0.0720	0.20	0.120	1	J
Chrysene	0.0240	0.20	0.0240	1	ND
Dibenzo(a,h)anthracene	0.0770	0.20	0.0770	1	ND
Fluoranthene	0.0500	0.20	0.0500	1	ND
Fluorene	0.559	1.0	0.559	1	ND
Indeno(1,2,3-cd)pyrene	0.0800	0.20	0.0960	1	J
Naphthalene	0.359	1.0	0.800	1	J
Phenanthrene	0.287	1.0	0.287	1	ND
Pyrene	0.0680	0.20	0.0680	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-2S-Q2-02-18 Lab Sample ID: L0206102-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 14-JUN-02 21:49

Concentration Units: % Recovery File ID: 4L003142.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	79.2	40 – 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 2 of 2

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-3S-Q2-02-18 Lab Sample ID: L0206102-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 14-JUN-02 22:46

Concentration Units: ug/L File ID: 4L003143.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.362	1.0	1.10	1	
2-Methylnaphthalene	0.336	1.0	1.30	1	
Acenaphthene	0.415	1.0	0.415	1	ND
Acenaphthylene	0.351	1.0	0.351	1	ND
Anthracene	0.285	1.0	0.285	1	ND
Benzo(a)anthracene	0.0300	0.20	0.0300	1	ND
Benzo(a)pyrene	0.0530	0.20	0.0530	1	ND
Benzo(b)fluoranthene	0.0340	0.20	0.0340	1	ND
Benzo(g,h,i)perylene	0.0500	0.20	0.0500	1	ND
Benzo(k)fluoranthene	0.0720	0.20	0.0720	1	ND
Chrysene	0.0240	0.20	0.0240	1	ND
Dibenzo(a,h)anthracene	0.0770	0.20	0.0770	1	ND
Fluoranthene	0.0500	0.20	0.0500	1	ND
Fluorene	0.559	1.0	0.559	1	ND
Indeno(1,2,3-cd)pyrene	0.0800	0.20	0.0800	1	ND
Naphthalene	0.359	1.0	1.60	1	
Phenanthrene	0.287	1.0	0.287	1	ND
Pyrene	0.0680	0.20	0.0680	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-3S-Q2-02-18 Lab Sample ID: L0206102-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 14-JUN-02 22:46

Concentration Units: % Recovery File ID: 4L003143.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	75.2	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 2 of 2

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-3S-Q2-02-18 Lab Sample ID: L0206102-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 14-JUN-02 22:46

Concentration Units: ug/L File ID: 4L003143.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.362	1.0	0.760	1	J
2-Methylnaphthalene	0.336	1.0	1.20	1	
Acenaphthene	0.415	1.0	0.415	1	ND
Acenaphthylene	0.351	1.0	0.351	1	ND
Anthracene	0.285	1.0	0.285	1	ND
Benzo(a)anthracene	0.0300	0.20	0.0300	1	ND
Benzo(a)pyrene	0.0530	0.20	0.0530	1	ND
Benzo(b)fluoranthene	0.0340	0.20	0.0340	1	ND
Benzo(g,h,i)perylene	0.0500	0.20	0.0500	1	ND
Benzo(k)fluoranthene	0.0720	0.20	0.0720	1	ND
Chrysene	0.0240	0.20	0.0240	1	ND
Dibenzo(a,h)anthracene	0.0770	0.20	0.0770	1	ND
Fluoranthene	0.0500	0.20	0.0500	1	ND
Fluorene	0.559	1.0	0.559	1	ND
Indeno(1,2,3-cd)pyrene	0.0800	0.20	0.0800	1	ND
Naphthalene	0.359	1.0	1.10	1	
Phenanthrene	0.287	1.0	0.287	1	ND
Pyrene	0.0680	0.20	0.230	1	

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-3S-Q2-02-18 Lab Sample ID: L0206102-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 14-JUN-02 22:46

Concentration Units: % Recovery File ID: 4L003143.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	74.6	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-5S-Q2-02-18 Lab Sample ID: L0206102-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 14-JUN-02 23:42

Concentration Units: ug/L File ID: 4L003144.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.362	1.0	0.362	1	ND
2-Methylnaphthalene	0.354	1.1	0.354	1	ND
Acenaphthene	0.437	1.1	0.437	1	ND
Acenaphthylene	0.351	1.0	0.351	1	ND
Anthracene	0.300	1.1	0.300	1	ND
Benzo(a)anthracene	0.0300	0.20	0.0300	1	ND
Benzo(a)pyrene	0.0530	0.20	0.0530	1	ND
Benzo(b)fluoranthene	0.0340	0.20	0.0340	1	ND
Benzo(g,h,i)perylene	0.0526	0.21	0.0526	1	ND
Benzo(k)fluoranthene	0.0720	0.20	0.0720	1	ND
Chrysene	0.0240	0.20	0.0240	1	ND
Dibenzo(a,h)anthracene	0.0770	0.20	0.0770	1	ND
Fluoranthene	0.0500	0.20	0.0500	1	ND
Fluorene	0.588	1.1	0.588	1	ND
Indeno(1,2,3-cd)pyrene	0.0800	0.20	0.0800	1	ND
Naphthalene	0.378	1.1	0.378	1	ND
Phenanthrene	0.302	1.1	0.302	1	ND
Pyrene	0.0680	0.20	0.0680	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-5S-Q2-02-18 Lab Sample ID: L0206102-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 14-JUN-02 23:42

Concentration Units: % Recovery File ID: 4L003144.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	73.9	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 2 of 2

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 00:39

Concentration Units: ug/L File ID: 4L003145.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.362	1.0	0.362	1	ND
2-Methylnaphthalene	0.336	1.0	0.336	1	ND
Acenaphthene	0.415	1.0	0.415	1	ND
Acenaphthylene	0.351	1.0	0.351	1	ND
Anthracene	0.285	1.0	0.285	1	ND
Benzo(a)anthracene	0.0300	0.20	0.0300	1	ND
Benzo(a)pyrene	0.0530	0.20	0.0530	1	ND
Benzo(b)fluoranthene	0.0340	0.20	0.0340	1	I
Benzo(g,h,i)perylene	0.0500	0.20	0.0500	1	ND
Benzo(k)fluoranthene	0.0720	0.20	0.0720	1	ND
Chrysene	0.0240	0.20	0.0240	1	ND
Dibenzo(a,h)anthracene	0.0770	0.20	0.0770	1	I
Fluoranthene	0.0500	0.20	0.0500	1	ND
Fluorene	0.559	1.0	0.559	1	ND
Indeno(1,2,3-cd)pyrene	0.0800	0.20	0.0800	1	ND
Naphthalene	0.359	1.0	0.359	1	ND
Phenanthrene	0.287	1.0	0.287	1	ND
Pyrene	0.0680	0.20	0.0680	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 00:39

Concentration Units: % Recovery File ID: 4L003145.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	86.2	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 2 of 2

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 01:36

Concentration Units: ug/L File ID: 4L003146.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.362	1.0	27.0	1	
2-Methylnaphthalene	0.336	1.0	26.0	1	
Acenaphthene	0.415	1.0	29.0	1	
Acenaphthylene	0.351	1.0	0.351	1	ND
Anthracene	0.285	1.0	38.0	1	
Benzo(a)anthracene	0.0300	0.20	4.80	1	
Benzo(a)pyrene	0.0530	0.20	4.30	1	
Benzo(b)fluoranthene	0.0340	0.20	4.20	1	
Benzo(g,h,i)perylene	0.0500	0.20	2.90	1	
Benzo(k)fluoranthene	0.0720	0.20	2.00	1	
Chrysene	0.0240	0.20	4.80	1	
Dibenzo(a,h)anthracene	0.0770	0.20	2.70	1	
Fluoranthene	0.0500	0.20	4.80	1	
Fluorene	0.559	1.0	31.0	1	
Indeno(1,2,3-cd)pyrene	0.0800	0.20	3.20	1	
Naphthalene	0.359	1.0	25.0	1	
Phenanthrene	0.287	1.0	36.0	1	
Pyrene	0.0680	0.20	4.70	1	

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 01:36

Concentration Units: % Recovery File ID:4L003146.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	90.6	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-02-02-18 Lab Sample ID: L0206102-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 01:36

Concentration Units: ug/L File ID: 4L003146.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.362	1.0	27.0	1	
2-Methylnaphthalene	0.336	1.0	27.0	1	
Acenaphthene	0.415	1.0	29.0	1	
Acenaphthylene	0.351	1.0	29.0	1	
Anthracene	0.285	1.0	39.0	1	
Benzo(a)anthracene	0.0300	0.20	4.90	1	
Benzo(a)pyrene	0.0530	0.20	4.20	1	
Benzo(b)fluoranthene	0.0340	0.20	4.20	1	
Benzo(g,h,i)perylene	0.0500	0.20	2.90	1	
Benzo(k)fluoranthene	0.0720	0.20	2.00	1	
Chrysene	0.0240	0.20	4.80	1	
Dibenzo(a,h)anthracene	0.0770	0.20	2.80	1	
Fluoranthene	0.0500	0.20	4.70	1	
Fluorene	0.559	1.0	31.0	1	
Indeno(1,2,3-cd)pyrene	0.0800	0.20	3.30	1	
Naphthalene	0.359	1.0	26.0	1	
Phenanthrene	0.287	1.0	37.0	1	
Pyrene	0.0680	0.20	4.60	1	

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 01:36

Concentration Units: % Recovery File ID: 4L003146.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	91.5	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 02:32

Concentration Units: ug/L File ID: 4L003147.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.362	1.0	25.0	1	
2-Methylnaphthalene	0.336	1.0	25.0	1	
Acenaphthene	0.415	1.0	27.0	1	
Acenaphthylene	0.351	1.0	0.351	1	ND
Anthracene	0.285	1.0	36.0	1	
Benzo(a)anthracene	0.0300	0.20	4.20	1	
Benzo(a)pyrene	0.0530	0.20	3.30	1	
Benzo(b)fluoranthene	0.0340	0.20	3.30	1	
Benzo(g,h,i)perylene	0.0500	0.20	2.00	1	
Benzo(k)fluoranthene	0.0720	0.20	1.50	1	
Chrysene	0.0240	0.20	3.90	1	
Dibenzo(a,h)anthracene	0.0770	0.20	1.90	1	
Fluoranthene	0.0500	0.20	4.40	1	
Fluorene	0.559	1.0	29.0	1	
Indeno(1,2,3-cd)pyrene	0.0800	0.20	2.30	1	
Naphthalene	0.359	1.0	24.0	1	
Phenanthrene	0.287	1.0	33.0	1	
Pyrene	0.0680	0.20	4.40	1	

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 02:32

Concentration Units: % Recovery File ID: 4L003147.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	66.6	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 02:32

Concentration Units: ug/L File ID: 4L003147.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.362	1.0	25.0	1	
2-Methylnaphthalene	0.336	1.0	25.0	1	
Acenaphthene	0.415	1.0	27.0	1	
Acenaphthylene	0.351	1.0	27.0	1	
Anthracene	0.285	1.0	36.0	1	
Benzo(a)anthracene	0.0300	0.20	4.30	1	
Benzo(a)pyrene	0.0530	0.20	3.30	1	
Benzo(b)fluoranthene	0.0340	0.20	3.30	1	
Benzo(g,h,i)perylene	0.0500	0.20	2.00	1	
Benzo(k)fluoranthene	0.0720	0.20	1.50	1	
Chrysene	0.0240	0.20	4.00	1	
Dibenzo(a,h)anthracene	0.0770	0.20	2.10	1	
Fluoranthene	0.0500	0.20	4.30	1	
Fluorene	0.559	1.0	29.0	1	
Indeno(1,2,3-cd)pyrene	0.0800	0.20	2.30	1	
Naphthalene	0.359	1.0	25.0	1	
Phenanthrene	0.287	1.0	34.0	1	
Pyrene	0.0680	0.20	4.30	1	

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 02:32

Concentration Units: % Recovery File ID: 4L003147.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	66.6	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 2 of 2

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-9S-Q2-02-18 Lab Sample ID: L0206102-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 03:29

Concentration Units: ug/L File ID: 4L003148.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.389	1.1	5.50	1	
2-Methylnaphthalene	0.361	1.1	9.30	1	
Acenaphthene	0.446	1.1	0.446	1	ND
Acenaphthylene	0.351	1.0	0.351	1	ND
Anthracene	0.306	1.1	0.306	1	ND
Benzo(a)anthracene	0.0323	0.22	0.0323	1	ND
Benzo(a)pyrene	0.0570	0.22	0.0570	1	ND
Benzo(b)fluoranthene	0.0366	0.22	0.0366	1	ND
Benzo(g,h,i)perylene	0.0538	0.22	0.0538	1	ND
Benzo(k)fluoranthene	0.0774	0.22	0.0774	1	ND
Chrysene	0.0258	0.22	0.0258	1	ND
Dibenzo(a,h)anthracene	0.0828	0.22	0.0828	1	ND
Fluoranthene	0.0538	0.22	0.0538	1	ND
Fluorene	0.601	1.1	0.601	1	ND
Indeno(1,2,3-cd)pyrene	0.0860	0.22	0.0860	1	ND
Naphthalene	0.386	1.1	44.0	1	
Phenanthrene	0.309	1.1	0.309	1	ND
Pyrene	0.0731	0.22	0.0731	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-9S-Q2-02-18 Lab Sample ID: L0206102-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 03:29

Concentration Units: % Recovery File ID: 4L003148.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	82.0	40 – 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-9S-Q2-02-18 Lab Sample ID: L0206102-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 03:29

Concentration Units: ug/L File ID: 4L003148.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.389	1.1	5.10	1	
2-Methylnaphthalene	0.361	1.1	11.0	1	
Acenaphthene	0.446	1.1	0.446	1	ND
Acenaphthylene	0.377	1.1	0.377	1	ND
Anthracene	0.306	1.1	0.306	1	ND
Benzo(a)anthracene	0.0300	0.20	0.0300	1	ND
Benzo(a)pyrene	0.0530	0.20	0.0530	1	ND
Benzo(b)fluoranthene	0.0340	0.20	0.0340	1	ND
Benzo(g,h,i)perylene	0.0500	0.20	0.0500	1	ND
Benzo(k)fluoranthene	0.0720	0.20	0.0720	1	ND
Chrysene	0.0240	0.20	0.0240	1	ND
Dibenzo(a,h)anthracene	0.0770	0.20	0.0770	1	ND
Fluoranthene	0.0500	0.20	0.0500	1	ND
Fluorene	0.601	1.1	0.601	1	ND
Indeno(1,2,3-cd)pyrene	0.0800	0.20	0.0800	1	ND
Naphthalene	0.386	1.1	46.0	1	
Phenanthrene	0.309	1.1	0.309	1	ND
Pyrene	0.0731	0.22	0.0731	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-9S-Q2-02-18 Lab Sample ID: L0206102-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 03:29

Concentration Units: % Recovery File ID: 4L003148.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	81.7	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9DUP-Q2-02-18 Lab Sample ID: L0206102-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 04:25

Concentration Units: ug/L File ID: 4L003149.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.362	1.0	5.30	1	
2-Methylnaphthalene	0.336	1.0	9.00	1	
Acenaphthene	0.415	1.0	0.415	1	ND
Acenaphthylene	0.351	1.0	0.351	1	ND
Anthracene	0.285	1.0	0.285	1	ND
Benzo(a)anthracene	0.0300	0.20	0.0300	1	ND
Benzo(a)pyrene	0.0530	0.20	0.0530	1	ND
Benzo(b)fluoranthene	0.0340	0.20	0.0340	1	ND
Benzo(g,h,i)perylene	0.0500	0.20	0.0500	1	ND
Benzo(k)fluoranthene	0.0720	0.20	0.0720	1	ND
Chrysene	0.0240	0.20	0.0240	1	ND
Dibenzo(a,h)anthracene	0.0770	0.20	0.0770	1	ND
Fluoranthene	0.0500	0.20	0.0500	1	ND
Fluorene	0.559	1.0	0.559	1	ND
Indeno(1,2,3-cd)pyrene	0.0800	0.20	0.0800	1	ND
Naphthalene	0.359	1.0	42.0	1	
Phenanthrene	0.287	1.0	0.287	1	ND
Pyrene	0.0680	0.20	0.0680	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9DUP-Q2-02-18 Lab Sample ID: L0206102-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 04:25

Concentration Units: % Recovery File ID: 4L003149.F

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	72.4	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9DUP-Q2-02-18 Lab Sample ID: L0206102-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 04:25

Concentration Units: ug/L File ID: 4L003149.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.362	1.0	5.00	1	
2-Methylnaphthalene	0.336	1.0	10.0	1	
Acenaphthene	0.415	1.0	0.415	1	ND
Acenaphthylene	0.351	1.0	0.351	1	ND
Anthracene	0.285	1.0	0.285	1	ND
Benzo(a)anthracene	0.0300	0.20	0.0300	1	ND
Benzo(a)pyrene	0.0530	0.20	0.0530	1	ND
Benzo(b)fluoranthene	0.0340	0.20	0.0340	1	ND
Benzo(g,h,i)perylene	0.0500	0.20	0.0500	1	ND
Benzo(k)fluoranthene	0.0720	0.20	0.0720	1	ND
Chrysene	0.0240	0.20	0.0240	1	ND
Dibenzo(a,h)anthracene	0.0770	0.20	0.0770	1	ND
Fluoranthene	0.0500	0.20	0.0500	1	ND
Fluorene	0.559	1.0	0.559	1	ND
Indeno(1,2,3-cd)pyrene	0.0800	0.20	0.0800	1	ND
Naphthalene	0.359	1.0	44.0	1	
Phenanthrene	0.287	1.0	0.287	1	ND
Pyrene	0.0680	0.20	0.0680	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9DUP-Q2-02-18 Lab Sample ID: L0206102-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 04:25

Concentration Units: % Recovery File ID: 4L003149.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	71.7	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9EQB-Q2-02-18 Lab Sample ID: L0206102-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 05:22

Concentration Units: ug/L File ID: 4L003150.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier
1-Methylnaphthalene	0.389	1.1	0.389	1	ND
2-Methylnaphthalene	0.361	1.1	0.361	1	ND
Acenaphthene	0.415	1.0	0.415	1	ND
Acenaphthylene	0.351	1.0	0.351	1	ND
Anthracene	0.306	1.1	0.306	1	ND
Benzo(a)anthracene	0.0300	0.20	0.0300	1	ND
Benzo(a)pyrene	0.0530	0.20	0.0530	1	ND
Benzo(b)fluoranthene	0.0340	0.20	0.0340	1	ND
Benzo(g,h,i)perylene	0.0500	0.20	0.0500	1	ND
Benzo(k)fluoranthene	0.0720	0.20	0.0720	1	ND
Chrysene	0.0240	0.20	0.0240	1	ND
Dibenzo(a,h)anthracene	0.0770	0.20	0.0770	1	ND
Fluoranthene	0.0500	0.20	0.0500	1	ND
Fluorene	0.601	1.1	0.601	1	ND
Indeno(1,2,3-cd)pyrene	0.0800	0.20	0.0800	1	ND
Naphthalene	0.386	1.1	0.386	1	ND
Phenanthrene	0.309	1.1	0.309	1	ND
Pyrene	0.0680	0.20	0.0680	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG119449

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9EQB-Q2-02-18 Lab Sample ID: L0206102-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 13-JUN-2002

Date Received: 06-JUN-02 Date Extracted: 06-JUN-02 Date Analyzed: 15-JUN-02 05:22

Concentration Units: % Recovery File ID: 4L003150.R

Analyte	MDL	RL	Concentration	Dilution	Qualifier

Surrogate	Recovery	Control Limits	Qualifier
p-terphenyl-d14	92.8	40 - 132	

Internal Std	Qualifier

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES
ANALYSES DATA PACKAGE

Analytical Method : 9056
Lab Name : Kemron Environmental Services
Base/Command : NAS Cecil Field Jacksonville (

AAB # : WG119311
Contract # : Colleen Kurtz
Prime Contractor : CCI

Field sample ID		Lab Sample ID
062-CEF9-2S-Q2-02-18		L0206102-01
062-CEF9-3S-Q2-02-18		L0206102-02
062-CEF9-5S-Q2-02-18		L0206102-03
062-CEF9-7D-Q2-02-18	RS01	L0206102-04
062-CEF9-7D-Q2-02-18	MS01	L0206102-05
062-CEF9-7D-Q2-02-18	SD01	L0206102-06
062-CEF9-9S-Q2-02-18		L0206102-07
062-9DUP-Q2-02-18		L0206102-08
062-9EQB-Q2-02-18		L0206102-09

Comments:
RS=Parent Sample, MS or SS=Matrix Spike, SD=Spike Duplicate, DS=Duplicate Sample.
Suffix Matches parent to QC

I certify this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: David L. Bumgarner
Name: David L. Bumgarner
Date: 09-JUL-02
Title: Laboratory Director

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG119311

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-2S-Q2-02-18 Lab Sample ID: L0206102-01 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 21-MAY-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 14:26

Concentration Units: mg/L File ID: 060602.14

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Nitrate	0.0670	0.60	0.0670	1	ND
Nitrite	0.0610	0.40	0.0610	1	ND
Phosphate	0.163	1.0	0.163	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG119311

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-3S-Q2-02-18 Lab Sample ID: L0206102-02 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 21-MAY-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 14:38

Concentration Units: mg/L File ID: 060602.15

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Nitrate	0.0670	0.60	0.110	1	J
Nitrite	0.0610	0.40	0.0610	1	ND
Phosphate	0.163	1.0	0.163	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG119311

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-5S-Q2-02-18 Lab Sample ID: L0206102-03 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 21-MAY-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 14:49

Concentration Units: mg/L File ID: 060602.16

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Nitrate	0.0670	0.60	1.50	1	
Nitrite	0.0610	0.40	0.0960	1	J
Phosphate	0.163	1.0	0.163	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG119311

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-04 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 21-MAY-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 15:01

Concentration Units: mg/L File ID: 060602.17

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Nitrate	0.0670	0.60	0.0670	1	ND
Nitrite	0.0610	0.40	0.0610	1	ND
Phosphate	0.163	1.0	0.163	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG119311

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-02-18 Lab Sample ID: L0206102-05 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 21-MAY-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 15:12

Concentration Units: mg/L File ID: 060602.18

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Nitrate	0.0670	0.60	4.20	1	
Nitrite	0.0610	0.40	3.80	1	
Phosphate	0.163	1.0	11.0	1	

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG119311

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-7D-Q2-Q2-18 Lab Sample ID: L0206102-06 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 21-MAY-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 15:24

Concentration Units: mg/L File ID: 060602.19

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Nitrate	0.0670	0.60	4.10	1	
Nitrite	0.0610	0.40	3.80	1	
Phosphate	0.163	1.0	11.0	1	

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG119311

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-CEF9-9S-Q2-02-18 Lab Sample ID: L0206102-07 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 21-MAY-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 15:35

Concentration Units: mg/L File ID: 060602.20

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Nitrate	0.0670	0.60	0.0890	1	J
Nitrite	0.0610	0.40	0.0610	1	ND
Phosphate	0.163	1.0	0.163	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG119311

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9DUP-Q2-02-18 Lab Sample ID: L0206102-08 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 21-MAY-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 16:01

Concentration Units: mg/L File ID: 060602.22

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Nitrate	0.0670	0.60	0.0670	1	ND
Nitrite	0.0610	0.40	0.0610	1	ND
Phosphate	0.163	1.0	0.163	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG119311

Lab Name : Kemron Environmental Services Contract#: Colleen Kurtz

Field Sample ID: 062-9EQB-02-02-18 Lab Sample ID: L0206102-09 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 21-MAY-2002

Date Received: 06-JUN-02 Date Extracted: Date Analyzed: 06-JUN-02 16:12

Concentration Units: mg/L File ID: 060602.23

Analyte	MDL	RL	Concentration	Dilution	Qualifier
Nitrate	0.0670	0.60	0.0670	1	ND
Nitrite	0.0610	0.40	0.0610	1	ND
Phosphate	0.163	1.0	0.163	1	ND

Comments:

All results, MDLs, and RLs have been corrected to dry weight, where applicable.

Page 1 of 1

1.2 Attachments

KEMRON ANALYST LIST

Ohio Valley Laboratory

06/17/2002

AJF - AMANDA J. FICKIESEN
ALT - ANN L. THAYER
ARS - ANGELINA R. SCOTT
BRG - BRENDA R. GREGORY
CAF - CHERYL A. FLOWERS
CAK - CHERYL A. KOELSCH
CBN - CHARLES B. NOLL
CEB - CHAD E. BARNES
CLC - CHRYS L. CRAWFORD
CLK - CARL L. KING
CLW - CHARISSA L. WINTERS
CMS - CRYSTAL M. STEVENS
CRC - CARLA R. COCHRAN
CSH - CHRIS S. HILL
DAD - DAVE A. DAULEY
DAH - DON A. HUNTER
DAM - DAN A. MUSGRAVE
DAS - DALLAS A. SULLIVAN
DAT - DEBBIE A. TORNES
DEL - DON E. LIGHTFRITZ
DEV - DAVID E. VANDENBERG
DGB - DOUGLAS G. BUTCHER
DIH - DEANNA I. HESSON
DLA - DENISE L. ADAMS
DLB - DAVID L. BUMGARNER
DLN - DEANNA L. NORTON
DLP - DOROTHY L. PAYNE
DLR - DIANNA L. RAUCH
DP - DEANNA L. PIERSON
DRB - DOUG R. BARNETT
DSM - DAVID S. MOSSOR
DST - DENNIS S. TEPE
ECL - ERIC C. LAWSON
GSG - GALEN S. GEORGE
HV - HEMA VILASAGAR
JAL - JOHN A. LENT
JJG - JAKE J. GREUEY
JKW - JANE K. WARDEN
JLS - JANICE L. SCHIMMEL
JMM - JARROD M. MARTIN
JMT - JOY M. THOMAS
JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES
JYH - JI Y. HU
KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON
LKN - LINDA K. NEDEFF
LRR - LUCYNDA R. ROBERTS
LSA - LUCINDA S. ARNOLD
LSB - LESLIE S. BUCINA
MDA - MICHAEL D. ALBERTSON
MDC - MICHAEL D. COCHRAN
MEF - MIKE E. FLANAGAN
MES - MARY E. SCHILLING
MKZ - MARILYN K. ZUMBRO
MLR - MARY L. ROCHOTTE
MLS - MICHAEL L. SCHIMMEL
MMB - MAREN M. BEERY
MSW - MATT S. WILSON
NJB - NATALIE J. BOOTH
OGT - OKEY G. TUCKER
RDC - REBECCA D. CUTLIP
REF - RON E. FERTILE
REK - ROBERT E. KYER
RJW - RHONDA J. WITTEKIND
RLW - RON L. WATSON
RSS - REGINA S. SIMMONS
RWC - ROD W. CAMPBELL
SJK - SINDY J. KINNEY
SLP - SHERI L. PFALZGRAF
SLT - STEPHANIE L. TEPE
SMW - SHAUNA M. WELCH
SMW - SHARON M. WASHBURN
SPL - STEVE P. LEARN
TJH - TIM J. HOEFLICH
TMM - TAMMY M. MORRIS
VC - VICKI COLLIER
VKL - VICKY K. LAUER

KEMRON Environmental Services, Inc
List of Valid Qualifiers
December 15, 2000

Standard Qualifiers

These are KEMRON's Standard Report Qualifiers

A	See the report narrative
B	Present in the method blank
C	Confirmed by GC/MS
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met
N	Tentatively Identified Compound (TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration >40% difference between The two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Re analysis confirms reported results
RE	Re analysis confirms sample matrix Interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out Of control limits
Z	Can not be resolved from isomer.***
+	Correlation coefficient for the MSA is less Than 0.995
<	Less than
>	Greater than
*	Surrogate or spike compound out of range

***** Special Notes for Organic Analytes**

1. Acrolein and acrylonitrile by method 624 are semiquantative screens only
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene
3. N-nitrosodiphenylamine cannot be separated from diphenylamine
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds
5. m-Xylene and p-Xylene are unresolvable compounds
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent

AFCEE Qualifiers

These are KEMRON's AFCEE Report Qualifiers

J	The analyte was positively identified, the quantitation is an estimation
U	The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL
F	The analyte was positively identified but the associated numerical value is below the RL
R	The data is unusable due to deficiencies in the ability to analyze the sample and meet QC criteria
B	The analyte was found in an associated blank, as well as in the sample
M	The matrix effect was present
S	To be applied to all field screening data
T	Tentatively identified compound (using GC/MS)

115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No (770) 604-9182 ; Fax No (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER
163151-047

PROJECT NAME:	PROJECT NUMBER:	LAB NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 1 (Name and Company)	RECIPIENT 1 (Address, Tel No. , and Fax No.):
N.A.S. Cecil Field Building 9	163151	Stephanie Tepe Kemron Environmental Services	Bill Canelos J.A Jones Env. Services	6219 Authority Road, Jacksonville, FL 32221 PH: (904) 7774812 FAX: (904) 7774262
PROJECT PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 2 (Name and Company)	RECIPIENT 2 (Address, Tel No. , and Fax No.):
Building 9 Quarterly GW Sampling Event	0062	3868	Christelle Newsome CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 PH:(770)604-9182 Ext.561 FAX:604-9282
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Bill Canelos	Phone: 904-777-4812 Fax:904-777-4262	Phone: 740-373-4071 Fax: 740-373-4835		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on back)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on back)	TAT (calendar days)	BTEX by 8021B	Naphthalene & 15 Metlnd Listed PAHs by 8310	TRPH by FL-PRO	NO2 NO3 PO4 by EPA Method 300.0					SAMPLE TYPE (see codes on back)	COMMENTS/ SCREENING READINGS	LAB ID
1	062-CEF9-2S-Q2-02-18	CEF-9-2S	W	06/05/02	13:05	III/C	14	2	2	2	1					Grab	Turbid	
2	062-CEF9-3S-Q2-02-18	CEF-9-3S	W	06/05/02	13:25	III/C	14	2	2	2	1					Grab		
3	062-CEF9-5S-Q2-02-18	CEF-9-5S	W	06/05/02	15:40	III/C	14	2	2	2	1					Grab		
4	062-CEF9-7D-Q2-02-18	CEF-9-7D	W	06/05/02	14:10	III/C	14	6	6	6	3					Grab	(MS/MSD)	
5	062-CEF9-9S-Q2-02-18	CEF-9-9S	W	06/05/02	15:05	III/C	14	2	2	2	1					Grab		
6	062-9DUP-Q2-02-18	Duplicate	W	06/05/02	NA	III/C	14	2	2	2	1					Grab		
7	062-9EQB-Q2-02-18	Equipment Blank	W	06/05/02	13:35	III/C	14	2	2	2	1					Grab		
8	062-9TB-Q2-02-18	Trip Blank	W	NA	NA	III/C	14	2									Prepared by Lab	
9	NA	Temperature Blank	W	NA	NA	III/C	14					5					Prepared by Lab	
10																		

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:
Randy Dumaop / Sean Smith J.A. Jones Environmental Services	Federal Express Track No's.790441077455, 790441077503, 790538555016, 790538555049, 790441077710. (5 Coolers)

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	6/5/02	18:00	Federal Express	6/5/02	18:00
Printed Name and Signature:			Printed Name and Signature:		
			SHAUNA WELCH Shauna Welch	6/6/02	1001

Distribution: [ ] **Original** - Laboratory (To be returned with Analytical Report); [ ] **Copy 1** - Project File; [ ] **Copy 2** - PMO

Form CCI001, Rev 02/00

CH2M Hill Constructors, Inc.
115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No (770) 604-9182 ; Fax No (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER
163151-047

PROJECT NAME:	PROJECT NUMBER:	LAB NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 1 (Name and Company)	RECIPIENT 1 (Address, Tel No. , and Fax No.):
N.A.S. Cecil Field Building 9	163151	Stephanie Tepe Kemron Environmental Services	Bill Canelos J.A Jones Env. Services	6219 Authority Road, Jacksonville, FL 32221 PH: (904) 7774812 FAX: (904) 7774262
PROJECT PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 2 (Name and Company)	RECIPIENT 2 (Address, Tel No. , and Fax No.):
Building 9 Quarterly GW Sampling Event	0062	3868	Christelle Newsome CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 PH:(770)604-9182 Ext.561 FAX:604-9282
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Bill Canelos	Phone: 904-777-4812 Fax:904-777-4262	Phone: 740-373-4071 Fax: 740-373-4835		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on back)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on back)	TAT (calendar days)	BTEX by 8021B	Naphthalene & 15 Methd Listed PAHs by 8310	TRPH by FL-PRO	NO2 NO3 PO4 by EPA Method 300.0					SAMPLE TYPE (see codes on back)	COMMENTS/ SCREENING READINGS	LAB ID
1	062-CEF9-2S-Q2-02-18	CEF-9-2S	W	06/05/02	13:05	III/C	14	2	2	2	1					Grab	Turbid	
2	062-CEF9-3S-Q2-02-18	CEF-9-3S	W	06/05/02	13:25	III/C	14	2	2	2	1					Grab		
3	062-CEF9-5S-Q2-02-18	CEF-9-5S	W	06/05/02	15:40	III/C	14	2	2	2	1					Grab		
4	062-CEF9-7D-Q2-02-18	CEF-9-7D	W	06/05/02	14:10	III/C	14	6	6	6	3					Grab	(MS/MSD)	
5	062-CEF9-9S-Q2-02-18	CEF-9-9S	W	06/05/02	15:05	III/C	14	2	2	2	1					Grab		
6	062-9DUP-Q2-02-18	Duplicate	W	06/05/02	NA	III/C	14	2	2	2	1					Grab		
7	062-9EQB-Q2-02-18	Equipment Blank	W	06/05/02	13:35	III/C	14	2	2	2	1					Grab		
8	062-9TB-Q2-02-18	Trip Blank	W	NA	NA	III/C	14	2									Prepared by Lab	
9	NA	Temperature Blank	W	NA	NA	III/C	14					5					Prepared by Lab	
10																		

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:
Randy Dumaop / Sean Smith J.A. Jones Environmental Services	Federal Express Track No's.790441077455, 790441077503, 790538555016, 790538555049, 790441077710. (5 Coolers)

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	6/5/02	18:00	Federal Express	6/5/02	18:00
Printed Name and Signature:			Printed Name and Signature:		

Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PMO

Form CCI001, Rev 02/00

CH2M Hill Constructors, Inc.
115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No (770) 604-9182 ; Fax No (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER
163151-047

PROJECT NAME:	PROJECT NUMBER:	LAB NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 1 (Name and Company)	RECIPIENT 1 (Address, Tel No. , and Fax No.):
N.A.S. Cecil Field Building 9	163151	Stephanie Tepe Kemron Environmental Services	Bill Canelos J.A Jones Env. Services	6219 Authority Road, Jacksonville, FL 32221 PH: (904) 7774812 FAX: (904) 7774262
PROJECT PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 2 (Name and Company)	RECIPIENT 2 (Address, Tel No. , and Fax No.):
Building 9 Quarterly GW Sampling Event	0062	3868	Christelle Newsome CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 PH:(770)604-9182 Ext.561 FAX:604-9282
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Bill Canelos	Phone: 904-777-4812 Fax:904-777-4262	Phone: 740-373-4071 Fax: 740-373-4835		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on back)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on back)	TAT (calendar days)	BTEX by 8021B	Naphthalene & 15 Methd Listed PAHs by 8310	TRPH by FL-PRO	NO2 NO3 PO4 by EPA Method 300.0					SAMPLE TYPE (see codes on back)	COMMENTS/ SCREENING READINGS	LAB ID
1	062-CEF9-2S-Q2-02-18	CEF-9-2S	W	06/05/02	13:05	III/C	14	2	2	2	1					Grab	Turbid	
2	062-CEF9-3S-Q2-02-18	CEF-9-3S	W	06/05/02	13:25	III/C	14	2	2	2	1					Grab		
3	062-CEF9-5S-Q2-02-18	CEF-9-5S	W	06/05/02	15:40	III/C	14	2	2	2	1					Grab		
4	062-CEF9-7D-Q2-02-18	CEF-9-7D	W	06/05/02	14:10	III/C	14	6	6	6	3					Grab	(MS/MSD)	
5	062-CEF9-9S-Q2-02-18	CEF-9-9S	W	06/05/02	15:05	III/C	14	2	2	2	1					Grab		
6	062-9DUP-Q2-02-18	Duplicate	W	06/05/02	NA	III/C	14	2	2	2	1					Grab		
7	062-9EQB-Q2-02-18	Equipment Blank	W	06/05/02	13:35	III/C	14	2	2	2	1					Grab		
8	062-9TB-Q2-02-18	Trip Blank	W	NA	NA	III/C	14	2									Prepared by Lab	
9	NA	Temperature Blank	W	NA	NA	III/C	14					5					Prepared by Lab	
10																		

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:
Randy Dumaop / Sean Smith J.A. Jones Environmental Services	Federal Express Track No's.790441077455, 790441077503, 790538555016, 790538555049, 790441077710. (5 Coolers)

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	6/5/02	18:00	Federal Express	6/5/02	18:00
Printed Name and Signature:			Printed Name and Signature:		

Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PMO

Form CCI001, Rev 02/00

CH2M Hill Constructors, Inc.
115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No (770) 604-9182 ; Fax No (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER
163151-047

PROJECT NAME:	PROJECT NUMBER:	LAB NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 1 (Name and Company)	RECIPIENT 1 (Address, Tel No. , and Fax No.):
N.A.S. Cecil Field Building 9	163151	Stephanie Tepe Kemron Environmental Services	Bill Canelos J.A Jones Env. Services	6219 Authority Road, Jacksonville, FL 32221 PH: (904) 7774812 FAX: (904) 7774262
PROJECT PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 2 (Name and Company)	RECIPIENT 2 (Address, Tel No. , and Fax No.):
Building 9 Quarterly GW Sampling Event	0062	3868	Christelle Newsome CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 PH:(770)604-9182 Ext.561 FAX:604-9282
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Bill Canelos	Phone: 904-777-4812 Fax:904-777-4262	Phone: 740-373-4071 Fax: 740-373-4835		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on back)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on back)	TAT (calendar days)	BTEX by 8021B	Naphthalene & 15 Methd Listed PAHs by 8310	TRPH by FL-PRO	NO2 NO3 PO4 by EPA Method 300.0					SAMPLE TYPE (see codes on back)	COMMENTS/ SCREENING READINGS	LAB ID
1	062-CEF9-2S-Q2-02-18	CEF-9-2S	W	06/05/02	13:05	III/C	14	2	2	2	1					Grab	Turbid	
2	062-CEF9-3S-Q2-02-18	CEF-9-3S	W	06/05/02	13:25	III/C	14	2	2	2	1					Grab		
3	062-CEF9-5S-Q2-02-18	CEF-9-5S	W	06/05/02	15:40	III/C	14	2	2	2	1					Grab		
4	062-CEF9-7D-Q2-02-18	CEF-9-7D	W	06/05/02	14:10	III/C	14	6	6	6	3					Grab	(MS/MSD)	
5	062-CEF9-9S-Q2-02-18	CEF-9-9S	W	06/05/02	15:05	III/C	14	2	2	2	1					Grab		
6	062-9DUP-Q2-02-18	Duplicate	W	06/05/02	NA	III/C	14	2	2	2	1					Grab		
7	062-9EQB-Q2-02-18	Equipment Blank	W	06/05/02	13:35	III/C	14	2	2	2	1					Grab		
8	062-9TB-Q2-02-18	Trip Blank	W	NA	NA	III/C	14	2									Prepared by Lab	
9	NA	Temperature Blank	W	NA	NA	III/C	14					5					Prepared by Lab	
10																		

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:
Randy Dumaop / Sean Smith J.A. Jones Environmental Services	Federal Express Track No's.790441077455, 790441077503, 790538555016, 790538555049, 790441077710. (5 Coolers)

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	6/5/02	18:00	Federal Express	6/5/02	18:00
Printed Name and Signature:			Printed Name and Signature:		

Distribution: [ ] **Original** - Laboratory (To be returned with Analytical Report); [ ] **Copy 1** - Project File; [ ] **Copy 2** - PMO

Form CCI001, Rev 02/00

CH2M Hill Constructors, Inc.
115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No (770) 604-9182 ; Fax No (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER
163151-047

PROJECT NAME:	PROJECT NUMBER:	LAB NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 1 (Name and Company)	RECIPIENT 1 (Address, Tel No. , and Fax No.):
N.A.S. Cecil Field Building 9	163151	Stephanie Tepe Kemron Environmental Services	Bill Canelos J.A Jones Env. Services	6219 Authority Road, Jacksonville, FL 32221 PH: (904) 7774812 FAX: (904) 7774262
PROJECT PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 2 (Name and Company)	RECIPIENT 2 (Address, Tel No. , and Fax No.):
Building 9 Quarterly GW Sampling Event	0062	3868	Christelle Newsome CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 PH:(770)604-9182 Ext.561 FAX:604-9282
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Bill Canelos	Phone: 904-777-4812 Fax:904-777-4262	Phone: 740-373-4071 Fax: 740-373-4835		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on back)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on back)	TAT (calendar days)	BTEX by 8021B	Naphthalene & 15 Methd Listed PAHs by 8310	TRPH by FL-PRO	NO2 NO3 PO4 by EPA Method 300.0					SAMPLE TYPE (see codes on back)	COMMENTS/ SCREENING READINGS	LAB ID
1	062-CEF9-2S-Q2-02-18	CEF-9-2S	W	06/05/02	13:05	III/C	14	2	2	2	1					Grab	Turbid	
2	062-CEF9-3S-Q2-02-18	CEF-9-3S	W	06/05/02	13:25	III/C	14	2	2	2	1					Grab		
3	062-CEF9-5S-Q2-02-18	CEF-9-5S	W	06/05/02	15:40	III/C	14	2	2	2	1					Grab		
4	062-CEF9-7D-Q2-02-18	CEF-9-7D	W	06/05/02	14:10	III/C	14	6	6	6	3					Grab	(MS/MSD)	
5	062-CEF9-9S-Q2-02-18	CEF-9-9S	W	06/05/02	15:05	III/C	14	2	2	2	1					Grab		
6	062-9DUP-Q2-02-18	Duplicate	W	06/05/02	NA	III/C	14	2	2	2	1					Grab		
7	062-9EQB-Q2-02-18	Equipment Blank	W	06/05/02	13:35	III/C	14	2	2	2	1					Grab		
8	062-9TB-Q2-02-18	Trip Blank	W	NA	NA	III/C	14	2									Prepared by Lab	
9	NA	Temperature Blank	W	NA	NA	III/C	14					5					Prepared by Lab	
10																		

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:
Randy Dumaop / Sean Smith J.A. Jones Environmental Services	Federal Express Track No's.790441077455, 790441077503, 790538555016, 790538555049, 790441077710. (5 Coolers)

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	6/5/02	18:00	Federal Express	6/5/02	18:00
Printed Name and Signature:			Printed Name and Signature:		

Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PMO

Form CCI001, Rev 02/00

KEMRON Internal Laboratory Chain of Custody

Work Order: 06-102 **Client:** CC1 **# of Samples:** 10 **Due Date:** 06-13-02 **Page:** ____

Sample #	Analysis	Reason	Removed By ADT	Removed From	Moved To	Reliq. by	Ret'd By ADT	Ret'd To	Rec'd By	Reason
1-9	9056	Analysis	SVR 6/6/02 1150	Log In	HPLC	BLG	RJC 6/25/02 @0700	Arch	SMW	Arch.
1-9A	8310	EXT	CEB 6/6/02 1313	WALKIN	ELAB	BLG	AJF 6/7/02 @0700	crusher	PM	disposal
1-10	BTEX	ANALYSIS	CBN 6/6/02 @1450	V-1	ORG-3	BLG	SMW 6/25/02 @1100	ARCH2	SMW	ARCH2
1-9A	PFO	EXT	CEB 6/6/02 @1553	WALKIN	ELAB	BLG	AJF 6/7/02 @0700	crusher	PM	disposal

KEMRON Environmental Services | **SAMPLES RECEIPT FORM** | Marietta Laboratory

CLIENT: ICI BRG / Other _____	DATE: 6/6/02	SHIPPED BY: (✓) FED-EX ( ) AIRBORNE ( ) UPS ( ) EMERY ( ) RPS ( ) US MAIL ( ) KEMRON ( ) CLIENT

COOLER ID: KL1049	COOLER ID: KL889	COOLER ID: KL845
INDEX # : 79044107 7455	INDEX # : 79053855 5016	INDEX # : 79044107 7710
SEALED (✓) YES ( ) NO	SEALED (✓) YES ( ) NO	SEALED (✓) YES ( ) NO
CUSTODY (✓) YES ( ) NO	CUSTODY (✓) YES ( ) NO	CUSTODY (✓) YES ( ) NO
TEMP : (D) (E) 1 °C	TEMP : (D) (E) 0 °C	TEMP : (D) (E) 1 °C
TEMP IN RANGE (4°C ± 2°) ( ) YES (✓) NO	TEMP IN RANGE (4°C ± 2°) ( ) YES (✓) NO	TEMP IN RANGE (4°C ± 2°) ( ) YES (✓) NO
WET ICE (✓) BLUE ICE ( )	WET ICE (✓) BLUE ICE ( )	WET ICE (✓) BLUE ICE ( )
ICE FROZEN (✓) MELTED ( )	ICE FROZEN (✓) MELTED ( )	ICE FROZEN (✓) MELTED ( )
RADIATION CHECKED (✓) YES ( ) NO	RADIATION CHECKED (✓) YES ( ) NO	RADIATION CHECKED (✓) YES ( ) NO
SAMPLE INTACT ( ) YES ( ) NO SALVAGEBLE ( ) YES ( ) NO	SAMPLE INTACT (✓) YES ( ) NO SALVAGEBLE ( ) YES ( ) NO	SAMPLE INTACT (✓) YES ( ) NO SALVAGEBLE ( ) YES ( ) NO
SAMPLE TYPE: WATER (✓) SOIL ( ) OTHER ( )	SAMPLE TYPE: WATER (✓) SOIL ( ) OTHER ( )	SAMPLE TYPE: WATER (✓) SOIL ( ) OTHER ( )
LABELS: INTACT (✓) YES ( ) NO LEGIBLE (✓) YES ( ) NO MATCH COC (✓) YES ( ) NO	LABELS: INTACT (✓) YES ( ) NO LEGIBLE (✓) YES ( ) NO MATCH COC (✓) YES ( ) NO	LABELS: INTACT (✓) YES ( ) NO LEGIBLE (✓) YES ( ) NO MATCH COC (✓) YES ( ) NO
pH IN RANGE (2 - >9 - >12) AS APPROPRIATE (✓) YES ( ) NO	pH IN RANGE (2 - >9 - >12) AS APPROPRIATE (✓) YES ( ) NO	pH IN RANGE (2 - >9 - >12) AS APPROPRIATE (✓) YES ( ) NO
SAMPLES FROZEN? ( ) YES (✓) NO	SAMPLES FROZEN? ( ) YES (✓) NO	SAMPLES FROZEN? ( ) YES (✓) NO
LOG-IN COMMENTS 1410	LOG-IN COMMENTS 1335	LOG-IN COMMENTS
1410 (MS/SD)	1410 (MS/SD)	1505
		1540

TSR COMMENTS

CONTACT:	DATE:	TIME:

COMMENTS: ( ) VOICE ( ) FAX ( ) E-MAIL

KEMRON Environmental Services | **SAMPLES RECEIPT FORM** | **Marietta Laboratory**

CLIENT: CCI ~~BRG~~ Other _____	**DATE:** 6/6/02	**SHIPPED BY:** (✓) FED-EX ( ) AIRBORNE ( ) UPS ( ) EMERY ( ) RPS ( ) US MAIL ( ) KEMRON ( ) CLIENT

COOLER ID: KL1053	**COOLER ID:** KL273	**COOLER ID:**
INDEX # : 790538555049	**INDEX # :** 790441077503	**INDEX # :**
SEALED (✓) YES ( ) NO	**SEALED** (✓) YES ( ) NO	**SEALED** ( ) YES ( ) NO
CUSTODY (✓) YES ( ) NO	**CUSTODY** (✓) YES ( ) NO	**CUSTODY** ( ) YES ( ) NO
TEMP : (D) (E) 1 °C	**TEMP :** (D) (E) 2 °C	**TEMP :** (D) (E) °C
TEMP IN RANGE (4°C ± 2°) ( ) YES (✓) NO	**TEMP IN RANGE** (4°C ± 2°) (✓) YES ( ) NO	**TEMP IN RANGE** (4°C ± 2°) ( ) YES ( ) NO
WET ICE (✓) **BLUE ICE** ( )	**WET ICE** (✓) **BLUE ICE** ( )	**WET ICE** ( ) **BLUE ICE** ( )
ICE FROZEN (✓) **MELTED** ( )	**ICE FROZEN** (✓) **MELTED** ( )	**ICE FROZEN** ( ) **MELTED** ( )
RADIATION CHECKED (✓) YES ( ) NO	**RADIATION CHECKED** (✓) YES ( ) NO	**RADIATION CHECKED** ( ) YES ( ) NO
SAMPLE INTACT (✓) YES ( ) NO **SALVAGEBLE** ( ) YES ( ) NO	**SAMPLE INTACT** (✓) YES ( ) NO **SALVAGEBLE** ( ) YES ( ) NO	**SAMPLE INTACT** ( ) YES ( ) NO **SALVAGEBLE** ( ) YES ( ) NO
SAMPLE TYPE: **WATER** (✓) **SOIL** ( ) **OTHER** ( )	**SAMPLE TYPE:** **WATER** (✓) **SOIL** ( ) **OTHER** ( )	**SAMPLE TYPE:** **WATER** ( ) **SOIL** ( ) **OTHER** ( )
LABELS: INTACT (✓) YES ( ) NO **LEGIBLE** (✓) YES ( ) NO **MATCH COC** (✓) YES ( ) NO	**LABELS: INTACT** (✓) YES ( ) NO **LEGIBLE** (✓) YES ( ) NO **MATCH COC** (✓) YES ( ) NO	**LABELS: INTACT** ( ) YES ( ) NO **LEGIBLE** ( ) YES ( ) NO **MATCH COC** ( ) YES ( ) NO
pH IN RANGE (2 - >9 - >12) AS APPROPRIATE (✓) YES ( ) NO	**pH IN RANGE (2 - >9 - >12) AS APPROPRIATE** (✓) YES ( ) NO	**pH IN RANGE (2 - >9 - >12) AS APPROPRIATE** ( ) YES ( ) NO
SAMPLES FROZEN? ( ) YES (✓) NO	**SAMPLES FROZEN?** ( ) YES (✓) NO	**SAMPLES FROZEN?** ( ) YES ( ) NO
LOG-IN COMMENTS 1305 1325	**LOG-IN COMMENTS** DUP VOS	**LOG-IN COMMENTS**

TSR COMMENTS

CONTACT:	**DATE:**	**TIME:**

COMMENTS: ( ) VOICE ( ) FAX ( ) E-MAIL

Contractor Cooler _____
MRD Cooler # _____
Number of Coolers 5

PROJECT: CCI 163157 LIMS# 06-102

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONERNING CHECK-IN PROBLEMS

A. **PRELIMINARY EXAMINATION PHASE:** Date cooler opened: 6/6/02 C-of-C Number: _____
by (print) Brenda Gregory (sign) Brenda Gregory

1. Did cooler come with a shipping slip (air bill, etc.)? ..... YES NO
   If YES, enter carrier name & air bill number here: _____
2. Were custody seals on outside of cooler? ..... YES NO
   How many & where? 1-front, seal date: 6/5/02 seal name: Kemron
3. Were custody seals unbroken and intact at the data and time of arrival? ..... YES NO
4. Did you screen samples for radioactivity using the Geiger Counter? ..... YES NO
5. Were custody papers sealed in a plastic bag & taped inside to the lid? ..... YES NO
6. Were custody papers filled out properly (ink, signed, etc.)? ..... YES NO
7. Did you sign custody papers in the appropriate place? ..... YES NO
8. Was project identifiable from custody papers? If yes, enter project name at the top of this form ..... YES NO
9. If required, was enough ice used? ..... Type of ice: Wet Temp 2 CR#3 °C ..... YES NO
10. Have designated person initial here to acknowledge receipt of cooler: BG (date) 6/6/02

B. **LOG-IN PHASE:** Date samples were logged-in: 06/06/02
by (print) SHAUNA WELCH (sign) Shauna Welch

11. Describe type of packing in cooler: ice, some bubble wrap
12. Were all bottles sealed in separate plastic bags? ..... YES NO
13. Did all bottles arrive unbroken & were labels in good condition? ..... YES NO
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? ..... YES NO
15. Did all bottle labels agree with custody papers? ..... YES NO
16. Were correct containers used for the tests indicated? ..... YES NO
17. Were correct preservatives added to samples? ..... YES NO
18. Was a sufficient amount of sample sent for tests indicated? ..... YES NO
19. Were bubbles absent in volatile samples? If NO, list by Sample # _____ YES NO
20. Was the project manager called and status discussed? If YES, give details on the back of this form ..... YES NO
21. Who was called? _____ By whom? _____ (date) _____

81

2.0 Full Sample Data Package

2.1 Volatiles Data

2.1.3 BTEX GC Data (8021)

REPORT NARRATIVE
GC VOLATILE ORGANICS - BETX

KEMRON Login No: L0206102

METHOD

Preparation: SW- 846 5030B
Analysis: SW-846 8021B

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Sample: All acceptance criteria were met.
Matrix Spikes: All acceptance criteria were met in the MS/MSD analyses of fraction 04.

SAMPLES

Surrogates: All acceptance criteria were met.
Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CSH REVIEWED: _____ DATE: 6/13/02

Rev. 6/00

BETX-GC DATA (8021)

Login Number: L0206102

A. QC Summary

✓ Batch QC Summary Form

B. Sample Data

NA Target Compound List results and surrogate recoveries - See section 1.0 (c) (laboratory report)

✓ Chromatogram and quantitation report for each sample analysis and re-analysis (if re-analyzed) (Numerical order)

C. Standards Data

✓ Initial calibration summary form (Average Response Factor Calibration Data) (Chronological)

✓ Chromatograms and quantitation reports for standards

✓ Calibration verification standards (Continuing Calibration Data) initial and ending checks, chromatograms and quantitation reports (chronological)

✓ Retention time window summary (if applicable)(chronological)

D. Raw QC Data

✓ Method Blank, chromatogram and quantitation report for each matrix type (chronological)

✓ Laboratory Control Sample, chromatogram and quantitation report for each matrix type (chronological)

✓ Matrix Spike/Matrix Spike Duplicate, chromatograms and quantitation reports (if not reported as samples) and of the same client batch (chronological)

✓ Instrument runlogs (chronological)

NA Extraction bench sheets (for mid-level methanol extractions) (chronological)

NA 5035 logs (if applicable) (chronological)

Checked By: C Brian Noll **Date:** 6/7/02

86

2.1.3.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES

METHOD BLANK SUMMARY

Login Number: L0206102
Blank File ID: 5G13652
Date Analyzed: 06/06/02
Time Analyzed: 10:22
Analyst: CSH

Work Group: WG119272
Blank Sample ID: WG119272-01
Instrument ID: HP5
Method: 8021B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG119272-02	5G13653	06/06/02 10:57	
062-CEF9-2S-Q2-02-18	L0206102-01	5G13656	06/06/02 12:50	
062-CEF9-3S-Q2-02-18	L0206102-02	5G13657	06/06/02 13:25	
062-CEF9-5S-Q2-02-18	L0206102-03	5G13658	06/06/02 14:00	
062-CEF9-7D-Q2-02-18	L0206102-04	5G13659	06/06/02 14:35	
062-CEF9-7D-Q2-02-18	L0206102-05	5G13660	06/06/02 15:11	
062-CEF9-7D-Q2-02-18	L0206102-06	5G13661	06/06/02 16:46	
062-CEF9-9S-Q2-02-18	L0206102-07	5G13663	06/06/02 17:56	
062-9DUP-Q2-02-18	L0206102-08	5G13664	06/06/02 18:30	
062-9EQB-Q2-02-18	L0206102-09	5G13665	06/06/02 19:05	
062-9TB-Q2-02-18	L0206102-10	5G13666	06/06/02 19:40	

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0206102 Run Date: 06/06/2002 Sample ID: WG119272-01
Instrument ID: HP5 Run Time: 10:22 Method: 8021B
File ID: 5G13652 Analyst: CSH Matrix: Water
Workgroup (AAB#): WG119272 Units: ug/L
Contract #: Cal ID: HP5-22-APR-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
MTBE	0.500	1.00	0.500	1.00	ND
Benzene	0.500	1.00	0.500	1.00	ND
Toluene	0.500	1.00	0.500	1.00	ND
Ethylbenzene	0.500	1.00	0.500	1.00	ND
Total xylenes	0.500	1.00	0.500	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
TFT	104	70 - 130	PASS

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0206102
Run Date: 06/06/2002
Sample ID: WG119272-02
Instrument ID: HP5
Run Time: 10:57
Method: 8021B
File ID: 5G13653
Analyst: CSH
Matrix: Water
Workgroup (AAB#): WG119272
Units: ug/L
Contract #:
Cal ID: HP5-22-APR-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
MTBE	20	21.5	107	41 - 161	
Benzene	20	21.6	108	80 - 122	
Toluene	20	21.6	108	80 - 124	
Ethylbenzene	20	21.5	107	80 - 125	
Total xylenes	60	60.5	101	80 - 121	

Surrogates	% Recovery	Surrogate Limits	Qualifier
TFT	104	70 - 130	PASS

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 06/06/2002
Version 1.3
Report generated

KEMRON ENVIRONMENTAL SERVICES
MS/MSD REPORT

Loginnum: L0206102 Cal ID: HP5-22-APR-2002 Worknum: WG119272
Instrument ID: HP5 Contract #: Method: 8021B
Parent ID: L0206102-04 File ID: 5G13659 Dil: 1 Matrix: Water
Sample ID: L0206102-05 MS File ID: 5G13660 Dil: 1 Units: ug/L
Sample ID: L0206102-06 MSD File ID: 5G13661 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Benzene	ND	20.0	21.8	109	20.0	21.0	105	3.62	80 - 122	24	
Ethylbenzene	ND	20.0	22.2	111	20.0	21.5	108	3.20	80 - 125	25	
Methyl tert-butyl ether	ND	20.0	19.7	98.5	20.0	20.1	101	1.91	41 - 161	73	
Toluene	ND	20.0	22.1	111	20.0	21.6	108	2.38	80 - 124	26	
Xylenes, Total	ND	60.0	62.5	104	60.0	60.6	101	3.05	80 - 121	24	

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8021B

AAB#: WG119272

Login Number: L0206102

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
062-9DUP-Q2-02-18	06/05/02	06/06/02	06/06/02	14	1.77	06/06/02	14	1.77	
062-9EQB-Q2-02-18	06/05/02	06/06/02	06/06/02	14	1.23	06/06/02	14	1.23	
062-9TB-Q2-02-18	06/05/02	06/06/02	06/06/02	14	1.82	06/06/02	14	1.82	
062-CEF9-2S-Q2-02-18	06/05/02	06/06/02	06/06/02	14	0.990	06/06/02	14	0.990	
062-CEF9-3S-Q2-02-18	06/05/02	06/06/02	06/06/02	14	1.00	06/06/02	14	1.00	
062-CEF9-5S-Q2-02-18	06/05/02	06/06/02	06/06/02	14	0.931	06/06/02	14	0.931	
062-CEF9-7D-Q2-02-18	06/05/02	06/06/02	06/06/02	14	1.02	06/06/02	14	1.02	
062-CEF9-7D-Q2-02-18	06/05/02	06/06/02	06/06/02	14	1.04	06/06/02	14	1.04	
062-CEF9-7D-Q2-02-18	06/05/02	06/06/02	06/06/02	14	1.11	06/06/02	14	1.11	
062-CEF9-9S-Q2-02-18	06/05/02	06/06/02	06/06/02	14	1.12	06/06/02	14	1.12	

* EXT = MISSED EXTRACTION HOLD TIME
*ANAL = MISSED ANALYITICAL HOLD TIME

SURROGATE STANDARDS

Login Number: L0206102
Instrument Id: HP5
Workgroup (AAB#): WG119272

Method: 8021
Matrix: WATER

Sample Number	Dilution	Tag	1
L0206102-01	1.00		106
L0206102-02	1.00		106
L0206102-03	1.00		104
L0206102-04	1.00		103
L0206102-05	1.00		98.6
L0206102-06	1.00		104
L0206102-07	1.00		114
L0206102-08	1.00		114
L0206102-09	1.00		104
L0206102-10	1.00		104
WG119272-01	1.00		104
WG119272-02	1.00		104

Surrogates	Surrogate Limits		
1 - a,a,a-Trifluorotoluene	70	-	130

Underline = Result out of surrogate limits

DL = surrogate diluted out

Login Number: L0206102

Analytical Method: 8021

Instrument ID: HP5

Analyst: CBN

Initial Calibration Date: 22-APR-02

Analyte		Summary			
		AVG RF	% RSD	R^2	Q
BROMOCHLOROBENZENE		46800	1.26		
1,2-DICHLOROBENZENE		37900	3.64		
1,4-DICHLOROBENZENE		47100	6.41		
1,3-DICHLOROBENZENE		43500	6.36		
P-BROMOFLUOROBENZENE		47800	3.15		
O-XYLENE		51600	5.42		
STYRENE		55500	6.63		
M-,P-XYLENE		52900	3.13		
ETHYLBENZENE		44200	2.65		
CHLOROBENZENE		54100	2.39		
TOLUENE		51100	2.86		
A,A,A-TRIFLUOROTOLUENE		17700	1.89		
BENZENE		56100	2.72		
METHYLTERT-BUTYL ETHER		10500	7.49		

= CC

* = SPCC

INITIAL CALIBRATION

Login Number: L0206102
Analytical Method: 8021
Instrument ID: HP5

Analyst: CBN
Initial Calibration Date: 22-APR-02

	Sample #	File #	Level
	WG116507-01	5G12946	1
Analyte	Conc	Response	RF
BROMOCHLOROBENZENE	3.0	137779	45930
1,2-DICHLOROBENZENE	1.0	35066	35070
1,4-DICHLOROBENZENE	1.0	40973	40970
1,3-DICHLOROBENZENE	1.0	37248	37250
P-BROMOFLUOROBENZENE	3.0	133330	44440
O-XYLENE	1.0	55799	55800
STYRENE	1.0	47957	47960
M-,P-XYLENE	2.0	108410	54200
ETHYLBENZENE	1.0	42551	42550
CHLOROBENZENE	1.0	51700	51700
TOLUENE	1.0	48925	48930
A,A,A-TRIFLUOROTOLUENE	3.0	51288	17100
BENZENE	1.0	56327	56330
METHYLTERT-BUTYL ETHER	1.0	11757	11760

INITIAL CALIBRATION

Login Number: L0206102
Analytical Method: 8021
Instrument ID: HP5

Analyst: CBN
Initial Calibration Date: 22-APR-02

Analyte	Sample #	File #	Level
	WG116507-02	5G12947	2
	Conc	Response	RF
BROMOCHLOROBENZENE	15.0	711170	47410
1,2-DICHLOROBENZENE	10.0	386329	38630
1,4-DICHLOROBENZENE	10.0	498740	49870
1,3-DICHLOROBENZENE	10.0	442610	44260
P-BROMOFLUOROBENZENE	15.0	723215	48210
O-XYLENE	10.0	537265	53730
STYRENE	10.0	565358	56540
M-,P-XYLENE	20.0	1088481	54420
ETHYLBENZENE	10.0	453901	45390
CHLOROBENZENE	10.0	551031	55100
TOLUENE	10.0	524199	52420
A,A,A-TRIFLUOROTOLUENE	15.0	272138	18140
BENZENE	10.0	579615	57960
METHYLTERT-BUTYL ETHER	10.0	108182	10820

INITIAL CALIBRATION

Login Number: L0206102
Analytical Method: 8021
Instrument ID: HP5

Analyst: CBN
Initial Calibration Date: 22-APR-02

Analyte	Sample #	File #	Level
	WG116507-03	5G12948	3
	Conc	Response	RF
BROMOCHLOROBENZENE	30.0	1406625	46890
1,2-DICHLOROBENZENE	20.0	779720	38990
1,4-DICHLOROBENZENE	20.0	990896	49540
1,3-DICHLOROBENZENE	20.0	890328	44520
P-BROMOFLUOROBENZENE	30.0	1437037	47900
O-XYLENE	20.0	1057926	52900
STYRENE	20.0	1145612	57280
M-,P-XYLENE	40.0	2170128	54250
ETHYLBENZENE	20.0	906551	45330
CHLOROBENZENE	20.0	1106539	55330
TOLUENE	20.0	1049846	52490
A,A,A-TRIFLUOROTOLUENE	30.0	537047	17900
BENZENE	20.0	1150225	57510
METHYLTERT-BUTYL ETHER	20.0	215108	10760

INITIAL CALIBRATION

Login Number: L0206102
Analytical Method: 8021
Instrument ID: HP5

Analyst: CBN
Initial Calibration Date: 22-APR-02

	Sample #	File #	Level
	WG116507-04	5G12949	4
Analyte	Conc	Response	RF
BROMOCHLOROBENZENE	45.0	2125866	47240
1,2-DICHLOROBENZENE	50.0	1932782	38660
1,4-DICHLOROBENZENE	50.0	2418650	48370
1,3-DICHLOROBENZENE	50.0	2229246	44580
P-BROMOFLUOROBENZENE	45.0	2192778	48730
O-XYLENE	50.0	2583852	51680
STYRENE	50.0	2897265	57950
M-,P-XYLENE	100.0	5356662	53570
ETHYLBENZENE	50.0	2242060	44840
CHLOROBENZENE	50.0	2731610	54630
TOLUENE	50.0	2608433	52170
A,A,A-TRIFLUOROTOLUENE	45.0	807512	17940
BENZENE	50.0	2843877	56880
METHYLTERT-BUTYL ETHER	50.0	523680	10470

INITIAL CALIBRATION

Login Number: L0206102

Analyst: CBN

Analytical Method: 8021

Initial Calibration Date: 22-APR-02

Instrument ID: HP5

	Sample #	File #	Level
	WG116507-05	5G12950	5
Analyte	Conc	Response	RF
BROMOCHLOROBENZENE	60.0	2845744	47430
1,2-DICHLOROBENZENE	100.0	3869496	38690
1,4-DICHLOROBENZENE	100.0	4785322	47850
1,3-DICHLOROBENZENE	100.0	4470416	44700
P-BROMOFLUOROBENZENE	60.0	2925355	48760
O-XYLENE	100.0	5004098	50040
STYRENE	100.0	5341161	53410
M-,P-XYLENE	200.0	10403552	52020
ETHYLBENZENE	100.0	4394325	43940
CHLOROBENZENE	100.0	5426734	54270
TOLUENE	100.0	5051424	50510
A,A,A-TRIFLUOROTOLUENE	60.0	1052975	17550
BENZENE	100.0	5501929	55020
METHYLTERT-BUTYL ETHER	100.0	1036822	10370

INITIAL CALIBRATION

Login Number: L0206102
Analytical Method: 8021
Instrument ID: HP5

Analyst: CBN
Initial Calibration Date: 22-APR-02

	Sample #	File #	Level
	WG116507-06	5G12951	6
Analyte	Conc	Response	RF
BROMOCHLOROBENZENE	75.0	3466056	46210
1,2-DICHLOROBENZENE	200.0	7443401	37220
1,4-DICHLOROBENZENE	200.0	9220416	46100
1,3-DICHLOROBENZENE	200.0	8798263	43990
P-BROMOFLUOROBENZENE	75.0	3619677	48260
O-XYLENE	200.0	9611978	48060
STYRENE	200.0	11339575	56700
M-,P-XYLENE	400.0	20020076	50050
ETHYLBENZENE	200.0	8552369	42760
CHLOROBENZENE	200.0	10606672	53030
TOLUENE	200.0	9901450	49510
A,A,A-TRIFLUOROTOLUENE	75.0	1333832	17780
BENZENE	200.0	10728979	53640
METHYLTERT-BUTYL ETHER	200.0	1862797	9314

INITIAL CALIBRATION

Login Number: L0206102

Analyst: CBN

Analytical Method: 8021

Initial Calibration Date: 22-APR-02

Instrument ID: HP5

Analyte	Sample #	File #	Level
	WG116507-07	5G12952	7
	Conc	Response	RF
BROMOCHLOROBENZENE	90.0	4198503	46650
1,2-DICHLOROBENZENE	300.0	11386255	37950
1,4-DICHLOROBENZENE	300.0	14010936	46700
1,3-DICHLOROBENZENE	300.0	13510483	45030
P-BROMOFLUOROBENZENE	90.0	4333947	48150
O-XYLENE	300.0	14625810	48750
STYRENE	300.0	17507932	58360
M-,P-XYLENE	600.0	31047355	51750
ETHYLBENZENE	300.0	13415617	44720
CHLOROBENZENE	300.0	16406053	54690
TOLUENE	300.0	15528746	51760
A,A,A-TRIFLUOROTOLUENE	90.0	1590258	17670
BENZENE	300.0	16585339	55280
METHYLTERT-BUTYL ETHER	300.0	2935664	9786

Login Number: L0206102
File ID: 5G12955
ALT ID: WG116507-08
Units: ug/L

Instrument ID: HP5
Run Date: 04/22/2002
Run Time: 18:42
Analyst: CBN
Cal ID: HP5 - 22-APR-02

Analyte		Expected	Found	RF	%D	Q
1,2-Dichlorobenzene		20	21.6	40900	8.0	
1,4-Dichlorobenzene		20	21.6	50800	8.0	
1,3-Dichlorobenzene		20	21.3	46300	6.5	
o-Xylene		20	20.8	53600	4.0	
Styrene		20	21.0	58100	5.0	
m-,p-Xylene		40	42.1	55600	5.3	
Ethylbenzene		20	21.5	47600	7.5	
Chlorobenzene		20	20.9	56500	4.5	
Toluene		20	21.3	54400	6.5	
Benzene		20	21.2	59600	6.0	
MTBE		20	21.1	11100	5.5	

Login Number: L0206102
File ID: 5G13651
CCV ID: WG119271-01
Units: ug/L

Instrument ID: HP5
Run Date: 06/06/2002
Run Time: 09:17
Analyst: CSH
Cal ID: HP5 - 22-APR-02

Analyte		Expected	Found	RF	%D	Q
1,2-Dichlorobenzene		20	21.1	40000	5.5	
1,4-Dichlorobenzene		20	21.2	50000	6.0	
1,3-Dichlorobenzene		20	20.8	45200	4.0	
o-Xylene		20	17.8	45900	11.0	
Styrene		20	16.6	45900	17.0	*
m-,p-Xylene		40	40.2	53200	0.5	
Ethylbenzene		20	20.4	45000	2.0	
Chlorobenzene		20	20.5	55400	2.5	
Toluene		20	21.0	53600	5.0	
Benzene		20	20.3	56900	1.5	
MTBE		20	21.0	11000	5.0	

* Exceeds %D Limit

Login Number: L0206102
File ID: 5G13662
CCV ID: WG119271-02
Units: ug/L

Instrument ID: HP5
Run Date: 06/06/2002
Run Time: 17:21
Analyst: CSH
Cal ID: HP5 - 22-APR-02

Analyte	Expected	Found	RF	%D	Q
1,2-Dichlorobenzene	20	21.7	41100	8.5	
1,4-Dichlorobenzene	20	21.7	51000	8.5	
1,3-Dichlorobenzene	20	21.4	46500	7.0	
o-Xylene	20	18.7	48300	6.5	
Styrene	20	17.4	48300	13.0	
m-,p-Xylene	40	42.8	56600	7.0	
Ethylbenzene	20	21.9	48500	9.5	
Chlorobenzene	20	21.4	57900	7.0	
Toluene	20	22.0	56100	10.0	
Benzene	20	21.8	61000	9.0	
MTBE	20	20.5	10700	2.5	

* Exceeds %D Limit

Login Number: L0206102
File ID: 5G13673
CCV ID: WG119271-03
Units: ug/L

Instrument ID: HP5
Run Date: 06/06/2002
Run Time: 23:43
Analyst: CSH
Cal ID: HP5 - 22-APR-02

Analyte		Expected	Found	RF	%D	Q
1,2-Dichlorobenzene		20	21.7	41200	8.5	
1,4-Dichlorobenzene		20	21.5	50600	7.5	
1,3-Dichlorobenzene		20	21.2	46100	6.0	
o-Xylene		20	18.6	48100	7.0	
Styrene		20	17.3	48100	13.5	
m-,p-Xylene		40	42.4	56100	6.0	
Ethylbenzene		20	21.6	47800	8.0	
Chlorobenzene		20	21.0	56800	5.0	
Toluene		20	21.6	55100	8.0	
Benzene		20	21.5	60200	7.5	
MTBE		20	20.8	10900	4.0	

* Exceeds %D Limit

Directory: c:\hpchem\2\data\042202

Analyst: CBN

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	5g12946.d	1.	WG116507-01 STD1 1PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::2
2	2	5g12947.d	1.	WG116507-02 STD2 10PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::0
3	3	5g12948.d	1.	WG116507-03 STD3 20PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::3
4	4	5g12949.d	1.	WG116507-04 STD4 50PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::1
5	5	5g12950.d	1.	WG116507-05 STD5 100PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::4
6	6	5g12951.d	1.	WG116507-06 STD6 200PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::2
7	7	5g12952.d	1.	WG116507-07 STD7 300PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::5
8	8	5g12953.d	1.	RINSE	1,1 S-92-44	22 Apr 102 12::3
9	9	5g12954.d	1.	RINSE	1,1 S-92-44	22 Apr 102 12::0
10	10	5g12955.d	1.	WG116507-08 ALT SOURCE 20PPB 5ML✓	1,1 S-92-44	22 Apr 102 12::4

106

Directory: c:\hpchem\2\data\060602

WG119272

Analyst: CSH

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	5g13651.d	1.	WG119271-01 8021 STD 20PPB 5ML	1,1 S-94-04,93-47	6 Jun 102 12::1
2	2	5g13652.d	1.	WG119272-01 WATER BLANK 5ML	1,1 S-93-47	6 Jun 102 13::2
3	3	5g13653.d	1.	WG119272-02 WATER LCS 20PPB 5ML	1,1 S-94-04,93-47	6 Jun 102 13::5
4	1	5g13654.d	1.	L0206078-06 B 5ML	2,1 S-93-47	6 Jun 102 13::4
5	2	5g13655.d	1.	L0206078-17 B 5ML conf SSS	2,1,RE S-93-47 pH=7	6 Jun 102 13::1
6	3	5g13656.d	1.	L0206102-01 A 5ML	1,1 S-93-47 pH<2	6 Jun 102 13::5
7	4	5g13657.d	1.	L0206102-02 A 5ML	1,1 S-93-47	6 Jun 102 12::2
8	5	5g13658.d	1.	L0206102-03 A 5ML	1,1 S-93-47	6 Jun 102 12::0
9	6	5g13659.d	1.	WG119272-03 L0206102-04 A 5ML	1,1 S-93-47	6 Jun 102 12::3
10	7	5g13660.d	1.	WG119272-04 L0206102-05 MS A 5ML	1,1 S-94-04,93-47	6 Jun 102 12::1
11	8	5g13661.d	1.	WG119272-05 L0206102-06 MSD A 5ML	1,1 S-94-04,93-47	6 Jun 102 12::4
12	9	5g13662.d	1.	WG119271-02 8021 STD 20PPB 5ML	1,1 S-94-04,93-47	6 Jun 102 12::2
13	10	5g13663.d	1.	L0206102-07 A 5ML	1,1 S-93-47 pH<2	6 Jun 102 12::5
14	11	5g13664.d	1.	L0206102-08 A 5ML	1,1 S-93-47	6 Jun 102 12::3
15	12	5g13665.d	1.	L0206102-09 A 5ML	1,1 S-94-93-4	6 Jun 102 12::0
16	13	5g13666.d	1.	L0206102-10 A 5ML	1,1 S-93-47	6 Jun 102 12::4
17	14	5g13667.d	100.	L0206106-01 A 5ML 100X	1,100 S-93-47	6 Jun 102 12::1
18	15	5g13668.d	1.	L0206106-02 A 5ML	1,1 S-93-47	6 Jun 102 12::4
19	16	5g13669.d	1.	L0206106-03 A 5ML RR @ 10X	1,1 S-93-47	6 Jun 102 12::2
20	17	5g13670.d	100.	L0206106-04 A 5ML 100X RR c/o	1,100 S-93-47	6 Jun 102 12::5
21	18	5g13671.d	1.	L0206106-05 A 5ML	1,1 S-93-47	6 Jun 102 13::3
22	19	5g13672.d	1.	L0206106-06 A 5ML	1,1 S-93-47	6 Jun 102 13::0
23	20	5g13673.d	1.	WG119271-03 8021 STD 20PPB 5ML	1,1 S-94-04,93-47	6 Jun 102 13::4
24	21	5g13674.d	1.	L0206106-07 A 5ML	1,1 S-93-47 pH<2	7 Jun 102 13::1
25	22	5g13675.d	1.	L0206106-08 A 5ML	1,1 S-93-47	7 Jun 102 13::5
26	23	5g13676.d	1.	WG119271-04 8021 STD 20PPB 5ML	1,1 S-94-04,93-47	7 Jun 102 12::2

Reanalyses

File number

L0206106-03 10X

-04 100X

VOA - GC

Date: 6/6/02 Analyst: CSH Method: 8021 8015 602

Instrument: HP5 Work Group: WG 119272

	Analyst
Initial Calibration	✓
Average RF	✓
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	✓
Continuing Calibration / Check Standards	✓
Project / Client Specific Requirements	✓
Special Standards	NA
Blanks	✓
TCL's	✓
Surrogates	✓
LCS (Laboratory Control Sample)	✓
Recoveries	✓
Surrogates	✓
MS / MSD / Duplicates	✓
Samples	✓
TCL Hits	✓
Surrogates	✓
Calculations & Correct Factors	✓
Dilutions Run	✓
Reruns	✓
Excel Spreadsheets / Forms	✓
Case Narrative	✓
Narrative Summary	✓
Results Reporting / Data Qualifiers	✓
Client Data Package Assembly	✓
Check for Completeness	✓

Primary Reviewers Initials & Date Checked: CSH 6/7/02

Secondary Reviewers Initials & Date Checked: CBN 6/7/02

_____ • Check for compliance with Method and project-specific requirements
_____ • Check the completeness of the reported information
_____ • Check the information for the report narrative
_____ • Check the reasonableness of results

Supervisory Review Initials & Date Checked: _____

Comments _____

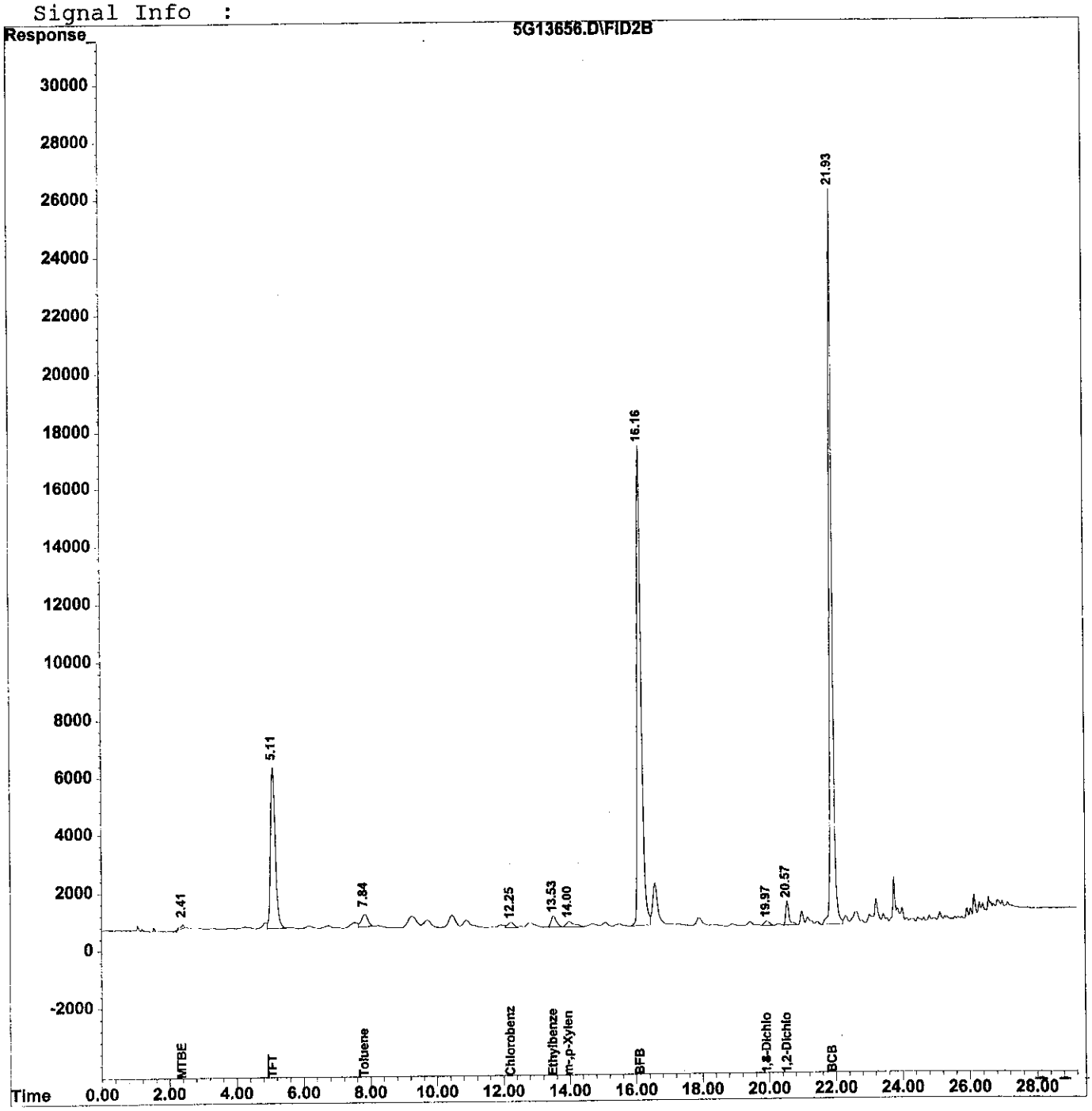
✓ = Checked & OK
NA = Not Applicable

2.1.3.2 Sample Data

Data File : C:\HPCHEM\2\DATA\060602\5G13656.D Vial: 3
Acq On : 6 Jun 2002 12:50 Operator: CSH
Sample : L0206102-01 A 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 13:20 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\060602\5G13656.D
Acq On : 6 Jun 2002 12:50
Sample : L0206102-01 A 5ML
Misc : 1,1 S-93-47
IntFile : autoint1.e
Quant Time: Jun 6 13:20 2002 Quant Results File: 602STY.RES

Vial: 3
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

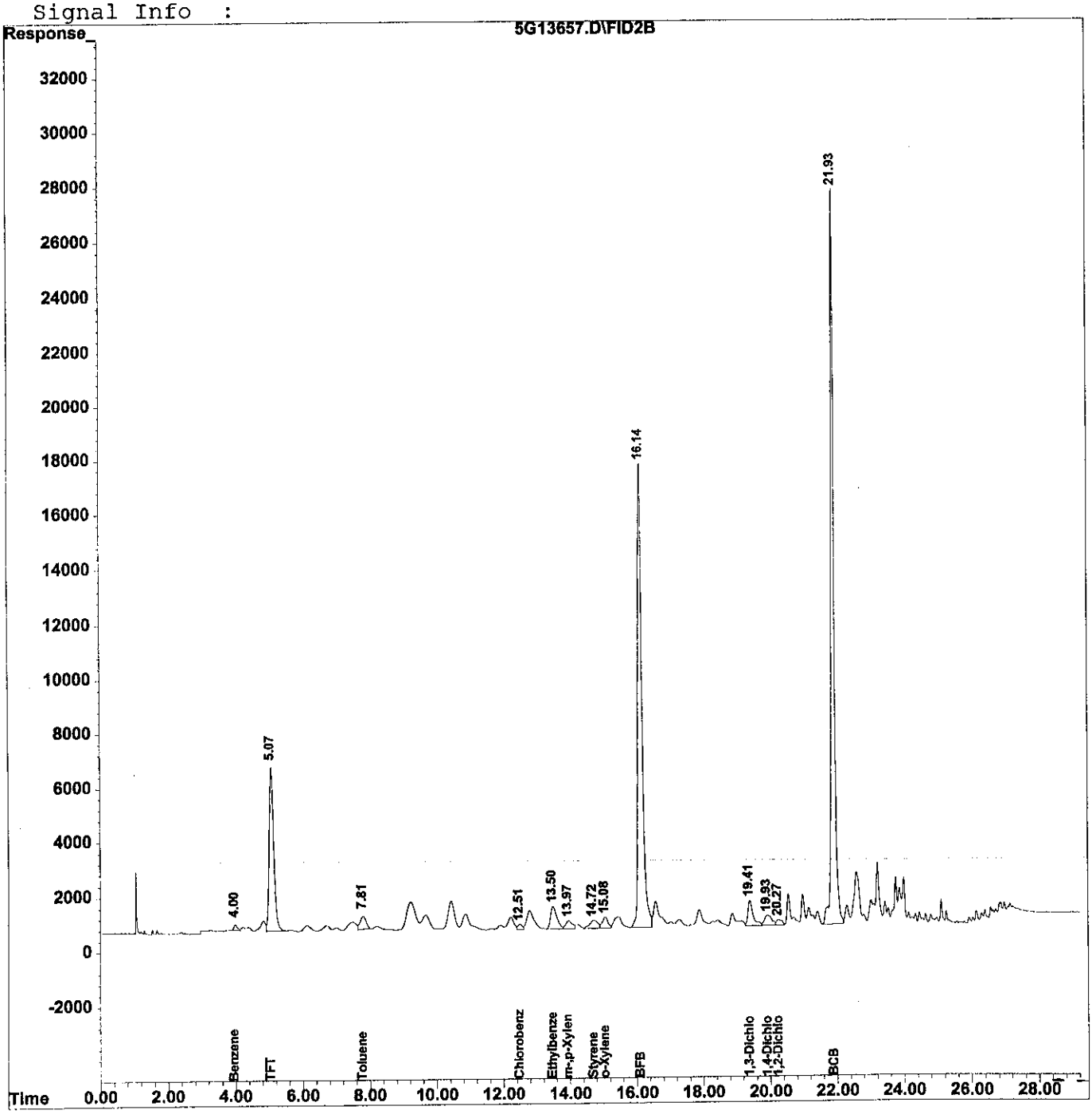
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.11	564429	31.8402 ug/L ✓
Spiked Amount 30.000	Range 70 - 130	Recovery	= 106.13%
10) S BFB	16.16	1438949	30.1161 ug/L
Spiked Amount 30.000		Recovery	= 100.39%
14) S BCB	21.93	1461008	31.2029 ug/L
Spiked Amount 30.000	Range 37 - 137	Recovery	= 104.01%
Target Compounds			
1) TM MTBE	2.42	10070	~~0.9620 ug/L~~
2) TM Benzene	0.00	0	~~N.D. ug/L~~
4) TM Toluene	7.85✓	58131	1.1373 ug/L
5) TM Chlorobenzene	12.25	23090	~~0.4268 ug/L~~
6) TM Ethylbenzene	13.53✓	43936	0.9936 ug/L
7) TM m-,p-Xylene	14.00✓	35641	0.6738 ug/L
8) TM Styrene	0.00	0	N.D. ug/L
9) TM o-Xylene	0.00	0	N.D. ug/L
11) TM 1,3-Dichlorobenzene	19.97f	17318	~~0.3983 ug/L~~
12) TM 1,4-Dichlorobenzene	19.97	17318	~~0.3680 ug/L~~
13) TM 1,2-Dichlorobenzene	20.57	59260	~~1.5641 ug/L~~

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\060602\5G13657.D Vial: 4
Acq On : 6 Jun 2002 13:25 Operator: CSH
Sample : L0206102-02 A 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 13:54 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\060602\5G13657.D Vial: 4
Acq On : 6 Jun 2002 13:25 Operator: CSH
Sample : L0206102-02 A 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 13:54 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	564809	31.8617 ug/L ✓
Spiked Amount 30.000 Range 70 - 130		Recovery	= 106.21%
10) S BFB	16.15	1519810	31.8085 ug/L
Spiked Amount 30.000		Recovery	= 106.03%
14) S BCB	21.93	1694075	36.1805 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery	= 120.60%
Target Compounds			
1) TM MTBE	0.00	0	N.D. ug/L
2) TM Benzene	4.00	15369	~~0.2740 ug/L~~
4) TM Toluene	7.81✓	59061	1.1555 ug/L
5) TM Chlorobenzene	12.51	19455	~~0.3596 ug/L~~
6) TM Ethylbenzene	13.50✓	108904	2.4628 ug/L
7) TM m-,p-Xylene	13.97✓	42662	0.8066 ug/L
8) TM Styrene	14.73	50251	~~0.9062 ug/L~~
9) TM o-Xylene	15.07✓	47290	0.9171 ug/L
11) TM 1,3-Dichlorobenzene	19.41	97482	~~2.2421 ug/L~~
12) TM 1,4-Dichlorobenzene	19.95	56175	~~1.1937 ug/L~~
13) TM 1,2-Dichlorobenzene	20.26	22624	~~0.5972 ug/L~~

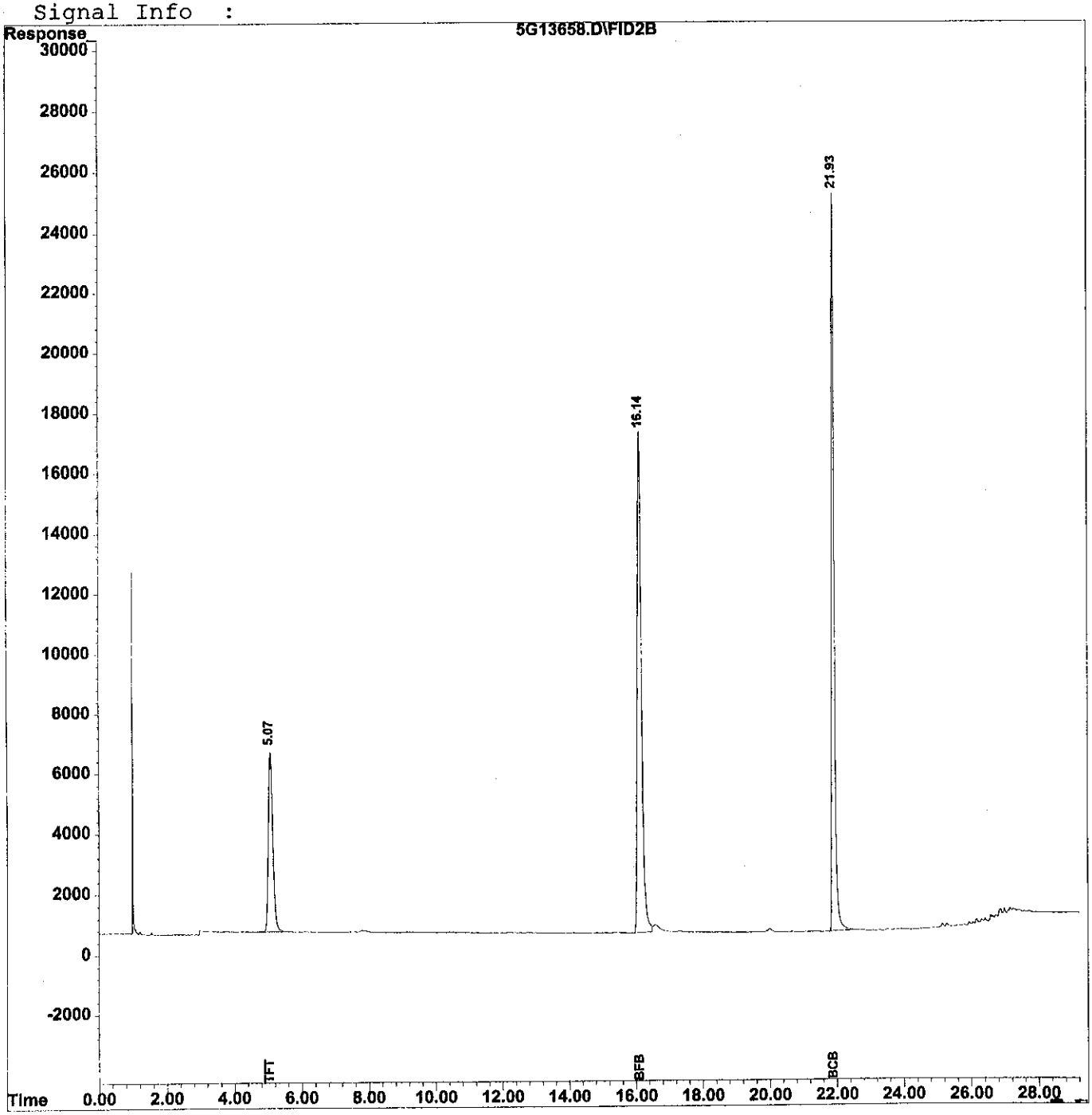
(f)=RT Delta > 1/2 Window (m)=manual int.

113

Data File : C:\HPCHEM\2\DATA\060602\5G13658.D Vial: 5
Acq On : 6 Jun 2002 14:00 Operator: CSH
Sample : L0206102-03 A 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 14:29 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\060602\5G13658.D Vial: 5
Acq On : 6 Jun 2002 14:00 Operator: CSH
Sample : L0206102-03 A 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 14:29 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

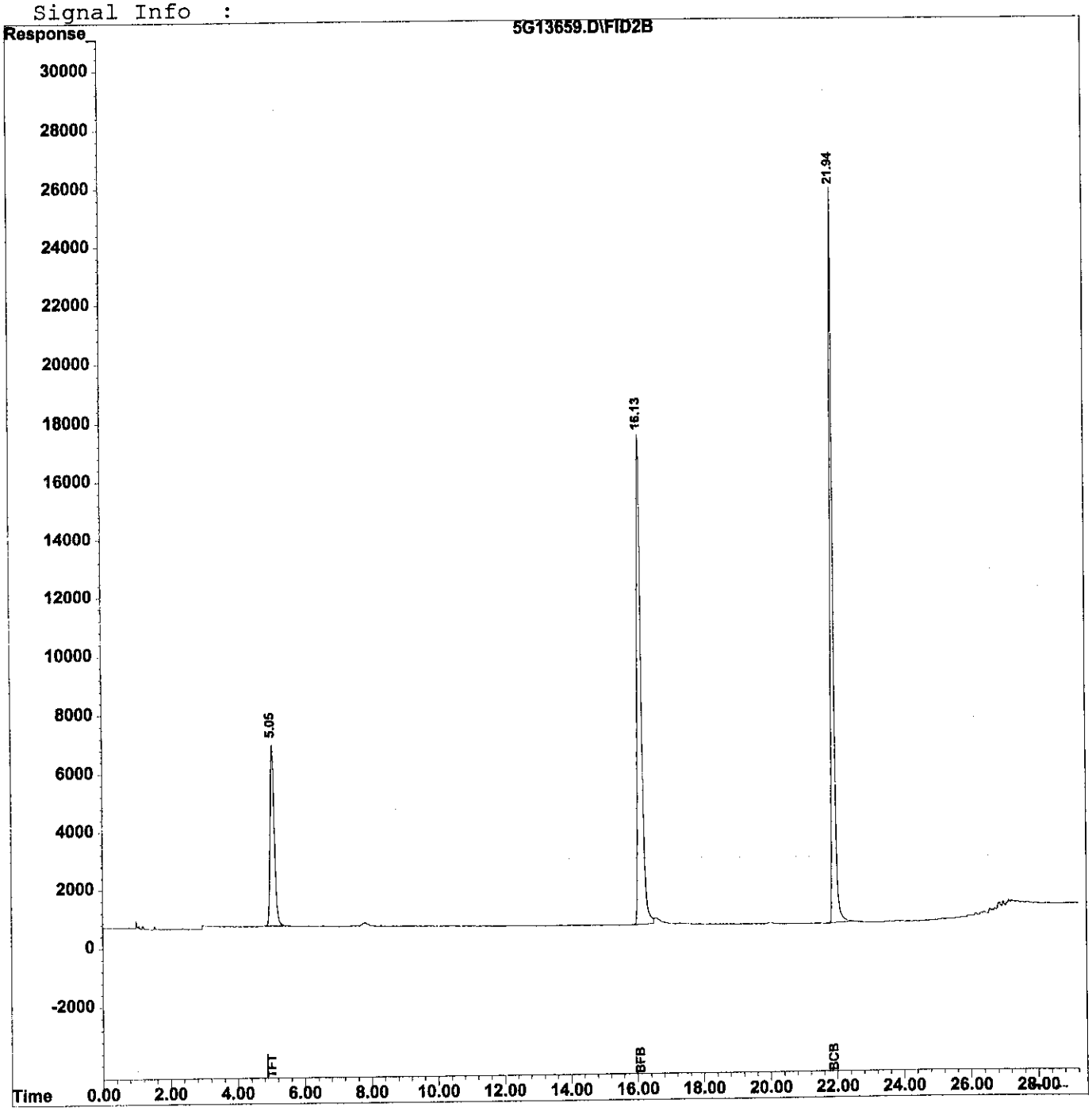
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.08	551178	31.0927 ug/L
Spiked Amount 30.000 Range 70 - 130		Recovery =	103.64%
10) S BFB	16.14	1423058	29.7835 ug/L
Spiked Amount 30.000		Recovery =	99.28%
14) S BCB	21.93	1334675	28.5048 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery =	95.02%
Target Compounds			
1) TM MTBE	0.00	0	N.D. ug/L
2) TM Benzene	0.00	0	N.D. ug/L
4) TM Toluene	0.00	0	N.D. ug/L
5) TM Chlorobenzene	0.00	0	N.D. ug/L
6) TM Ethylbenzene	0.00	0	N.D. ug/L
7) TM m-,p-Xylene	0.00	0	N.D. ug/L
8) TM Styrene	0.00	0	N.D. ug/L
9) TM o-Xylene	0.00	0	N.D. ug/L
11) TM 1,3-Dichlorobenzene	0.00	0	N.D. ug/L
12) TM 1,4-Dichlorobenzene	0.00	0	N.D. ug/L
13) TM 1,2-Dichlorobenzene	0.00	0	N.D. ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\060602\5G13659.D Vial: 6
Acq On : 6 Jun 2002 14:35 Operator: CSH
Sample : WG119272-03 L0206102-04 A 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 15:04 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\060602\5G13659.D Vial: 6
Acq On : 6 Jun 2002 14:35 Operator: CSH
Sample : WG119272-03 L0206102-04 A 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 15:04 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

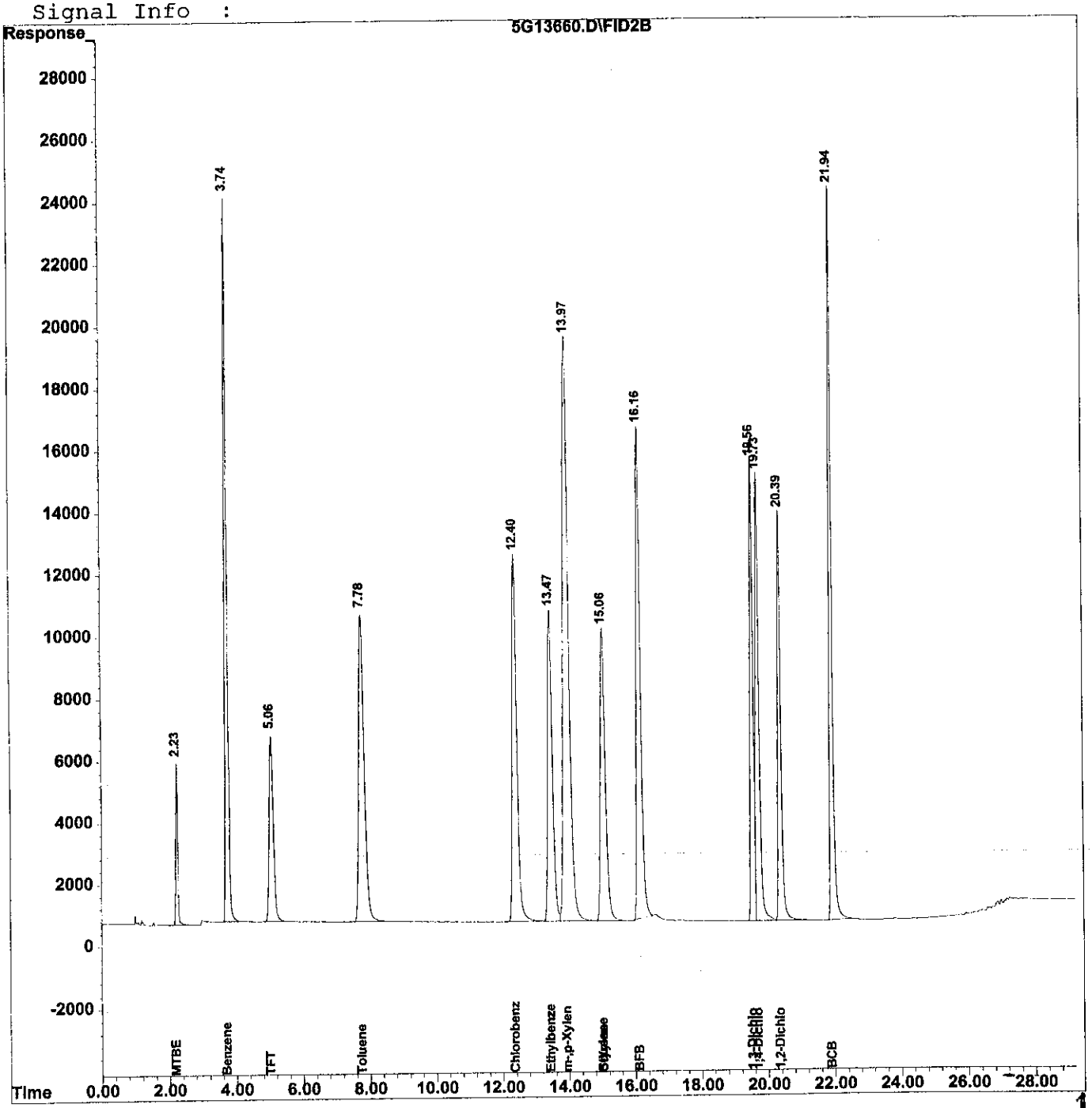
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.06	549436	30.9944 ug/L
Spiked Amount 30.000	Range 70 - 130	Recovery =	103.31% ✓
10) S BFB	16.13	1421736	29.7558 ug/L
Spiked Amount 30.000		Recovery =	99.19%
14) S BCB	21.94	1363585	29.1222 ug/L
Spiked Amount 30.000	Range 37 - 137	Recovery =	97.07%
Target Compounds			
1) TM MTBE	0.00	0	N.D. ug/L
2) TM Benzene	0.00	0	N.D. ug/L
4) TM Toluene	0.00	0	N.D. ug/L
5) TM Chlorobenzene	0.00	0	N.D. ug/L
6) TM Ethylbenzene	0.00	0	N.D. ug/L
7) TM m-,p-Xylene	0.00	0	N.D. ug/L
8) TM Styrene	0.00	0	N.D. ug/L
9) TM o-Xylene	0.00	0	N.D. ug/L
11) TM 1,3-Dichlorobenzene	0.00	0	N.D. ug/L
12) TM 1,4-Dichlorobenzene	0.00	0	N.D. ug/L
13) TM 1,2-Dichlorobenzene	0.00	0	N.D. ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\060602\5G13660.D Vial: 7
Acq On : 6 Jun 2002 15:11 Operator: CSH
Sample : WG119272-04 L0206102-05 MS A 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 15:41 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\060602\5G13660.D Vial: 7
Acq On : 6 Jun 2002 15:11 Operator: CSH
Sample : WG119272-04 L0206102-05 MS A 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 15:41 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.06	524499	29.5877 ug/L
Spiked Amount 30.000 Range 70 - 130 Recovery = 98.63%			
10) S BFB	16.16	1353264	28.3228 ug/L
Spiked Amount 30.000 Recovery = 94.41%			
14) S BCB	21.95	1313944	28.0620 ug/L
Spiked Amount 30.000 Range 37 - 137 Recovery = 93.54%			
Target Compounds			
1) TM MTBE	2.24	206081	19.6879 ug/L
2) TM Benzene	3.75	1222674	21.7986 ug/L
4) TM Toluene	7.78	1131996	22.1470 ug/L
5) TM Chlorobenzene	12.40	1166695	21.5627 ug/L
6) TM Ethylbenzene	13.47	983695	22.2460 ug/L
7) TM m-,p-Xylene	13.97	2293266	43.3554 ug/L
8) TM Styrene	15.06	988253	17.8207 ug/L
9) TM o-Xylene	15.06	988253	19.1654 ug/L
11) TM 1,3-Dichlorobenzene	19.57	936288	21.5352 ug/L
12) TM 1,4-Dichlorobenzene	19.73	1027242	21.8281 ug/L
13) TM 1,2-Dichlorobenzene	20.39	826345	21.8110 ug/L

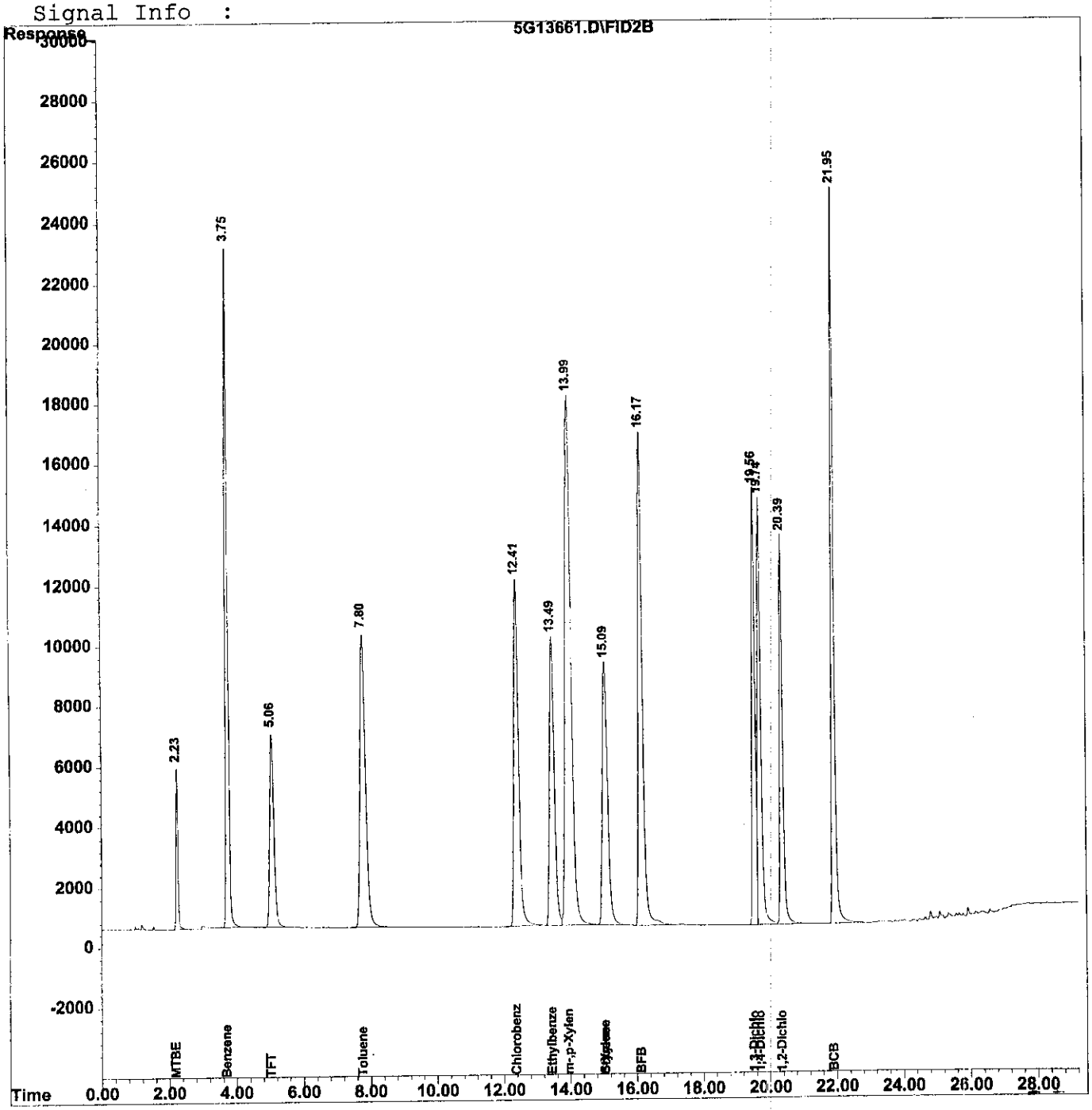
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\060602\5G13661.D
Acq On : 6 Jun 2002 16:46
Sample : WG119272-05 L0206102-06 MSD A 5ML
Misc : 1,1 S-94-04,93-47
IntFile : autoint1.e
Quant Time: Jun 6 17:16 2002 Quant Results File: 602STY.RES

Vial: 8
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\060602\5G13661.D Vial: 8
Acq On : 6 Jun 2002 16:46 Operator: CSH
Sample : WG119272-05 L0206102-06 MSD A 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 17:16 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.06	552572	31.1714 ug/L
Spiked Amount 30.000 Range 70 - 130 Recovery = 103.90%			
10) S BFB	16.17	1465523	30.6723 ug/L
Spiked Amount 30.000 Recovery = 102.24%			
14) S BCB	21.95	1377579	29.4211 ug/L
Spiked Amount 30.000 Range 37 - 137 Recovery = 98.07%			
Target Compounds			
1) TM MTBE	2.24	210052	20.0673 ug/L
2) TM Benzene	3.75	1179227	21.0240 ug/L
4) TM Toluene	7.80	1105322	21.6251 ug/L
5) TM Chlorobenzene	12.42	1137103	21.0157 ug/L
6) TM Ethylbenzene	13.49	952749	21.5461 ug/L
7) TM m-,p-Xylene	14.00	2231355	42.1849 ug/L
8) TM Styrene	15.09f	951728	17.1620 ug/L
9) TM o-Xylene	15.09	951728	18.4570 ug/L
11) TM 1,3-Dichlorobenzene	19.57	921787	21.2016 ug/L
12) TM 1,4-Dichlorobenzene	19.74	1016309	21.5958 ug/L
13) TM 1,2-Dichlorobenzene	20.39	820430	21.6548 ug/L

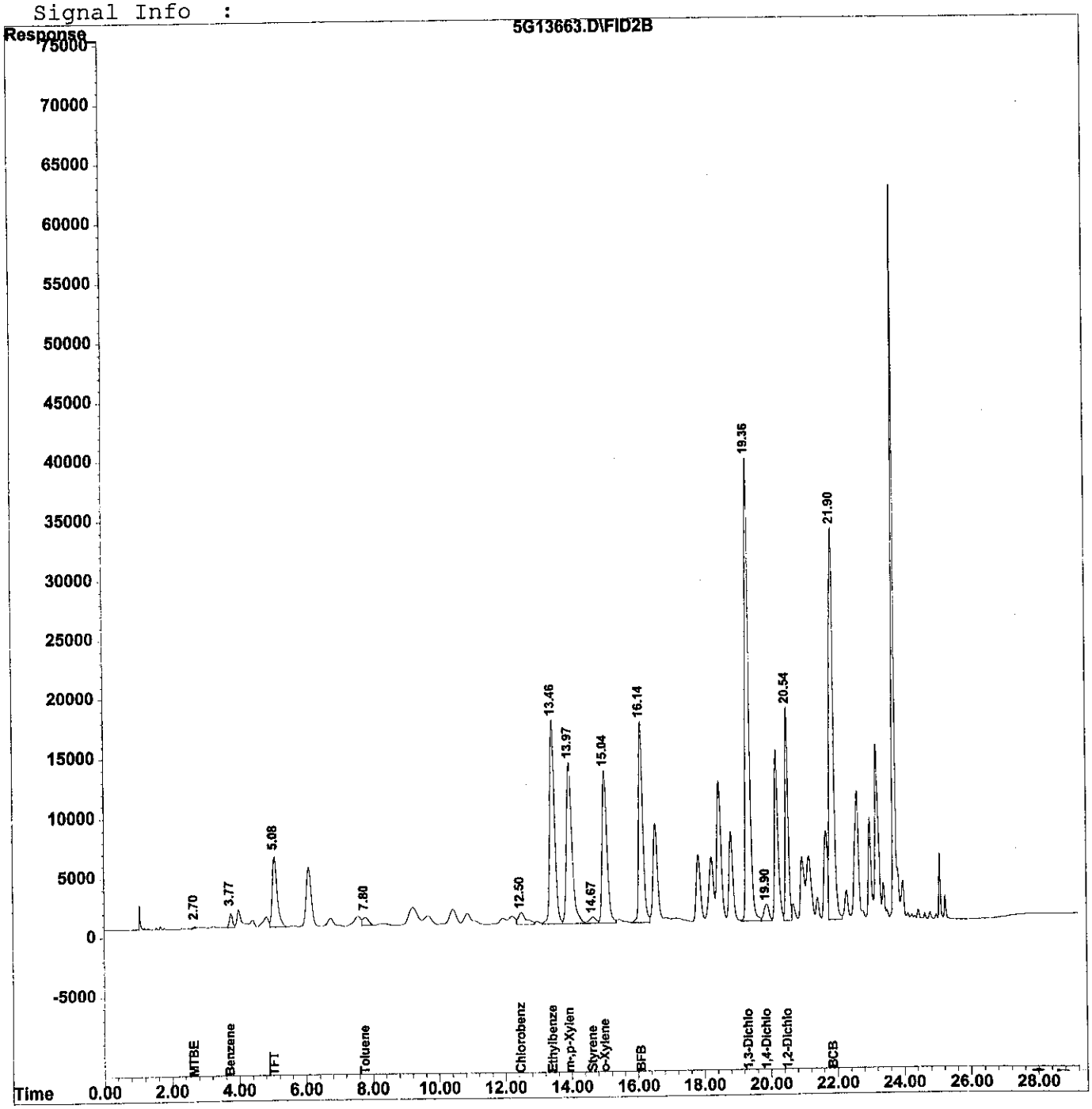
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\060602\5G13663.D
Acq On : 6 Jun 2002 17:56
Sample : L0206102-07 A 5ML
Misc : 1,1 S-93-47
IntFile : autoint1.e
Quant Time: Jun 6 18:25 2002 Quant Results File: 602STY.RES

Vial: 10
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\060602\5G13663.D Vial: 10
Acq On : 6 Jun 2002 17:56 Operator: CSH
Sample : L0206102-07 A 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 18:25 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.08	607230	34.2547 ug/L
Spiked Amount 30.000 Range 70 - 130		Recovery =	114.18%
10) S BFB	16.14	1462960	30.6186 ug/L
Spiked Amount 30.000		Recovery =	102.06%
14) S BCB	21.90	2859576	61.0722 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery =	203.57%#
Target Compounds			
1) TM MTBE	2.71f	7645	0.7304 ug/L
2) TM Benzene	3.77	81016	1.4444 ug/L
4) TM Toluene	7.80	86600	1.6943 ug/L
5) TM Chlorobenzene	12.51	165771	3.0637 ug/L
6) TM Ethylbenzene	13.46	1741015	39.3725 ug/L
7) TM m-,p-Xylene	13.97	1581321	29.8957 ug/L
8) TM Styrene	14.67	75765	1.3662 ug/L
9) TM o-Xylene	15.04	1298221	25.1766 ug/L
11) TM 1,3-Dichlorobenzene	19.36	3063679	70.4664 ug/L
12) TM 1,4-Dichlorobenzene	19.91	148449	3.1544 ug/L
13) TM 1,2-Dichlorobenzene	20.54	1063474	28.0699 ug/L

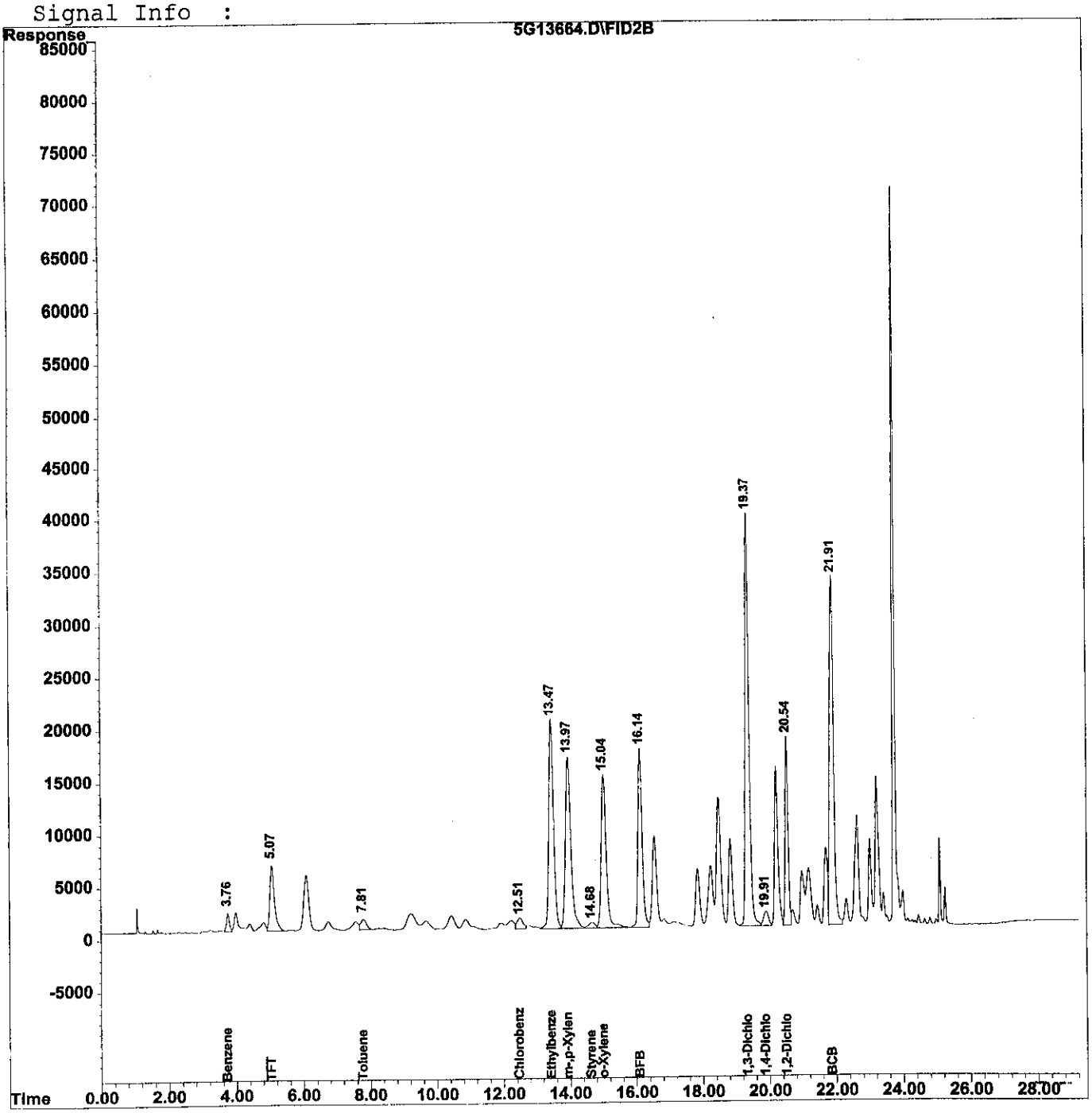
(f)=RT Delta > 1/2 Window (m)=manual int.

123

Data File : C:\HPCHEM\2\DATA\060602\5G13664.D Vial: 11
Acq On : 6 Jun 2002 18:30 Operator: CSH
Sample : L0206102-08 A 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 19:00 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\060602\5G13664.D Vial: 11
Acq On : 6 Jun 2002 18:30 Operator: CSH
Sample : L0206102-08 A 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 19:00 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	608206	34.3098 ug/L
Spiked Amount 30.000	Range 70 - 130	Recovery =	114.37%
10) S BFB	16.14	1461566	30.5895 ug/L
Spiked Amount 30.000		Recovery =	101.97%
14) S BCB	21.91	2824497	60.3231 ug/L
Spiked Amount 30.000	Range 37 - 137	Recovery =	201.08%#
Target Compounds			
1) TM MTBE	0.00	0	N.D. ug/L
2) TM Benzene	3.76	105127	1.8743 ug/L
4) TM Toluene	7.81	121452	2.3761 ug/L
5) TM Chlorobenzene	12.51	132518	2.4492 ug/L
6) TM Ethylbenzene	13.47	1986346	44.9206 ug/L
7) TM m-,p-Xylene	13.97	1879747	35.5376 ug/L
8) TM Styrene	14.68	71823	1.2952 ug/L
9) TM o-Xylene	15.04	1526890	29.6112 ug/L
11) TM 1,3-Dichlorobenzene	19.37	3134563	72.0967 ug/L
12) TM 1,4-Dichlorobenzene	19.91	139312	2.9603 ug/L
13) TM 1,2-Dichlorobenzene	20.54	1076239	28.4068 ug/L

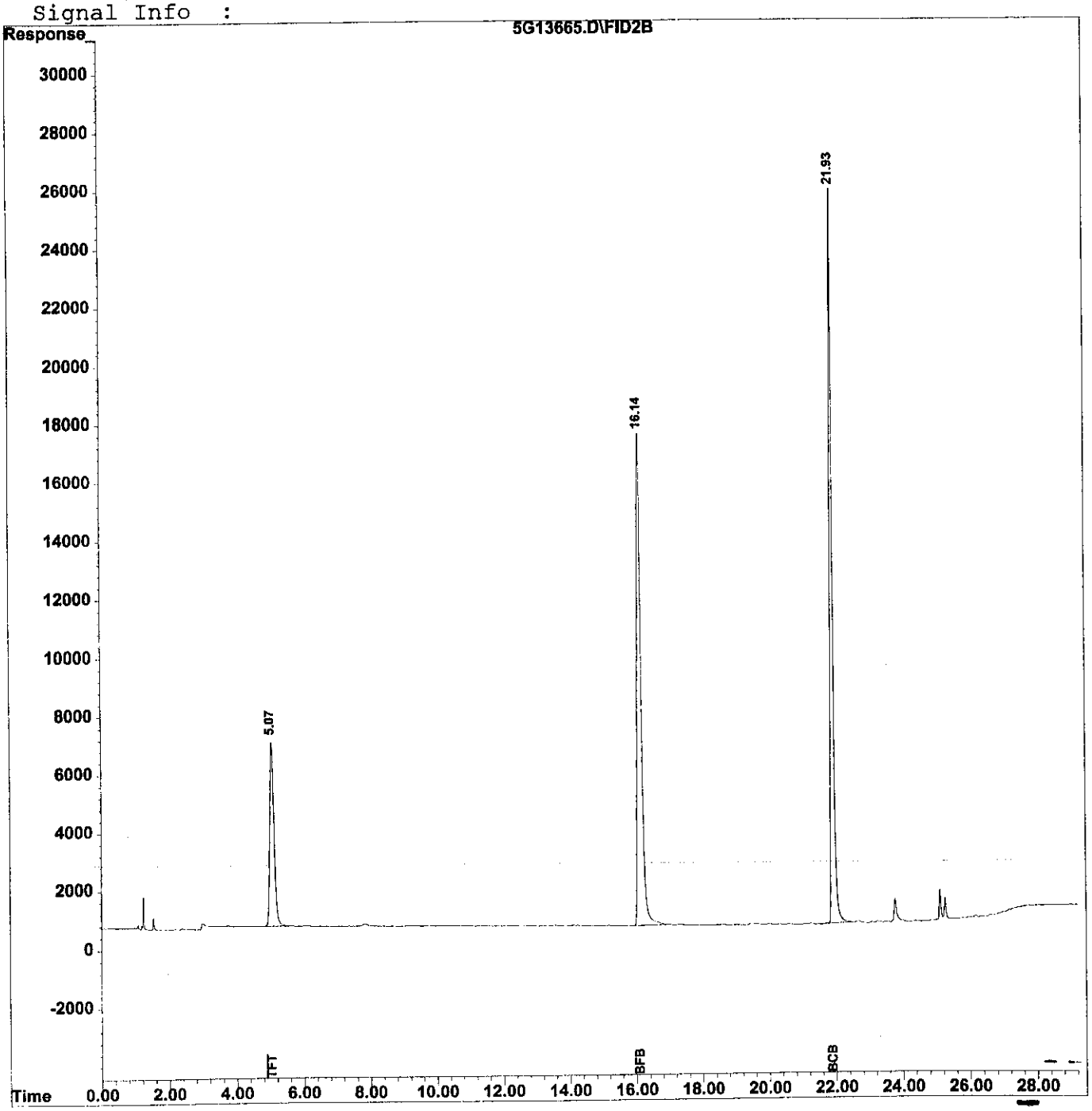
125

(m)=manual int.

Data File : C:\HPCHEM\2\DATA\060602\5G13665.D Vial: 12
Acq On : 6 Jun 2002 19:05 Operator: CSH
Sample : L0206102-09 A 5ML Inst : HP5
Misc : 1,1 S-94-93-4 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 19:34 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



126

Data File : C:\HPCHEM\2\DATA\060602\5G13665.D Vial: 12
Acq On : 6 Jun 2002 19:05 Operator: CSH
Sample : L0206102-09 A 5ML Inst : HP5
Misc : 1,1 S-94-93-4 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 19:34 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	552911	31.1905 ug/L
Spiked Amount 30.000	Range 70 - 130	Recovery	= 103.97%
10) S BFB	16.14	1447306	30.2910 ug/L
Spiked Amount 30.000		Recovery	= 100.97%
14) S BCB	21.93	1371155	29.2839 ug/L
Spiked Amount 30.000	Range 37 - 137	Recovery	= 97.61%
Target Compounds			
1) TM MTBE	0.00	0	N.D. ug/L
2) TM Benzene	0.00	0	N.D. ug/L
4) TM Toluene	0.00	0	N.D. ug/L
5) TM Chlorobenzene	0.00	0	N.D. ug/L
6) TM Ethylbenzene	0.00	0	N.D. ug/L
7) TM m-,p-Xylene	0.00	0	N.D. ug/L
8) TM Styrene	0.00	0	N.D. ug/L
9) TM o-Xylene	0.00	0	N.D. ug/L
11) TM 1,3-Dichlorobenzene	0.00	0	N.D. ug/L
12) TM 1,4-Dichlorobenzene	0.00	0	N.D. ug/L
13) TM 1,2-Dichlorobenzene	0.00	0	N.D. ug/L

127

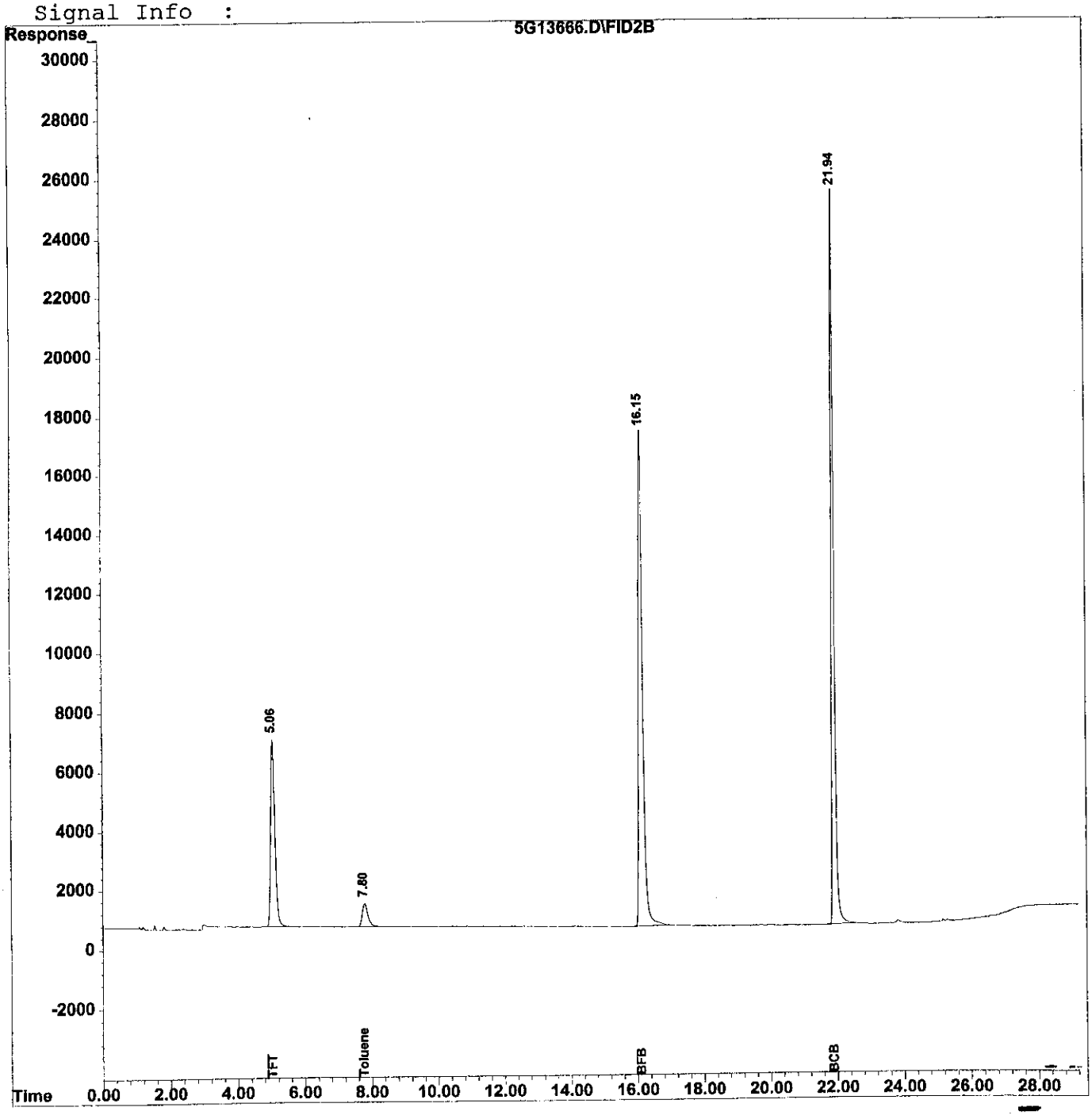
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\060602\5G13666.D
Acq On : 6 Jun 2002 19:40
Sample : L0206102-10 A 5ML
Misc : 1,1 S-93-47
IntFile : autoint1.e
Quant Time: Jun 6 20:09 2002 Quant Results File: 602STY.RES

Vial: 13
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



128

Data File : C:\HPCHEM\2\DATA\060602\5G13666.D Vial: 13
Acq On : 6 Jun 2002 19:40 Operator: CSH
Sample : L0206102-10 A 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 20:09 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.06	551689	31.1215 ug/L
Spiked Amount 30.000	Range 70 - 130	Recovery =	103.74%
10) S BFB	16.15	1452873	30.4075 ug/L
Spiked Amount 30.000		Recovery =	101.36%
14) S BCB	21.94	1372501	29.3126 ug/L
Spiked Amount 30.000	Range 37 - 137	Recovery =	97.71%
Target Compounds			
1) TM MTBE	0.00	0	N.D. ug/L
2) TM Benzene	0.00	0	N.D. ug/L
4) TM Toluene	7.80	91143	1.7832 ug/L
5) TM Chlorobenzene	0.00	0	N.D. ug/L
6) TM Ethylbenzene	0.00	0	N.D. ug/L
7) TM m-,p-Xylene	0.00	0	N.D. ug/L
8) TM Styrene	0.00	0	N.D. ug/L
9) TM o-Xylene	0.00	0	N.D. ug/L
11) TM 1,3-Dichlorobenzene	0.00	0	N.D. ug/L
12) TM 1,4-Dichlorobenzene	0.00	0	N.D. ug/L
13) TM 1,2-Dichlorobenzene	0.00	0	N.D. ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

2.1.3.3 Standards Data

Calibration Table Report
Method: 602STY.M
Title: METHOD 602 - Water - 4/22/02
Last Calibration: Tue Apr 23 13:19:26 2002

Calibration Files

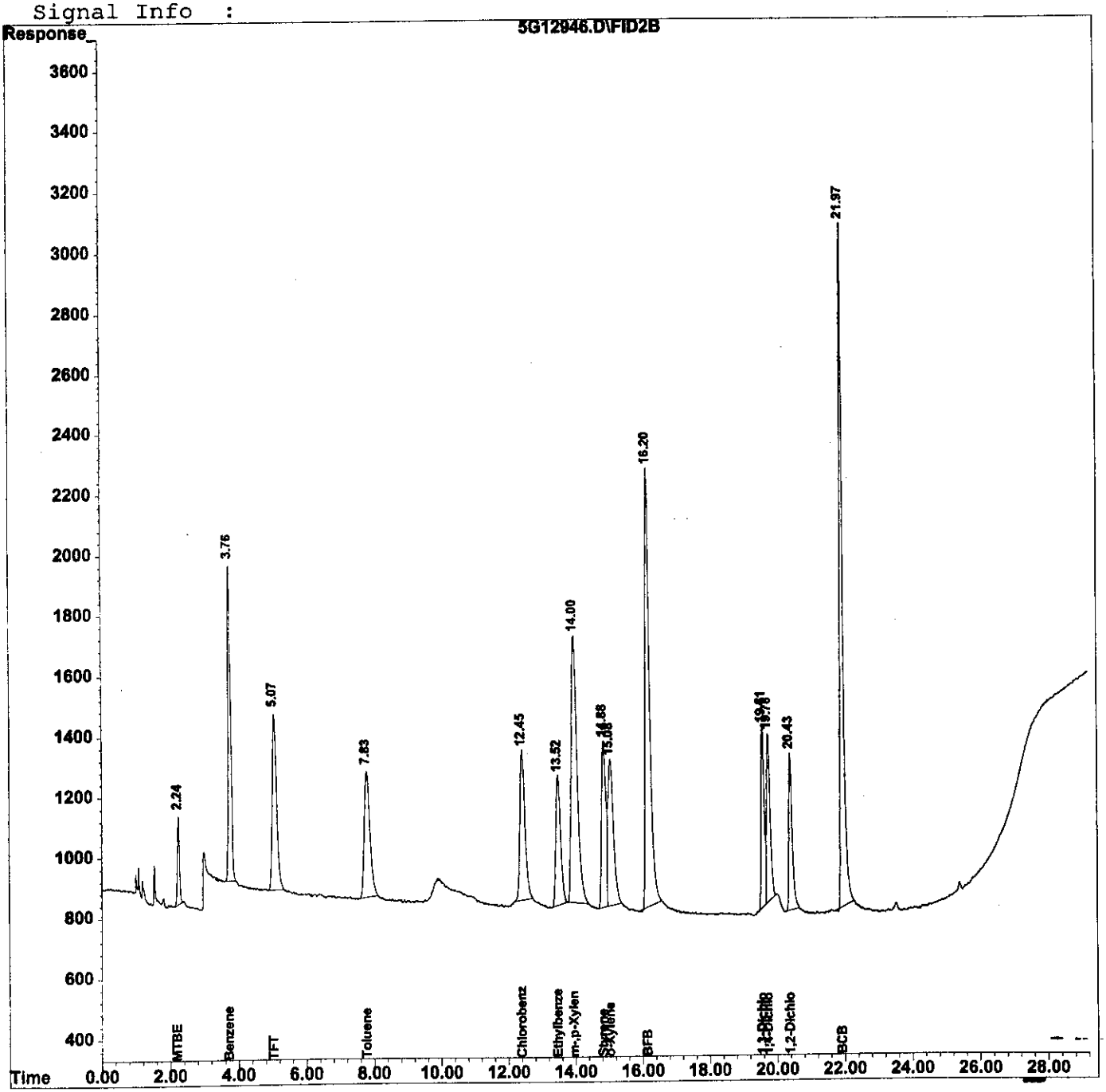
Compound	1 5G12946.D	10 5G12947.D	20 5G12948.D	50 5G12949.D	100 5G12950.D	200 5G12951.D	300 5G12952.D	Avg	%RSD
MTBE	11757	10818	10755	10474	10368	9314	9786	10467	7.475
Benzene	56328	57962	57511	56878	55019	53645	55284	56090	2.721
TFT	17096	18143	17902	17945	17550	17784	17670	17727	1.908
Toluene	48925	52420	52492	52169	50514	49507	51762	51113	2.865
Chlorobenzene	51700	55103	55327	54632	54267	53033	54687	54107	2.393
Ethylbenzene	42551	45390	45328	44841	43943	42762	44719	44219	2.647
m-,p-Xylene	54205	54424	54253	53567	52018	50050	51746	52895	3.138
Styrene	47957	56536	57281	57945	53412	56698	58360	55455	6.629
o-Xylene	55799	53727	52896	51677	50041	48060	48753	51565	5.422
BFB	44443	48214	47901	48728	48756	48262	48155	47780	3.147
1,3-Dichlorobenzene	37248	44261	44516	44585	44704	43991	45035	43477	6.363
1,4-Dichlorobenzene	40973	49874	49545	48373	47853	46102	46703	47061	6.406
1,2-Dichlorobenzene	35066	38633	38986	38656	38695	37217	37954	37887	3.641
BCB	45926	47411	46888	47241	47429	46214	46650	46823	1.263

Tue Apr 23 13:21:51 2002

Data File : C:\HPCHEM\2\DATA\042202\5G12946.D Vial: 1
Acq On : 22 Apr 2002 13:29 Operator: CBN
Sample : WG116507-01 STD1 1PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\042202\5G12946.D
Acq On : 22 Apr 2002 13:29
Sample : WG116507-01 STD1 1PPB 5ML
Misc : 1,1 S-(93-17),S-92-(36,44)
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Vial: 1
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.08	51288	2.8932 ug/L
Spiked Amount 30.000	Range 70 - 130	Recovery =	9.64%#
10) S BFB	16.20	133330	2.7905 ug/L
Spiked Amount 30.000		Recovery =	9.30%
14) S BCB	21.97	137779	2.9426 ug/L
Spiked Amount 30.000	Range 37 - 137	Recovery =	9.81%#
Target Compounds			
1) TM MTBE	2.24	11757	1.1232 ug/L
2) TM Benzene	3.76	56327	1.0042 ug/L
4) TM Toluene	7.83	48925	0.9572 ug/L
5) TM Chlorobenzene	12.45	51700	0.9555 ug/L
6) TM Ethylbenzene	13.52	42551	0.9623 ug/L
7) TM m-,p-Xylene	14.00	108410	2.0495 ug/L
8) TM Styrene	14.88	47957	0.8648 ug/L
9) TM o-Xylene	15.08	55799	1.0821 ug/L
11) TM 1,3-Dichlorobenzene	19.61	37248	0.7915 ug/L
12) TM 1,4-Dichlorobenzene	19.78	40973	0.8707 ug/L
13) TM 1,2-Dichlorobenzene	20.43	35066	0.9256 ug/L

133

(m)=manual int.

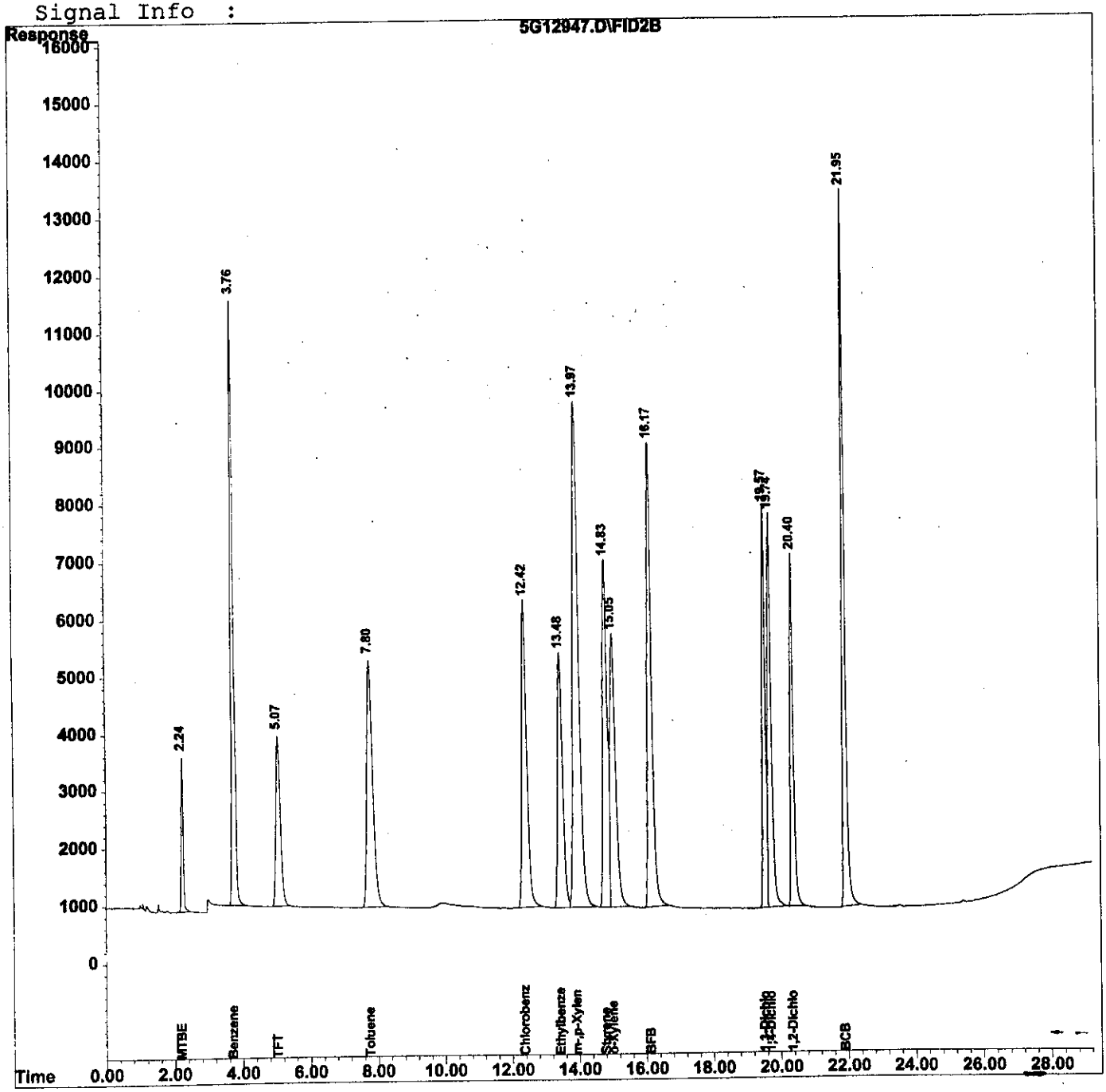
Quantitation Report

Data File : C:\HPCHEM\2\DATA\042202\5G12947.D
Acq On : 22 Apr 2002 14:04
Sample : WG116507-02 STD2 10PPB 5ML
Misc : 1,1 S-(93-17),S-92-(36,44)
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Vial: 2
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



134

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\042202\5G12947.D Vial: 2
Acq On : 22 Apr 2002 14:04 Operator: CBN
Sample : WG116507-02 STD2 10PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	272138	15.3517 ug/L
Spiked Amount 30.000 Range 70 - 130		Recovery =	51.17%#
10) S BFB	16.17	723215	15.1363 ug/L
Spiked Amount 30.000		Recovery =	50.45%
14) S BCB	21.95	711170	15.1885 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery =	50.63%
Target Compounds			
1) TM MTBE	2.24	108182	10.3351 ug/L
2) TM Benzene	3.76	579615	10.3338 ug/L
4) TM Toluene	7.80	524199	10.2557 ug/L
5) TM Chlorobenzene	12.42	551031	10.1841 ug/L
6) TM Ethylbenzene	13.48	453901	10.2648 ug/L
7) TM m-,p-Xylene	13.97	1088481	20.5783 ug/L
8) TM Styrene	14.84	565358	10.1948 ug/L
9) TM o-Xylene	15.06	537265	10.4193 ug/L
11) TM 1,3-Dichlorobenzene	19.57	442610	9.4051 ug/L
12) TM 1,4-Dichlorobenzene	19.74	498740	10.5978 ug/L
13) TM 1,2-Dichlorobenzene	20.40	386329	10.1969 ug/L

135

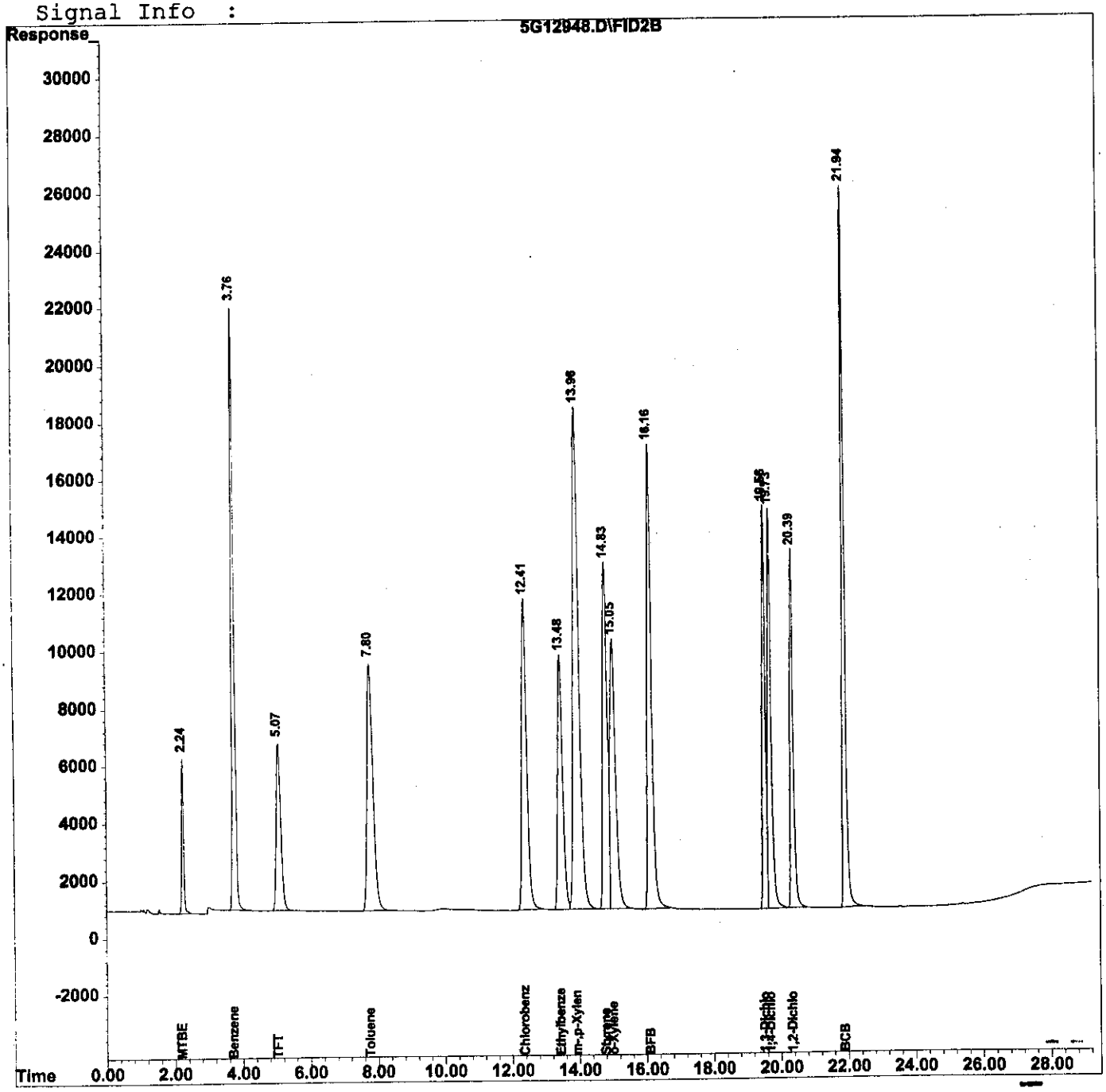
(6) RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\042202\5G12948.D
Acq On : 22 Apr 2002 14:39
Sample : WG116507-03 STD3 20PPB 5ML
Misc : 1,1 S-(93-17),S-92-(36,44)
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Vial: 3
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\042202\5G12948.D Vial: 3
Acq On : 22 Apr 2002 14:39 Operator: CBN
Sample : WG116507-03 STD3 20PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	537047	30.2956 ug/L
Spiked Amount 30.000 Range 70 - 130		Recovery =	100.99%
10) S BFB	16.16	1437037	30.0761 ug/L
Spiked Amount 30.000		Recovery =	100.25%
14) S BCB	21.94	1406625	30.0414 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery =	100.14%
Target Compounds			
1) TM MTBE	2.24	215108	20.5503 ug/L
2) TM Benzene	3.76	1150225	20.5070 ug/L
4) TM Toluene	7.80	1049846	20.5397 ug/L
5) TM Chlorobenzene	12.41	1106539	20.4509 ug/L
6) TM Ethylbenzene	13.48	906551	20.5014 ug/L
7) TM m-,p-Xylene	13.97	2170128	41.0274 ug/L
8) TM Styrene	14.83	1145612	20.6582 ug/L
9) TM o-Xylene	15.05	1057926	20.5165 ug/L
11) TM 1,3-Dichlorobenzene	19.57	890328	18.9188 ug/L
12) TM 1,4-Dichlorobenzene	19.73	990896	21.0558 ug/L
13) TM 1,2-Dichlorobenzene	20.39	779720	20.5803 ug/L

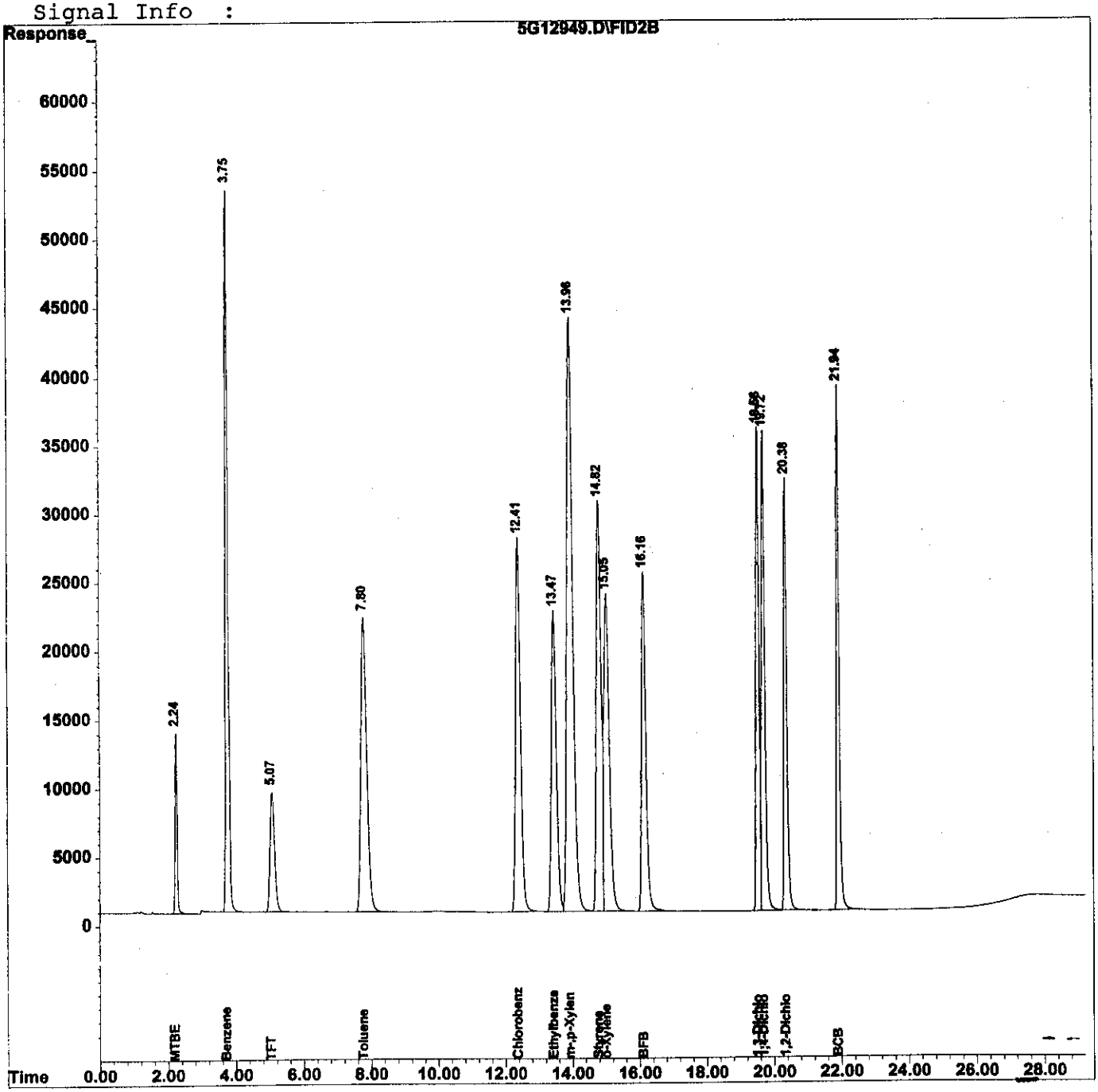
(m)=manual int

Quantitation Report

Data File : C:\HPCHEM\2\DATA\042202\5G12949.D Vial: 4
Acq On : 22 Apr 2002 15:14 Operator: CBN
Sample : WG116507-04 STD4 50PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



138

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\042202\5G12949.D
Acq On : 22 Apr 2002 15:14
Sample : WG116507-04 STD4 50PPB 5ML
Misc : 1,1 S-(93-17),S-92-(36,44)
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Vial: 4
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	807512	45.5529 ug/L
Spiked Amount 30.000 Range 70 - 130		Recovery =	151.84%#
10) S BFB	16.16	2192778	45.8931 ug/L
Spiked Amount 30.000		Recovery =	152.98%
14) S BCB	21.94	2125866	45.4023 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery =	151.34%#
Target Compounds			
1) TM MTBE	2.24	523680	50.0297 ug/L
2) TM Benzene	3.76	2843877	50.7025 ug/L
4) TM Toluene	7.80	2608433	51.0328 ug/L
5) TM Chlorobenzene	12.41	2731610	50.4852 ug/L
6) TM Ethylbenzene	13.47	2242060	50.7035 ug/L
7) TM m-,p-Xylene	13.96	5356662	101.2705 ug/L
8) TM Styrene	14.82	2897265	52.2449 ug/L
9) TM o-Xylene	15.05	2583852	50.1091 ug/L
11) TM 1,3-Dichlorobenzene	19.56	2229246	47.3698 ug/L
12) TM 1,4-Dichlorobenzene	19.73	2418650	51.3944 ug/L
13) TM 1,2-Dichlorobenzene	20.38	1932782	51.0148 ug/L

139

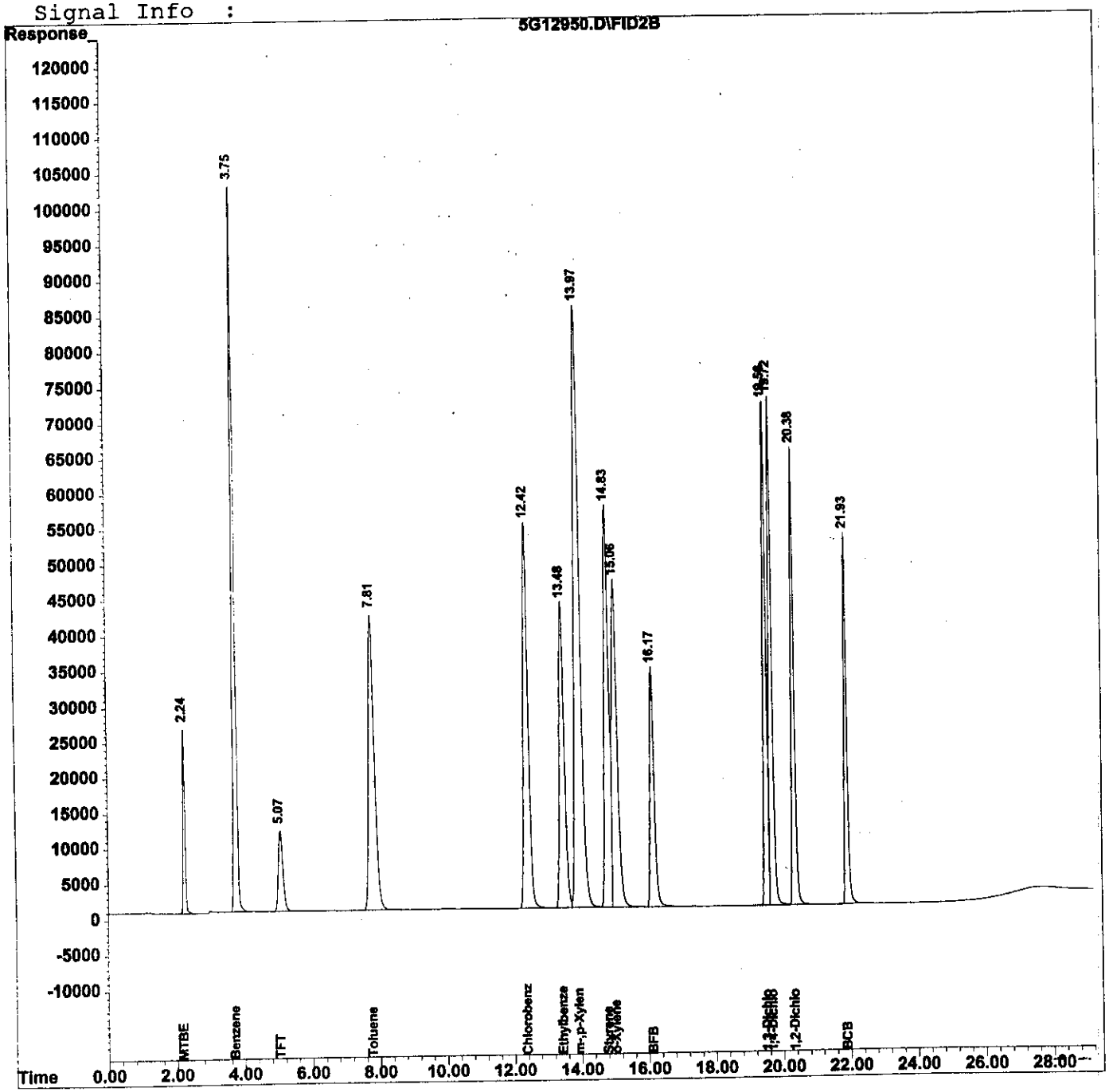
(m)=manual int.

Data File : C:\HPCHEM\2\DATA\042202\5G12950.D
Acq On : 22 Apr 2002 15:48
Sample : WG116507-05 STD5 100PPB 5ML
Misc : 1,1 S-(93-17),S-92-(36,44)
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Vial: 5
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\042202\5G12950.D
Acq On : 22 Apr 2002 15:48
Sample : WG116507-05 STD5 100PPB 5ML
Misc : 1,1 S-(93-17),S-92-(36,44)
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Vial: 5
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.08	1052975	59.3998 ug/L
Spiked Amount 30.000 Range 70 - 130		Recovery =	198.00%#
10) S BFB	16.17	2925355	61.2254 ug/L
Spiked Amount 30.000		Recovery =	204.08%
14) S BCB	21.94	2845744	60.7768 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery =	202.59%#
Target Compounds			
1) TM MTBE	2.24	1036822	99.0526 ug/L
2) TM Benzene	3.75	5501929	98.0920 ug/L
4) TM Toluene	7.81	5051424	98.8287 ug/L
5) TM Chlorobenzene	12.42	5426734	100.2960 ug/L
6) TM Ethylbenzene	13.49	4394325	99.3763 ug/L
7) TM m-,p-Xylene	13.97	10403552	196.6845 ug/L
8) TM Styrene	14.84	5341161	96.3145 ug/L
9) TM o-Xylene	15.06	5004098	97.0453 ug/L
11) TM 1,3-Dichlorobenzene	19.56	4470416	94.9929 ug/L
12) TM 1,4-Dichlorobenzene	19.72	4785322	101.6844 ug/L
13) TM 1,2-Dichlorobenzene	20.38	3869496	102.1334 ug/L

141

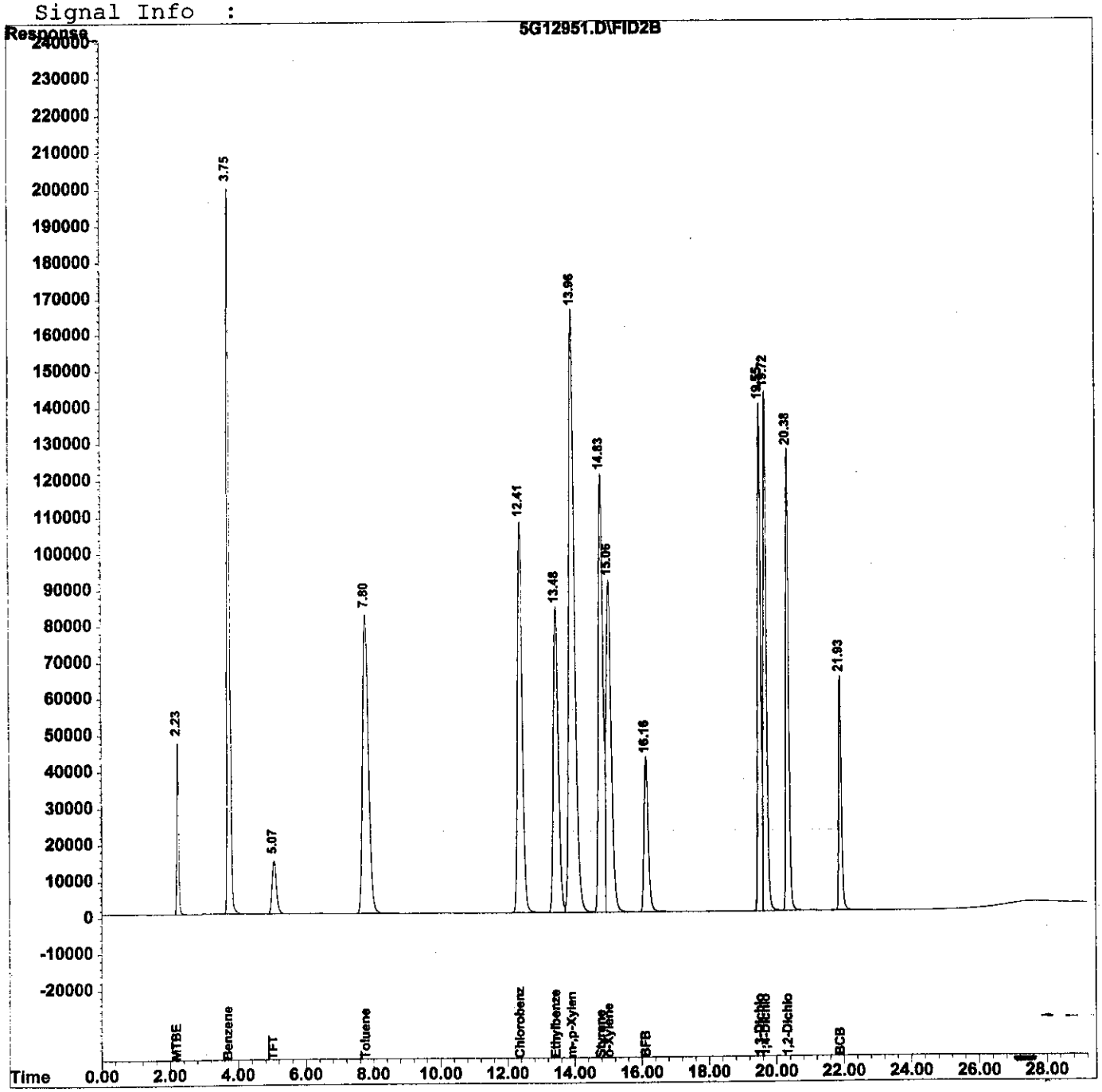
(m)=manual int

Quantitation Report

Data File : C:\HPCHEM\2\DATA\042202\5G12951.D Vial: 6
Acq On : 22 Apr 2002 16:23 Operator: CBN
Sample : WG116507-06 STD6 200PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



142

Data File : C:\HPCHEM\2\DATA\042202\5G12951.D Vial: 6
Acq On : 22 Apr 2002 16:23 Operator: CBN
Sample : WG116507-06 STD6 200PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	1333832	75.2433 ug/L
Spiked Amount 30.000 Range 70 - 130		Recovery = 250.81%#	
10) S BFB	16.16	3619677	75.7570 ug/L
Spiked Amount 30.000		Recovery = 252.52%	
14) S BCB	21.94	3466056	74.0249 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery = 246.75%#	
Target Compounds			
1) TM MTBE	2.24	1862797	177.9620 ug/L
2) TM Benzene	3.75	10728979	191.2832 ug/L
4) TM Toluene	7.80	9901450	193.7172 ug/L
5) TM Chlorobenzene	12.41	10606672	196.0308 ug/L
6) TM Ethylbenzene	13.48	8552369	193.4091 ug/L
7) TM m-,p-Xylene	13.97	20020076	378.4899 ug/L
8) TM Styrene	14.83	11339575	204.4809 ug/L
9) TM o-Xylene	15.06	9611978	186.4066 ug/L
11) TM 1,3-Dichlorobenzene	19.55	8798263	186.9563 ug/L
12) TM 1,4-Dichlorobenzene	19.72	9220416	195.9268 ug/L
13) TM 1,2-Dichlorobenzene	20.38	7443401	196.4647 ug/L

143

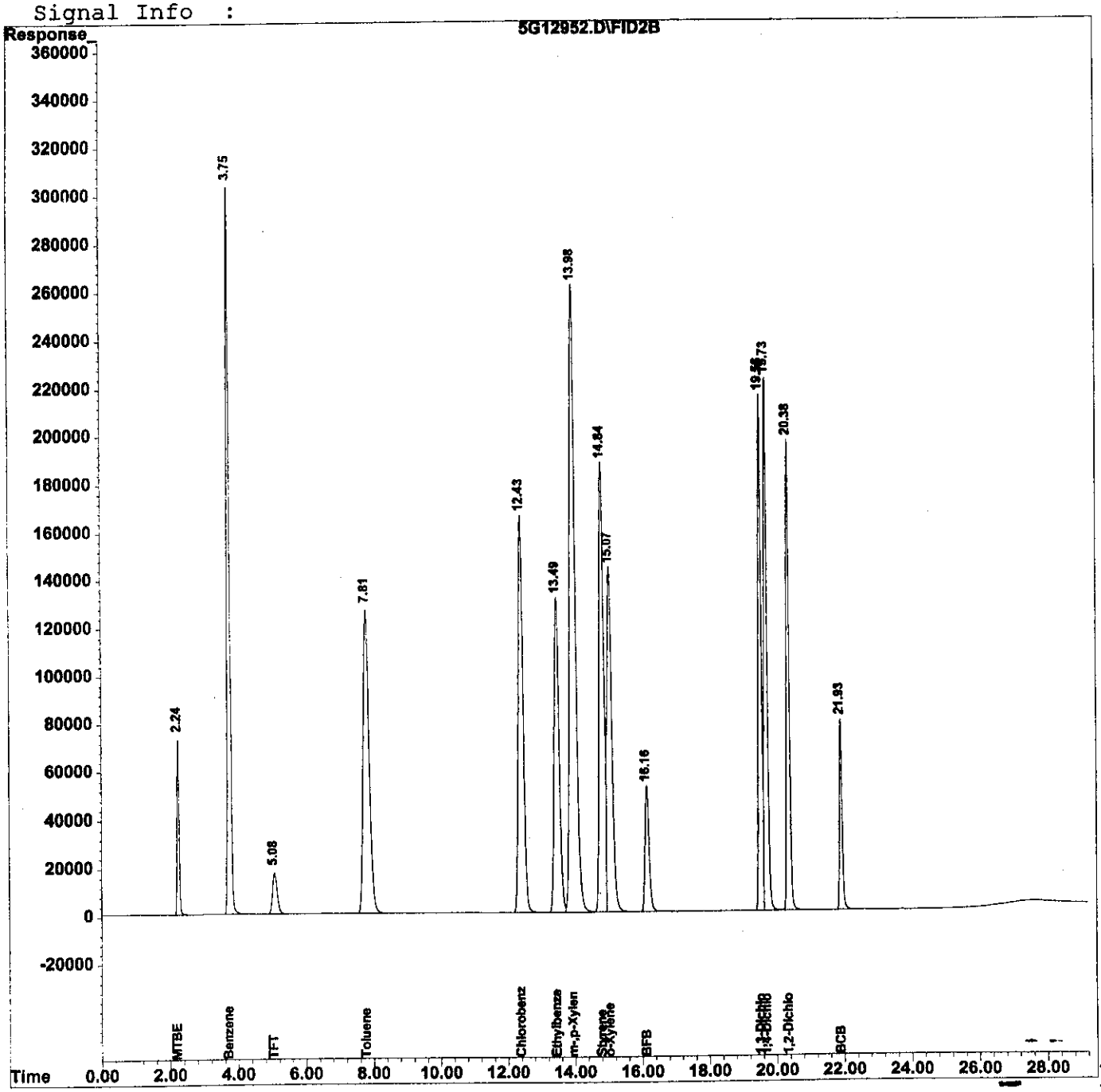
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\042202\5G12952.D Vial: 7
Acq On : 22 Apr 2002 16:58 Operator: CBN
Sample : WG116507-07 STD7 300PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



144

5G12952.D 602STY.M Tue Apr 23 13:18:28 2002 Page 2

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\042202\5G12952.D Vial: 7
Acq On : 22 Apr 2002 16:58 Operator: CBN
Sample : WG116507-07 STD7 300PPB 5ML Inst : HP5
Misc : 1,1 S-(93-17),S-92-(36,44) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:18 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Mon Apr 22 19:15:15 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.08	1590258	89.7086 ug/L
Spiked Amount 30.000 Range 70 - 130		Recovery =	299.03%#
10) S BFB	16.17	4333947	90.7061 ug/L
Spiked Amount 30.000		Recovery =	302.35%
14) S BCB	21.93	4198503	89.6678 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery =	298.89%#
Target Compounds			
1) TM MTBE	2.24	2935664	280.4582 ug/L
2) TM Benzene	3.75	16585339	295.6942 ug/L
4) TM Toluene	7.81	15528746	303.8126 ug/L
5) TM Chlorobenzene	12.43	16406053	303.2140 ug/L
6) TM Ethylbenzene	13.49	13415617	303.3899 ug/L
7) TM m-,p-Xylene	13.98	31047355	586.9664 ug/L
8) TM Styrene	14.84	17507932	315.7119 ug/L
9) TM o-Xylene	15.07	14625810	283.6407 ug/L
11) TM 1,3-Dichlorobenzene	19.56	13510483	287.0874 ug/L
12) TM 1,4-Dichlorobenzene	19.73	14010936	297.7217 ug/L
13) TM 1,2-Dichlorobenzene	20.38	11386255	300.5344 ug/L

(f) RT Delta > 1/2 Window (m)=manual int.

145

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\042202\5G12955.D
Acq On : 22 Apr 2002 18:42
Sample : WG116507-08 ALT SOURCE 20PPB 5ML
Misc : 1,1 S-92-44
IntFile : autoint1.e

Vial: 10
Operator: CBN
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:19:26 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	TM	MTBE	10.467	11.052 E3	-5.6	103	0.00
2	TM	Benzene	56.089	59.558 E3	-6.2	104	0.00
3	S	TFT	17.727	17.906 E3	-1.0	100	0.00
4	TM	Toluene	51.113	54.406 E3	-6.4	104	0.00
5	TM	Chlorobenzene	54.107	56.529 E3	-4.5	102	0.00
6	TM	Ethylbenzene	44.219	47.600 E3	-7.6	105	0.00
7	TM	m-,p-Xylene	52.895	55.632 E3	-5.2	103	0.00
8	TM	Styrene	55.455	58.150 E3	-4.9	102	0.00
9	TM	o-Xylene	51.565	53.613 E3	-4.0	101	-0.01
10	S	BFB	47.780	46.240 E3	3.2	97	-0.01
11	TM	1,3-Dichlorobenzene	43.477	46.342 E3	-6.6	104	-0.01
12	TM	1,4-Dichlorobenzene	47.061	50.837 E3	-8.0	103	-0.01
13	TM	1,2-Dichlorobenzene	37.887	40.945 E3	-8.1	105	0.00
14	S	BCB	46.823	46.651 E3	0.4	99	0.00

146

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\042202\5G12955.D
Acq On : 22 Apr 2002 18:42
Sample : WG116507-08 ALT SOURCE 20PPB 5ML
Misc : 1,1 S-92-44
IntFile : autoint1.e

Vial: 10
Operator: CBN
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:19:26 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	TM	MTBE	20.000	21.117	-5.6	103	0.00
2	TM	Benzene	20.000	21.237	-6.2	104	0.00
3	S	TFT	30.000	30.303	-1.0	100	0.00
4	TM	Toluene	20.000	21.288	-6.4	104	0.00
5	TM	Chlorobenzene	20.000	20.895	-4.5	102	0.00
6	TM	Ethylbenzene	20.000	21.529	-7.6	105	0.00
7	TM	m-,p-Xylene	40.000	42.070	-5.2	103	0.00
8	TM	Styrene	20.000	20.972	-4.9	102	0.00
9	TM	o-Xylene	20.000	20.795	-4.0	101	-0.01
10	S	BFB	30.000	29.033	3.2	97	-0.01
11	TM	1,3-Dichlorobenzene	20.000	21.318	-6.6	104	-0.01
12	TM	1,4-Dichlorobenzene	20.000	21.605	-8.0	103	-0.01
13	TM	1,2-Dichlorobenzene	20.000	21.614	-8.1	105	0.00
14	S	BCB	30.000	29.890	0.4	99	0.00

147

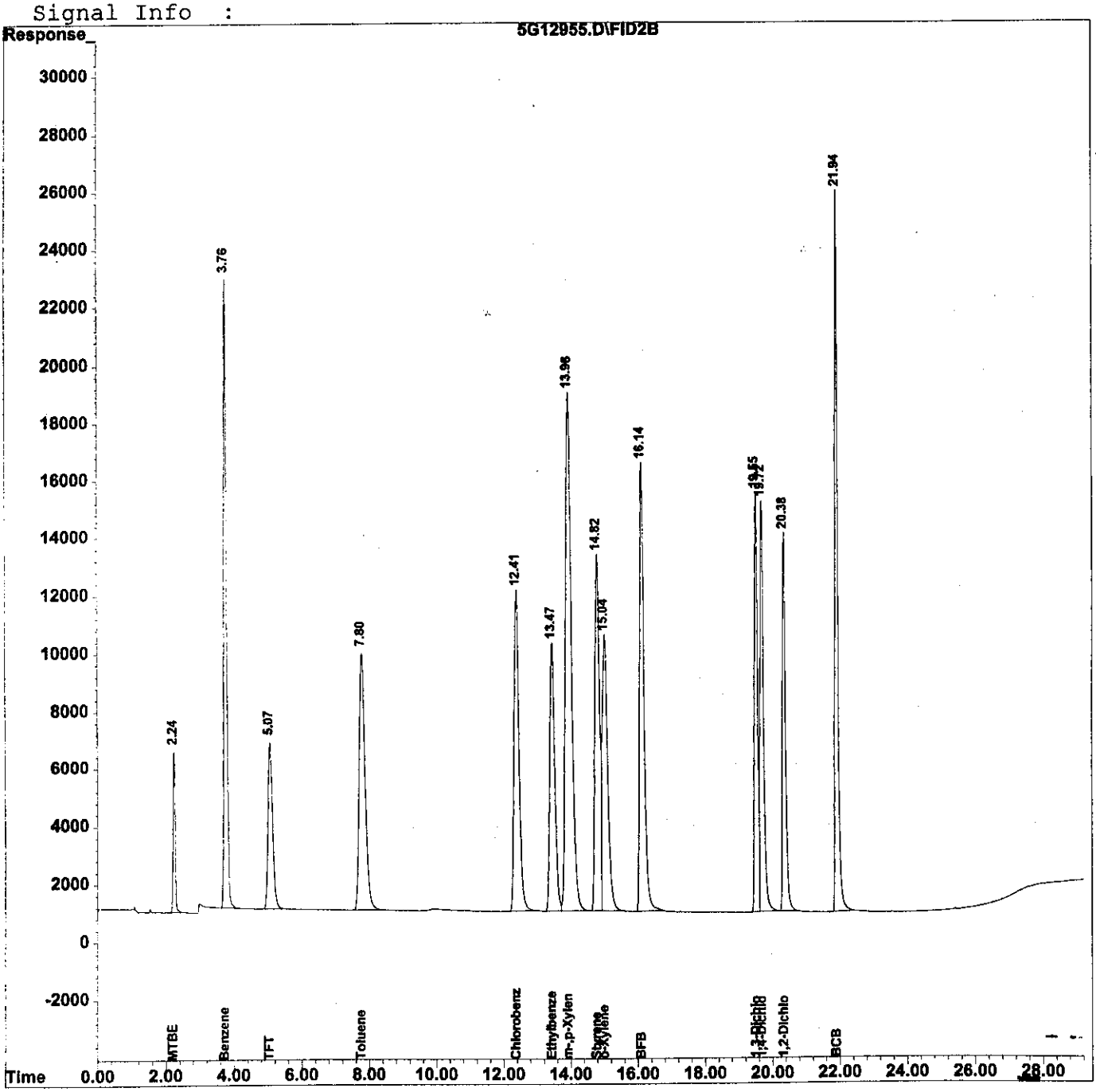
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report

Data File : C:\HPCHEM\2\DATA\042202\5G12955.D Vial: 10
Acq On : 22 Apr 2002 18:42 Operator: CBN
Sample : WG116507-08 ALT SOURCE 20PPB 5ML Inst : HP5
Misc : 1,1 S-92-44 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 23 13:20 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



148

Data File : C:\HPCHEM\2\DATA\042202\5G12955.D
Acq On : 22 Apr 2002 18:42
Sample : WG116507-08 ALT SOURCE 20PPB 5ML
Misc : 1,1 S-92-44
IntFile : autoint1.e
Quant Time: Apr 23 13:20 2002 Quant Results File: 602STY.RES

Vial: 10
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	537186	30.3034 ug/L
Spiked Amount 30.000 Range 70 - 130		Recovery =	101.01%
10) S BFB	16.15	1387204	29.0331 ug/L
Spiked Amount 30.000		Recovery =	96.78%
14) S BCB	21.94	1399522	29.8897 ug/L
Spiked Amount 30.000 Range 37 - 137		Recovery =	99.63%
Target Compounds			
1) TM MTBE	2.24	221045	21.1175 ug/L
2) TM Benzene	3.76	1191168	21.2369 ug/L
4) TM Toluene	7.80	1088112	21.2884 ug/L
5) TM Chlorobenzene	12.41	1130584	20.8953 ug/L
6) TM Ethylbenzene	13.48	952001	21.5292 ug/L
7) TM m-,p-Xylene	13.96	2225281	42.0701 ug/L
8) TM Styrene	14.82	1162996	20.9717 ug/L
9) TM o-Xylene	15.04	1072269	20.7947 ug/L
11) TM 1,3-Dichlorobenzene	19.55	926849	21.3180 ug/L
12) TM 1,4-Dichlorobenzene	19.72	1016744	21.6050 ug/L
13) TM 1,2-Dichlorobenzene	20.38	818900	21.6144 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\060602\5G13651.D
Acq On : 6 Jun 2002 9:17
Sample : WG119271-01 8021 STD 20PPB 5ML
Misc : 1,1 S-94-04,93-47
IntFile : autoint1.e

Vial: 1
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:19:26 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	TM	MTBE	10.467	10.983 E3	-4.9	102	0.00
2	TM	Benzene	56.089	56.855 E3	-1.4	99	0.00
3	S	TFT	17.727	18.346 E3	-3.5	102	-0.01
4	TM	Toluene	51.113	53.595 E3	-4.9	102	-0.02
5	TM	Chlorobenzene	54.107	55.381 E3	-2.4	100	-0.01
6	TM	Ethylbenzene	44.219	45.028 E3	-1.8	99	-0.01
7	TM	m-,p-Xylene	52.895	53.183 E3	-0.5	98	0.00
8	TM	Styrene	55.455	45.944 E3	17.2#	80	0.22
9	TM	o-Xylene	51.565	45.944 E3	10.9	87	0.00
10	S	BFB	47.780	47.443 E3	0.7	99	-0.02
11	TM	1,3-Dichlorobenzene	43.477	45.204 E3	-4.0	102	-0.01
12	TM	1,4-Dichlorobenzene	47.061	49.984 E3	-6.2	101	-0.01
13	TM	1,2-Dichlorobenzene	37.887	40.045 E3	-5.7	103	0.00
14	S	BCB	46.823	44.600 E3	4.7	95	0.00

150

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\2\DATA\060602\5G13651.D
Acq On : 6 Jun 2002 9:17
Sample : WG119271-01 8021 STD 20PPB 5ML
Misc : 1,1 S-94-04,93-47
IntFile : autoint1.e

Vial: 1
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:19:26 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	TM	MTBE	20.000	20.986	-4.9	102	0.00
2	TM	Benzene	20.000	20.273	-1.4	99	0.00
3	S	TFT	30.000	31.048	-3.5	102	-0.01
4	TM	Toluene	20.000	20.971	-4.9	102	-0.02
5	TM	Chlorobenzene	20.000	20.471	-2.4	100	-0.01
6	TM	Ethylbenzene	20.000	20.366	-1.8	99	-0.01
7	TM	m-,p-Xylene	40.000	40.218	-0.5	98	0.00
8	TM	Styrene	20.000	16.570	17.2#	80	0.22
9	TM	o-Xylene	20.000	17.820	10.9	87	0.00
10	S	BFB	30.000	29.788	0.7	99	-0.02
11	TM	1,3-Dichlorobenzene	20.000	20.794	-4.0	102	-0.01
12	TM	1,4-Dichlorobenzene	20.000	21.243	-6.2	101	-0.01
13	TM	1,2-Dichlorobenzene	20.000	21.139	-5.7	103	0.00
14	S	BCB	30.000	28.576	4.7	95	0.00

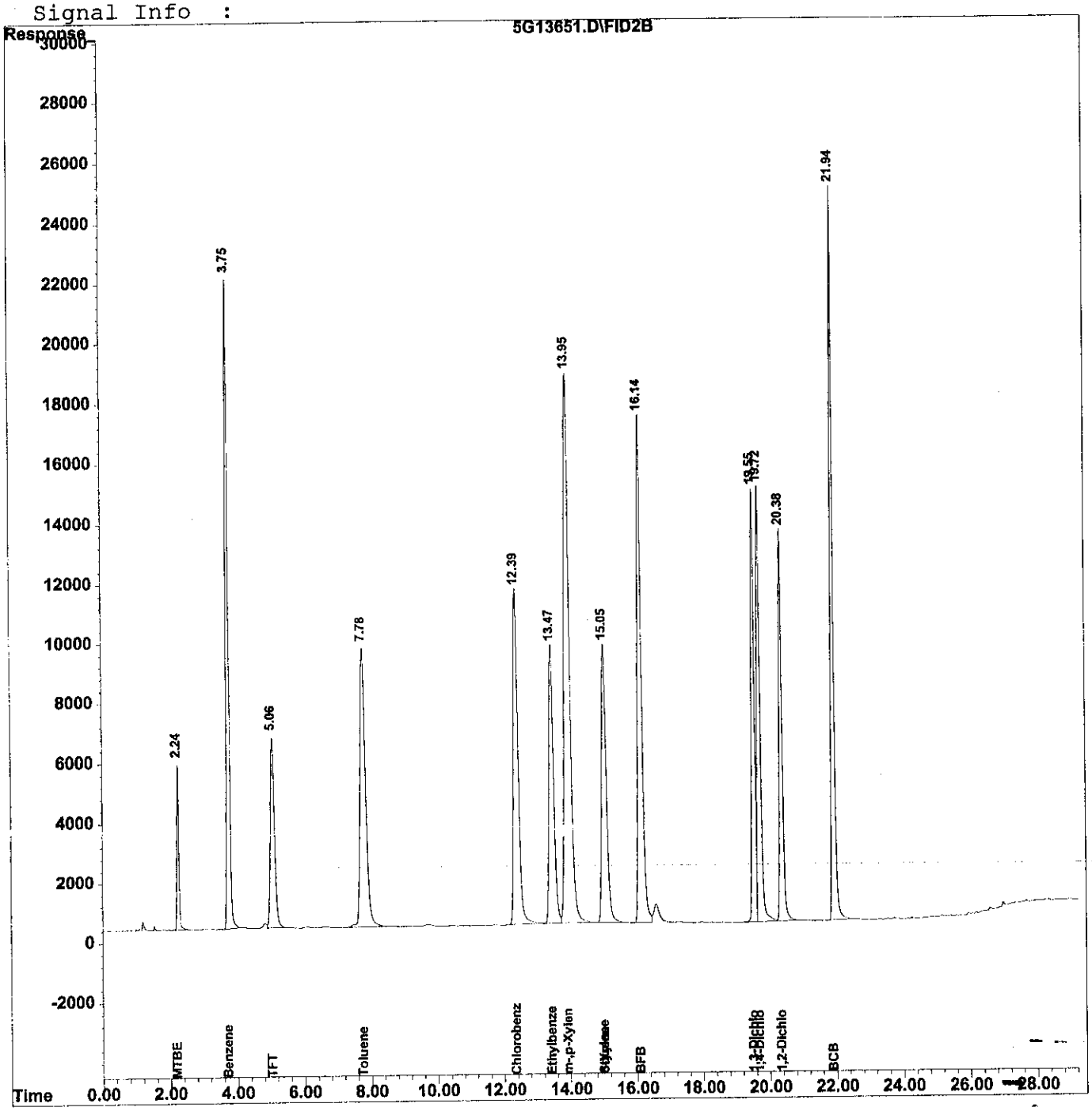
151

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G13651.D 602STY.M Thu Jun 06 11:45:29 2002 Page 1

Data File : C:\HPCHEM\2\DATA\060602\5G13651.D Vial: 1
Acq On : 6 Jun 2002 9:17 Operator: CSH
Sample : WG119271-01 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 9:47 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



152

Data File : C:\HPCHEM\2\DATA\060602\5G13651.D Vial: 1
Acq On : 6 Jun 2002 9:17 Operator: CSH
Sample : WG119271-01 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 9:47 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.06	550384	31.0479 ug/L
Spiked Amount 30.000 Range 70 - 130 Recovery = 103.49%			
10) S BFB	16.15	1423276	29.7881 ug/L
Spiked Amount 30.000 Recovery = 99.29%			
14) S BCB	21.94	1338002	28.5758 ug/L
Spiked Amount 30.000 Range 37 - 137 Recovery = 95.25%			
Target Compounds			
1) TM MTBE	2.24	219665	20.9857 ug/L
2) TM Benzene	3.75	1137101	20.2730 ug/L
4) TM Toluene	7.78	1071897	20.9712 ug/L
5) TM Chlorobenzene	12.40	1107630	20.4710 ug/L
6) TM Ethylbenzene	13.47	900563	20.3659 ug/L
7) TM m-,p-Xylene	13.96	2127315	40.2180 ug/L
8) TM Styrene	15.05	918873	16.5696 ug/L
9) TM o-Xylene	15.05	918873	17.8199 ug/L
11) TM 1,3-Dichlorobenzene	19.55	904082	20.7944 ug/L
12) TM 1,4-Dichlorobenzene	19.72	999690	21.2426 ug/L
13) TM 1,2-Dichlorobenzene	20.38	800892	21.1391 ug/L

153

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\060602\5G13662.D Vial: 9
Acq On : 6 Jun 2002 17:21 Operator: CSH
Sample : WG119271-02 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	TM	MTBE	10.467	10.708 E3	-2.3	100	0.00
2	TM	Benzene	56.089	61.037 E3	-8.8	106	0.00
3	S	TFT	17.727	18.563 E3	-4.7	104	0.00
4	TM	Toluene	51.113	56.137 E3	-9.8	107	0.00
5	TM	Chlorobenzene	54.107	57.861 E3	-6.9	105	0.00
6	TM	Ethylbenzene	44.219	48.499 E3	-9.7	107	0.00
7	TM	m-,p-Xylene	52.895	56.568 E3	-6.9	104	0.00
8	TM	Styrene	55.455	48.287 E3	12.9	84	0.22
9	TM	o-Xylene	51.565	48.287 E3	6.4	91	0.00
10	S	BFB	47.780	48.240 E3	-1.0	101	-0.02
11	TM	1,3-Dichlorobenzene	43.477	46.459 E3	-6.9	104	-0.02
12	TM	1,4-Dichlorobenzene	47.061	51.042 E3	-8.5	103	-0.02
13	TM	1,2-Dichlorobenzene	37.887	41.101 E3	-8.5	105	-0.02
14	S	BCB	46.823	45.449 E3	2.9	97	-0.02

Data File : C:\HPCHEM\2\DATA\060602\5G13662.D
Acq On : 6 Jun 2002 17:21
Sample : WG119271-02 8021 STD 20PPB 5ML
Misc : 1,1 S-94-04,93-47
IntFile : autoint1.e

Vial: 9
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	TM	MTBE	20.000	20.460	-2.3	100	0.00
2	TM	Benzene	20.000	21.764	-8.8	106	0.00
3	S	TFT	30.000	31.415	-4.7	104	0.00
4	TM	Toluene	20.000	21.966	-9.8	107	0.00
5	TM	Chlorobenzene	20.000	21.387	-6.9	105	0.00
6	TM	Ethylbenzene	20.000	21.936	-9.7	107	0.00
7	TM	m-,p-Xylene	40.000	42.778	-6.9	104	0.00
8	TM	Styrene	20.000	17.415	12.9	84	0.22
9	TM	o-Xylene	20.000	18.729	6.4	91	0.00
10	S	BFB	30.000	30.289	-1.0	101	-0.02
11	TM	1,3-Dichlorobenzene	20.000	21.372	-6.9	104	-0.02
12	TM	1,4-Dichlorobenzene	20.000	21.692	-8.5	103	-0.02
13	TM	1,2-Dichlorobenzene	20.000	21.697	-8.5	105	-0.02
14	S	BCB	30.000	29.120	2.9	97	-0.02

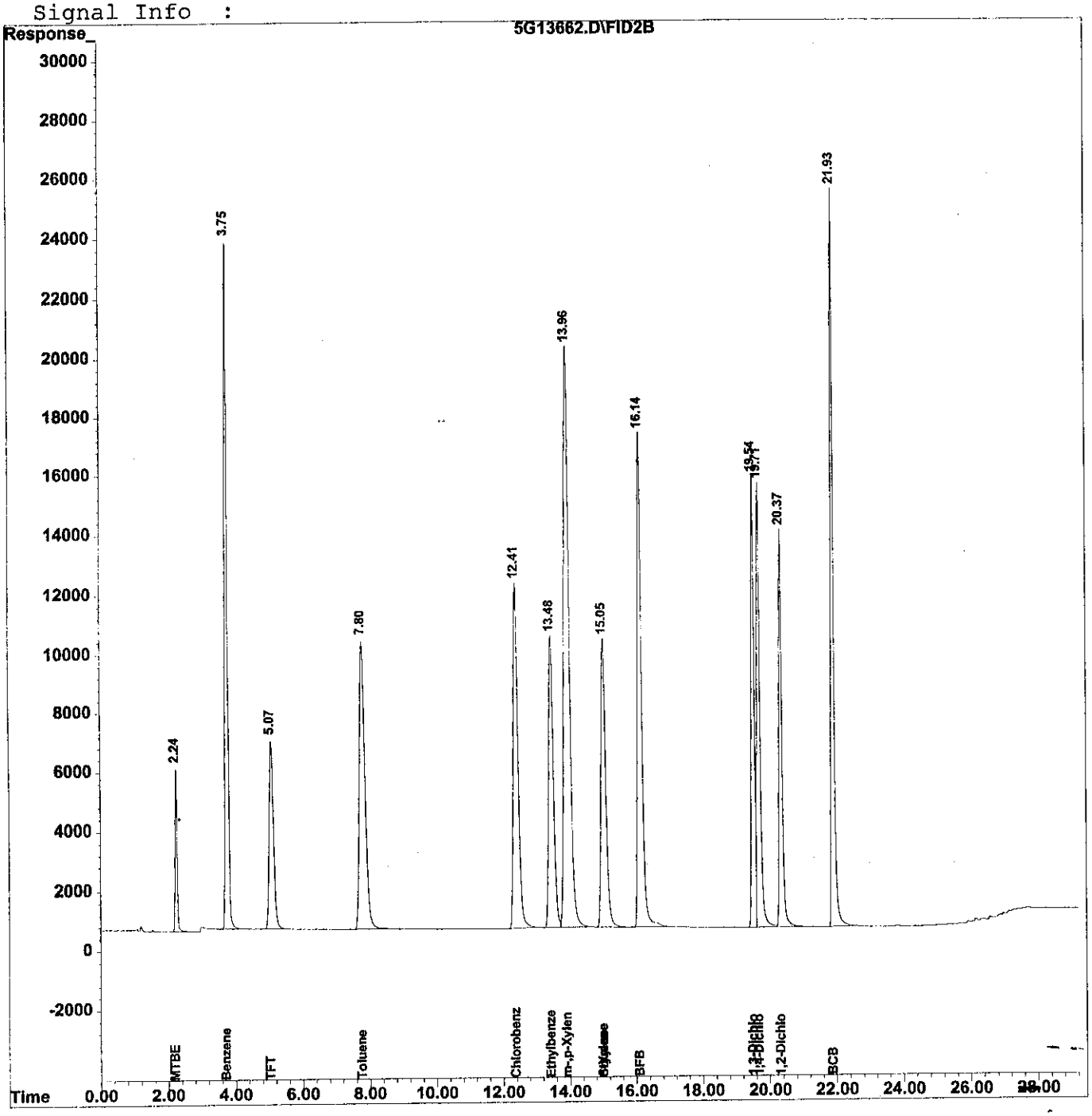
155

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G13662.D 602STY.M Thu Jun 06 17:53:18 2002 Page 1

Data File : C:\HPCHEM\2\DATA\060602\5G13662.D Vial: 9
Acq On : 6 Jun 2002 17:21 Operator: CSH
Sample : WG119271-02 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 17:50 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



156

Data File : C:\HPCHEM\2\DATA\060602\5G13662.D Vial: 9
Acq On : 6 Jun 2002 17:21 Operator: CSH
Sample : WG119271-02 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 17:50 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	556887	31.4148 ug/L
Spiked Amount 30.000	Range 70 - 130	Recovery = 104.72%	
10) S BFB	16.14	1447210	30.2890 ug/L
Spiked Amount 30.000		Recovery = 100.96%	
14) S BCB	21.93	1363459	29.1195 ug/L
Spiked Amount 30.000	Range 37 - 137	Recovery = 97.06%	
Target Compounds			
1) TM MTBE	2.24	214168	20.4605 ug/L
2) TM Benzene	3.75	1220740	21.7642 ug/L
4) TM Toluene	7.80	1122746	21.9660 ug/L
5) TM Chlorobenzene	12.41	1157211	21.3874 ug/L
6) TM Ethylbenzene	13.48	969989	21.9360 ug/L
7) TM m-,p-Xylene	13.96	2262707	42.7776 ug/L
8) TM Styrene	15.05	965735	17.4146 ug/L
9) TM o-Xylene	15.05	965735	18.7287 ug/L
11) TM 1,3-Dichlorobenzene	19.54	929185	21.3718 ug/L
12) TM 1,4-Dichlorobenzene	19.71	1020843	21.6921 ug/L
13) TM 1,2-Dichlorobenzene	20.37	822029	21.6970 ug/L

157

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\060602\5G13673.D Vial: 20
Acq On : 6 Jun 2002 23:43 Operator: CSH
Sample : WG119271-03 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	TM	MTBE	10.467	10.876 E3	-3.9	101	0.00
2	TM	Benzene	56.089	60.242 E3	-7.4	105	0.00
3	S	TFT	17.727	18.195 E3	-2.6	102	0.00
4	TM	Toluene	51.113	55.140 E3	-7.9	105	0.00
5	TM	Chlorobenzene	54.107	56.835 E3	-5.0	103	0.00
6	TM	Ethylbenzene	44.219	47.820 E3	-8.1	105	0.00
7	TM	m-,p-Xylene	52.895	56.125 E3	-6.1	103	0.00
8	TM	Styrene	55.455	48.078 E3	13.3	84	0.23
9	TM	o-Xylene	51.565	48.078 E3	6.8	91	0.00
10	S	BFB	47.780	48.407 E3	-1.3	101	0.00
11	TM	1,3-Dichlorobenzene	43.477	46.140 E3	-6.1	104	-0.02
12	TM	1,4-Dichlorobenzene	47.061	50.574 E3	-7.5	102	-0.01
13	TM	1,2-Dichlorobenzene	37.887	41.199 E3	-8.7	106	-0.01
14	S	BCB	46.823	45.971 E3	1.8	98	0.00

Data File : C:\HPCHEM\2\DATA\060602\5G13673.D Vial: 20
Acq On : 6 Jun 2002 23:43 Operator: CSH
Sample : WG119271-03 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration

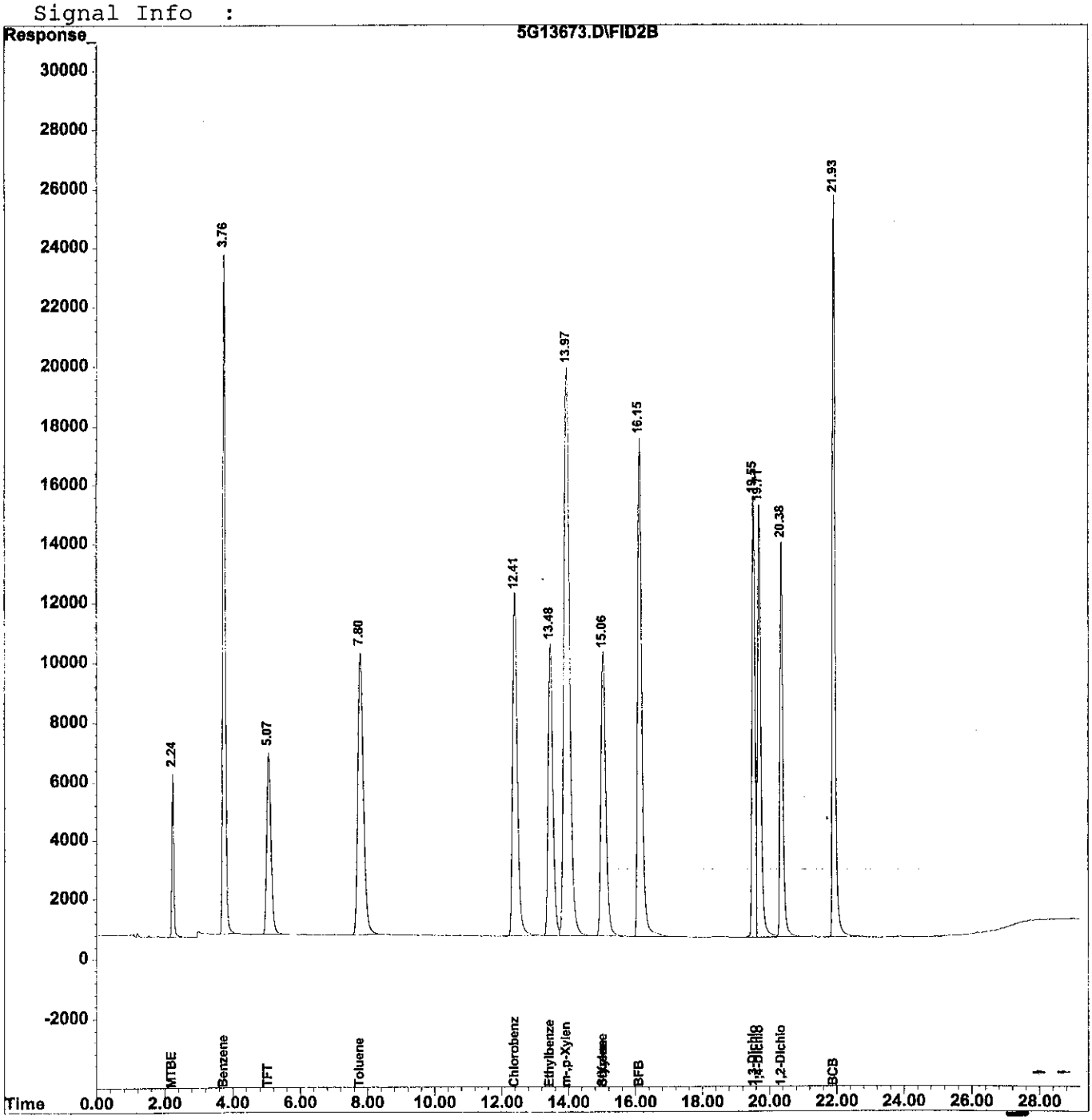
Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	TM	MTBE	20.000	20.781	-3.9	101	0.00
2	TM	Benzene	20.000	21.481	-7.4	105	0.00
3	S	TFT	30.000	30.792	-2.6	102	0.00
4	TM	Toluene	20.000	21.576	-7.9	105	0.00
5	TM	Chlorobenzene	20.000	21.008	-5.0	103	0.00
6	TM	Ethylbenzene	20.000	21.629	-8.1	105	0.00
7	TM	m-,p-Xylene	40.000	42.443	-6.1	103	0.00
8	TM	Styrene	20.000	17.339	13.3	84	0.23
9	TM	o-Xylene	20.000	18.648	6.8	91	0.00
10	S	BFB	30.000	30.394	-1.3	101	0.00
11	TM	1,3-Dichlorobenzene	20.000	21.225	-6.1	104	-0.02
12	TM	1,4-Dichlorobenzene	20.000	21.493	-7.5	102	-0.01
13	TM	1,2-Dichlorobenzene	20.000	21.749	-8.7	106	-0.01
14	S	BCB	30.000	29.454	1.8	98	0.00

Data File : C:\HPCHEM\2\DATA\060602\5G13673.D Vial: 20
Acq On : 6 Jun 2002 23:43 Operator: CSH
Sample : WG119271-03 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 7 0:12 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



160

Data File : C:\HPCHEM\2\DATA\060602\5G13673.D Vial: 20
Acq On : 6 Jun 2002 23:43 Operator: CSH
Sample : WG119271-03 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 7 0:12 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.08	545846	30.7919 ug/L
Spiked Amount 30.000 Range 70 - 130 Recovery = 102.64%			
10) S BFB	16.15	1452220	30.3938 ug/L
Spiked Amount 30.000 Recovery = 101.31%			
14) S BCB	21.93	1379141	29.4545 ug/L
Spiked Amount 30.000 Range 37 - 137 Recovery = 98.18%			
Target Compounds			
1) TM MTBE	2.24	217528	20.7815 ug/L
2) TM Benzene	3.76	1204844	21.4807 ug/L
4) TM Toluene	7.80	1102806	21.5759 ug/L
5) TM Chlorobenzene	12.41	1136691	21.0081 ug/L
6) TM Ethylbenzene	13.48	956394	21.6285 ug/L
7) TM m-,p-Xylene	13.97	2244982	42.4425 ug/L
8) TM Styrene	15.06	961567	17.3395 ug/L
9) TM o-Xylene	15.06	961567	18.6478 ug/L
11) TM 1,3-Dichlorobenzene	19.55	922807	21.2251 ug/L
12) TM 1,4-Dichlorobenzene	19.72	1011470	21.4930 ug/L
13) TM 1,2-Dichlorobenzene	20.38	823984	21.7486 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

DAILY RETENTION TIME
WINDOW DETERMINATION
GC VOLATILES

Date of Analysis: 6-Jun-02
Filename: 5G13651
Sub Directory: 060602
Instrument: HP5
Matrix: WATER

Analyte Name	STD RT	From RT	To RT
methyl-tert-butyl-ether	2.240	**2.217**	**2.263**
benzene	3.752	**3.722**	**3.782**
1,1,1-trifluorotoluene (SS)	5.064	**5.020**	**5.108**
toluene	7.783	**7.715**	**7.851**
chlorobenzene	12.396	**12.319**	**12.473**
ethylbenzene	13.466	**13.380**	**13.552**
m+p-xylene	13.956	**13.853**	**14.059**
o-xylene	15.053	**14.950**	**15.156**
bromofluorobenzene (SS)	16.146	**16.060**	**16.232**
1,3-dichlorobenzene	19.553	**19.488**	**19.618**
1,4-dichlorobenzene	19.721	**19.657**	**19.785**
1,2-dichlorobenzene	20.382	**20.325**	**20.439**
bromochlorobenzene (SS)	21.939	**21.886**	**21.992**

INSTRUMENT:	HP5	**MATRIX:**	WATER
CONT STD #1:	5G11797	**DATE #1:**	9-Jan-02
CONT STD #2:	5G11808	**DATE #2:**	10-Jan-02
CONT STD #3:	5G11824	**DATE #3:**	10-Jan-02

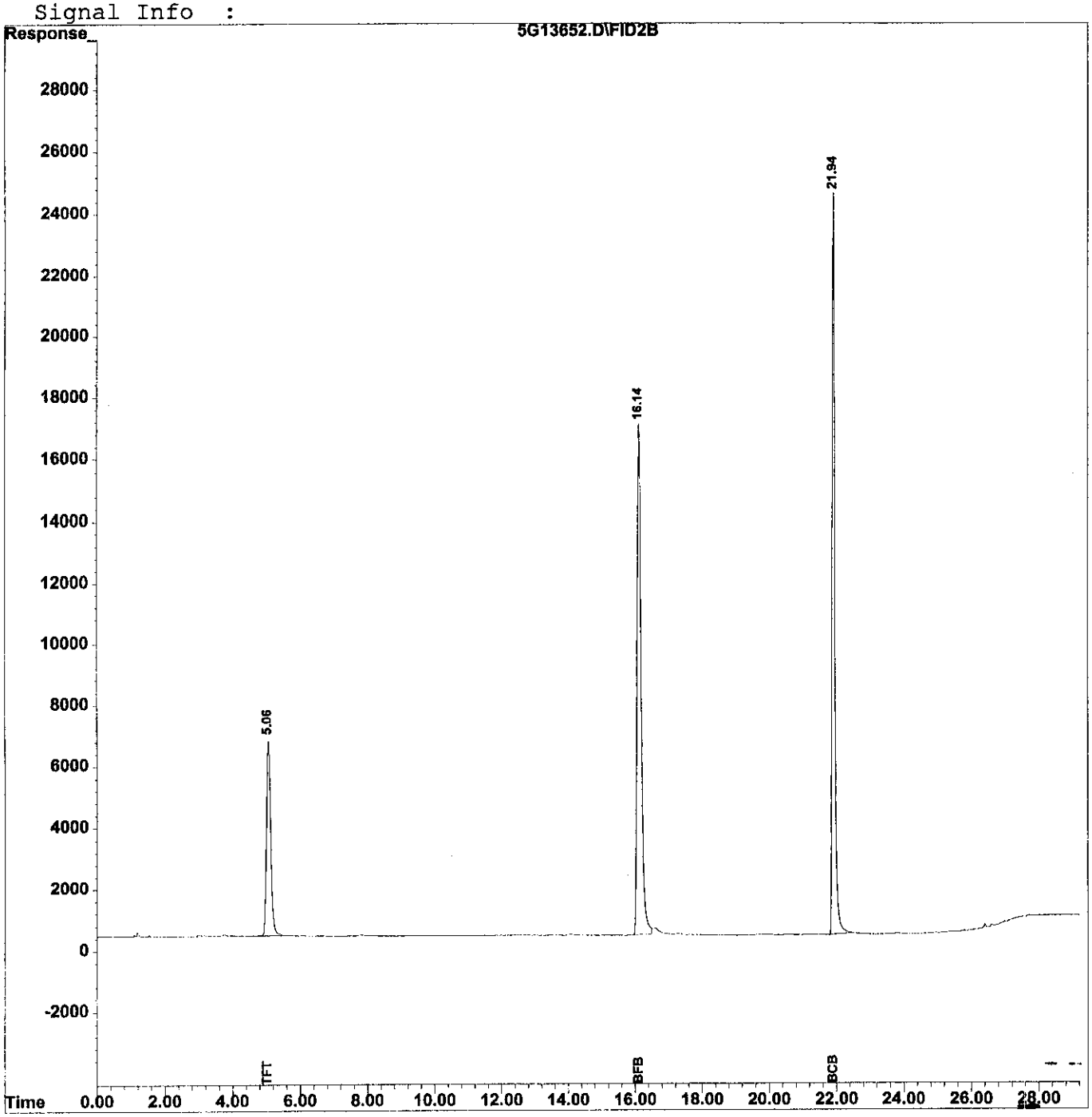
Analyte Name	RT #1	RT #2	RT #3	Mean	STD DEV	RT Window
methyl-tert-butyl-ether	2.319	2.304	2.312	2.312	0.008	**0.023**
benzene	3.883	3.863	3.875	3.874	0.010	**0.030**
1,1,1-trifluorotoluene (SS)	5.246	5.217	5.231	5.231	0.015	**0.044**
toluene	8.082	8.039	8.049	8.057	0.023	**0.068**
chlorobenzene	12.683	12.635	12.643	12.654	0.026	**0.077**
ethylbenzene	13.748	13.695	13.702	13.715	0.029	**0.086**
m+p-xylene	14.244	14.182	14.187	14.204	0.034	**0.103**
o-xylene	15.328	15.266	15.271	15.288	0.034	**0.103**
bromofluorobenzene (SS)	16.400	16.347	16.355	16.367	0.029	**0.086**
1,3-dichlorobenzene	19.750	19.710	19.715	19.725	0.022	**0.065**
1,4-dichlorobenzene	19.915	19.876	19.880	19.890	0.021	**0.064**
1,2-dichlorobenzene	20.561	20.526	20.530	20.539	0.019	**0.057**
bromochlorobenzene (SS)	22.097	22.064	22.069	22.077	0.018	**0.053**

2.1.3.4 Raw Data

Data File : C:\HPCHEM\2\DATA\060602\5G13652.D Vial: 2
Acq On : 6 Jun 2002 10:22 Operator: CSH
Sample : WG119272-01 WATER BLANK 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 10:52 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



164

Data File : C:\HPCHEM\2\DATA\060602\5G13652.D Vial: 2
Acq On : 6 Jun 2002 10:22 Operator: CSH
Sample : WG119272-01 WATER BLANK 5ML Inst : HP5
Misc : 1,1 S-93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 10:52 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

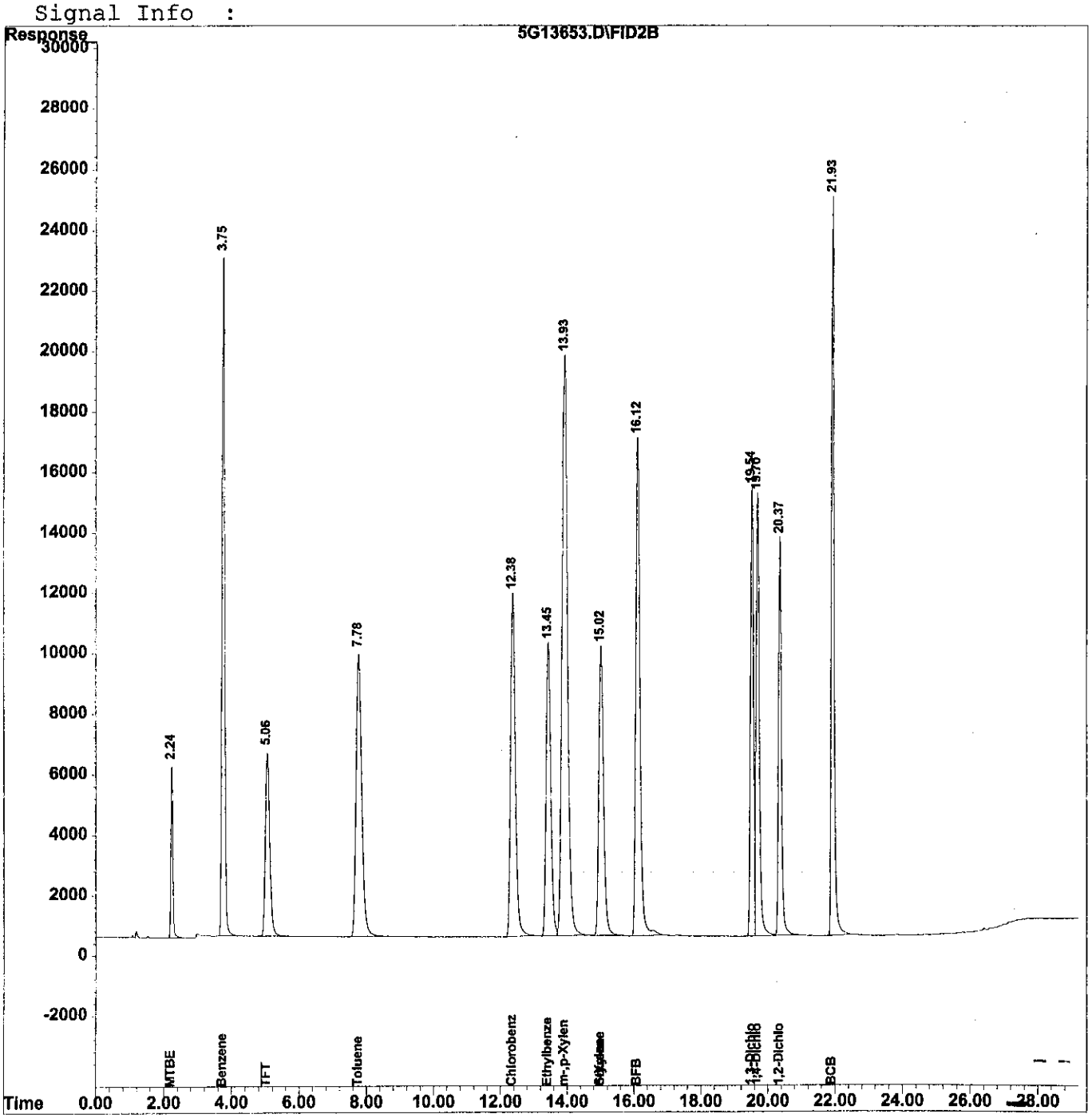
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.06	553871	31.2447 ug/L
Spiked Amount 30.000	Range 70 - 130	Recovery =	104.15%
10) S BFB	16.14	1403793	29.3803 ug/L
Spiked Amount 30.000		Recovery =	97.93%
14) S BCB	21.94	1320373	28.1993 ug/L
Spiked Amount 30.000	Range 37 - 137	Recovery =	94.00%
Target Compounds			
1) TM MTBE	0.00	0	N.D. ug/L
2) TM Benzene	0.00	0	N.D. ug/L
4) TM Toluene	0.00	0	N.D. ug/L
5) TM Chlorobenzene	0.00	0	N.D. ug/L
6) TM Ethylbenzene	0.00	0	N.D. ug/L
7) TM m-,p-Xylene	0.00	0	N.D. ug/L
8) TM Styrene	0.00	0	N.D. ug/L
9) TM o-Xylene	0.00	0	N.D. ug/L
11) TM 1,3-Dichlorobenzene	0.00	0	N.D. ug/L
12) TM 1,4-Dichlorobenzene	0.00	0	N.D. ug/L
13) TM 1,2-Dichlorobenzene	0.00	0	N.D. ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\060602\5G13653.D Vial: 3
Acq On : 6 Jun 2002 10:57 Operator: CSH
Sample : WG119272-02 WATER LCS 20PPB 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 11:26 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Multiple Level Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :



166

Data File : C:\HPCHEM\2\DATA\060602\5G13653.D Vial: 3
Acq On : 6 Jun 2002 10:57 Operator: CSH
Sample : WG119272-02 WATER LCS 20PPB 5ML Inst : HP5
Misc : 1,1 S-94-04,93-47 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 6 11:26 2002 Quant Results File: 602STY.RES

Quant Method : C:\HPCHEM\2\METHODS\602STY.M (Chemstation Integrator)
Title : METHOD 602 - Water - 4/22/02
Last Update : Tue Apr 23 13:18:58 2002
Response via : Initial Calibration
DataAcq Meth : 602STY.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) S TFT	5.07	554699	31.2913 ug/L
Spiked Amount 30.000 Range 70 - 130 Recovery = 104.30%			
10) S BFB	16.12	1437484	30.0854 ug/L
Spiked Amount 30.000 Recovery = 100.28%			
14) S BCB	21.94	1344136	28.7068 ug/L
Spiked Amount 30.000 Range 37 - 137 Recovery = 95.69%			
Target Compounds			
1) TM MTBE	2.24	224990	21.4944 ug/L
2) TM Benzene	3.76	1212650	21.6199 ug/L
4) TM Toluene	7.78	1102465	21.5692 ug/L
5) TM Chlorobenzene	12.38	1135017	20.9772 ug/L
6) TM Ethylbenzene	13.45	949071	21.4629 ug/L
7) TM m-,p-Xylene	13.93	2225658	42.0772 ug/L
8) TM Styrene	15.03	952107	17.1689 ug/L
9) TM o-Xylene	15.03	952107	18.4644 ug/L
11) TM 1,3-Dichlorobenzene	19.54	918304	21.1215 ug/L
12) TM 1,4-Dichlorobenzene	19.70	1008930	21.4390 ug/L
13) TM 1,2-Dichlorobenzene	20.37	816087	21.5402 ug/L

167

(f)=RT Delta > 1/2 Window (m)=manual int.

Directory: c:\hpchem\2\data\042202

Analyst: CBN

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	5g12946.d	1.	WG116507-01 STD1 1PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::2
2	2	5g12947.d	1.	WG116507-02 STD2 10PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::0
3	3	5g12948.d	1.	WG116507-03 STD3 20PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::3
4	4	5g12949.d	1.	WG116507-04 STD4 50PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::1
5	5	5g12950.d	1.	WG116507-05 STD5 100PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::4
6	6	5g12951.d	1.	WG116507-06 STD6 200PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::2
7	7	5g12952.d	1.	WG116507-07 STD7 300PPB 5ML✓	1,1 S-(93-17),S-92-(36,44)	22 Apr 102 12::5
8	8	5g12953.d	1.	RINSE	1,1 S-92-44	22 Apr 102 12::3
9	9	5g12954.d	1.	RINSE	1,1 S-92-44	22 Apr 102 12::0
10	10	5g12955.d	1.	WG116507-08 ALT SOURCE 20PPB 5ML✓	1,1 S-92-44	22 Apr 102 12::4

168

WG119272 Analyst: CSH

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	5g13651.d	1.	WG119271-01 8021 STD 20PPB 5ML	1,1 S-94-04,93-47	6 Jun 102 12::1
2	2	5g13652.d	1.	WG119272-01 WATER BLANK 5ML	1,1 S-93-47	6 Jun 102 13::2
3	3	5g13653.d	1.	WG119272-02 WATER LCS 20PPB 5ML	1,1 S-94-04,93-47	6 Jun 102 13::5
4	1	5g13654.d	1.	L0206078-06 B 5ML	2,1 S-93-47	6 Jun 102 13::4
5	2	5g13655.d	1.	L0206078-17 B 5ML conf SSS	2,1,RE S-93-47 pH=7	6 Jun 102 13::1
6	3	5g13656.d	1.	L0206102-01 A 5ML	1,1 S-93-47 pH<2	6 Jun 102 13::5
7	4	5g13657.d	1.	L0206102-02 A 5ML	1,1 S-93-47	6 Jun 102 12::2
8	5	5g13658.d	1.	L0206102-03 A 5ML	1,1 S-93-47	6 Jun 102 12::0
9	6	5g13659.d	1.	WG119272-03 L0206102-04 A 5ML	1,1 S-93-47	6 Jun 102 12::3
10	7	5g13660.d	1.	WG119272-04 L0206102-05 MS A 5ML	1,1 S-94-04,93-47	6 Jun 102 12::1
11	8	5g13661.d	1.	WG119272-05 L0206102-06 MSD A 5ML	1,1 S-94-04,93-47	6 Jun 102 12::4
12	9	5g13662.d	1.	WG119271-02 8021 STD 20PPB 5ML	1,1 S-94-04,93-47	6 Jun 102 12::2
13	10	5g13663.d	1.	L0206102-07 A 5ML	1,1 S-93-47 pH<2	6 Jun 102 12::5
14	11	5g13664.d	1.	L0206102-08 A 5ML	1,1 S-93-47	6 Jun 102 12::3
15	12	5g13665.d	1.	L0206102-09 A 5ML	1,1 S-94-93-4	6 Jun 102 12::0
16	13	5g13666.d	1.	L0206102-10 A 5ML	1,1 S-93-47	6 Jun 102 12::4
17	14	5g13667.d	100.	L0206106-01 A 5ML 100X	1,100 S-93-47	6 Jun 102 12::1
18	15	5g13668.d	1.	L0206106-02 A 5ML	1,1 S-93-47	6 Jun 102 12::4
19	16	5g13669.d	1.	L0206106-03 A 5ML RR @ 10X	1,1 S-93-47	6 Jun 102 12::2
20	17	5g13670.d	100.	L0206106-04 A 5ML 100X RR c/o	1,100 S-93-47	6 Jun 102 12::5
21	18	5g13671.d	1.	L0206106-05 A 5ML	1,1 S-93-47	6 Jun 102 13::3
22	19	5g13672.d	1.	L0206106-06 A 5ML	1,1 S-93-47	6 Jun 102 13::0
23	20	5g13673.d	1.	WG119271-03 8021 STD 20PPB 5ML	1,1 S-94-04,93-47	6 Jun 102 13::4
24	21	5g13674.d	1.	L0206106-07 A 5ML	1,1 S-93-47 pH<2	7 Jun 102 13::1
25	22	5g13675.d	1.	L0206106-08 A 5ML	1,1 S-93-47	7 Jun 102 13::5
26	23	5g13676.d	1.	WG119271-04 8021 STD 20PPB 5ML	1,1 S-94-04,93-47	7 Jun 102 12::2

Reanalyses File number

L0206106-03 10X

-04 100X

169

2.2 Semivolatiles Data

2.2.6 Method 8011

REPORT NARRATIVE
GC PETROLEUM RANGE ORGANICS

KEMRON Report No.: L0206102

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8015

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: Sample 04 was chosen by the client for MS/MSD analysis. All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.
Surrogates: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CLK REVIEWED: _____ DATE: 6/13/02

Rev. 7/14/00

TRPH – GC DATA (FLA-PRO)

Login Number L0206102

A. QC Summary

- ✓ Method Blank Summary
- ✓ Method Blank Results
- ✓ Laboratory Control Sample (LCS)
- ✓ Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- ✓ Holding Time Summary
- ✓ Surrogate Recovery Summary
- ✓ Initial Calibration Summary
- ✓ Initial Calibration Verification (ICV) Form (Second Source)
- ✓ Continuing Calibration Verification (CCV)
- ✓ Instrument Run Log
- ✓ Extraction Bench Sheet

B. Sample Data

- ___ Target compound and surrogate results summary (See Summary Report)
- ✓ Chromatograms (RIC) and quantitation report

C. Standards Data

- ✓ Initial calibration (ICAL) summary form
- ✓ Chromatograms and quantitation report for ICAL standards
- ✓ Initial calibration verification (ICV/second source) summary forms
- ✓ Initial calibration verification (ICV/second source) quantitation reports and chromatograms
- ✓ Continuing Calibration Verification (CCV) summary forms
- ✓ Continuing Calibration Verification (CCV) quantitation reports and chromatograms
- ✓ Retention Time Window Summary

D. Raw QC Data

- ✓ Method blank chromatogram and quantitation report
- ✓ LCS chromatogram and quantitation report
- ___ MS/MSD chromatogram and quantitation report
- ✓ Instrument Run Log
- ✓ Extraction Bench Sheet
- ✓ Daily Checklist
- ✓ Example Calculations

Checked By: CUK Date: 6/12/02

2.2.6.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES

METHOD BLANK SUMMARY

Login Number: L0206102
Blank File ID: 2G20390
Date Analyzed: 06/10/02
Time Analyzed: 16:28
Analyst: CLK

Work Group: WG119397
Blank Sample ID: WG119345-02
Instrument ID: HP2
Method: 8015 MOD

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG119345-03	2G20391	06/10/02 17:00	01
062-CEF9-2S-Q2-02-18	L0206102-01	2G20392	06/10/02 17:15	01
062-CEF9-3S-Q2-02-18	L0206102-02	2G20393	06/10/02 17:30	01
062-CEF9-5S-Q2-02-18	L0206102-03	2G20394	06/10/02 17:45	01
062-CEF9-7D-Q2-02-18	L0206102-04	2G20395	06/10/02 18:01	01
062-CEF9-7D-Q2-02-18	L0206102-05	2G20396	06/10/02 18:16	01
062-CEF9-7D-Q2-02-18	L0206102-06	2G20397	06/10/02 18:31	01
062-CEF9-9S-Q2-02-18	L0206102-07	2G20400	06/10/02 19:16	01
062-9DUP-Q2-02-18	L0206102-08	2G20401	06/10/02 19:32	01
062-9EQB-Q2-02-18	L0206102-09	2G20402	06/10/02 19:47	01

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0206102
Instrument ID: HP2
File ID: 2G20390
Workgroup (AAB#): WG119397
Contract #:

Run Date: 06/10/2002
Run Time: 16:28
Analyst: CLK

Sample ID: WG119345-02
Method: 8015 MOD
Matrix: Water
Units: ug/L
Cal ID: HP2-06-JUN-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
TRPH-Florida PRO	250	500	250	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
o-Terphenyl	94.4	49 - 174	PASS

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON FORMS - Modified 05/09/2002
Version 1.2
Report generated 06/12/2002 17:59

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0206102
Instrument ID: HP2
File ID: 2G20391
Workgroup (AAB#): WG119397
Contract #:

Run Date: 06/10/2002
Run Time: 17:00
Analyst: CLK

Sample ID: WG119345-03
Method: 8015 MOD
Matrix: Water
Units: ug/L
Cal ID: HP2-06-JUN-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
TRPH-Florida PRO	3400	2620	76.9	50 - 150	

Surrogates	% Recovery	Surrogate Limits	Qualifier
o-Terphenyl	99.1	49 - 174	PASS

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 06/12/2002
Version 1.3
Report generated 06/12/2002 17:59

KEMRON ENVIRONMENTAL SERVICES
MS/MSD REPORT

Loginnum: L0206102 | Cal ID: HP2-06-JUN-2002 | Worknum: WG119397
Instrument ID: HP2 | Contract #: | Method: 8015 MOD
Parent ID: L0206102-04 | File ID: 2G20395 | Dil: 1 | Matrix: Water
Sample ID: L0206102-05 MS | File ID: 2G20396 | Dil: 1 | Units: ug/L
Sample ID: L0206102-06 MSD | File ID: 2G20397 | Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
TRPH-Florida PRO	ND	3540	2610	73.7	3540	2690	76.0	3.20	50 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 05/29/2002
Version 1.2
Report generated 06/12/2002 18:00

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8015 MOD

AAB#: WG119397

Login Number: L0206102

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
062-9DUP-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.69	06/10/02	7	4.13	
062-9EQB-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.12	06/10/02	7	4.14	
062-CEF9-2S-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.14	06/10/02	7	4.03	
062-CEF9-3S-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.13	06/10/02	7	4.04	
062-CEF9-5S-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.03	06/10/02	7	4.05	
062-CEF9-7D-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.10	06/10/02	7	4.06	
062-CEF9-7D-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.10	06/10/02	7	4.07	
062-CEF9-7D-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.10	06/10/02	7	4.08	
062-CEF9-9S-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.06	06/10/02	7	4.12	

* EXT = MISSED EXTRACTION HOLD TIME
*ANAL = MISSED ANALYITICAL HOLD TIME

KEMRON FORMS - Modified 05/28/2002
Version 1.2
Report generated 06/12/2002 17:59

170

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0206102
Instrument Id: HP2
Workgroup (AAB#): WG119397

Method: FLA-PRO
Matrix: WATER

Sample Number	Dilution	Tag	1
L0206102-01	1.00	01	67.0
L0206102-02	1.00	01	107
L0206102-03	1.00	01	101
L0206102-04	1.00	01	94.3
L0206102-05	1.00	01	97.3
L0206102-06	1.00	01	97.6
L0206102-07	1.00	01	107
L0206102-08	1.00	01	106
L0206102-09	1.00	01	90.4
WG119345-02	1.00	01	94.4
WG119345-03	1.00	01	99.1

Surrogates	Surrogate Limits		
1 - o-Terphenyl	49	-	174

Underline = Result out of surrogate limits

DL = surrogate diluted out

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:10:08 2002

Calibration Files

5	=2G20388.D	50	=2G20387.D	100	=2G20386.D
200	=2G20383.D	400	=2G20385.D	600	=2G20384.D

		Compound	5	50	100	200	400	600	Avg		%RSD
1)	H	Petroleum Range	2.458	2.924	3.620	3.100	3.072	3.691	3.144	E4	14.59
2)	s	O-Terphenyl	3.053	2.907	3.459	2.744	2.596	3.277	3.006	E4	10.80
3)	s	n-Nonatriacontane							0.000	0	-1.00

(#) = Out of Range

Login Number: L0206102
File ID: 2G20389
ALT ID: WG119552-07
Units: mg/L

Instrument ID: HP2
Run Date: 06/10/2002
Run Time: 16:13
Analyst: CLK
Cal ID: HP2 - 10-JUN-02

Analyte		Expected	Found	RF	%D	Q
n-Nonatriacontane		200		0		
Petroleum Range		3400	2930	27100	13.8	

Login Number: L0206102
File ID: 2G20399
CCV ID: WG119552-08
Units: mg/L

Instrument ID: HP2
Run Date: 06/10/2002
Run Time: 19:01
Analyst: CLK
Cal ID: HP2 - 10-JUN-02

Analyte		Expected	Found	RF	%D	Q
n-Nonatriacontane		200		0		
Petroleum Range		3400	3590	33200	5.6	

* Exceeds %D Limit

Login Number: L0206102
File ID: 2G20405
CCV ID: WG119552-09
Units: mg/L

Instrument ID: HP2
Run Date: 06/10/2002
Run Time: 20:33
Analyst: CLK
Cal ID: HP2 - 10-JUN-02

Analyte		Expected	Found	RF	%D	Q
n-Nonatriacontane		200		0		
Petroleum Range		3400	3570	33000	5.0	

* Exceeds %D Limit

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	2g20378.d	1.	NA CH2CL2	1,1	10 Jun 102 13::3
2	2	2g20379.d	1.	✓ DRO CCV	1,1 NS 15-27	10 Jun 102 13::4
3	3	2g20380.d	1.	✓ EXT LAB DRO SURR	1,1	10 Jun 102 13::4
4	1	2g20381.d	1.	✓ WIN DEF STD	1,1 SOS 60-20	10 Jun 102 13::0
5	2	2g20382.d	1.	CC PRO CCV	1,1 SOS 59-6	10 Jun 102 13::1
6	3	2g20383.d	1.	✓ WG119552-04 200ppm PRO STD	1,1 SOS 59-6	10 Jun 102 12::3
7	4	2g20384.d	1.	WG119552-06 600ppm PRO STD	1,1 SOS 59-6	10 Jun 102 12::5
8	5	2g20385.d	1.	WG119552-05 400ppm PRO STD	1,1 SOS 59-6	10 Jun 102 12::1
9	6	2g20386.d	1.	WG119552-03 100ppm PRO STD	1,1 SOS 59-6	10 Jun 102 12::2
10	7	2g20387.d	1.	WG119552-02 50ppm PRO STD	1,1 SOS 59-6	10 Jun 102 12::4
11	8	2g20388.d	1.	WG119552-01 5ppm PRO STD	1,1 SOS 59-6	10 Jun 102 12::5
12	9	2g20389.d	1.	WG119552-07 200ppm PRO ALT SOURCE STD	1,1 SOS 59-1	10 Jun 102 12::1
13	10	2g20390.d	1.	WG119345-02 BLK 6/6 V185P133	1,1	10 Jun 102 12::2
14	11	2g20391.d	1.	WG119345-03 LCS 6/6 V185P133	1,1	10 Jun 102 12::0
15	12	2g20392.d	1.	L0206102-01 WATER PRO	1,1	10 Jun 102 12::1
16	13	2g20393.d	1.	L0206102-02 WATER PRO	1,1	10 Jun 102 12::3
17	14	2g20394.d	1.	L0206102-03 WATER PRO	1,1	10 Jun 102 12::4
18	15	2g20395.d	1.	WG119345-01 L0206102-04 WATER PRO	1,1	10 Jun 102 12::0
19	16	2g20396.d	1.	WG119345-04 L0206102-05 WATER PRO MS	1,1	10 Jun 102 12::1
20	17	2g20397.d	1.	WG119345-05 L0206102-06 WATER PRO MSD	1,1	10 Jun 102 12::3
21	1	2g20398.d	1.	NA CH2CL2	1,1	10 Jun 102 12::4
22	3	2g20399.d	1.	✓ WG119552-08 200ppm PRO CCV	1,1 SOS 59-6	10 Jun 102 12::0
23	18	2g20400.d	1.	L0206102-07 WATER PRO	1,1	10 Jun 102 12::1
24	19	2g20401.d	1.	L0206102-08 WATER PRO	1,1	10 Jun 102 12::3
25	20	2g20402.d	1.	L0206102-09 WATER PRO	1,1	10 Jun 102 12::4
26	21	2g20403.d	1.	L0206078-02 WATER PRO	2,1	10 Jun 102 12::0
27	1	2g20404.d	1.	NA CH2CL2	1,1	10 Jun 102 12::1
28	3	2g20405.d	1.	✓ WG119552-09 200ppm PRO CCV	1,1 SOS 59-6	10 Jun 102 12::3

CLK
6/11/02
[illegible]

KEMRON ENVIRONMENTAL SERVICES
Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 6/10/02 Instrument ID HP2 Column ID RTX-5 Data Subdirectory 061002
Analyst Initials CLE

SOP # GCS09 Rev. # ___ 8081A ____
SOP # GCS04 Rev. # ___ 8151A ____
SOP # GCS03 Rev. # 2 PRO ✓
SOP # GCS02 Rev. # ___ 8015B Mod (Alcohol) ____

SOP # GCS10 Rev. # ___ 8082 ____
SOP # GCS05 Rev. # ___ TNRCC 1005 ____
SOP # GCS02 Rev. # ___ 8015B Mod (DRO) ____
SOP # GCS07 Rev. # ___ 8011 ____

Analysis Date/Time _____ Instrument ID _____ Column ID _____ Data Subdirectory _____

Daily Check
- [x] Gases >500 psi

Preventative Maintenance
- [ ] Change o-ring
- [x] Change liner
- [ ] Change septum
- [ ] Clip column (___cm)
- [ ] Injection port seal (goldseal)
- [ ] Change gases _____

Returned To Control?
Yes ___ No ____

Additional Maintenance
Problem: _____

Action Taken: _____

Comments

Reviewed By: [illegible] 6/11/02

Parameter: FLA PRO-H_2O SOP #: CXPRO Revision #: 3
Extraction Analyst(s): DP TV/KD Analyst(s): DP
Date/Time Extracted: 06/06/02 @ 1630 Date TV/KD: 06/07/02
Spike/Surrogate Analyst: DP Witness: CEB
Surrogate #: CS50040-18 Earliest Hold Date: 06/11/02
Spike #: A = CS50041-07 Spike #: B = ——

Extraction Work Group WG 119345
Analytical Work Group WG 119397
Extract Relinquished By: DP
Extract Received By & Date: RDC 6/7/02

	Sample ID	Test Code	pH √ <2	N	>12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	BN	N	Comments
1	Blank		✓			1L	1mL		1mL	T				WG 119345-02
2	LCS		✓			↓		1mL		T				WG ↓ -03
3	06-078-02	FLA-PRO	✓	6/13		820 mL				C				
4	06-102-01		✓			960				T	✓			
5	-02	6/13	✓			950				T				
6	-03		✓			950				T				
7	-04		✓			980				T				WG119345-01
8	-05MS		✓			960		1mL		T				↓ -04*
9	-06MSD		✓			960		↓		T				— -05*
10	-07		✓			950				T				
11	-08		✓			960				T				
12	-09		✓			950				T				
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

DP 06/07/02

Methylene Chloride Lot #: 412015
Hexane Lot #: ——
Ether Lot #: ——
Methanol Lot #: ——
Solvent: —— Lot #: ——
Reagent: —— Lot #: ——
Reagent: —— Lot #: ——
Reagent: —— Lot #: ——
Acid: 1:1 HCL Lot #: CR2084
Florisil Lot #: ——
Silica Gel Lot #: ——
IR Analyst / Date / Time: ——
Dried Na_2SO_4 Lot #: CR2152

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C	✓	Other	
Acid 3664A		N/A	
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 6-07-02

Extraction Notes For Volume # 185 Page # 133

General Comments: * MS/MSD of 06-102-04

Extraction Anomalies: None

Concentration Anomalies: None

Clean-Up Anomalies: None

Supervisor Review: _____ Date: _____

2.2.6.2 Sample Data

Data File : C:\HPCHEM\1\DATA\061002\2G20392.D Vial: 12
Acq On : 10 Jun 2002 17:15 Operator: CLK
Sample : L0206102-01 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:23 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

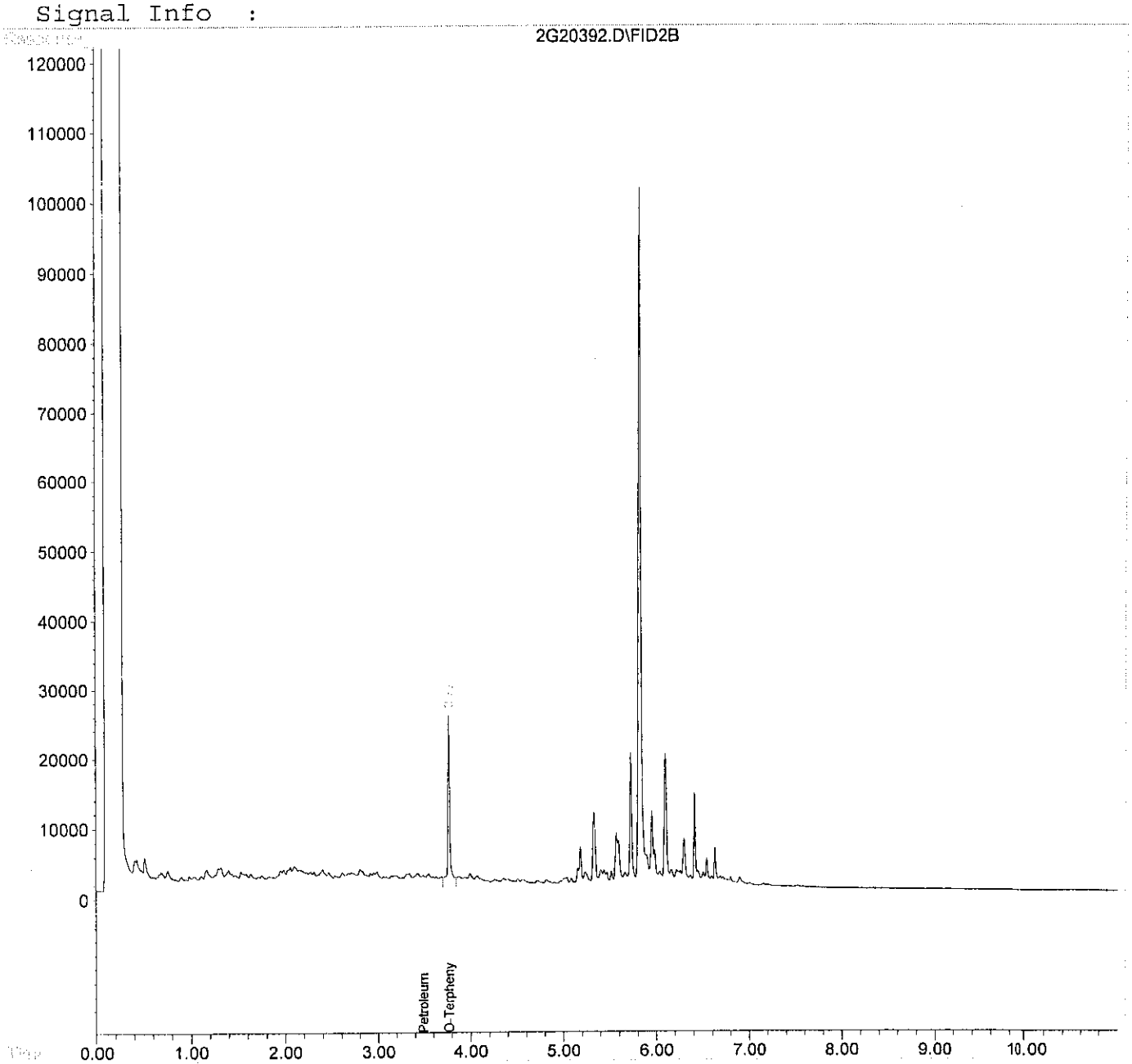
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.77	402698	13.396 ppb
Spiked Amount 20.000 Range 49 - 174 Recovery = 66.98%			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.48	9244033	293.998 ppb F

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20392.D FLASHPRO.M Tue Jun 11 08:23:34 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20392.D Vial: 12
Acq On : 10 Jun 2002 17:15 Operator: CLK
Sample : L0206102-01 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:23 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20393.D Vial: 13
Acq On : 10 Jun 2002 17:30 Operator: CLK
Sample : L0206102-02 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:23 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

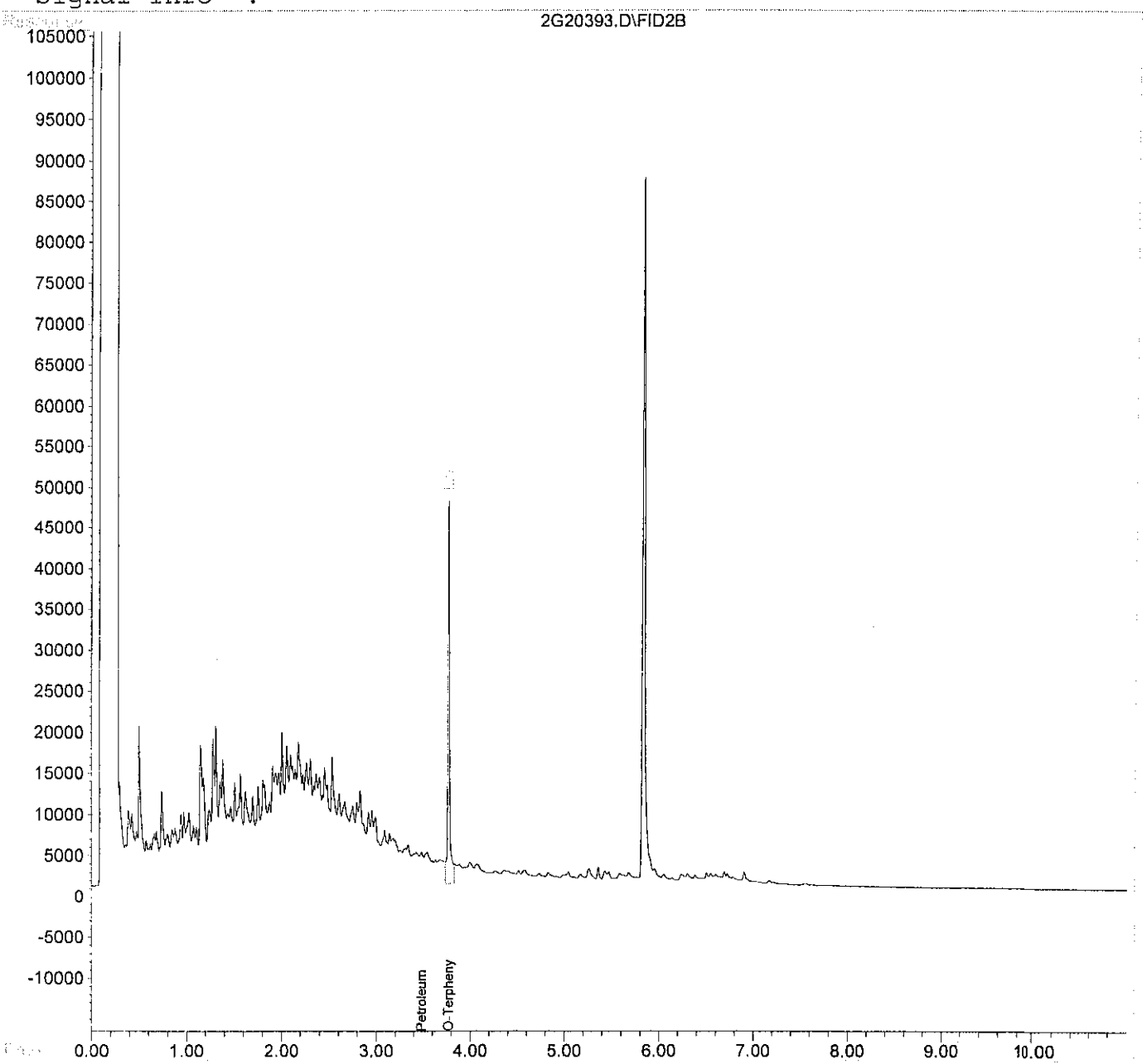
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.77	646046	21.491 ppb
Spiked Amount 20.000 Range 49 - 174		Recovery =	107.46%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	20273796	644.788 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20393.D FLASHPRO.M Tue Jun 11 08:23:55 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20393.D Vial: 13
Acq On : 10 Jun 2002 17:30 Operator: CLK
Sample : L0206102-02 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:23 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20394.D Vial: 14
Acq On : 10 Jun 2002 17:45 Operator: CLK
Sample : L0206102-03 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:24 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

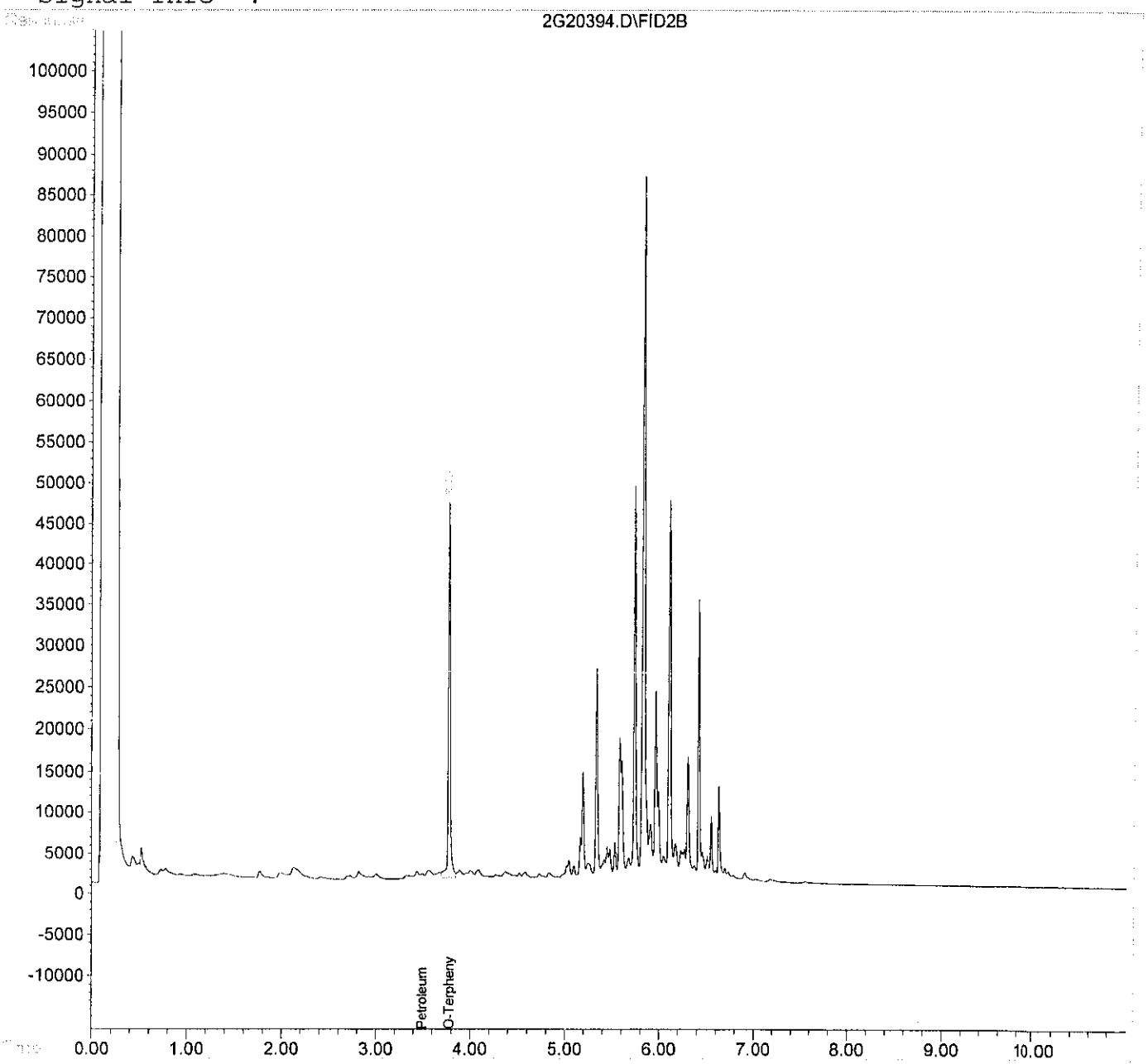
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.78	604960	20.124 ppb
Spiked Amount 20.000	Range 49 - 174	Recovery	= 100.62%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery	= 0.00%
Target Compounds			
1) H Petroleum Range	3.48	7649921	243.298 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20394.D FLASHPRO.M Tue Jun 11 08:24:27 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20394.D Vial: 14
Acq On : 10 Jun 2002 17:45 Operator: CLK
Sample : L0206102-03 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:24 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20395.D Vial: 15
Acq On : 10 Jun 2002 18:01 Operator: CLK
Sample : WG119345-01 L0206102-04 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:24 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

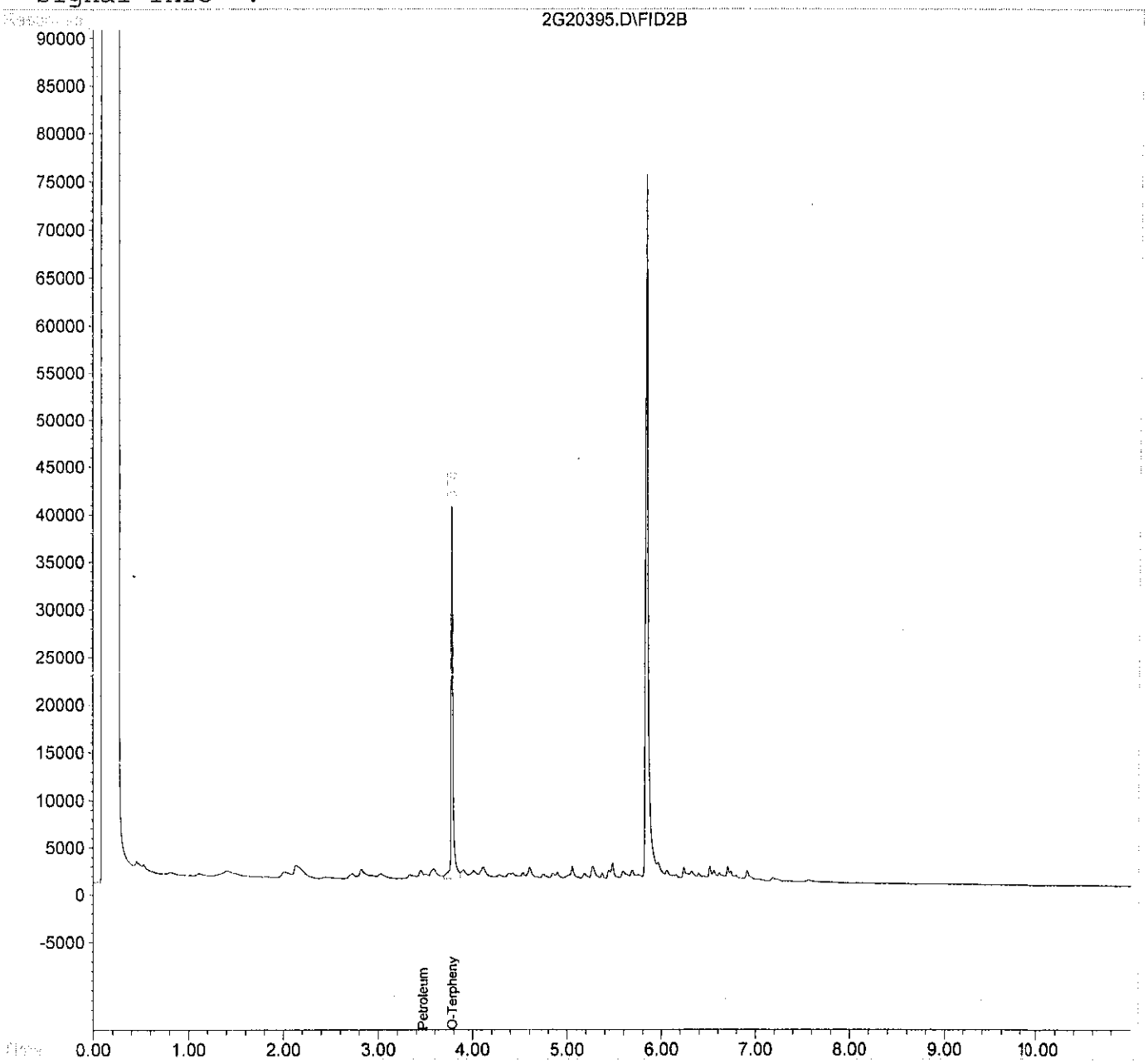
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.78	566681	18.851 ppb
Spiked Amount 20.000 Range 49 - 174 Recovery = 94.26%			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.48	2853579	90.755 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20395.D FLASHPRO.M Tue Jun 11 08:24:50 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20395.D Vial: 15
Acq On : 10 Jun 2002 18:01 Operator: CLK
Sample : WG119345-01 L0206102-04 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:24 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20396.D Vial: 10
Acq On : 10 Jun 2002 18:16 Operator: CLK
Sample : WG119345-04 L0206102-05 WATER PRO MS Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:25 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

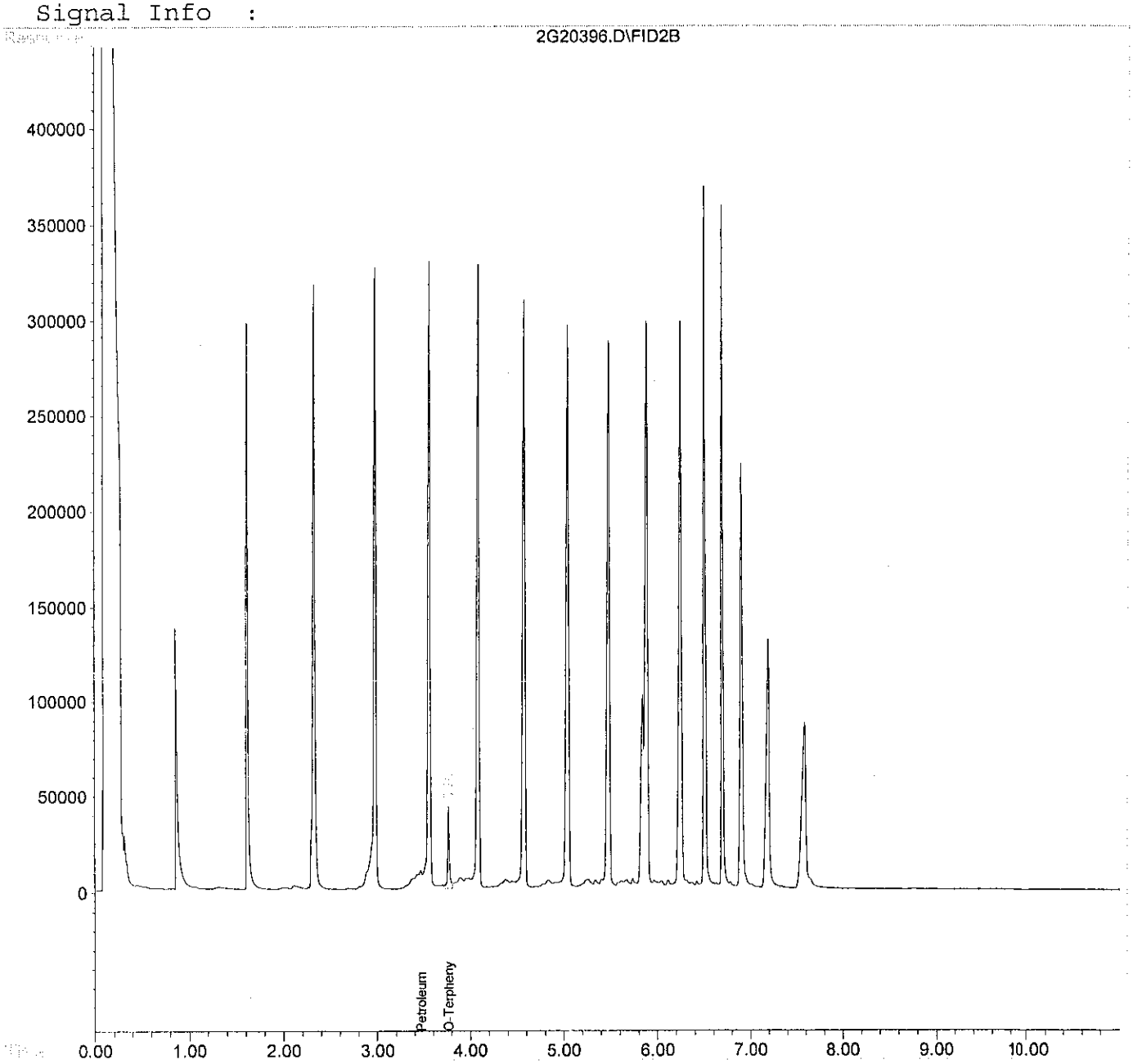
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.76	584682	19.449 ppb
Spiked Amount 20.000 Range 49 - 174 Recovery = 97.25%			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.48	78722619	2503.697 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20396.D FLASHPRO.M Tue Jun 11 08:25:14 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20396.D Vial: 16
Acq On : 10 Jun 2002 18:16 Operator: CLK
Sample : WG119345-04 L0206102-05 WATER PRO MS Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:25 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20397.D Vial: 17
Acq On : 10 Jun 2002 18:31 Operator: CLK
Sample : WG119345-05 L0206102-06 WATER PRO MSD Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:25 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

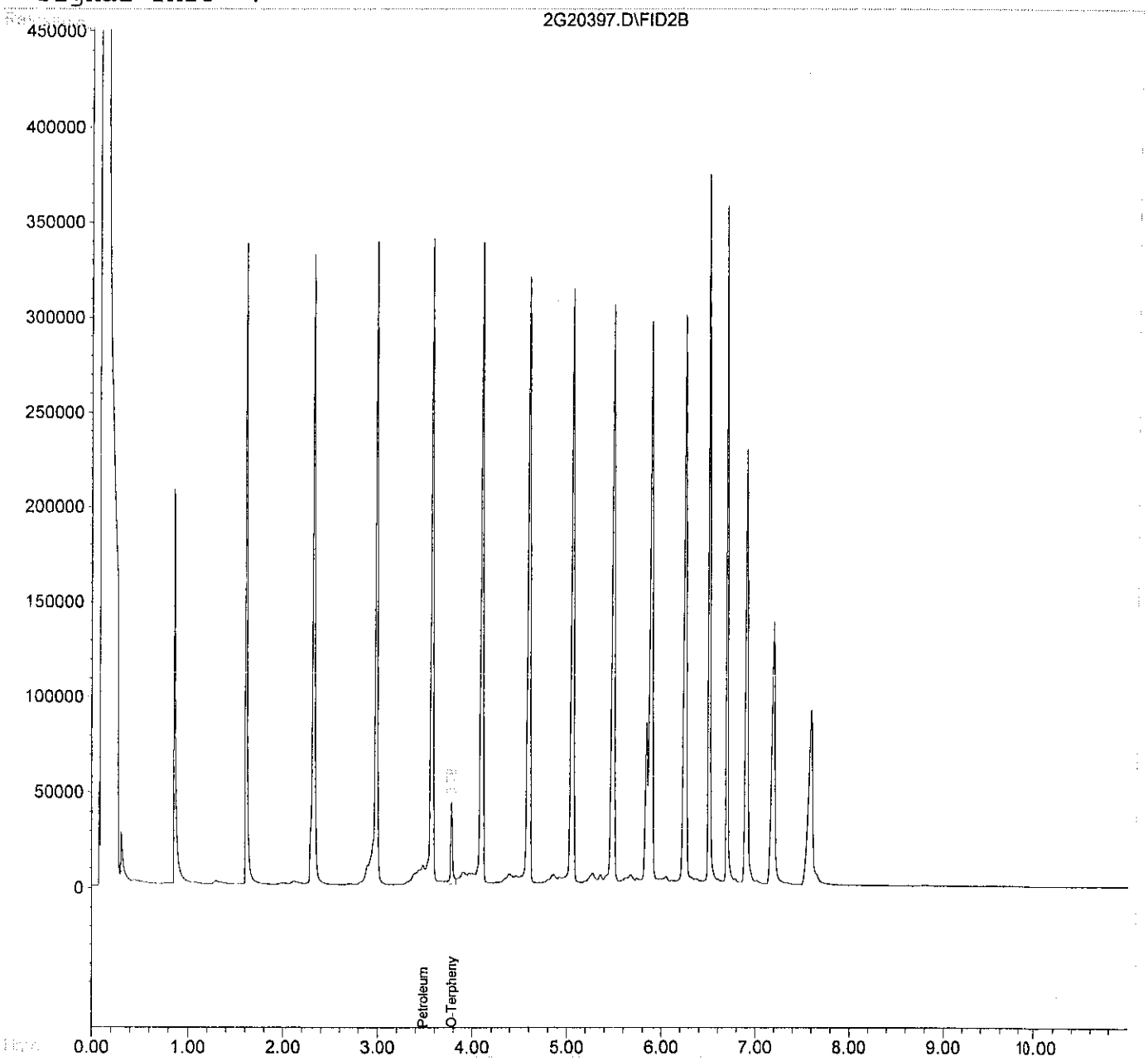
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.78	586873	19.522 ppb
Spiked Amount 20.000 Range 49 - 174 Recovery = 97.61%			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.48	81281453	2585.078 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20397.D FLASHPRO.M Tue Jun 11 08:25:35 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20397.D Vial: 17
Acq On : 10 Jun 2002 18:31 Operator: CLK
Sample : WG119345-05 L0206102-06 WATER PRO MSD Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:25 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 10 Jun 2002 19:16 Operator: CLK
Sample : L0206102-07 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:28 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:27:40 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.79	643269	21.398 ppb
Spiked Amount 20.000 Range 49 - 174		Recovery =	106.99%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	25667398	816.327 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20400.D FLASHPRO.M Tue Jun 11 08:28:35 2002 HP2 - Page 1

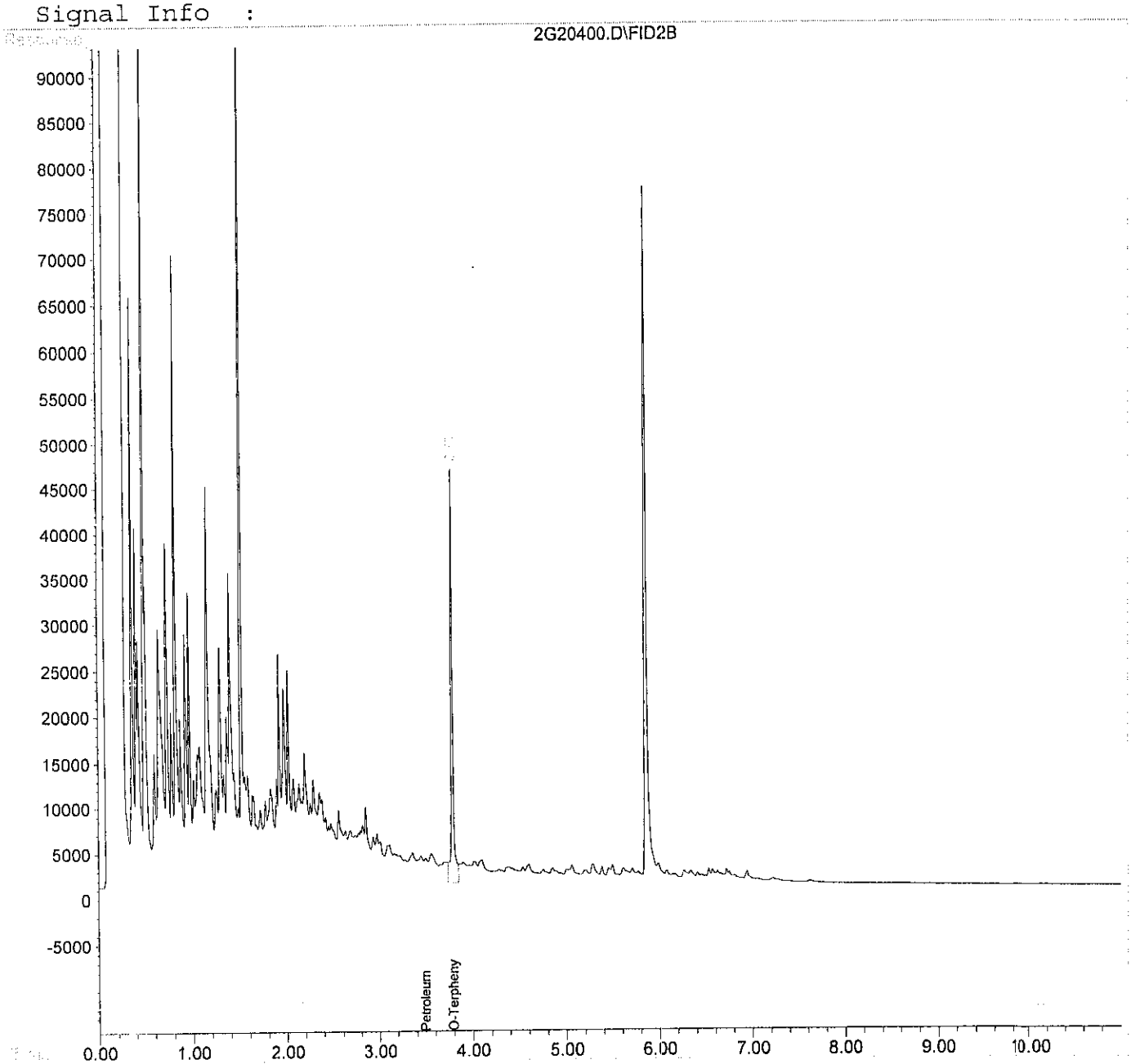
Data File : C:\HPCHEM\1\DATA\[illegible]

Acq On : 10 Jun 2002 19:16
Sample : L0206102-07 WATER PRO
Misc : 1,1
IntFile : PETRO.E
Quant Time: Jun 11 8:28 2002 Quant Results File: FLASHPRO.RES

Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:27:40 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20401.D

Acq On : 10 Jun 2002 19:32 Operator: CLK
Sample : L0206102-08 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:28 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:27:40 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

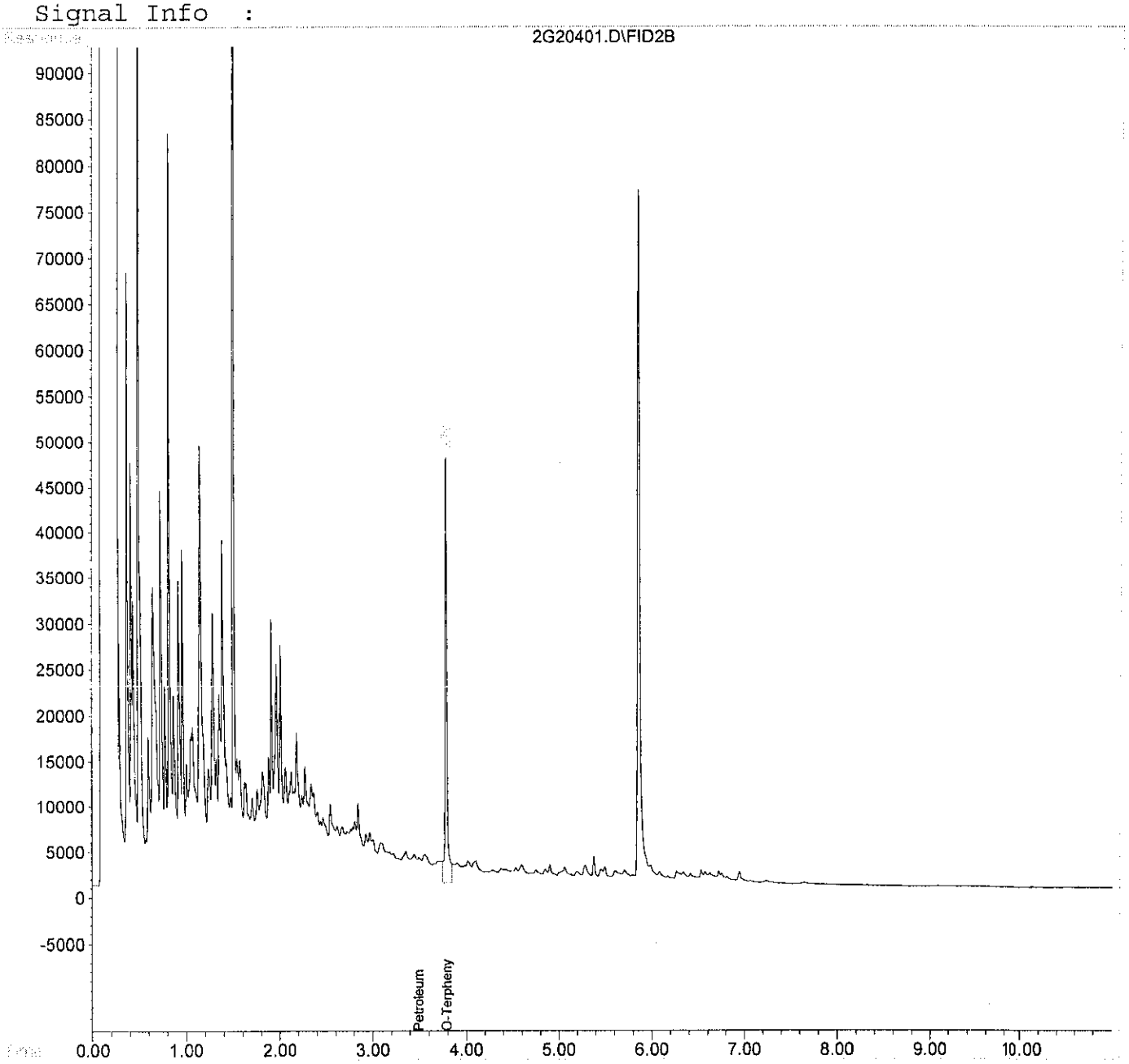
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.79	636028	21.157 ppb
Spiked Amount 20.000 Range 49 - 174		Recovery =	105.79%
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	26686540	848.740 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Acq On : 10 Jun 2002 19:32 Operator: CLK
Sample : L0206102-08 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:28 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:27:40 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20402.D Vial: 20
Acq On : 10 Jun 2002 19:47 Operator: CLK
Sample : L0206102-09 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:29 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:27:40 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

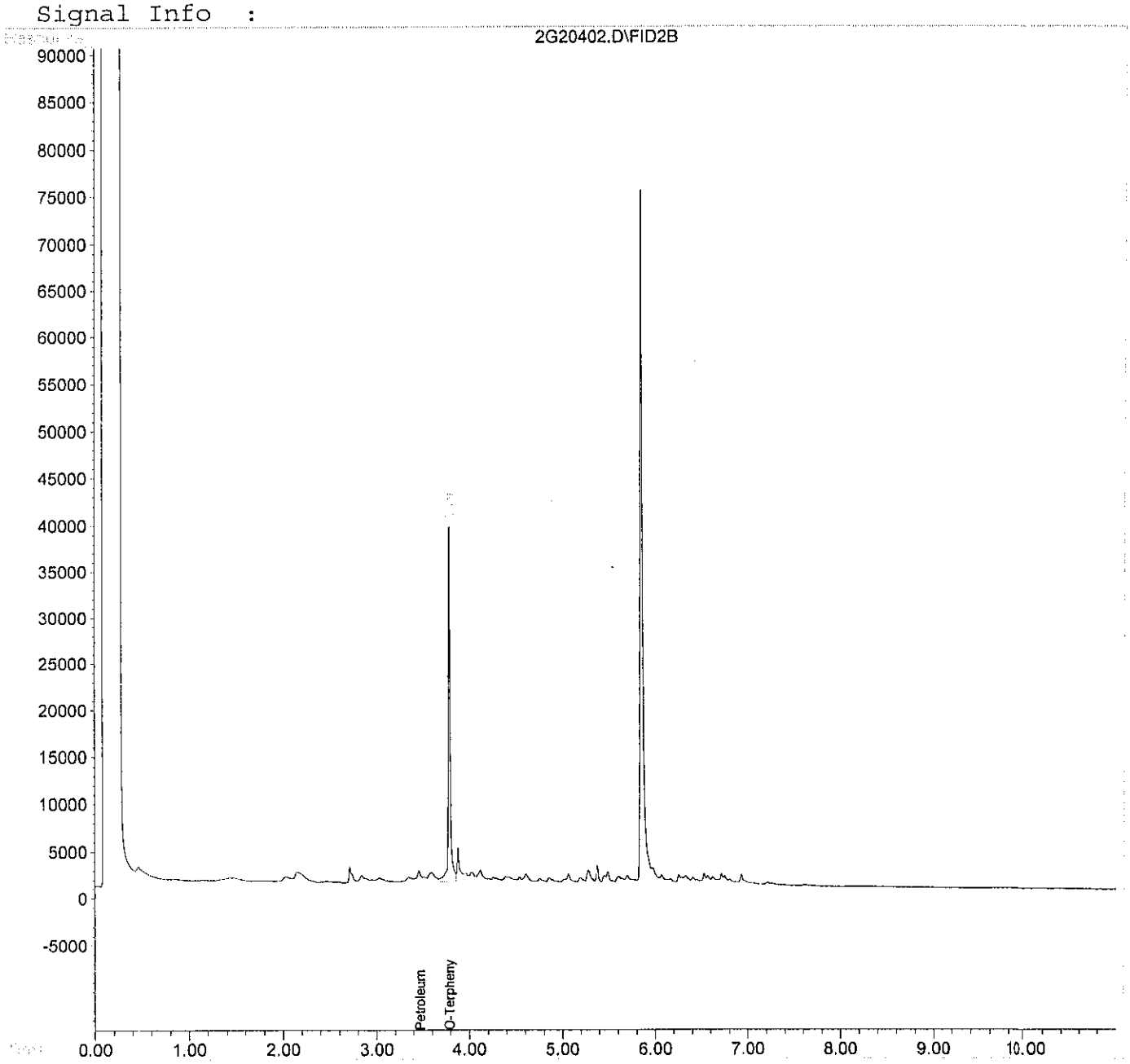
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.79	543424	18.077 ppb
Spiked Amount 20.000 Range 49 - 174 Recovery = 90.39%			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.48	2575854	81.923 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20402.D FLASHPRO.M Tue Jun 11 08:29:20 2002 HP2 Page 1

Acq On : 10 Jun 2002 19:47 Operator: CLK
Sample : L0206102-09 WATER PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:29 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:27:40 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



2.2.6.3 Standards Data

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:10:08 2002

Calibration Files

5	=2G20388.D	50	=2G20387.D	100	=2G20386.D
200	=2G20383.D	400	=2G20385.D	600	=2G20384.D

		Compound	5	50	100	200	400	600	Avg		%RSD
1)	H	Petroleum Range	2.458	2.924	3.620	3.100	3.072	3.691	3.144	E4	14.59
2)	s	O-Terphenyl	3.053	2.907	3.459	2.744	2.596	3.277	3.006	E4	10.80
3)	s	n-Nonatriacontane							0.000	0	-1.00

(#) = Out of Range

Data File : C:\HPCHEM\1\DATA\061002\2G20383.D Vial: 3
Acq On : 10 Jun 2002 14:30 Operator: CLK
Sample : WG119552-04 200ppm PRO STD Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 10 15:32 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Mon Jun 10 15:32:15 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

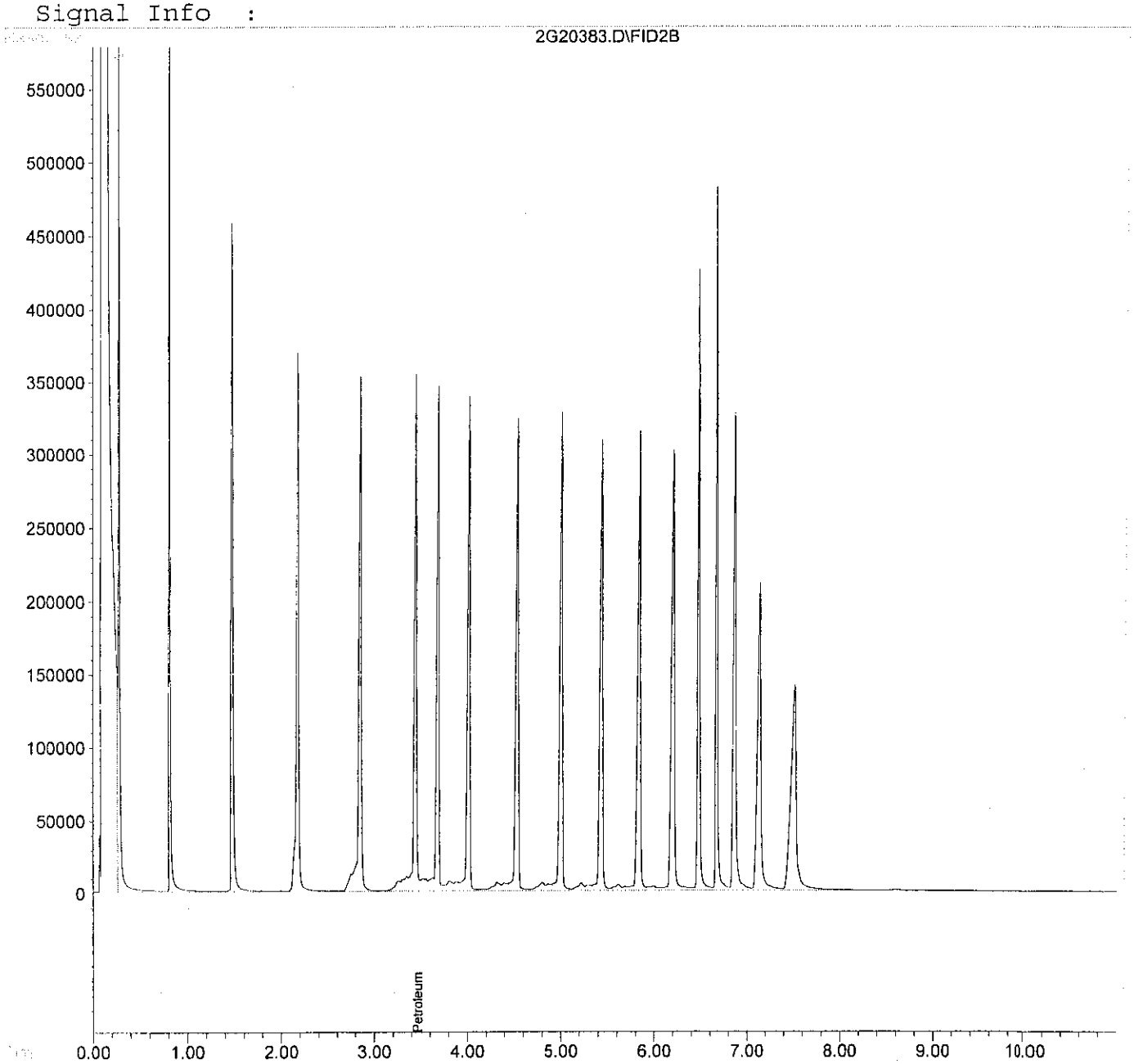
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.69	5488079	222.566 ppb
Spiked Amount 20.000 Range 49 - 174 Recovery = 1112.83%#			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.48	105404486	4032.163 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20383.D FLASHPRO.M Tue Jun 11 08:00:42 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20383.D Vial: 3
Acq On : 10 Jun 2002 14:30 Operator: CLK
Sample : WG119552-04 200ppm PRO STD Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 10 15:32 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Mon Jun 10 15:32:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20384.D Vial: 4
Acq On : 10 Jun 2002 14:57 Operator: CLK
Sample : WG119552-06 600ppm PRO STD Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 10 15:33 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Mon Jun 10 15:33:11 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

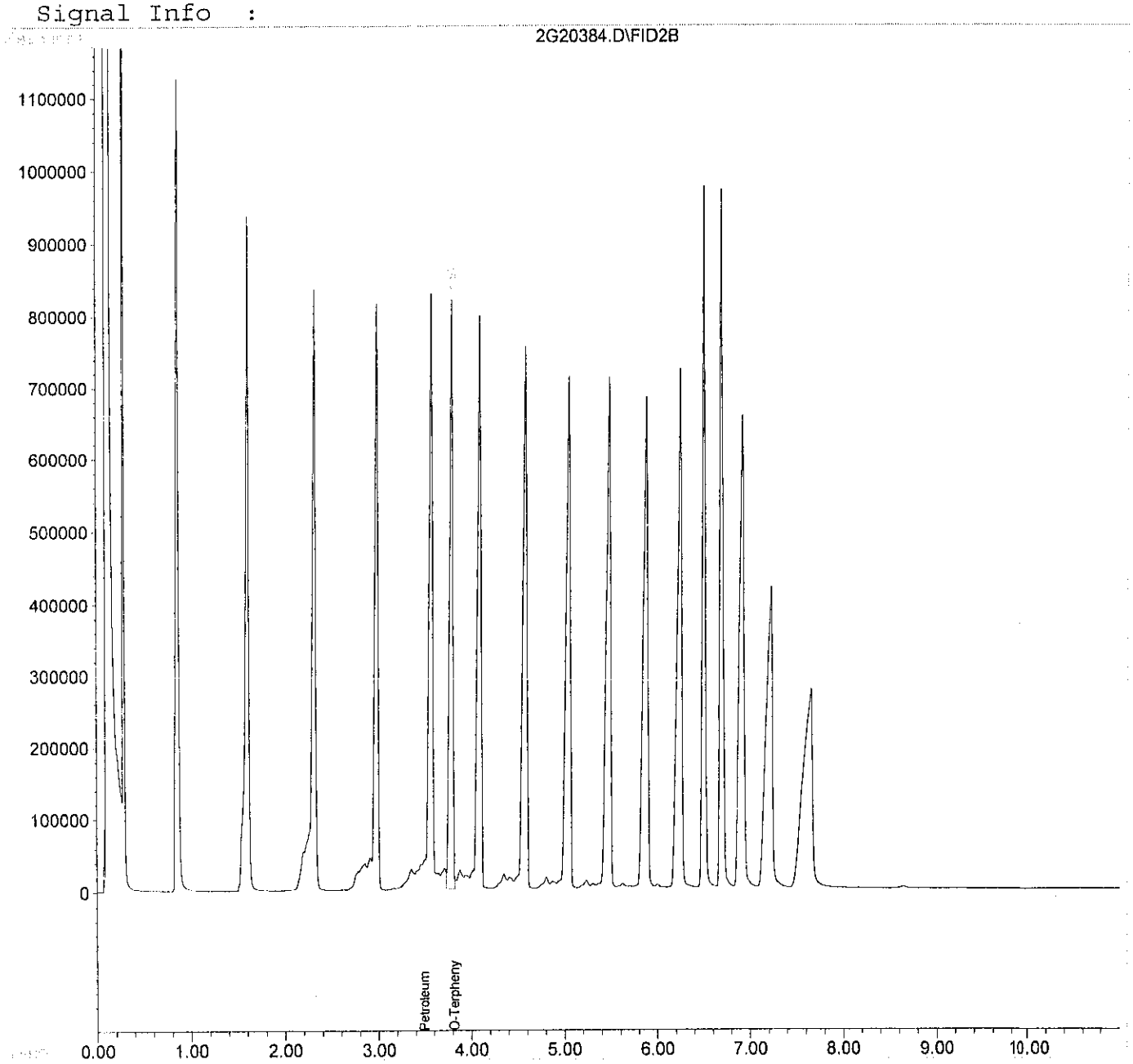
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.81	19664398	797.478 ppb
Spiked Amount 20.000 Range 49 - 174 Recovery = 3987.39%#			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.48	376523220	14403.589 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20384.D FLASHPRO.M Tue Jun 11 08:00:51 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20384.D Vial: 1
Acq On : 10 Jun 2002 14:57 Operator: CLK
Sample : WG119552-06 600ppm PRO STD Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 10 15:33 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Mon Jun 10 15:33:11 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20385.D Vial: 5
Acq On : 10 Jun 2002 15:12 Operator: CLK
Sample : WG119552-05 400ppm PRO STD Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 10 15:33 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Mon Jun 10 15:33:11 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

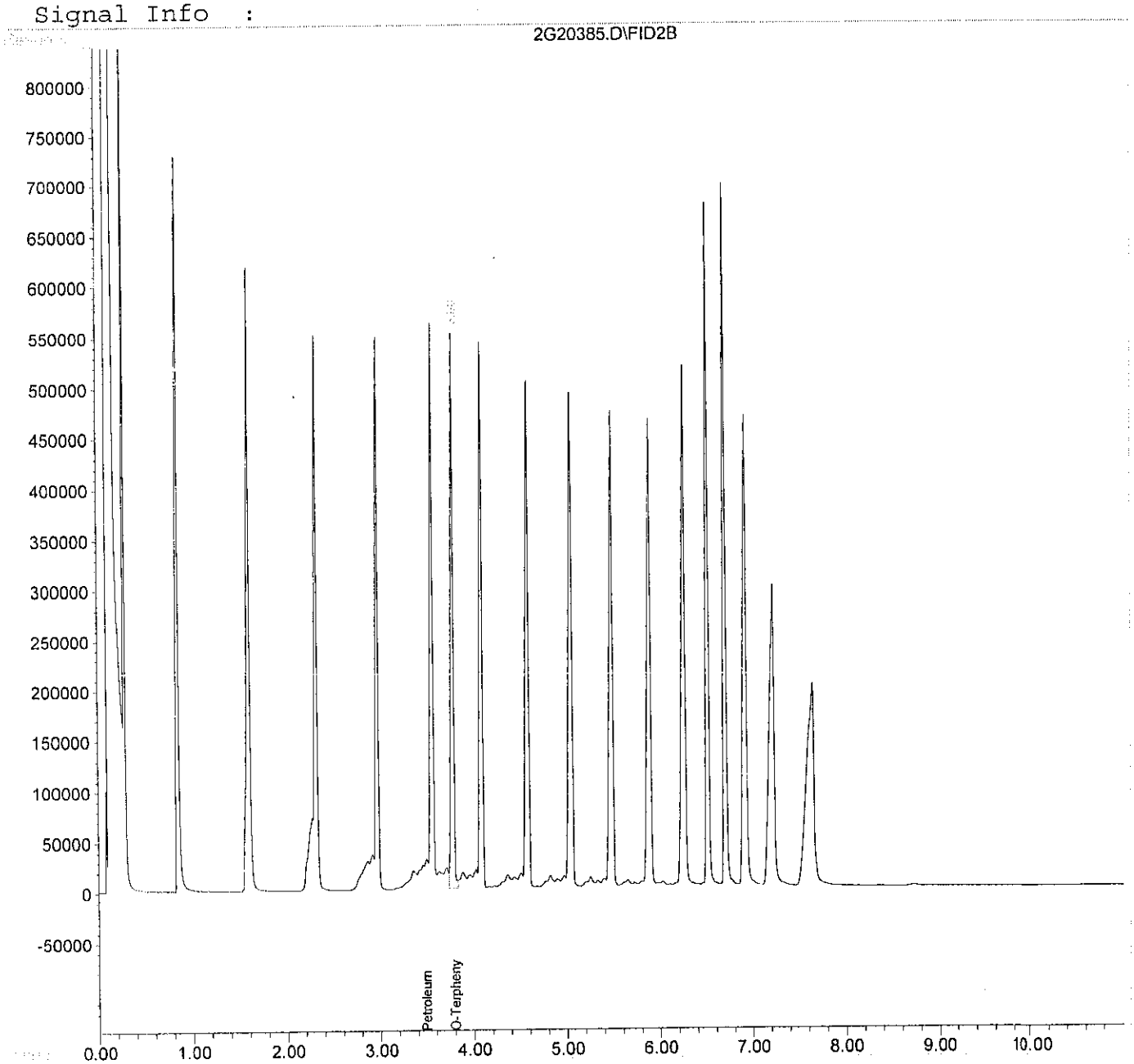
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.80	10385667	421.184 ppb
Spiked Amount 20.000 Range 49 - 174 Recovery = 2105.92%#			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.48	208921042	7992.104 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20385.D FLASHPRO.M Tue Jun 11 08:00:59 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20385.D Vial: 5
Acq On : 10 Jun 2002 15:12 Operator: CLK
Sample : WG119552-05 400ppm PRO STD Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 10 15:33 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Mon Jun 10 15:33:11 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

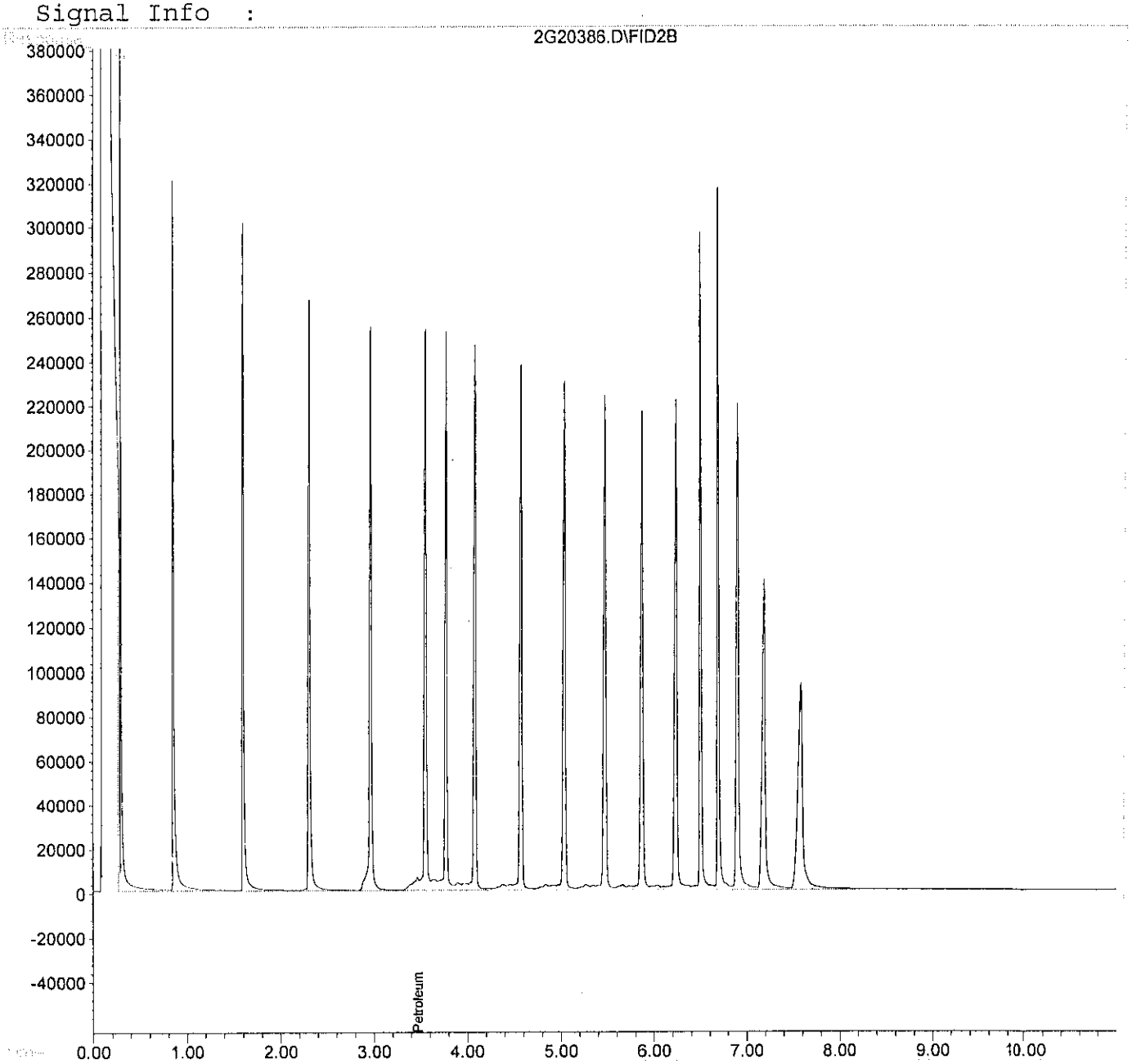


```
Data File : C:\HPCHEM\1\DATA\061002\2G20386.D                Vial: 6
Acq On    : 10 Jun 2002  15:27                          Operator: CLK
Sample    : WG119552-03 100ppm PRO STD                  Inst    : HP2
Misc      : 1,1 SOS 59-6                                Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Jun 10 15:46 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 06/10/02
Last Update  : Mon Jun 10 15:33:11 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj.  :
Signal Phase :
Signal Info  :

     Compound                          R.T.       Response    Conc Units
---------------------------------------------------------------------------

  System Monitoring Compounds
 2) s   O-Terphenyl                    3.78        3458980  140.277 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    =  701.39%#
 3) s   n-Nonatriacontane              0.00              0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

  Target Compounds
 1) H   Petroleum Range                3.48       61535583 2353.994 ppb
```

Data File : C:\HPCHEM\1\DATA\061002\2G20386.D Vial: 6
Acq On : 10 Jun 2002 15:27 Operator: CLK
Sample : WG119552-03 100ppm PRO STD Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 10 15:46 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Mon Jun 10 15:33:11 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20387.D Vial: 7
Acq On : 10 Jun 2002 15:43 Operator: CLK
Sample : WG119552-02 50ppm PRO STD Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 10 15:59 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Mon Jun 10 15:33:11 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

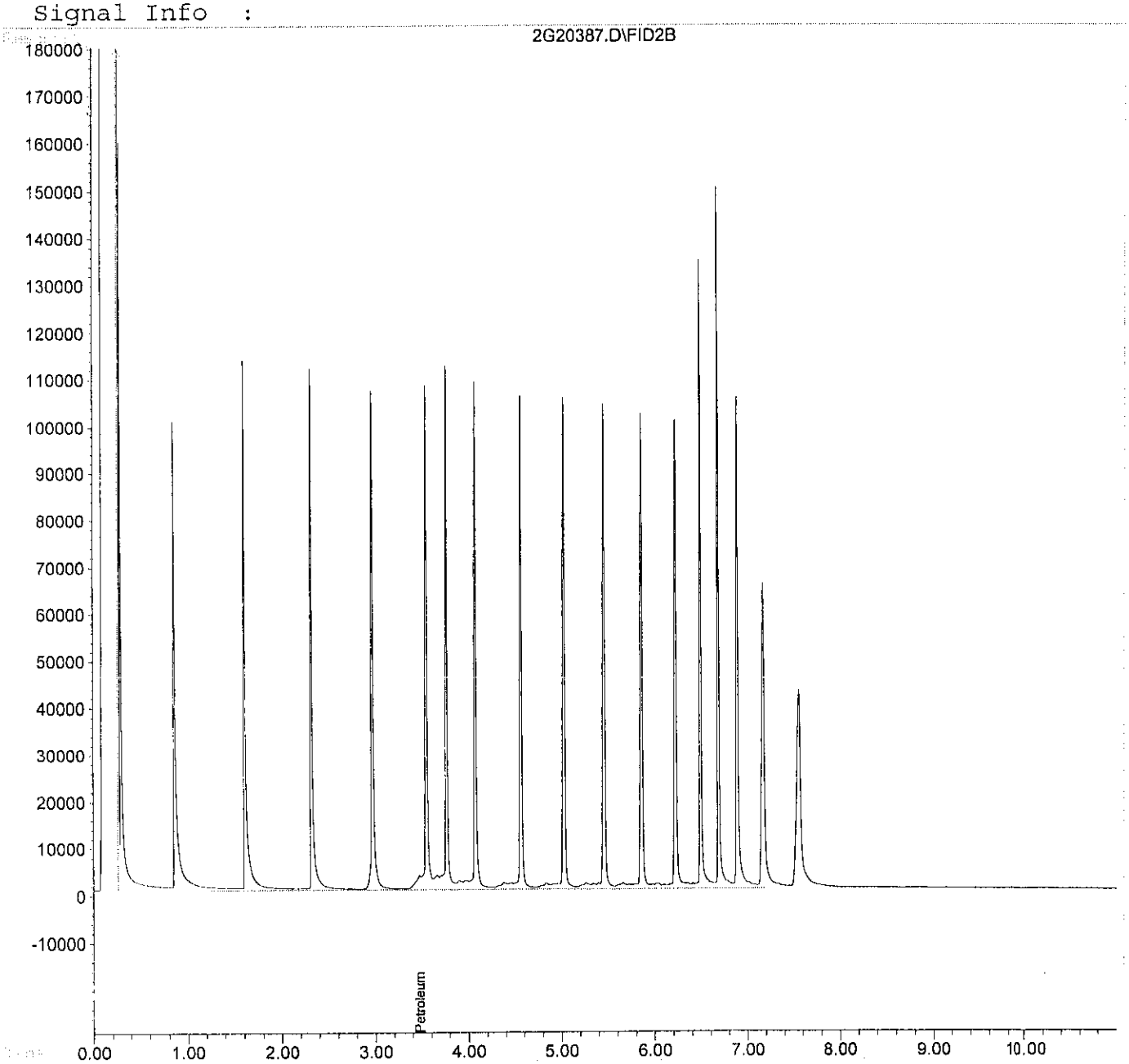
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.77	1453475	58.945 ppb
Spiked Amount 20.000 Range 49 - 174		Recovery	= 294.73%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery	= 0.00%
Target Compounds			
1) H Petroleum Range	3.48	24856363	950.860 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20387.D FLASHPRO.M Tue Jun 11 08:01:16 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20387.D Vial: 7
Acq On : 10 Jun 2002 15:43 Operator: CLK
Sample : WG119552-02 50ppm PRO STD Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 10 15:59 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Mon Jun 10 15:33:11 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20388.D Vial: 8
Acq On : 10 Jun 2002 15:58 Operator: CLK
Sample : WG119552-01 5ppm PRO STD Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 10 16:09 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Mon Jun 10 15:33:11 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

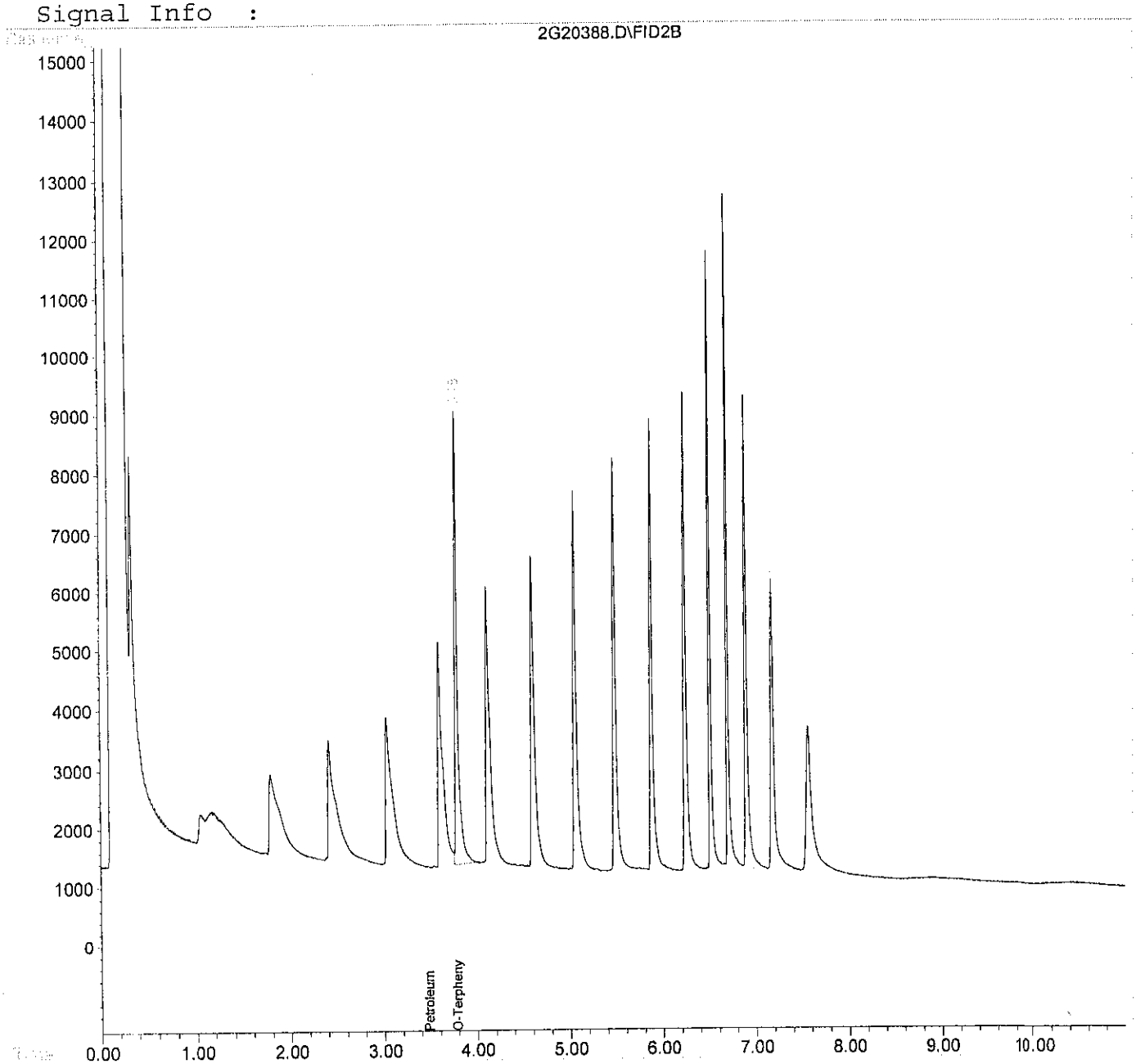
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.78	152664	6.191 ppb
Spiked Amount 20.000 Range 49 - 174		Recovery =	30.96%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	2088968	79.912 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\061002\2G20388.D Vial: 8
Acq On : 10 Jun 2002 15:58 Operator: CLK
Sample : WG119552-01 5ppm PRO STD Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 10 16:09 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Mon Jun 10 15:33:11 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20389.D
Acq On : 10 Jun 2002 16:13 Operator: CLK
Sample : WG119552-07 200ppm PRO ALT SOURCE STD Inst : HP2
Misc : 1,1 SOS 59-1 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:09:26 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Petroleum Range	3400.000	2929.558	13.8	87	0.00
2	s	O-Terphenyl	200.000	0.354	99.8#	0	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2G20389.D FLASHPRO.M Tue Jun 11 08:12:47 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20389.D
Acq On : 10 Jun 2002 16:13
Sample : WG119552-07 200ppm PRO ALT SOURCE STD
Misc : 1,1 SOS 59-1
IntFile : PETRO.E

Operator: CLK
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:09:26 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
3 s	n-Nonatriacontane	200.000	0.000	100.0#	0	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2G20389.D FLASHPRO.M Tue Jun 11 08:12:47 2002 HP2 Page 2

Data File : C:\HPCHEM\1\DATA\061002\2G20389.D Vial: 9
Acq On : 10 Jun 2002 16:13 Operator: CLK
Sample : WG119552-07 200ppm PRO ALT SOURCE STD Inst : HP2
Misc : 1,1 SOS 59-1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:12 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:09:26 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

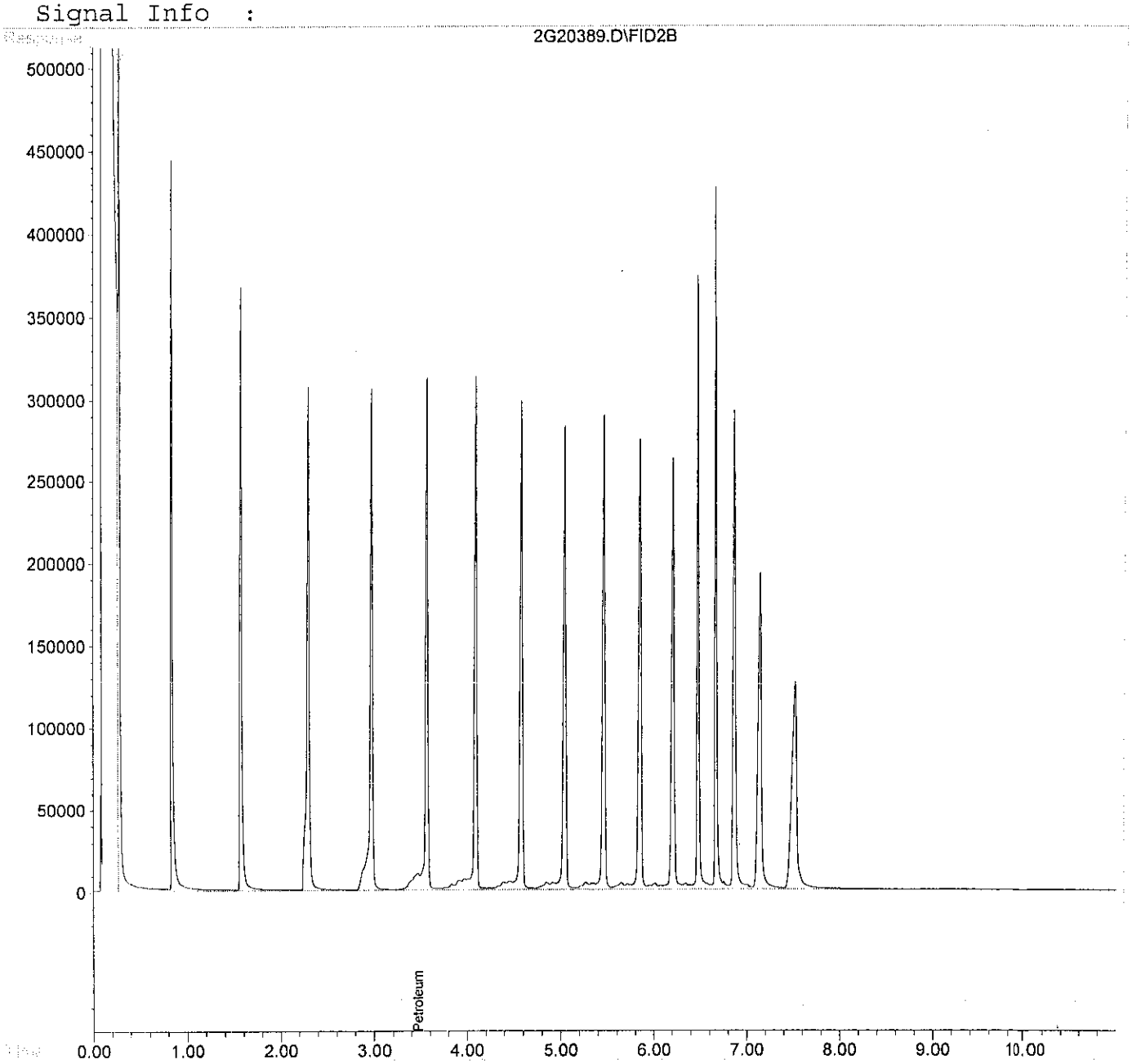
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.72	10637	0.354 ppb
Spiked Amount 20.000 Range 49 - 174		Recovery =	1.77%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery =	0.00%
Target Compounds			
1) H Petroleum Range	3.48	92112771	2929.558 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20389.D FLASHPRO.M Tue Jun 11 08:12:42 2002 HP2 Page 1

Acq On : 10 Jun 2002 16:13 Operator: CLK
Sample : WG119552-07 200ppm PRO ALT SOURCE STD Inst : HP2
Misc : 1,1 SOS 59-1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:12 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:09:26 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20399.D Vial: 5
Acq On : 10 Jun 2002 19:01 Operator: CLK
Sample : WG119552-08 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:27:40 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Petroleum Range	3400.000	3587.307	-5.5	107	0.00
2	s	O-Terphenyl	200.000	190.843	4.6	105	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\061002\2G20399.D Vial: 5
Acq On : 10 Jun 2002 19:01 Operator: CLK
Sample : WG119552-08 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:27:40 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
3 s	n-Nonatriacontane	200.000	0.000	100.0#	0	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data File : C:\HPCHEM\1\DATA\[illegible] Vial: [illegible]
Acq On : 10 Jun 2002 19:01 Operator: CLK
Sample : WG119552-08 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:27 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:27:40 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.81	5737084	190.843 ppb
Spiked Amount 20.000 Range 49 - 174		Recovery	= 954.21%#
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000		Recovery	= 0.00%
Target Compounds			
1) H Petroleum Range	3.48	112794098	3587.307 ppb

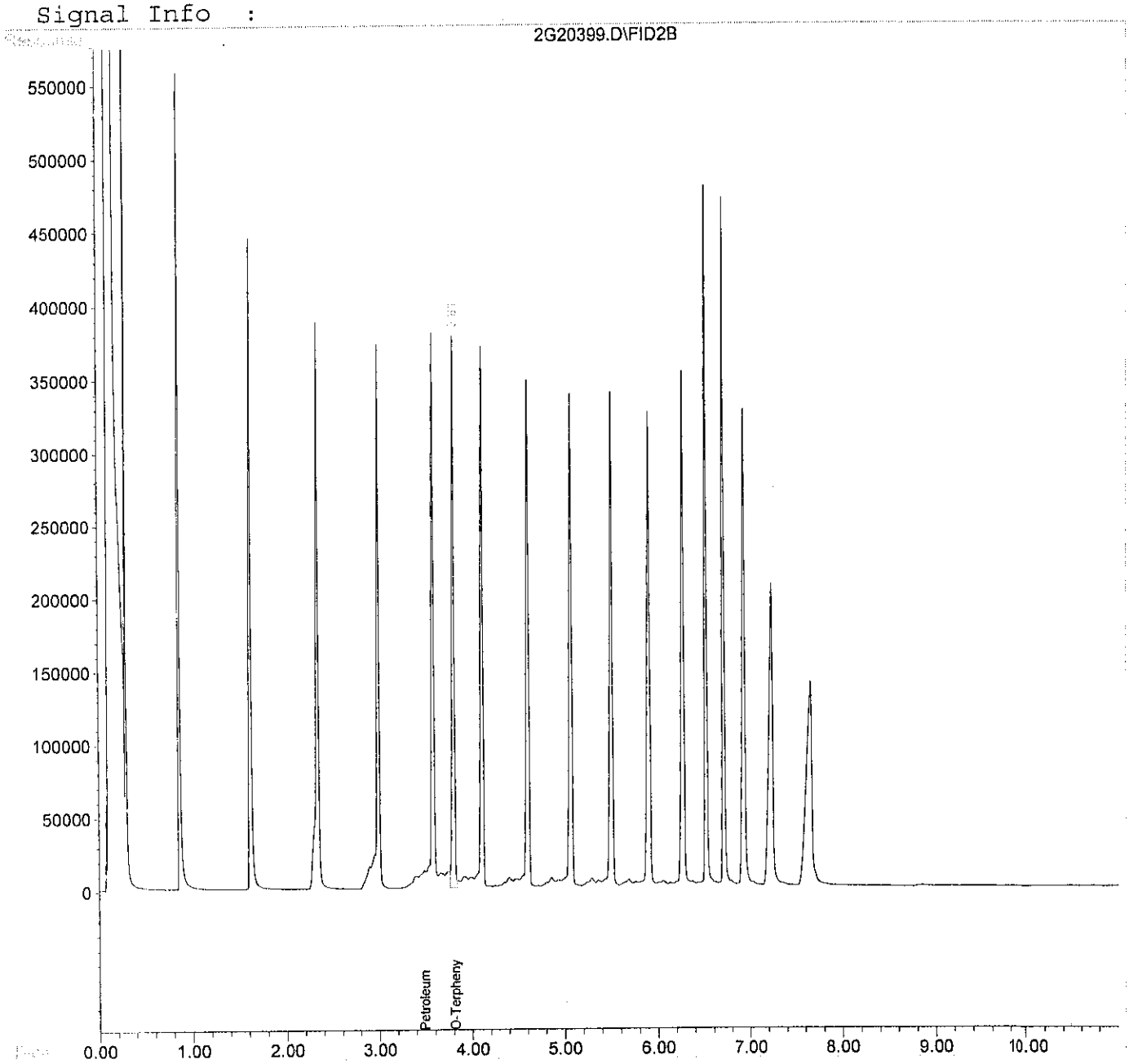
(f)=RT Delta > 1/2 Window (m)=manual int.
2G20399.D FLASHPRO.M Tue Jun 11 08:28:04 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\[illegible]

Acq On : 10 Jun 2002 19:01 Operator: CLK
Sample : WG119552-08 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:27 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:27:40 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 10 Jun 2002 20:33 Operator: CLK
Sample : WG119552-09 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:30:47 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Petroleum Range	3400.000	3566.908	-4.9	106	0.00
2	s	O-Terphenyl	200.000	188.276	5.9	103	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2G20405.D FLASHPRO.M Tue Jun 11 08:31:42 2002 HP2 Page 1

Acq On : 10 Jun 2002 20:33 Operator: CLK
Sample : WG119552-09 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:30:47 2002
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
3 s	n-Nonatriacontane	200.000	0.000	100.0#	0	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

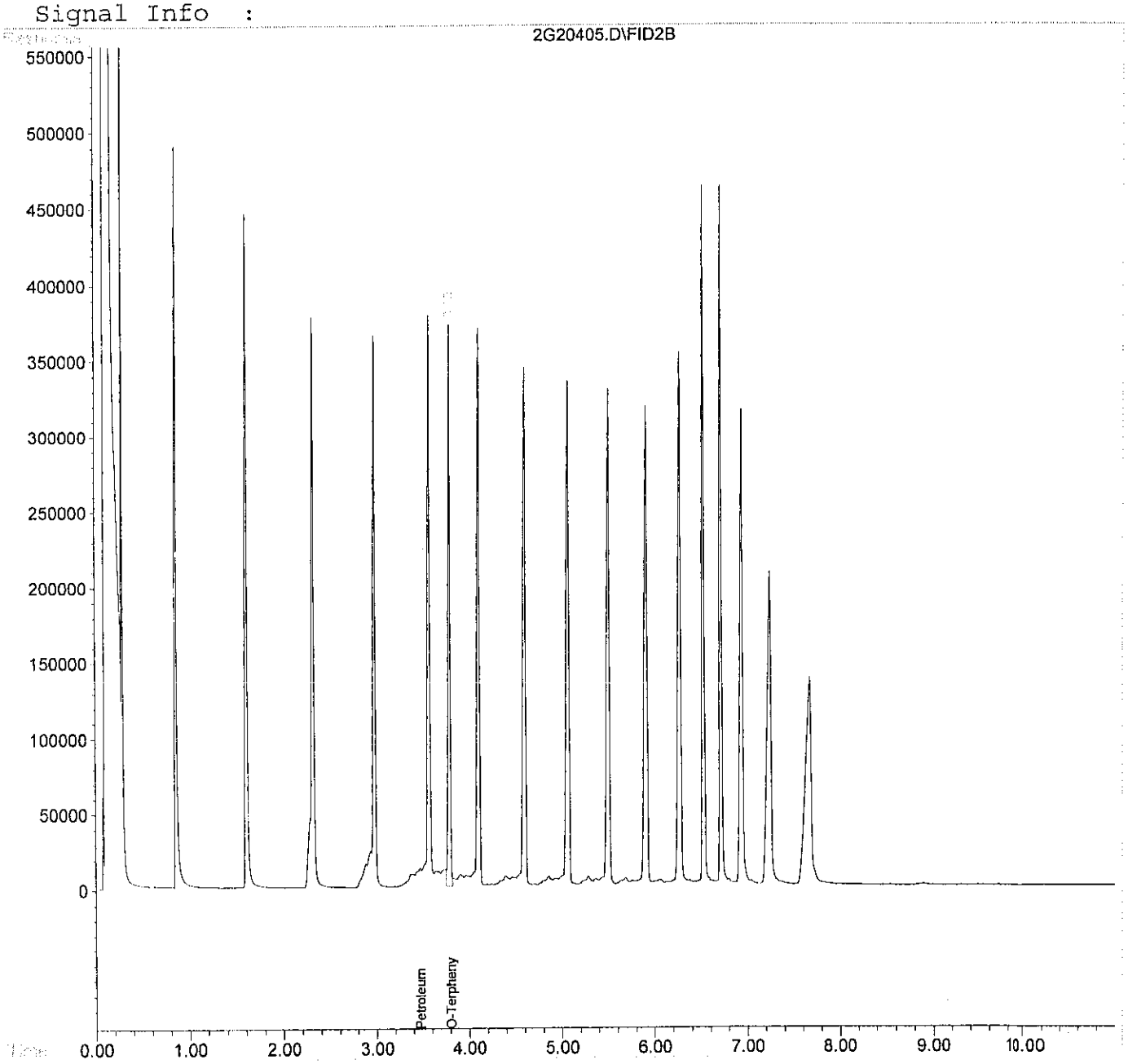
```
Acq On     : 10 Jun 2002  20:33                          Operator: CLK
Sample     : WG119552-09 200ppm PRO CCV                  Inst     : HP2
Misc       : 1,1 SOS 59-6                                Multiplr: 1.00
IntFile    : PETRO.E
Quant Time: Jun 11  8:31 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 06/10/02
Last Update  : Tue Jun 11 08:30:47 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj.  :
Signal Phase :
Signal Info  :

    Compound                        R.T.       Response    Conc Units
-----------------------------------------------------------------------

  System Monitoring Compounds
 2) s   O-Terphenyl                 3.80        5659897  188.276 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    =  941.38%#
 3) s   n-Nonatriacontane           0.00              0    N.D.  ppm
Spiked Amount   20.000                   Recovery      =    0.00%

  Target Compounds
 1) H   Petroleum Range             3.48      112152680 3566.908 ppb
```

Data File : C:\HPCHEM\1\DATA\[illegible]

Acq On : 10 Jun 2002 20:33 Operator: CLK
Sample : WG119552-09 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS 59-6 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:31 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:30:47 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



RETENTION TIME WINDOWS

Lab Name: Kemron Environmental Services

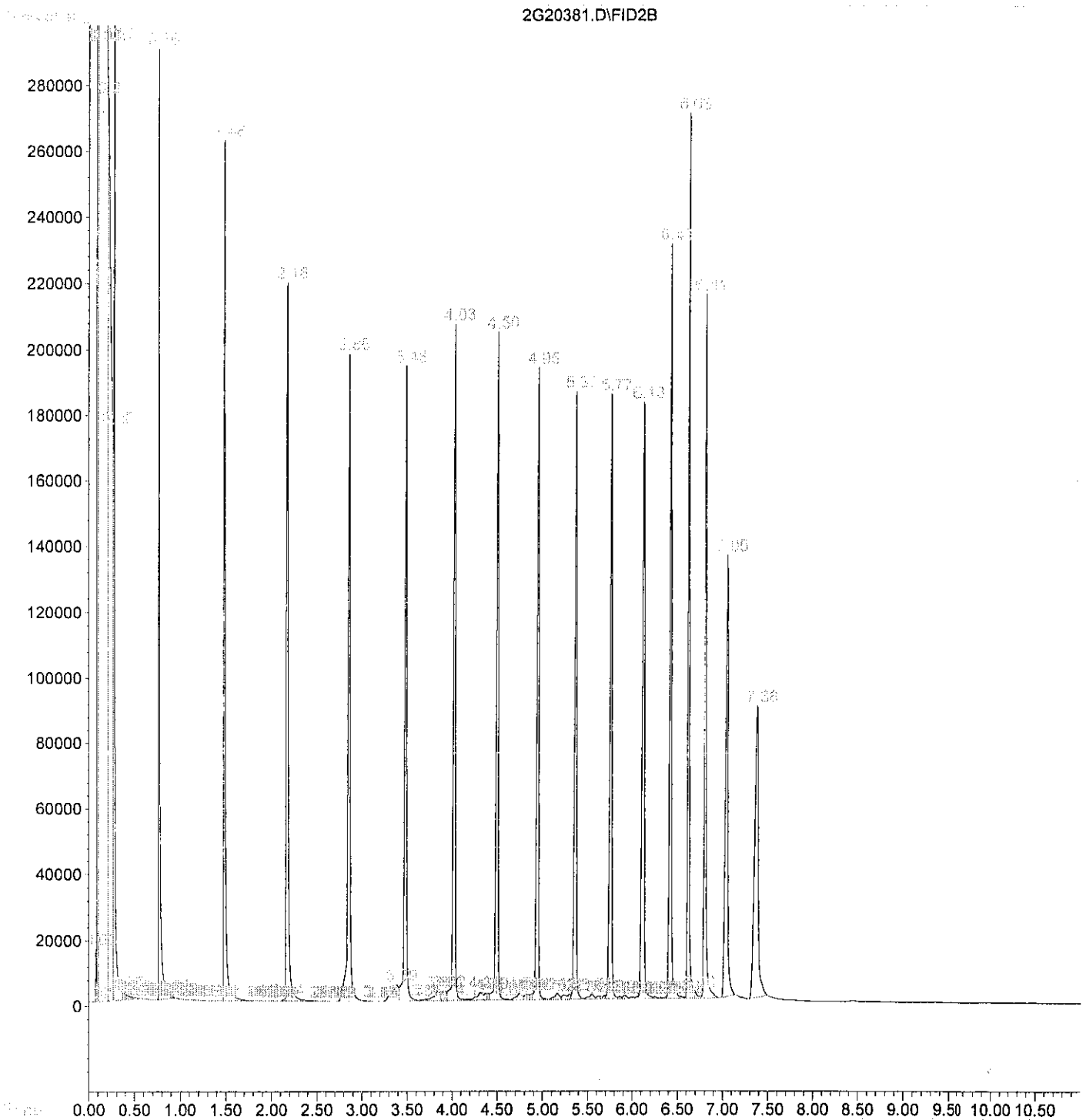
Instrument ID: HP-2

GC Column: RTX-5

	WIN.STD #1	WIN.STD #2	WIN.STD #3
Date Run	01-23-02	01-24-02	01-25-02
File #	2g18031	2g18074	2g18121

COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
Petroleum Range				
PRO - C8 #1	0.28	0.26	0.26	0.035
PRO - C40 #2	7.97	7.75	7.88	0.332
Surrogates				
O-Terphenyl (C28)	3.81	3.72	3.75	0.137

File : C:\HPCHEM\1\DATA\061002\2G20381.D
Operator : HV
Acquired : 10 Jun 2002 12:02 using AcqMethod FLASHPRO.M
Instrument : HP2
Sample Name: WIN DEF STD
Misc Info : 1,1 SOS 60-20
Vial Number: 1



2.2.6.4 Raw QC Data

Data File : C:\HPCHEM\1\DATA\061002\2G20390.D Vial: 10
Acq On : 10 Jun 2002 16:28 Operator: CLK
Sample : WG119345-02 BLK 6/6 V185P133 Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:22 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

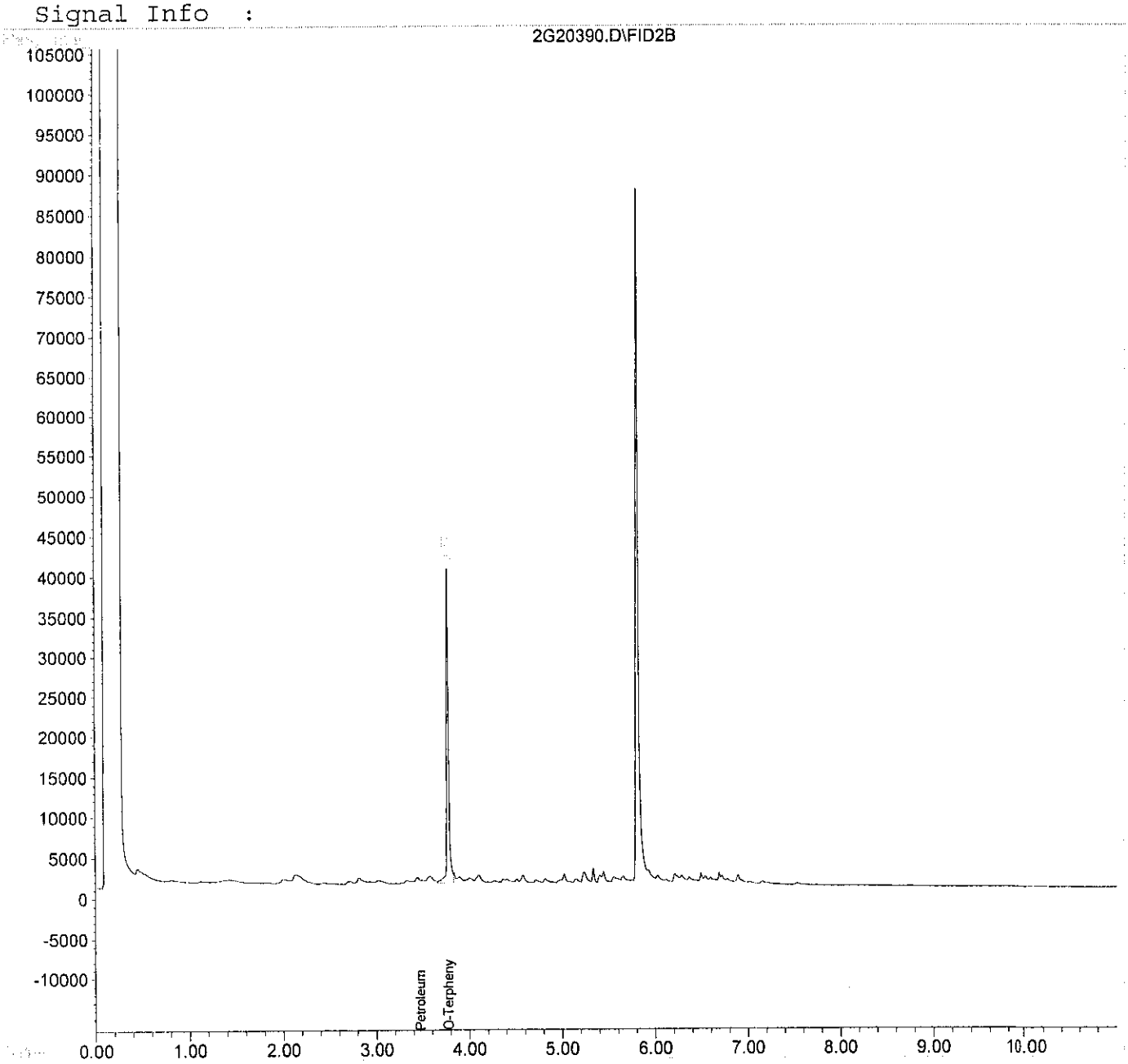
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.77	567143	18.866 ppb
Spiked Amount 20.000 Range 49 - 174 Recovery = 94.33%			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.48	2703895	85.995 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20390.D FLASHPRO.M Tue Jun 11 08:22:46 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20390.D Vial: 10
Acq On : 10 Jun 2002 16:28 Operator: CLK
Sample : WG119345-02 BLK 6/6 V185P133 Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:22 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\061002\2G20391.D Vial: 11
Acq On : 10 Jun 2002 17:00 Operator: CLK
Sample : WG119345-03 LCS 6/6 V185P133 Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:22 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

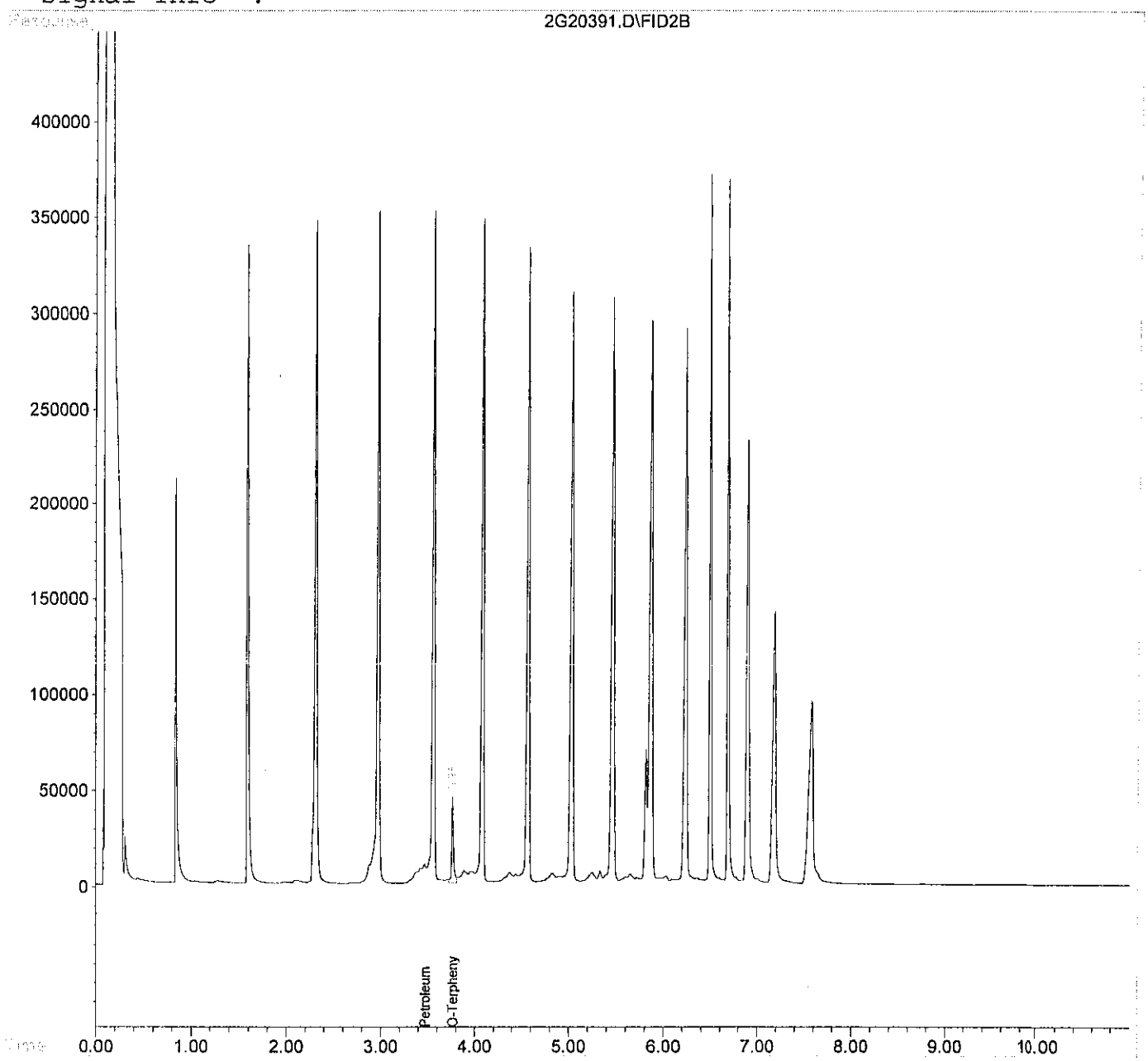
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) s O-Terphenyl	3.77	595652	19.814 ppb
Spiked Amount 20.000 Range 49 - 174 Recovery = 99.07%			
3) s n-Nonatriacontane	0.00	0	N.D. ppm
Spiked Amount 20.000 Recovery = 0.00%			
Target Compounds			
1) H Petroleum Range	3.48	82254400	2616.022 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.
2G20391.D FLASHPRO.M Tue Jun 11 08:23:08 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\061002\2G20391.D Vial: 11
Acq On : 10 Jun 2002 17:00 Operator: CLK
Sample : WG119345-03 LCS 6/6 V185P133 Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Jun 11 8:22 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 06/10/02
Last Update : Tue Jun 11 08:21:47 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



.ine	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	2g20378.d	1.	NA CH2CL2	1,1	10 Jun 102 13::3
2	2	2g20379.d	1.	✓ DRO CCV	1,1 NS 15-27	10 Jun 102 13::4
3	3	2g20380.d	1.	✓ EXT LAB DRO SURR	1,1	10 Jun 102 13::4
4	1	2g20381.d	1.	✓ WIN DEF STD	1,1 SOS 60-20	10 Jun 102 13::0
5	2	2g20382.d	1.	CL PRO CCV	1,1 SOS 59-6	10 Jun 102 13::1
6	3	2g20383.d	1.	✓ WG119552-04 200ppm PRO STD	1,1 SOS 59-6	10 Jun 102 12::3
7	4	2g20384.d	1.	WG119552-06 600ppm PRO STD	1,1 SOS 59-6	10 Jun 102 12::5
8	5	2g20385.d	1.	WG119552-05 400ppm PRO STD	1,1 SOS 59-6	10 Jun 102 12::1
9	6	2g20386.d	1.	WG119552-03 100ppm PRO STD	1,1 SOS 59-6	10 Jun 102 12::2
10	7	2g20387.d	1.	WG119552-02 50ppm PRO STD	1,1 SOS 59-6	10 Jun 102 12::4
11	8	2g20388.d	1.	WG119552-01 5ppm PRO STD	1,1 SOS 59-6	10 Jun 102 12::5
12	9	2g20389.d	1.	WG119552-07 200ppm PRO ALT SOURCE STD	1,1 SOS 59-1	10 Jun 102 12::1
13	10	2g20390.d	1.	WG119345-02 BLK 6/6 V185P133	1,1	10 Jun 102 12::2
14	11	2g20391.d	1.	WG119345-03 LCS 6/6 V185P133	1,1	10 Jun 102 12::0
15	12	2g20392.d	1.	L0206102-01 WATER PRO	1,1	10 Jun 102 12::1
16	13	2g20393.d	1.	L0206102-02 WATER PRO	1,1	10 Jun 102 12::3
17	14	2g20394.d	1.	L0206102-03 WATER PRO	1,1	10 Jun 102 12::4
18	15	2g20395.d	1.	WG119345-01 L0206102-04 WATER PRO	1,1	10 Jun 102 12::0
19	16	2g20396.d	1.	WG119345-04 L0206102-05 WATER PRO MS	1,1	10 Jun 102 12::1
20	17	2g20397.d	1.	WG119345-05 L0206102-06 WATER PRO MSD	1,1	10 Jun 102 12::3
21	1	2g20398.d	1.	NA CH2CL2	1,1	10 Jun 102 12::4
22	3	2g20399.d	1.	✓ WG119552-08 200ppm PRO CCV	1,1 SOS 59-6	10 Jun 102 12::0
23	18	2g20400.d	1.	L0206102-07 WATER PRO	1,1	10 Jun 102 12::1
24	19	2g20401.d	1.	L0206102-08 WATER PRO	1,1	10 Jun 102 12::3
25	20	2g20402.d	1.	L0206102-09 WATER PRO	1,1	10 Jun 102 12::4
26	21	2g20403.d	1.	L0206078-02 WATER PRO	2,1	10 Jun 102 12::0
27	1	2g20404.d	1.	NA CH2CL2	1,1	10 Jun 102 12::1
28	3	2g20405.d	1.	✓ WG119552-09 200ppm PRO CCV	1,1 SOS 59-6	10 Jun 102 12::3

CLK
6/11/02
[illegible]

Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 6/10/02 Instrument ID HP2 Column ID RTX-5 Data Subdirectory 061002
Analyst Initials CLE

SOP # GCS09 Rev. # ___ 8081A ____
SOP # GCS04 Rev. # ___ 8151A ____
SOP # GCS03 Rev. # 2 PRO ✓
SOP # GCS02 Rev. # ___ 8015B Mod (Alcohol) ____

SOP # GCS10 Rev. # ___ 8082 ____
SOP # GCS05 Rev. # ___ TNRCC 1005 ____
SOP # GCS02 Rev. # ___ 8015B Mod (DRO) ____
SOP # GCS07 Rev. # ___ 8011 ____

Analysis Date/Time _____ Instrument ID _____ Column ID _____ Data Subdirectory _____

Daily Check

- [x] Gases >500 psi

Preventative Maintenance

- [ ] Change o-ring
- [x] Change liner
- [ ] Change septum
- [ ] Clip column (___cm)
- [ ] Injection port seal (goldseal)
- [ ] Change gases _____

Returned To Control?

Yes ___ No ____

Additional Maintenance

Problem: _____

Action Taken: _____

Comments

Reviewed By: [illegible]

Parameter: FLA PRO-H_2O SOP #: CXPRO Revision #: 3
Extraction Analyst(s): DP TV/KD Analyst(s): DP
Date/Time Extracted: 06/06/02 @ 1630 Date TV/KD: 06/07/02
Spike/Surrogate Analyst: DP Witness: CEB
Surrogate #: CS50040-18 Earliest Hold Date: 06/11/02
Spike #: A = CS50041-07 Spike #: B = —

Extraction Work Group WG 119345
Analytical Work Group WG 119397
Extract Relinquished By: DP
Extract Received By & Date: RDC 6/7/02

	Sample ID	Test Code	pH ✓ <2	N	>12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions ✓ A	BN	N	Comments
1	Blank		✓			1L	1mL		1mL	T				WG 119345-02
2	LCS		✓			↓		1mL		T				WG ↓-03
3	06-078-02	FLA-PRO	✓	6/13		820 mL				C				
4	06-102-01		✓			960				T	✓			
5	-02	6/13	✓			950				T				
6	-03		✓			950				T				
7	-04		✓			980				T				WG119345-01
8	-05MS		✓			960		1mL		T				↓ -04*
9	-06MSD		✓			960		↓		T				— -05*
10	-07		✓			950				T				
11	-08		✓			960				T				
12	— -09	—	✓			950 ↓	↓		—	T				
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

DP 06/07/02

Methylene Chloride Lot #: 42015
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: 1:1 HCL Lot #: CR2084
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: CR2152

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C	✓	Other	
Acid 3664A		N/A	
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 6-07-02

Extraction Notes For Volume # 185 Page # 133

General Comments: * MS/MSD of 06-102-04

Extraction Anomalies: None

Concentration Anomalies: None

Clean-Up Anomalies: None

Supervisor Review: _____ Date: _____

Analyst: CLK
Method: 8015 PRO
Instrument: HP2
Work Group: WG119397

06-102 6/13

	Analyst
System Performance Check	✓
Endrin & DDT Breakdown	NA
Initial Calibration	✓
Average RF	✓
Linear Reg or Higher Order Curve	NA
Second Source Standard % Difference	✓
Check Standards	✓
Project / Client Specific Requirements	✓
Special Standards	NA
Blanks	✓
TCL's	✓
Surrogates	✓
LCS (Laboratory Control Sample)	✓
Recoveries	✓
Surrogates	✓
MS / MSD / Duplicates	✓
Samples	✓
TCL Hits	✓
Surrogates	✓
Calculations & Correct Factors	✓
Dilutions Run	NA
Reruns	NA
Check Sample Histories	NA
Ending Check Standards	✓
Excel Spreadsheets	✓
Case Narrative	
Corrective Action	
Results Reporting / Data Qualifiers	
WorkGroups Traceability	
Client Data Package Assembly	
Check for Completeness	

Primary Reviewer Initials & Date Checked CLK 6/11/02

Secondary Reviewer Initials & Date Checked [illegible] 6/11/02

- ✓ Check for compliance with Method and project-specific requirements
- ✓ Check the completeness of the reported information
- ✓ Check the information for the report narrative
- ✓ Check the reasonableness of results

Supervisory Review Initials & Date Checked [illegible] 6/11/02

Comments:

✓ - Checked & OK
NA - Not Applicable
DL - Diluted Out

Example FLA-PRO Calculations

1.0 Calulating the Response Factor (RF) from the initial calibration (ICAL) data:

RF = As/ Cs

Where:		Example:
	As = Area of the compound being measured in the standard	10000
	Cs = Concentration of the compound being measured (ng/ml).	100
	RF	**100**

2.0 Calculating the concentration (C) of a compound in water using data from prep log and quantitation report:

C = [(Ax)(Vf)(D)] / [(RF)(Vi)]

Where:		Example:
	Ax = Area of the compound being measured	10000
	Vf = Final volume of sample extract (mL). (prep log)	1
	D = Dilution factor for sample as a multiplier (10X = 10).	1
	RF = Response factor from ICAL calculated above.	**100**
	Vi = Initial volume of sample (mL). (prep log)	1000
	C (ug/L) =	**0.1**

3.0 Calculating the concentration (C) of a compound in soil using data from prep log and quantitation report: C = [(Ax)(Vf)(D)] / [(RF)(Vi)]

Where:		Example:
	Ax = Area of the compound being measured	10000
	Vf = Final volume of sample extract (mL).	1
	D = Dilution factor for sample as a multiplier (10X = 10).	1
	RF = Response factor from ICAL calculated above.	100
	Wi = Initial weight of sample (g).	30
	C (ug/kg)	**3.333333**

2.2.7 PAH HPLC DATA (8310)

REPORT NARRATIVE
PAH HPLC

KEMRON Login No.: L0206102

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)
Analysis: SW-846 8310

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples:All acceptance criteria were met.
Matrix Spikes: The MS/MSD results were not associated with this sample delivery group.

SAMPLES

Surrogates: All acceptance criteria were met.
Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: RDC REVIEWED: _____ DATE: 6/27/02

Rev. 7/14/00

PAH HPLC DATA (8310)

Login Number 06-102

A. QC Summary

___Method Blank Summary
✓ Method Blank Results
✓ Laboratory Control Sample (LCS)
✓ Matrix Spike/Matrix Spike Duplicate (MS/MSD)
✓ Holding Time Summary
✓ Surrogate Recovery Summary
✓ Initial Calibration Summary
✓ Initial Calibration Verification (ICV) Form (Second Source)
✓ Continuing Calibration Verification (CCV)
✓ Instrument Run Log
✓ Extraction Bench Sheet

B. Sample Data

___Target compound and surrogate results summary (See Summary Report)
✓ Chromatograms and quantitation report

C. Standards Data

✓ Initial calibration (ICAL) summary form
✓ Chromatograms and quantitation report for ICAL standards
✓ Initial calibration verification (ICV/second source) summary forms
✓ Initial calibration verification (ICV/second source) quantitation reports and chromatograms
✓ Continuing Calibration Verification (CCV) summary forms
✓ Continuing Calibration Verification (CCV) quantitation reports and chromatograms
___Retention Time Window Summary

D. Raw QC Data

✓ Method blank chromatogram and quantitation report
✓ LCS chromatogram and quantitation report
✓ MS/MSD chromatogram and quantitation report
✓ Instrument Run Log
✓ Extraction Bench Sheet
✓ Daily Checklist
✓ Example Calculations

Checked By: [signature] Date: 6/27/02

2.2.7.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0206102
Run Date: 06/14/2002
Sample ID: WG119312-02
Instrument ID: HPLC4
Run Time: 11:34
Method: 8310
File ID: 4L003133.R
Analyst: RDC
Matrix: Water
Workgroup (AAB#): WG119449
Units: ug/L
Contract #:
Cal ID: HPLC4-13-JUN-2002

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Acenaphthene	0.415	1.00	0.415	1.00	ND
Acenaphthylene	0.351	1.00	0.351	1.00	ND
Anthracene	0.285	1.00	0.285	1.00	ND
Benzo(a)anthracene	0.0300	0.200	0.0300	1.00	ND
Benzo[a]pyrene	0.0530	0.200	0.0530	1.00	ND
Benzo(b)Fluoranthene	0.0340	0.200	0.0340	1.00	ND
Benzo[ghi]perylene	0.0500	0.200	0.0500	1.00	ND
Benzo[k]fluoranthene	0.0720	0.200	0.0720	1.00	ND
Chrysene	0.0240	0.200	0.0240	1.00	ND
Dibenz(a,h)Anthracene	0.0770	0.200	0.0770	1.00	ND
Fluoranthene	0.0500	0.200	0.0500	1.00	ND
Fluorene	0.559	1.00	0.559	1.00	ND
Indeno(1,2,3-cd)pyrene	0.0800	0.200	0.0800	1.00	ND
Naphthalene	0.359	1.00	0.359	1.00	ND
2-Methylnaphthalene	0.336	1.00	0.336	1.00	ND
1-Methylnaphthalene	0.362	1.00	0.362	1.00	ND
Phenanthrene	0.287	1.00	0.287	1.00	ND
Pyrene	0.0680	0.200	0.0680	1.00	ND

Surrogates	% Recovery	Surrogate Limits	Qualifier
p-terphenyl-d14	92.8	40 - 132	PASS

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0206102
Run Date: 06/14/2002
Sample ID: WG119312-03
Instrument ID: HPLC4
Run Time: 12:30
Method: 8310
File ID: 4L003134.R
Analyst: RDC
Matrix: Water
Workgroup (AAB#): WG119449
Units: ug/L
Contract #:
Cal ID: HPLC4-13-JUN-2002

Analytes	Expected	Found	% Rec	LCS Limits	Q
Acenaphthene	50	33.2	66.5	25 - 78	
Acenaphthylene	50	33.4	66.7	25 - 77	
Anthracene	50	44.4	88.8	47 - 101	
Benzo(a)anthracene	5	5.04	101	50 - 115	
Benzo[a]pyrene	5	4.68	93.6	29 - 113	
Benzo(b)Fluoranthene	5	4.75	95.1	41 - 110	
Benzo[ghi]perylene	5	4.01	80.2	11 - 84	
Benzo[k]fluoranthene	2.5	2.28	91.4	25 - 107	
Chrysene	5	5.01	100	39 - 120	
Dibenz(a,h)Anthracene	5	4.10	82.1	10 - 92	
Fluoranthene	5	4.82	96.4	55 - 104	
Fluorene	50	36.0	72.0	29 - 84	
Indeno(1,2,3-cd)pyrene	5	4.20	84.0	16 - 98	
Naphthalene	50	28.4	56.8	25 - 68	
2-Methylnaphthalene	50	29.5	59.0	26 - 72	
1-Methylnaphthalene	50	29.7	59.3	26 - 71	
Phenanthrene	50	40.3	80.7	39 - 95	
Pyrene	5	4.84	96.8	56 - 104	

Surrogates	% Recovery	Surrogate Limits	Qualifier
p-terphenyl-d14	104	40 - 132	PASS

* Analyte outside control limits

NS Analyte not spiked

KEMRON ENVIRONMENTAL SERVICES
MS/MSD REPORT

Loginnum: L0206102 Cal ID: HPLC4-13-JUN-2002 Worknum: WG119449
Instrument ID: HPLC4 Contract #: Method: 8310
Parent ID: L0206102-04 File ID: 4L003145.R Dil: 1 Matrix: Water
Sample ID: L0206102-05 MS File ID: 4L003146.R Dil: 1 Units: ug/L
Sample ID: L0206102-06 MSD File ID: 4L003147.R Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Naphthalene	ND	50.0	26.4	52.8	50.0	24.7	49.4	6.35	25 - 68	50	
1-Methylnaphthalene	ND	50.0	27.1	54.2	50.0	25.3	50.6	6.67	26 - 71	50	
2-Methylnaphthalene	ND	50.0	27.0	54.0	50.0	25.3	50.6	6.64	26 - 72	50	
Acenaphthylene	ND	50.0	29.3	58.6	50.0	27.5	55.0	6.45	25 - 77	50	
Acenaphthene	ND	50.0	29.3	58.6	50.0	27.4	54.8	6.63	25 - 78	50	
Fluorene	ND	50.0	31.4	62.8	50.0	29.3	58.6	6.60	29 - 84	50	
Phenanthrene	ND	50.0	36.6	73.2	50.0	34.0	68.0	7.46	39 - 95	50	
Anthracene	ND	50.0	39.0	78.0	50.0	36.4	72.8	6.75	47 - 101	50	
Fluoranthene	ND	5.00	4.67	93.4	5.00	4.31	86.2	7.87	55 - 104	50	
Pyrene	ND	5.00	4.64	92.8	5.00	4.28	85.6	8.05	56 - 104	50	
Benzo(a)anthracene	ND	5.00	4.88	97.6	5.00	4.28	85.6	13.3	50 - 115	50	
Chrysene	ND	5.00	4.79	95.8	5.00	3.96	79.2	18.9	39 - 120	50	
Benzo(b)fluoranthene	ND	5.00	4.22	84.4	5.00	3.32	66.4	23.9	41 - 110	50	
Benzo(k)fluoranthene	ND	2.50	2.00	80.0	2.50	1.49	59.6	28.9	25 - 107	50	
Benzo(a)pyrene	ND	5.00	4.24	84.8	5.00	3.30	66.0	25.0	29 - 113	50	
Indeno(1,2,3-cd)pyrene	ND	5.00	3.31	66.2	5.00	2.29	45.8	36.4	16 - 98	50	
Dibenzo(a,h)anthracene	ND	5.00	2.75	55.0	5.00	2.12	42.4	26.1	10 - 92	50	
Benzo(g,h,i)perylene	ND	5.00	2.90	58.0	5.00	2.01	40.2	36.0	11 - 84	50	

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8310 AAB#: WG119449

Login Number: L0206102

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
062-9DUP-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.62	06/15/02	40	8.57	
062-9EQB-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.05	06/15/02	40	8.61	
062-CEF9-2S-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.07	06/14/02	40	8.29	
062-CEF9-3S-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.06	06/14/02	40	8.33	
062-CEF9-5S-Q2-02-18	06/05/02	06/06/02	06/06/02	7	0.965	06/14/02	40	8.37	
062-CEF9-7D-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.03	06/15/02	40	8.41	
062-CEF9-7D-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.03	06/15/02	40	8.45	
062-CEF9-7D-Q2-02-18	06/05/02	06/06/02	06/06/02	7	1.03	06/15/02	40	8.49	
062-CEF9-9S-Q2-02-18	06/05/02	06/06/02	06/06/02	7	0.990	06/15/02	40	8.53	

* EXT = MISSED EXTRACTION HOLD TIME

*ANAL = MISSED ANALYITICAL HOLD TIME

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0206102
Instrument Id: HPLC4
Workgroup (AAB#): WG119449

Method: 8310
Matrix: WATER

Sample Number	Dilution	Tag	1
L0206102-01	1.00	01	79.2
L0206102-01	1.00	CF01	76.8
L0206102-02	1.00	01	74.6
L0206102-02	1.00	CF01	75.2
L0206102-03	1.00	01	73.9
L0206102-04	1.00	01	86.2
L0206102-05	1.00	01	91.5
L0206102-05	1.00	CF01	90.6
L0206102-06	1.00	01	66.6
L0206102-06	1.00	CF01	66.6
L0206102-07	1.00	01	81.7
L0206102-07	1.00	CF01	82.0
L0206102-08	1.00	01	71.7
L0206102-08	1.00	CF01	72.4
L0206102-09	1.00	01	92.8
WG119312-02	1.00	01	92.8
WG119312-03	1.00	01	104

Surrogates	Surrogate Limits		
1 - p-terphenyl-d14	40	-	132

Underline = Result out of surrogate limits

DL = surrogate diluted out

==========
Calibration Table
==========

HPLC4 8310 CALIBRATION

Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM

Calculate : External Standard
Based on : Peak Area

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.300 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.300 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Included
Weight : Equal

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)

Signal 1: FLD1 A, Ex=270, Em=335, TT
Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Sig	Lvl	Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
9.335	2	1	1.00000	118.44469	8.44276e-3			Naphthalene #1
		2	5.00000	598.90387	8.34859e-3			
		3	10.00000	1219.35925	8.20103e-3			
		4	20.00000	2498.67944	8.00423e-3			
		5	50.00000	6195.70996	8.07010e-3			
		6	100.00000	1.19505e4	8.36782e-3			
9.353	1	1	1.00000	35.70203	2.80096e-2			Naphthalene #1
		2	5.00000	178.95563	2.79399e-2			
		3	10.00000	371.85556	2.68922e-2			
		4	20.00000	754.54517	2.65060e-2			
		5	50.00000	1885.17432	2.65227e-2			
		6	100.00000	3817.44727	2.61955e-2			
10.959	2	1	1.00000	32.34379	3.09178e-2			Acenaphthylene #2
		2	5.00000	157.19412	3.18078e-2			
		3	10.00000	325.59451	3.07130e-2			
		4	20.00000	658.50293	3.03719e-2			
		5	50.00000	1639.64368	3.04944e-2			
		6	100.00000	3321.14795	3.01101e-2			
11.906	2	1	1.00000	73.52287	1.36012e-2			1-Methylnaphthalene #3

256

RetTime [min]	Lvl Sig		Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
		2	5.00000	365.23682	1.36897e-2			
		3	10.00000	757.97943	1.31930e-2			
		4	20.00000	1536.99390	1.30124e-2			
		5	50.00000	3823.69092	1.30764e-2			
		6	100.00000	7652.24854	1.30681e-2			
11.924	1	1	1.00000	41.21246	2.42645e-2			1-Methylnaphthalene #3
		2	5.00000	205.97406	2.42749e-2			
		3	10.00000	427.16837	2.34100e-2			
		4	20.00000	865.41754	2.31102e-2			
		5	50.00000	2162.71216	2.31191e-2			
		6	100.00000	4362.68555	2.29217e-2			
12.479	2	1	1.00000	85.92275	1.16384e-2			2-Methylnaphthalene #4
		2	5.00000	427.72684	1.16897e-2			
		3	10.00000	887.82635	1.12635e-2			
		4	20.00000	1791.84399	1.11617e-2			
		5	50.00000	4440.55420	1.12599e-2			
		6	100.00000	8770.67480	1.14016e-2			
12.497	1	1	1.00000	53.61522	1.86514e-2			2-Methylnaphthalene #4
		2	5.00000	267.76404	1.86732e-2			
		3	10.00000	555.40234	1.80050e-2			
		4	20.00000	1125.70947	1.77666e-2			
		5	50.00000	2815.32397	1.77599e-2			
		6	100.00000	5651.09082	1.76957e-2			
12.956	2	1	1.00000	45.75132	2.18573e-2			Acenaphthene #5
		2	5.00000	230.37761	2.17035e-2			
		3	10.00000	479.64664	2.08487e-2			
		4	20.00000	968.64014	2.06475e-2			
		5	50.00000	2413.63843	2.07156e-2			
		6	100.00000	4859.52686	2.05781e-2			
12.974	1	1	1.00000	68.11809	1.46804e-2			Acenaphthene #5
		2	5.00000	339.83661	1.47130e-2			
		3	10.00000	704.82605	1.41879e-2			
		4	20.00000	1426.86951	1.40167e-2			
		5	50.00000	3551.90137	1.40770e-2			
		6	100.00000	7092.07813	1.41002e-2			
13.606	2	1	1.00000	52.41635	1.90780e-2			Fluorene #6
		2	5.00000	267.85175	1.86670e-2			
		3	10.00000	555.59216	1.79988e-2			
		4	20.00000	1125.01990	1.77775e-2			
		5	50.00000	2806.76538	1.78141e-2			
		6	100.00000	5664.78320	1.76529e-2			
13.625	1	1	1.00000	147.37762	6.78529e-3			Fluorene #6
		2	5.00000	732.50269	6.82591e-3			
		3	10.00000	1519.64282	6.58049e-3			
		4	20.00000	3071.66968	6.51112e-3			
		5	50.00000	7586.48193	6.59067e-3			
		6	100.00000	1.50207e4	6.65746e-3			
14.988	2	1	1.00000	59.16147	1.69029e-2			Phenanthrene #7
		2	5.00000	271.73749	1.84001e-2			
		3	10.00000	563.78528	1.77372e-2			
		4	20.00000	1137.39648	1.75840e-2			
		5	50.00000	2834.24902	1.76414e-2			
		6	100.00000	5720.03760	1.74824e-2			
15.006	1	1	1.00000	5.49246	1.82068e-1			Phenanthrene #7
		2	5.00000	27.09999	1.84502e-1			
		3	10.00000	56.03428	1.78462e-1			

RetTime [min]	Sig	Lvl	Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
		4	20.00000	113.91219	1.75574e-1			
		5	50.00000	286.42151	1.74568e-1			
		6	100.00000	583.99371	1.71235e-1			
16.387	2	1	1.00000	93.73675	1.06682e-2			Anthracene #8
		2	5.00000	479.37994	1.04301e-2			
		3	10.00000	1007.09772	9.92952e-3			
		4	20.00000	2016.31750	9.91907e-3			
		5	50.00000	4994.17480	1.00117e-2			
		6	100.00000	9770.11133	1.02353e-2			
16.405	1	1	1.00000	3.27440	3.05399e-1			Anthracene #8
		2	5.00000	15.91612	3.14147e-1			
		3	10.00000	32.93192	3.03657e-1			
		4	20.00000	66.59662	3.00316e-1			
		5	50.00000	165.24231	3.02586e-1			
		6	100.00000	330.63736	3.02446e-1			
17.762	2	1	1.00000e-1	2.86666	3.48838e-2			Fluoranthene #9
		2	5.00000e-1	21.47706	2.32806e-2			
		3	1.00000	44.35479	2.25455e-2			
		4	2.00000	90.19173	2.21750e-2			
		5	5.00000	225.76083	2.21473e-2			
		6	10.00000	458.29434	2.18200e-2			
17.779	1	1	1.00000e-1	3.76502	2.65603e-2			Fluoranthene #9
		2	5.00000e-1	18.56896	2.69267e-2			
		3	1.00000	38.54884	2.59411e-2			
		4	2.00000	77.44264	2.58256e-2			
		5	5.00000	194.82120	2.56646e-2			
		6	10.00000	394.78314	2.53304e-2			
18.761	2	1	1.00000e-1	5.78315	1.72916e-2			Pyrene #10
		2	5.00000e-1	30.90943	1.61763e-2			
		3	1.00000	67.05128	1.49140e-2			
		4	2.00000	137.28792	1.45679e-2			
		5	5.00000	342.14008	1.46139e-2			
		6	10.00000	696.78912	1.43515e-2			
18.779	1	1	1.00000e-1	2.23349	4.47730e-2			Pyrene #10
		2	5.00000e-1	11.37372	4.39610e-2			
		3	1.00000	23.43897	4.26640e-2			
		4	2.00000	48.14644	4.15399e-2			
		5	5.00000	120.60387	4.14580e-2			
21.086	2	1	1.00000	14.27733	7.00411e-2			p-Terphenyl d14 #11*
		2	5.00000	72.29396	6.91621e-2			
		3	10.00000	150.04201	6.66480e-2			
		4	20.00000	302.29453	6.61606e-2			
		5	50.00000	765.97974	6.52759e-2			
		6	100.00000	1538.62390	6.49931e-2			
21.105	1	1	1.00000	3.43824	2.90847e-1			p-Terphenyl d14 #11*
		2	5.00000	15.96525	3.13180e-1			
		3	10.00000	33.36931	2.99677e-1			
		4	20.00000	66.93617	2.98792e-1			
		5	50.00000	168.95605	2.95935e-1			
		6	100.00000	342.27563	2.92162e-1			
22.401	2	1	1.00000e-1	4.17491	2.39526e-2			Benzo(a)anthracene #12
		2	5.00000e-1	21.50113	2.32546e-2			
		3	1.00000	43.38402	2.30500e-2			
		4	2.00000	88.38959	2.26271e-2			
		5	5.00000	220.76303	2.26487e-2			
		6	10.00000	449.91843	2.22263e-2			

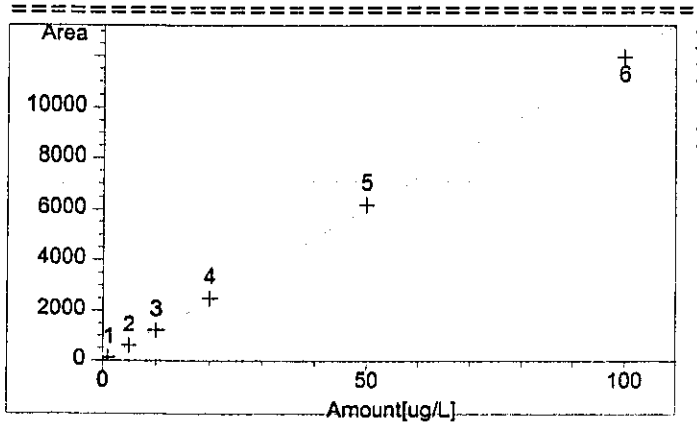
RetTime [min]	Sig	Lvl	Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
22.418	1	1	1.00000e-1	11.68998	8.55433e-3			Benzo(a)anthracene #12
		2	5.00000e-1	57.25381	8.73304e-3			
		3	1.00000	119.10960	8.39563e-3			
		4	2.00000	240.75162	8.30732e-3			
		5	5.00000	603.67468	8.28261e-3			
		6	10.00000	1230.57483	8.12628e-3			
23.266	2	1	1.00000e-1	7.56785	1.32138e-2			Chrysene #13
		2	5.00000e-1	30.82063	1.62229e-2			
		3	1.00000	63.84754	1.56623e-2			
		4	2.00000	129.65228	1.54259e-2			
		5	5.00000	324.23495	1.54209e-2			
		6	10.00000	658.83282	1.51784e-2			
23.280	1	1	1.00000e-1	2.35546	4.24546e-2			Chrysene #13
		2	5.00000e-1	11.91314	4.19705e-2			
		3	1.00000	24.15862	4.13931e-2			
		4	2.00000	49.60668	4.03171e-2			
		5	5.00000	123.50459	4.04843e-2			
		6	10.00000	251.15788	3.98156e-2			
25.984	2	1	1.00000e-1	4.71679	2.12008e-2			Benzo(b)fluoranthene #
		2	5.00000e-1	22.19203	2.25306e-2			
		3	1.00000	43.42394	2.30288e-2			
		4	2.00000	94.69703	2.11200e-2			
		5	5.00000	236.61021	2.11318e-2			
		6	10.00000	480.16330	2.08262e-2			
26.003	1	1	1.00000e-1	5.60739	1.78336e-2			Benzo(b)fluoranthene #
		2	5.00000e-1	27.48360	1.81927e-2			
		3	1.00000	57.64073	1.73488e-2			
		4	2.00000	116.12308	1.72231e-2			
		5	5.00000	291.03116	1.71803e-2			
		6	10.00000	592.02631	1.68911e-2			
27.418	2	1	5.00000e-2	2.02281	2.47181e-2			Benzo(k)fluoranthene #
		2	2.50000e-1	10.12679	2.46870e-2			
		3	5.00000e-1	21.38502	2.33809e-2			
		4	1.00000	43.30220	2.30935e-2			
		5	2.50000	108.54563	2.30318e-2			
		6	5.00000	220.91960	2.26327e-2			
27.438	1	1	5.00000e-2	16.96901	2.94655e-3			Benzo(k)fluoranthene #
		2	2.50000e-1	83.42035	2.99687e-3			
		3	5.00000e-1	173.46057	2.88250e-3			
		4	1.00000	351.66119	2.84365e-3			
		5	2.50000	879.42432	2.84277e-3			
		6	5.00000	1779.80371	2.80930e-3			
28.535	2	1	1.00000e-1	3.59195	2.78400e-2			Benzo(a)pyrene #16
		2	5.00000e-1	16.33183	3.06151e-2			
		3	1.00000	36.80410	2.71709e-2			
		4	2.00000	74.00938	2.70236e-2			
		5	5.00000	188.39293	2.65403e-2			
		6	10.00000	385.66537	2.59292e-2			
28.553	1	1	1.00000e-1	19.68503	5.08000e-3			Benzo(a)pyrene #16
		2	5.00000e-1	97.54757	5.12570e-3			
		3	1.00000	203.09286	4.92386e-3			
		4	2.00000	412.69138	4.84624e-3			
		5	5.00000	1041.60461	4.80029e-3			
		6	10.00000	2128.17065	4.69887e-3			
30.399	2	1	1.00000e-1	8.17798e-1	1.22280e-1			Dibenz(a,h)anthracene
		2	5.00000e-1	4.54521	1.10006e-1			

RetTime [min]	Lvl Sig		Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
		3	1.00000	10.34522	9.66630e-2			
		4	2.00000	20.79541	9.61751e-2			
		5	5.00000	53.20811	9.39706e-2			
		6	10.00000	106.05376	9.42918e-2			
30.418	1	1	1.00000e-1	2.33135	4.28935e-2			Dibenz(a,h)anthracene
		2	5.00000e-1	11.57100	4.32115e-2			
		3	1.00000	23.94359	4.17648e-2			
		4	2.00000	48.37633	4.13425e-2			
		5	5.00000	122.52839	4.08069e-2			
		6	10.00000	250.75458	3.98796e-2			
31.206	2	1	1.00000e-1	3.35385	2.98165e-2			Benzo(g,h,i)perylene #
		2	5.00000e-1	8.93342	5.59696e-2			
		3	1.00000	21.12121	4.73458e-2			
		4	2.00000	37.91122	5.27548e-2			
		5	5.00000	92.63392	5.39759e-2			
		6	10.00000	187.07765	5.34537e-2			
31.227	1	1	1.00000e-1	3.26803	3.05995e-2			Benzo(g,h,i)perylene #
		2	5.00000e-1	16.23036	3.08065e-2			
		3	1.00000	33.76281	2.96184e-2			
		4	2.00000	68.38602	2.92457e-2			
		5	5.00000	173.07938	2.88885e-2			
		6	10.00000	354.98242	2.81704e-2			
32.159	2	1	1.00000e-1	3.43245	2.91337e-2			Indeno(1,2,3-cd)pyrene
		2	5.00000e-1	20.74642	2.41005e-2			
		3	1.00000	45.65535	2.19032e-2			
		4	2.00000	93.60317	2.13668e-2			
		5	5.00000	237.44170	2.10578e-2			
		6	10.00000	485.43732	2.06000e-2			
32.172	1	1	1.00000e-1	6.85877	1.45799e-2			Indeno(1,2,3-cd)pyrene
		2	5.00000e-1	32.92362	1.51867e-2			
		3	1.00000	69.03428	1.44856e-2			
		4	2.00000	140.00281	1.42854e-2			
		5	5.00000	351.97876	1.42054e-2			
		6	10.00000	715.64252	1.39735e-2			

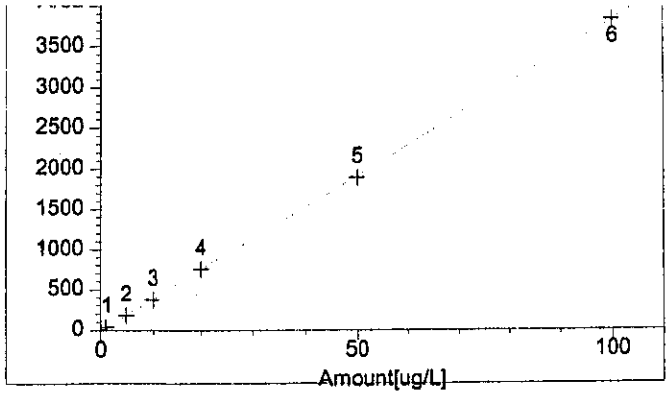
Peak Sum Table

No Entries in table

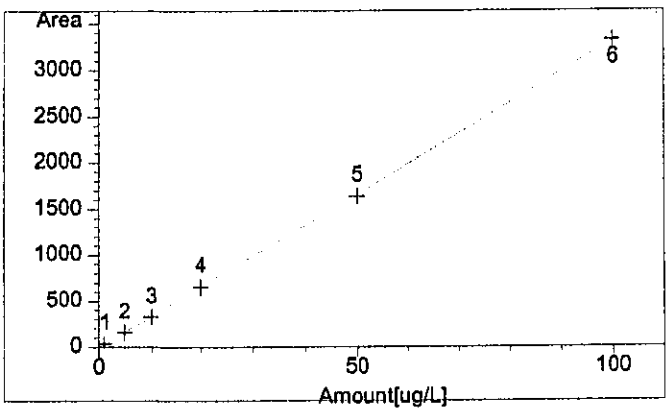
Calibration Curves



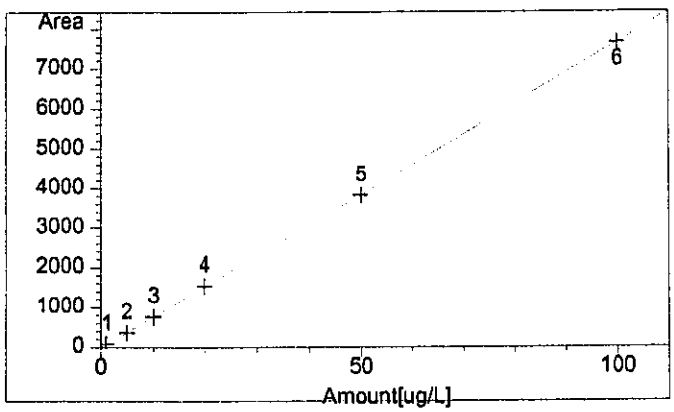
Naphthalene #1 at exp. RT: 9.335
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99982
Residual Std. Dev.: 90.64647
Formula: y = mx + b
m: 120.00596
b: 37.21961
x: Amount[ug/L]
y: Area



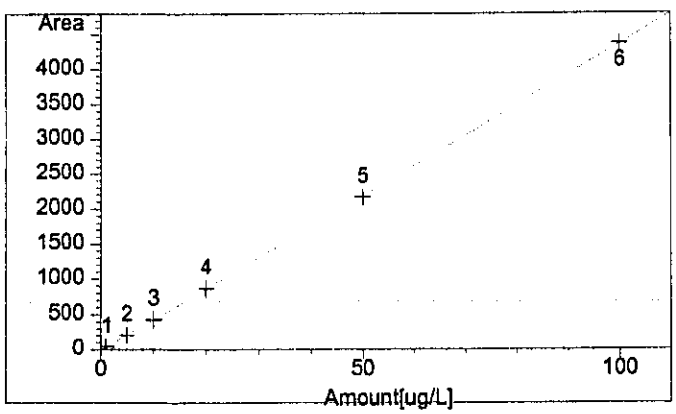
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 9.16561
Formula: y = mx + b
m: 38.17339
b: -8.08139
x: Amount [ug/L]
y: Area



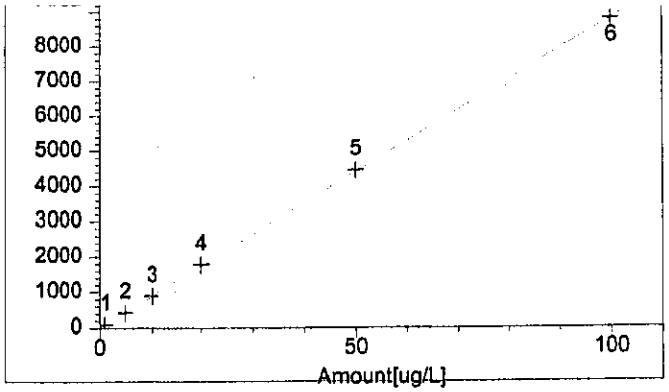
Acenaphthylene #2 at exp. RT: 10.959
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99998
Residual Std. Dev.: 8.09380
Formula: y = mx + b
m: 33.19524
b: -5.69815
x: Amount [ug/L]
y: Area



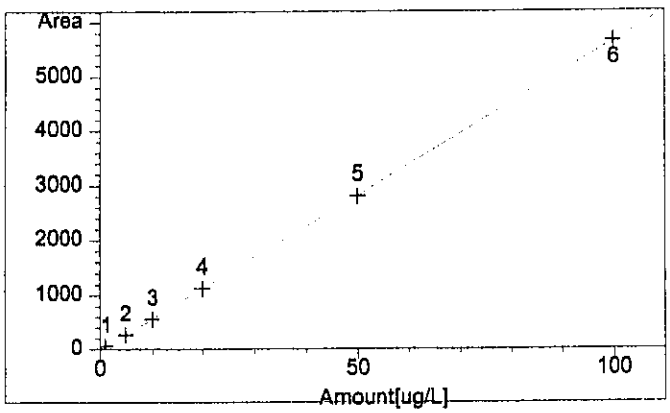
1-Methylnaphthalene #3 at exp. RT: 11.906
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 1.00000
Residual Std. Dev.: 7.81901
Formula: y = mx + b
m: 76.58082
b: -4.90862
x: Amount [ug/L]
y: Area



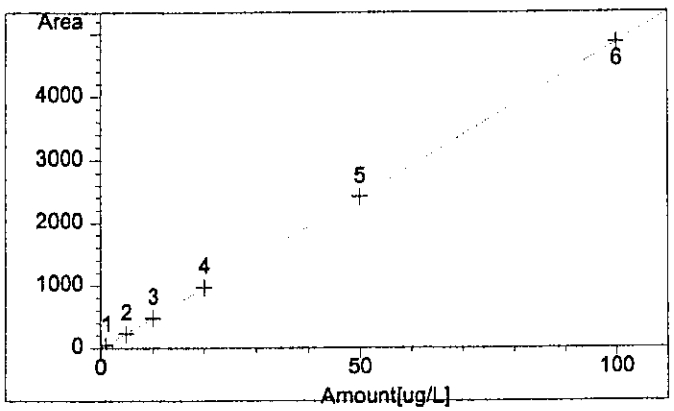
1-Methylnaphthalene #3 at exp. RT: 11.924
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99999
Residual Std. Dev.: 7.54227
Formula: y = mx + b
m: 43.63739
b: -7.34061
x: Amount [ug/L]
y: Area



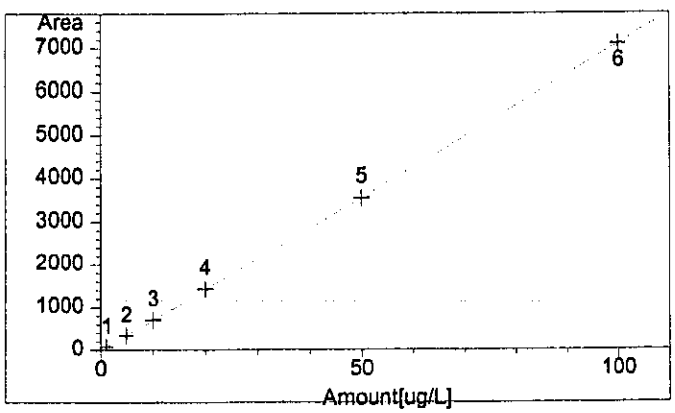
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99997
Residual Std. Dev.: 25.91757
Formula: y = mx + b
m: 87.84855
b: 9.24548
x: Amount[ug/L]
y: Area



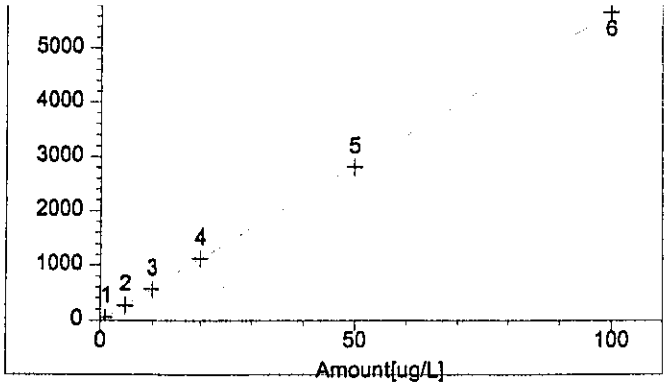
2-Methylnaphthalene #4 at exp. RT: 12.497
FLD1 A, Ex=270, Em=335, TT
Correlation: 1.00000
Residual Std. Dev.: 5.96731
Formula: y = mx + b
m: 56.55348
b: -7.14867
x: Amount[ug/L]
y: Area



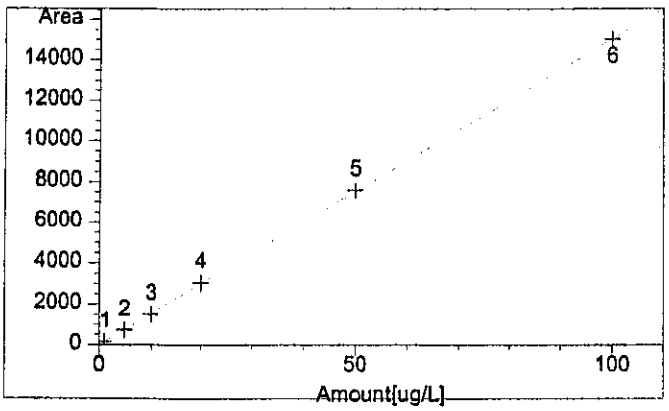
Acenaphthene #5 at exp. RT: 12.956
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 6.84725
Formula: y = mx + b
m: 48.60673
b: -6.18160
x: Amount[ug/L]
y: Area



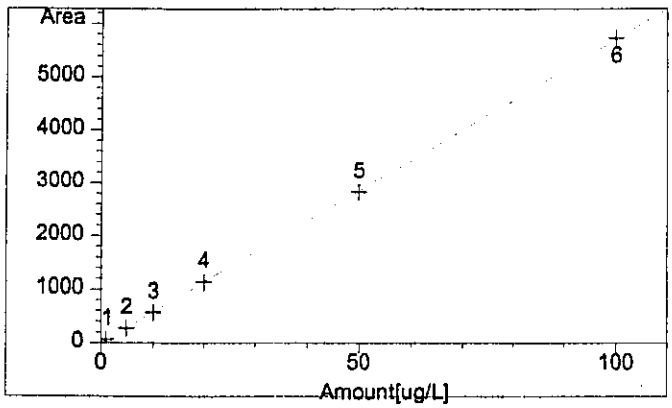
Acenaphthene #5 at exp. RT: 12.974
FLD1 A, Ex=270, Em=335, TT
Correlation: 1.00000
Residual Std. Dev.: 7.82229
Formula: y = mx + b
m: 70.98815
b: -2.88099
x: Amount[ug/L]
y: Area



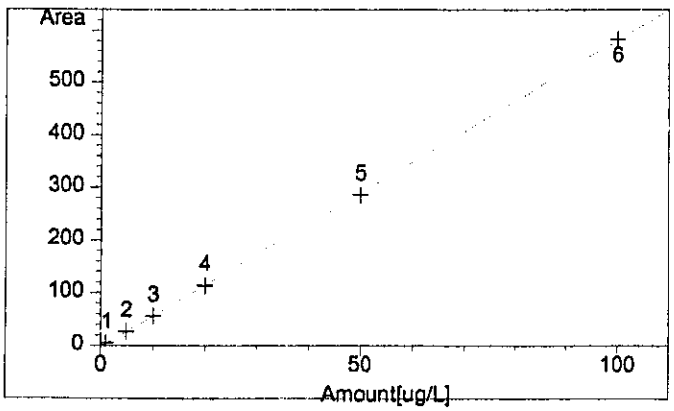
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 10.05830
Formula: y = mx + b
m: 56.65678
b: -9.39024
x: Amount[ug/L]
y: Area



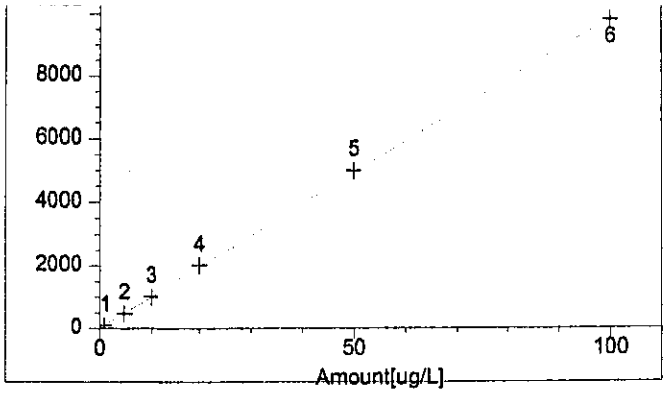
Fluorene #6 at exp. RT: 13.625
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 39.83191
Formula: y = mx + b
m: 150.39549
b: 14.97901
x: Amount[ug/L]
y: Area



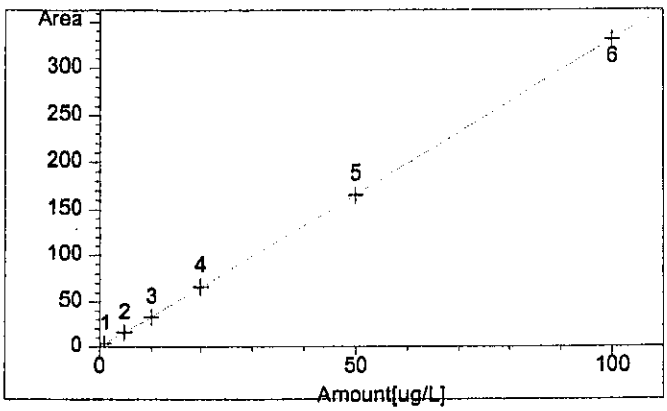
Phenanthrene #7 at exp. RT: 14.988
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 10.76481
Formula: y = mx + b
m: 57.17977
b: -7.01003
x: Amount[ug/L]
y: Area



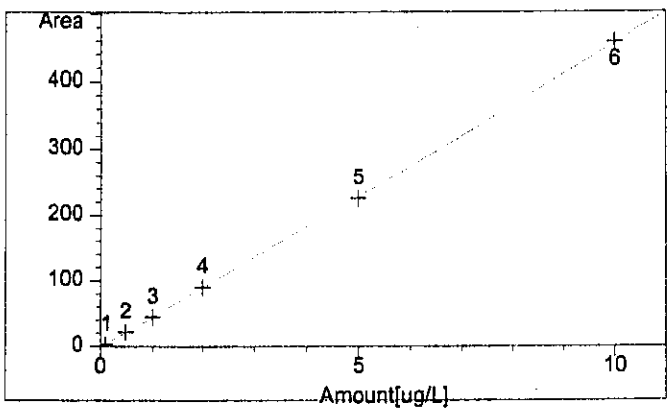
Phenanthrene #7 at exp. RT: 15.006
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99996
Residual Std. Dev.: 2.20575
Formula: y = mx + b
m: 5.83768
b: -1.83622
x: Amount[ug/L]
y: Area



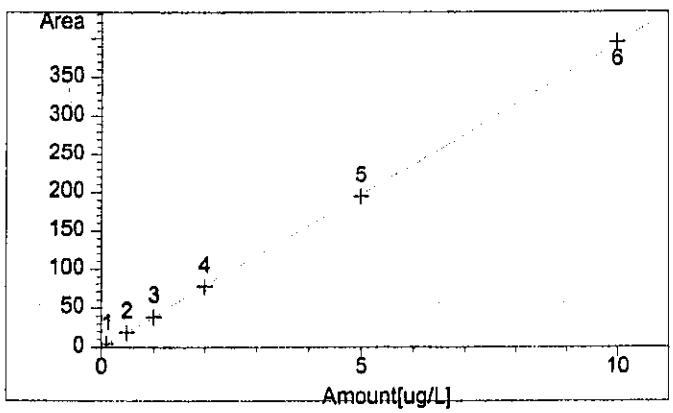
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99993
Residual Std. Dev.: 47.43795
Formula: y = mx + b
m: 97.94194
b: 20.51670
x: Amount [ug/L]
y: Area



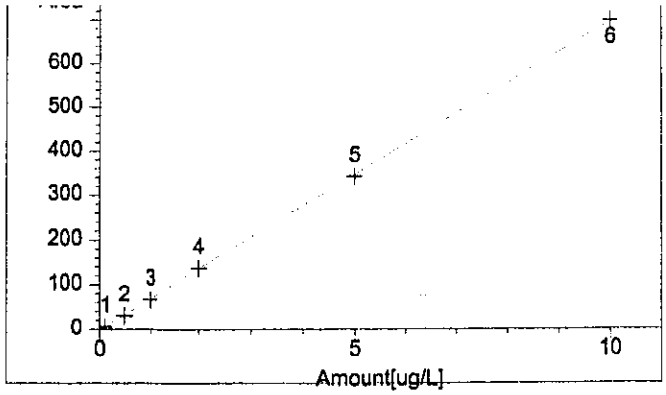
Anthracene #8 at exp. RT: 16.405
FLD1 A, Ex=270, Em=335, TT
Correlation: 1.00000
Residual Std. Dev.: 0.34234
Formula: y = mx + b
m: 3.30779
b: -9.27632e-2
x: Amount [ug/L]
y: Area



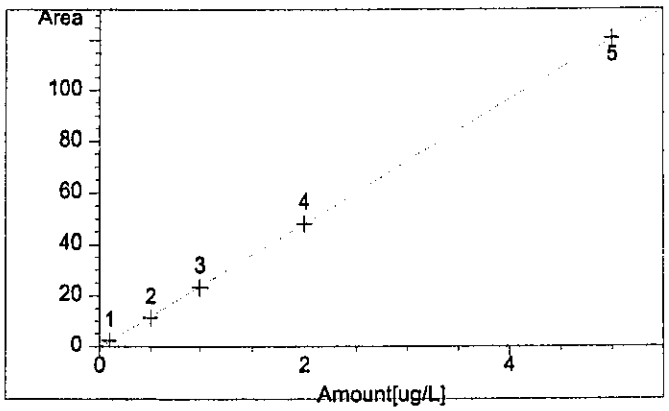
Fluoranthene #9 at exp. RT: 17.762
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99998
Residual Std. Dev.: 1.25331
Formula: y = mx + b
m: 45.86610
b: -1.45201
x: Amount [ug/L]
y: Area



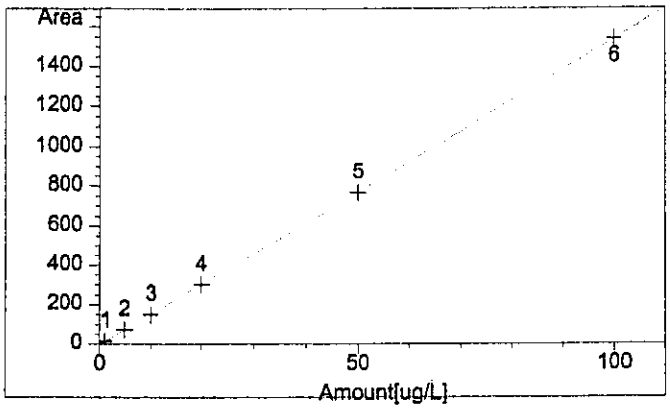
Fluoranthene #9 at exp. RT: 17.779
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 1.03650
Formula: y = mx + b
m: 39.47219
b: -8.93275e-1
x: Amount [ug/L]
y: Area



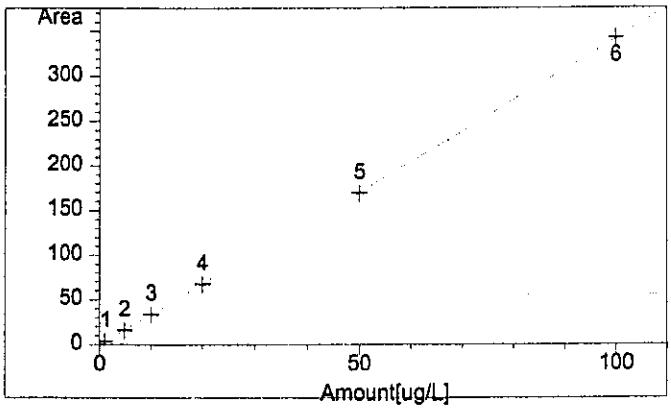
Pyrene #10 at exp. RT: 18.781
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99996
Residual Std. Dev.: 2.45753
Formula: y = mx + b
m: 69.71068
b: -2.37968
x: Amount[ug/L]
y: Area



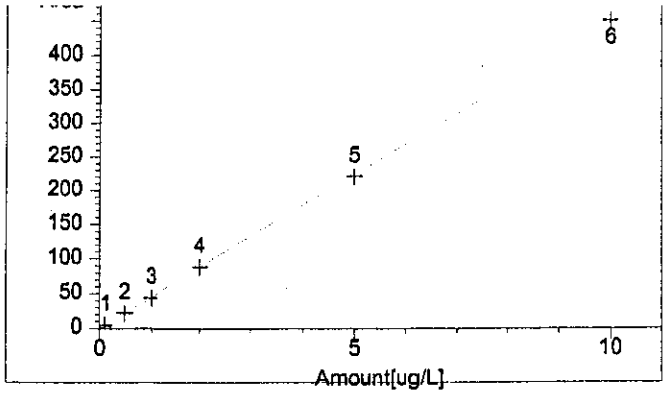
Pyrene #10 at exp. RT: 18.779
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 0.33832
Formula: y = mx + b
m: 24.18326
b: -3.63256e-1
x: Amount[ug/L]
y: Area



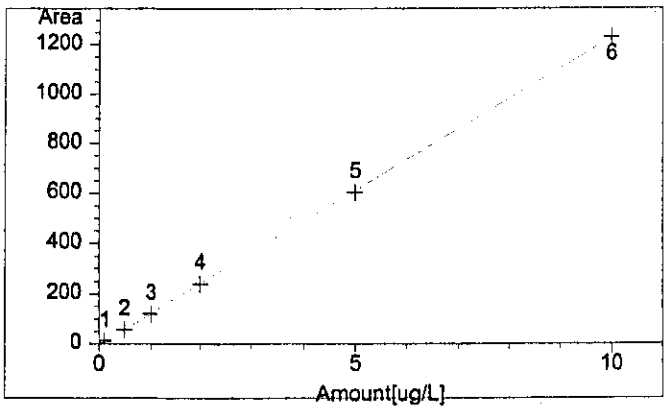
p-Terphenyl d14 #11* at exp. RT: 21.086
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 2.33106
Formula: y = mx + b
m: 15.40471
b: -3.10922
x: Amount[ug/L]
y: Area



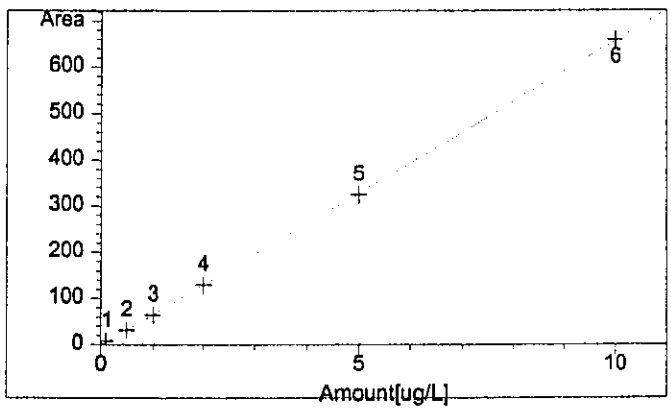
p-Terphenyl d14 #11* at exp. RT: 21.105
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 0.94806
Formula: y = mx + b
m: 3.42244
b: -8.04824e-1
x: Amount[ug/L]
y: Area



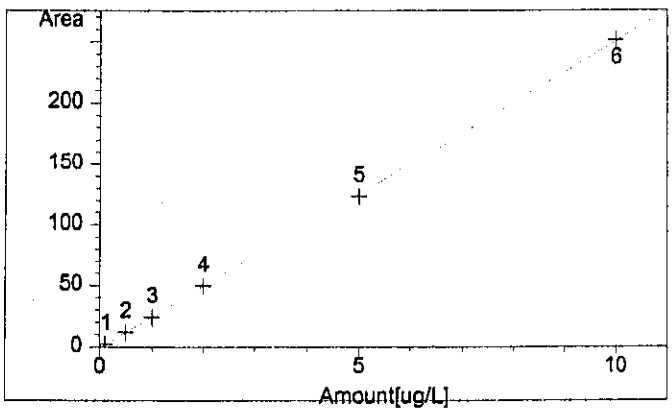
Benzo(a)anthracene #12 at exp. RT: 22.401
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99996
Residual Std. Dev.: 1.60319
Formula: y = mx + b
m: 44.95295
b: -1.14196
x: Amount [ug/L]
y: Area



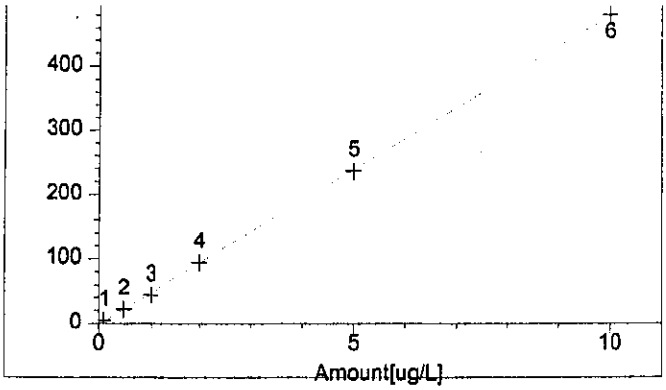
Benzo(a)anthracene #12 at exp. RT: 22.418
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99996
Residual Std. Dev.: 4.52026
Formula: y = mx + b
m: 122.97900
b: -3.47928
x: Amount [ug/L]
y: Area



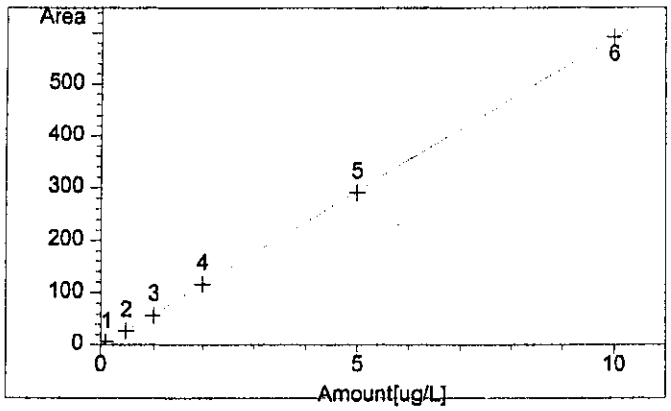
Chrysene #13 at exp. RT: 23.266
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99996
Residual Std. Dev.: 2.23172
Formula: y = mx + b
m: 65.81764
b: -1.32173
x: Amount [ug/L]
y: Area



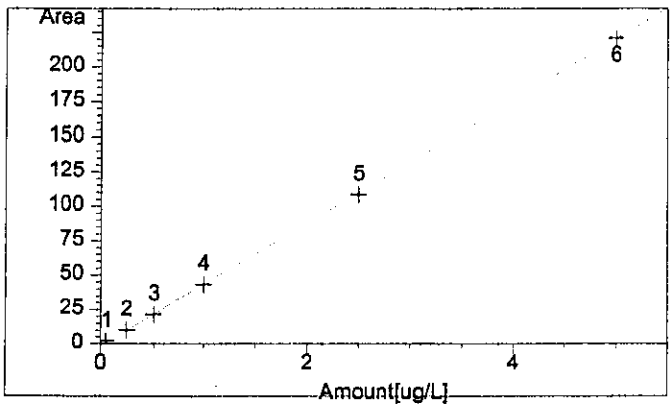
Chrysene #13 at exp. RT: 23.280
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 0.79966
Formula: y = mx + b
m: 25.10251
b: -6.01486e-1
x: Amount [ug/L]
y: Area



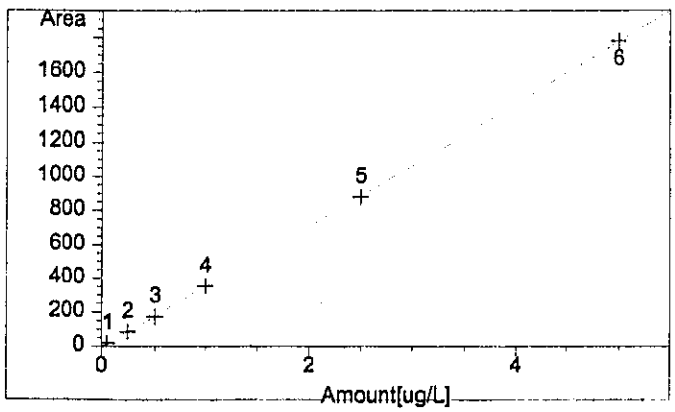
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99995
Residual Std. Dev.: 1.98687
Formula: y = mx + b
m: 48.07187
b: -1.76192
x: Amount[ug/L]
y: Area



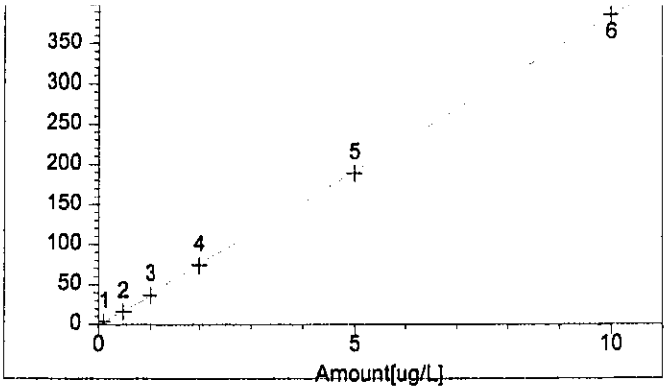
Benzo(b)fluoranthene #14 at exp. RT: 26.0
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 1.94362
Formula: y = mx + b
m: 59.17522
b: -1.53526
x: Amount[ug/L]
y: Area



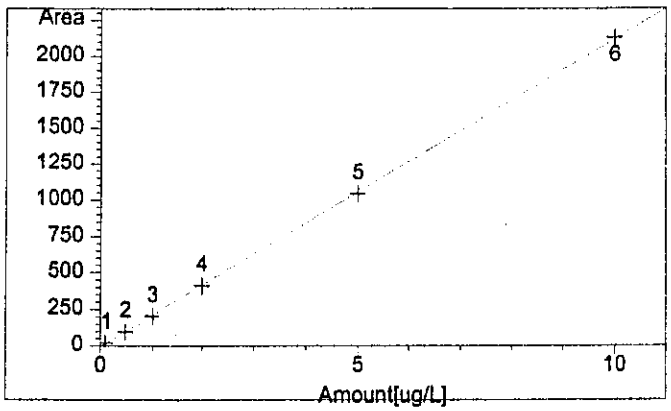
Benzo(k)fluoranthene #15 at exp. RT: 27.4
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99996
Residual Std. Dev.: 0.74646
Formula: y = mx + b
m: 44.17713
b: -6.49330e-1
x: Amount[ug/L]
y: Area



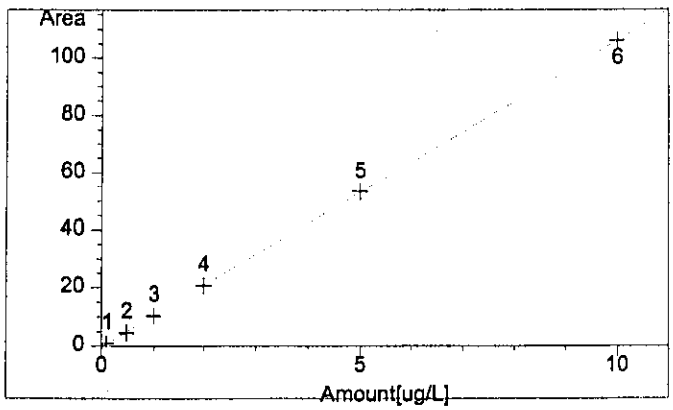
Benzo(k)fluoranthene #15 at exp. RT: 27.4
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 4.14920
Formula: y = mx + b
m: 355.95834
b: -3.66763
x: Amount[ug/L]
y: Area



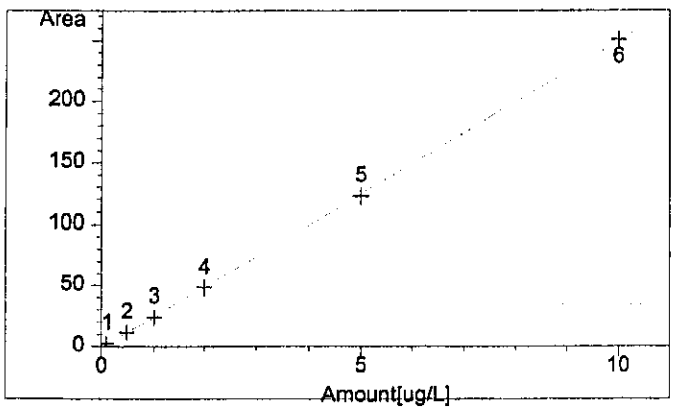
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99992
Residual Std. Dev.: 1.94176
Formula: y = mx + b
m: 38.58652
b: -1.84481
x: Amount[ug/L]
y: Area



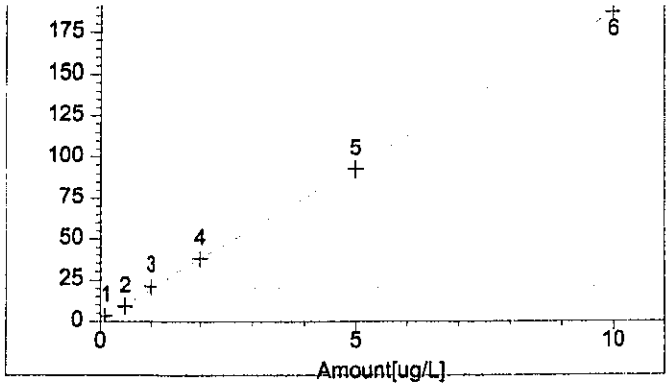
Benzo(a)pyrene #16 at exp. RT: 28.553
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99994
Residual Std. Dev.: 9.01693
Formula: y = mx + b
m: 212.75704
b: -7.78412
x: Amount[ug/L]
y: Area



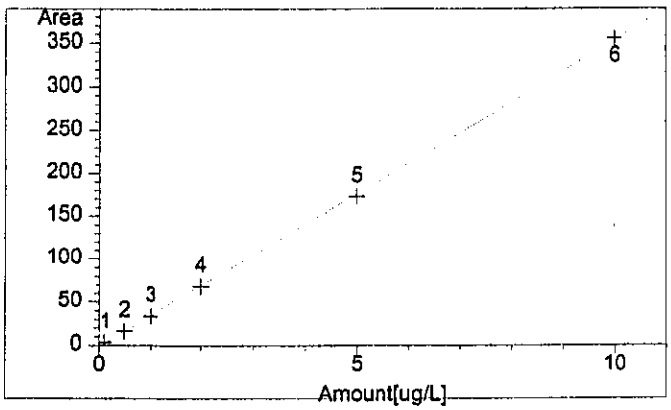
Dibenz(a,h)anthracene #17 at exp. RT: 30.
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99998
Residual Std. Dev.: 0.29835
Formula: y = mx + b
m: 10.64723
b: -3.24711e-1
x: Amount[ug/L]
y: Area



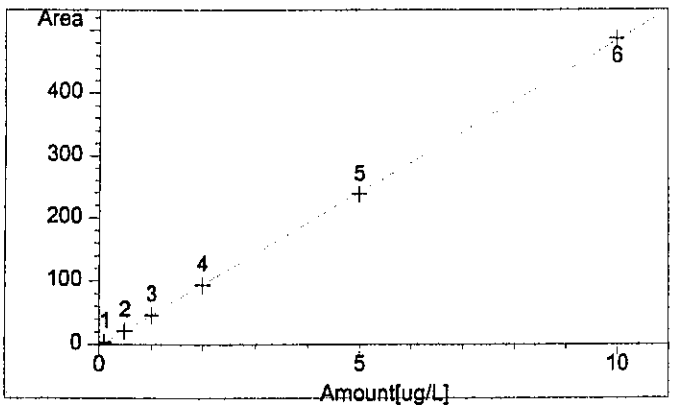
Dibenz(a,h)anthracene #17 at exp. RT: 30.
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99993
Residual Std. Dev.: 1.15752
Formula: y = mx + b
m: 25.06189
b: -9.49414e-1
x: Amount[ug/L]
y: Area



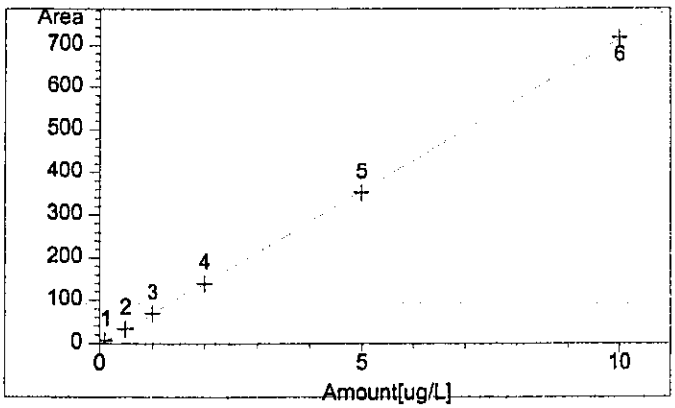
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99988
Residual Std. Dev.: 1.17004
Formula: y = mx + b
m: 18.59234
b: 7.44819e-1
x: Amount [ug/L]
y: Area



Benzo(g,h,i)perylene #18 at exp. RT: 31.2
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 1.77276
Formula: y = mx + b
m: 35.47662
b: -1.45086
x: Amount [ug/L]
y: Area



Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99994
Residual Std. Dev.: 2.14429
Formula: y = mx + b
m: 48.61738
b: -2.56671
x: Amount [ug/L]
y: Area



Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 2.36150
Formula: y = mx + b
m: 71.55789
b: -2.07657
x: Amount [ug/L]
y: Area

==========

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\061302\4L003130.D Sample Name: WG119840-08 ALT
HPLC4 6/14/2002 9:20:03 AM RDC

1,1 SOS0060-26/60-27 LEVEL 4 ALT STD @ 20 ppm

==========

Injection Date : 6/14/2002 4:41:30 AM Seq. Line : 9

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.353	20.0	19.636	-1.8
1-Methylnaphthalene #3	11.923	20.0	19.634	-1.8
2-Methylnaphthalene #4	12.497	20.0	19.240	-3.8
Acenaphthene #5	12.975	20.0	20.191	1.0
Fluorene #6	13.626	20.0	20.156	0.8
Phenanthrene #7	15.007	20.0	19.424	-2.9
Anthracene #8	16.402	20.0	20.494	2.5
Fluoranthene #9	17.774	2.0	2.011	0.5
Pyrene #10	18.774	2.0	1.908	-4.6
p-Terphenyl d14 #11*	Not Found	20.0	Not Found	
Benzo(a)anthracene #12	22.416	2.0	1.861	-7.0
Chrysene #13	23.280	2.0	1.942	-2.9
Benzo(b)fluoranthene #14	26.001	2.0	1.981	-0.9
Benzo(k)fluoranthene #15	27.443	1.0	0.888	-11.2
Benzo(a)pyrene #16	28.560	2.0	2.072	3.6
Dibenz(a,h)anthracene #1	30.417	2.0	2.178	8.9
Benzo(g,h,i)perylene #18	31.225	2.0	2.014	0.7
Indeno(1,2,3-cd)pyrene #	32.171	2.0	1.909	-4.5

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.336	20.0	20.298	1.5
Acenaphthylene #2	10.959	20.0	19.150	-4.3
1-Methylnaphthalene #3	11.907	20.0	19.874	-0.6
2-Methylnaphthalene #4	12.480	20.0	19.624	-1.9
Acenaphthene #5	12.958	20.0	20.239	1.2
Fluorene #6	13.609	20.0	19.969	-0.2
Phenanthrene #7	14.989	20.0	19.480	-2.6
Anthracene #8	16.385	20.0	20.776	3.9
Fluoranthene #9	17.755	2.0	1.981	-0.9
Pyrene #10	18.756	2.0	1.911	-4.4
p-Terphenyl d14 #11*	Not Found	20.0	Not Found	
Benzo(a)anthracene #12	22.399	2.0	1.903	-4.8
Chrysene #13	23.263	2.0	1.940	-3.0
Benzo(b)fluoranthene #14	25.983	2.0	2.137	6.9
Benzo(k)fluoranthene #15	27.425	1.0	0.882	-11.8
Benzo(a)pyrene #16	28.542	2.0	2.012	0.6
Dibenz(a,h)anthracene #1	30.400	2.0	2.132	6.6
Benzo(g,h,i)perylene #18	31.205	2.0	2.022	1.1
Indeno(1,2,3-cd)pyrene #	32.151	2.0	1.915	-4.2

= Failed 15.0% Criteria

270

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\061402\4L003132.D Sample Name: WG119863-01 CCV
HPLC4 6/14/2002 1:12:43 PM RDC

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========

Injection Date : 6/14/2002 10:37:36 AM Seq. Line : 2

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.359	20.0	20.480	2.4
1-Methylnaphthalene #3	11.928	20.0	20.502	2.5
2-Methylnaphthalene #4	12.500	20.0	20.448	2.2
Acenaphthene #5	12.975	20.0	20.456	2.3
Fluorene #6	13.627	20.0	20.336	1.7
Phenanthrene #7	15.009	20.0	20.163	0.8
Anthracene #8	16.411	20.0	20.007	0.0
Fluoranthene #9	17.786	2.0	2.014	0.7
Pyrene #10	18.789	2.0	2.116	5.8
p-Terphenyl d14 #11*	21.117	20.0	19.797	-1.0
Benzo(a)anthracene #12	22.435	2.0	2.007	0.3
Chrysene #13	23.303	2.0	2.019	0.9
Benzo(b)fluoranthene #14	26.023	2.0	2.019	0.9
Benzo(k)fluoranthene #15	27.463	1.0	1.001	0.1
Benzo(a)pyrene #16	28.577	2.0	2.023	1.1
Dibenz(a,h)anthracene #1	30.438	2.0	2.008	0.4
Benzo(g,h,i)perylene #18	31.247	2.0	1.984	-0.8
Indeno(1,2,3-cd)pyrene #	32.198	2.0	1.952	-2.4

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.345	20.0	20.749	3.7
Acenaphthylene #2	10.971	20.0	19.979	-0.1
1-Methylnaphthalene #3	11.914	20.0	20.099	0.5
2-Methylnaphthalene #4	12.486	20.0	20.269	1.3
Acenaphthene #5	12.962	20.0	19.997	0.0
Fluorene #6	13.612	20.0	19.992	0.0
Phenanthrene #7	14.994	20.0	19.993	0.0
Anthracene #8	16.397	20.0	20.093	0.5
Fluoranthene #9	17.771	2.0	1.994	-0.3
Pyrene #10	18.774	2.0	2.003	0.2
p-Terphenyl d14 #11*	21.103	20.0	19.997	0.0
Benzo(a)anthracene #12	22.421	2.0	1.969	-1.6
Chrysene #13	23.289	2.0	1.987	-0.6
Benzo(b)fluoranthene #14	26.009	2.0	1.949	-2.6
Benzo(k)fluoranthene #15	27.448	1.0	1.008	0.8
Benzo(a)pyrene #16	28.562	2.0	2.001	0.0
Dibenz(a,h)anthracene #1	30.424	2.0	1.952	-2.4
Benzo(g,h,i)perylene #18	31.232	2.0	1.907	-4.7
Indeno(1,2,3-cd)pyrene #	32.182	2.0	1.940	-3.0

= Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\061402\4L003141.D Sample Name: WG119863-02 CCV
HPLC4 6/14/2002 8:41:52 PM RDC

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========
Injection Date : 6/14/2002 7:22:15 PM Seq. Line : 11

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.369	20.0	19.997	0.0
1-Methylnaphthalene #3	11.940	20.0	20.055	0.3
2-Methylnaphthalene #4	12.515	20.0	20.048	0.2
Acenaphthene #5	12.993	20.0	20.138	0.7
Fluorene #6	13.644	20.0	20.314	1.6
Phenanthrene #7	15.027	20.0	19.748	-1.3
Anthracene #8	16.427	20.0	20.133	0.7
Fluoranthene #9	17.799	2.0	1.998	-0.1
Pyrene #10	18.802	2.0	1.979	-1.1
p-Terphenyl d14 #11*	21.129	20.0	19.874	-0.6
Benzo(a)anthracene #12	22.445	2.0	1.980	-1.0
Chrysene #13	23.313	2.0	1.974	-1.3
Benzo(b)fluoranthene #14	26.034	2.0	1.991	-0.4
Benzo(k)fluoranthene #15	27.475	1.0	0.998	-0.2
Benzo(a)pyrene #16	28.588	2.0	2.008	0.4
Dibenz(a,h)anthracene #1	30.462	2.0	1.975	-1.2
Benzo(g,h,i)perylene #18	31.272	2.0	1.956	-2.2
Indeno(1,2,3-cd)pyrene #	32.225	2.0	1.984	-0.8

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.350	20.0	20.741	3.7
Acenaphthylene #2	10.974	20.0	20.099	0.5
1-Methylnaphthalene #3	11.921	20.0	20.269	1.3
2-Methylnaphthalene #4	12.496	20.0	20.428	2.1
Acenaphthene #5	12.974	20.0	20.167	0.8
Fluorene #6	13.625	20.0	20.154	0.8
Phenanthrene #7	15.007	20.0	20.150	0.7
Anthracene #8	16.407	20.0	20.460	2.3
Fluoranthene #9	17.779	2.0	2.007	0.3
Pyrene #10	18.782	2.0	2.024	1.2
p-Terphenyl d14 #11*	21.110	20.0	20.035	0.2
Benzo(a)anthracene #12	22.426	2.0	1.994	-0.3
Chrysene #13	23.294	2.0	1.998	-0.1
Benzo(b)fluoranthene #14	26.014	2.0	2.016	0.8
Benzo(k)fluoranthene #15	27.455	1.0	1.001	0.1
Benzo(a)pyrene #16	28.568	2.0	2.016	0.8
Dibenz(a,h)anthracene #1	30.442	2.0	2.045	2.2
Benzo(g,h,i)perylene #18	31.252	2.0	1.961	-2.0
Indeno(1,2,3-cd)pyrene #	32.204	2.0	2.002	0.1

= Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\061402\4L003151.D Sample Name: WG119863-03 CCV
HPLC4 6/17/2002 9:41:54 AM RDC

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========

Injection Date : 6/15/2002 6:19:19 AM Seq. Line : 21

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.363	20.0	20.160	0.8
1-Methylnaphthalene #3	11.936	20.0	20.132	0.7
2-Methylnaphthalene #4	12.511	20.0	20.073	0.4
Acenaphthene #5	12.989	20.0	20.190	0.9
Fluorene #6	13.642	20.0	20.320	1.6
Phenanthrene #7	15.026	20.0	19.811	-0.9
Anthracene #8	16.431	20.0	20.190	0.9
Fluoranthene #9	17.808	2.0	2.000	0.0
Pyrene #10	18.810	2.0	1.994	-0.3
p-Terphenyl d14 #11*	21.143	20.0	20.082	0.4
Benzo(a)anthracene #12	22.462	2.0	1.995	-0.3
Chrysene #13	23.331	2.0	1.987	-0.7
Benzo(b)fluoranthene #14	26.052	2.0	2.030	1.5
Benzo(k)fluoranthene #15	27.485	1.0	1.003	0.3
Benzo(a)pyrene #16	28.596	2.0	2.068	3.4
Dibenz(a,h)anthracene #1	30.466	2.0	1.978	-1.1
Benzo(g,h,i)perylene #18	31.276	2.0	2.035	1.8
Indeno(1,2,3-cd)pyrene #	32.232	2.0	1.990	-0.5

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.342	20.0	20.767	3.8
Acenaphthylene #2	10.969	20.0	20.177	0.9
1-Methylnaphthalene #3	11.916	20.0	20.315	1.6
2-Methylnaphthalene #4	12.491	20.0	20.472	2.4
Acenaphthene #5	12.968	20.0	20.190	0.9
Fluorene #6	13.621	20.0	20.183	0.9
Phenanthrene #7	15.005	20.0	20.146	0.7
Anthracene #8	16.410	20.0	20.536	2.7
Fluoranthene #9	17.786	2.0	2.010	0.5
Pyrene #10	18.788	2.0	2.000	0.0
p-Terphenyl d14 #11*	21.123	20.0	20.014	0.1
Benzo(a)anthracene #12	22.441	2.0	2.002	0.1
Chrysene #13	23.311	2.0	1.998	-0.1
Benzo(b)fluoranthene #14	26.030	2.0	2.023	1.2
Benzo(k)fluoranthene #15	27.464	1.0	1.010	1.0
Benzo(a)pyrene #16	28.575	2.0	2.075	3.7
Dibenz(a,h)anthracene #1	30.445	2.0	2.003	0.2
Benzo(g,h,i)perylene #18	31.254	2.0	2.062	3.1
Indeno(1,2,3-cd)pyrene #	32.211	2.0	2.003	0.1

= Failed 15.0% Criteria

272

Sequence Table:

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	accn blk	8310	1	Sample		
2	2	WG119840-01 STD6	8310	1	Sample		
3	3	WG119840-02 STD6	8310	1	Sample		
4	4	WG119840-03 STD5	8310	1	Sample		
5	5	WG119840-04 STD4	8310	1	Sample		
6	6	WG119840-05 STD3	8310	1	Sample		
7	7	WG119840-06 STD2	8310	1	Sample		
8	8	WG119840-07 STD1	8310	1	Sample		
9	9	WG119840-08 ALT	8310	1	Sample		

RDG 6/14/02 274

							RD 6/14/02
No	1	1	8310	4L003122	01:01		accn blk
No	2	2	8310	4L003123	02:01	SOS 58-26	WG119840-01 ST
No	3	3	8310	4L003124	03:01	SOS 59-38	WG119840-02 ST
No	4	4	8310	4L003125	04:01	DIL'N of SOS 58-26	WG119840-03 ST
No	5	5	8310	4L003126	05:01	& 59-38	WG119840-04 ST
No	6	6	8310	4L003127	06:01		WG119840-05 ST
No	7	7	8310	4L003128	07:01		WG119840-06 ST
No	8	8	8310	4L003129	08:01		WG119840-07 ST
No	9	9	8310	4L003130	09:01	SOS 60-26/60-27	WG119840-08 AL

RRC
6/14/02

rd 6/14/02

KEMRON ENVIRONMENTAL SERVICES
HPLC Laboratory Maintenance Log

Analysis Date/Time June 13, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 061302
Analyst Initials RCC SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ____ 8330

Daily Check
- ☑ Mobile phase reservoir
- ☑ System pressure 117 bar
- ☑ Waste container

Returned to Control?
Yes ____ No ____

Additional Maintenance
Problem: Re-installed LC-PAH column for 8310 ~~HPLC~~ Rev. 3 / 610 analysis

Action Taken: recalibration

Comments

Reviewed By: [illegible] 6/14/02

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310	4L003131	01:01 ✓		accn blk
No	2	2	8310	4L003132	02:01 ✓	SOS 59-38/58-26	WG119863-01 CC
No	3	3	8310	4L003133	03:01 ✓		WG119312-02 WB
No	4	4	8310	4L003134	04:01 ✓		WG119312-03 WL
No	5	5	8310	4L003135	05:01 ✓		L0206078-05 61
No	6	6	8310	4L003136	06:01 ✓		L0206078-07 61
No	7	7	8310	4L003137	07:01 ✓		L0206078-09 61
No	8	8	8310	4L003138	08:01 ✓		L0206078-12 61
No	9	9	8310	4L003139	09:01 ✓		L0206078-15 61
No	10	10	8310	4L003140	10:01 ✓		L0206078-18 61
No	11	11	8310	4L003141	11:01 ✓	SOS 59-38/58-26	WG119863-02 CC
No	12	12	8310	4L003142	12:01 ✓		L0206102-01 83
No	13	13	8310	4L003143	13:01 ✓		L0206102-02 83
No	14	14	8310	4L003144	14:01 ✓		L0206102-03 83
No	15	15	8310	4L003145	15:01 ✓		WG119312-01 WR
No	16	16	8310	4L003146	16:01 ✓		WG119312-04 WM
No	17	17	8310	4L003147	17:01 ✓		WG119312-05 WM
No	18	18	8310	4L003148	18:01 ✓	accn. NC	L0206102-07 83
No	19	19	8310	4L003149	19:01 ✓		L0206102-08 83
No	20	20	8310	4L003150	20:01 ✓		L0206102-09 83
No	21	21	8310	4L003151	21:01 ✓	SOS 59-38/58-26	WG119863-03 CC
No	22	22	8310	4L003152	22:01 ✓		WG119548-02 WB
No	23	23	8310	4L003153	23:01 ✓		WG119548-03 WL
No	24	24	8310	4L003154	24:01	RR 10X, Accn. NC	L0206140-01 83
No	25	25	8310	4L003155	25:01 ✓		L0206140-02 83
No	26	26	8310	4L003156	26:01 ✓		L0206140-03 83
No	27	27	8310	4L003157	27:01 ✓		L0206140-04 83
No	28	28	8310	4L003158	28:01 ✓		L0206140-05 83
No	29	29	8310	4L003159	29:01 ✓		L0206140-06 83
No	30	30	8310	4L003160	30:01 ✓		WG119548-01 WR
No	31	31	8310	4L003161	31:01 ✓		L0206140-08 83
No	32	21	8310	4L003162	32:01 ✓	SOS 59-38/58-26	WG119863-04 CC
No	33	32	8310	4L003163	33:01 ✓		L0206140-09 83
No	34	33	8310	4L003164	34:01 ✓		L0206140-10 83
No	35	34	8310	4L003165	35:01	RE Needed low surr.	L0206140-11 83
No	36	35	8310	4L003166 Accn. NC	36:01	RR 10X, RE low surr.	L0206140-12 83
No	37	36	8310	4L003167	37:01 ✓		L0206140-13 83
No	38	37	8310	4L003168	38:01 ✓	low surr	WG119548-0 WMS
No	39	38	8310	4L003169	39:01 ✓		WG119548-05 WM
No	40	39	8310	4L003170	40:01	RE low surr.	L0206164-01 83
No	41	40	8310	4L003171	41:01	RE low surr.	L0206164-02 83
No	42	41	8310	4L003172	42:01 ✓		L0206164-03 83
No	43	21	8310	4L003173	43:01 ✓		WG119863-05 CC

RAC 6/17/02

6/18/02

6/18/02

Sequence Table:

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	accn blk	8310	1	Sample		
2	2	WG119863-01 CCV	8310	1	Sample		
3	3	WG119312-02 WBLK	8310	1	Sample		
4	4	WG119312-03 WLCS	8310	1	Sample		
5	5	L0206078-05 610W	8310	1	Sample		
6	6	L0206078-07 610W	8310	1	Sample		
7	7	L0206078-09 610W	8310	1	Sample		
8	8	L0206078-12 610W	8310	1	Sample		
9	9	L0206078-15 610W	8310	1	Sample		
10	10	L0206078-18 610W	8310	1	Sample		
11	11	WG119863-02 CCV	8310	1	Sample		
12	12	L0206102-01 831W	8310	1	Sample		
13	13	L0206102-02 831W	8310	1	Sample		
14	14	L0206102-03 831W	8310	1	Sample		
15	15	WG119312-01 WREF	8310	1	Sample		
16	16	WG119312-04 WMS	8310	1	Sample		
17	17	WG119312-05 WMSD	8310	1	Sample		
18	18	L0206102-07 831W	8310	1	Sample		
19	19	L0206102-08 831W	8310	1	Sample		
20	20	L0206102-09 831W	8310	1	Sample		
21	21	WG119863-03 CCV	8310	1	Sample		
22	22	WG119548-02 WBLK	8310	1	Sample		
23	23	WG119548-03 WLCS	8310	1	Sample		
24	24	L0206140-01 831W	8310	1	Sample		
25	25	L0206140-02 831W	8310	1	Sample		
26	26	L0206140-03 831W	8310	1	Sample		
27	27	L0206140-04 831W	8310	1	Sample		
28	28	L0206140-05 831W	8310	1	Sample		
29	29	L0206140-06 831W	8310	1	Sample		
30	30	WG119548-01 WREF	8310	1	Sample		
31	31	L0206140-08 831W	8310	1	Sample		
32	21	WG119863-04 CCV	8310	1	Sample		
33	32	L0206140-09 831W	8310	1	Sample		
34	33	L0206140-10 831W	8310	1	Sample		
35	34	L0206140-11 831W	8310	1	Sample		
36	35	L0206140-12 831W	8310	1	Sample		
37	36	L0206140-13 831W	8310	1	Sample		
38	37	WG119548-0 WMS	8310	1	Sample		
39	38	WG119548-05 WMSD	8310	1	Sample		
40	39	L0206164-01 831W	8310	1	Sample		
41	40	L0206164-02 831W	8310	1	Sample		
42	41	L0206164-03 831W	8310	1	Sample		
43	21	WG119863-05 CCV	8310	1	Sample		

tzec 6/19/02

278

KEMRON ENVIRONMENTAL SERVICES
HPLC Laboratory Maintenance Log

Analysis Date/Time June 14, 2002 **Instrument ID** HPLC4 **Column ID** LC-PAH **Data Subdirectory** 061402
Analyst Initials RBC **SOP # HPLC01 Rev. #** 3 ✓ 8310 **SOP # HPLC02 Rev. #** ____ 8330

Daily Check
- ☑ Mobile phase reservoir
- ☑ System pressure 117 bar
- ☑ Waste container

Returned to Control?
Yes ____ No ____

Additional Maintenance
Problem: ____

Action Taken: ____

Comments

L0206140-11 & 12 need RE-EXT for low surr.
L0206164-01 & 02 ↓ ↓ ↓ ↓ ↓ } submitted for reext.

L0206140-01 & 12 need 10X dil'n.
Acenaphthylene not confirming by DAD

Reviewed By: RR 6/18/02

Parameter: 8310-H_2O SOP #: EXH PLC1 Revision #: 6
Extraction Analyst(s): GSG, DP TV/KD Analyst(s): GSG
Date/Time Extracted: 06/06/02@1450 Date TV/KD: 06/06/02
Spike/Surrogate Analyst: GSG/CEB Witness: CEB/
Surrogate #: E550040-50 Earliest Hold Date: 06/11/02
Spike #: A = E550041-01 Spike #: B = —

Extraction Work Group WG 119312
Analytical Work Group WG 119449
Extract Relinquished By:
Extract Received By & Date: EC 6/7/02

	Sample ID	Test Code	pH / <2	N	>12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions / A	BN	N	Comments
1	Blank					1L	100uL		1mL					WG 119312-02
2	LCS							500uL						WG -03
3	06-078-05	610				850mL								
4	-07					1L								
5	-09					850mL								
6	-12					1L								
7	-15					925mL								
8	-18													
9	06-102-01	8310				1L								
10	-02													
11	-03					950mL								
12	-04					1L								Wb 119312-01
13	-05MS							500uL						-04 X
14	-06MSD													-05 X
15	-07					930mL								
16	-08					1L								
17	-09					930mL								
18														
19														
20														
21														
22														
23														
24														

DP 06/06/02

Methylene Chloride Lot #: 42015
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Accronimic Lot #: 41264
Reagent: Fortified Lot #: EK2163
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: EK2152

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3664A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: Date: 6/7/02

Extraction Notes For Volume # 185 Page # 131

General Comments: *US, MSD of 06-102-04

Extraction Anomalies: None

Concentration Anomalies: None

Clean-Up Anomalies: NA

Supervisor Review: _____ Date: _____

2.2.7.2 Sample Data

1,1

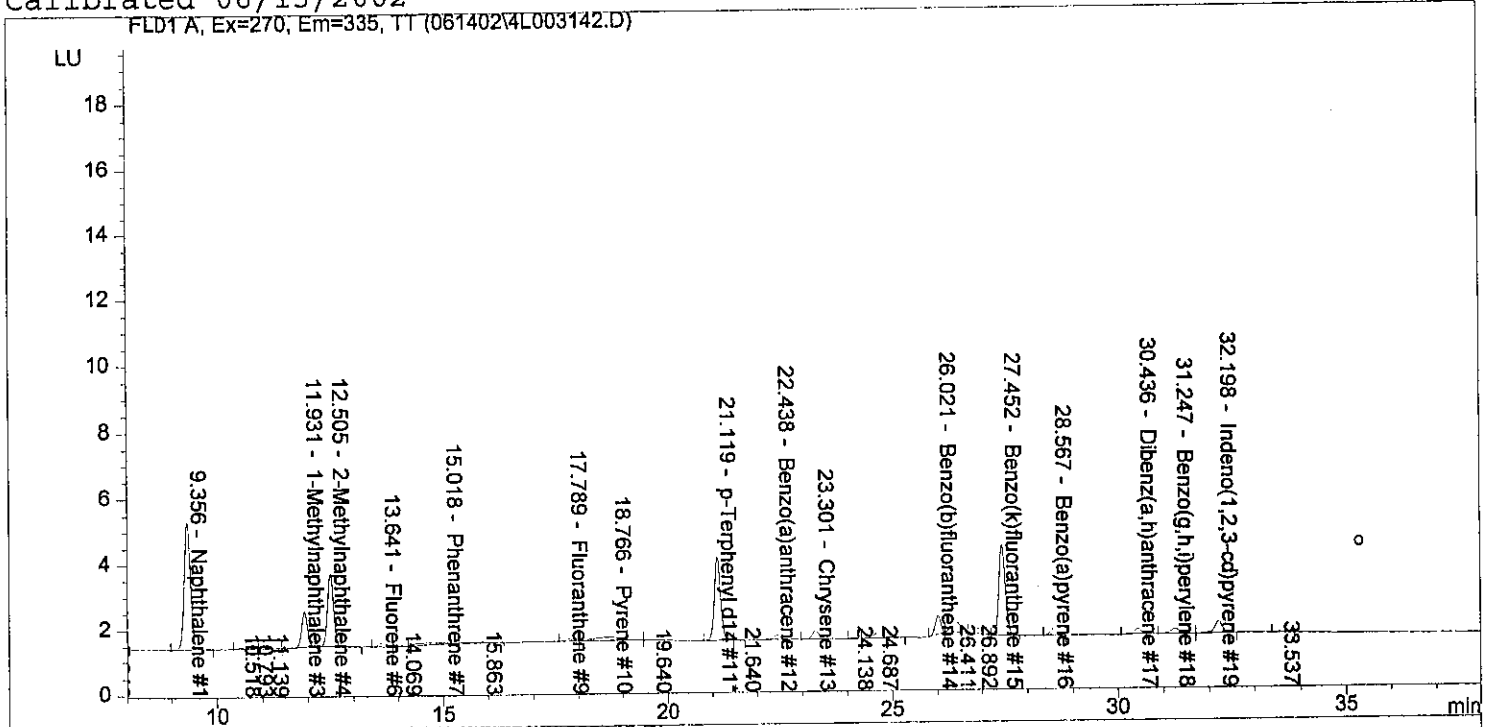
==========

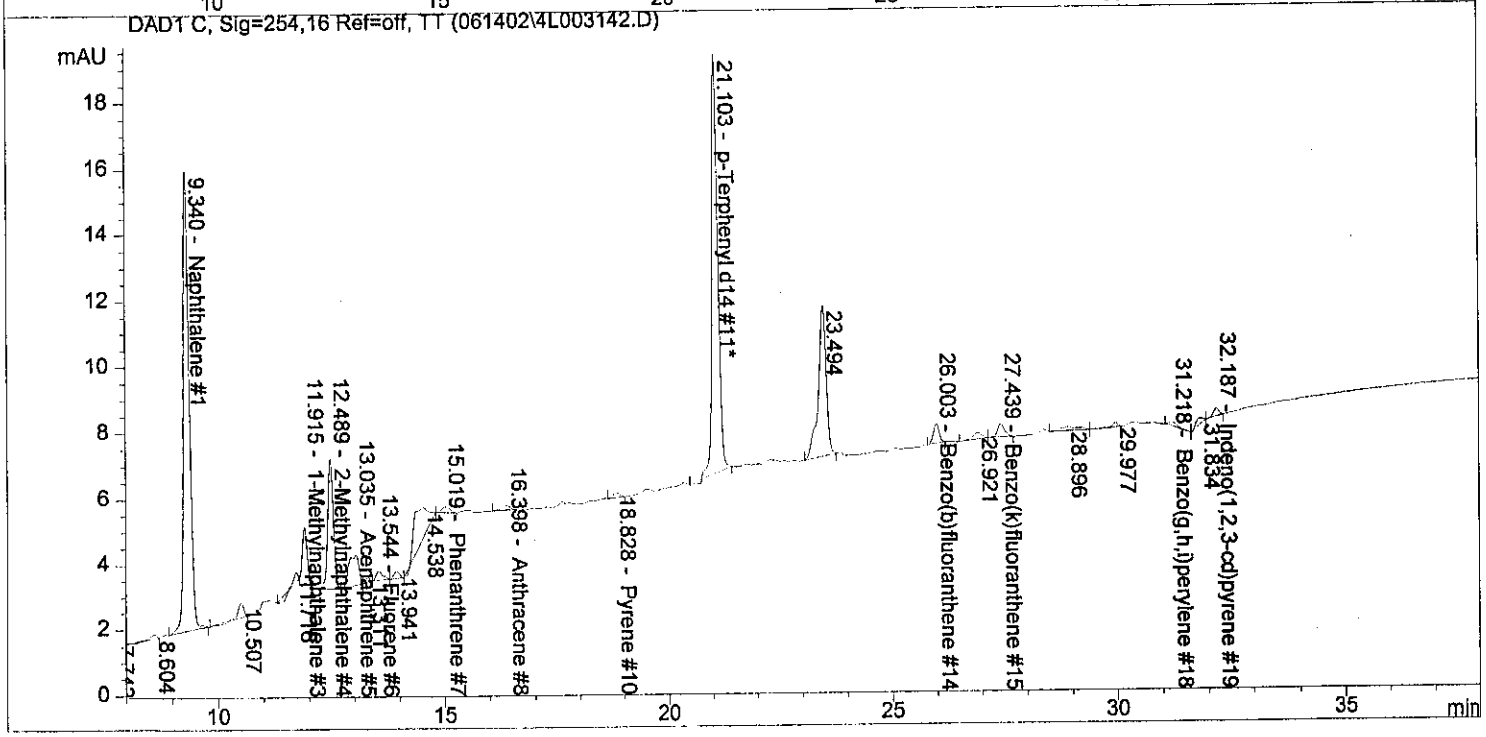
Injection Date : 6/14/2002 9:49:26 PM
Sample Name : L0206102-01 831W
Acq. Operator : RDC

Seq. Line : 12
Vial : 12
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/17/2002 10:47:35 AM by RDC
(modified after loading)

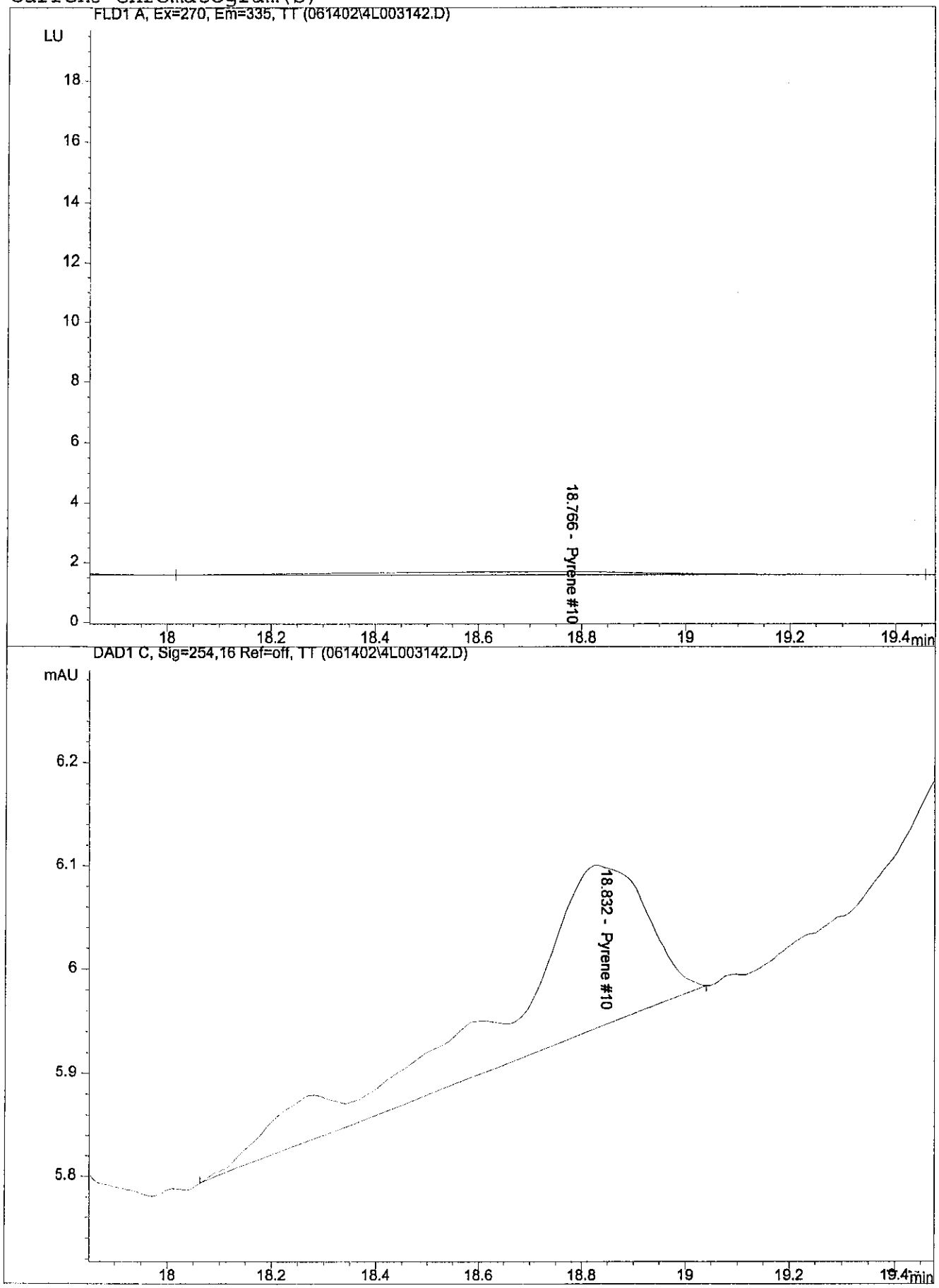
Calibrated 06/13/2002





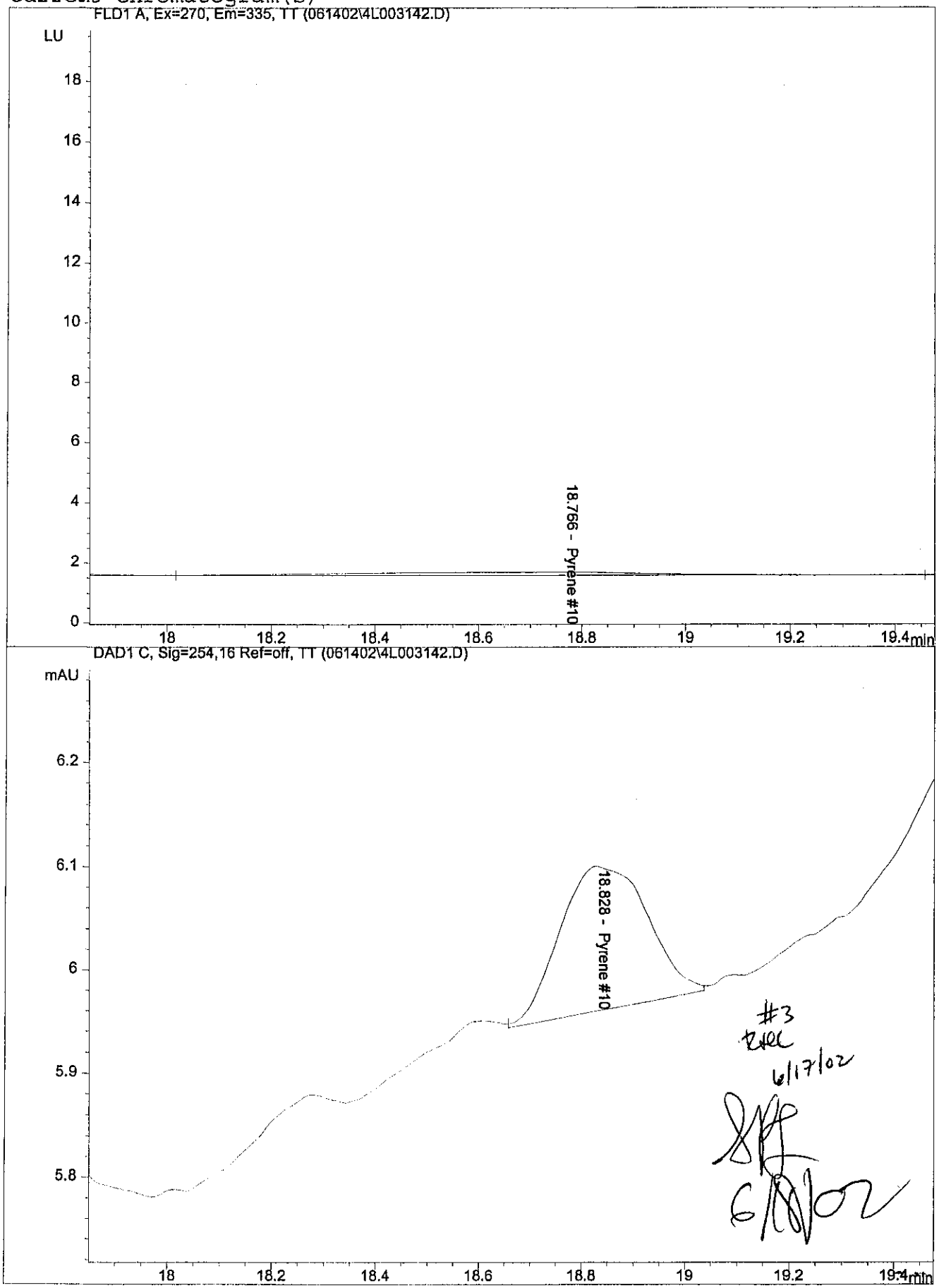
283

Current Chromatogram(s)



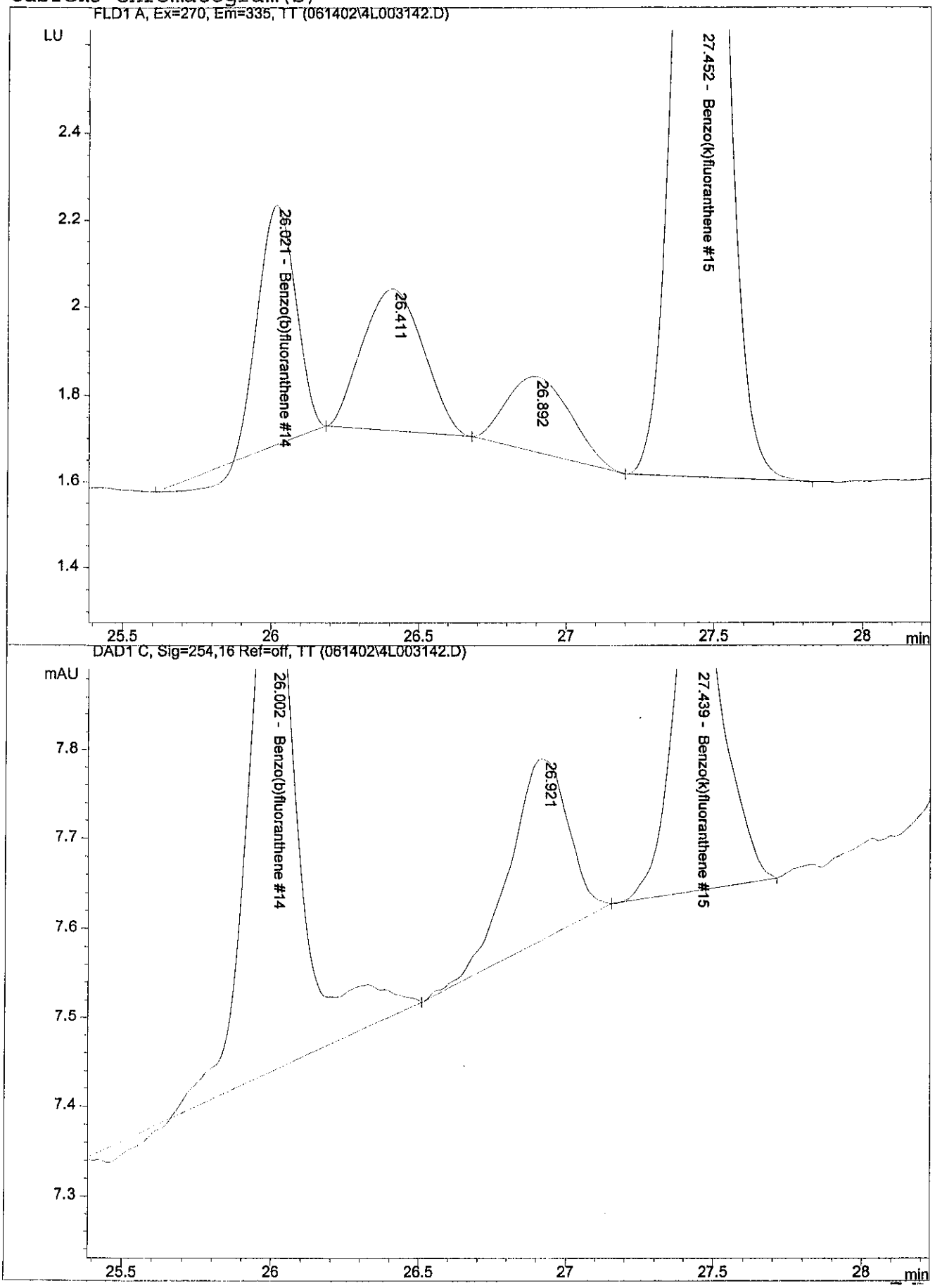
284

Current Chromatogram(s)



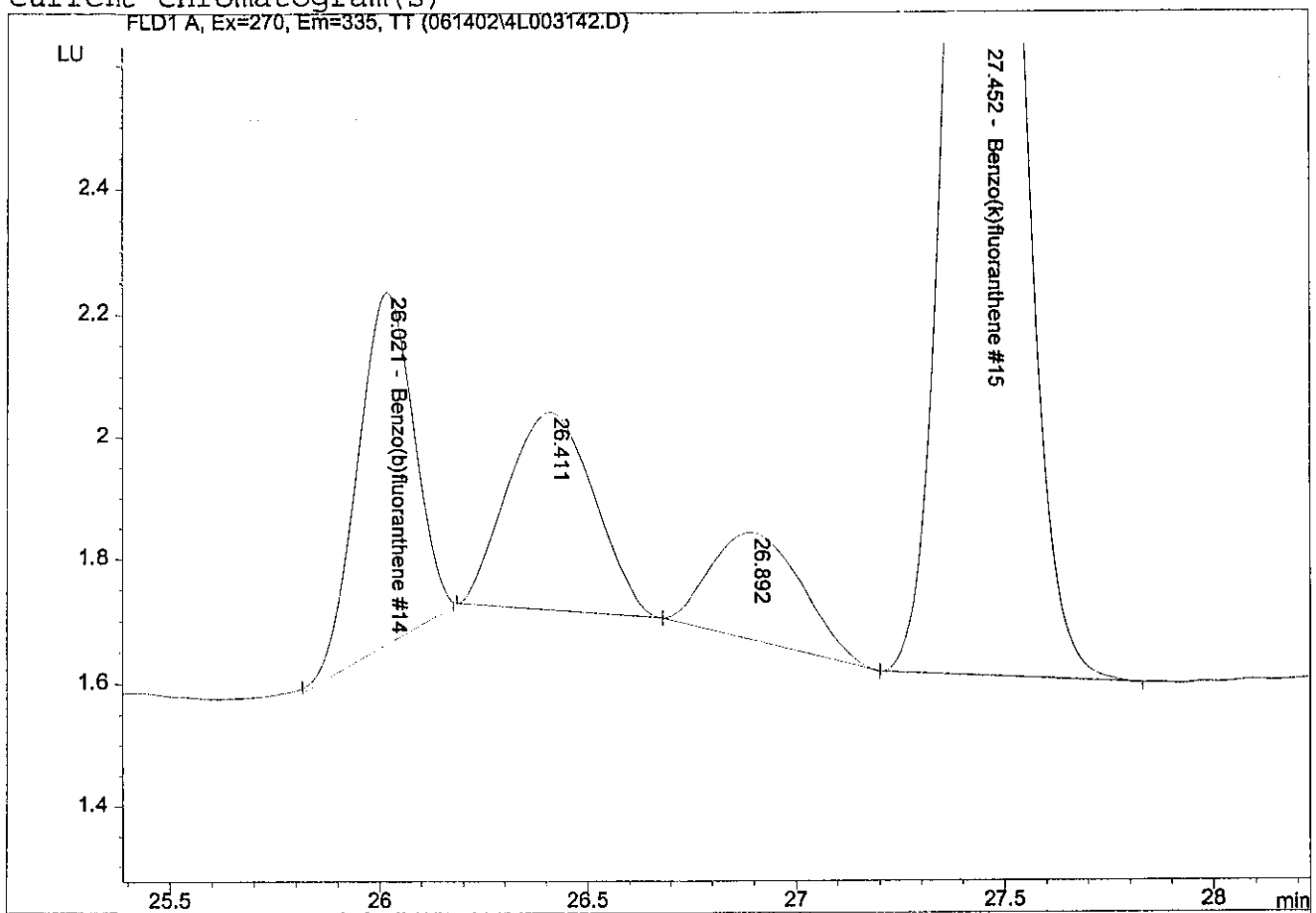
285

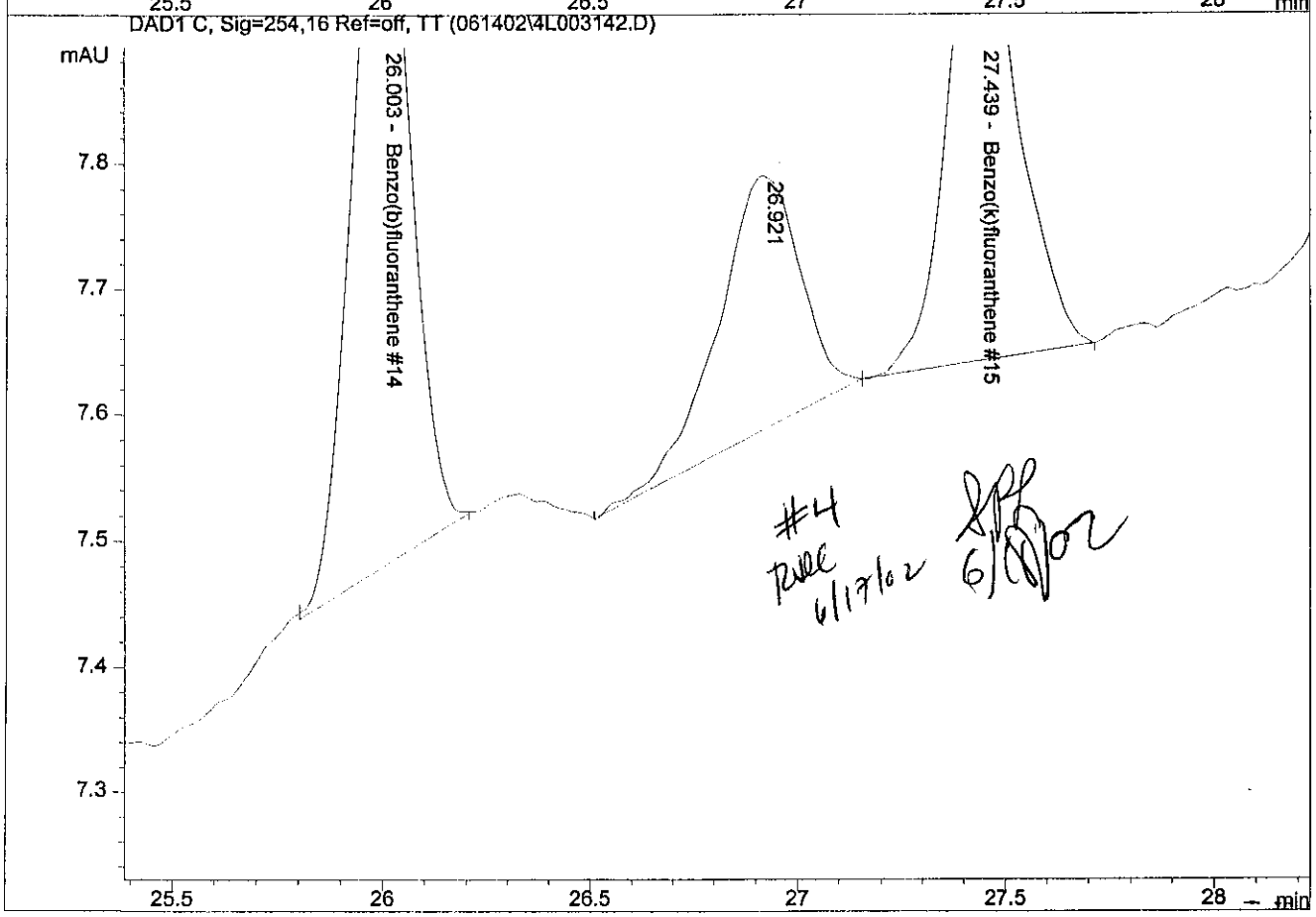
Current Chromatogram(s)



286

Current Chromatogram(s)





287

External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.356	PBA	39.94304	3.14964e-2	1.25806		Naphthalene #1
11.931	BB	10.55135	3.88590e-2	4.10015e-1		1-Methylnaphthalene #3
12.505	BB	21.60291	2.35337e-2	5.08396e-1		2-Methylnaphthalene #4
12.974		-	-	-		Acenaphthene #5
13.641	BB	1.62813	0.00000	0.00000		Fluorene #6
15.018	BB	3.15084	2.71130e-1	8.54288e-1		Phenanthrene #7
16.405		-	-	-		Anthracene #8
17.789	BB	7.11287e-1	5.71505e-2	4.06504e-2		Fluoranthene #9
18.766	BB	4.33017	4.48198e-2	1.94078e-1		Pyrene #10
21.119	BB	25.48112	3.01418e-1	7.68046		p-Terphenyl d14 #11*
22.438	BB	1.90240	2.30030e-2	4.37609e-2		Benzo(a)anthracene #12
23.301	BB	2.70536	4.86936e-2	1.31734e-1		Chrysene #13
26.021	MM	5.38483	2.17170e-2	1.16942e-1	F	Benzo(b)fluoranthene #14
27.452	BBA	28.67372	3.16865e-3	9.08571e-2	F	Benzo(k)fluoranthene #15
28.567	BBA	1.90646	2.38912e-2	4.55477e-2		Benzo(a)pyrene #16
30.436	PB	1.51430	6.49179e-2	9.83053e-2		Dibenz(a,h)anthracene #17
31.247	BB	2.18120	4.69370e-2	1.02379e-1		Benzo(g,h,i)perylene #18
32.198	BB	4.61903	2.02573e-2	9.35690e-2	F	Indeno(1,2,3-cd)pyrene #1

Totals : 11.66905

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.340	BBA	132.66722	5.99513e-3	7.95357e-1	F	Naphthalene #1
10.959		-	-	-		Acenaphthylene #2
11.915	BB	12.64049	1.81289e-2	2.29158e-1		1-Methylnaphthalene #3
12.489	BB	36.84826	8.52710e-3	3.14209e-1		2-Methylnaphthalene #4
13.035	BB	14.79130	2.91713e-2	4.31481e-1	NC	Acenaphthene #5
13.544	BB	3.18937	6.96163e-2	2.22032e-1		Fluorene #6
15.019	BB	2.34599	6.97466e-2	1.63625e-1		Phenanthrene #7
16.398	BBA	1.80909	0.00000	0.00000		Anthracene #8
17.762		-	-	-		Fluoranthene #9
18.828	MM	1.65612	3.49573e-2	5.78936e-2		Pyrene #10
21.103	BBA	118.88640	6.66129e-2	7.91937		p-Terphenyl d14 #11*
22.401		-	-	-		Benzo(a)anthracene #12
23.266		-	-	-		Chrysene #13
26.003	MM	5.63497	2.73065e-2	1.53872e-1	F	Benzo(b)fluoranthene #14
27.439	BB	4.49961	2.59027e-2	1.16552e-1	F	Benzo(k)fluoranthene #15
28.535		-	-	-		Benzo(a)pyrene #16
30.399		-	-	-		Dibenz(a,h)anthracene #17

288

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.218	BB	1.32646	2.35845e-2	3.12840e-2	cma	Benzo(g,h,i)perylene #18
32.187	BB	2.08294	4.59147e-2	9.56376e-2	f	Indeno(1,2,3-cd)pyrene #1

Totals : 10.53047

Results obtained with enhanced integrator!
4 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed
Warning : Negative results set to zero (cal. curve intercept), (Fluorene #6)
Warning : Negative results set to zero (cal. curve intercept), (Anthracene #

==========

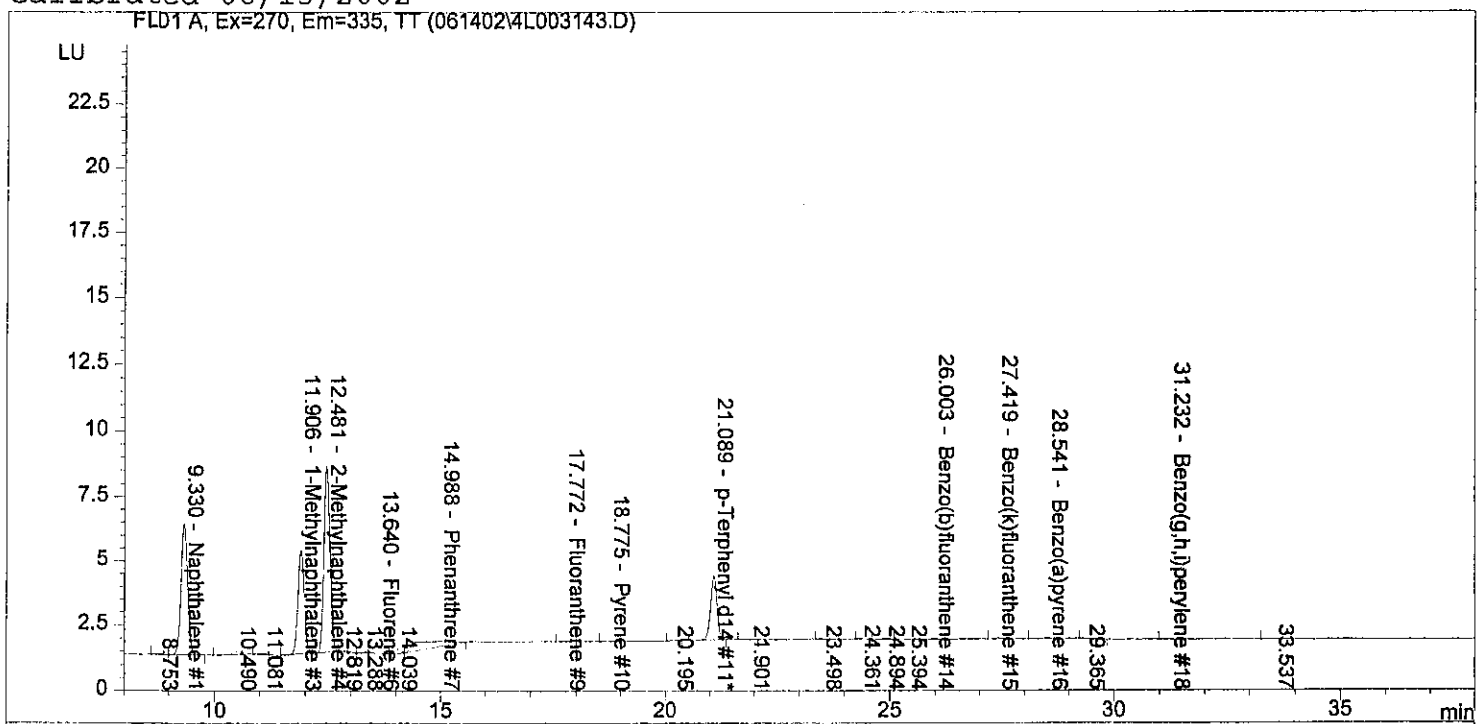
*** End of Report ***

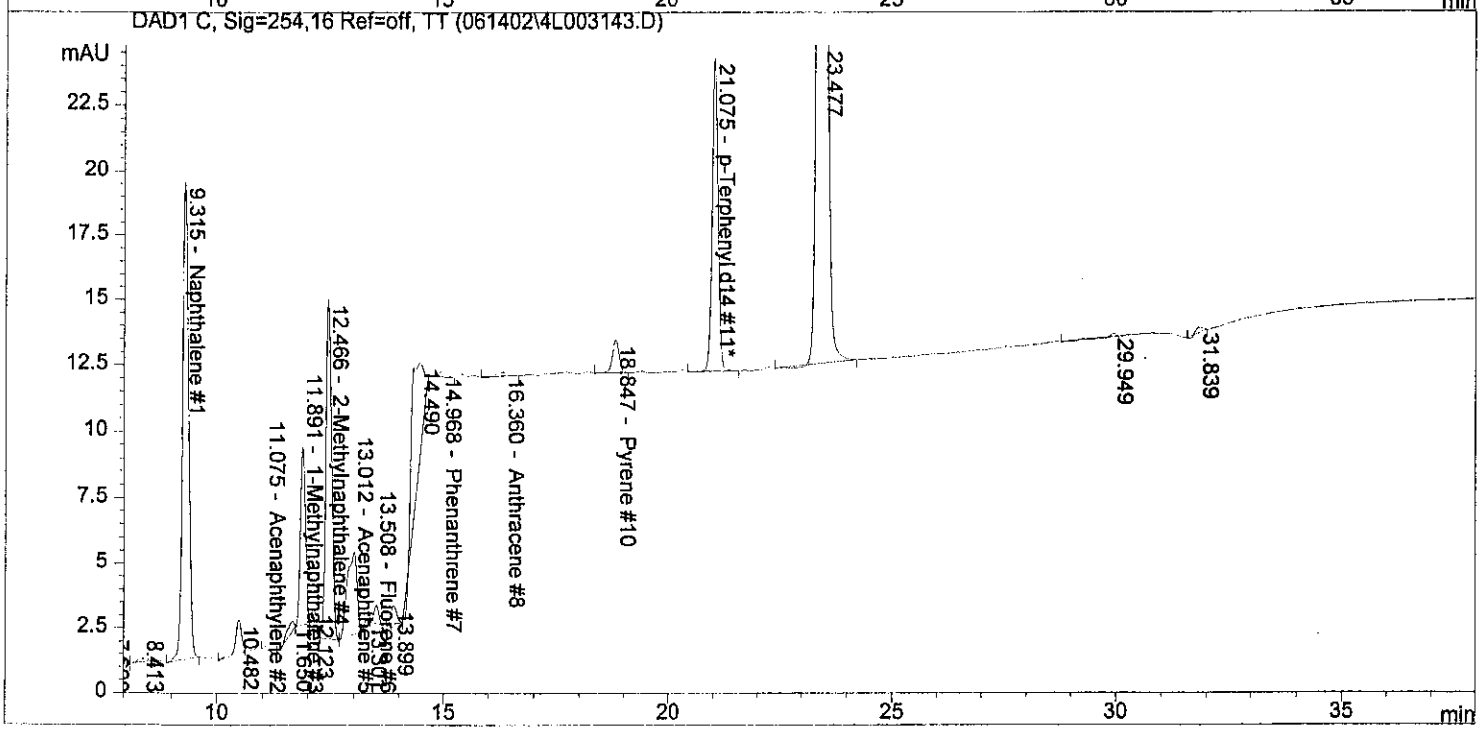
1,1

==========

Injection Date : 6/14/2002 10:46:07 PM Seq. Line : 13
Sample Name : L0206102-02 831W Vial : 13
Acq. Operator : RDC Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:21:05 AM by RDC
Calibrated 06/13/2002





290

External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.330	BB	51.71883	3.02896e-2	1.56654	C	Naphthalene #1
11.906	BB	39.48015	2.71770e-2	1.07295	C	1-Methylnaphthalene #3
12.481	BB	68.86129	1.95180e-2	1.34404	C	2-Methylnaphthalene #4
12.974		-	-	-		Acenaphthene #5
13.640	BB	3.09888	0.00000	0.00000		Fluorene #6
14.988	BB	15.04826	1.92204e-1	2.89233		Phenanthrene #7
16.405		-	-	-		Anthracene #8
17.772	BBA	4.31838e-1	7.77394e-2	3.35708e-2		Fluoranthene #9
18.775	BBA	2.43380e-1	1.03069e-1	2.50850e-2		Pyrene #10
21.089	BB	24.94057	3.01618e-1	7.52252		p-Terphenyl d14 #11*
22.418		-	-	-	75.2%	Benzo(a)anthracene #12
23.280		-	-	-		Chrysene #13
26.003	BBA	4.01247e-1	8.15582e-2	3.27250e-2		Benzo(b)fluoranthene #14
27.419	BBA	5.52345e-1	2.14635e-2	1.18552e-2		Benzo(k)fluoranthene #15
28.541	BBA	3.47470e-1	1.09995e-1	3.82201e-2		Benzo(a)pyrene #16
30.418		-	-	-		Dibenz(a,h)anthracene #17
31.232	BB	2.64300e-1	1.82922e-1	4.83463e-2		Benzo(g,h,i)perylene #18
32.172		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 14.58818

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.315	BBA	171.82985	6.52795e-3	1.12170		Naphthalene #1
11.075	BB	8.78871e-1	2.25439e-1	1.98131e-1	ampl	Acenaphthylene #2
11.891	BB	53.57130	1.42546e-2	7.63637e-1	F	1-Methylnaphthalene #3
12.466	BB	112.82610	1.04504e-2	1.17908		2-Methylnaphthalene #4
13.012	BB	46.66003	2.32989e-2	1.08713	NC	Acenaphthene #5
13.508	BB	5.50352	4.77652e-2	2.62877e-1	NC	Fluorene #6
14.968	BB	2.10709	7.56716e-2	1.59447e-1	ampl	Phenanthrene #7
16.360	BB	2.47219	0.00000	0.00000		Anthracene #8
17.762		-	-	-		Fluoranthene #9
18.847	BB	13.64735	1.68463e-2	2.29908e-1	NC	Pyrene #10
21.075	BB	111.74480	6.67214e-2	7.45577		p-Terphenyl d14 #11*
22.401		-	-	-	74.6%	Benzo(a)anthracene #12
23.266		-	-	-		Chrysene #13
25.984		-	-	-		Benzo(b)fluoranthene #14
27.418		-	-	-		Benzo(k)fluoranthene #15
28.535		-	-	-		Benzo(a)pyrene #16
30.399		-	-	-		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.206		-	-	-		Benzo(g,h,i)perylene #18
32.159		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 12.45768

Results obtained with enhanced integrator!
4 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed
Warning : Negative results set to zero (cal. curve intercept), (Fluorene #6)
Warning : Negative results set to zero (cal. curve intercept), (Anthracene #

==========

*** End of Report ***

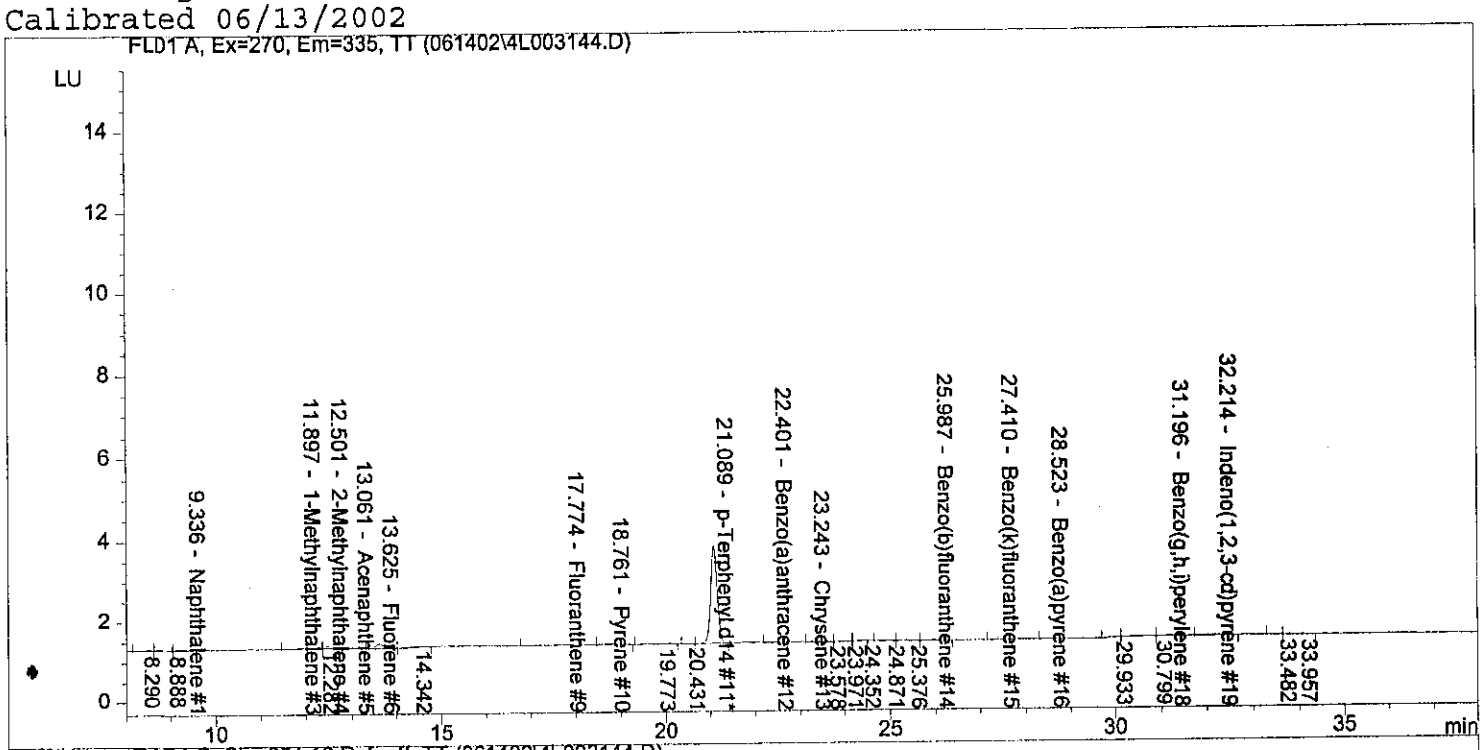
1,1

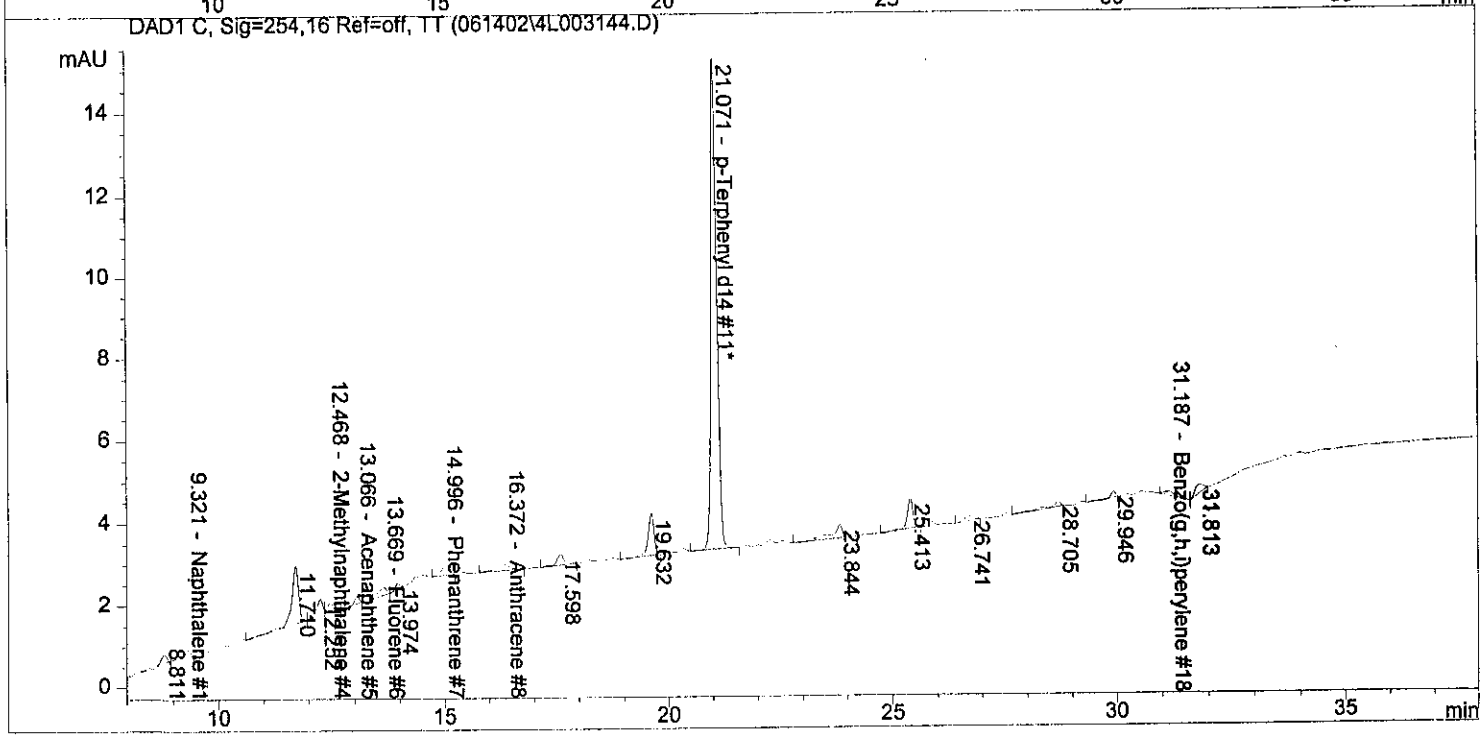
==========

Injection Date : 6/14/2002 11:42:45 PM
Sample Name : L0206102-03 831W
Acq. Operator : RDC

Seq. Line : 14
Vial : 14
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:21:05 AM by RDC
Calibrated 06/13/2002





293

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.336	BBA	5.71531e-1	3.96609e-1	2.26674e-1		Naphthalene #1
11.897	BB	2.11314e-1	8.18976e-1	1.73061e-1		1-Methylnaphthalene #3
12.501	BB	7.31676e-1	1.90444e-1	1.39343e-1		2-Methylnaphthalene #4
13.061	BB	4.76232e-1	9.93062e-2	4.72927e-2		Acenaphthene #5
13.625	BB	1.50736	0.00000	0.00000		Fluorene #6
15.006		-	-	-		Phenanthrene #7
16.405		-	-	-		Anthracene #8
17.774	BB	6.74914e-1	5.88652e-2	3.97289e-2		Fluoranthene #9
18.761	BBA	4.54349e-1	7.44114e-2	3.38087e-2		Pyrene #10
21.089	BB	24.64405	3.01731e-1	7.43588		p-Terphenyl d14 #11*
22.401	BBA	1.44646e-1	2.03723e-1	2.94678e-2		Benzo(a)anthracene #12
23.243	BB	2.04136e-1	1.57215e-1	3.20932e-2		Chrysene #13
25.987	BBA	2.65605e-1	1.14579e-1	3.04328e-2		Benzo(b)fluoranthene #14
27.410	PB	6.51869e-1	1.86155e-2	1.21348e-2		Benzo(k)fluoranthene #15
28.523	BB	5.23742e-1	7.45569e-2	3.90486e-2		Benzo(a)pyrene #16
30.418		-	-	-		Dibenz(a,h)anthracene #17
31.196	BB	2.91647e-1	1.68413e-1	4.91171e-2		Benzo(g,h,i)perylene #18
32.214	BB	5.90056e-1	6.31556e-2	3.72653e-2		Indeno(1,2,3-cd)pyrene #1

Totals : 8.32535

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.321	BB	1.30064	0.00000	0.00000		Naphthalene #1
10.959		-	-	-		Acenaphthylene #2
11.906		-	-	-		1-Methylnaphthalene #3
12.468	BB	1.39824	0.00000	0.00000		2-Methylnaphthalene #4
13.066	BB	1.50928	1.04836e-1	1.58227e-1	2mDL	Acenaphthene #5
13.669	BB	2.68186	7.94501e-2	2.13074e-1		Fluorene #6
14.996	BB	2.55240	6.55206e-2	1.67234e-1		Phenanthrene #7
16.372	BB	3.00036	0.00000	0.00000		Anthracene #8
17.762		-	-	-		Fluoranthene #9
18.761		-	-	-		Pyrene #10
21.071	BBA	110.67105	6.67390e-2	7.38607		p-Terphenyl d14 #11*
22.401		-	-	-		Benzo(a)anthracene #12
23.266		-	-	- 73.9%		Chrysene #13
25.984		-	-	-		Benzo(b)fluoranthene #14
27.418		-	-	-		Benzo(k)fluoranthene #15
28.535		-	-	-		Benzo(a)pyrene #16
30.399		-	-	-		Dibenz(a,h)anthracene #17

294

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.187	BB	1.40780	2.53295e-2	3.56590e-2		Benzo(g,h,i)perylene #18
32.159		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 7.96026

Results obtained with enhanced integrator!
6 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed
Warning : Negative results set to zero (cal. curve intercept), (Naphthalene
Warning : Negative results set to zero (cal. curve intercept), (2-Methylnaph
Warning : Negative results set to zero (cal. curve intercept), (Fluorene #6)
Warning : Negative results set to zero (cal. curve intercept), (Anthracene #

==========

*** End of Report ***

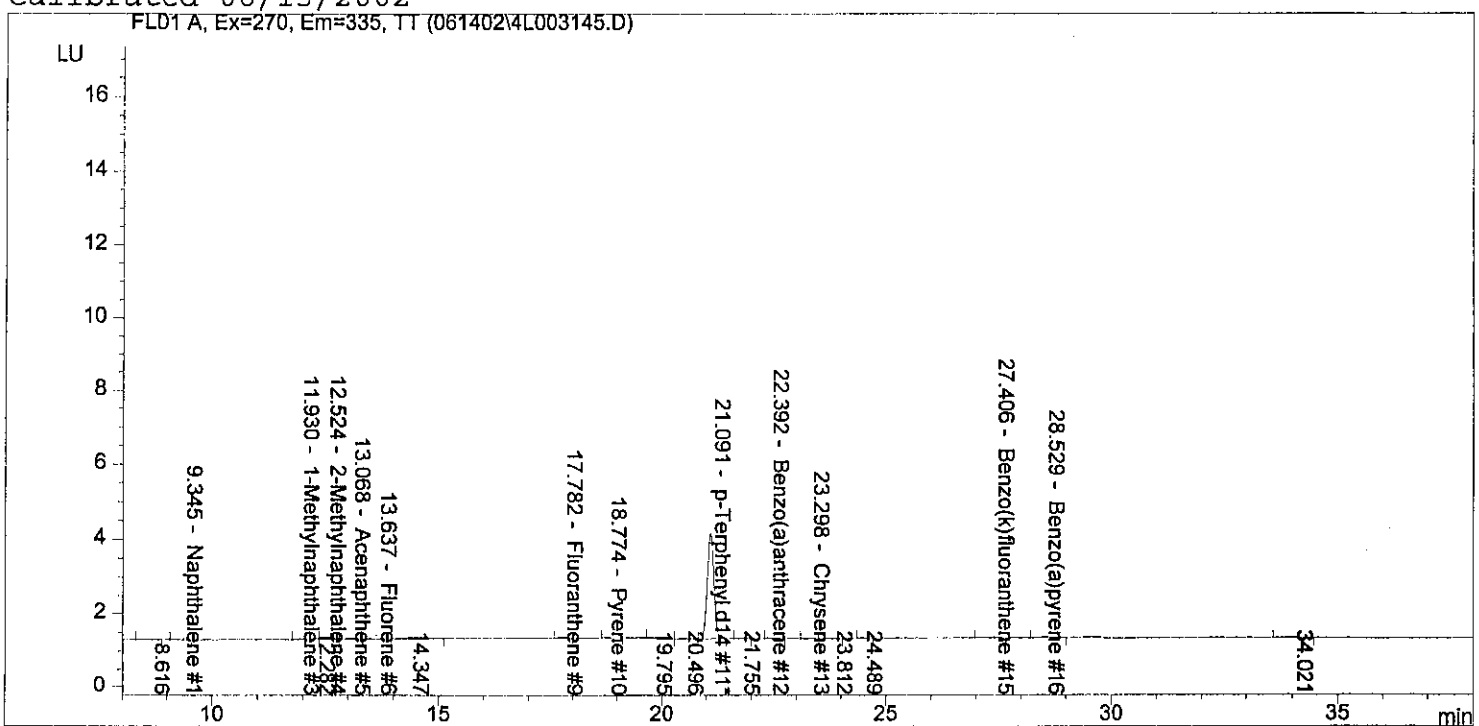
295

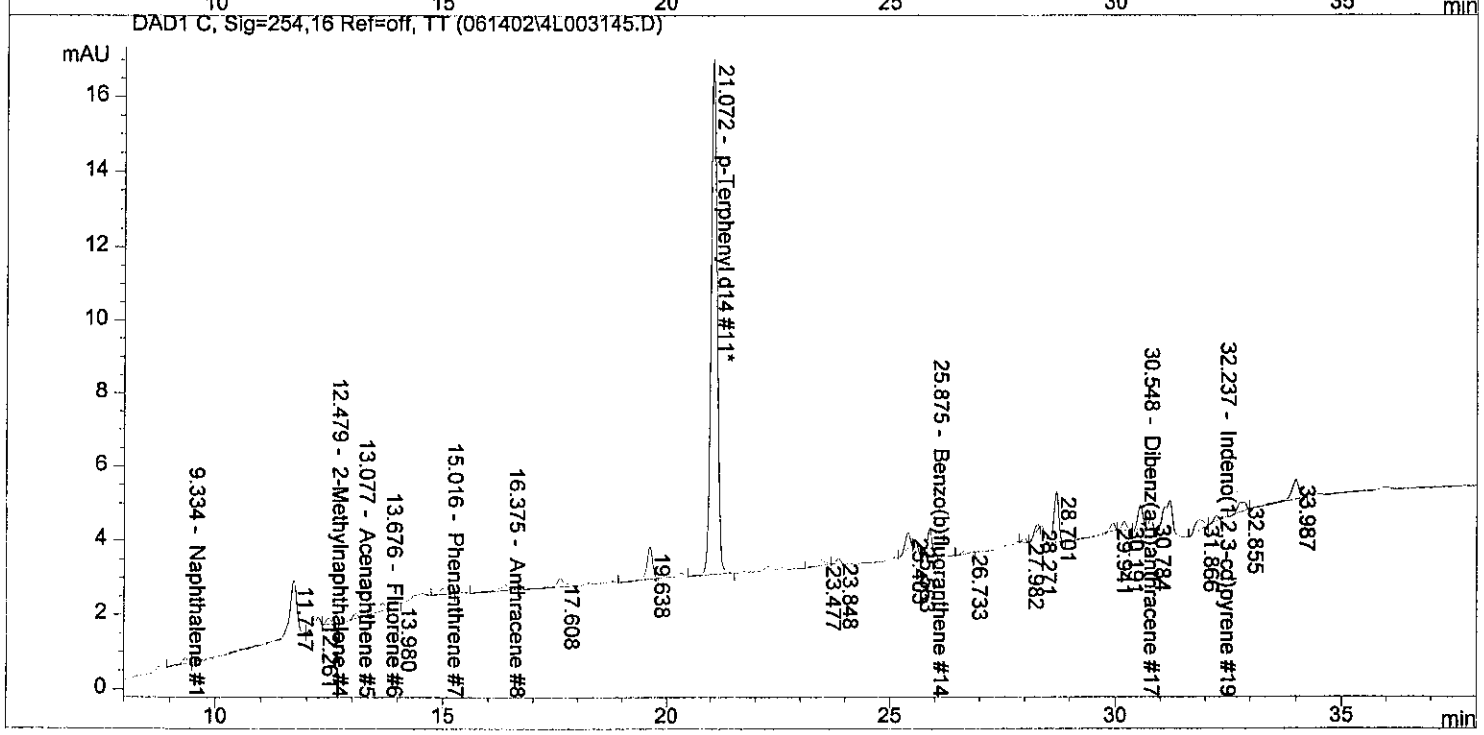
1,1 L0206102-04 REF

==========

Injection Date : 6/15/2002 12:39:22 AM Seq. Line : 15
Sample Name : WG119312-01 WREF Vial : 15
Acq. Operator : RDC Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:21:05 AM by RDC
Calibrated 06/13/2002





296

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.345	BB	6.06218e-1	3.75414e-1	2.27583e-1		Naphthalene #1
11.930	BB	2.22720e-1	7.78206e-1	1.73322e-1		1-Methylnaphthalene #3
12.524	BB	6.90651e-1	2.00706e-1	1.38618e-1		2-Methylnaphthalene #4
13.068	BB	4.42341e-1	1.05835e-1	4.68153e-2		Acenaphthene #5
13.637	BB	1.43015	0.00000	0.00000		Fluorene #6
15.006		-	-	-		Phenanthrene #7
16.405		-	-	-		Anthracene #8
17.782	BBA	3.81722e-1	8.46195e-2	3.23011e-2		Fluoranthene #9
18.774	BBA	1.95000e-1	1.18382e-1	2.30844e-2		Pyrene #10
21.091	BB	28.71331	3.00379e-1	8.62487		p-Terphenyl d14 #11*
22.392	BB	3.07021e-1	1.00280e-1	3.07882e-2		Benzo(a)anthracene #12
23.298	BB	2.43121e-1	1.38393e-1	3.36463e-2		Chrysene #13
26.003		-	-	-		Benzo(b)fluoranthene #14
27.406	BB	3.87180e-1	2.94211e-2	1.13912e-2		Benzo(k)fluoranthene #15
28.529	BBA	3.16169e-1	1.20420e-1	3.80730e-2		Benzo(a)pyrene #16
30.418		-	-	-		Dibenz(a,h)anthracene #17
31.227		-	-	-		Benzo(g,h,i)perylene #18
32.172		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 9.38049

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.334	BB	1.59609	0.00000	0.00000		Naphthalene #1
10.959		-	-	-		Acenaphthylene #2
11.906		-	-	-		1-Methylnaphthalene #3
12.479	BB	1.51452	0.00000	0.00000		2-Methylnaphthalene #4
13.077	BB	1.03632	1.43291e-1	1.48496e-1		Acenaphthene #5
13.676	BB	2.52817	8.32071e-2	2.10362e-1		Fluorene #6
15.016	BB	2.47071	6.71086e-2	1.65806e-1		Phenanthrene #7
16.375	BB	2.46001	0.00000	0.00000		Anthracene #8
17.762		-	-	-		Fluoranthene #9
18.761		-	-	-		Pyrene #10
21.072	BBA	129.67986	6.64716e-2	8.62003		p-Terphenyl d14 #11*
22.401		-	-	-		Benzo(a)anthracene #12
23.266		-	-	-		Chrysene #13
25.875	BBA	5.64372	2.72964e-2	1.54053e-1		Benzo(b)fluoranthene #14
27.418		-	-	-		Benzo(k)fluoranthene #15
28.535		-	-	-		Benzo(a)pyrene #16
30.548	BB	4.88498	1.00164e-1	4.89300e-1		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.206		-	-	-		Benzo(g,h,i)perylene #18
32.237	BB	9.66519e-1	7.51916e-2	7.26741e-2	N	Indeno(1,2,3-cd)pyrene #1

Totals : 9.86072

Results obtained with enhanced integrator!
6 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed
Warning : Negative results set to zero (cal. curve intercept), (Naphthalene
Warning : Negative results set to zero (cal. curve intercept), (2-Methylnaph
Warning : Negative results set to zero (cal. curve intercept), (Fluorene #6)
Warning : Negative results set to zero (cal. curve intercept), (Anthracene #

==========

*** End of Report ***

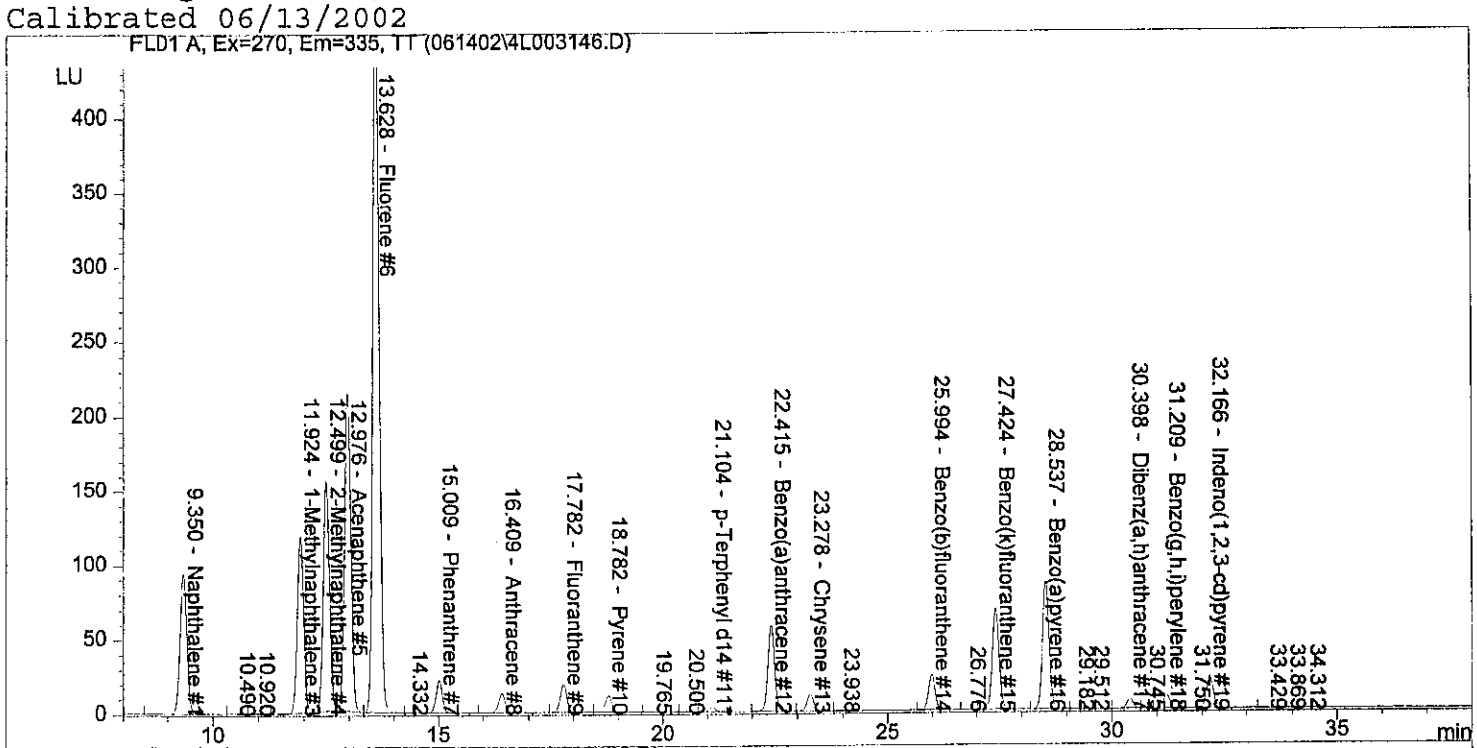
1,1 L0206102-05 MS

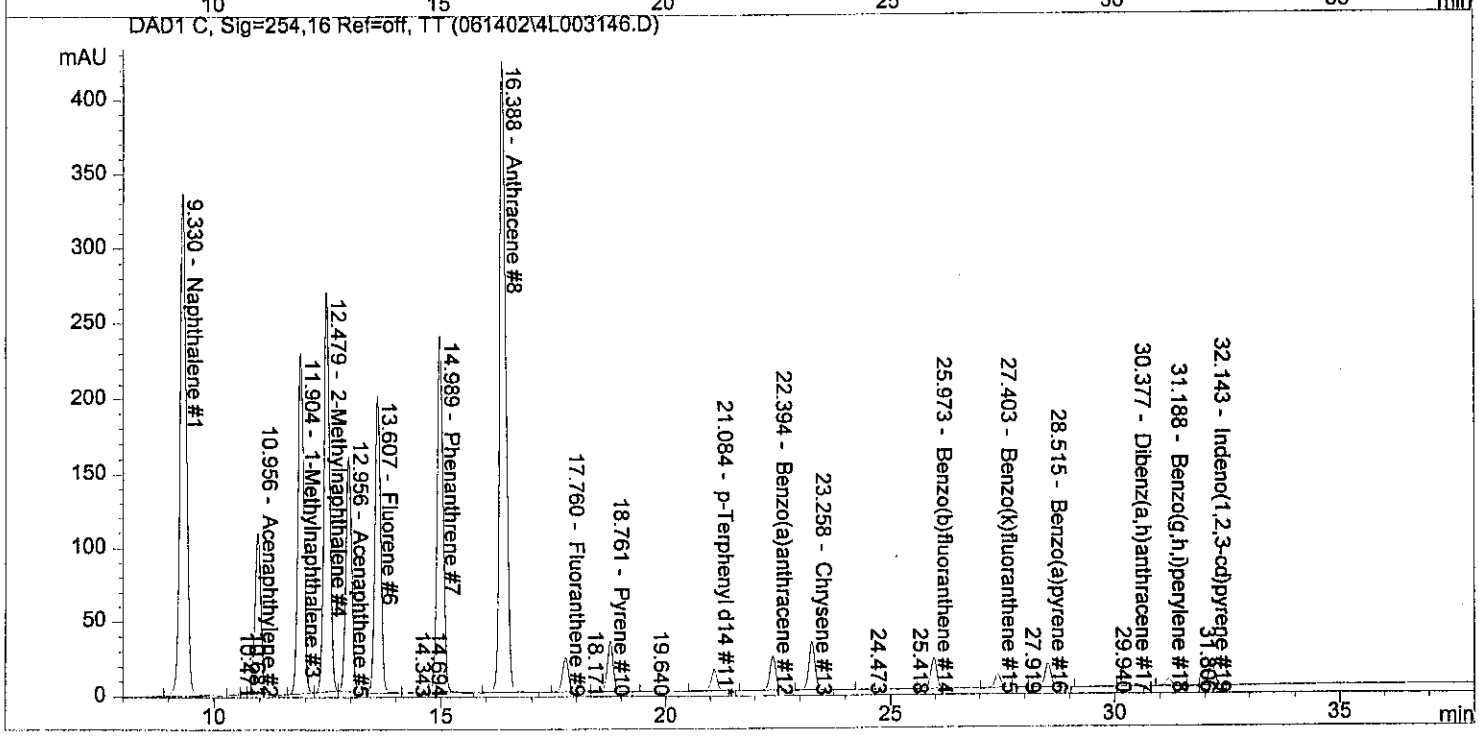
==========

Injection Date : 6/15/2002 1:36:01 AM
Sample Name : WG119312-04 WMS
Acq. Operator : RDC

Seq. Line : 16
Vial : 16
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:21:05 AM by RDC
Calibrated 06/13/2002





299

External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.350	BB	956.19641	2.64177e-2	25.26047		Naphthalene #1
11.924	BB	1160.04565	2.30611e-2	26.75197		1-Methylnaphthalene #3
12.499	BB	1491.41980	1.77671e-2	26.49826		2-Methylnaphthalene #4
12.976	BB	2076.30566	1.41064e-2	29.28921		Acenaphthene #5
13.628	BB	4746.55566	6.62815e-3	31.46089		Fluorene #6
15.009	BBA	209.49934	1.72802e-1	36.20201		Phenanthrene #7
16.409	BBA	126.94231	3.02538e-1	38.40487		Anthracene #8
17.782	PB	187.29002	2.54551e-2	4.76749		Fluoranthene #9
18.782	BBA	114.17100	4.14825e-2	4.73610		Pyrene #10
21.104	BB	30.21691	2.99971e-1	9.06421	90%	p-Terphenyl d14 #11*
22.415	BB	588.58636	8.17954e-3	4.81436		Benzo(a)anthracene #12
23.278	BB	118.65902	4.00386e-2	4.75094		Chrysene #13
25.994	BB	245.78937	1.70045e-2	4.17953		Benzo(b)fluoranthene #14
27.424	BB	705.39368	2.82392e-3	1.99198		Benzo(k)fluoranthene #15
28.537	BB	899.30170	4.74088e-3	4.26348		Benzo(a)pyrene #16
30.398	BB	66.96770	4.04669e-2	2.70998		Dibenz(a,h)anthracene #17
31.209	BB	102.83620	2.85853e-2	2.93960		Benzo(g,h,i)perylene #18
32.166	BB	228.93150	1.41015e-2	3.22827		Indeno(1,2,3-cd)pyrene #1

Totals : 261.31361

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.330	BBA	3199.85522	8.23599e-3	26.35399		Naphthalene #1
10.956	BB	966.54437	3.03024e-2	29.28862		Acenaphthylene #2
11.904	BB	2068.07349	1.30891e-2	27.06921		1-Methylnaphthalene #3
12.479	BB	2382.33545	1.13391e-2	27.01342		2-Methylnaphthalene #4
12.956	BB	1417.99329	2.06630e-2	29.29995		Acenaphthene #5
13.607	BB	1767.02515	1.77439e-2	31.35398		Fluorene #6
14.989	BBA	2086.95605	1.75474e-2	36.62075		Phenanthrene #7
16.388	PBA	3837.62598	1.01555e-2	38.97318		Anthracene #8
17.760	PB	212.58548	2.19515e-2	4.66657		Fluoranthene #9
18.761	BBA	320.90408	1.44514e-2	4.63751		Pyrene #10
21.084	BBA	137.77777	6.63801e-2	9.14571	91.5%	p-Terphenyl d14 #11*
22.394	BBA	218.43715	2.23618e-2	4.88464		Benzo(a)anthracene #12
23.258	BB	314.03363	1.52574e-2	4.79135		Chrysene #13
25.973	BBA	201.00023	2.09845e-2	4.21790		Benzo(b)fluoranthene #14
27.403	BB	87.75499	2.28036e-2	2.00113		Benzo(k)fluoranthene #15
28.515	BBA	161.89632	2.62111e-2	4.24348		Benzo(a)pyrene #16
30.377	BB	28.96660	9.49740e-2	2.75107		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.188	BB	54.66457	5.30527e-2	2.90011		Benzo(g,h,i)perylene #18
32.143	BB	158.53755	2.09018e-2	3.31372		Indeno(1,2,3-cd)pyrene #1

Totals : 293.52628

Results obtained with enhanced integrator!

*** End of Report ***

301

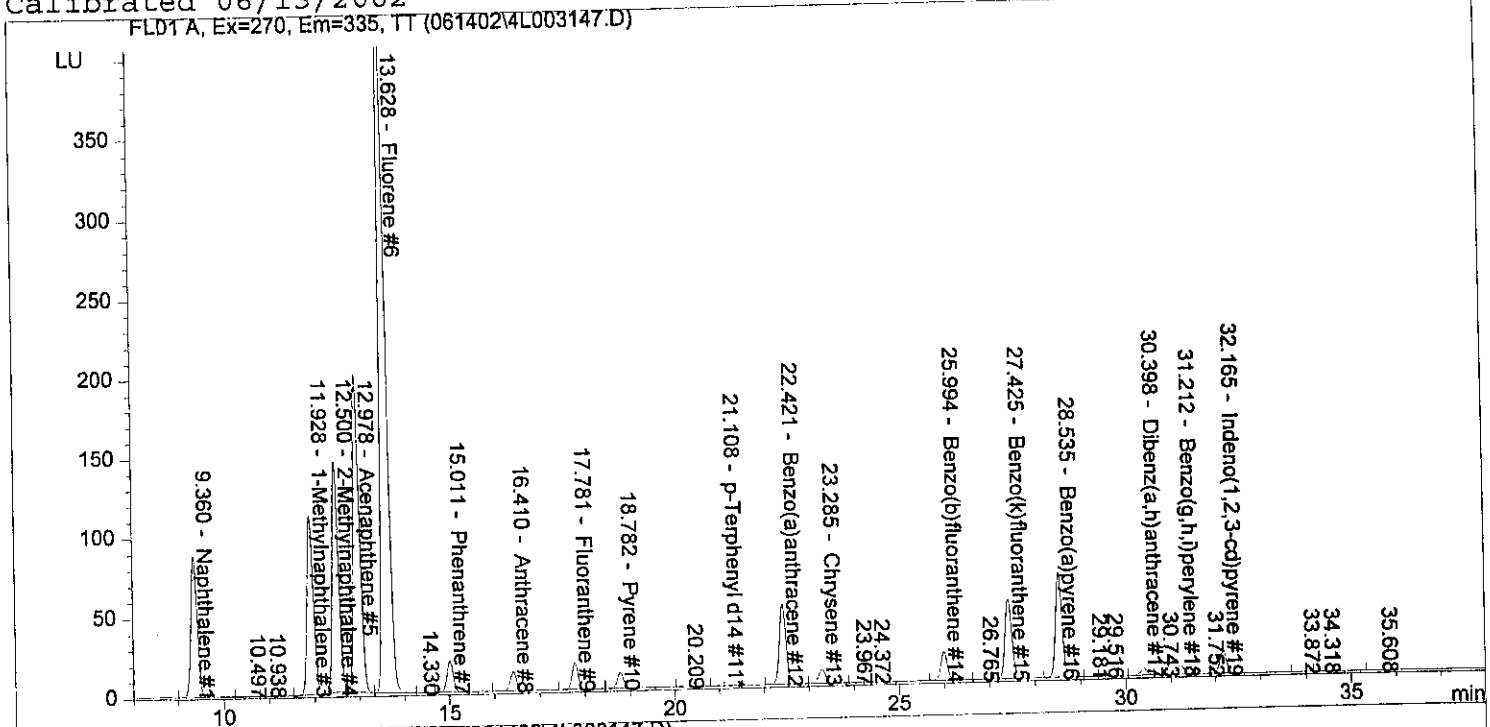
1,1 L0206102-06 MSD

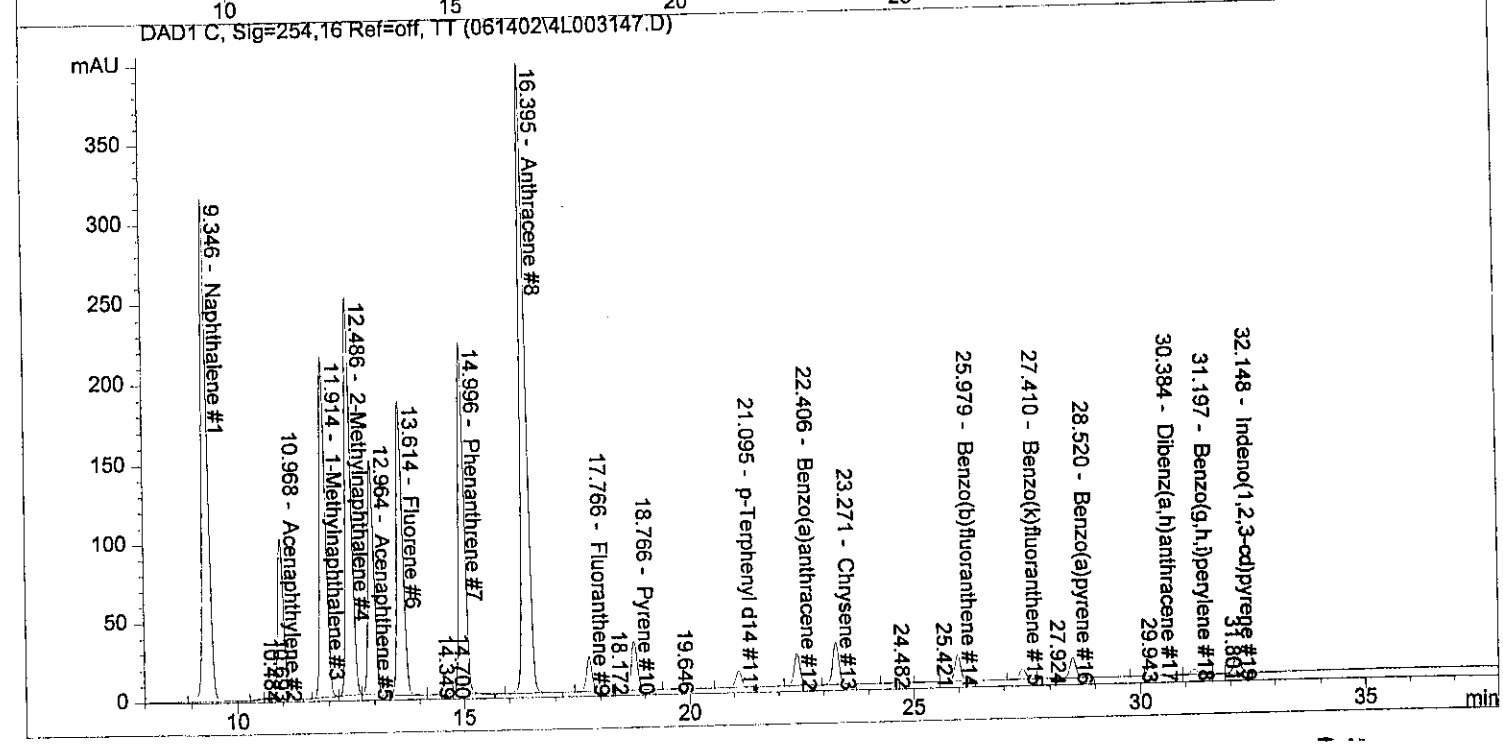
==========

Injection Date : 6/15/2002 2:32:41 AM
Sample Name : WG119312-05 WMSD
Acq. Operator : RDC

Seq. Line : 17
Vial : 17
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:21:05 AM by RDC
Calibrated 06/13/2002





302

Page 1 of 3

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.360	BB	898.02179	2.64320e-2	23.73652		Naphthalene #1
11.928	BB	1089.50061	2.30705e-2	25.13535		1-Methylnaphthalene #3
12.500	BB	1395.47412	1.77730e-2	24.80171		2-Methylnaphthalene #4
12.978	BB	1943.45850	1.41077e-2	27.41781		Acenaphthene #5
13.628	BB	4448.70752	6.62675e-3	29.48046		Fluorene #6
15.011	BBA	193.47398	1.72927e-1	33.45684		Phenanthrene #7
16.410	PB	117.60485	3.02556e-1	35.58200		Anthracene #8
17.781	BB	173.00166	2.54651e-2	4.40551		Fluoranthene #9
18.782	BBA	105.45380	4.14934e-2	4.37563		Pyrene #10
21.108	BB	22.00101	3.02878e-1	6.66361 66.6%		p-Terphenyl d14 #11*
22.421	BB	516.53906	8.18624e-3	4.22851		Benzo(a)anthracene #12
23.285	BBA	97.97204	4.00812e-2	3.92684		Chrysene #13
25.994	BB	193.75221	1.70329e-2	3.30016		Benzo(b)fluoranthene #14
27.425	BB	525.28876	2.82893e-3	1.48601		Benzo(k)fluoranthene #15
28.535	BB	694.66351	4.75287e-3	3.30164		Benzo(a)pyrene #16
30.398	BB	46.86907	4.07095e-2	1.90802		Dibenz(a,h)anthracene #17
31.212	BB	70.57700	2.87670e-2	2.03029		Benzo(g,h,i)perylene #18
32.165	BB	159.13206	1.41571e-2	2.25284		Indeno(1,2,3-cd)pyrene #1

Totals : 237.48975

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.346	BBA	3005.64038	8.22973e-3	24.73561		Naphthalene #1
10.968	BB	905.69495	3.03143e-2	27.45554		Acenaphthylene #2
11.914	BB	1934.22461	1.30912e-2	25.32139		1-Methylnaphthalene #3
12.486	BB	2230.13867	1.13360e-2	25.28093		2-Methylnaphthalene #4
12.964	BB	1326.50269	2.06692e-2	27.41769		Acenaphthene #5
13.614	BB	1653.32813	1.77504e-2	29.34721		Fluorene #6
14.996	BBA	1936.40161	1.75520e-2	33.98775		Phenanthrene #7
16.395	PBA	3588.49927	1.01518e-2	36.42957		Anthracene #8
17.766	PB	196.37039	2.19638e-2	4.31304		Fluoranthene #9
18.766	BBA	295.86551	1.44604e-2	4.27833		Pyrene #10
21.095	BBA	99.43734	6.69450e-2	6.65683 66.6%		p-Terphenyl d14 #11*
22.406	BBA	191.14561	2.23784e-2	4.27753		Benzo(a)anthracene #12
23.271	BB	259.44318	1.52709e-2	3.96193		Chrysene #13
25.979	BBA	157.68494	2.10346e-2	3.31684		Benzo(b)fluoranthene #14
27.410	BB	65.38223	2.28610e-2	1.49470		Benzo(k)fluoranthene #15
28.520	BB	125.55728	2.62966e-2	3.30173		Benzo(a)pyrene #16
30.384	BB	22.22581	9.52933e-2	2.11797		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.197	BB	38.18083	5.27364e-2	2.01352		Benzo(g,h,i)perylene #18
32.148	BB	109.00761	2.10531e-2	2.29495		Indeno(1,2,3-cd)pyrene #1

Totals : 268.00306

Results obtained with enhanced integrator!

*** End of Report ***

1,1

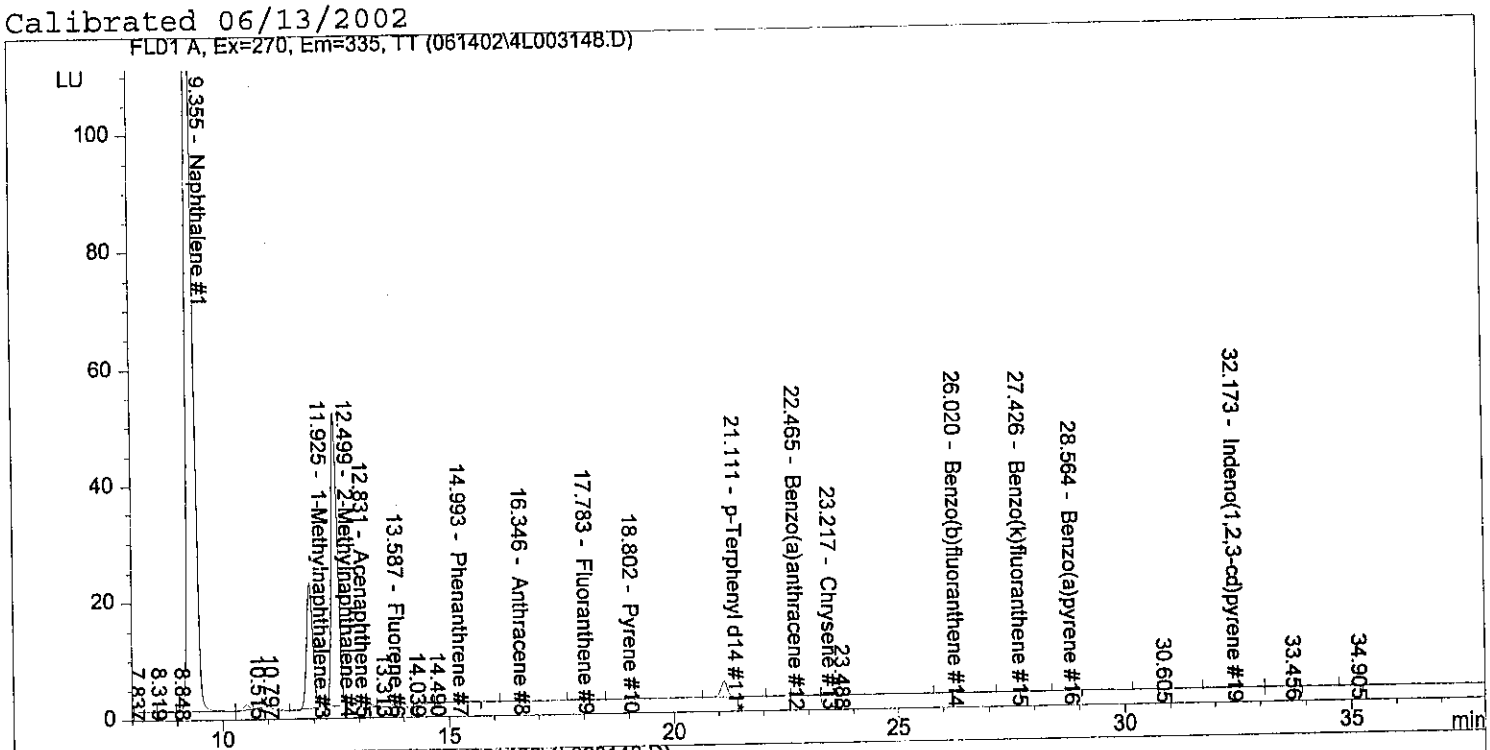
==========

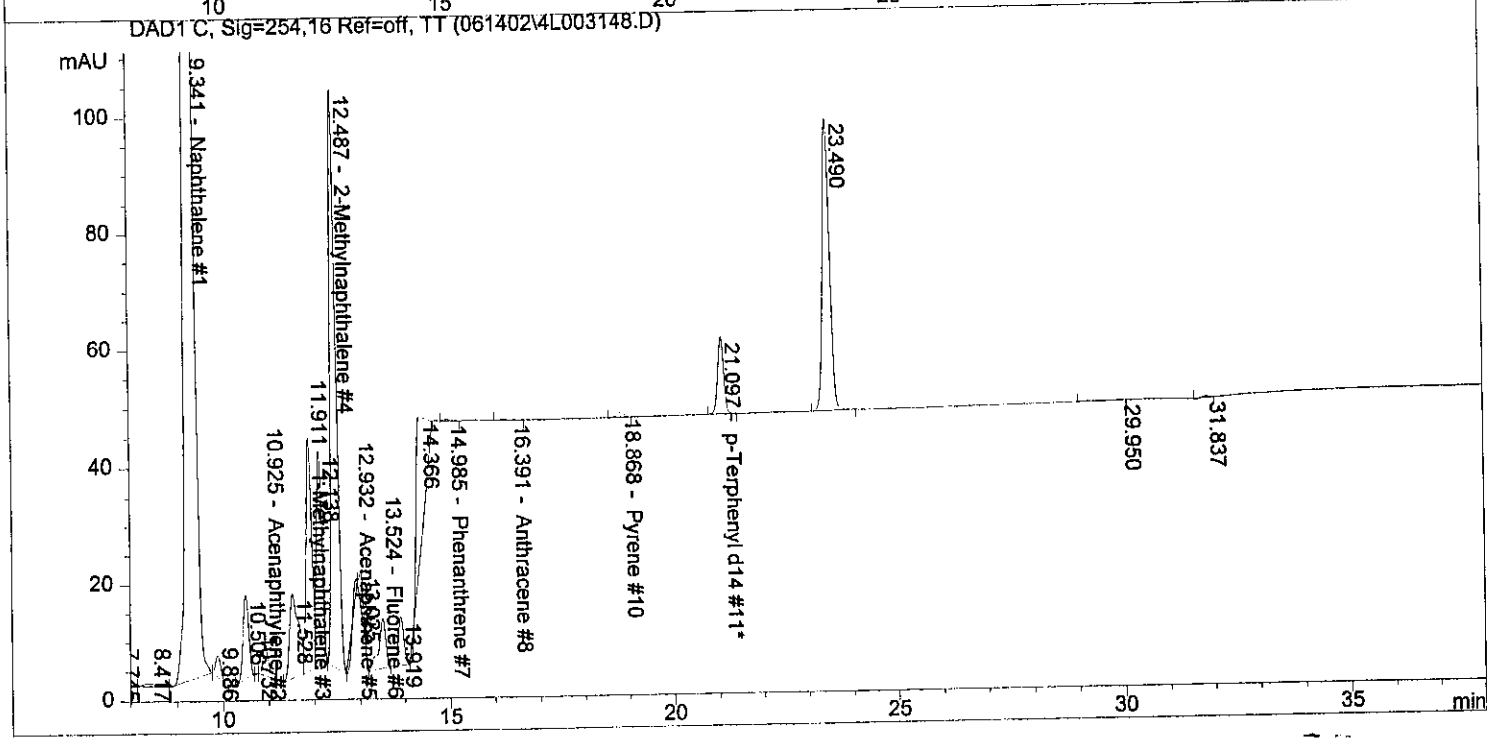
Injection Date : 6/15/2002 3:29:19 AM
Sample Name : L0206102-07 831W
Acq. Operator : RDC

Seq. Line : 18
Vial : 18
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/17/2002 10:47:35 AM by RDC
(modified after loading)

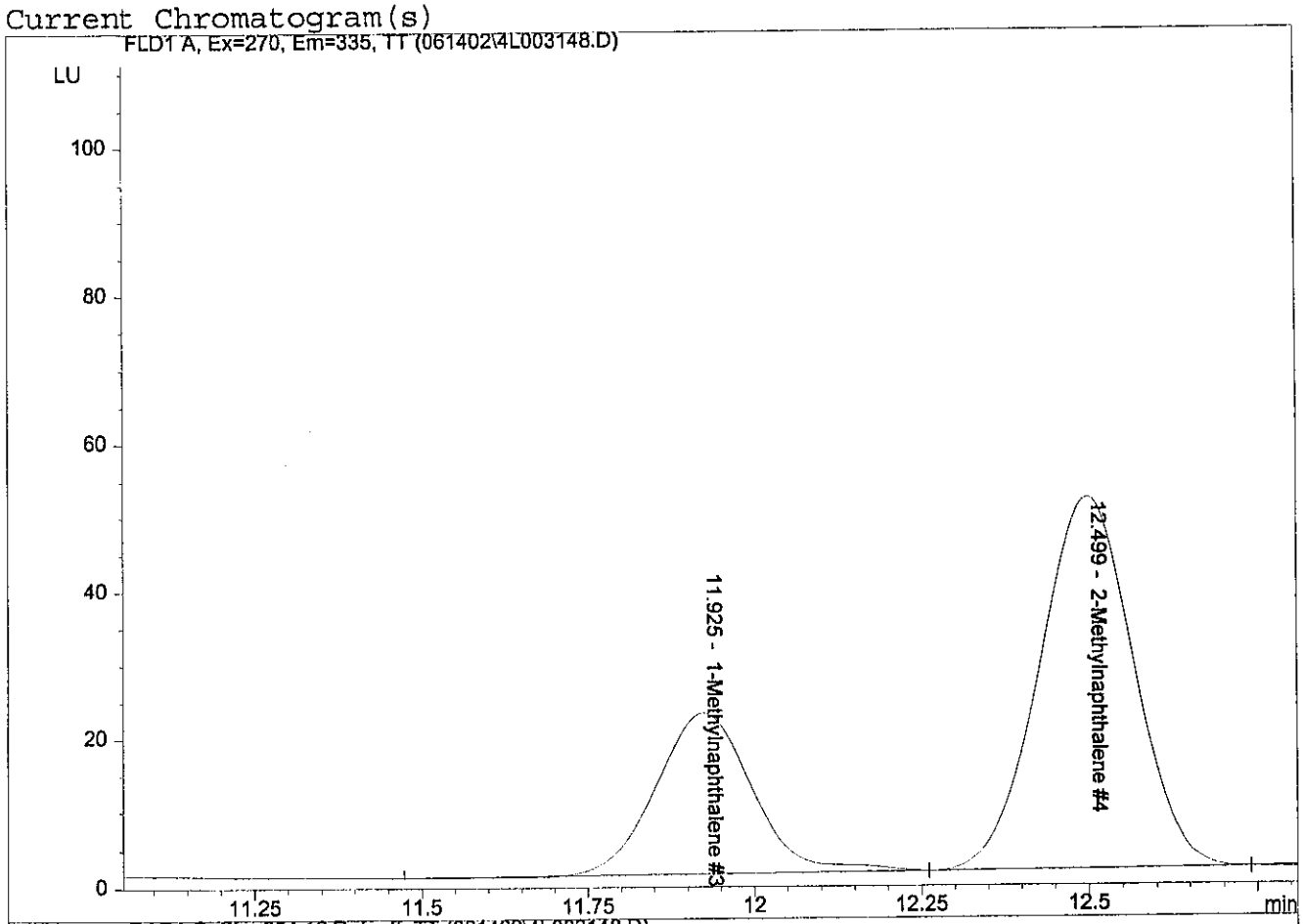
Calibrated 06/13/2002

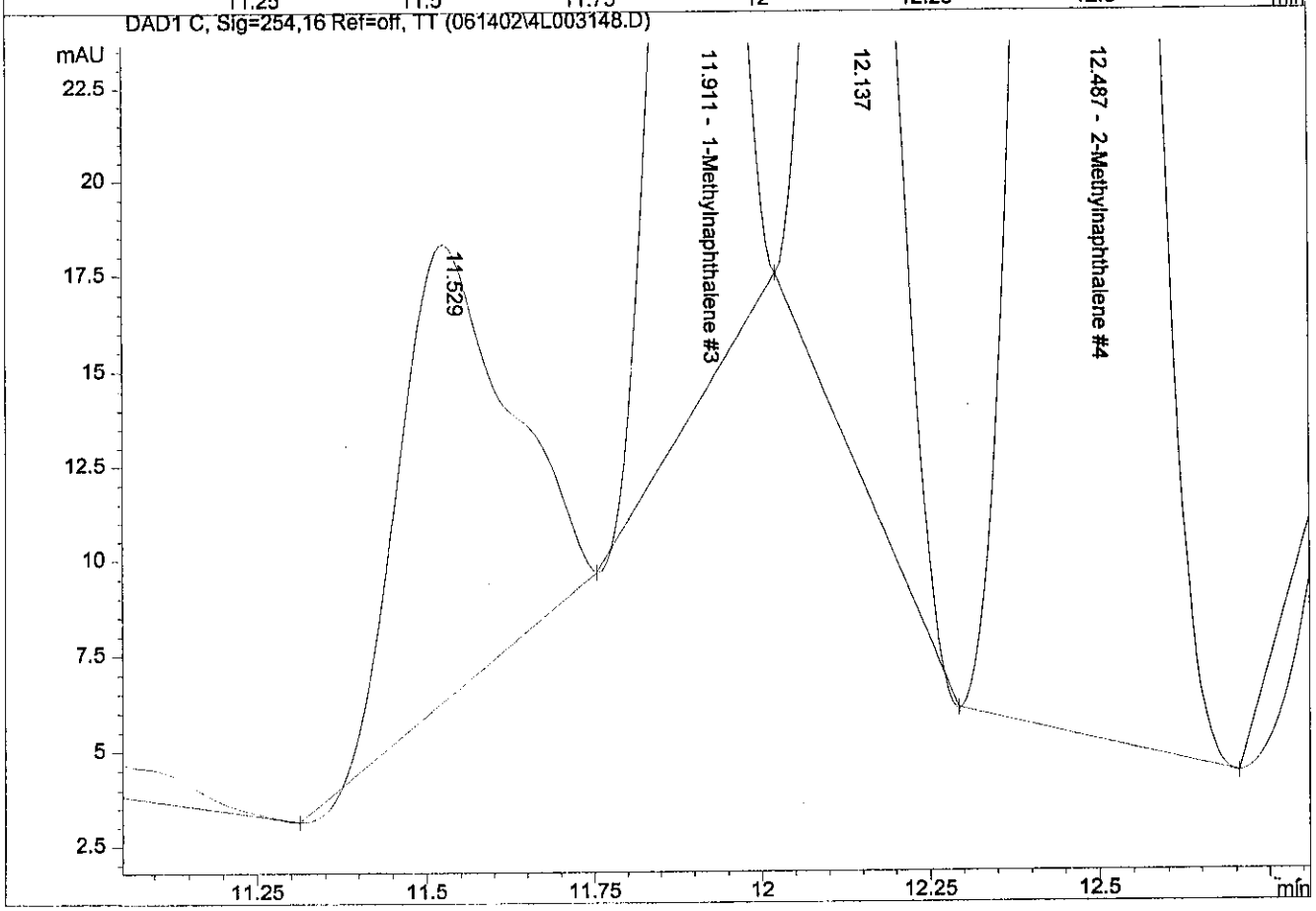




305

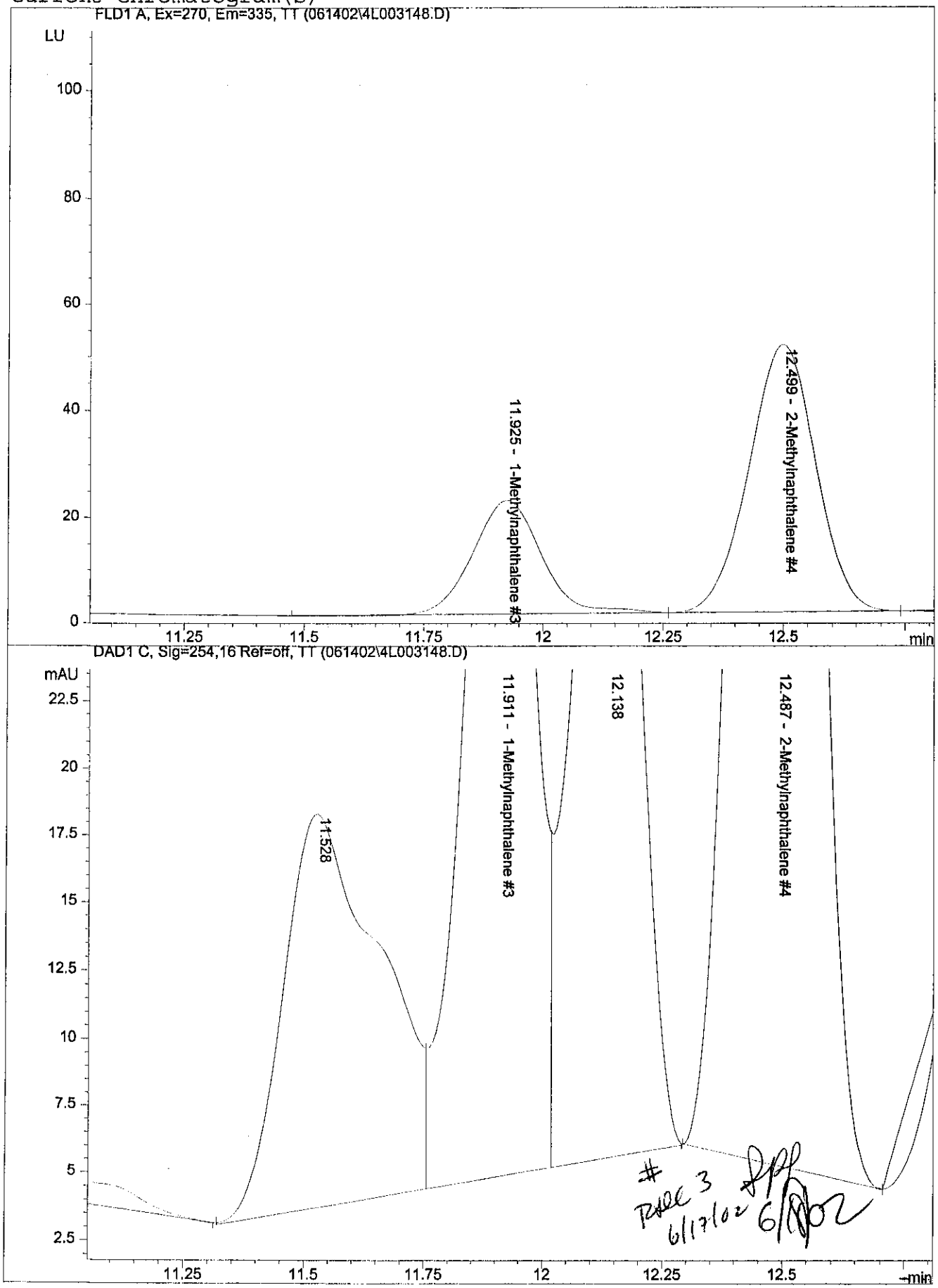
Current Chromatogram(s)





306

Current Chromatogram(s)



Page 3
6/17/02 6/18/02

External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.355	BB	1545.52515	2.63332e-2	40.69868	C	Naphthalene #1
11.925	BB	215.07857	2.36983e-2	5.09699	C	1-Methylnaphthalene #3
12.499	BB	482.31729	1.79445e-2	8.65492	C	2-Methylnaphthalene #4
12.831	BB	4.40283	2.33046e-2	1.02606e-1		Acenaphthene #5
13.587	BB	15.59877	2.64179e-4	4.12087e-3		Fluorene #6
14.993	BB	4.31672e-1	8.99971e-1	3.88492e-1		Phenanthrene #7
16.346	BBA	1.78651e-1	4.59293e-1	8.20531e-2		Anthracene #8
17.783	BBA	2.54738e-1	1.14173e-1	2.90841e-2		Fluoranthene #9
18.802	PB	2.63606e-1	9.83337e-2	2.59213e-2		Pyrene #10
21.111	BB	27.25808	3.00816e-1	8.19967	82.0%	p-Terphenyl d14 #11*
22.465	BB	3.35424e-1	9.24774e-2	3.10191e-2		Benzo(a)anthracene #12
23.217	BB	1.89440e-1	1.66321e-1	3.15078e-2		Chrysene #13
26.020	BB	1.65045e-1	1.74095e-1	2.87334e-2		Benzo(b)fluoranthene #14
27.426	PBA	3.32916e-1	3.37586e-2	1.12388e-2		Benzo(k)fluoranthene #15
28.564	BBA	2.54829e-1	1.48274e-1	3.77847e-2		Benzo(a)pyrene #16
30.418		-	-	-		Dibenz(a,h)anthracene #17
31.227		-	-	-		Benzo(g,h,i)perylene #18
32.173	PB	6.97052e-1	5.56065e-2	3.87606e-2		Indeno(1,2,3-cd)pyrene #1

Totals : 63.46158

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.341	BB	5176.36426	8.27300e-3	42.82408		Naphthalene #1
10.925	BB	46.26859	3.38348e-2	1.56549	NC	Acenaphthylene #2
11.911	VV	359.78305	1.32363e-2	4.76218		1-Methylnaphthalene #3
12.487	BB	888.92450	1.12648e-2	10.01359		2-Methylnaphthalene #4
12.932	BB	3.73855	5.45907e-2	2.04090e-1	<MRL	Acenaphthene #5
13.524	BB	95.15562	1.93919e-2	1.84525	NC	Fluorene #6
14.985	BB	3.13229	5.66283e-2	1.77376e-1	<MDL	Phenanthrene #7
16.391	BB	4.40494	0.00000	0.00000		Anthracene #8
17.762		-	-	-		Fluoranthene #9
18.868	BB	8.47635	1.83723e-2	1.55730e-1	NC	Pyrene #10
21.097	BBA	122.67258	6.65605e-2	8.16515		p-Terphenyl d14 #11*
22.401		-	-	-		Benzo(a)anthracene #12
23.266		-	-	-	81.7%	Chrysene #13
25.984		-	-	-		Benzo(b)fluoranthene #14
27.418		-	-	-		Benzo(k)fluoranthene #15
28.535		-	-	-		Benzo(a)pyrene #16
30.399		-	-	-		Dibenz(a,h)anthracene #17

308

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.206		-	-	-		Benzo(g,h,i)perylene #18
32.159		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 69.71293

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed
Warning : Negative results set to zero (cal. curve intercept), (Anthracene #

==========

*** End of Report ***

Search result of : DAD1, 10.923 (5.3 mAU, -) Ref=10.790 & 11.170
Library used : C:\HPCHEM\SPECLIBS\8310_CCV.UVL
Library Name : 8310 CCV
Parameters : Window 10.377 | 10.377 min

Library search results

#	Match	Entry	Time [min]	Name
1	215.2332	1	10.972	acenaphthylene

Not corb.

*** End of Report ***

310

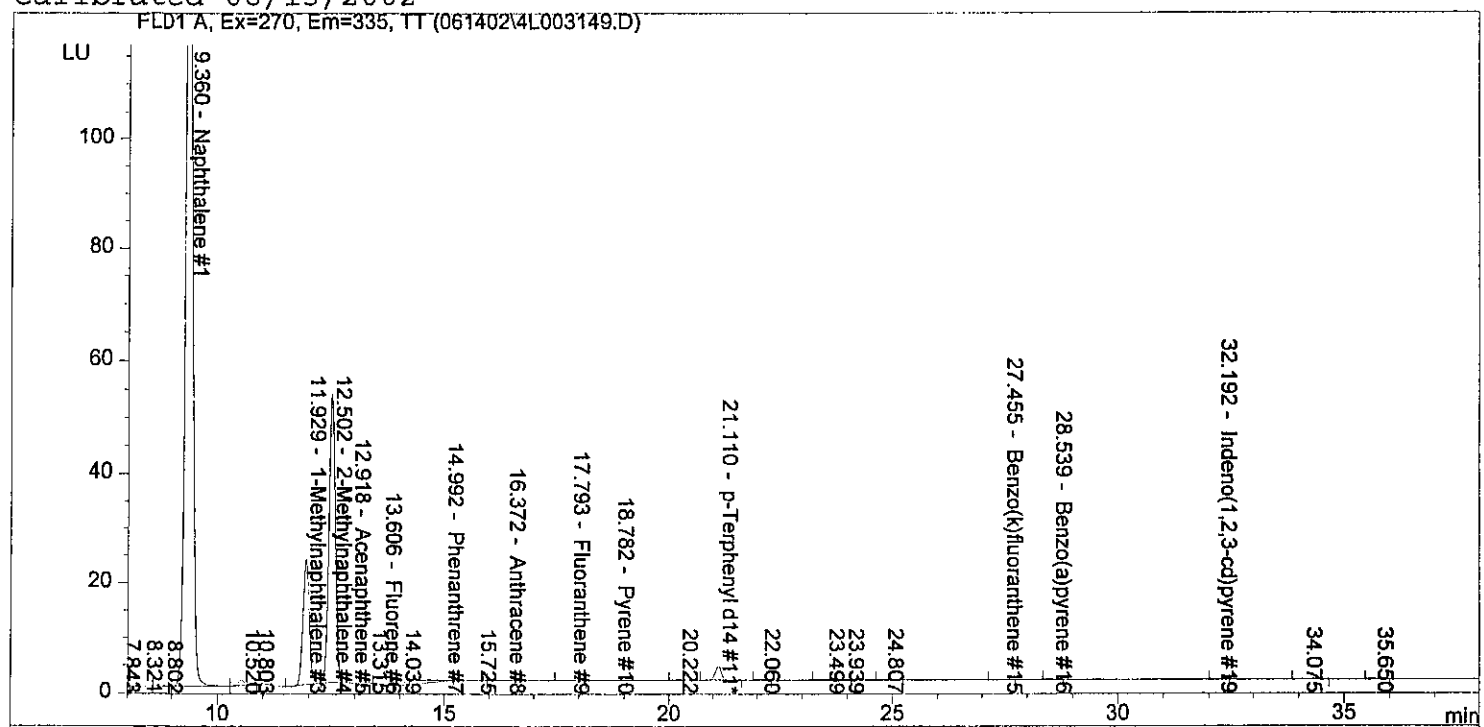
1,1

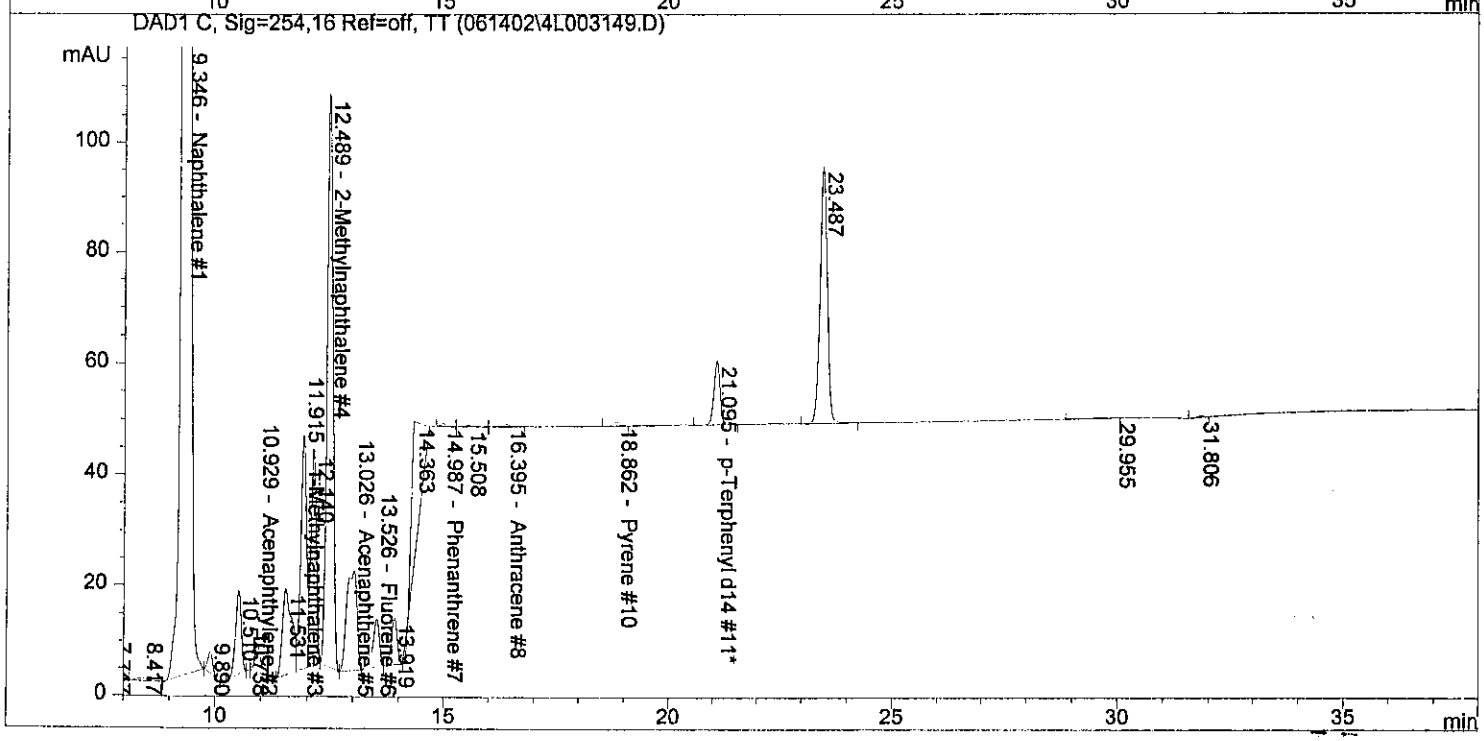
==========

Injection Date : 6/15/2002 4:25:58 AM Seq. Line : 19
Sample Name : L0206102-08 831W Vial : 19
Acq. Operator : RDC Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/17/2002 10:47:35 AM by RDC
(modified after loading)

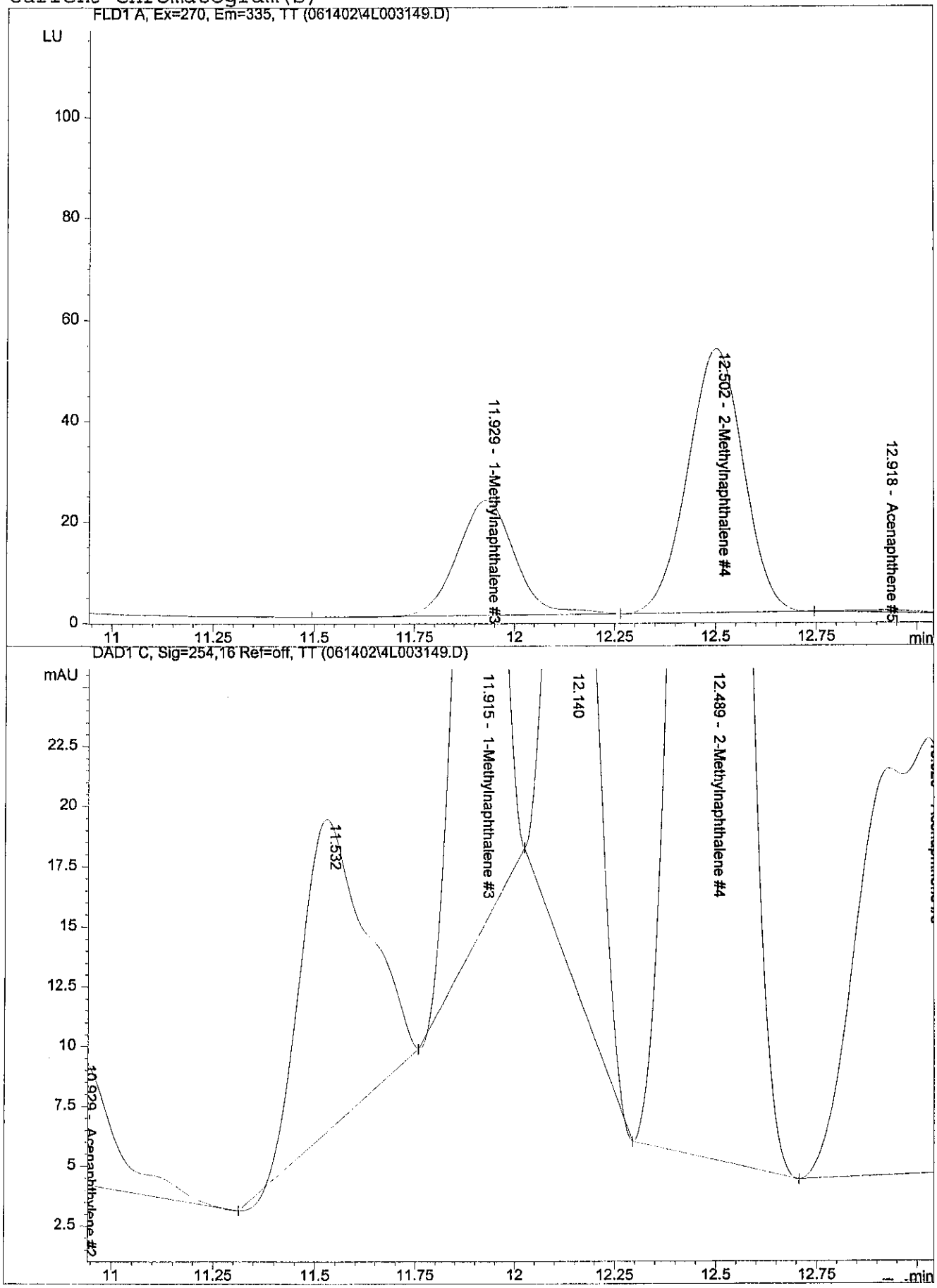
Calibrated 06/13/2002





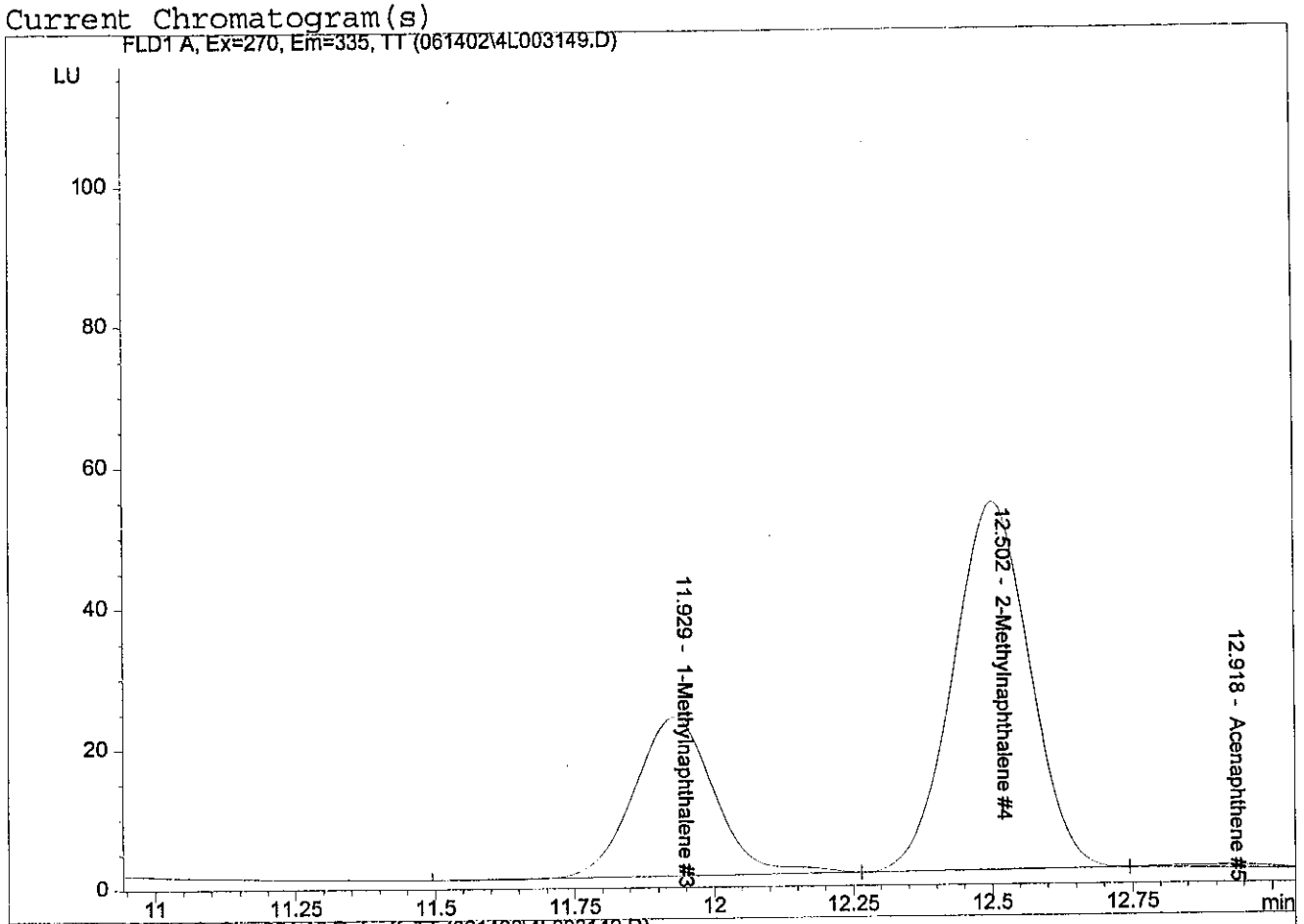
311

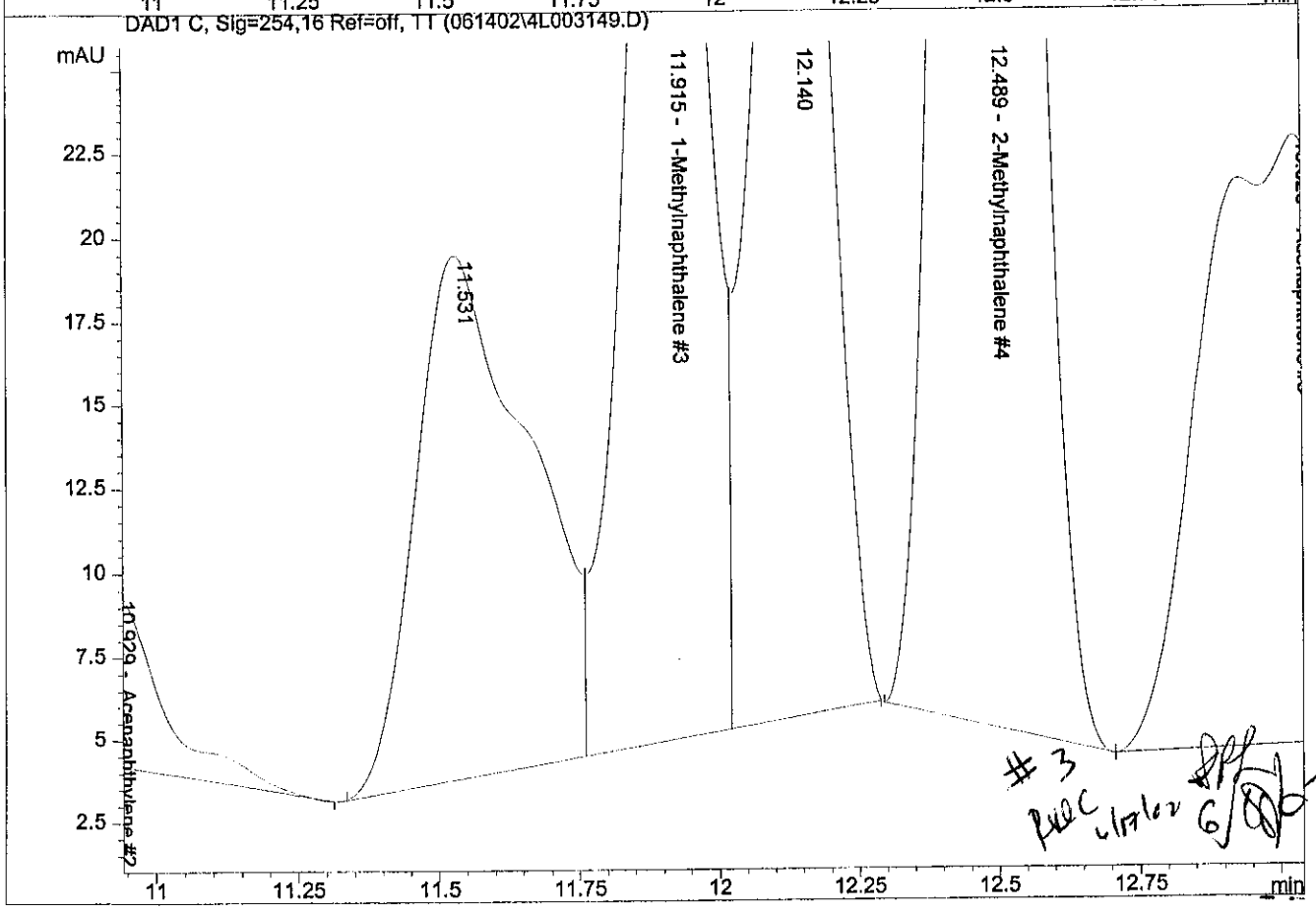
Current Chromatogram(s)



312

Current Chromatogram(s)





#3 RWC 6/8/02

External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.360	BB	1582.81665	2.63300e-2	41.67558	C	Naphthalene #1
11.929	BB	225.57161	2.36619e-2	5.33745	C	1-Methylnaphthalene #3
12.502	BB	499.38663	1.79355e-2	8.95675	C	2-Methylnaphthalene #4
12.918	BB	5.77140	2.11188e-2	1.21885e-1		Acenaphthene #5
13.606	BB	18.75629	1.33905e-3	2.51157e-2		Fluorene #6
14.992	BB	19.98848	1.87037e-1	3.73859		Phenanthrene #7
16.372	BB	3.00601e-1	3.95610e-1	1.18921e-1		Anthracene #8
17.793	BB	4.69142e-1	7.35723e-2	3.45159e-2		Fluoranthene #9
18.782	BB	3.75879e-1	8.13132e-2	3.05639e-2		Pyrene #10
21.110	BB	23.97682	3.01997e-1	7.24092		p-Terphenyl d14 #11*
22.418		-	-	-	72.4%	Benzo(a)anthracene #12
23.280		-	-	-		Chrysene #13
26.003		-	-	-		Benzo(b)fluoranthene #14
27.455	BB	4.13495e-1	2.77274e-2	1.14652e-2		Benzo(k)fluoranthene #15
28.539	BB	2.11328e-1	1.77829e-1	3.75802e-2		Benzo(a)pyrene #16
30.418		-	-	-		Dibenz(a,h)anthracene #17
31.227		-	-	-		Benzo(g,h,i)perylene #18
32.192	BB	1.52956e-1	2.03699e-1	3.11570e-2		Indeno(1,2,3-cd)pyrene #1

Totals : 67.36050

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.346	BB	5300.47656	8.27441e-3	43.85830	✓	Naphthalene #1
10.929	BB	49.09389	3.36213e-2	1.65060	NC	Acenaphthylene #2
11.915	VV	377.02716	1.32281e-2	4.98736	✓	1-Methylnaphthalene #3
12.489	BB	921.88733	1.12691e-2	10.38881	✓	2-Methylnaphthalene #4
13.026	BB	283.51569	2.10218e-2	5.96002	NC	Acenaphthene #5
13.526	BB	98.46812	1.93333e-2	1.90371	NC	Fluorene #6
14.987	BB	4.59244	4.41840e-2	2.02912e-1	LMDL	Phenanthrene #7
16.395	BB	6.64632	0.00000	0.00000		Anthracene #8
17.762		-	-	-		Fluoranthene #9
18.862	BB	7.95552	1.86359e-2	1.48258e-1	NC	Pyrene #10
21.095	BB	107.26811	6.67968e-2	7.16517		p-Terphenyl d14 #11*
22.401		-	-	-	71.7%	Benzo(a)anthracene #12
23.266		-	-	-		Chrysene #13
25.984		-	-	-		Benzo(b)fluoranthene #14
27.418		-	-	-		Benzo(k)fluoranthene #15
28.535		-	-	-		Benzo(a)pyrene #16
30.399		-	-	-		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.206		-	-	-		Benzo(g,h,i)perylene #18
32.159		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 76.26514

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed
Warning : Negative results set to zero (cal. curve intercept), (Anthracene #

==========

*** End of Report ***

Search result of : DAD1, 10.928 (5.8 mAU,Apx) Ref=10.788 & 11.235
Library used : C:\HPCHEM\SPECLIBS\8310_CCV.UVL
Library Name : 8310 CCV
Parameters : Window 10.382 | 10.382 min

Library search results

#	Match	Entry	Time [min]	Name	
1	223.5509	1	10.972	acenaphthylene	Not conf.

*** End of Report ***

316

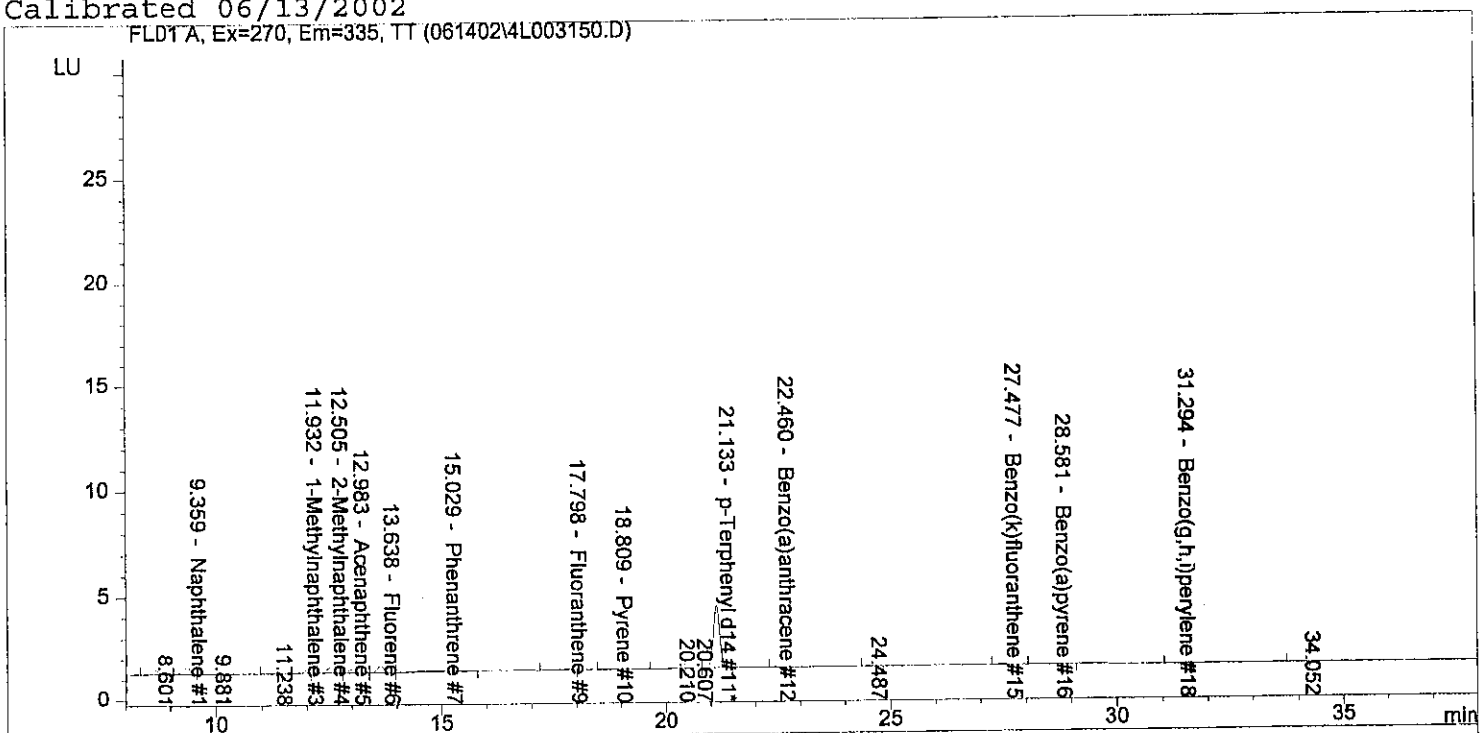
1,1

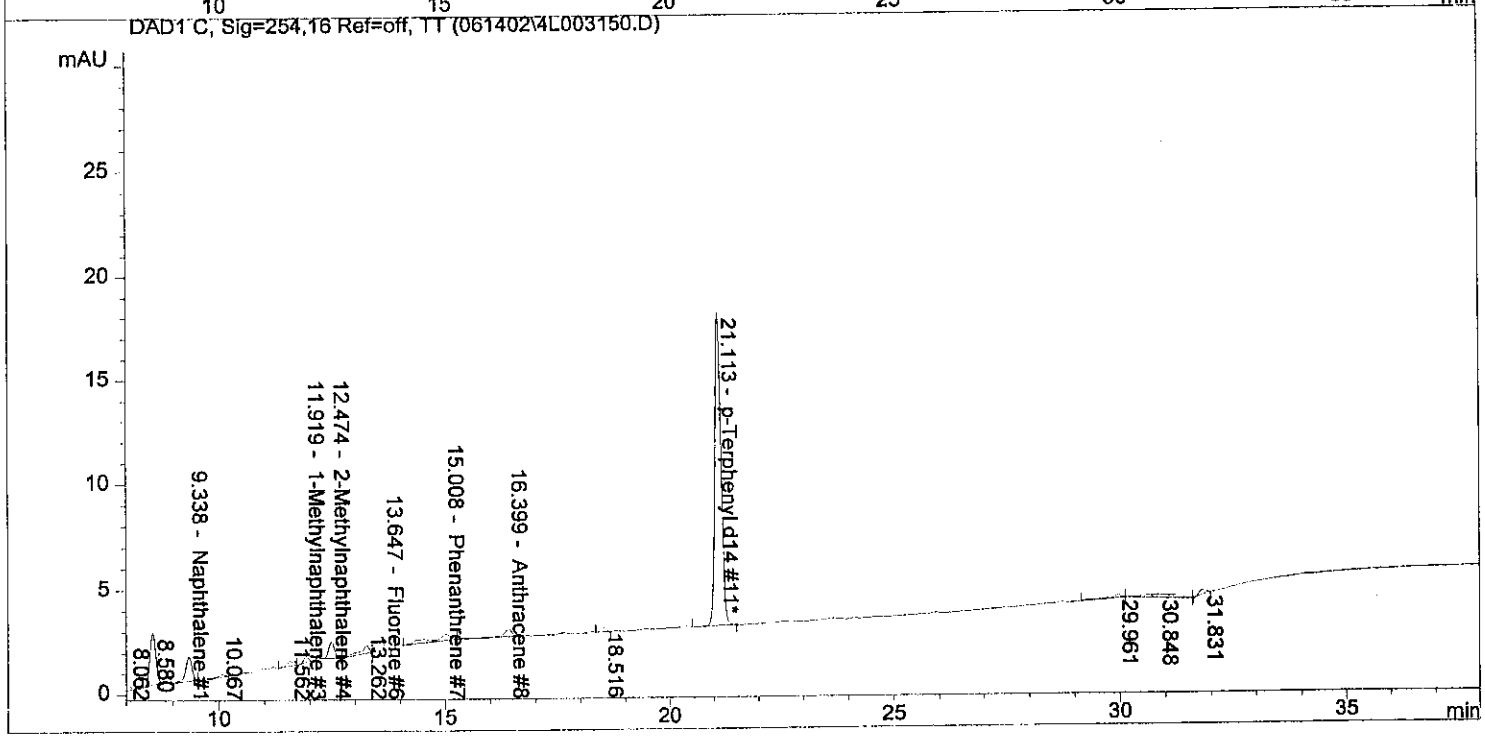
==========

Injection Date : 6/15/2002 5:22:35 AM
Sample Name : L0206102-09 831W
Acq. Operator : RDC

Seq. Line : 20
Vial : 20
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:21:05 AM by RDC
Calibrated 06/13/2002





317

External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.359	BB	3.60328	8.49489e-2	3.06095e-1		Naphthalene #1
11.932	BB	1.36489	1.46163e-1	1.99496e-1		1-Methylnaphthalene #3
12.505	BB	2.64748	6.54280e-2	1.73219e-1		2-Methylnaphthalene #4
12.983	BB	1.73847	3.74316e-2	6.50737e-2		Acenaphthene #5
13.638	BB	3.80300	0.00000	0.00000		Fluorene #6
15.029	BB	2.85272	2.81563e-1	8.03220e-1		Phenanthrene #7
16.405		-	-	-		Anthracene #8
17.798	PBA	4.71297e-1	7.33518e-2	3.45704e-2		Fluoranthene #9
18.809	PB	2.06873e-1	1.13961e-1	2.35754e-2		Pyrene #10
21.133	BBA	30.60346	2.99873e-1	9.17715	91.2%	p-Terphenyl d14 #11*
22.460	BB	1.95185e-1	1.53079e-1	2.98788e-2		Benzo(a)anthracene #12
23.280		-	-	-		Chrysene #13
26.003		-	-	-		Benzo(b)fluoranthene #14
27.477	PBA	3.73628e-1	3.03863e-2	1.13532e-2		Benzo(k)fluoranthene #15
28.581	PB	4.35289e-1	8.87522e-2	3.86329e-2		Benzo(a)pyrene #16
30.418		-	-	-		Dibenz(a,h)anthracene #17
31.294	BBA	2.92867e-1	1.67829e-1	4.91515e-2		Benzo(g,h,i)perylene #18
32.172		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 10.91142

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.338	BB	11.42968	0.00000	0.00000		Naphthalene #1
10.959		-	-	-		Acenaphthylene #2
11.919	BB	2.23553	4.17302e-2	9.32890e-2	LMDL	1-Methylnaphthalene #3
12.474	BB	6.82467	0.00000	0.00000		2-Methylnaphthalene #4
12.956		-	-	-		Acenaphthene #5
13.647	BB	2.94263	7.39735e-2	2.17677e-1		Fluorene #6
15.008	BB	8.68374	3.16066e-2	2.74464e-1		Phenanthrene #7
16.399	BB	5.00413	0.00000	0.00000		Anthracene #8
17.762		-	-	-		Fluoranthene #9
18.761		-	-	-		Pyrene #10
21.113	BBA	139.88107	6.63581e-2	9.28225		p-Terphenyl d14 #11*
22.401		-	-	-		Benzo(a)anthracene #12
23.266		-	-	-	92.8%	Chrysene #13
25.984		-	-	-		Benzo(b)fluoranthene #14
27.418		-	-	-		Benzo(k)fluoranthene #15
28.535		-	-	-		Benzo(a)pyrene #16
30.399		-	-	-		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.206		-	-	-		Benzo(g,h,i)perylene #18
32.159		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 9.86767

Results obtained with enhanced integrator!
6 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed
Warning : Negative results set to zero (cal. curve intercept), (Naphthalene
Warning : Negative results set to zero (cal. curve intercept), (2-Methylnaph
Warning : Negative results set to zero (cal. curve intercept), (Fluorene #6)
Warning : Negative results set to zero (cal. curve intercept), (Anthracene #

==========

*** End of Report ***

2.2.7.3 Standards Data

==========
Calibration Table
==========

HPLC4 8310 CALIBRATION

Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM

Calculate : External Standard
Based on : Peak Area

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.300 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.300 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Included
Weight : Equal

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)

Signal 1: FLD1 A, Ex=270, Em=335, TT
Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Sig	Lvl	Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
9.335	2	1	1.00000	118.44469	8.44276e-3			Naphthalene #1
		2	5.00000	598.90387	8.34859e-3			
		3	10.00000	1219.35925	8.20103e-3			
		4	20.00000	2498.67944	8.00423e-3			
		5	50.00000	6195.70996	8.07010e-3			
		6	100.00000	1.19505e4	8.36782e-3			
9.353	1	1	1.00000	35.70203	2.80096e-2			Naphthalene #1
		2	5.00000	178.95563	2.79399e-2			
		3	10.00000	371.85556	2.68922e-2			
		4	20.00000	754.54517	2.65060e-2			
		5	50.00000	1885.17432	2.65227e-2			
		6	100.00000	3817.44727	2.61955e-2			
10.959	2	1	1.00000	32.34379	3.09178e-2			Acenaphthylene #2
		2	5.00000	157.19412	3.18078e-2			
		3	10.00000	325.59451	3.07130e-2			
		4	20.00000	658.50293	3.03719e-2			
		5	50.00000	1639.64368	3.04944e-2			
		6	100.00000	3321.14795	3.01101e-2			
11.906	2	1	1.00000	73.52287	1.36012e-2			1-Methylnaphthalene #3

RetTime [min]	Sig	Lvl	Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
		2	5.00000	365.23682	1.36897e-2			
		3	10.00000	757.97943	1.31930e-2			
		4	20.00000	1536.99390	1.30124e-2			
		5	50.00000	3823.69092	1.30764e-2			
		6	100.00000	7652.24854	1.30681e-2			
11.924	1	1	1.00000	41.21246	2.42645e-2			1-Methylnaphthalene #3
		2	5.00000	205.97406	2.42749e-2			
		3	10.00000	427.16837	2.34100e-2			
		4	20.00000	865.41754	2.31102e-2			
		5	50.00000	2162.71216	2.31191e-2			
		6	100.00000	4362.68555	2.29217e-2			
12.479	2	1	1.00000	85.92275	1.16384e-2			2-Methylnaphthalene #4
		2	5.00000	427.72684	1.16897e-2			
		3	10.00000	887.82635	1.12635e-2			
		4	20.00000	1791.84399	1.11617e-2			
		5	50.00000	4440.55420	1.12599e-2			
		6	100.00000	8770.67480	1.14016e-2			
12.497	1	1	1.00000	53.61522	1.86514e-2			2-Methylnaphthalene #4
		2	5.00000	267.76404	1.86732e-2			
		3	10.00000	555.40234	1.80050e-2			
		4	20.00000	1125.70947	1.77666e-2			
		5	50.00000	2815.32397	1.77599e-2			
		6	100.00000	5651.09082	1.76957e-2			
12.956	2	1	1.00000	45.75132	2.18573e-2			Acenaphthene #5
		2	5.00000	230.37761	2.17035e-2			
		3	10.00000	479.64664	2.08487e-2			
		4	20.00000	968.64014	2.06475e-2			
		5	50.00000	2413.63843	2.07156e-2			
		6	100.00000	4859.52686	2.05781e-2			
12.974	1	1	1.00000	68.11809	1.46804e-2			Acenaphthene #5
		2	5.00000	339.83661	1.47130e-2			
		3	10.00000	704.82605	1.41879e-2			
		4	20.00000	1426.86951	1.40167e-2			
		5	50.00000	3551.90137	1.40770e-2			
		6	100.00000	7092.07813	1.41002e-2			
13.606	2	1	1.00000	52.41635	1.90780e-2			Fluorene #6
		2	5.00000	267.85175	1.86670e-2			
		3	10.00000	555.59216	1.79988e-2			
		4	20.00000	1125.01990	1.77775e-2			
		5	50.00000	2806.76538	1.78141e-2			
		6	100.00000	5664.78320	1.76529e-2			
13.625	1	1	1.00000	147.37762	6.78529e-3			Fluorene #6
		2	5.00000	732.50269	6.82591e-3			
		3	10.00000	1519.64282	6.58049e-3			
		4	20.00000	3071.66968	6.51112e-3			
		5	50.00000	7586.48193	6.59067e-3			
		6	100.00000	1.50207e4	6.65746e-3			
14.988	2	1	1.00000	59.16147	1.69029e-2			Phenanthrene #7
		2	5.00000	271.73749	1.84001e-2			
		3	10.00000	563.78528	1.77372e-2			
		4	20.00000	1137.39648	1.75840e-2			
		5	50.00000	2834.24902	1.76414e-2			
		6	100.00000	5720.03760	1.74824e-2			
15.006	1	1	1.00000	5.49246	1.82068e-1			Phenanthrene #7
		2	5.00000	27.09999	1.84502e-1			
		3	10.00000	56.03428	1.78462e-1			

322

RetTime [min]	Sig	Lvl	Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
		4	20.00000	113.91219	1.75574e-1			
		5	50.00000	286.42151	1.74568e-1			
		6	100.00000	583.99371	1.71235e-1			
16.387	2	1	1.00000	93.73675	1.06682e-2			Anthracene #8
		2	5.00000	479.37994	1.04301e-2			
		3	10.00000	1007.09772	9.92952e-3			
		4	20.00000	2016.31750	9.91907e-3			
		5	50.00000	4994.17480	1.00117e-2			
		6	100.00000	9770.11133	1.02353e-2			
16.405	1	1	1.00000	3.27440	3.05399e-1			Anthracene #8
		2	5.00000	15.91612	3.14147e-1			
		3	10.00000	32.93192	3.03657e-1			
		4	20.00000	66.59662	3.00316e-1			
		5	50.00000	165.24231	3.02586e-1			
		6	100.00000	330.63736	3.02446e-1			
17.762	2	1	1.00000e-1	2.86666	3.48838e-2			Fluoranthene #9
		2	5.00000e-1	21.47706	2.32806e-2			
		3	1.00000	44.35479	2.25455e-2			
		4	2.00000	90.19173	2.21750e-2			
		5	5.00000	225.76083	2.21473e-2			
		6	10.00000	458.29434	2.18200e-2			
17.779	1	1	1.00000e-1	3.76502	2.65603e-2			Fluoranthene #9
		2	5.00000e-1	18.56896	2.69267e-2			
		3	1.00000	38.54884	2.59411e-2			
		4	2.00000	77.44264	2.58256e-2			
		5	5.00000	194.82120	2.56646e-2			
		6	10.00000	394.78314	2.53304e-2			
18.761	2	1	1.00000e-1	5.78315	1.72916e-2			Pyrene #10
		2	5.00000e-1	30.90943	1.61763e-2			
		3	1.00000	67.05128	1.49140e-2			
		4	2.00000	137.28792	1.45679e-2			
		5	5.00000	342.14008	1.46139e-2			
		6	10.00000	696.78912	1.43515e-2			
18.779	1	1	1.00000e-1	2.23349	4.47730e-2			Pyrene #10
		2	5.00000e-1	11.37372	4.39610e-2			
		3	1.00000	23.43897	4.26640e-2			
		4	2.00000	48.14644	4.15399e-2			
		5	5.00000	120.60387	4.14580e-2			
21.086	2	1	1.00000	14.27733	7.00411e-2			p-Terphenyl d14 #11*
		2	5.00000	72.29396	6.91621e-2			
		3	10.00000	150.04201	6.66480e-2			
		4	20.00000	302.29453	6.61606e-2			
		5	50.00000	765.97974	6.52759e-2			
		6	100.00000	1538.62390	6.49931e-2			
21.105	1	1	1.00000	3.43824	2.90847e-1			p-Terphenyl d14 #11*
		2	5.00000	15.96525	3.13180e-1			
		3	10.00000	33.36931	2.99677e-1			
		4	20.00000	66.93617	2.98792e-1			
		5	50.00000	168.95605	2.95935e-1			
		6	100.00000	342.27563	2.92162e-1			
22.401	2	1	1.00000e-1	4.17491	2.39526e-2			Benzo(a)anthracene #12
		2	5.00000e-1	21.50113	2.32546e-2			
		3	1.00000	43.38402	2.30500e-2			
		4	2.00000	88.38959	2.26271e-2			
		5	5.00000	220.76303	2.26487e-2			
		6	10.00000	449.91843	2.22263e-2			

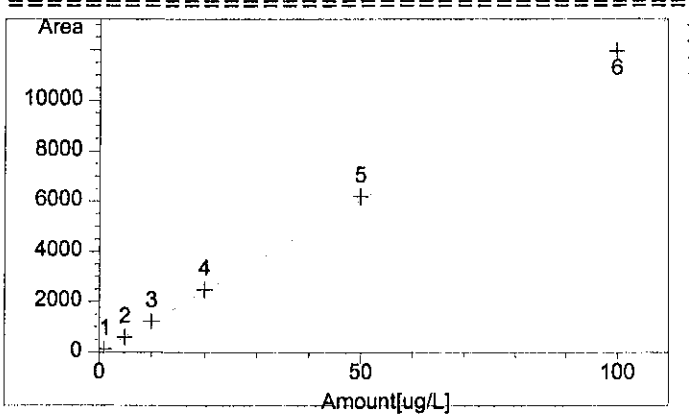
RetTime [min]	Sig	Lvl	Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
22.418	1	1	1.00000e-1	11.68998	8.55433e-3			Benzo(a)anthracene #12
		2	5.00000e-1	57.25381	8.73304e-3			
		3	1.00000	119.10960	8.39563e-3			
		4	2.00000	240.75162	8.30732e-3			
		5	5.00000	603.67468	8.28261e-3			
		6	10.00000	1230.57483	8.12628e-3			
23.266	2	1	1.00000e-1	7.56785	1.32138e-2			Chrysene #13
		2	5.00000e-1	30.82063	1.62229e-2			
		3	1.00000	63.84754	1.56623e-2			
		4	2.00000	129.65228	1.54259e-2			
		5	5.00000	324.23495	1.54209e-2			
		6	10.00000	658.83282	1.51784e-2			
23.280	1	1	1.00000e-1	2.35546	4.24546e-2			Chrysene #13
		2	5.00000e-1	11.91314	4.19705e-2			
		3	1.00000	24.15862	4.13931e-2			
		4	2.00000	49.60668	4.03171e-2			
		5	5.00000	123.50459	4.04843e-2			
		6	10.00000	251.15788	3.98156e-2			
25.984	2	1	1.00000e-1	4.71679	2.12008e-2			Benzo(b)fluoranthene #
		2	5.00000e-1	22.19203	2.25306e-2			
		3	1.00000	43.42394	2.30288e-2			
		4	2.00000	94.69703	2.11200e-2			
		5	5.00000	236.61021	2.11318e-2			
		6	10.00000	480.16330	2.08262e-2			
26.003	1	1	1.00000e-1	5.60739	1.78336e-2			Benzo(b)fluoranthene #
		2	5.00000e-1	27.48360	1.81927e-2			
		3	1.00000	57.64073	1.73488e-2			
		4	2.00000	116.12308	1.72231e-2			
		5	5.00000	291.03116	1.71803e-2			
		6	10.00000	592.02631	1.68911e-2			
27.418	2	1	5.00000e-2	2.02281	2.47181e-2			Benzo(k)fluoranthene #
		2	2.50000e-1	10.12679	2.46870e-2			
		3	5.00000e-1	21.38502	2.33809e-2			
		4	1.00000	43.30220	2.30935e-2			
		5	2.50000	108.54563	2.30318e-2			
		6	5.00000	220.91960	2.26327e-2			
27.438	1	1	5.00000e-2	16.96901	2.94655e-3			Benzo(k)fluoranthene #
		2	2.50000e-1	83.42035	2.99687e-3			
		3	5.00000e-1	173.46057	2.88250e-3			
		4	1.00000	351.66119	2.84365e-3			
		5	2.50000	879.42432	2.84277e-3			
		6	5.00000	1779.80371	2.80930e-3			
28.535	2	1	1.00000e-1	3.59195	2.78400e-2			Benzo(a)pyrene #16
		2	5.00000e-1	16.33183	3.06151e-2			
		3	1.00000	36.80410	2.71709e-2			
		4	2.00000	74.00938	2.70236e-2			
		5	5.00000	188.39293	2.65403e-2			
		6	10.00000	385.66537	2.59292e-2			
28.553	1	1	1.00000e-1	19.68503	5.08000e-3			Benzo(a)pyrene #16
		2	5.00000e-1	97.54757	5.12570e-3			
		3	1.00000	203.09286	4.92386e-3			
		4	2.00000	412.69138	4.84624e-3			
		5	5.00000	1041.60461	4.80029e-3			
		6	10.00000	2128.17065	4.69887e-3			
30.399	2	1	1.00000e-1	8.17798e-1	1.22280e-1			Dibenz(a,h)anthracene
		2	5.00000e-1	4.54521	1.10006e-1			

RetTime [min]	Sig	Lvl	Amount [ug/L]	Area	Amt/Area	Ref	Grp	Name
		3	1.00000	10.34522	9.66630e-2			
		4	2.00000	20.79541	9.61751e-2			
		5	5.00000	53.20811	9.39706e-2			
		6	10.00000	106.05376	9.42918e-2			
30.418	1	1	1.00000e-1	2.33135	4.28935e-2			Dibenz(a,h)anthracene
		2	5.00000e-1	11.57100	4.32115e-2			
		3	1.00000	23.94359	4.17648e-2			
		4	2.00000	48.37633	4.13425e-2			
		5	5.00000	122.52839	4.08069e-2			
		6	10.00000	250.75458	3.98796e-2			
31.206	2	1	1.00000e-1	3.35385	2.98165e-2			Benzo(g,h,i)perylene #
		2	5.00000e-1	8.93342	5.59696e-2			
		3	1.00000	21.12121	4.73458e-2			
		4	2.00000	37.91122	5.27548e-2			
		5	5.00000	92.63392	5.39759e-2			
		6	10.00000	187.07765	5.34537e-2			
31.227	1	1	1.00000e-1	3.26803	3.05995e-2			Benzo(g,h,i)perylene #
		2	5.00000e-1	16.23036	3.08065e-2			
		3	1.00000	33.76281	2.96184e-2			
		4	2.00000	68.38602	2.92457e-2			
		5	5.00000	173.07938	2.88885e-2			
		6	10.00000	354.98242	2.81704e-2			
32.159	2	1	1.00000e-1	3.43245	2.91337e-2			Indeno(1,2,3-cd)pyrene
		2	5.00000e-1	20.74642	2.41005e-2			
		3	1.00000	45.65535	2.19032e-2			
		4	2.00000	93.60317	2.13668e-2			
		5	5.00000	237.44170	2.10578e-2			
		6	10.00000	485.43732	2.06000e-2			
32.172	1	1	1.00000e-1	6.85877	1.45799e-2			Indeno(1,2,3-cd)pyrene
		2	5.00000e-1	32.92362	1.51867e-2			
		3	1.00000	69.03428	1.44856e-2			
		4	2.00000	140.00281	1.42854e-2			
		5	5.00000	351.97876	1.42054e-2			
		6	10.00000	715.64252	1.39735e-2			

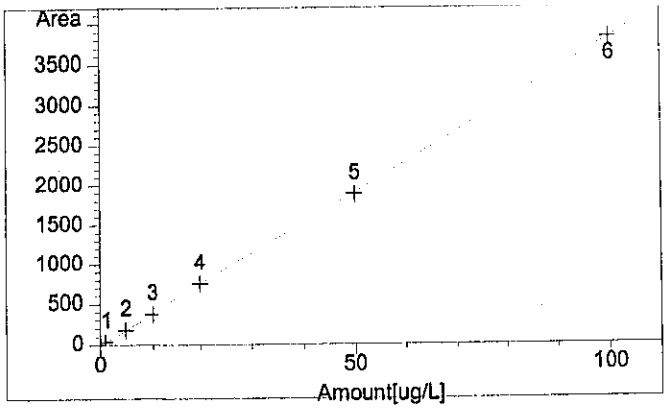
Peak Sum Table

No Entries in table

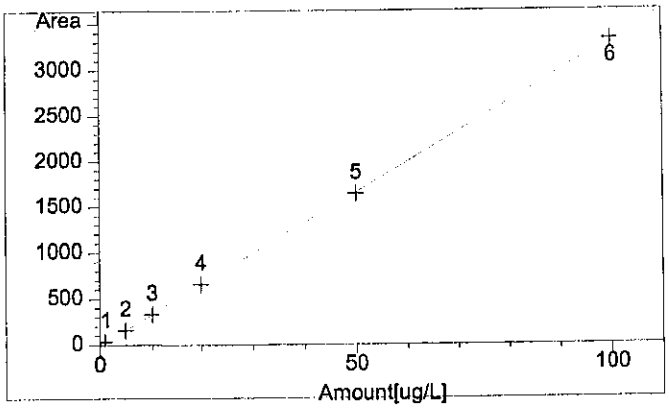
Calibration Curves



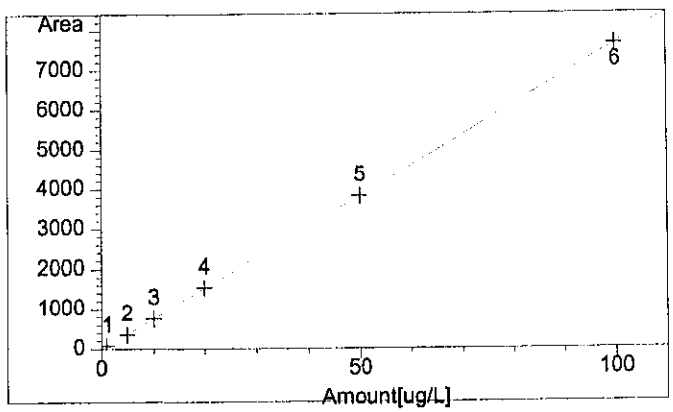
Naphthalene #1 at exp. RT: 9.335
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99982
Residual Std. Dev.: 90.64647
Formula: y = mx + b
m: 120.00596
b: 37.21961
x: Amount [ug/L]
y: Area



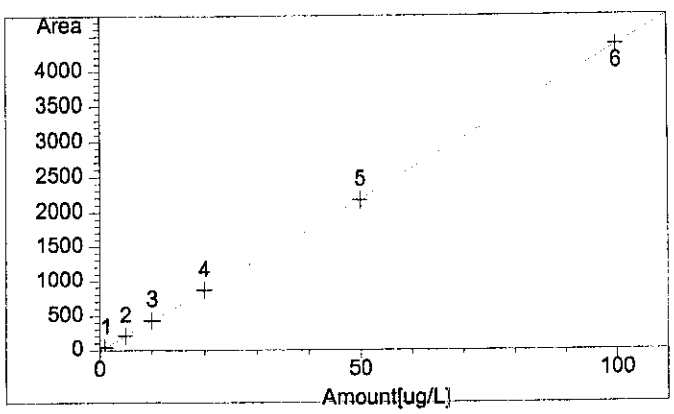
Naphthalene #1 at exp. RT: 9.355
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 9.16561
Formula: y = mx + b
m: 38.17339
b: -8.08139
x: Amount[ug/L]
y: Area



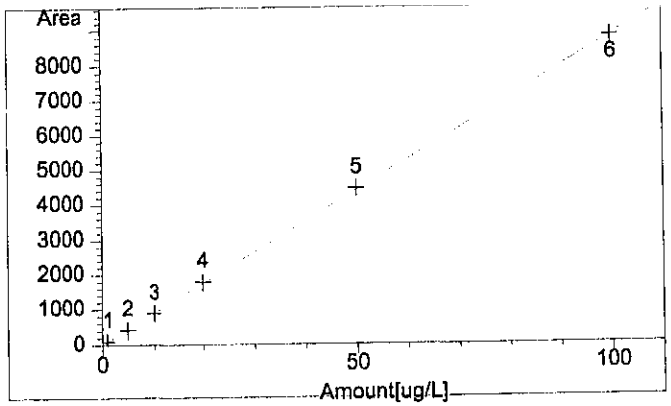
Acenaphthylene #2 at exp. RT: 10.959
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99998
Residual Std. Dev.: 8.09380
Formula: y = mx + b
m: 33.19524
b: -5.69815
x: Amount[ug/L]
y: Area



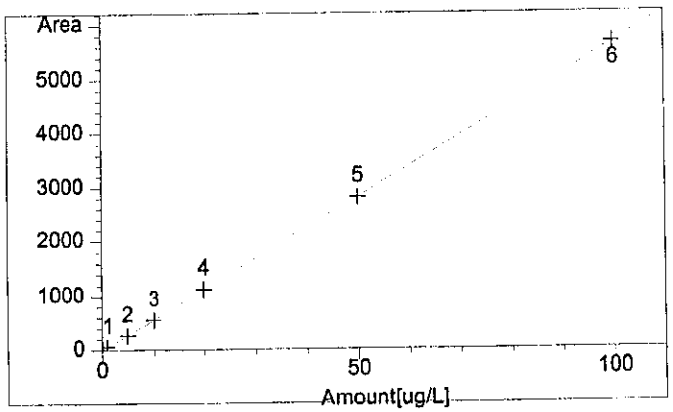
1-Methylnaphthalene #3 at exp. RT: 11.906
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 1.00000
Residual Std. Dev.: 7.81901
Formula: y = mx + b
m: 76.58082
b: -4.90862
x: Amount[ug/L]
y: Area



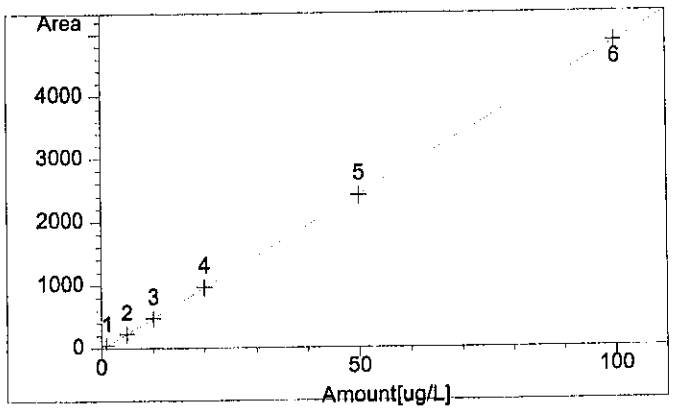
1-Methylnaphthalene #3 at exp. RT: 11.924
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99999
Residual Std. Dev.: 7.54227
Formula: y = mx + b
m: 43.63739
b: -7.34061
x: Amount[ug/L]
y: Area



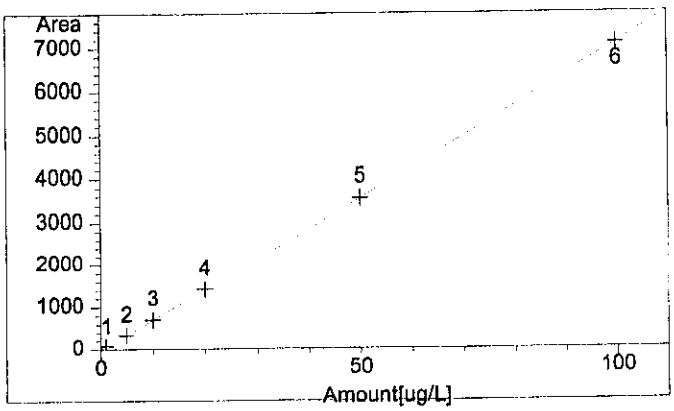
2-Methylnaphthalene #4 at exp. RT: 12.479
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99997
Residual Std. Dev.: 25.91757
Formula: y = mx + b
m: 87.84855
b: 9.24548
x: Amount [ug/L]
y: Area



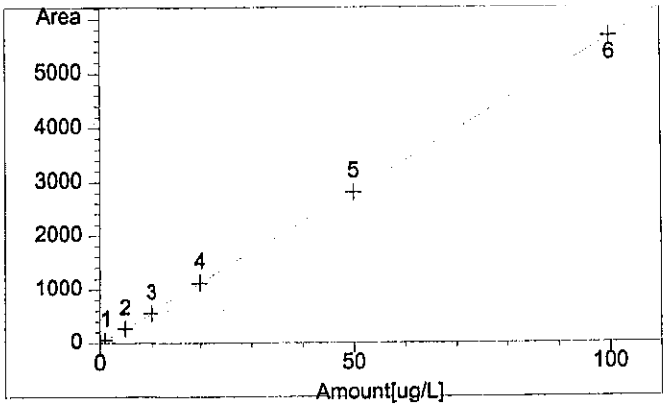
2-Methylnaphthalene #4 at exp. RT: 12.497
FLD1 A, Ex=270, Em=335, TT
Correlation: 1.00000
Residual Std. Dev.: 5.96731
Formula: y = mx + b
m: 56.55348
b: -7.14867
x: Amount [ug/L]
y: Area



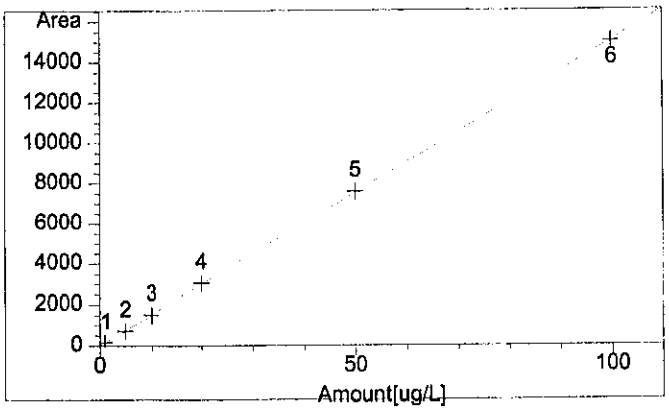
Acenaphthene #5 at exp. RT: 12.956
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 6.84725
Formula: y = mx + b
m: 48.60673
b: -6.18160
x: Amount [ug/L]
y: Area



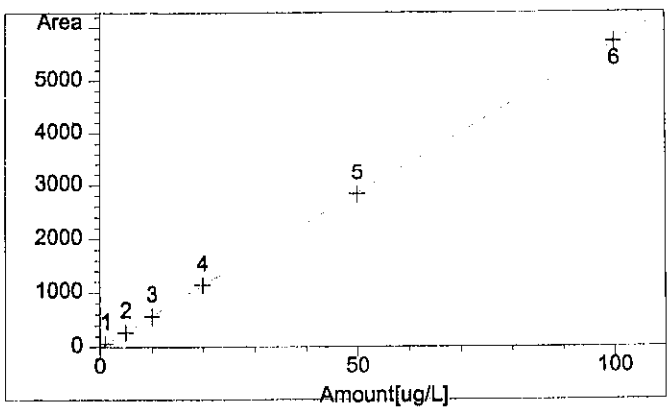
Acenaphthene #5 at exp. RT: 12.974
FLD1 A, Ex=270, Em=335, TT
Correlation: 1.00000
Residual Std. Dev.: 7.82229
Formula: y = mx + b
m: 70.98815
b: -2.88099
x: Amount [ug/L]
y: Area



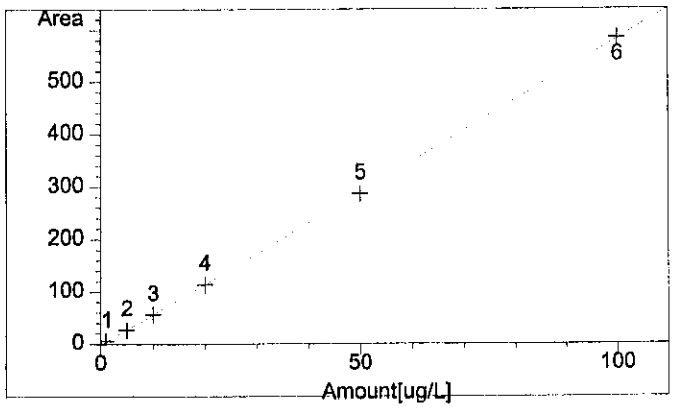
Fluorene #6 at exp. RT: 13.606
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 10.05830
Formula: y = mx + b
m: 56.65678
b: -9.39024
x: Amount[ug/L]
y: Area



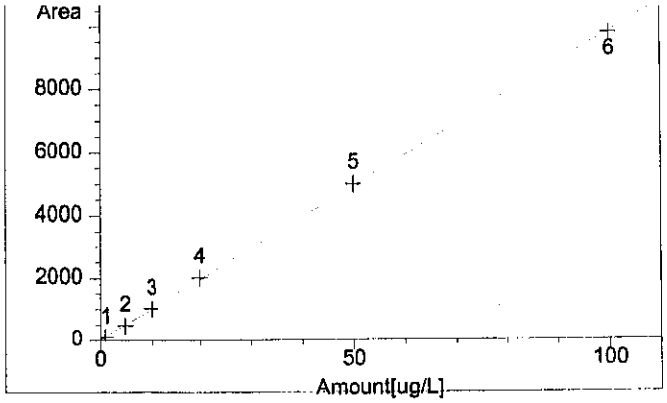
Fluorene #6 at exp. RT: 13.625
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 39.83191
Formula: y = mx + b
m: 150.39549
b: 14.97901
x: Amount[ug/L]
y: Area



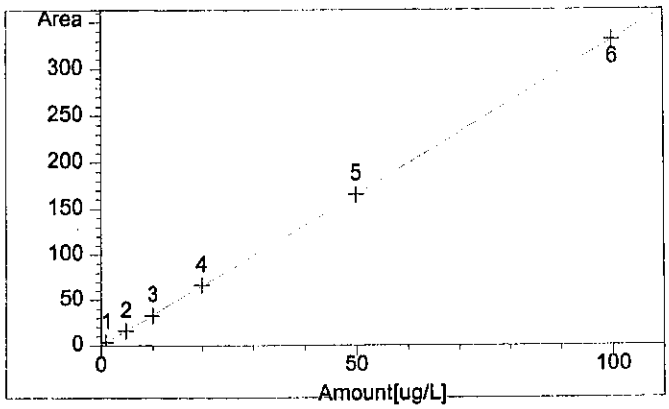
Phenanthrene #7 at exp. RT: 14.988
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 10.76481
Formula: y = mx + b
m: 57.17977
b: -7.01003
x: Amount[ug/L]
y: Area



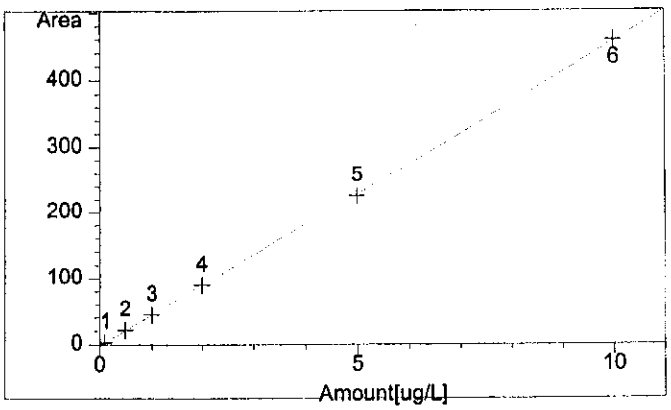
Phenanthrene #7 at exp. RT: 15.006
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99996
Residual Std. Dev.: 2.20575
Formula: y = mx + b
m: 5.83768
b: -1.83622
x: Amount[ug/L]
y: Area



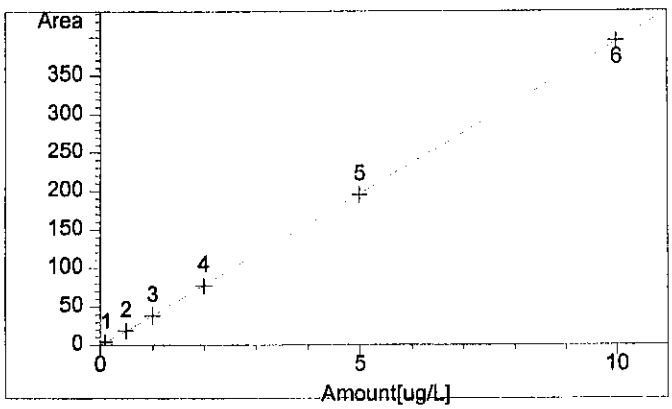
Anthracene #8 at exp. RT: 16.387
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99993
Residual Std. Dev.: 47.43795
Formula: y = mx + b
m: 97.94194
b: 20.51670
x: Amount [ug/L]
y: Area



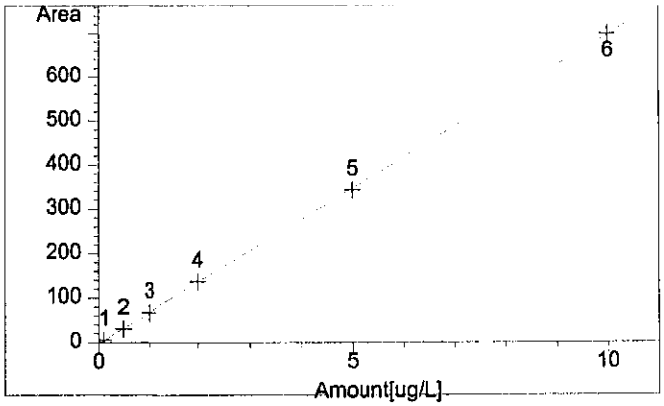
Anthracene #8 at exp. RT: 16.405
FLD1 A, Ex=270, Em=335, TT
Correlation: 1.00000
Residual Std. Dev.: 0.34234
Formula: y = mx + b
m: 3.30779
b: -9.27632e-2
x: Amount [ug/L]
y: Area



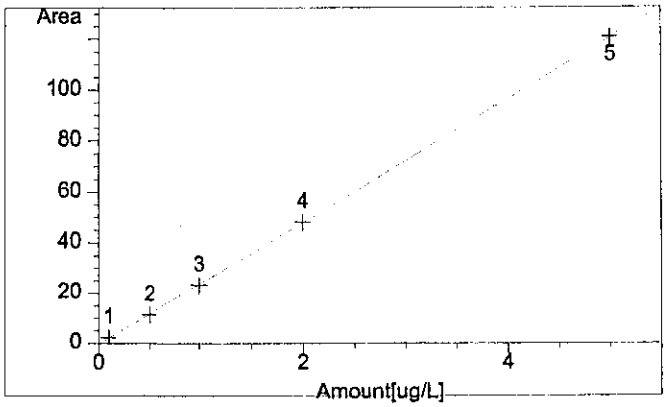
Fluoranthene #9 at exp. RT: 17.762
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99998
Residual Std. Dev.: 1.25331
Formula: y = mx + b
m: 45.86610
b: -1.45201
x: Amount [ug/L]
y: Area



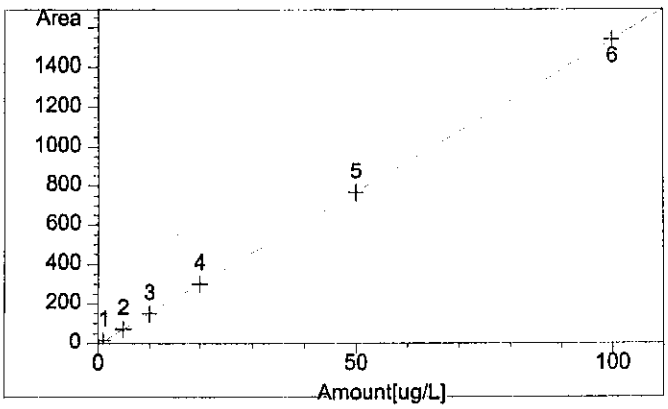
Fluoranthene #9 at exp. RT: 17.779
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 1.03650
Formula: y = mx + b
m: 39.47219
b: -8.93275e-1
x: Amount [ug/L]
y: Area



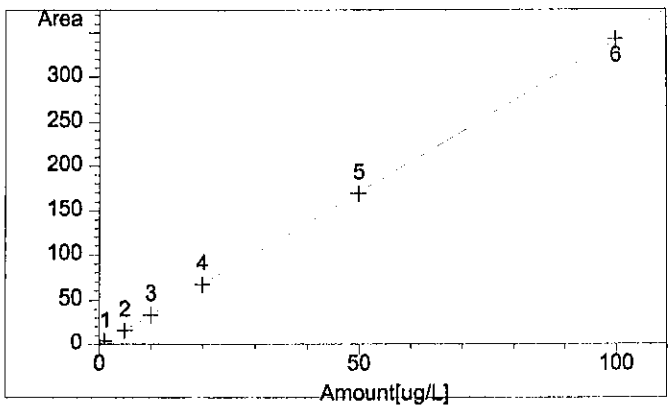
Pyrene #10 at exp. RT: 18.761
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99996
Residual Std. Dev.: 2.45753
Formula: y = mx + b
m: 69.71068
b: -2.37968
x: Amount[ug/L]
y: Area



Pyrene #10 at exp. RT: 18.779
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 0.33832
Formula: y = mx + b
m: 24.18326
b: -3.63256e-1
x: Amount[ug/L]
y: Area

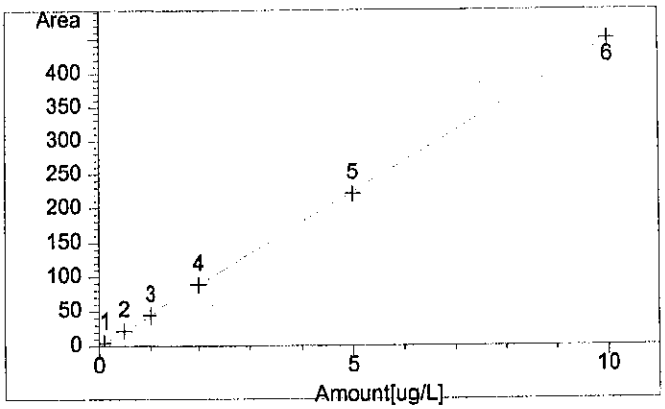


p-Terphenyl d14 #11* at exp. RT: 21.086
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99999
Residual Std. Dev.: 2.33106
Formula: y = mx + b
m: 15.40471
b: -3.10922
x: Amount[ug/L]
y: Area

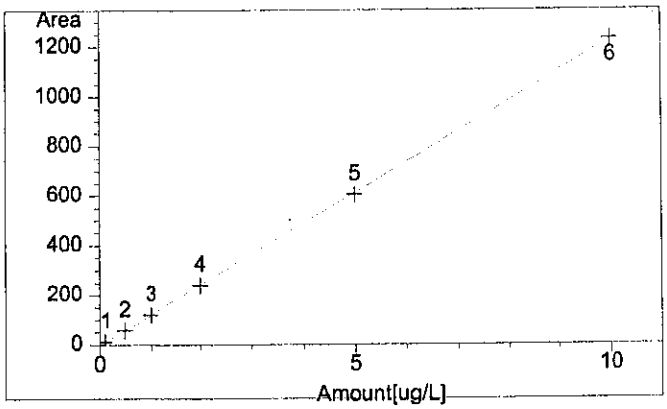


p-Terphenyl d14 #11* at exp. RT: 21.105
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 0.94806
Formula: y = mx + b
m: 3.42244
b: -8.04824e-1
x: Amount[ug/L]
y: Area

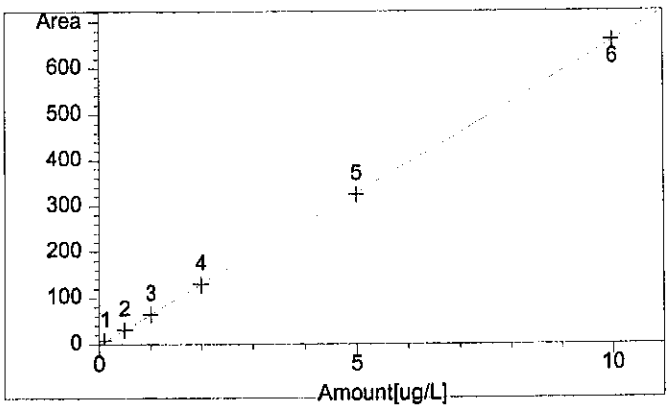
330



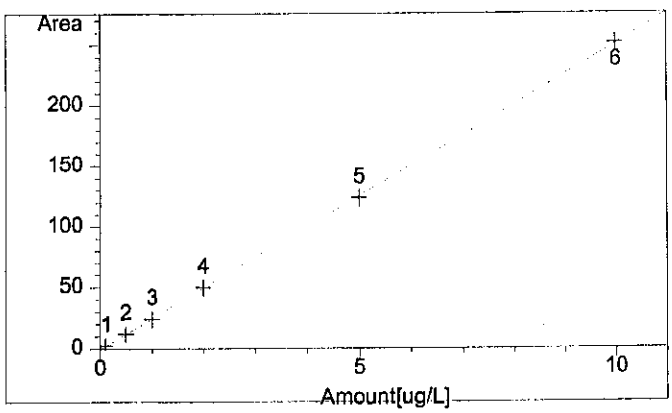
Benzo(a)anthracene #12 at exp. RT: 22.401
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99996
Residual Std. Dev.: 1.60319
Formula: y = mx + b
m: 44.95295
b: -1.14196
x: Amount [ug/L]
y: Area



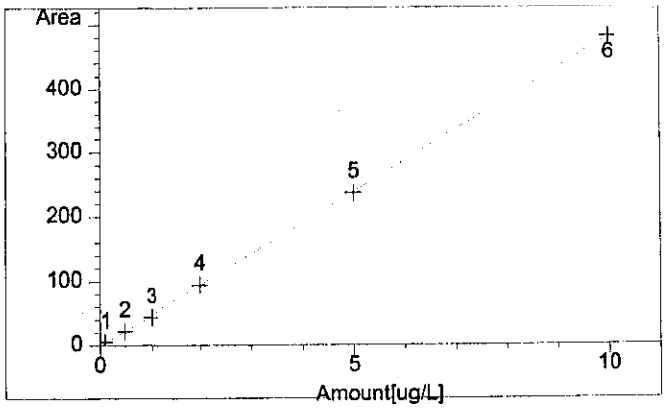
Benzo(a)anthracene #12 at exp. RT: 22.418
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99996
Residual Std. Dev.: 4.52026
Formula: y = mx + b
m: 122.97900
b: -3.47928
x: Amount [ug/L]
y: Area



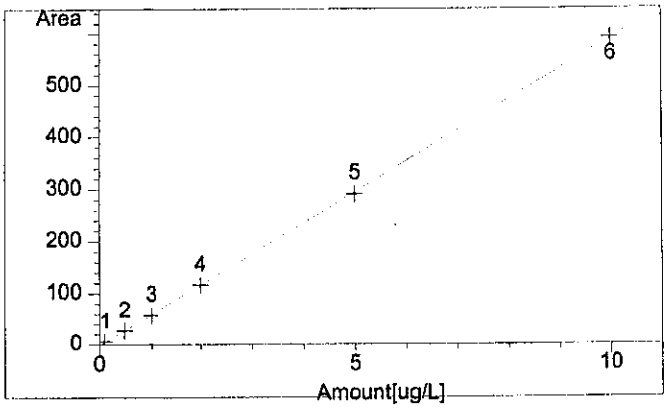
Chrysene #13 at exp. RT: 23.266
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99996
Residual Std. Dev.: 2.23172
Formula: y = mx + b
m: 65.81764
b: -1.32173
x: Amount [ug/L]
y: Area



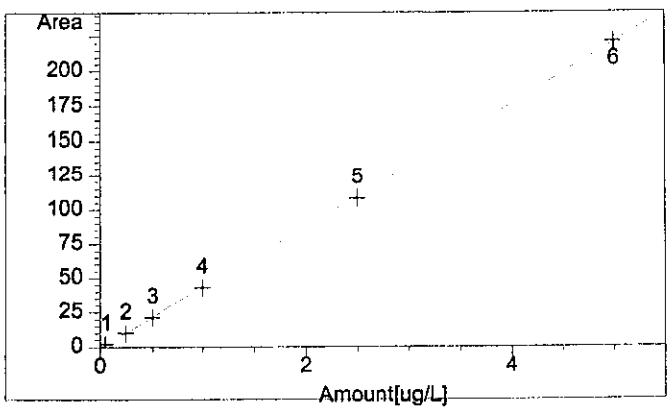
Chrysene #13 at exp. RT: 23.280
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 0.79966
Formula: y = mx + b
m: 25.10251
b: -6.01486e-1
x: Amount [ug/L]
y: Area



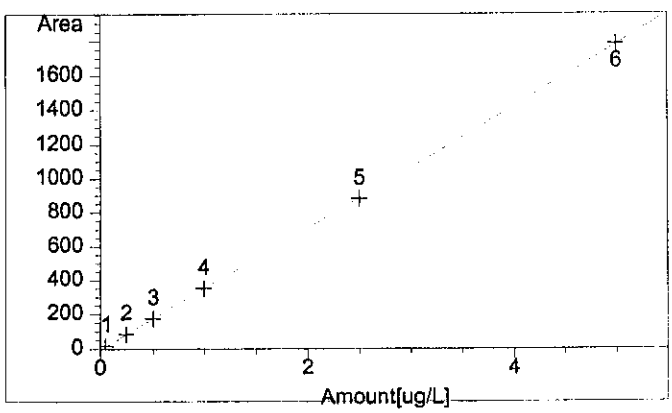
Benzo(b)fluoranthene #14 at exp. RT: 25.9
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99995
Residual Std. Dev.: 1.98687
Formula: y = mx + b
m: 48.07187
b: -1.76192
x: Amount[ug/L]
y: Area



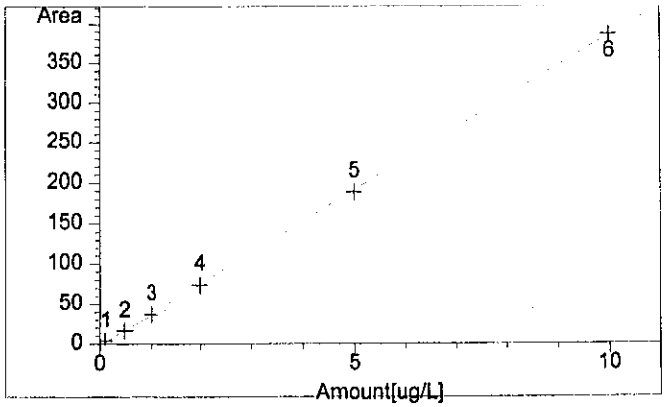
Benzo(b)fluoranthene #14 at exp. RT: 26.0
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 1.94362
Formula: y = mx + b
m: 59.17522
b: -1.53526
x: Amount[ug/L]
y: Area



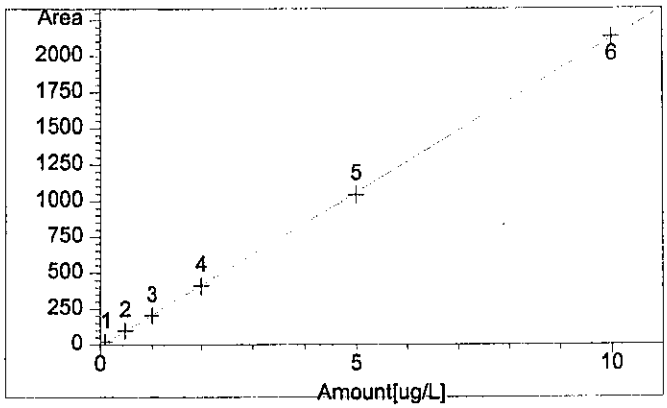
Benzo(k)fluoranthene #15 at exp. RT: 27.4
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99996
Residual Std. Dev.: 0.74646
Formula: y = mx + b
m: 44.17713
b: -6.49330e-1
x: Amount[ug/L]
y: Area



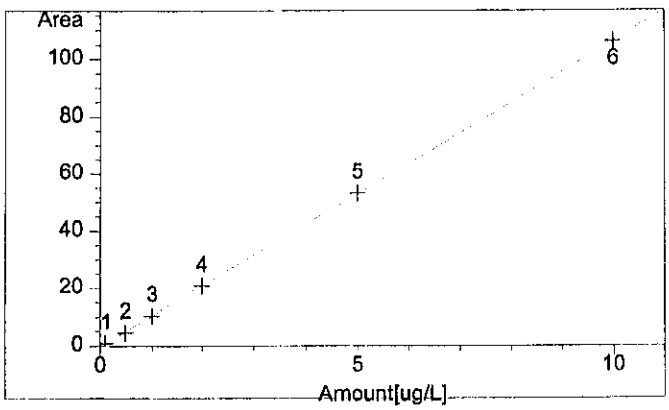
Benzo(k)fluoranthene #15 at exp. RT: 27.4
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 4.14920
Formula: y = mx + b
m: 355.95834
b: -3.66763
x: Amount[ug/L]
y: Area



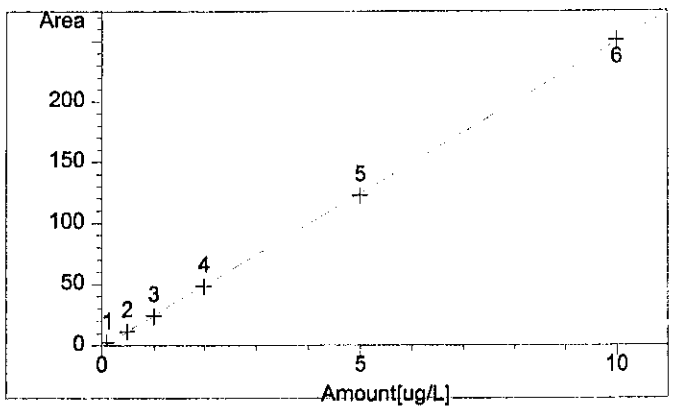
Benzo(a)pyrene #16 at exp. RT: 28.535
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99992
Residual Std. Dev.: 1.94176
Formula: y = mx + b
m: 38.58652
b: -1.84481
x: Amount[ug/L]
y: Area



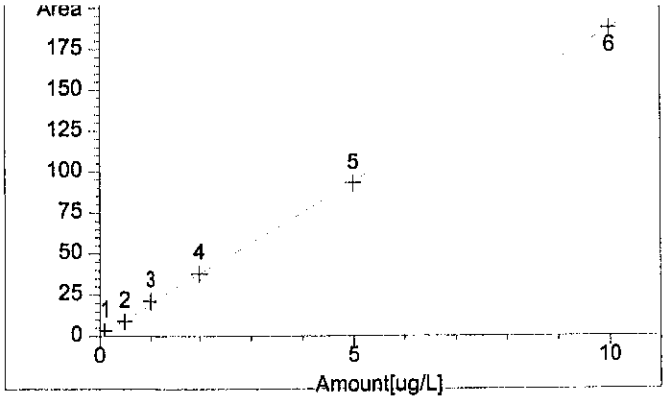
Benzo(a)pyrene #16 at exp. RT: 28.553
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99994
Residual Std. Dev.: 9.01693
Formula: y = mx + b
m: 212.75704
b: -7.78412
x: Amount[ug/L]
y: Area



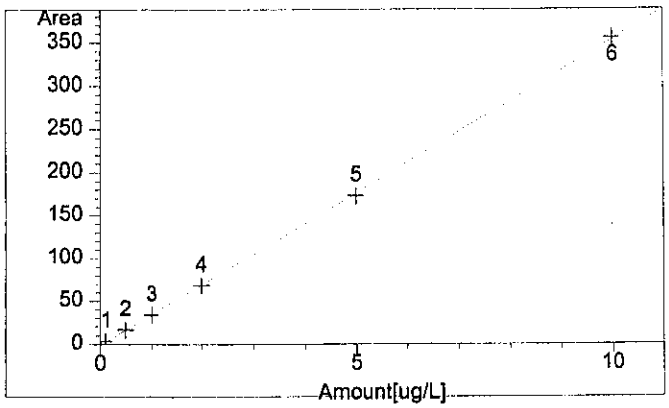
Dibenz(a,h)anthracene #17 at exp. RT: 30.
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99998
Residual Std. Dev.: 0.29835
Formula: y = mx + b
m: 10.64723
b: -3.24711e-1
x: Amount[ug/L]
y: Area



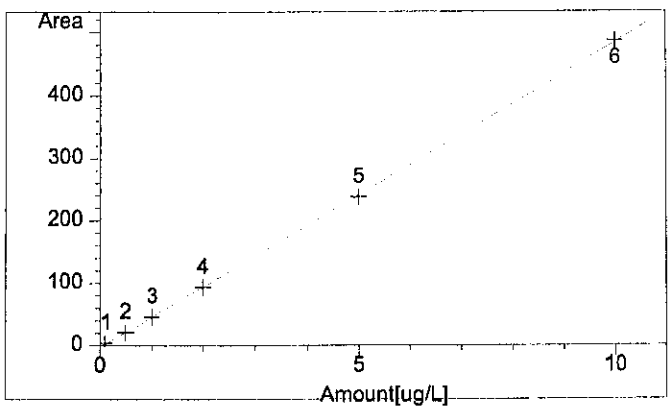
Dibenz(a,h)anthracene #17 at exp. RT: 30.
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99993
Residual Std. Dev.: 1.15752
Formula: y = mx + b
m: 25.06189
b: -9.49414e-1
x: Amount[ug/L]
y: Area



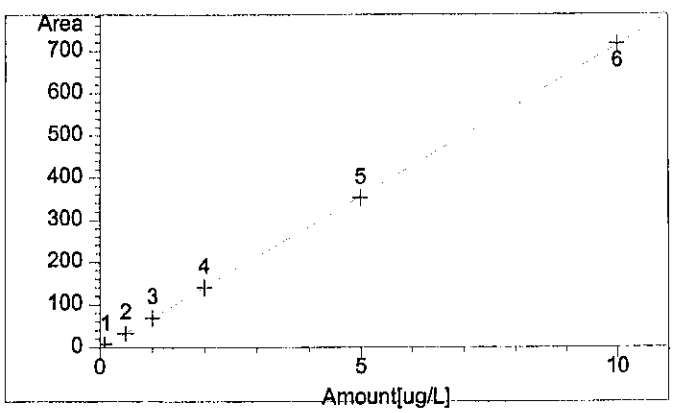
Benzo(g,h,i)perylene #18 at exp. RT: 31.2
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99988
Residual Std. Dev.: 1.17004
Formula: y = mx + b
m: 18.59234
b: 7.44819e-1
x: Amount[ug/L]
y: Area



Benzo(g,h,i)perylene #18 at exp. RT: 31.2
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 1.77276
Formula: y = mx + b
m: 35.47662
b: -1.45086
x: Amount[ug/L]
y: Area



Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
DAD1 C, Sig=254,16 Ref=off, TT
Correlation: 0.99994
Residual Std. Dev.: 2.14429
Formula: y = mx + b
m: 48.61738
b: -2.56671
x: Amount[ug/L]
y: Area



Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 2.36150
Formula: y = mx + b
m: 71.55789
b: -2.07657
x: Amount[ug/L]
y: Area

==========

1,1 SOS58-26 LEVEL 6 SURROGATE @ 100 ppm

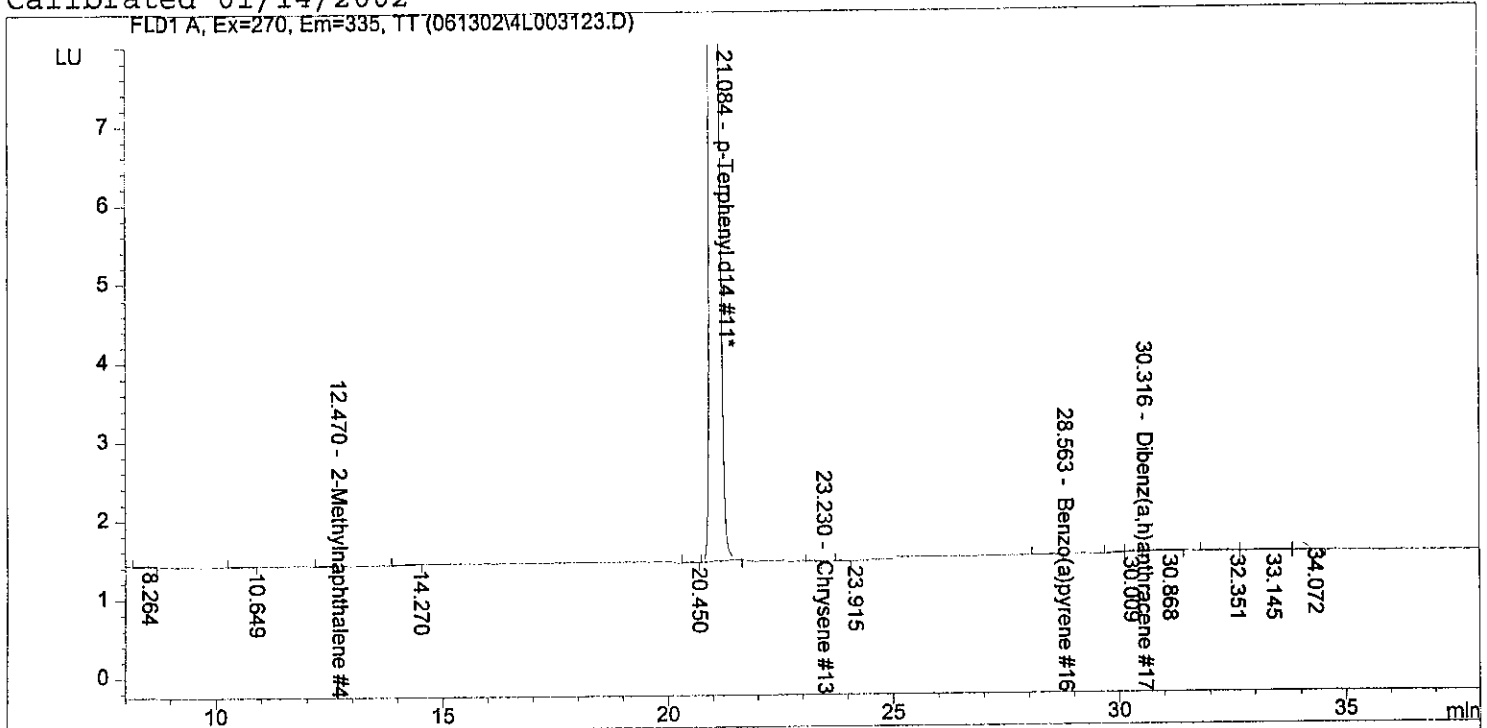
==========

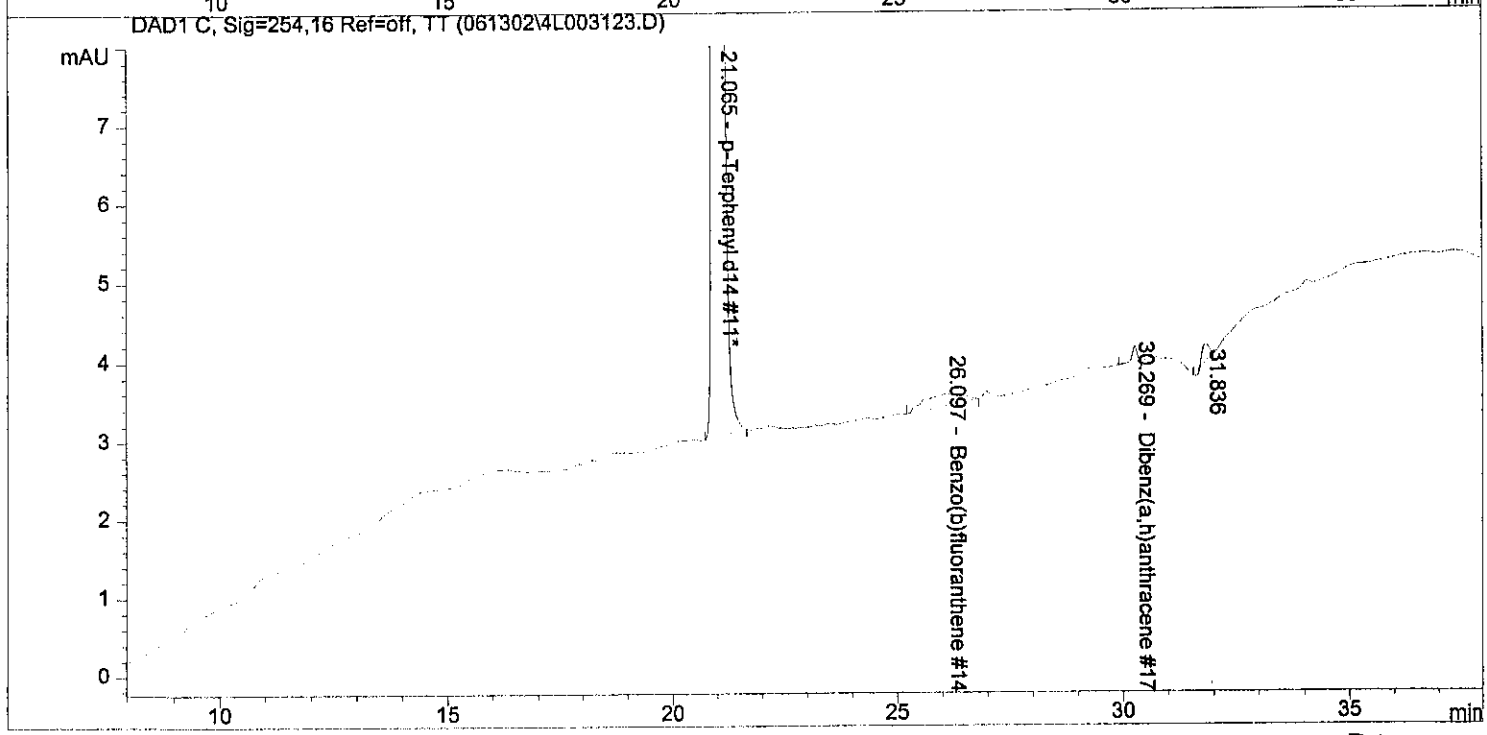
Injection Date : 6/13/2002 10:05:00 PM
Sample Name : WG119840-01 STD6
Acq. Operator : RDC

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:03:08 AM by RDC
(modified after loading)

Calibrated 01/14/2002





335

External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:02:42 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.342		-	-	-		Naphthalene #1
11.908		-	-	-		1-Methylnaphthalene #3
12.470	BBA	1.78080e-1	1.76307e-2	3.13969e-3		2-Methylnaphthalene #4
12.960		-	-	-		Acenaphthene #5
13.611		-	-	-		Fluorene #6
14.992		-	-	-		Phenanthrene #7
16.391		-	-	-		Anthracene #8
17.765		-	-	-		Fluoranthene #9
18.766		-	-	-		Pyrene #10
21.084	BBA	342.27563	2.91938e-1	99.92331		p-Terphenyl d14 #11*
22.412		-	-	-		Benzo(a)anthracene #12
23.230	BB	1.49638e-1	3.98605e-2	5.96463e-3		Chrysene #13
25.992		-	-	-		Benzo(b)fluoranthene #14
27.434		-	-	-		Benzo(k)fluoranthene #15
28.563	BBA	2.31745e-1	4.72512e-3	1.09502e-3		Benzo(a)pyrene #16
30.316	BB	2.11069e-1	4.00249e-2	8.44802e-3		Dibenz(a,h)anthracene #17
31.216		-	-	-		Benzo(g,h,i)perylene #18
32.167		-	-	-		Indeno(1,2,3-cd)pyrene #1
Totals :				99.94195		

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.322		-	-	-		Naphthalene #1
10.943		-	-	-		Acenaphthylene #2
11.889		-	-	-		1-Methylnaphthalene #3
12.462		-	-	-		2-Methylnaphthalene #4
12.940		-	-	-		Acenaphthene #5
13.590		-	-	-		Fluorene #6
14.972		-	-	-		Phenanthrene #7
16.371		-	-	-		Anthracene #8
17.745		-	-	-		Fluoranthene #9
18.745		-	-	-		Pyrene #10
21.065	PBA	1538.62390	6.50759e-2	100.12728		p-Terphenyl d14 #11*
22.392		-	-	-		Benzo(a)anthracene #12
23.257		-	-	-		Chrysene #13
26.097	PB	8.94292	2.09236e-2	1.87118e-1		Benzo(b)fluoranthene #14
27.413		-	-	-		Benzo(k)fluoranthene #15
28.530		-	-	-		Benzo(a)pyrene #16
30.269	BBA	1.42871	9.44938e-2	1.35004e-1		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.195		-	-	-		Benzo(g,h,i)perylene #18
32.144		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 100.44940

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

==========

*** End of Report ***

1,1 SOS59-38 LEVEL 6 STD @ 100/10/5 ppm

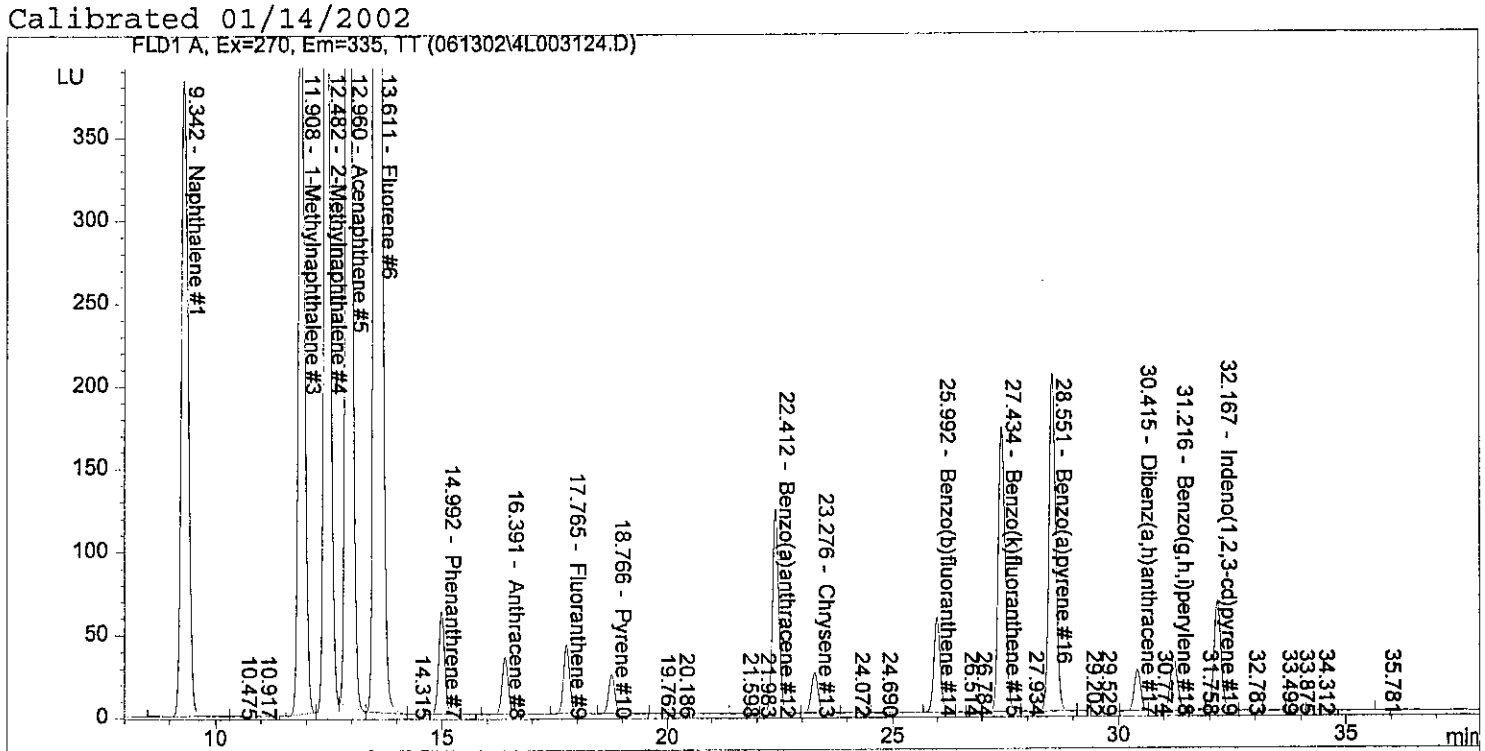
==========

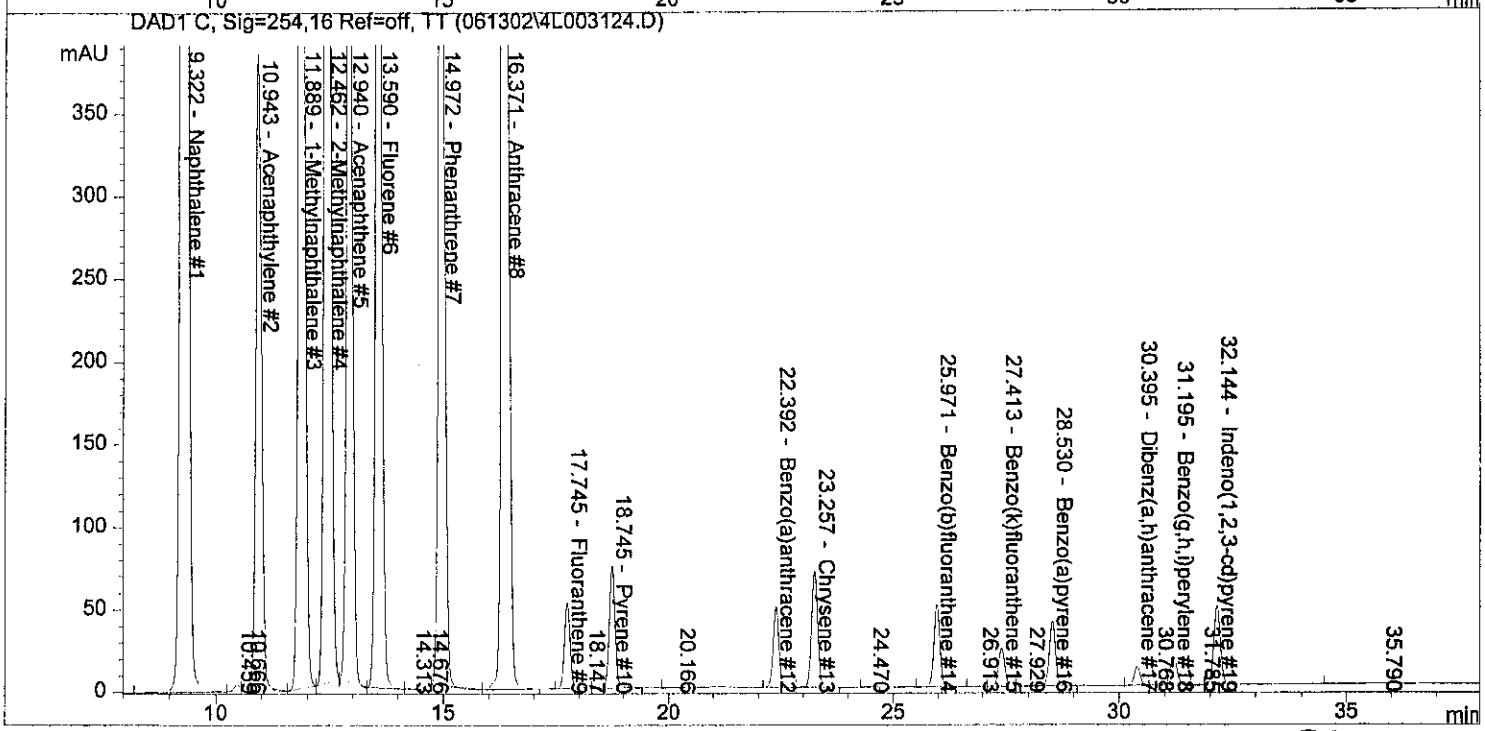
Injection Date : 6/13/2002 11:01:38 PM
Sample Name : WG119840-02 STD6
Acq. Operator : RDC

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:02:46 AM by RDC
(modified after loading)

Calibrated 01/14/2002





338

External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:02:42 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.342	BB	3817.44727	2.61760e-2	99.92567		Naphthalene #1
11.908	BB	4362.68555	2.28929e-2	99.87447		1-Methylnaphthalene #3
12.482	BB	5651.09082	1.76307e-2	99.63297		2-Methylnaphthalene #4
12.960	BB	7092.07813	1.40500e-2	99.64367		Acenaphthene #5
13.611	BB	1.50207e4	6.62709e-3	99.54381		Fluorene #6
14.992	BBA	583.99371	1.71696e-1	100.26935		Phenanthrene #7
16.391	PB	330.63736	3.03302e-1	100.28311		Anthracene #8
17.765	BB	394.78314	2.51141e-2	9.91464		Fluoranthene #9
18.766	BBA	245.93037	4.06594e-2	9.99938		Pyrene #10
21.084		-	-	-		p-Terphenyl d14 #11*
22.412	BB	1230.57483	8.13570e-3	10.01159		Benzo(a)anthracene #12
23.276	BB	251.15788	3.98605e-2	10.01128		Chrysene #13
25.992	BB	592.02631	1.69028e-2	10.00692		Benzo(b)fluoranthene #14
27.434	BB	1779.80371	2.81213e-3	5.00504		Benzo(k)fluoranthene #15
28.551	BB	2128.17065	4.72512e-3	10.05586		Benzo(a)pyrene #16
30.415	BB	250.75458	4.00249e-2	10.03642		Dibenz(a,h)anthracene #17
31.216	BB	354.98242	2.81184e-2	9.98154		Benzo(g,h,i)perylene #18
32.167	BB	715.64252	1.39865e-2	10.00935		Indeno(1,2,3-cd)pyrene #1

Totals : 794.20506

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.322	BB	1.19505e4	8.30314e-3	99.22712		Naphthalene #1
10.943	BB	3321.14795	3.02035e-2	100.31018		Acenaphthylene #2
11.889	BB	7652.24854	1.30763e-2	100.06281		1-Methylnaphthalene #3
12.462	BB	8770.67480	1.13600e-2	99.63456		2-Methylnaphthalene #4
12.940	BB	4859.52686	2.05944e-2	100.07911		Acenaphthene #5
13.590	BB	5664.78320	1.77273e-2	100.42143		Fluorene #6
14.972	BB	5720.03760	1.75290e-2	100.26666		Phenanthrene #7
16.371	BBA	9770.11133	1.02038e-2	99.69273		Anthracene #8
17.745	PB	458.29434	2.19487e-2	10.05898		Fluoranthene #9
18.745	BBA	696.78912	1.44782e-2	10.08825		Pyrene #10
21.065		-	-	-		p-Terphenyl d14 #11*
22.392	BB	449.91843	2.23535e-2	10.05727		Benzo(a)anthracene #12
23.257	BBA	658.83282	1.52615e-2	10.05477		Chrysene #13
25.971	BBA	480.16330	2.09236e-2	10.04676		Benzo(b)fluoranthene #14
27.413	BB	220.91960	2.27584e-2	5.02779		Benzo(k)fluoranthene #15
28.530	BB	385.66537	2.62367e-2	10.11860		Benzo(a)pyrene #16
30.395	PB	106.05376	9.44938e-2	10.02142		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.195	BB	187.07765	5.37764e-2	10.06036		Benzo(g,h,i)perylene #18
32.144	BB	485.43732	2.07205e-2	10.05852		Indeno(1,2,3-cd)pyrene #1

Totals : 895.28732

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

1,1 SOS59-38/58-26 LEVEL 5 STD @ 50/50/2.5 ppm

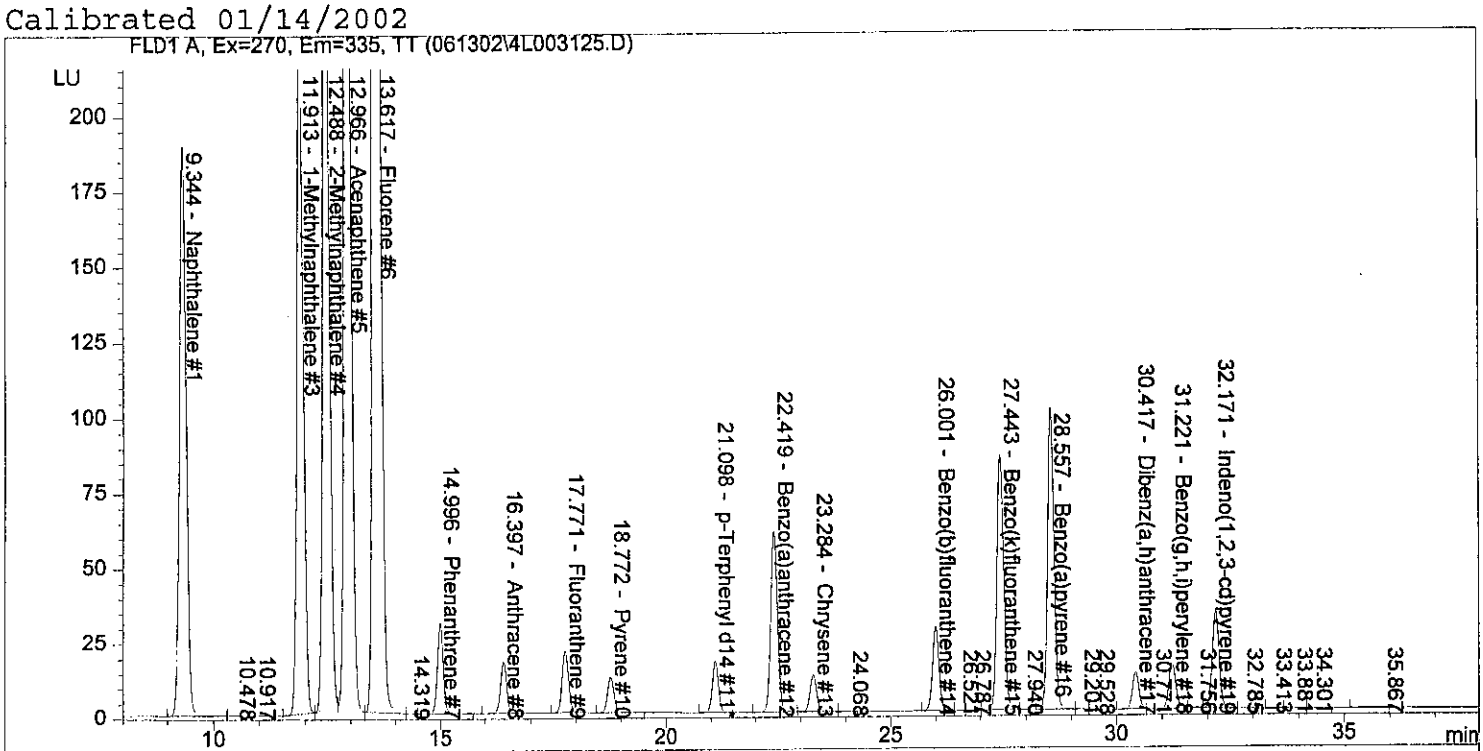
==========

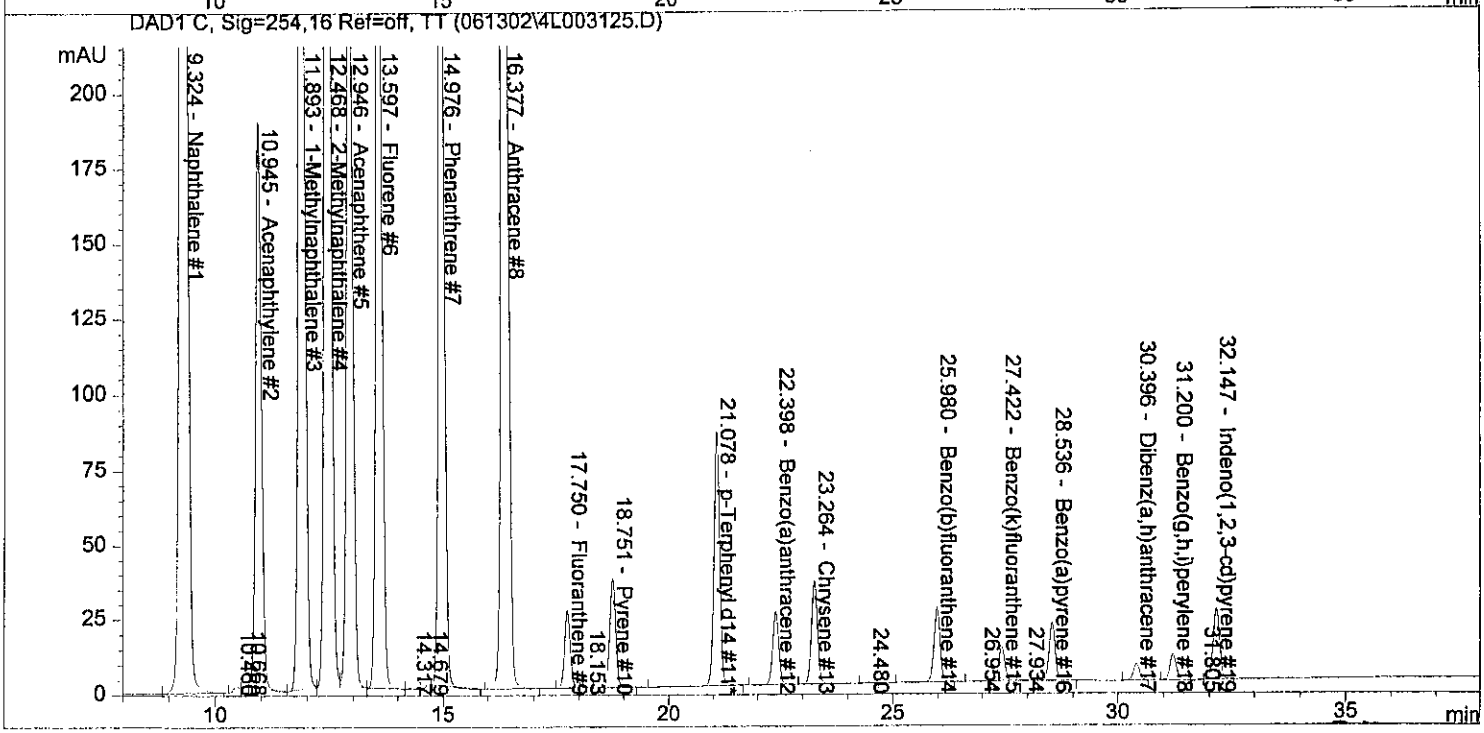
Injection Date : 6/13/2002 11:58:14 PM
Sample Name : WG119840-03 STD5
Acq. Operator : RDC

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:03:45 AM by RDC
(modified after loading)

Calibrated 01/14/2002





341

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:03:41 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.344	BB	1885.17432	2.62620e-2	49.50850		Naphthalene #1
11.913	BB	2162.71216	2.29604e-2	49.65673		1-Methylnaphthalene #3
12.488	BB	2815.32397	1.76997e-2	49.83046		2-Methylnaphthalene #4
12.966	BB	3551.90137	1.40873e-2	50.03685		Acenaphthene #5
13.617	BB	7586.48193	6.63786e-3	50.35801		Fluorene #6
14.996	BBA	286.42151	1.72041e-1	49.27616		Phenanthrene #7
16.397	PB	165.24231	3.02535e-1	49.99152		Anthracene #8
17.771	PB	194.82120	2.53682e-2	4.94227		Fluoranthene #9
18.772	BBA	120.60387	4.14587e-2	5.00008		Pyrene #10
21.098	BB	168.95605	2.93088e-1	49.51891		p-Terphenyl d14 #11*
22.419	BB	603.67468	8.16153e-3	4.92691		Benzo(a)anthracene #12
23.284	BB	123.50459	3.99703e-2	4.93651		Chrysene #13
26.001	BB	291.03116	1.69547e-2	4.93435		Benzo(b)fluoranthene #14
27.443	BB	879.42432	2.81705e-3	2.47738		Benzo(k)fluoranthene #15
28.557	BB	1041.60461	4.72555e-3	4.92215		Benzo(a)pyrene #16
30.417	BB	122.52839	4.01053e-2	4.91403		Dibenz(a,h)anthracene #17
31.221	BB	173.07938	2.83215e-2	4.90187		Benzo(g,h,i)perylene #18
32.171	BB	351.97876	1.40258e-2	4.93679		Indeno(1,2,3-cd)pyrene #1
Totals :				445.06949		

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.324	BBA	6195.70996	8.29589e-3	51.39892		Naphthalene #1
10.945	BB	1639.64368	3.02076e-2	49.52967		Acenaphthylene #2
11.893	BB	3823.69092	1.30729e-2	49.98657		1-Methylnaphthalene #3
12.468	BB	4440.55420	1.13665e-2	50.47341		2-Methylnaphthalene #4
12.946	BB	2413.63843	2.06106e-2	49.74644		Acenaphthene #5
13.597	BB	2806.76538	1.77008e-2	49.68200		Fluorene #6
14.976	BBA	2834.24902	1.75238e-2	49.66678		Phenanthrene #7
16.377	BBA	4994.17480	1.01861e-2	50.87104		Anthracene #8
17.750	PB	225.76083	2.19135e-2	4.94721		Fluoranthene #9
18.751	BBA	342.14008	1.44277e-2	4.93629		Pyrene #10
21.078	PBA	765.97974	6.51146e-2	49.87647		p-Terphenyl d14 #11*
22.398	BBA	220.76303	2.23358e-2	4.93093		Benzo(a)anthracene #12
23.264	BBA	324.23495	1.52455e-2	4.94313		Chrysene #13
25.980	PBA	236.61021	2.09101e-2	4.94754		Benzo(b)fluoranthene #14
27.422	BB	108.54563	2.27278e-2	2.46701		Benzo(k)fluoranthene #15
28.536	BBA	188.39293	2.61148e-2	4.91985		Benzo(a)pyrene #16
30.396	PB	53.20811	9.42831e-2	5.01662		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.200	BB	92.63392	5.36167e-2	4.96672		Benzo(g,h,i)perylene #18
32.147	BBA	237.44170	2.07228e-2	4.92046		Indeno(1,2,3-cd)pyrene #1

Totals : 498.22705

Results obtained with enhanced integrator!

*** End of Report ***

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

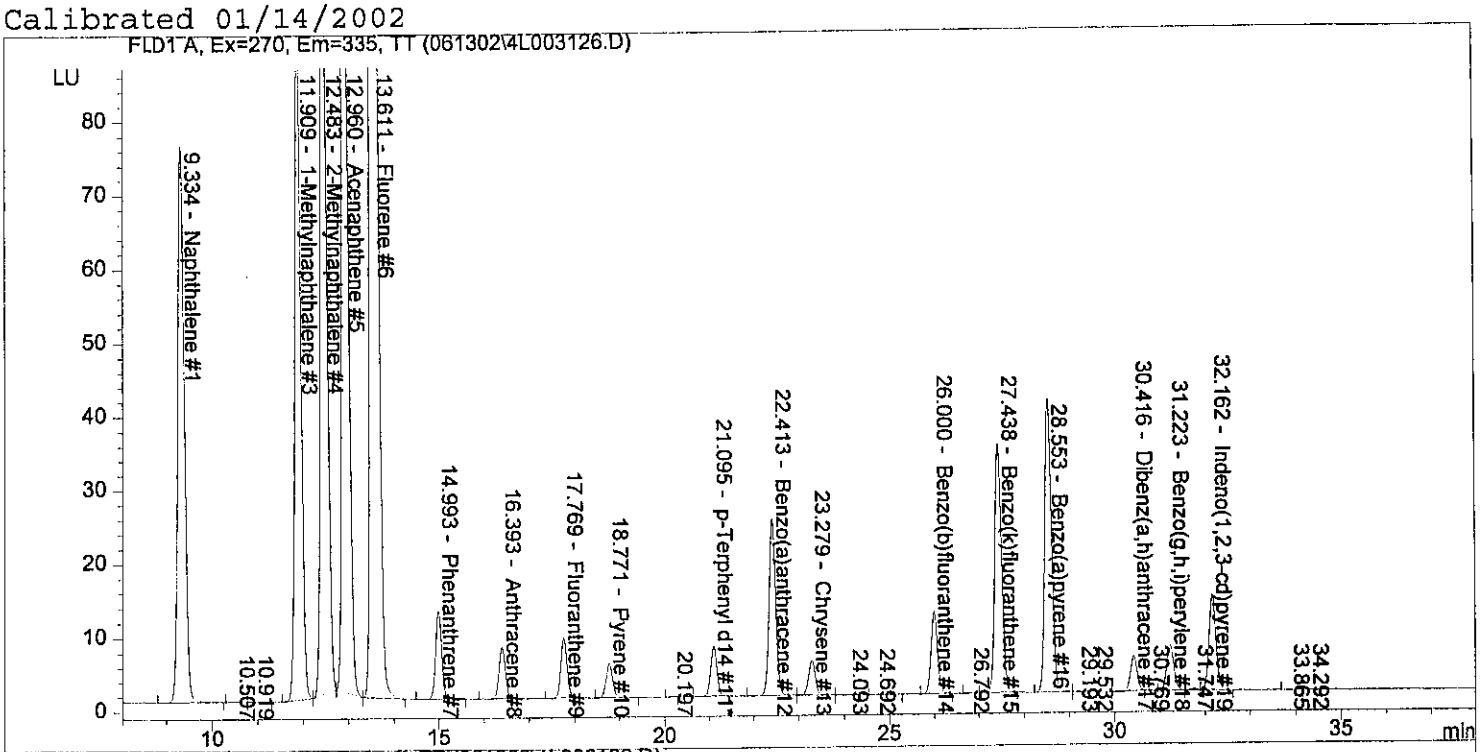
==========

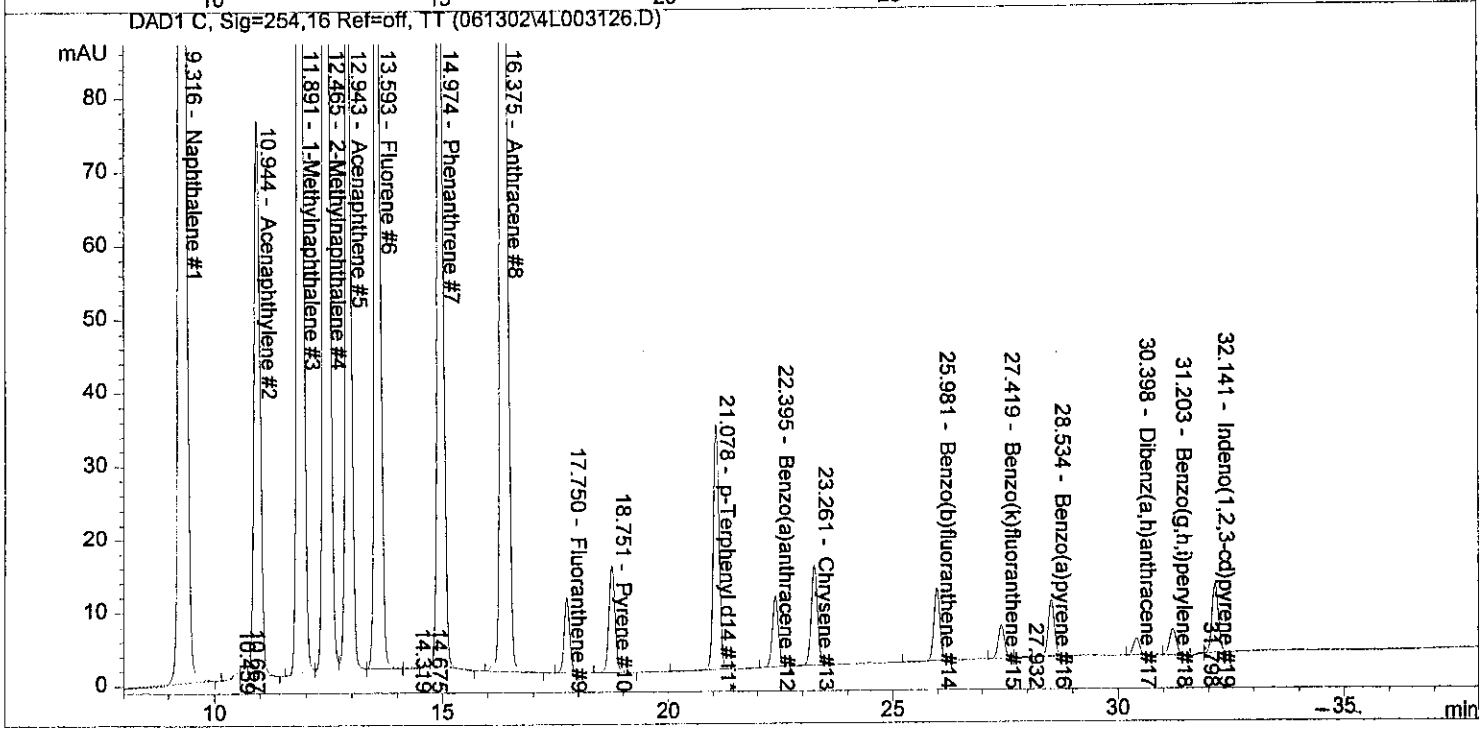
Injection Date : 6/14/2002 12:54:55 AM
Sample Name : WG119840-04 STD4
Acq. Operator : RDC

Seq. Line : 5
Vial : 5
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:04:24 AM by RDC
(modified after loading)

Calibrated 01/14/2002





344

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:04:18 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.334	BBA	754.54517	2.62729e-2	19.82412		Naphthalene #1
11.909	BB	865.41754	2.29694e-2	19.87815		1-Methylnaphthalene #3
12.483	BB	1125.70947	1.77112e-2	19.93764		2-Methylnaphthalene #4
12.960	BB	1426.86951	1.40935e-2	20.10956		Acenaphthene #5
13.611	BB	3071.66968	6.63912e-3	20.39317		Fluorene #6
14.993	BBA	113.91219	1.72066e-1	19.60039		Phenanthrene #7
16.393	PBA	66.59662	3.02478e-1	20.14398		Anthracene #8
17.769	BB	77.44264	2.54072e-2	1.96760		Fluoranthene #9
18.771	BBA	48.14644	4.15143e-2	1.99876		Pyrene #10
21.095	BB	66.93617	2.93177e-1	19.62415		p-Terphenyl d14 #11*
22.413	BB	240.75162	8.16425e-3	1.96556		Benzo(a)anthracene #12
23.279	BB	49.60668	3.99715e-2	1.98285		Chrysene #13
26.000	BB	116.12308	1.69606e-2	1.96952		Benzo(b)fluoranthene #14
27.438	BB	351.66119	2.81749e-3	9.90801e-1		Benzo(k)fluoranthene #15
28.553	BB	412.69138	4.72525e-3	1.95007		Benzo(a)pyrene #16
30.416	BB	48.37633	4.01211e-2	1.94091		Dibenz(a,h)anthracene #17
31.223	BB	68.38602	2.83478e-2	1.93860		Benzo(g,h,i)perylene #18
32.162	BB	140.00281	1.40312e-2	1.96440		Indeno(1,2,3-cd)pyrene #1

Totals : 178.18024

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.316	BBA	2498.67944	8.29533e-3	20.72737		Naphthalene #1
10.944	BBA	658.50293	3.02016e-2	19.88782		Acenaphthylene #2
11.891	PB	1536.99390	1.30705e-2	20.08927		1-Methylnaphthalene #3
12.465	BB	1791.84399	1.13662e-2	20.36648		2-Methylnaphthalene #4
12.943	BB	968.64014	2.06106e-2	19.96428		Acenaphthene #5
13.593	BB	1125.01990	1.76942e-2	19.90638		Fluorene #6
14.974	BBA	1137.39648	1.75204e-2	19.92767		Phenanthrene #7
16.375	BBA	2016.31750	1.01817e-2	20.52949		Anthracene #8
17.750	PB	90.19173	2.19034e-2	1.97551		Fluoranthene #9
18.751	BBA	137.28792	1.44175e-2	1.97935		Pyrene #10
21.078	PBA	302.29453	6.51086e-2	19.68196		p-Terphenyl d14 #11*
22.395	PBA	88.38959	2.23283e-2	1.97359		Benzo(a)anthracene #12
23.261	BBA	129.65228	1.52393e-2	1.97581		Chrysene #13
25.981	PBA	94.69703	2.09016e-2	1.97932		Benzo(b)fluoranthene #14
27.419	BB	43.30220	2.27256e-2	9.84067e-1		Benzo(k)fluoranthene #15
28.534	BB	74.00938	2.60983e-2	1.93152		Benzo(a)pyrene #16
30.398	PBA	20.79541	9.43053e-2	1.96112		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.203	BB	37.91122	5.35429e-2	2.02988		Benzo(g,h,i)perylene #18
32.141	BBA	93.60317	2.07224e-2	1.93968		Indeno(1,2,3-cd)pyrene #1

Totals : 199.81055

Results obtained with enhanced integrator!

*** End of Report ***

346

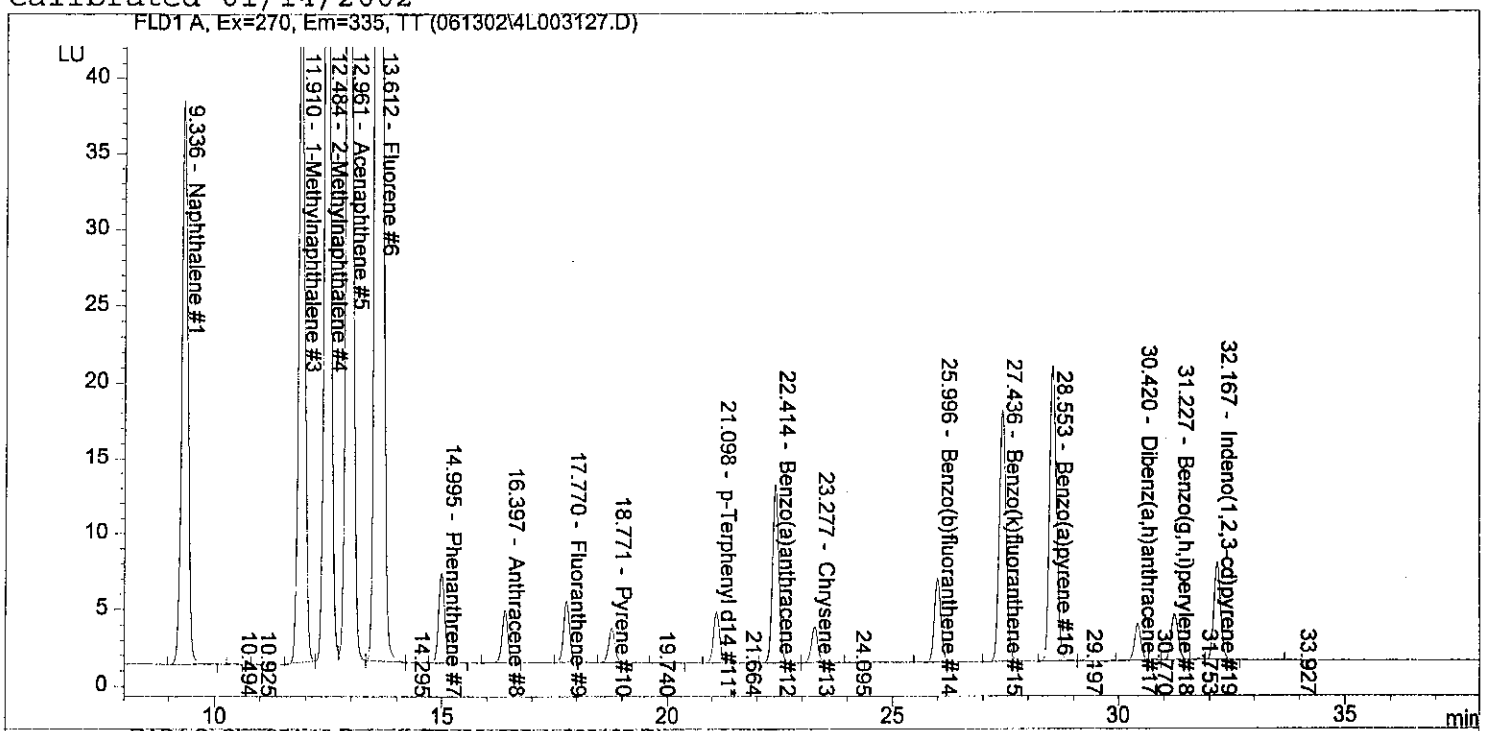
1,1 SOS59-38/58-26 LEVEL 3 STD @ 10/1/.5 ppm

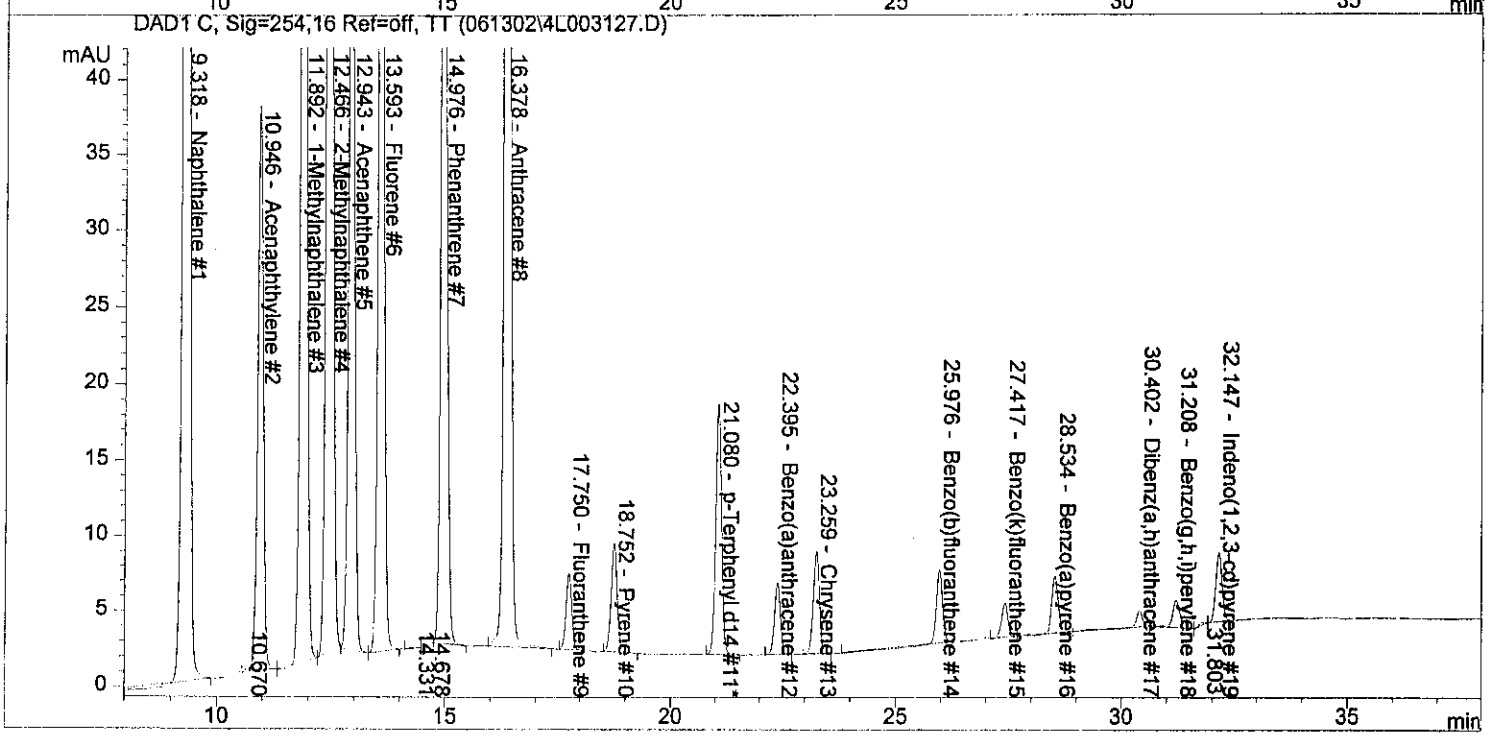
==========

Injection Date	: 6/14/2002 1:51:31 AM	Seq. Line :	6
Sample Name	: WG119840-05 STD3	Vial :	6
Acq. Operator	: RDC	Inj :	1
		Inj Volume :	8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:05:00 AM by RDC
(modified after loading)

Calibrated 01/14/2002





==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:04:56 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.336	BBA	371.85556	2.62768e-2	9.77118		Naphthalene #1
11.910	BB	427.16837	2.29725e-2	9.81312		1-Methylnaphthalene #3
12.484	BB	555.40234	1.77148e-2	9.83887		2-Methylnaphthalene #4
12.961	BB	704.82605	1.40956e-2	9.93493		Acenaphthene #5
13.612	BB	1519.64282	6.63998e-3	10.09040		Fluorene #6
14.995	BBA	56.03428	1.72084e-1	9.64260		Phenanthrene #7
16.397	BBA	32.93192	3.02467e-1	9.96081		Anthracene #8
17.770	PB	38.54884	2.54172e-2	9.79803e-1		Fluoranthene #9
18.771	BBA	23.43897	4.15409e-2	9.73675e-1		Pyrene #10
21.098	BB	33.36931	2.93182e-1	9.78328		p-Terphenyl d14 #11*
22.414	BB	119.10960	8.16492e-3	9.72520e-1		Benzo(a)anthracene #12
23.277	BBA	24.15862	3.99772e-2	9.65794e-1		Chrysene #13
25.996	BBA	57.64073	1.69625e-2	9.77732e-1		Benzo(b)fluoranthene #14
27.436	BB	173.46057	2.81775e-3	4.88769e-1		Benzo(k)fluoranthene #15
28.553	BB	203.09286	4.72524e-3	9.59662e-1		Benzo(a)pyrene #16
30.420	BB	23.94359	4.01220e-2	9.60663e-1		Dibenz(a,h)anthracene #17
31.227	BB	33.76281	2.83539e-2	9.57306e-1		Benzo(g,h,i)perylene #18
32.167	BB	69.03428	1.40332e-2	9.68772e-1		Indeno(1,2,3-cd)pyrene #1

Totals : 88.03988

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.318	BBA	1219.35925	8.29679e-3	10.11677		Naphthalene #1
10.946	BB	325.59451	3.02017e-2	9.83350		Acenaphthylene #2
11.892	BB	757.97943	1.30709e-2	9.90750		1-Methylnaphthalene #3
12.466	BB	887.82635	1.13668e-2	10.09178		2-Methylnaphthalene #4
12.943	BB	479.64664	2.06118e-2	9.88638		Acenaphthene #5
13.593	BBA	555.59216	1.76936e-2	9.83044		Fluorene #6
14.976	BBA	563.78528	1.75204e-2	9.87776		Phenanthrene #7
16.378	BBA	1007.09772	1.01805e-2	10.25275		Anthracene #8
17.750	BBA	44.35479	2.19032e-2	9.71513e-1		Fluoranthene #9
18.752	BBA	67.05128	1.44166e-2	9.66649e-1		Pyrene #10
21.080	BBA	150.04201	6.51073e-2	9.76883		p-Terphenyl d14 #11*
22.395	BBA	43.38402	2.23286e-2	9.68704e-1		Benzo(a)anthracene #12
23.259	BBA	63.84754	1.52388e-2	9.72957e-1		Chrysene #13
25.976	PBA	43.42394	2.09127e-2	9.08112e-1		Benzo(b)fluoranthene #14
27.417	BB	21.38502	2.27323e-2	4.86132e-1		Benzo(k)fluoranthene #15
28.534	BB	36.80410	2.60959e-2	9.60435e-1		Benzo(a)pyrene #16
30.402	BB	10.34522	9.43221e-2	9.75783e-1		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.208	BB	21.12121	5.34825e-2	1.12962		Benzo(g,h,i)perylene #18
32.147	BB	45.65535	2.07246e-2	9.46189e-1		Indeno(1,2,3-cd)pyrene #1

Totals : 98.85178

Results obtained with enhanced integrator!

*** End of Report ***

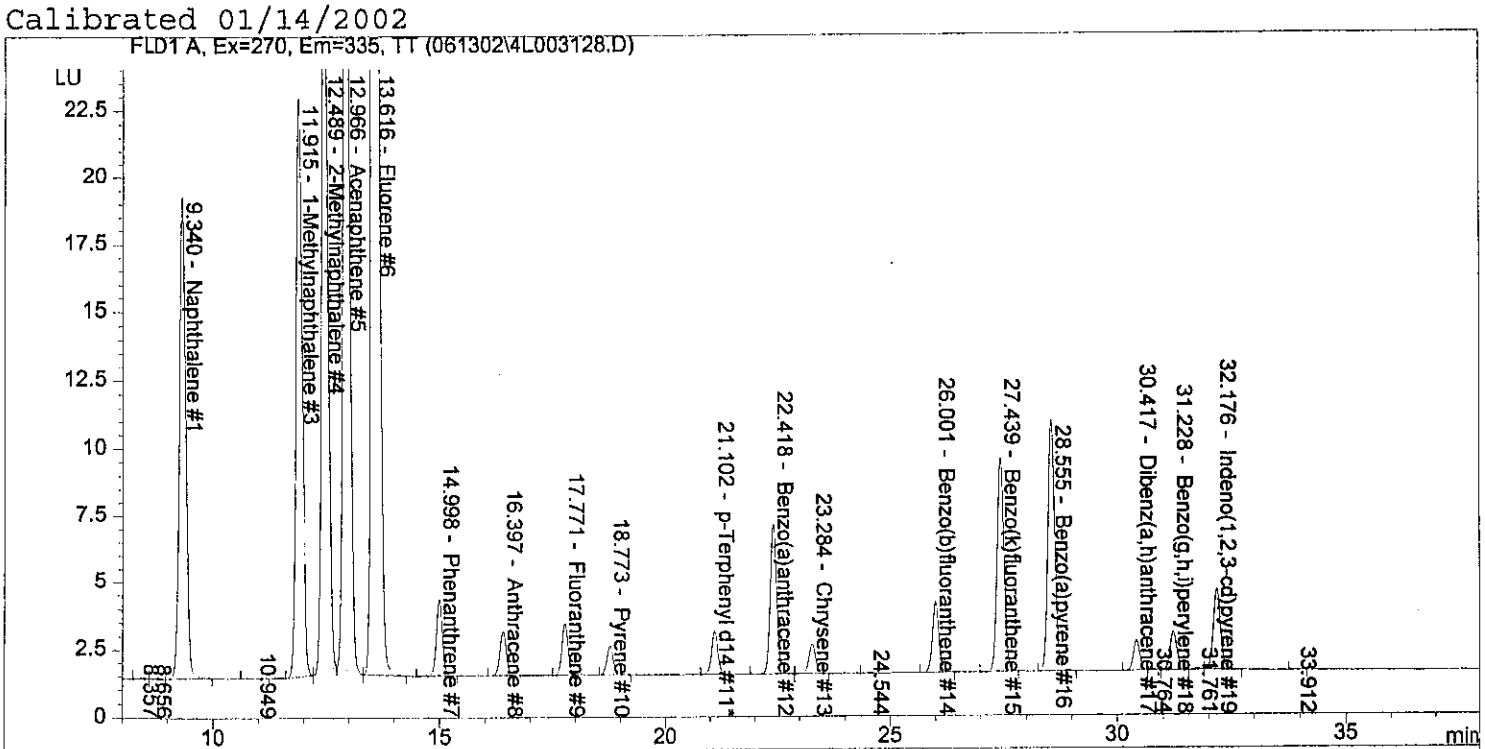
1,1 SOS59-38/58-26 LEVEL 2 STD @ 5/.5 /.25 ppm

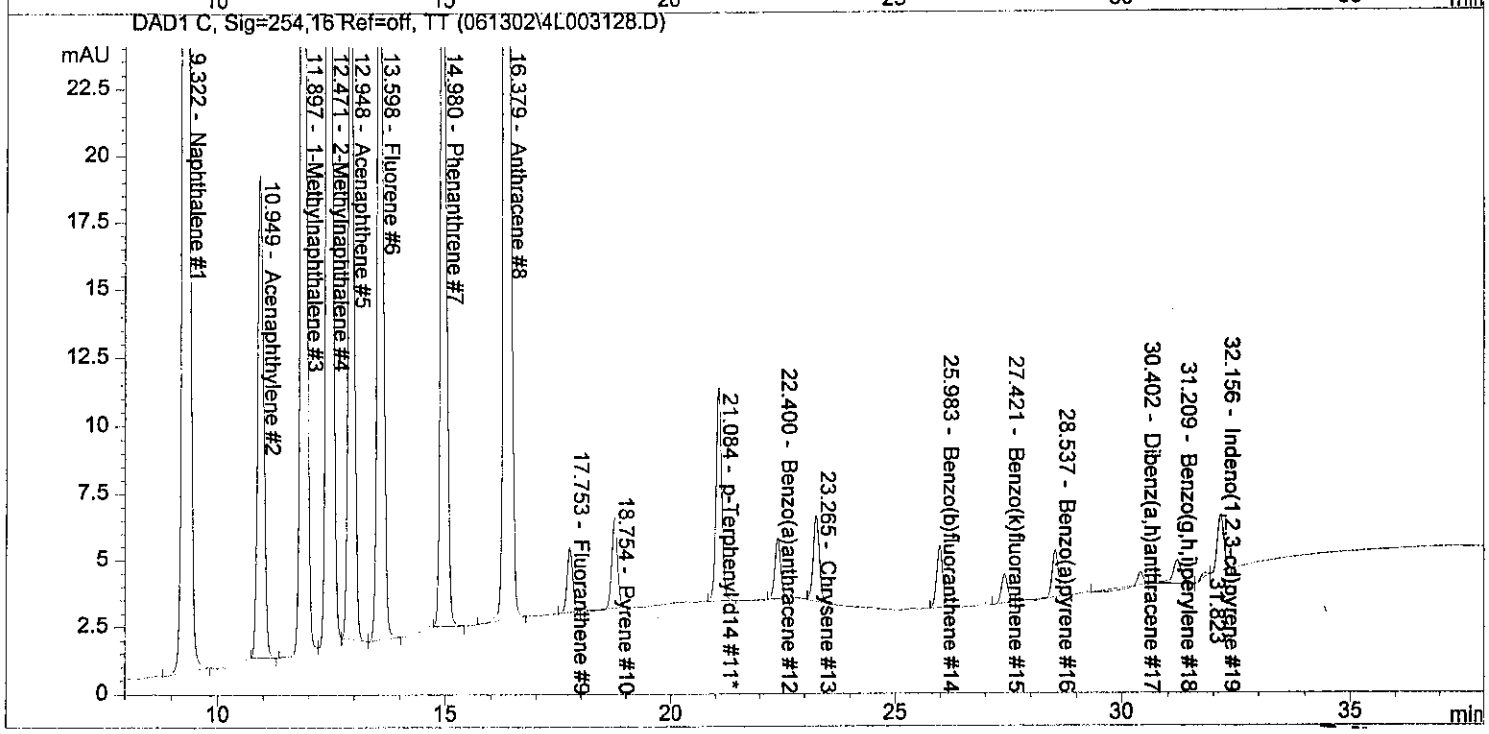
==========

Injection Date	: 6/14/2002 2:48:12 AM	Seq. Line :	7
Sample Name	: WG119840-06 STD2	Vial :	7
Acq. Operator	: RDC	Inj :	1
		Inj Volume :	8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:05:37 AM by RDC
(modified after loading)

Calibrated 01/14/2002





350

External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:05:33 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.340	BBA	178.95563	2.62757e-2	4.70218		Naphthalene #1
11.915	BB	205.97406	2.29713e-2	4.73149		1-Methylnaphthalene #3
12.489	BB	267.76404	1.77143e-2	4.74326		2-Methylnaphthalene #4
12.966	BB	339.83661	1.40950e-2	4.79001		Acenaphthene #5
13.616	BB	732.50269	6.63969e-3	4.86359		Fluorene #6
14.998	BBA	27.09999	1.72074e-1	4.66322		Phenanthrene #7
16.397	BBA	15.91612	3.02439e-1	4.81365		Anthracene #8
17.771	BB	18.56896	2.54164e-2	4.71956e-1		Fluoranthene #9
18.773	BBA	11.37372	4.15286e-2	4.72334e-1		Pyrene #10
21.102	BB	15.96525	2.93173e-1	4.68058		p-Terphenyl d14 #11*
22.418	BB	57.25381	8.16445e-3	4.67446e-1		Benzo(a)anthracene #12
23.284	BB	11.91314	3.99732e-2	4.76206e-1		Chrysene #13
26.001	BBA	27.48360	1.69618e-2	4.66172e-1		Benzo(b)fluoranthene #14
27.439	BBA	83.42035	2.81761e-3	2.35046e-1		Benzo(k)fluoranthene #15
28.555	PB	97.54757	4.72489e-3	4.60902e-1		Benzo(a)pyrene #16
30.417	PB	11.57100	4.01183e-2	4.64209e-1		Dibenz(a,h)anthracene #17
31.228	BB	16.23036	2.83529e-2	4.60178e-1		Benzo(g,h,i)perylene #18
32.176	BB	32.92362	1.40329e-2	4.62012e-1		Indeno(1,2,3-cd)pyrene #1

Totals : 42.42445

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.322	BBA	598.90387	8.29620e-3	4.96863		Naphthalene #1
10.949	BBA	157.19412	3.01994e-2	4.74717		Acenaphthylene #2
11.897	PB	365.23682	1.30701e-2	4.77368		1-Methylnaphthalene #3
12.471	BB	427.72684	1.13662e-2	4.86161		2-Methylnaphthalene #4
12.948	BB	230.37761	2.06107e-2	4.74825		Acenaphthene #5
13.598	BBA	267.85175	1.76921e-2	4.73885		Fluorene #6
14.980	BBA	271.73749	1.75192e-2	4.76062		Phenanthrene #7
16.379	PBA	479.37994	1.01797e-2	4.87993		Anthracene #8
17.753	PBA	21.47706	2.19011e-2	4.70372e-1		Fluoranthene #9
18.754	BBA	30.90943	1.44152e-2	4.45567e-1		Pyrene #10
21.084	BBA	72.29396	6.51030e-2	4.70655		p-Terphenyl d14 #11*
22.400	BBA	21.50113	2.23264e-2	4.80043e-1		Benzo(a)anthracene #12
23.265	BBA	30.82063	1.52375e-2	4.69628e-1		Chrysene #13
25.983	BBA	22.19203	2.09116e-2	4.64071e-1		Benzo(b)fluoranthene #14
27.421	BB	10.12679	2.27316e-2	2.30198e-1		Benzo(k)fluoranthene #15
28.537	BB	16.55305	2.60937e-2	4.31930e-1		Benzo(a)pyrene #16
30.402	BB	1.24579	9.44447e-2	1.17658e-1		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.209	BB	12.63941	5.34416e-2	6.75471e-1		Benzo(g,h,i)perylene #18
32.156	BB	20.74642	2.07249e-2	4.29967e-1		Indeno(1,2,3-cd)pyrene #1

Totals : 47.40020

Results obtained with enhanced integrator!

*** End of Report ***

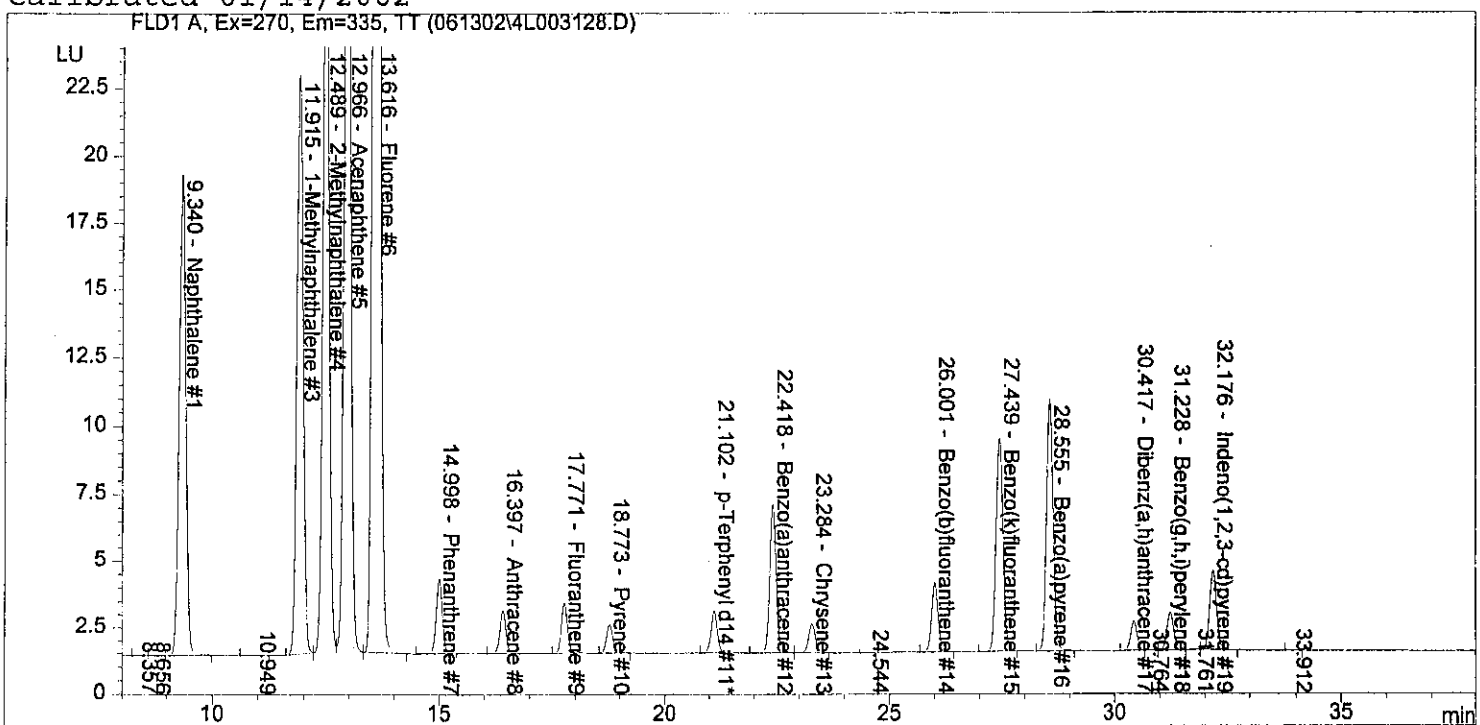
1,1 SOS59-38/58-26 LEVEL 2 STD @ 5/.5 /.25 ppm

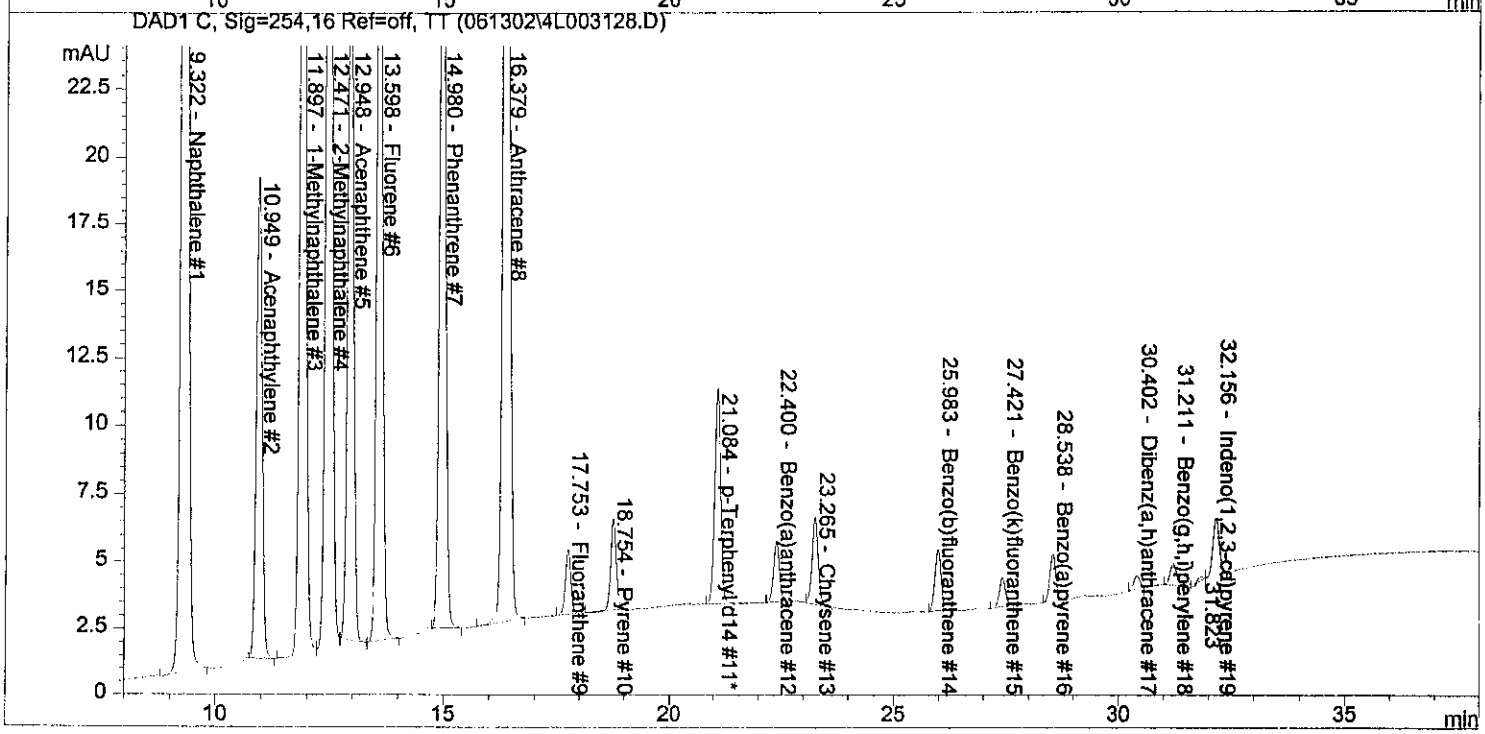
==========

Injection Date	: 6/14/2002 2:48:12 AM	Seq. Line :	7
Sample Name	: WG119840-06 STD2	Vial :	7
Acq. Operator	: RDC	Inj :	1
		Inj Volume :	8 µl

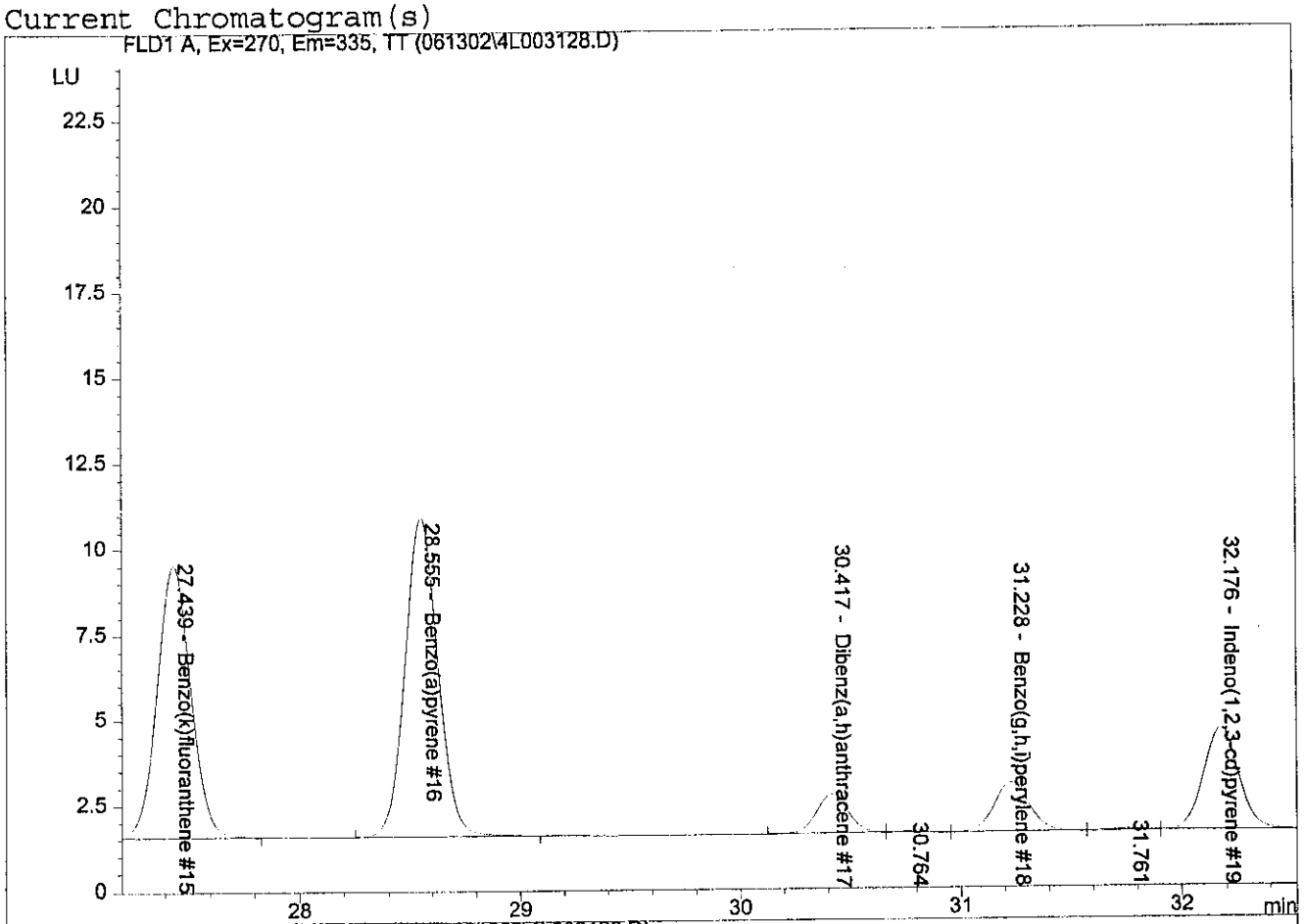
Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:09:18 AM by RDC
(modified after loading)

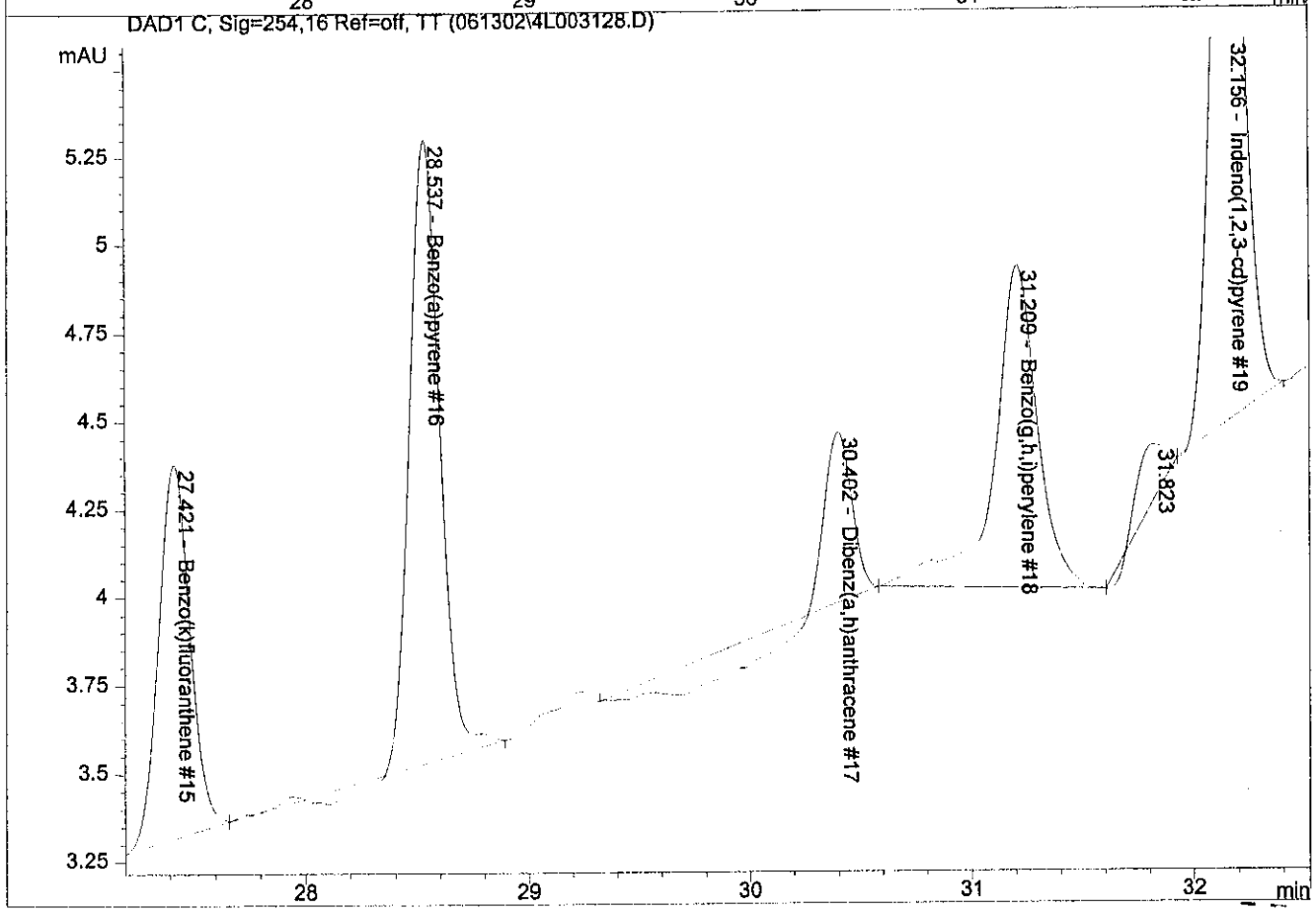
Calibrated 01/14/2002



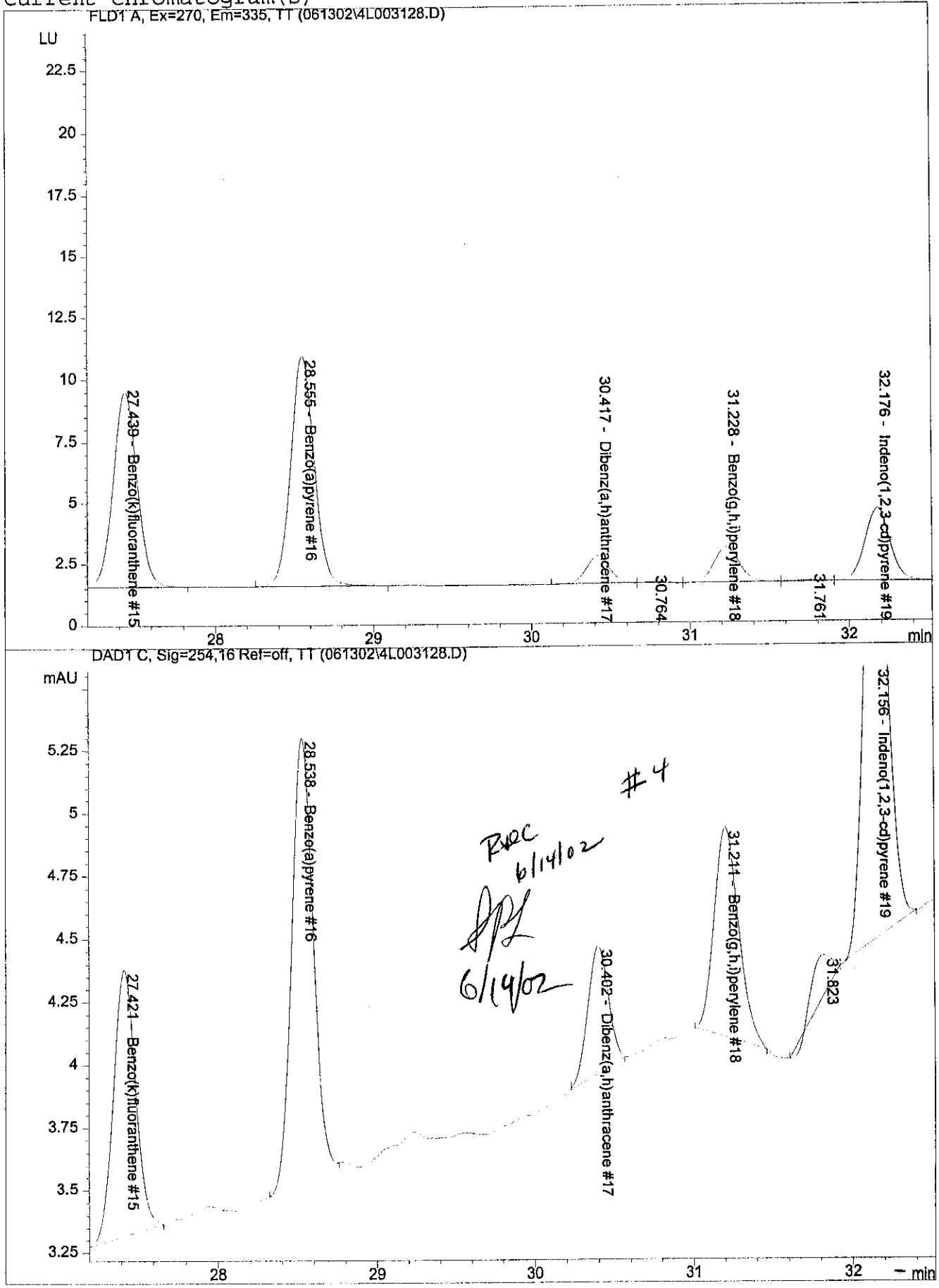


Current Chromatogram(s)





Current Chromatogram(s)



#4

RWC 6/14/02

6/14/02

355

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:09:13 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.340	BBA	178.95563	2.62757e-2	4.70218		Naphthalene #1
11.915	BB	205.97406	2.29713e-2	4.73149		1-Methylnaphthalene #3
12.489	BB	267.76404	1.77143e-2	4.74326		2-Methylnaphthalene #4
12.966	BB	339.83661	1.40950e-2	4.79001		Acenaphthene #5
13.616	BB	732.50269	6.63969e-3	4.86359		Fluorene #6
14.998	BBA	27.09999	1.72074e-1	4.66322		Phenanthrene #7
16.397	BBA	15.91612	3.02439e-1	4.81365		Anthracene #8
17.771	BB	18.56896	2.54164e-2	4.71956e-1		Fluoranthene #9
18.773	BBA	11.37372	4.15286e-2	4.72334e-1		Pyrene #10
21.102	BB	15.96525	2.93173e-1	4.68058		p-Terphenyl d14 #11*
22.418	BB	57.25381	8.16445e-3	4.67446e-1		Benzo(a)anthracene #12
23.284	BB	11.91314	3.99732e-2	4.76206e-1		Chrysene #13
26.001	BBA	27.48360	1.69618e-2	4.66172e-1		Benzo(b)fluoranthene #14
27.439	BBA	83.42035	2.81761e-3	2.35046e-1		Benzo(k)fluoranthene #15
28.555	PB	97.54757	4.72489e-3	4.60902e-1		Benzo(a)pyrene #16
30.417	PB	11.57100	4.01183e-2	4.64209e-1		Dibenz(a,h)anthracene #17
31.228	BB	16.23036	2.83529e-2	4.60178e-1		Benzo(g,h,i)perylene #18
32.176	BB	32.92362	1.40329e-2	4.62012e-1		Indeno(1,2,3-cd)pyrene #1

Totals : 42.42445

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.322	BBA	598.90387	8.29620e-3	4.96863		Naphthalene #1
10.949	BBA	157.19412	3.01994e-2	4.74717		Acenaphthylene #2
11.897	PB	365.23682	1.30701e-2	4.77368		1-Methylnaphthalene #3
12.471	BB	427.72684	1.13662e-2	4.86161		2-Methylnaphthalene #4
12.948	BB	230.37761	2.06107e-2	4.74825		Acenaphthene #5
13.598	BBA	267.85175	1.76921e-2	4.73885		Fluorene #6
14.980	BBA	271.73749	1.75192e-2	4.76062		Phenanthrene #7
16.379	PBA	479.37994	1.01797e-2	4.87993		Anthracene #8
17.753	PBA	21.47706	2.19011e-2	4.70372e-1		Fluoranthene #9
18.754	BBA	30.90943	1.44152e-2	4.45567e-1		Pyrene #10
21.084	BBA	72.29396	6.51030e-2	4.70655		p-Terphenyl d14 #11*
22.400	BBA	21.50113	2.23264e-2	4.80043e-1		Benzo(a)anthracene #12
23.265	BBA	30.82063	1.52375e-2	4.69628e-1		Chrysene #13
25.983	BBA	22.19203	2.09116e-2	4.64071e-1		Benzo(b)fluoranthene #14
27.421	BB	10.12679	2.27316e-2	2.30198e-1		Benzo(k)fluoranthene #15
28.538	MM	16.33183	2.60943e-2	4.26167e-1		Benzo(a)pyrene #16
30.402	MM	4.54521	9.43319e-2	4.28758e-1		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.211	MM	8.93342	5.34823e-2	4.77779e-1		Benzo(g,h,i)perylene #18
32.156	BB	20.74642	2.07249e-2	4.29967e-1		Indeno(1,2,3-cd)pyrene #1

Totals : 47.50785

Results obtained with enhanced integrator!

*** End of Report ***

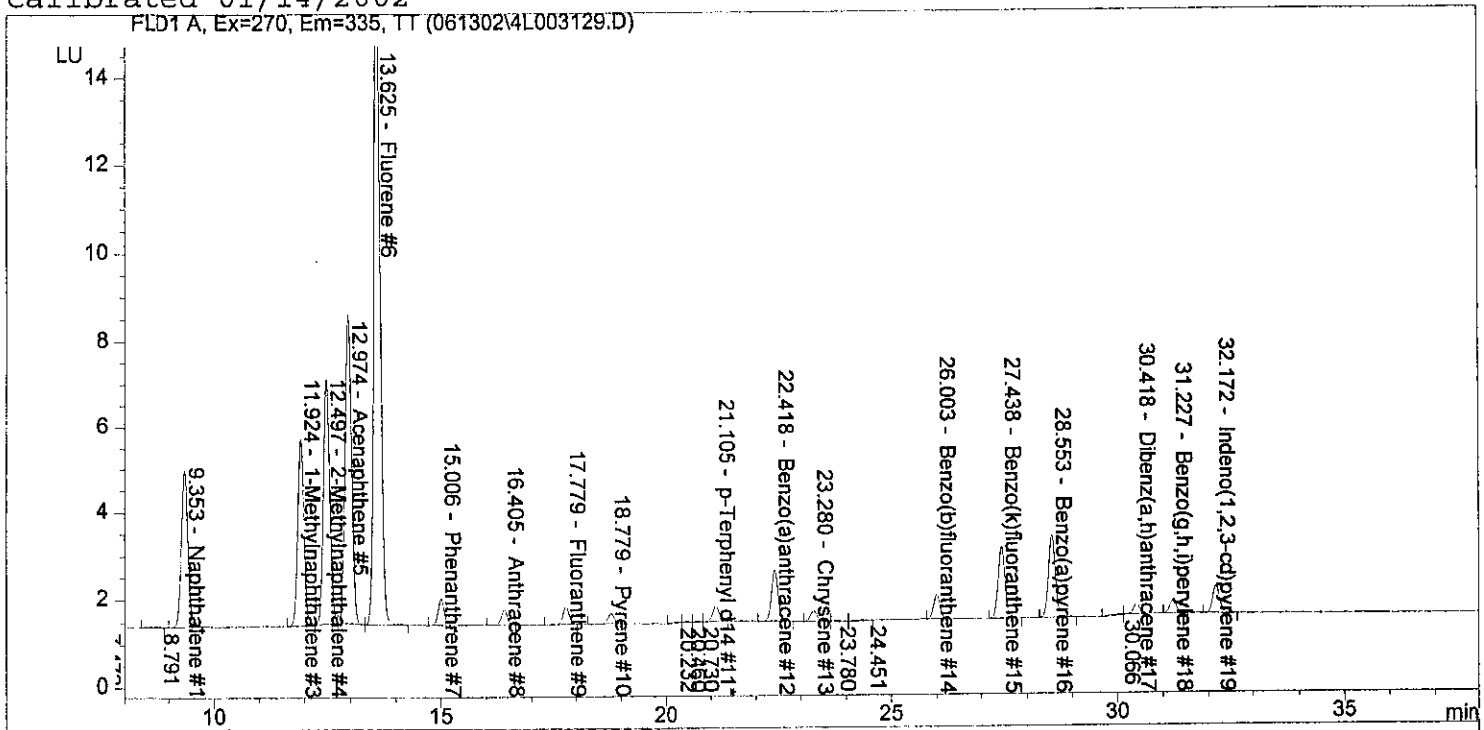
1,1 SOS59-38/58-26 LEVEL 1 STD @ 1/.1/.05 ppm

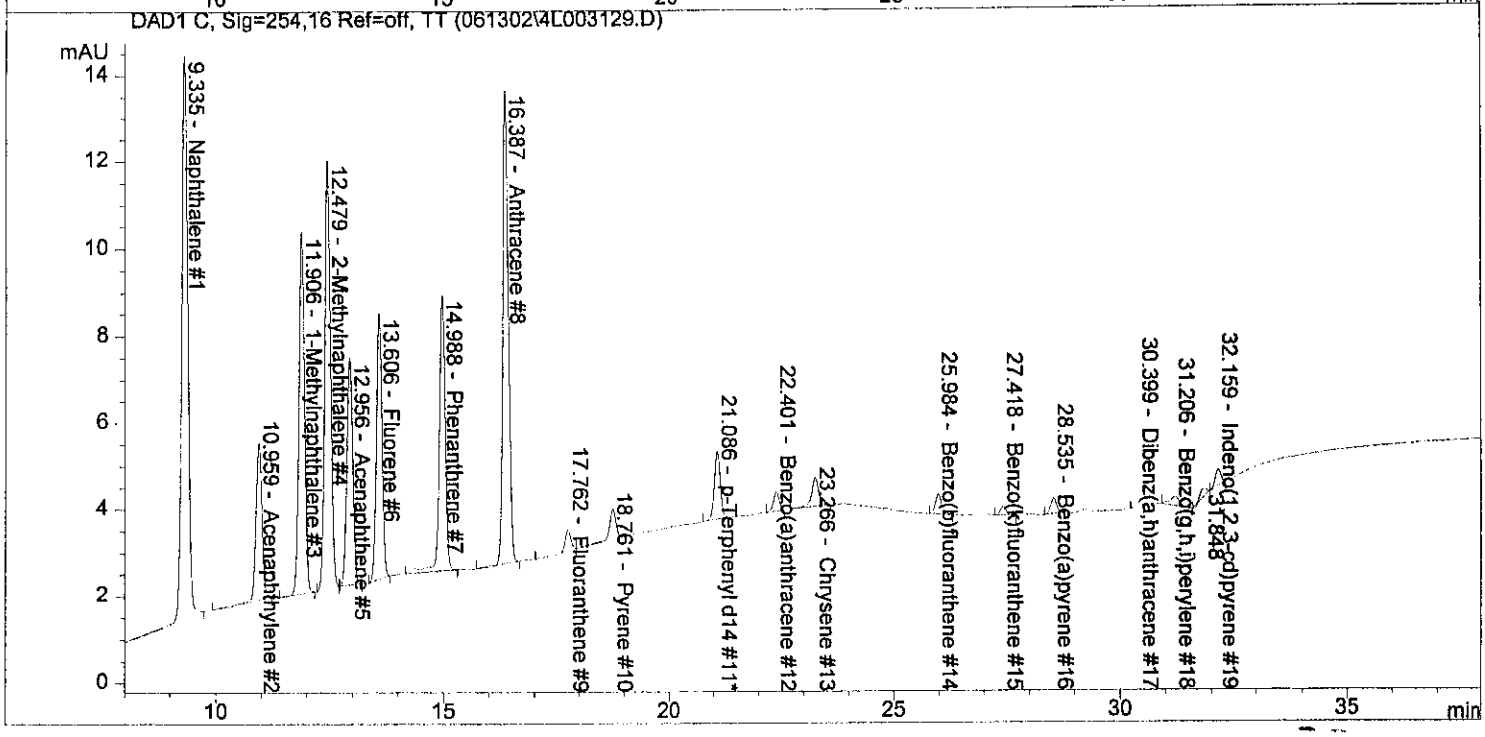
==========

Injection Date	: 6/14/2002 3:44:52 AM	Seq. Line :	8
Sample Name	: WG119840-07 STD1	Vial :	8
Acq. Operator	: RDC	Inj :	1
		Inj Volume :	8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:11:05 AM by RDC
(modified after loading)

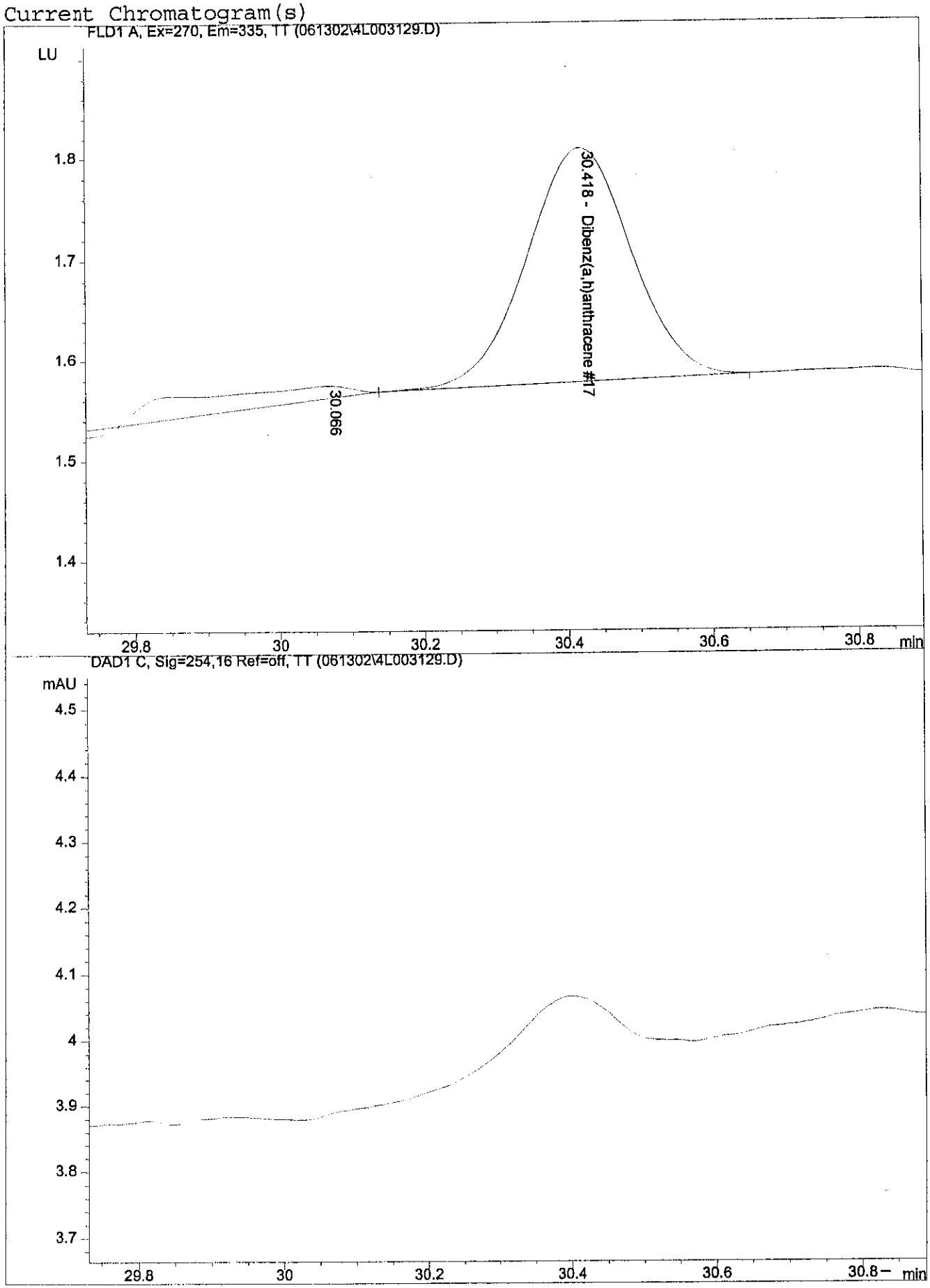
Calibrated 01/14/2002





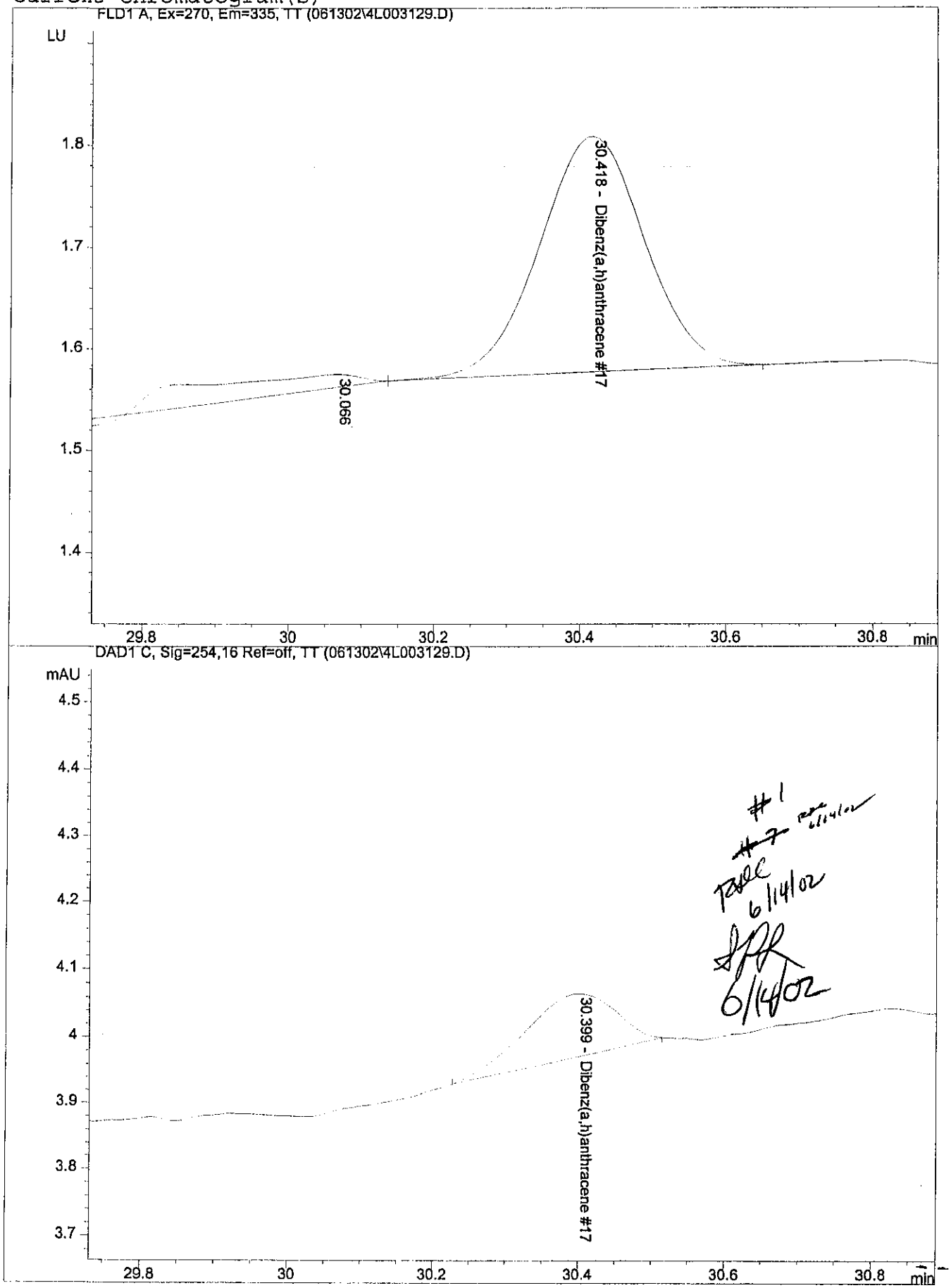
358

Current Chromatogram(s)



359

Current Chromatogram(s)



360

External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:10:59 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.353	BBA	35.70203	2.62757e-2	9.38096e-1		Naphthalene #1
11.924	BB	41.21246	2.29713e-2	9.46704e-1		1-Methylnaphthalene #3
12.497	BB	53.61522	1.77144e-2	9.49759e-1		2-Methylnaphthalene #4
12.974	BB	68.11809	1.40950e-2	9.60126e-1		Acenaphthene #5
13.625	BB	147.37762	6.63969e-3	9.78542e-1		Fluorene #6
15.006	BBA	5.49246	1.72074e-1	9.45109e-1		Phenanthrene #7
16.405	BBA	3.27440	3.02438e-1	9.90305e-1		Anthracene #8
17.779	PBA	3.76502	2.54164e-2	9.56934e-2		Fluoranthene #9
18.779	PBA	2.23349	4.15282e-2	9.27527e-2		Pyrene #10
21.105	BB	3.43824	2.93173e-1	1.00800		p-Terphenyl d14 #11*
22.418	BBA	11.68998	8.16445e-3	9.54423e-2		Benzo(a)anthracene #12
23.280	PBA	2.35546	3.99734e-2	9.41556e-2		Chrysene #13
26.003	BBA	5.60739	1.69618e-2	9.51115e-2		Benzo(b)fluoranthene #14
27.438	PBA	16.96901	2.81761e-3	4.78120e-2		Benzo(k)fluoranthene #15
28.553	BBA	19.68503	4.72488e-3	9.30094e-2		Benzo(a)pyrene #16
30.418	BBA	2.33135	4.01182e-2	9.35298e-2		Dibenz(a,h)anthracene #17
31.227	BBA	3.26803	2.83532e-2	9.26588e-2		Benzo(g,h,i)perylene #18
32.172	BB	6.85877	1.40328e-2	9.62480e-2		Indeno(1,2,3-cd)pyrene #1

Totals : 8.61305

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.335	PBA	118.44469	8.29618e-3	9.82638e-1		Naphthalene #1
10.959	BBA	32.34379	3.01988e-2	9.76744e-1		Acenaphthylene #2
11.906	PBA	73.52287	1.30701e-2	9.60949e-1		1-Methylnaphthalene #3
12.479	BB	85.92275	1.13661e-2	9.76611e-1		2-Methylnaphthalene #4
12.956	BBA	45.75132	2.06107e-2	9.42967e-1		Acenaphthene #5
13.606	PBA	52.41635	1.76920e-2	9.27351e-1		Fluorene #6
14.988	BBA	59.16147	1.75194e-2	1.03647		Phenanthrene #7
16.387	PBA	93.73675	1.01797e-2	9.54210e-1		Anthracene #8
17.762	PB	2.86666	2.19016e-2	6.27845e-2		Fluoranthene #9
18.761	BB	5.78315	1.44153e-2	8.33657e-2		Pyrene #10
21.086	BBA	14.27733	6.51028e-2	9.29495e-1		p-Terphenyl d14 #11*
22.401	BBA	4.17491	2.23265e-2	9.32110e-2		Benzo(a)anthracene #12
23.266	BBA	7.56785	1.52372e-2	1.15313e-1		Chrysene #13
25.984	BBA	4.71679	2.09116e-2	9.86358e-2		Benzo(b)fluoranthene #14
27.418	PBA	2.02281	2.27316e-2	4.59816e-2		Benzo(k)fluoranthene #15
28.535	PBA	3.59195	2.60939e-2	9.37281e-2		Benzo(a)pyrene #16
30.399	MM	8.17798e-1	9.43319e-2	7.71445e-2		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.206	BBA	3.35385	5.34797e-2	1.79363e-1		Benzo(g,h,i)perylene #18
32.159	BB	3.43245	2.07250e-2	7.11377e-2		Indeno(1,2,3-cd)pyrene #1

Totals : 9.60810

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\061302\4L003130.D Sample Name: WG119840-08 ALT
HPLC4 6/14/2002 9:20:03 AM RDC

1,1 SOS0060-26/60-27 LEVEL 4 ALT STD @ 20 ppm

==========

Injection Date : 6/14/2002 4:41:30 AM Seq. Line : 9

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.353	20.0	19.636	-1.8
1-Methylnaphthalene #3	11.923	20.0	19.634	-1.8
2-Methylnaphthalene #4	12.497	20.0	19.240	-3.8
Acenaphthene #5	12.975	20.0	20.191	1.0
Fluorene #6	13.626	20.0	20.156	0.8
Phenanthrene #7	15.007	20.0	19.424	-2.9
Anthracene #8	16.402	20.0	20.494	2.5
Fluoranthene #9	17.774	2.0	2.011	0.5
Pyrene #10	18.774	2.0	1.908	-4.6
p-Terphenyl d14 #11*	Not Found	20.0	Not Found	
Benzo(a)anthracene #12	22.416	2.0	1.861	-7.0
Chrysene #13	23.280	2.0	1.942	-2.9
Benzo(b)fluoranthene #14	26.001	2.0	1.981	-0.9
Benzo(k)fluoranthene #15	27.443	1.0	0.888	-11.2
Benzo(a)pyrene #16	28.560	2.0	2.072	3.6
Dibenz(a,h)anthracene #1	30.417	2.0	2.178	8.9
Benzo(g,h,i)perylene #18	31.225	2.0	2.014	0.7
Indeno(1,2,3-cd)pyrene #	32.171	2.0	1.909	-4.5

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.336	20.0	20.298	1.5
Acenaphthylene #2	10.959	20.0	19.150	-4.3
1-Methylnaphthalene #3	11.907	20.0	19.874	-0.6
2-Methylnaphthalene #4	12.480	20.0	19.624	-1.9
Acenaphthene #5	12.958	20.0	20.239	1.2
Fluorene #6	13.609	20.0	19.969	-0.2
Phenanthrene #7	14.989	20.0	19.480	-2.6
Anthracene #8	16.385	20.0	20.776	3.9
Fluoranthene #9	17.755	2.0	1.981	-0.9
Pyrene #10	18.756	2.0	1.911	-4.4
p-Terphenyl d14 #11*	Not Found	20.0	Not Found	
Benzo(a)anthracene #12	22.399	2.0	1.903	-4.8
Chrysene #13	23.263	2.0	1.940	-3.0
Benzo(b)fluoranthene #14	25.983	2.0	2.137	6.9
Benzo(k)fluoranthene #15	27.425	1.0	0.882	-11.8
Benzo(a)pyrene #16	28.542	2.0	2.012	0.6
Dibenz(a,h)anthracene #1	30.400	2.0	2.132	6.6
Benzo(g,h,i)perylene #18	31.205	2.0	2.022	1.1
Indeno(1,2,3-cd)pyrene #	32.151	2.0	1.915	-4.2

= Failed 15.0% Criteria

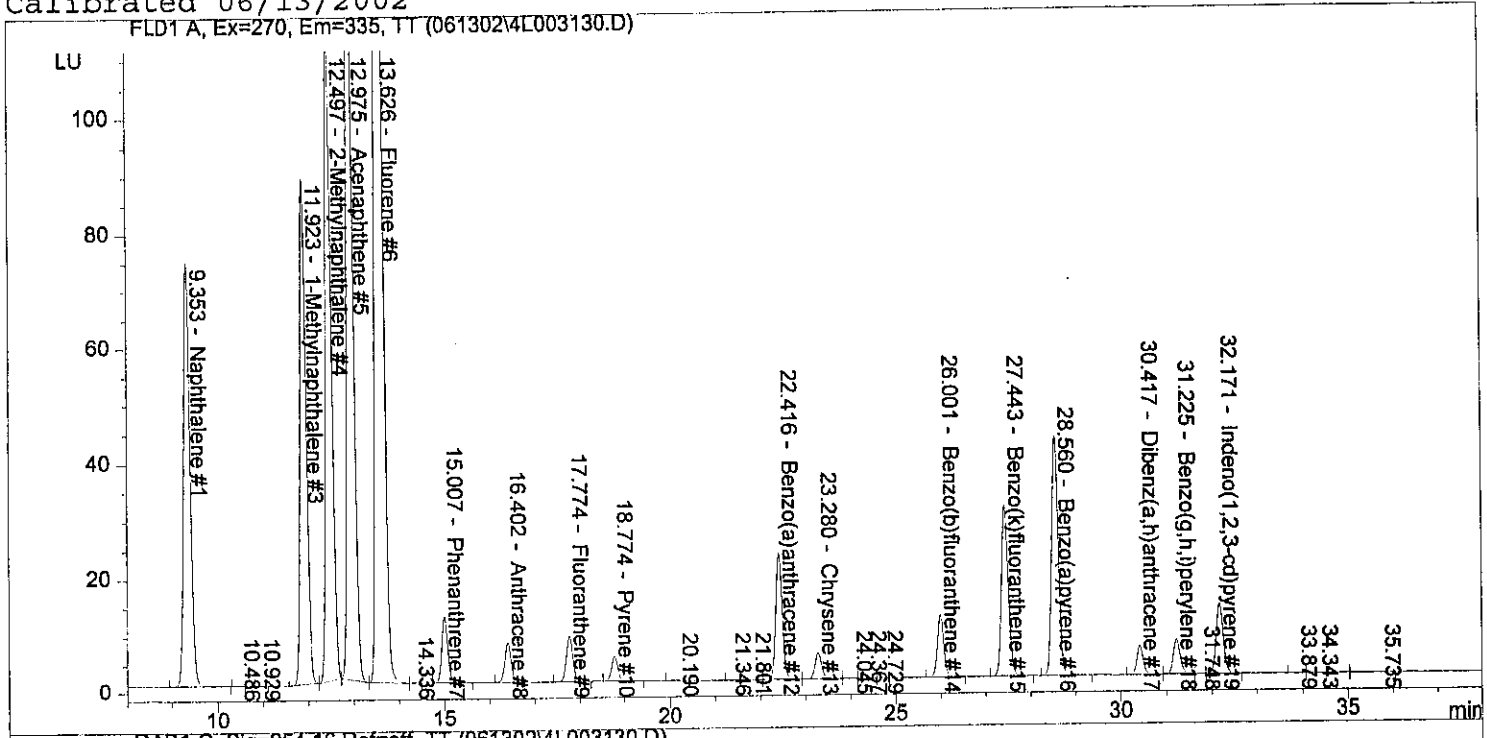
1,1 SOS0060-26/60-27 LEVEL 4 ALT STD @ 20 ppm

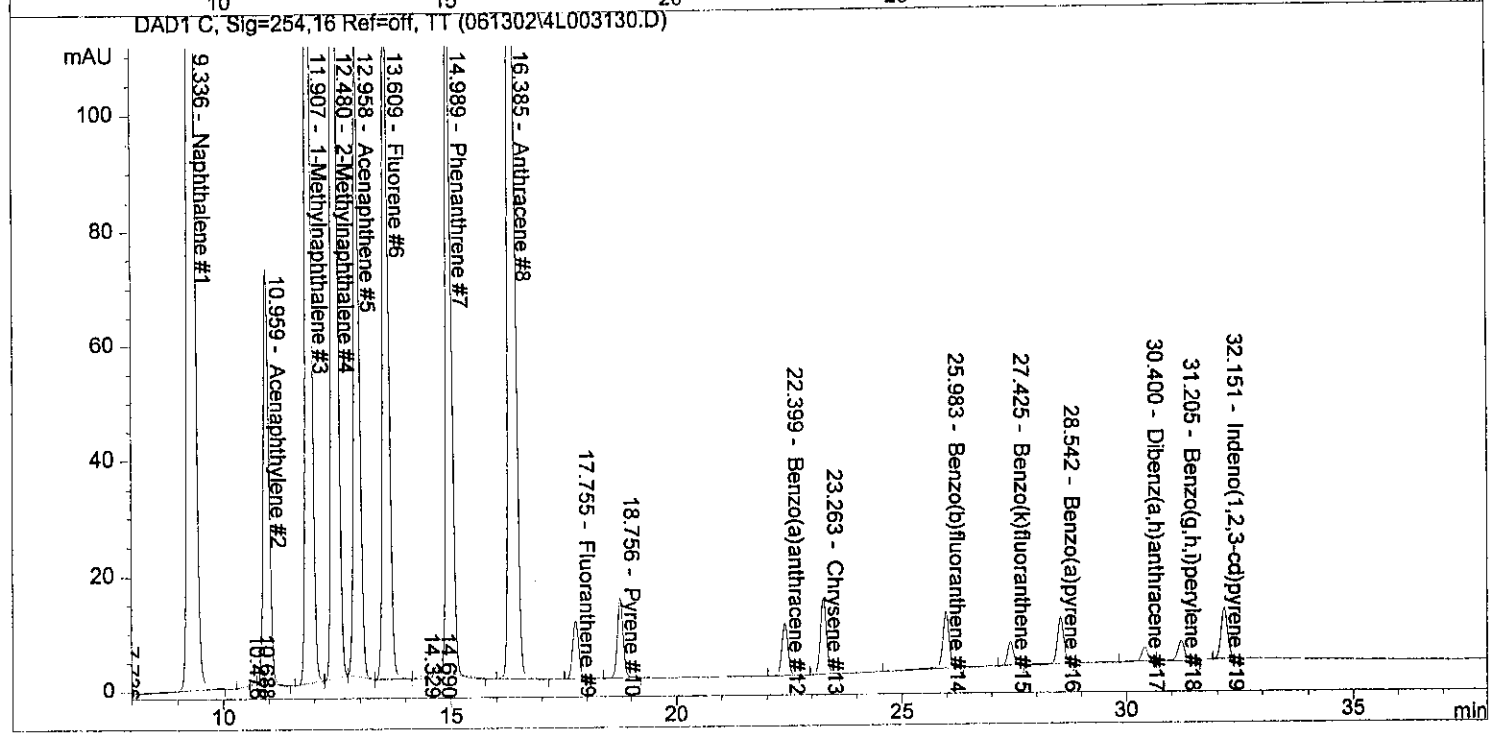
==========

Injection Date : 6/14/2002 4:41:30 AM
Sample Name : WG119840-08 ALT
Acq. Operator : RDC

Seq. Line : 9
Vial : 9
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:15:22 AM by RDC
Calibrated 06/13/2002





==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.353	BBA	741.47394	2.64818e-2	19.63555		Naphthalene #1
11.923	PB	849.44037	2.31142e-2	19.63410		1-Methylnaphthalene #3
12.497	BB	1080.91748	1.77993e-2	19.23960		2-Methylnaphthalene #4
12.975	BB	1430.41858	1.41152e-2	20.19069		Acenaphthene #5
13.626	BB	3046.35132	6.61644e-3	20.15601		Fluorene #6
15.007	BBA	111.55358	1.74121e-1	19.42379		Phenanthrene #7
16.402	PBA	67.69711	3.02731e-1	20.49403		Anthracene #8
17.774	BBA	78.48293	2.56226e-2	2.01094		Fluoranthene #9
18.774	BBA	45.76949	4.16791e-2	1.90763		Pyrene #10
21.105		-	-	-		p-Terphenyl d14 #11*
22.416	BB	225.32762	8.25703e-3	1.86054		Benzo(a)anthracene #12
23.280	BB	48.14102	4.03344e-2	1.94174		Chrysene #13
26.001	BBA	115.71564	1.71232e-2	1.98142		Benzo(b)fluoranthene #14
27.443	PBA	312.50757	2.84229e-3	8.88237e-1		Benzo(k)fluoranthene #15
28.560	BBA	433.13422	4.78467e-3	2.07240		Benzo(a)pyrene #16
30.417	PB	53.64731	4.06074e-2	2.17848		Dibenz(a,h)anthracene #17
31.225	BB	70.01231	2.87717e-2	2.01437		Benzo(g,h,i)perylene #18
32.171	BB	134.54210	1.41904e-2	1.90920		Indeno(1,2,3-cd)pyrene #1

Totals : 157.53873

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.336	BBA	2473.13794	8.20751e-3	20.29831		Naphthalene #1
10.959	BBA	629.97772	3.03973e-2	19.14961		Acenaphthylene #2
11.907	PB	1517.02673	1.31004e-2	19.87358		1-Methylnaphthalene #3
12.480	BB	1733.14465	1.13225e-2	19.62354		2-Methylnaphthalene #4
12.958	BB	977.54700	2.07034e-2	20.23853		Acenaphthene #5
13.609	BBA	1121.97900	1.77979e-2	19.96882		Fluorene #6
14.989	BBA	1106.84570	1.75995e-2	19.47989		Phenanthrene #7
16.385	BBA	2055.34277	1.01082e-2	20.77584		Anthracene #8
17.755	BB	89.41918	2.21566e-2	1.98123		Fluoranthene #9
18.756	BBA	130.87094	1.46058e-2	1.91148		Pyrene #10
21.086		-	-	-		p-Terphenyl d14 #11*
22.399	BBA	84.40978	2.25464e-2	1.90314		Benzo(a)anthracene #12
23.263	PBA	126.38636	1.53524e-2	1.94033		Chrysene #13
25.983	BBA	100.98494	2.11651e-2	2.13736		Benzo(b)fluoranthene #14
27.425	BB	38.33561	2.30196e-2	8.82469e-1		Benzo(k)fluoranthene #15
28.542	BB	75.80901	2.65464e-2	2.01246		Benzo(a)pyrene #16
30.400	PB	22.37718	9.52840e-2	2.13219		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.205	BB	38.34106	5.27407e-2	2.02214		Benzo(g,h,i)perylene #18
32.151	BBA	90.54501	2.11518e-2	1.91519		Indeno(1,2,3-cd)pyrene #1

Totals : 178.24611

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\061402\4L003132.D Sample Name: WG119863-01 CCV
HPLC4 6/14/2002 1:12:43 PM RDC

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========

Injection Date : 6/14/2002 10:37:36 AM Seq. Line : 2

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.359	20.0	20.480	2.4
1-Methylnaphthalene #3	11.928	20.0	20.502	2.5
2-Methylnaphthalene #4	12.500	20.0	20.448	2.2
Acenaphthene #5	12.975	20.0	20.456	2.3
Fluorene #6	13.627	20.0	20.336	1.7
Phenanthrene #7	15.009	20.0	20.163	0.8
Anthracene #8	16.411	20.0	20.007	0.0
Fluoranthene #9	17.786	2.0	2.014	0.7
Pyrene #10	18.789	2.0	2.116	5.8
p-Terphenyl d14 #11*	21.117	20.0	19.797	-1.0
Benzo(a)anthracene #12	22.435	2.0	2.007	0.3
Chrysene #13	23.303	2.0	2.019	0.9
Benzo(b)fluoranthene #14	26.023	2.0	2.019	0.9
Benzo(k)fluoranthene #15	27.463	1.0	1.001	0.1
Benzo(a)pyrene #16	28.577	2.0	2.023	1.1
Dibenz(a,h)anthracene #1	30.438	2.0	2.008	0.4
Benzo(g,h,i)perylene #18	31.247	2.0	1.984	-0.8
Indeno(1,2,3-cd)pyrene #	32.198	2.0	1.952	-2.4

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.345	20.0	20.749	3.7
Acenaphthylene #2	10.971	20.0	19.979	-0.1
1-Methylnaphthalene #3	11.914	20.0	20.099	0.5
2-Methylnaphthalene #4	12.486	20.0	20.269	1.3
Acenaphthene #5	12.962	20.0	19.997	0.0
Fluorene #6	13.612	20.0	19.992	0.0
Phenanthrene #7	14.994	20.0	19.993	0.0
Anthracene #8	16.397	20.0	20.093	0.5
Fluoranthene #9	17.771	2.0	1.994	-0.3
Pyrene #10	18.774	2.0	2.003	0.2
p-Terphenyl d14 #11*	21.103	20.0	19.997	0.0
Benzo(a)anthracene #12	22.421	2.0	1.969	-1.6
Chrysene #13	23.289	2.0	1.987	-0.6
Benzo(b)fluoranthene #14	26.009	2.0	1.949	-2.6
Benzo(k)fluoranthene #15	27.448	1.0	1.008	0.8
Benzo(a)pyrene #16	28.562	2.0	2.001	0.0
Dibenz(a,h)anthracene #1	30.424	2.0	1.952	-2.4
Benzo(g,h,i)perylene #18	31.232	2.0	1.907	-4.7
Indeno(1,2,3-cd)pyrene #	32.182	2.0	1.940	-3.0

= Failed 15.0% Criteria

367

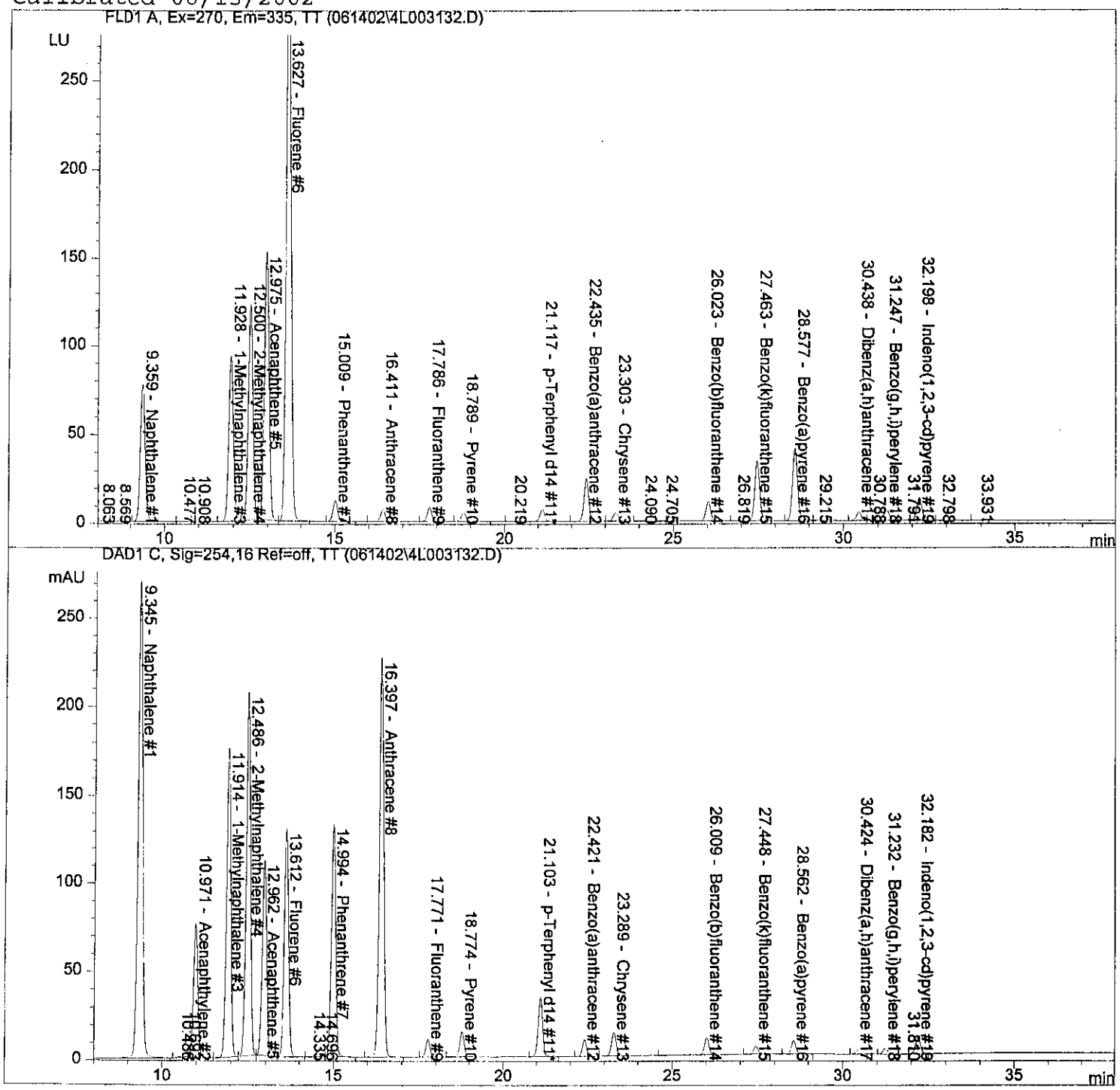
1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========

Injection Date : 6/14/2002 10:37:36 AM
Sample Name : WG119863-01 CCV
Acq. Operator : RDC

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:21:05 AM by RDC
Calibrated 06/13/2002



368

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.359	BB	773.70575	2.64699e-2	20.47990		Naphthalene #1
11.928	PB	887.29285	2.31057e-2	20.50153		1-Methylnaphthalene #3
12.500	BB	1149.26355	1.77924e-2	20.44812		2-Methylnaphthalene #4
12.975	BB	1449.28455	1.41149e-2	20.45645		Acenaphthene #5
13.627	BB	3073.37842	6.61673e-3	20.33571		Fluorene #6
15.009	BBA	115.86856	1.74016e-1	20.16295		Phenanthrene #7
16.411	BBA	66.08526	3.02741e-1	20.00675		Anthracene #8
17.786	PB	78.59554	2.56222e-2	2.01379		Fluoranthene #9
18.789	BBA	50.81740	4.16465e-2	2.11637		Pyrene #10
21.117	BB	66.94775	2.95702e-1	19.79655		p-Terphenyl d14 #11*
22.435	BB	243.33530	8.24774e-3	2.00697		Benzo(a)anthracene #12
23.303	BB	50.07780	4.03151e-2	2.01889		Chrysene #13
26.023	BB	117.91820	1.71190e-2	2.01864		Benzo(b)fluoranthene #14
27.463	BB	352.47397	2.83855e-3	1.00051		Benzo(k)fluoranthene #15
28.577	BB	422.57059	4.78678e-3	2.02275		Benzo(a)pyrene #16
30.438	PB	49.37830	4.06684e-2	2.00814		Dibenz(a,h)anthracene #17
31.247	BB	68.91933	2.87810e-2	1.98357		Benzo(g,h,i)perylene #18
32.198	BB	137.60634	1.41856e-2	1.95203		Indeno(1,2,3-cd)pyrene #1
Totals :				181.32962		

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.345	BBA	2527.24609	8.21020e-3	20.74919		Naphthalene #1
10.971	BB	657.51965	3.03859e-2	19.97931		Acenaphthylene #2
11.914	BB	1534.28687	1.30999e-2	20.09897		1-Methylnaphthalene #3
12.486	BB	1789.81470	1.13244e-2	20.26862		2-Methylnaphthalene #4
12.962	BB	965.80939	2.07050e-2	19.99704		Acenaphthene #5
13.612	BBA	1123.31335	1.77977e-2	19.99238		Fluorene #6
14.994	BBA	1136.17944	1.75966e-2	19.99290		Phenanthrene #7
16.397	PBA	1988.45422	1.01048e-2	20.09290		Anthracene #8
17.771	PB	90.02168	2.21543e-2	1.99436		Fluoranthene #9
18.774	BBA	137.28043	1.45937e-2	2.00342		Pyrene #10
21.103	BBA	304.94266	6.55771e-2	19.99725		p-Terphenyl d14 #11*
22.421	PBA	87.34856	2.25363e-2	1.96851		Benzo(a)anthracene #12
23.289	BBA	129.46716	1.53486e-2	1.98714		Chrysene #13
26.009	BB	91.91504	2.12009e-2	1.94869		Benzo(b)fluoranthene #14
27.448	BB	43.88424	2.29711e-2	1.00807		Benzo(k)fluoranthene #15
28.562	BBA	75.34831	2.65503e-2	2.00052		Benzo(a)pyrene #16
30.424	PBA	20.45755	9.54119e-2	1.95189		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.232	BB	36.19790	5.26789e-2	1.90687		Benzo(g,h,i)perylene #18
32.182	BB	91.74011	2.11442e-2	1.93978		Indeno(1,2,3-cd)pyrene #1

Totals : 199.87781

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\061402\4L003141.D Sample Name: WG119863-02 CCV
HPLC4 6/14/2002 8:41:52 PM RDC

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========

Injection Date : 6/14/2002 7:22:15 PM Seq. Line : 11

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.369	20.0	19.997	0.0
1-Methylnaphthalene #3	11.940	20.0	20.055	0.3
2-Methylnaphthalene #4	12.515	20.0	20.048	0.2
Acenaphthene #5	12.993	20.0	20.138	0.7
Fluorene #6	13.644	20.0	20.314	1.6
Phenanthrene #7	15.027	20.0	19.748	-1.3
Anthracene #8	16.427	20.0	20.133	0.7
Fluoranthene #9	17.799	2.0	1.998	-0.1
Pyrene #10	18.802	2.0	1.979	-1.1
p-Terphenyl d14 #11*	21.129	20.0	19.874	-0.6
Benzo(a)anthracene #12	22.445	2.0	1.980	-1.0
Chrysene #13	23.313	2.0	1.974	-1.3
Benzo(b)fluoranthene #14	26.034	2.0	1.991	-0.4
Benzo(k)fluoranthene #15	27.475	1.0	0.998	-0.2
Benzo(a)pyrene #16	28.588	2.0	2.008	0.4
Dibenz(a,h)anthracene #1	30.462	2.0	1.975	-1.2
Benzo(g,h,i)perylene #18	31.272	2.0	1.956	-2.2
Indeno(1,2,3-cd)pyrene #	32.225	2.0	1.984	-0.8

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.350	20.0	20.741	3.7
Acenaphthylene #2	10.974	20.0	20.099	0.5
1-Methylnaphthalene #3	11.921	20.0	20.269	1.3
2-Methylnaphthalene #4	12.496	20.0	20.428	2.1
Acenaphthene #5	12.974	20.0	20.167	0.8
Fluorene #6	13.625	20.0	20.154	0.8
Phenanthrene #7	15.007	20.0	20.150	0.7
Anthracene #8	16.407	20.0	20.460	2.3
Fluoranthene #9	17.779	2.0	2.007	0.3
Pyrene #10	18.782	2.0	2.024	1.2
p-Terphenyl d14 #11*	21.110	20.0	20.035	0.2
Benzo(a)anthracene #12	22.426	2.0	1.994	-0.3
Chrysene #13	23.294	2.0	1.998	-0.1
Benzo(b)fluoranthene #14	26.014	2.0	2.016	0.8
Benzo(k)fluoranthene #15	27.455	1.0	1.001	0.1
Benzo(a)pyrene #16	28.568	2.0	2.016	0.8
Dibenz(a,h)anthracene #1	30.442	2.0	2.045	2.2
Benzo(g,h,i)perylene #18	31.252	2.0	1.961	-2.0
Indeno(1,2,3-cd)pyrene #	32.204	2.0	2.002	0.1

= Failed 15.0% Criteria

371

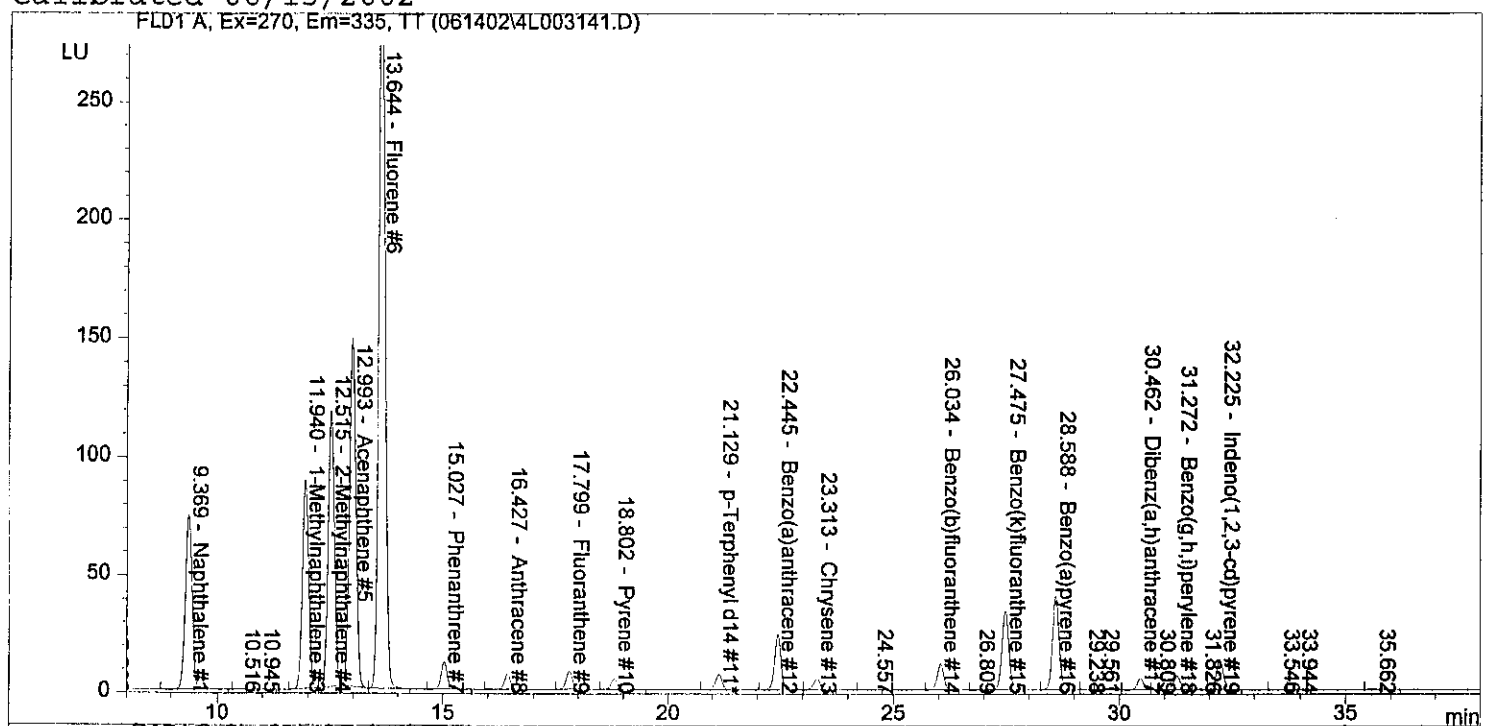
1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

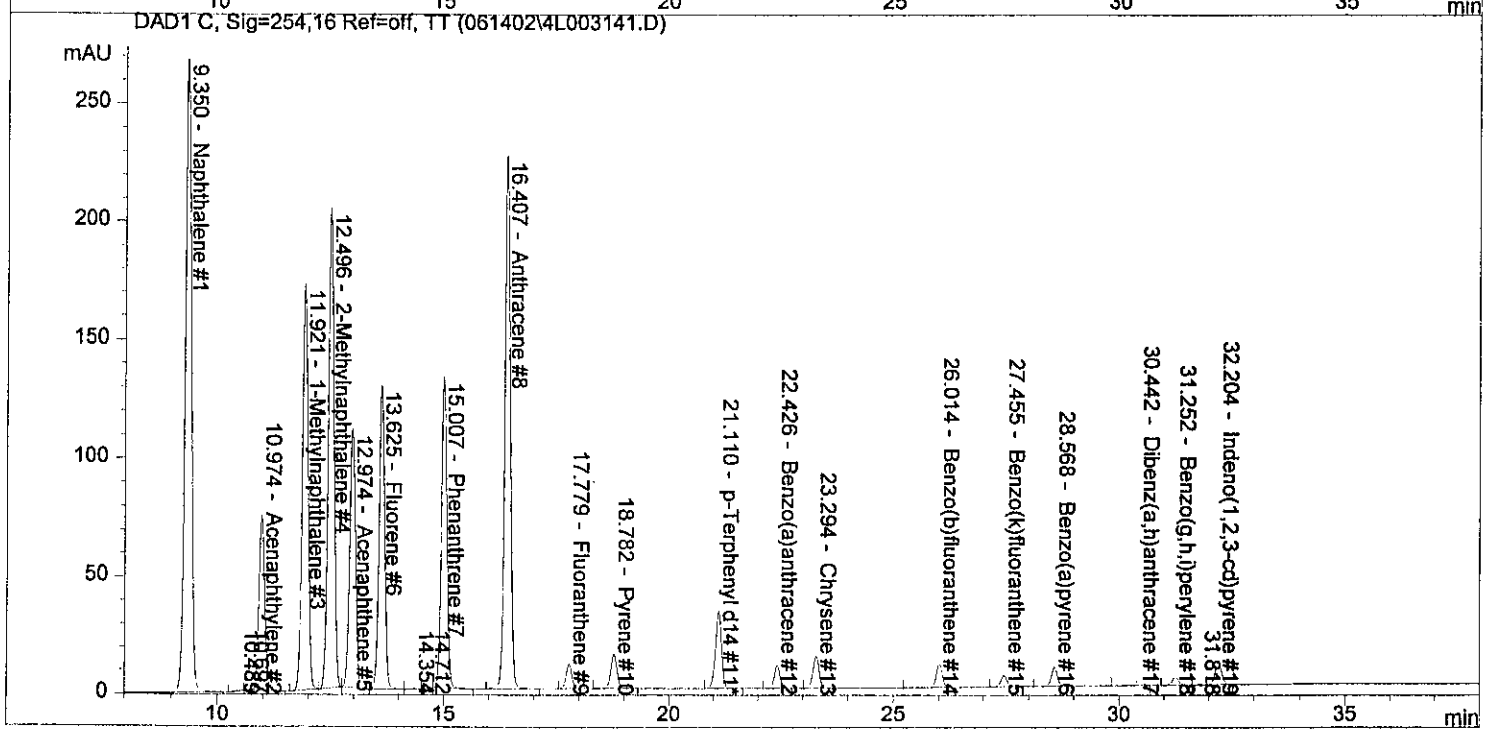
==========

Injection Date	: 6/14/2002 7:22:15 PM	Seq. Line	: 11
Sample Name	: WG119863-02 CCV	Vial	: 11
Acq. Operator	: RDC	Inj	: 1
		Inj Volume	: 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 4:03:53 PM by RDC
(modified after loading)

Calibrated 06/13/2002





372

External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.369	BBA	755.27008	2.64766e-2	19.99695		Naphthalene #1
11.940	BB	867.80566	2.31100e-2	20.05496		1-Methylnaphthalene #3
12.515	BB	1126.62476	1.77946e-2	20.04781		2-Methylnaphthalene #4
12.993	BB	1426.65784	1.41153e-2	20.13771		Acenaphthene #5
13.644	BB	3070.16870	6.61670e-3	20.31437		Fluorene #6
15.027	BBA	113.44813	1.74074e-1	19.74833		Phenanthrene #7
16.427	BB	66.50285	3.02739e-1	20.13299		Anthracene #8
17.799	PB	77.98933	2.56245e-2	1.99844		Fluoranthene #9
18.802	BBA	47.49395	4.16672e-2	1.97894		Pyrene #10
21.129	BB	67.21301	2.95688e-1	19.87406		p-Terphenyl d14 #11*
22.445	PB	240.06265	8.24932e-3	1.98035		Benzo(a)anthracene #12
23.313	BBA	48.96173	4.03260e-2	1.97443		Chrysene #13
26.034	BB	116.29039	1.71221e-2	1.99113		Benzo(b)fluoranthene #14
27.475	BB	351.54297	2.83863e-3	9.97899e-1		Benzo(k)fluoranthene #15
28.588	BB	419.40311	4.78743e-3	2.00786		Benzo(a)pyrene #16
30.462	BB	48.54900	4.06815e-2	1.97505		Dibenz(a,h)anthracene #17
31.272	BB	67.94588	2.87895e-2	1.95613		Benzo(g,h,i)perylene #18
32.225	BB	139.90329	1.41821e-2	1.98413		Indeno(1,2,3-cd)pyrene #1

Totals : 179.15155

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.350	BBA	2526.28857	8.21015e-3	20.74121		Naphthalene #1
10.974	BBA	661.50708	3.03843e-2	20.09943		Acenaphthylene #2
11.921	PB	1547.32837	1.30995e-2	20.26927		1-Methylnaphthalene #3
12.496	BB	1803.78748	1.13249e-2	20.42768		2-Methylnaphthalene #4
12.974	BB	974.07312	2.07038e-2	20.16706		Acenaphthene #5
13.625	BB	1132.46191	1.77965e-2	20.15385		Fluorene #6
15.007	BBA	1145.14038	1.75958e-2	20.14962		Phenanthrene #7
16.407	PBA	2024.38904	1.01067e-2	20.45980		Anthracene #8
17.779	PB	90.60052	2.21520e-2	2.00698		Fluoranthene #9
18.782	BBA	138.74426	1.45910e-2	2.02442		Pyrene #10
21.110	BBA	305.51675	6.55758e-2	20.03452		p-Terphenyl d14 #11*
22.426	PBA	88.51061	2.25325e-2	1.99436		Benzo(a)anthracene #12
23.294	BBA	130.21054	1.53477e-2	1.99843		Chrysene #13
26.014	PBA	95.14169	2.11874e-2	2.01581		Benzo(b)fluoranthene #14
27.455	BB	43.57862	2.29734e-2	1.00115		Benzo(k)fluoranthene #15
28.568	BB	75.92899	2.65455e-2	2.01557		Benzo(a)pyrene #16
30.442	PB	21.44828	9.53430e-2	2.04494		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.252	BB	37.19703	5.27086e-2	1.96060		Benzo(g,h,i)perylene #18
32.204	BB	94.76661	2.11259e-2	2.00203		Indeno(1,2,3-cd)pyrene #1

Totals : 201.56673

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\061402\4L003151.D Sample Name: WG119863-03 CCV
HPLC4 6/17/2002 9:41:54 AM RDC

1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

==========

Injection Date : 6/15/2002 6:19:19 AM Seq. Line : 21

Signal 1: FLD1 A, Ex=270, Em=335, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.363	20.0	20.160	0.8
1-Methylnaphthalene #3	11.936	20.0	20.132	0.7
2-Methylnaphthalene #4	12.511	20.0	20.073	0.4
Acenaphthene #5	12.989	20.0	20.190	0.9
Fluorene #6	13.642	20.0	20.320	1.6
Phenanthrene #7	15.026	20.0	19.811	-0.9
Anthracene #8	16.431	20.0	20.190	0.9
Fluoranthene #9	17.808	2.0	2.000	0.0
Pyrene #10	18.810	2.0	1.994	-0.3
p-Terphenyl d14 #11*	21.143	20.0	20.082	0.4
Benzo(a)anthracene #12	22.462	2.0	1.995	-0.3
Chrysene #13	23.331	2.0	1.987	-0.7
Benzo(b)fluoranthene #14	26.052	2.0	2.030	1.5
Benzo(k)fluoranthene #15	27.485	1.0	1.003	0.3
Benzo(a)pyrene #16	28.596	2.0	2.068	3.4
Dibenz(a,h)anthracene #1	30.466	2.0	1.978	-1.1
Benzo(g,h,i)perylene #18	31.276	2.0	2.035	1.8
Indeno(1,2,3-cd)pyrene #	32.232	2.0	1.990	-0.5

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

Compound	RT	Known Conc.	Cal. Conc.	%D
Naphthalene #1	9.342	20.0	20.767	3.8
Acenaphthylene #2	10.969	20.0	20.177	0.9
1-Methylnaphthalene #3	11.916	20.0	20.315	1.6
2-Methylnaphthalene #4	12.491	20.0	20.472	2.4
Acenaphthene #5	12.968	20.0	20.190	0.9
Fluorene #6	13.621	20.0	20.183	0.9
Phenanthrene #7	15.005	20.0	20.146	0.7
Anthracene #8	16.410	20.0	20.536	2.7
Fluoranthene #9	17.786	2.0	2.010	0.5
Pyrene #10	18.788	2.0	2.000	0.0
p-Terphenyl d14 #11*	21.123	20.0	20.014	0.1
Benzo(a)anthracene #12	22.441	2.0	2.002	0.1
Chrysene #13	23.311	2.0	1.998	-0.1
Benzo(b)fluoranthene #14	26.030	2.0	2.023	1.2
Benzo(k)fluoranthene #15	27.464	1.0	1.010	1.0
Benzo(a)pyrene #16	28.575	2.0	2.075	3.7
Dibenz(a,h)anthracene #1	30.445	2.0	2.003	0.2
Benzo(g,h,i)perylene #18	31.254	2.0	2.062	3.1
Indeno(1,2,3-cd)pyrene #	32.211	2.0	2.003	0.1

= Failed 15.0% Criteria

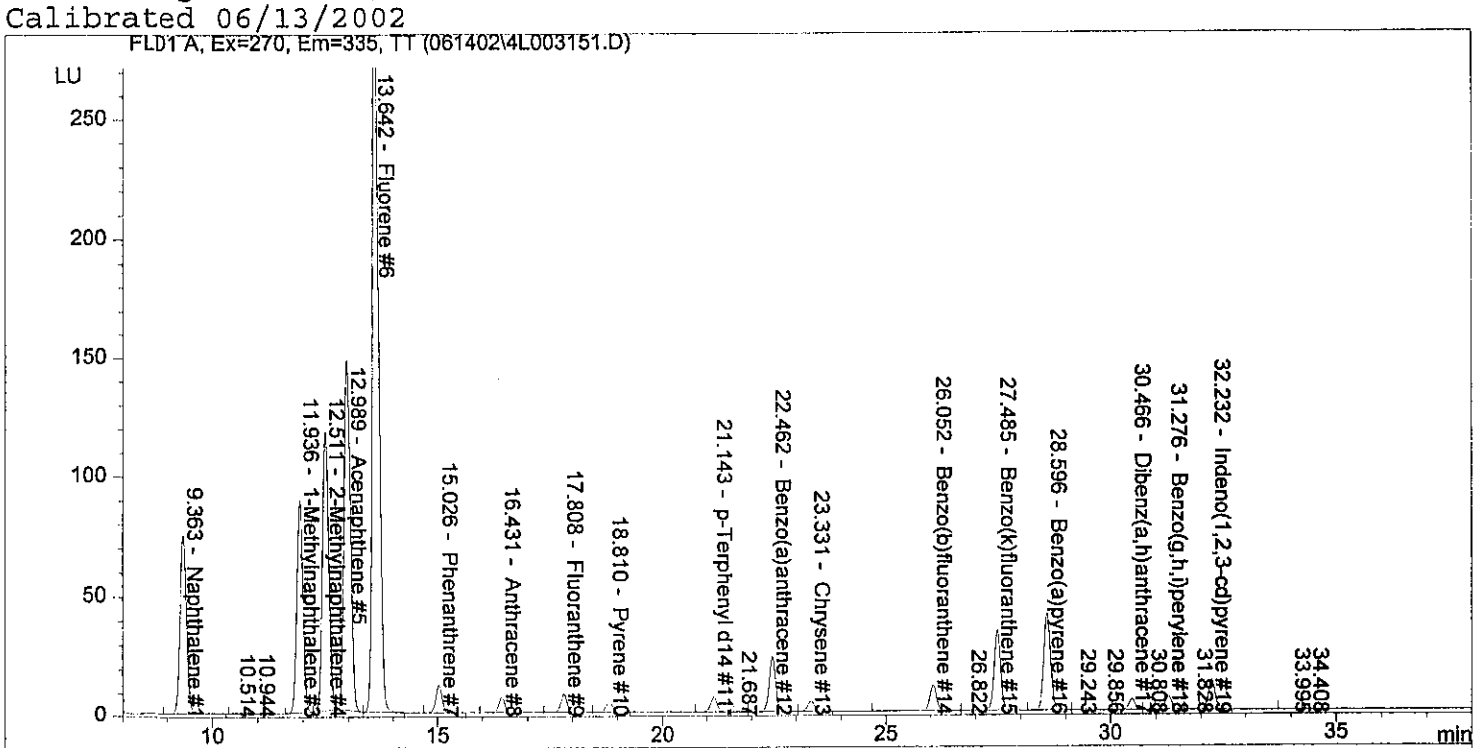
1,1 SOS59-38/58-26 LEVEL 4 STD @ 20/2/1 ppm

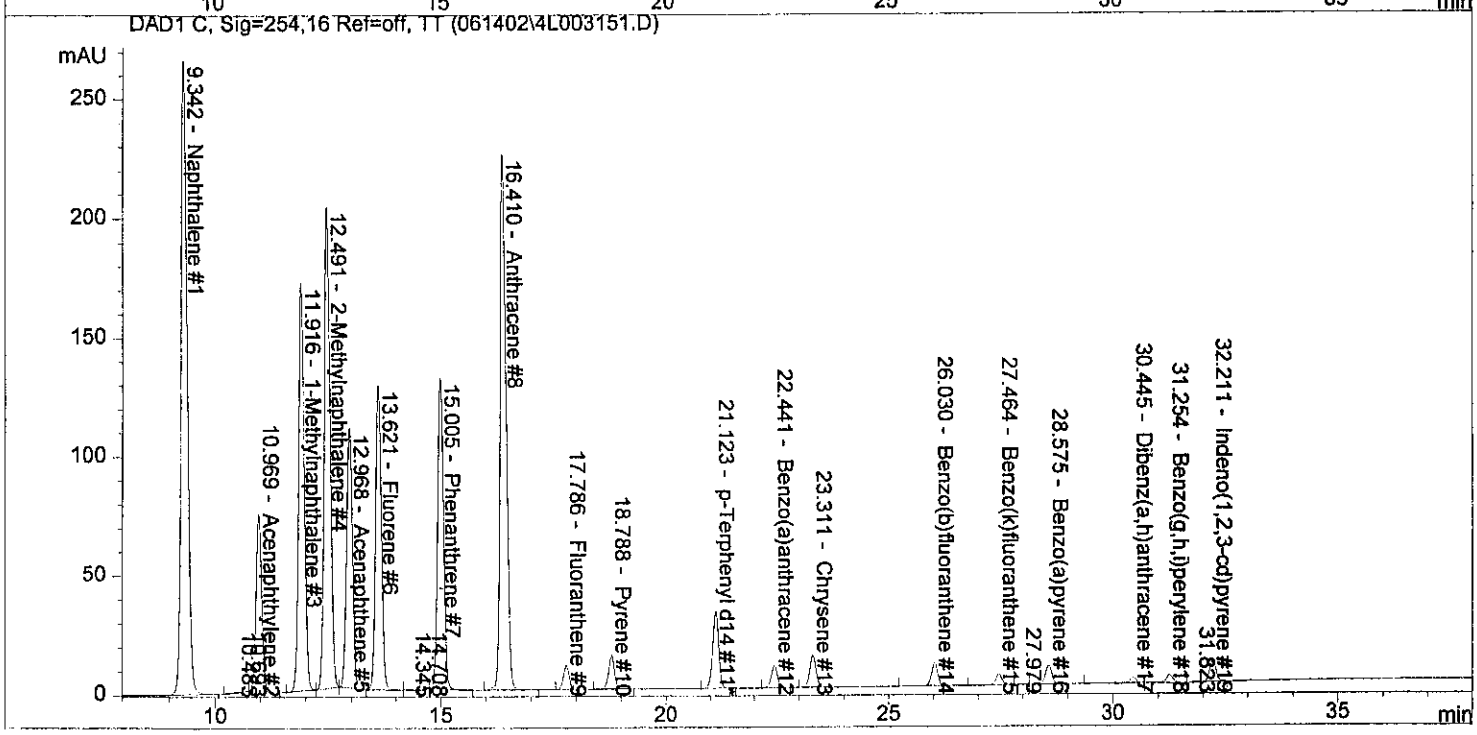
==========

Injection Date : 6/15/2002 6:19:19 AM
Sample Name : WG119863-03 CCV
Acq. Operator : RDC

Seq. Line : 21
Vial : 21
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:21:05 AM by RDC
Calibrated 06/13/2002





External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.363	BBA	761.49371	2.64743e-2	20.15999		Naphthalene #1
11.936	PB	871.14648	2.31092e-2	20.13152		1-Methylnaphthalene #3
12.511	BB	1128.03711	1.77944e-2	20.07279		2-Methylnaphthalene #4
12.989	BB	1430.34351	1.41152e-2	20.18963		Acenaphthene #5
13.642	BB	3070.94263	6.61670e-3	20.31952		Fluorene #6
15.026	BBA	113.81528	1.74065e-1	19.81122		Phenanthrene #7
16.431	PBA	66.69012	3.02738e-1	20.18961		Anthracene #8
17.808	PB	78.03944	2.56243e-2	1.99970		Fluoranthene #9
18.810	BBA	47.85608	4.16648e-2	1.99391		Pyrene #10
21.143	BB	67.92536	2.95651e-1	20.08220		p-Terphenyl d14 #11*
22.462	BB	241.81070	8.24847e-3	1.99457		Benzo(a)anthracene #12
23.331	BB	49.27583	4.03229e-2	1.98695		Chrysene #13
26.052	BB	118.58526	1.71177e-2	2.02991		Benzo(b)fluoranthene #14
27.485	BB	353.23618	2.83849e-3	1.00266		Benzo(k)fluoranthene #15
28.596	BB	432.28293	4.78483e-3	2.06840		Benzo(a)pyrene #16
30.466	BB	48.61948	4.06804e-2	1.97786		Dibenz(a,h)anthracene #17
31.276	BB	70.74438	2.87657e-2	2.03501		Benzo(g,h,i)perylene #18
32.232	BB	140.31125	1.41815e-2	1.98983		Indeno(1,2,3-cd)pyrene #1

Totals : 180.03527

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.342	BBA	2529.32812	8.21030e-3	20.76654		Naphthalene #1
10.969	BBA	664.08209	3.03833e-2	20.17700		Acenaphthylene #2
11.916	PB	1550.81189	1.30994e-2	20.31475		1-Methylnaphthalene #3
12.491	BB	1807.66809	1.13250e-2	20.47185		2-Methylnaphthalene #4
12.968	BB	975.17664	2.07037e-2	20.18976		Acenaphthene #5
13.621	BB	1134.11658	1.77963e-2	20.18305		Fluorene #6
15.005	BBA	1144.90674	1.75958e-2	20.14553		Phenanthrene #7
16.410	BBA	2031.84607	1.01070e-2	20.53594		Anthracene #8
17.786	PB	90.73675	2.21515e-2	2.00995		Fluoranthene #9
18.788	BBA	137.06593	1.45941e-2	2.00035		Pyrene #10
21.123	PBA	305.20706	6.55765e-2	20.01442		p-Terphenyl d14 #11*
22.441	BBA	88.83590	2.25314e-2	2.00160		Benzo(a)anthracene #12
23.311	BBA	130.18159	1.53478e-2	1.99800		Chrysene #13
26.030	BBA	95.50357	2.11860e-2	2.02333		Benzo(b)fluoranthene #14
27.464	PBA	43.96133	2.29705e-2	1.00981		Benzo(k)fluoranthene #15
28.575	BBA	78.21353	2.65271e-2	2.07477		Benzo(a)pyrene #16
30.445	BB	21.00448	9.53731e-2	2.00326		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.254	BB	39.08805	5.27607e-2	2.06231		Benzo(g,h,i)perylene #18
32.211	BB	94.80490	2.11256e-2	2.00281		Indeno(1,2,3-cd)pyrene #1

Totals : 201.98505

Results obtained with enhanced integrator!

*** End of Report ***

Lab Name: Kemron Environmental Services

Instrument ID: HPLC4 Method: 8310

Column: LC-PAH

	STD #1	STD #2	STD #3
Date Run	10/30/2001	10/31/2001	11/2/2001
File #	4L002247	4L002275	4L002311
Time	0:54	3:51	14:47

COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
Naphthalene (FLD)	9.337	9.362	9.352	0.038
1-Methylnaphthalene (FLD)	11.935	11.941	11.940	0.010
2-Methylnaphthalene (FLD)	12.517	12.523	12.521	0.009
Acenaphthene (FLD)	13.001	13.006	13.005	0.008
Fluorene (FLD)	13.664	13.667	13.669	0.008
Phenanthrene (FLD)	15.062	15.066	15.071	0.014
Anthracene (FLD)	16.475	16.483	16.493	0.027
Fluoranthene (FLD)	17.860	17.869	17.883	0.035
Pyrene (FLD)	18.868	18.881	18.897	0.044
p-Terphenyl-d14 (FLD)	21.217	21.244	21.262	0.068
Benzo(a)anthracene (FLD)	22.535	22.572	22.587	0.080
Chrysene (FLD)	23.401	23.449	23.467	0.102
Benzo(b)fluoranthene (FLD)	26.119	26.182	26.204	0.132
Benzo(k)fluoranthene (FLD)	27.554	27.629	27.650	0.151
Benzo(a)pyrene (FLD)	28.666	28.739	28.758	0.146
Dibenz(a,h)anthracene (FLD)	30.532	30.615	30.635	0.164
Benzo(g,h,i)perylene (FLD)	31.340	31.420	31.445	0.165
Indeno(1,2,3-cd)pyrene (FLD)	32.285	32.355	32.382	0.150
Naphthalene (VWD)	9.318	9.341	9.330	0.035
Acenaphthylene (VWD)	10.959	10.965	10.968	0.014
1-Methylnaphthalene (VWD)	11.916	11.920	11.922	0.009
2-Methylnaphthalene (VWD)	12.498	12.502	12.502	0.007
Acenaphthene (VWD)	12.982	12.986	12.986	0.007
Fluorene (VWD)	13.644	13.646	13.649	0.008
Phenanthrene (VWD)	15.042	15.045	15.052	0.015
Anthracene (VWD)	16.456	16.462	16.474	0.027
Fluoranthene (VWD)	17.840	17.848	17.863	0.035
Pyrene (VWD)	18.848	18.859	18.876	0.042
p-Terphenyl-d14 (VWD)	21.198	21.223	21.243	0.068
Benzo(a)anthracene (VWD)	22.516	22.551	22.568	0.080
Chrysene (VWD)	23.382	23.428	23.448	0.102
Benzo(b)fluoranthene (VWD)	26.099	26.160	26.184	0.131
Benzo(k)fluoranthene (VWD)	27.535	27.609	27.632	0.152
Benzo(a)pyrene (VWD)	28.646	28.717	28.738	0.145
Dibenz(a,h)anthracene (VWD)	30.513	30.595	30.617	0.164
Benzo(g,h,i)perylene (VWD)	31.320	31.398	31.426	0.165
Indeno(1,2,3-cd)pyrene (VWD)	32.266	32.338	32.367	0.156

2.2.7.4 Raw QC Data

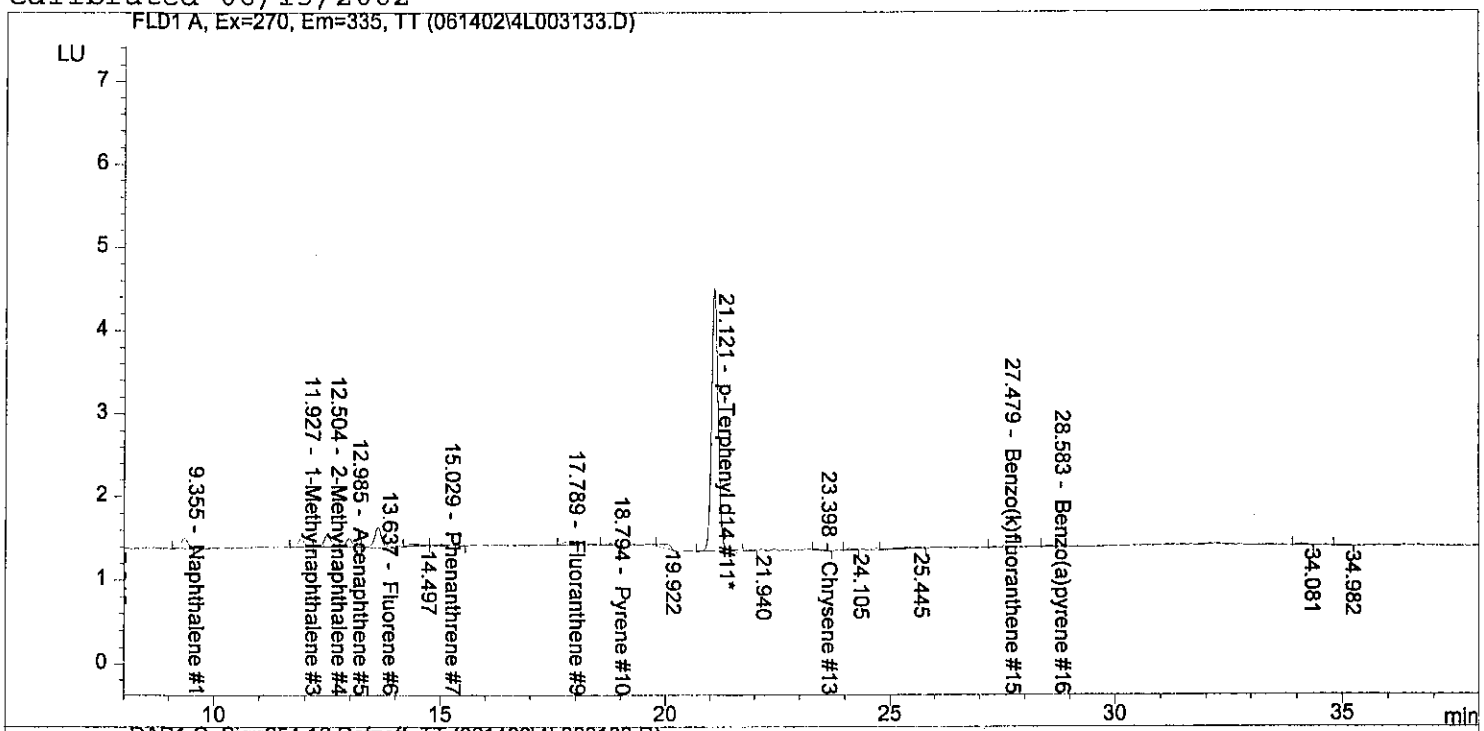
1,1 V185P131 BLK 060602 @ 1450

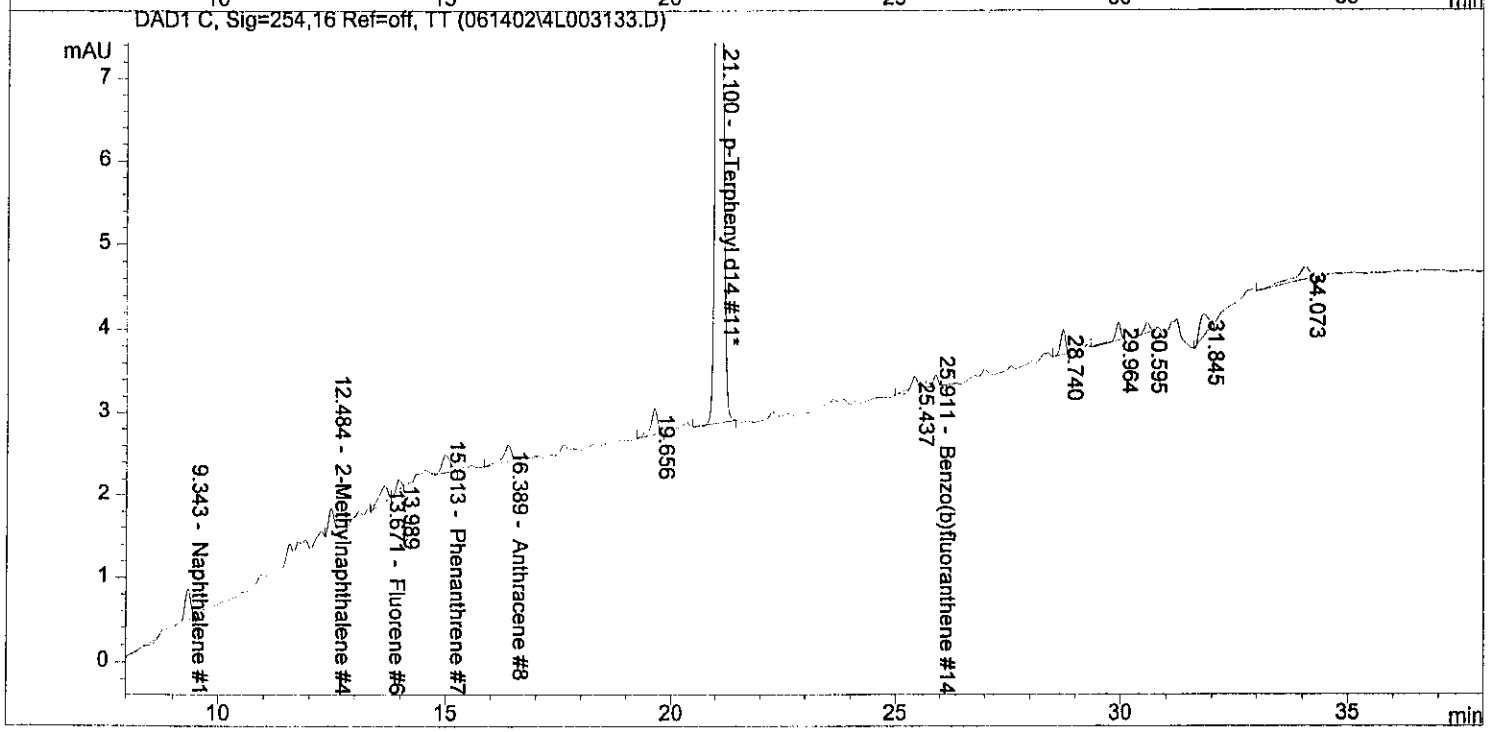
==========

Injection Date : 6/14/2002 11:34:15 AM
Sample Name : WG119312-02 WBLK
Acq. Operator : RDC

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:21:05 AM by RDC
Calibrated 06/13/2002





381

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.355	BB	1.34157	1.83999e-1	2.46846e-1		Naphthalene #1
11.927	BB	9.43224e-1	2.01260e-1	1.89833e-1		1-Methylnaphthalene #3
12.504	BB	1.59712	9.68283e-2	1.54646e-1		2-Methylnaphthalene #4
12.985	BB	1.08060	5.16438e-2	5.58064e-2		Acenaphthene #5
13.637	BB	2.69791	0.00000	0.00000		Fluorene #6
15.029	BBA	2.58801e-1	1.38670	3.58879e-1		Phenanthrene #7
16.405		-	-	-		Anthracene #8
17.789	BBA	3.53132e-1	8.94193e-2	3.15768e-2		Fluoranthene #9
18.794	BBA	2.22691e-1	1.08803e-1	2.42295e-2		Pyrene #10
21.121	BBA	31.41825	2.99674e-1	9.41523	94.2%	p-Terphenyl d14 #11*
22.418		-	-	-		Benzo(a)anthracene #12
23.398	BB	2.68918e-1	1.28939e-1	3.46740e-2		Chrysene #13
26.003		-	-	-		Benzo(b)fluoranthene #14
27.479	BBA	3.96058e-1	2.88245e-2	1.14162e-2		Benzo(k)fluoranthene #15
28.583	PBA	1.64899e-1	2.26575e-1	3.73620e-2		Benzo(a)pyrene #16
30.418		-	-	-		Dibenz(a,h)anthracene #17
31.227		-	-	-		Benzo(g,h,i)perylene #18
32.172		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 10.56050

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.343	BB	4.06679	0.00000	0.00000		Naphthalene #1
10.959		-	-	-		Acenaphthylene #2
11.906		-	-	-		1-Methylnaphthalene #3
12.484	BB	2.69668	0.00000	0.00000		2-Methylnaphthalene #4
12.956		-	-	-		Acenaphthene #5
13.671	BB	2.63712	8.04986e-2	2.12285e-1	mol	Fluorene #6
15.013	BB	2.76099	6.18918e-2	1.70882e-1		Phenanthrene #7
16.389	BBA	2.63481	0.00000	0.00000		Anthracene #8
17.762		-	-	-		Fluoranthene #9
18.761		-	-	-	97%	Pyrene #10
21.100	BBA	139.91791	6.63577e-2	9.28464		p-Terphenyl d14 #11*
22.401		-	-	-		Benzo(a)anthracene #12
23.266		-	-	-		Chrysene #13
25.911	BBA	1.08170	5.46857e-2	5.91534e-2	NC	Benzo(b)fluoranthene #14
27.418		-	-	-		Benzo(k)fluoranthene #15
28.535		-	-	-		Benzo(a)pyrene #16
30.399		-	-	-		Dibenz(a,h)anthracene #17

382

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.206		-	-	-		Benzo(g,h,i)perylene #18
32.159		-	-	-		Indeno(1,2,3-cd)pyrene #1

Totals : 9.72696

Results obtained with enhanced integrator!
6 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed
Warning : Negative results set to zero (cal. curve intercept), (Naphthalene
Warning : Negative results set to zero (cal. curve intercept), (2-Methylnaph
Warning : Negative results set to zero (cal. curve intercept), (Fluorene #6)
Warning : Negative results set to zero (cal. curve intercept), (Anthracene #

==========

*** End of Report ***

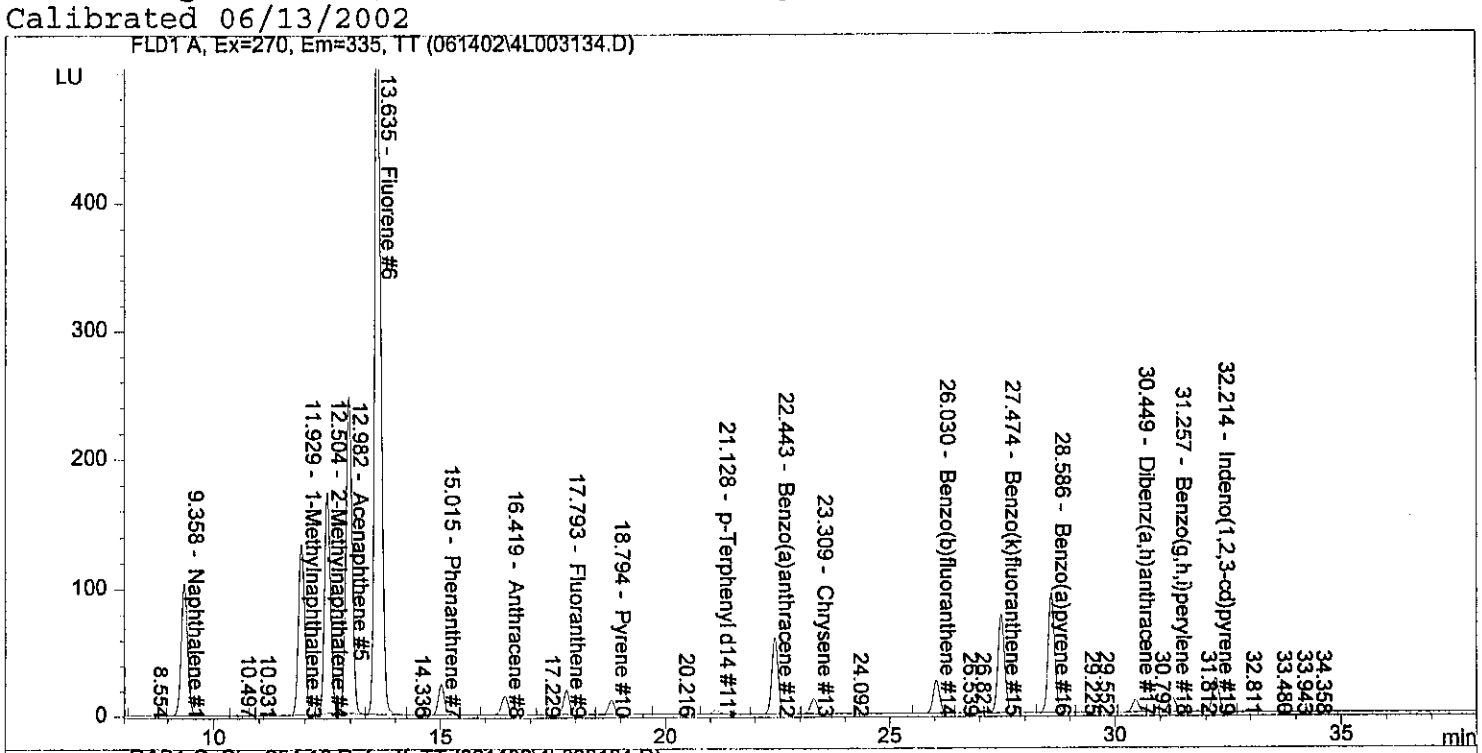
1,1 V185P131 LCS 060602 @ 1450

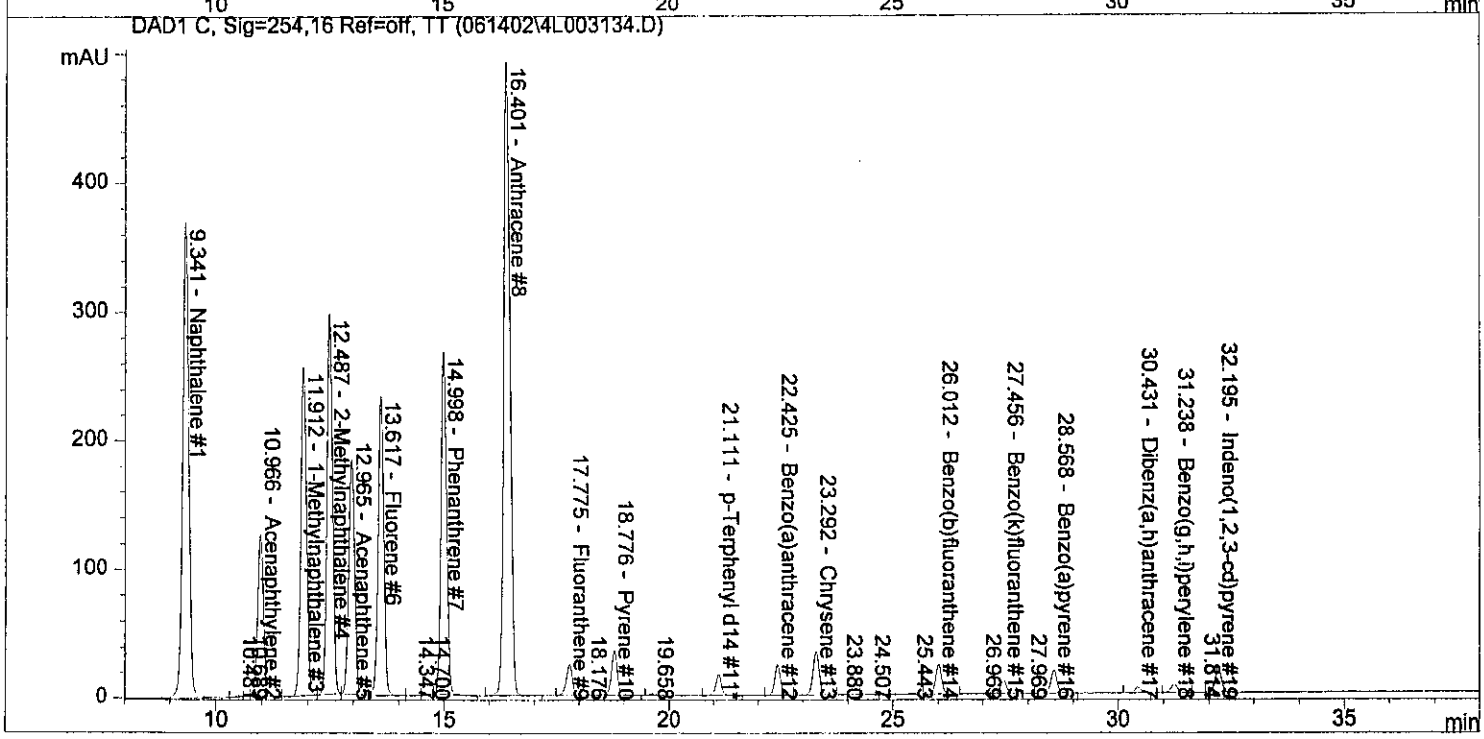
==========

Injection Date : 6/14/2002 12:30:54 PM
Sample Name : WG119312-03 WLCS
Acq. Operator : RDC

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 2/11/2002 4:29:00 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 6/14/2002 9:21:05 AM by RDC
Calibrated 06/13/2002





384

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Friday, June 14, 2002 9:14:03 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: FLD1 A, Ex=270, Em=335, TT

RetTime [min]	Type	Area LU *s	Amt/Area	Amount [ug/L]	Grp	Name
9.358	BB	1039.80676	2.63999e-2	27.45075		Naphthalene #1
11.929	BB	1282.21960	2.30473e-2	29.55173		1-Methylnaphthalene #3
12.504	BB	1643.39490	1.77593e-2	29.18554		2-Methylnaphthalene #4
12.982	BB	2369.16748	1.41040e-2	33.41471		Acenaphthene #5
13.635	BB	5471.67285	6.63093e-3	36.28230		Fluorene #6
15.015	BBA	231.90625	1.72657e-1	40.04033		Phenanthrene #7
16.419	BB	144.16426	3.02512e-1	43.61136		Anthracene #8
17.793	BB	193.55325	2.54512e-2	4.92617		Fluoranthene #9
18.794	BBA	118.92233	4.14772e-2	4.93257		Pyrene #10
21.128	BB	33.78324	2.99150e-1	10.10625	101%	p-Terphenyl d14 #11*
22.443	BB	614.70813	8.17749e-3	5.02677		Benzo(a)anthracene #12
23.309	BB	124.98224	4.00284e-2	5.00283		Chrysene #13
26.030	BB	278.38535	1.69922e-2	4.73037		Benzo(b)fluoranthene #14
27.474	BB	809.05634	2.82205e-3	2.28320		Benzo(k)fluoranthene #15
28.586	BB	983.12323	4.73741e-3	4.65746		Benzo(a)pyrene #16
30.449	BB	99.88524	4.02805e-2	4.02343		Dibenz(a,h)anthracene #17
31.257	BB	140.52985	2.84786e-2	4.00209		Benzo(g,h,i)perylene #18
32.214	BB	295.43408	1.40729e-2	4.15762		Indeno(1,2,3-cd)pyrene #1

Totals : 293.38547

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=off, TT

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
9.341	BBA	3447.96997	8.24297e-3	28.42151		Naphthalene #1
10.966	BB	1102.06799	3.02806e-2	33.37124		Acenaphthylene #2
11.912	BB	2266.84448	1.30864e-2	29.66478		1-Methylnaphthalene #3
12.487	BB	2600.09155	1.13428e-2	29.49219		2-Methylnaphthalene #4
12.965	BB	1609.97864	2.06523e-2	33.24972		Acenaphthene #5
13.617	BB	2029.89734	1.77318e-2	35.99371		Fluorene #6
14.998	BBA	2299.94458	1.75420e-2	40.34564		Phenanthrene #7
16.401	BBA	4369.08252	1.01622e-2	44.39942		Anthracene #8
17.775	PB	219.59276	2.19468e-2	4.81935		Fluoranthene #9
18.776	BBA	335.19281	1.44468e-2	4.84248		Pyrene #10
21.111	BBA	156.76241	6.62027e-2	10.37810	104%	p-Terphenyl d14 #11*
22.425	PB	225.24460	2.23583e-2	5.03608		Benzo(a)anthracene #12
23.292	BB	328.43597	1.52546e-2	5.01017		Chrysene #13
26.012	BBA	226.70006	2.09639e-2	4.75251		Benzo(b)fluoranthene #14
27.456	BB	100.28162	2.27827e-2	2.28469		Benzo(k)fluoranthene #15
28.568	BBA	178.79353	2.61832e-2	4.68138		Benzo(a)pyrene #16
30.431	BB	43.37602	9.46242e-2	4.10442		Dibenz(a,h)anthracene #17

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
31.238	BB	75.31331	5.32537e-2	4.01071		Benzo(g,h,i)perylene #18
32.195	BBA	201.72139	2.08305e-2	4.20196		Indeno(1,2,3-cd)pyrene #1

Totals : 329.06006

Results obtained with enhanced integrator!

*** End of Report ***

Sequence Table:

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	accn blk	8310	1	Sample		
2	2	WG119840-01 STD6	8310	1	Sample		
3	3	WG119840-02 STD6	8310	1	Sample		
4	4	WG119840-03 STD5	8310	1	Sample		
5	5	WG119840-04 STD4	8310	1	Sample		
6	6	WG119840-05 STD3	8310	1	Sample		
7	7	WG119840-06 STD2	8310	1	Sample		
8	8	WG119840-07 STD1	8310	1	Sample		
9	9	WG119840-08 ALT	8310	1	Sample		

RDG 6/14/03

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
							RDC 6/14/02
No	1	1	8310	4L003122	01:01		accn blk
No	2	2	8310	4L003123	02:01	SOS 58-26	WG119840-01 ST
No	3	3	8310	4L003124	03:01	SOS 59-38	WG119840-02 ST
No	4	4	8310	4L003125	04:01	DIL'N of SOS 58-26	WG119840-03 ST
No	5	5	8310	4L003126	05:01	& 59-38	WG119840-04 ST
No	6	6	8310	4L003127	06:01		WG119840-05 ST
No	7	7	8310	4L003128	07:01		WG119840-06 ST
No	8	8	8310	4L003129	08:01		WG119840-07 ST
No	9	9	8310	4L003130	09:01	SOS 60-26/60-27	WG119840-08 AL

RRC
6/14/02

rdc 6/14/02

388

KEMRON ENVIRONMENTAL SERVICES
HPLC Laboratory Maintenance Log

Analysis Date/Time June 13, 2002 **Instrument ID** HPLC4 **Column ID** LC-PAH **Data Subdirectory** 061302
Analyst Initials RCC **SOP # HPLC01 Rev. #** 3 ✓ 8310 **SOP # HPLC02 Rev. #** ___ ___ 8330

Daily Check
- ☑ Mobile phase reservoir
- ☑ System pressure 117 bar
- ☑ Waste container

Returned to Control?
Yes ____ No ____

Additional Maintenance
Problem: Re-installed LC-PAH column for 8310 ~~HP~~ Polynuclear / 610 analysis

Action Taken: recalibration

Comments

Reviewed By: [illegible] 6/14/02

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	1	8310	4L003131	01:01 ✓		accn blk
No	2	2	8310	4L003132	02:01 ✓	SOS 59-38/58-26	WG119863-01 CC
No	3	3	8310	4L003133	03:01 ✓		WG119312-02 WB
No	4	4	8310	4L003134	04:01 ✓		WG119312-03 WL
No	5	5	8310	4L003135	05:01 ✓		L0206078-05 61
No	6	6	8310	4L003136	06:01 ✓		L0206078-07 61
No	7	7	8310	4L003137	07:01 ✓		L0206078-09 61
No	8	8	8310	4L003138	08:01 ✓		L0206078-12 61
No	9	9	8310	4L003139	09:01 ✓		L0206078-15 61
No	10	10	8310	4L003140	10:01 ✓		L0206078-18 61
No	11	11	8310	4L003141	11:01 ✓	SOS 59-38/58-26	WG119863-02 CC
No	12	12	8310	4L003142	12:01 ✓		L0206102-01 83
No	13	13	8310	4L003143	13:01 ✓		L0206102-02 83
No	14	14	8310	4L003144	14:01 ✓		L0206102-03 83
No	15	15	8310	4L003145	15:01 ✓		WG119312-01 WR
No	16	16	8310	4L003146	16:01 ✓		WG119312-04 WM
No	17	17	8310	4L003147	17:01 ✓		WG119312-05 WM
No	18	18	8310	4L003148	18:01 ✓	accn. NC	L0206102-07 83
No	19	19	8310	4L003149	19:01 ✓		L0206102-08 83
No	20	20	8310	4L003150	20:01 ✓		L0206102-09 83
No	21	21	8310	4L003151	21:01 ✓	SOS 59-38/58-26	WG119863-03 CC
No	22	22	8310	4L003152	22:01 ✓		WG119548-02 WB
No	23	23	8310	4L003153	23:01 ✓		WG119548-03 WL
No	24	24	8310	4L003154	24:01	RR 10X, Accn. NC	L0206140-01 83
No	25	25	8310	4L003155	25:01 ✓		L0206140-02 83
No	26	26	8310	4L003156	26:01 ✓		L0206140-03 83
No	27	27	8310	4L003157	27:01 ✓		L0206140-04 83
No	28	28	8310	4L003158	28:01 ✓		L0206140-05 83
No	29	29	8310	4L003159	29:01 ✓		L0206140-06 83
No	30	30	8310	4L003160	30:01 ✓		WG119548-01 WR
No	31	31	8310	4L003161	31:01 ✓		L0206140-08 83
No	32	21	8310	4L003162	32:01 ✓	SOS 59-38/58-26	WG119863-04 CC
No	33	32	8310	4L003163	33:01 ✓		L0206140-09 83
No	34	33	8310	4L003164	34:01 ✓		L0206140-10 83
No	35	34	8310	4L003165	35:01	RE Needed low surr.	L0206140-11 83
No	36	35	8310	4L003166 Accn. NC	36:01	RR 10X, RE low surr.	L0206140-12 83
No	37	36	8310	4L003167	37:01 ✓		L0206140-13 83
No	38	37	8310	4L003168	38:01 ✓	low surr	WG119548-0 WMS
No	39	38	8310	4L003169	39:01 ✓		WG119548-05 WM
No	40	39	8310	4L003170	40:01	RE low surr.	L0206164-01 83
No	41	40	8310	4L003171	41:01	RE low surr.	L0206164-02 83
No	42	41	8310	4L003172	42:01 ✓		L0206164-03 83
No	43	21	8310	4L003173	43:01 ✓		WG119863-05 CC

RDC 6/17/02

6/18/02

6/18/02

390

Sequence Table:

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	accn blk	8310	1	Sample		
2	2	WG119863-01 CCV	8310	1	Sample		
3	3	WG119312-02 WBLK	8310	1	Sample		
4	4	WG119312-03 WLCS	8310	1	Sample		
5	5	L0206078-05 610W	8310	1	Sample		
6	6	L0206078-07 610W	8310	1	Sample		
7	7	L0206078-09 610W	8310	1	Sample		
8	8	L0206078-12 610W	8310	1	Sample		
9	9	L0206078-15 610W	8310	1	Sample		
10	10	L0206078-18 610W	8310	1	Sample		
11	11	WG119863-02 CCV	8310	1	Sample		
12	12	L0206102-01 831W	8310	1	Sample		
13	13	L0206102-02 831W	8310	1	Sample		
14	14	L0206102-03 831W	8310	1	Sample		
15	15	WG119312-01 WREF	8310	1	Sample		
16	16	WG119312-04 WMS	8310	1	Sample		
17	17	WG119312-05 WMSD	8310	1	Sample		
18	18	L0206102-07 831W	8310	1	Sample		
19	19	L0206102-08 831W	8310	1	Sample		
20	20	L0206102-09 831W	8310	1	Sample		
21	21	WG119863-03 CCV	8310	1	Sample		
22	22	WG119548-02 WBLK	8310	1	Sample		
23	23	WG119548-03 WLCS	8310	1	Sample		
24	24	L0206140-01 831W	8310	1	Sample		
25	25	L0206140-02 831W	8310	1	Sample		
26	26	L0206140-03 831W	8310	1	Sample		
27	27	L0206140-04 831W	8310	1	Sample		
28	28	L0206140-05 831W	8310	1	Sample		
29	29	L0206140-06 831W	8310	1	Sample		
30	30	WG119548-01 WREF	8310	1	Sample		
31	31	L0206140-08 831W	8310	1	Sample		
32	21	WG119863-04 CCV	8310	1	Sample		
33	32	L0206140-09 831W	8310	1	Sample		
34	33	L0206140-10 831W	8310	1	Sample		
35	34	L0206140-11 831W	8310	1	Sample		
36	35	L0206140-12 831W	8310	1	Sample		
37	36	L0206140-13 831W	8310	1	Sample		
38	37	WG119548-0 WMS	8310	1	Sample		
39	38	WG119548-05 WMSD	8310	1	Sample		
40	39	L0206164-01 831W	8310	1	Sample		
41	40	L0206164-02 831W	8310	1	Sample		
42	41	L0206164-03 831W	8310	1	Sample		
43	21	WG119863-05 CCV	8310	1	Sample		

tvec 6/19/02 391

KEMRON ENVIRONMENTAL SERVICES
HPLC Laboratory Maintenance Log

Analysis Date/Time June 14, 2002 **Instrument ID** HPLC4 **Column ID** LC-PAH **Data Subdirectory** 061402
Analyst Initials PJC **SOP # HPLC01 Rev. #** 3 ✓ 8310 **SOP # HPLC02 Rev. #** ____ 8330

Daily Check
- ☑ Mobile phase reservoir
- ☑ System pressure 117 bar
- ☑ Waste container

Returned to Control?
Yes ____ No ____

Additional Maintenance
Problem: ____

Action Taken: ____

Comments

L0206140-11 & 12 need RE-EXT for low surr. } submitted for recert.
L0206164-01 & 02 ↓ ↓ ↓ ↓ ↓
L0206140-01 & 12 need 10x dilN.
Acenaphthylene not confirming by DAD

Reviewed By: PR 6/18/02

Volume 185
Page 131

Parameter: 8310-H_2O SOP #: EX14 PLC1 Revision #: 6
Extraction Analyst(s): GSG, DP TV/KD Analyst(s): GSG
Date/Time Extracted: 06/06/02@1450 Date TV/KD: 06/06/02
Spike/Surrogate Analyst: GSG/CEB Witness: CEB/A
Surrogate #: E550040-50 Earliest Hold Date: 06/11/02
Spike #: A = E550041-01 Spike #: B = —

Extraction Work Group WG 119312
Analytical Work Group WG 119449

Extract Relinquished By: [illegible]
Extract Received By & Date: EC 6/7/02

	Sample ID	Test Code	pH √ <2	N	>12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	BN	N	Comments
1	Blank					1L	100µL		1mL					WG 119312-02
2	LCS					—		500µL						WG — -03
3	06 078-05	610				850mL								
4	-07					1L								
5	-09					850mL								
6	-12					1L								
7	-15					925mL								
8	-18					—								
9	06-102-01	8310				1L								
10	-02					—								
11	-03					950mL								
12	-04					1L								WG 119312-01
13	-05MS					—		500µL						— -04 *
14	-06MSD							—						— -05 *
15	-07					930mL								
16	-08					1L								
17	-09					930mL								
18														
19														
20														
21														
22														
23														
24														

DP 06/06/02

Methylene Chloride Lot #: 42015
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: 41264
Reagent: Fortified Lot #: ER2163
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: ER2152

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3664A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: [signature] Date: 6/7/02

393

Extraction Notes For Volume # 185 Page # 131

General Comments: *US, MSD of 06-102-04

Extraction Anomalies: None

Concentration Anomalies: None

Clean-Up Anomalies: NA

Supervisor Review: _____ Date: _____

RDC 6/14/02 13

Semi-Volatile 8310 Checklist

Run Date: ~~14~~-Jun-02

Analyst: RDC

Instrument: HPLC4

Workorders: Due Date: Priority:

		Analyst
Initial Calibration:	Average RF	NA
	Linear or quadriatic regression	√
	Alt Source Check	√
Continuing Calibration:	Continuing Calibration	NA
	Client Specific Requirements	NA
	Special Standards	NA
Blanks:	Quant Report/Chromatogram	NA
	Surrogates	NA
Laboratory Control Sample:	Quant Report/Chromatogram	NA
	Surrogates	NA
	Spike Compounds	NA
	MS/MSD	NA
	Excel Spreadsheet	NA
Samples:	TCL Hits	NA
	Surrogates	NA
	Correct Factors	NA
	Dilutions	NA
	Check Sample Histories	NA
	Corrective Action	NA
Data Package:	Level 2	NA
	Level 3	
	Level 4	
	Case narrative	

	Supervisor
Case Narrative:	
Corrective Action:	
Results Reporting/Data Qualifiers:	
Client Data Package Assembly:	
Check for Completeness:	
Check for compliance with method and project requirements:	
Check the reasonableness of results:	

Comments:
8310 re-calibration

Primary Reviewer: RDC 6/14/02

Secondary Reviewer: DR 6/14/02

Supervisor Review: DR 6/14/02

√ = Checked & OK
NA = Not Applicable

395

Semi-Volatile 8310 Checklist

Run Date: 14-Jun-02

Analyst: RDC

Instrument: HPLC4

Workorders:	Due Date:	Priority:
WG119449 06-078	6/13/2002	a1
↓ 06-102	↓	
WG119924 06-140	6/14/02	
↓ 06-164	6/17/02	

		Analyst
Initial Calibration:	Average RF	NA
	Linear or quadratic regression	NA
	Alt Source Check	NA
Continuing Calibration:	Continuing Calibration	√
	Client Specific Requirements	√
	Special Standards	NA
Blanks:	Quant Report/Chromatogram	√
	Surrogates	√
Laboratory Control Sample:	Quant Report/Chromatogram	√
	Surrogates	√
	Spike Compounds	√
	MS/MSD	NA
	Excel Spreadsheet	NA
Samples:	TCL Hits	√
	Surrogates	√
	Correct Factors	√
	Dilutions	NA
	Check Sample Histories	NA
	Corrective Action	NA
Data Package:	Level 2	
	Level 3	
	Level 4	
	Case narrative	√

	Supervisor
Case Narrative:	
Corrective Action:	
Results Reporting/Data Qualifiers:	
Client Data Package Assembly:	
Check for Completeness:	
Check for compliance with method and project requirements:	
Check the reasonableness of results:	

Comments:

LEVEL X

REEXT REQUESTED FOR
06-140-11 & 12
06-164-01 & 02
due to low surr recovery

06-140-01 & 12 need 10x dil.

06-102-07 ↓ -08 } Acenaphthene
06-140-01 ↓ -12 } CONF. via DAD

06-140-17 MS yielded
% rec. < adv. limit
for 2 analytes & surr.

06-140 17, 18 MS/MSD
% RPD was high for
10 analytes

Primary Reviewer: RDC 6/17/02

Secondary Reviewer: 6/17/02

Supervisor Review: 6/17/02

√ = Checked & OK

NA = Not Applicable

Resubmitted 6/17/02 for 06-102
06-140
06-164
↓

Example 8310 Calculations

1.0 Calulating the Calibration Factor (CF) from the initial calibration (ICAL) data:

CF = Cs/As

Where:		Example:
	As = Area of the compound being measured in the standard	10000
	Cs = Concentration of the compound being measured (ug/ml).	100
	CF	**0.01**

2.0 Calculating the concentration (C) of a compound in water using data from prep log and quantitation report:

C = [(Ax)(Vf)(D)(CF)(1000)] / Vi

Where:		Example:
	Ax = Area of the compound being measured	10000
	Vf = Final volume of sample extract (mL). (prep log)	1
	D = Dilution factor for sample as a multiplier (10X = 10).	1
	CF = Calibration factor from ICAL calculated above.	**0.01**
	Vi = Initial volume of sample (mL). (prep log)	1000
	1000 = conversion to ppb	
	C (ug/L) =	**0.1**

3.0 Calculating the concentration (C) of a compound in soil using data from prep log and quantitation report: C = [(Ax)(Vf)(D)(Cf)] / Vi

Where:		Example:
	Ax = Area of the compound being measured	10000
	Vf = Final volume of sample extract (mL).	1
	D = Dilution factor for sample as a multiplier (10X = 10).	1
	CF = Calibration factor from ICAL calculated above.	0.01
	Wi = Initial weight of sample (g).	30
	C (ug/kg)	**3.333333**

2.4 General Chemistry Data

2.4.5 Common Anions (9056)

REPORT NARRATIVE
COMMON ANIONS

KEMRON Report No.: L0206102

METHOD

Analysis: SW-846 9056

HOLDING TIMES

Sample Preparation: All holding times were met.
Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial calibrations: All acceptance criteria were met.
Alternate Source Standards: All acceptance criteria were met.
Continuing Calibration : All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.
Laboratory Control Samples: All acceptance criteria were met.
Matrix Spikes: All acceptance criteria were met.

SAMPLES

All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: xxx REVIEWED: dch DATE: 6/28/02

Rev. 7/14/00

ANIONS (9056)

Login Number L0206102

A. QC Summary

✓ Method Blank Summary
✓ Method Blank Results
✓ Laboratory Control Sample (LCS)
✓ Matrix Spike/Matrix Spike Duplicate (MS/MSD)
✓ Sample Duplicate
✓ Holding Time Summary
✓ Initial Calibration Summary
✓ Initial Calibration Verification (ICV) Form (Second Source)
✓ Continuing Calibration Verification (CCV)
✓ Instrument Run Log

B. Sample Data

✓ Target analyte results summary (See Summary Report)
✓ Chromatograms and quantitation report

C. Standards Data

✓ Initial calibration (ICAL) summary form
✓ Chromatograms and quantitation report for ICAL standards
✓ Initial calibration verification (ICV/second source) summary forms
✓ Initial calibration verification (ICV/second source) quantitation reports and chromatograms
✓ Continuing Calibration Verification (CCV) summary forms
✓ Continuing Calibration Verification (CCV) quantitation reports and chromatograms
✓ Retention Time Window Summary

D. Raw QC Data

✓ Method blank chromatogram and quantitation report
✓ LCS chromatogram and quantitation report
NA MS/MSD chromatogram and quantitation report
NA Duplicate chromatogram and quantitation report
✓ Instrument Run Log
✓ Daily Checklist
✓ Example Calculations

Checked By: dlh Date: 6/28/02

2.4.5.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES
METHOD BLANK SUMMARY

Login Number: L0206102
Blank File ID: 060602.12
Date Analyzed: 06/06/02
Time Analyzed: 14:03
Analyst: JWR

Work Group: WG119311
Blank Sample ID: WG119311-01
Instrument ID: IC2
Method: 9056

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG119311-02	060602.13	06/06/02 14:15	01
062-CEF9-2S-Q2-02-18	L0206102-01	060602.14	06/06/02 14:26	01
062-CEF9-3S-Q2-02-18	L0206102-02	060602.15	06/06/02 14:38	01
062-CEF9-5S-Q2-02-18	L0206102-03	060602.16	06/06/02 14:49	01
062-CEF9-7D-Q2-02-18	L0206102-04	060602.17	06/06/02 15:01	01
062-CEF9-7D-Q2-02-18	L0206102-05	060602.18	06/06/02 15:12	01
062-CEF9-7D-Q2-02-18	L0206102-06	060602.19	06/06/02 15:24	01
062-CEF9-9S-Q2-02-18	L0206102-07	060602.20	06/06/02 15:35	01
DUP	WG119311-04	060602.22	06/06/02 16:01	01
062-9EQB-Q2-02-18	L0206102-09	060602.23	06/06/02 16:12	01

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0206102
Run Date: 06/06/2002
Sample ID: WG119311-01
Instrument ID: IC2
Run Time: 14:03
Method: 9056
File ID: 060602.12
Analyst: JWR
Matrix: Water
Workgroup (AAB#): WG119311
Units: mg/L
Contract #:
Cal ID: IC2-

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Nitrate	0.0670	0.600	0.0670	1.00	ND
Nitrite	0.0610	0.400	0.0610	1.00	ND
Phosphate	0.163	1.00	0.163	1.00	ND

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0206102
Instrument ID: IC2
File ID: 060602.13
Workgroup (AAB#): WG119311
Contract #:

Run Date: 06/06/2002
Run Time: 14:15
Analyst: JWR

Sample ID: WG119311-02
Method: 9056
Matrix: Water
Units: mg/L
Cal ID: IC2-

Analytes	Expected	Found	% Rec	LCS Limits	Q
Nitrate	4.07	4.20	103	90 - 110	
Nitrite	3.65	3.77	103	90 - 110	
Phosphate	9.78	10.3	105	90 - 110	

KEMRON ENVIRONMENTAL SERVICES
MS/MSD REPORT

Loginnum: L0206102
Instrument ID: IC2
Parent ID: L0206102-04
Sample ID: L0206102-05 MS
Sample ID: L0206102-06 MSD

Cal ID: IC2-
Contract #:
File ID: 060602.17 Dil: 1
File ID: 060602.18 Dil: 1
File ID: 060602.19 Dil: 1

Worknum: WG119311
Method: 9056
Matrix: Water
Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Nitrate	ND	4.07	4.22	104	4.07	4.14	102	1.79	80 - 120	20	
Nitrite	ND	3.65	3.83	105	3.65	3.76	103	1.75	80 - 120	20	
Phosphate	ND	9.78	10.7	109	9.78	10.7	109	0.303	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON ENVIRONMENTAL SERVICES
DUPLICATE REPORT

Sample Login ID: L0206102-07
Instrument ID: IC2
Sample ID: WG119311-03 File ID: 060602.20 Dil: 1
Duplicate ID: WG119311-04 File ID: 060602.22 Dil: 1

Worknum: WG119311
Method: 9056
Matrix: Water
Units: mg/L

Analyte	Sample	Duplicate	RPD	RPD Limit	Q
Chloride	2.57	2.77	7.59	20	
Nitrate	0.0889		0	20	
Nitrite				20	
Phosphate				20	
Sulfate	49.7	48.8	1.81	20	

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 9056

AAB#: WG119311

Login Number: L0206102

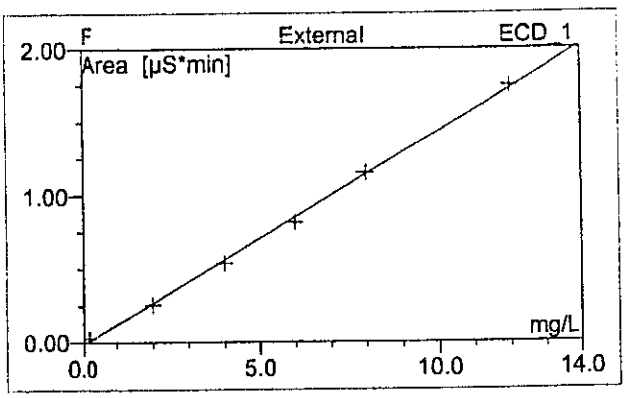
Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
062-9EQB-Q2-02-18	06/05/02	06/06/02	06/06/02	2	1.11	06/06/02	2	1.11	
062-CEF9-2S-Q2-02-18	06/05/02	06/06/02	06/06/02	2	1.06	06/06/02	2	1.06	
062-CEF9-3S-Q2-02-18	06/05/02	06/06/02	06/06/02	2	1.05	06/06/02	2	1.05	
062-CEF9-5S-Q2-02-18	06/05/02	06/06/02	06/06/02	2	0.965	06/06/02	2	0.965	
062-CEF9-7D-Q2-02-18	06/05/02	06/06/02	06/06/02	2	1.04	06/06/02	2	1.04	
062-CEF9-7D-Q2-02-18	06/05/02	06/06/02	06/06/02	2	1.04	06/06/02	2	1.04	
062-CEF9-7D-Q2-02-18	06/05/02	06/06/02	06/06/02	2	1.05	06/06/02	2	1.05	
062-CEF9-9S-Q2-02-18	06/05/02	06/06/02	06/06/02	2	1.02	06/06/02	2	1.02	

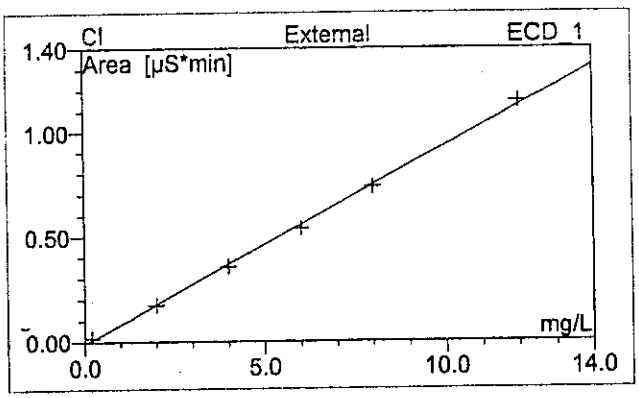
* EXT = MISSED EXTRACTION HOLD TIME
*ANAL = MISSED ANALYITICAL HOLD TIME

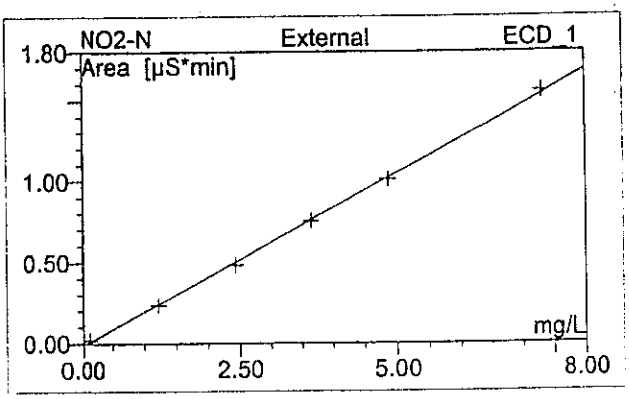
6 ANION STD #6

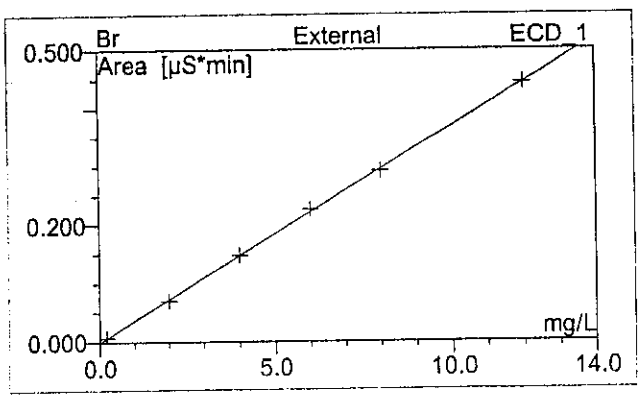
1,1 RDC ANION STD SOS0059-46

Sample Name:	**ANION STD #6**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/21/2002 18:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**







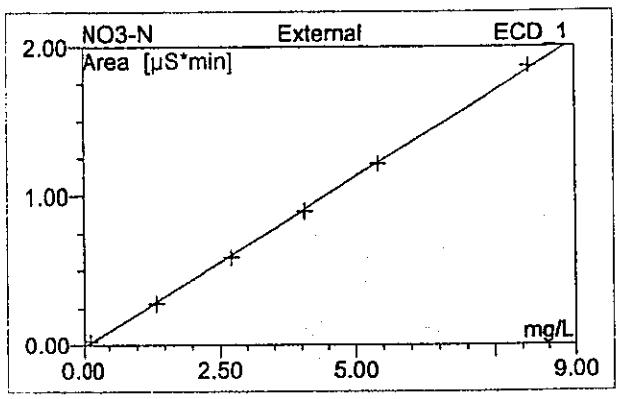


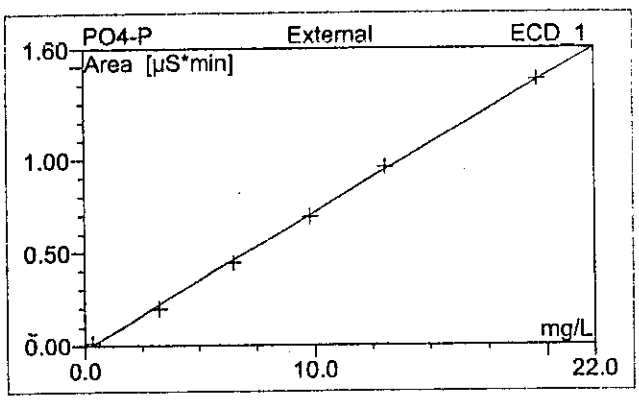
No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	0.89	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	1.11	F	0LOff	6	99.9254	-0.0220	0.1457	0.0000
3	1.45	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1.71	Cl	0LOff	6	99.9378	-0.0123	0.0949	0.0000
5	2.05	NO2-N	0LOff	6	99.9668	-0.0159	0.2129	0.0000
6	3.06	Br	0LOff	6	99.9829	-0.0006	0.0370	0.0000
7	3.46	NO3-N	0LOff	6	99.9712	-0.0182	0.2288	0.0000
8	5.78	PO4-P	0LOff	6	99.9603	-0.0203	0.0737	0.0000
9	7.70	SO4	0LOff	6	99.9246	-0.0599	0.0716	0.0000
Average:					99.9527	-0.0213	0.1235	0.0000

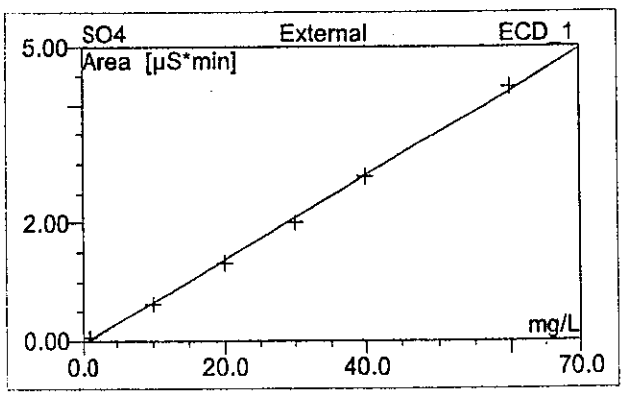
6 ANION STD #6

1,1 RDC ANION STD SOS0059-46

Sample Name:	**ANION STD #6**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/21/2002 18:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**







No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	0.89	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	1.11	F	0LOff	6	99.9254	-0.0220	0.1457	0.0000
3	1.45	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1.71	Cl	0LOff	6	99.9378	-0.0123	0.0949	0.0000
5	2.05	NO2-N	0LOff	6	99.9668	-0.0159	0.2129	0.0000
6	3.06	Br	0LOff	6	99.9829	-0.0006	0.0370	0.0000
7	3.46	NO3-N	0LOff	6	99.9712	-0.0182	0.2288	0.0000
8	5.78	PO4-P	0LOff	6	99.9603	-0.0203	0.0737	0.0000
9	7.70	SO4	0LOff	6	99.9246	-0.0599	0.0716	0.0000
Average:					99.9527	-0.0213	0.1235	0.0000

8 ANION ALT STD

1,1 RDC ANION ALT STD SOS0059-44

Sample Name:	**ANION ALT STD**	*Injection Volume:*	
Vial Number:	**36**	*Channel:*	
Sample Type:	**unknown**	*Wavelength:*	
Control Program:	**9056**	*Bandwidth:*	
Quantif. Method:	**9056**	*Dilution Factor:*	
Recording Time:	**5/21/2002 18:41**	*Sample Weight:*	
Run Time (min):	**9.10**	*Sample Amount:*	

ANION ALT STD	Actual mg/L	Recoved mg/L	%Difference	
F	6.00	5.8089	-3.19	PASS
Cl	6	5.9068	-1.55	PASS
NO2-N	3.65	3.6652	0.42	PASS
Br	6	6.3346	5.58	PASS
NO3-N	4.07	4.1408	1.74	PASS
PO4-P	9.78	9.8359	0.57	PASS
SO4	30	29.3113	-2.30	PASS

10 WG119310-01 CCV

1,1 JWR SOS0059-46 06/06/02

Sample Name:	**WG119310-01 CCV**	*Injection Volume:*	
Vial Number:	**41**	*Channel:*	
Sample Type:	**unknown**	*Wavelength:*	
Control Program:	**9056**	*Bandwidth:*	
Quantif. Method:	**9056**	*Dilution Factor:*	
Recording Time:	**6/6/2002 13:39**	*Sample Weight:*	
Run Time (min):	**9.10**	*Sample Amount:*	

WG119310-01 CCV	Actual mg/L	Recoved mg/L	%Difference	
F	6.00	6.4606	7.68	PASS
Cl	6	6.1330	2.22	PASS
NO2-N	3.65	3.7795	3.55	PASS
Br	6	6.3366	5.61	PASS
NO3-N	4.07	4.2274	3.87	PASS
PO4-P	9.78	10.2680	4.99	PASS
SO4	30	30.1723	0.57	PASS

21 WG119310-02 CCV

1,1 JWR SOS0059-46 06/06/02

Sample Name:	**WG119310-02 CCV**	*Injection Volume:*	
Vial Number:	**44**	*Channel:*	
Sample Type:	**unknown**	*Wavelength:*	
Control Program:	**9056**	*Bandwidth:*	
Quantif. Method:	**9056**	*Dilution Factor:*	
Recording Time:	**6/6/2002 15:47**	*Sample Weight:*	
Run Time (min):	**9.10**	*Sample Amount:*	

WG119310-02 CCV	Actual mg/L	Recoved mg/L	%Difference	
F	6.00	6.4071	6.79	PASS
Cl	6	6.0646	1.08	PASS
NO2-N	3.65	3.7087	1.61	PASS
Br	6	6.2688	4.48	PASS
NO3-N	4.07	4.1894	2.93	PASS
PO4-P	9.78	10.2414	4.72	PASS
SO4	30	29.7988	-0.67	PASS

32 WG119310-03 CCV

1,1 JWR SOS0059-46 06/06/02

Sample Name:	**WG119310-03 CCV**	*Injection Volume:*	
Vial Number:	**46**	*Channel:*	
Sample Type:	**unknown**	*Wavelength:*	
Control Program:	**9056**	*Bandwidth:*	
Quantif. Method:	**9056**	*Dilution Factor:*	
Recording Time:	**6/6/2002 17:56**	*Sample Weight:*	
Run Time (min):	**9.10**	*Sample Amount:*	

WG119310-03 CCV	Actual mg/L	Recoved mg/L	%Difference	
F	6.00	6.4815	8.02	PASS
Cl	6	6.5062	8.44	PASS
NO2-N	3.65	3.8852	6.44	PASS
Br	6	6.3562	5.94	PASS
NO3-N	4.07	4.2588	4.64	PASS
PO4-P	9.78	10.4342	6.69	PASS
SO4	30	30.3341	1.11	PASS

Operator: Analyst

Printed: 6/18/2002 09:52:17

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 38

Created: 6/6/2002 12:38:55 by Analyst
Last Update: 6/6/2002 16:49:59 by Analyst

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
1	ANION STD #1	Standard	1	25.0	9056	9056	Finished	5/21/2002 17:13:47
2	ANION STD #2	Standard	2	25.0	9056	9056	Finished	5/21/2002 17:25:17
3	ANION STD #3	Standard	3	25.0	9056	9056	Finished	5/21/2002 17:36:47
4	ANION STD #4	Standard	5	25.0	9056	9056	Finished	5/21/2002 17:48:17
5	ANION STD #5	Standard	5	25.0	9056	9056	Finished	5/21/2002 17:59:47
6	ANION STD #6	Standard	6	25.0	9056	9056	Finished	5/21/2002 18:11:17
7	ELUENT BLANK	Unknown	7	25.0	9056	9056	Finished	5/21/2002 18:30:18
8	ANION ALT STD	Unknown	36	25.0	9056	9056	Finished	5/21/2002 18:41:48
9	ELUENT BLANK	Unknown	44	25.0	9056	9056	Finished	6/6/2002 13:28:29
10	WG119310-01 CCV	Unknown	41	25.0	9056	9056	Finished	6/6/2002 13:39:59
11	MRL @1/2 (ANION STD #2)	Unknown	42	25.0	9056	9056	Finished	6/6/2002 13:52:28
12	WG119311-01 ANION BLANK	Unknown	43	25.0	9056	9056	Finished	6/6/2002 14:03:58
13	WG119311-02 ANION LCS	Unknown	43	25.0	9056	9056	Finished	6/6/2002 14:15:28
14	L0206102-01	Unknown	44	25.0	9056	9056	Finished	6/6/2002 14:26:57
15	L0206102-02	Unknown	44	25.0	9056	9056	Finished	6/6/2002 14:38:27
16	L0206102-03	Unknown	45	25.0	9056	9056	Finished	6/6/2002 14:49:57
17	WG119311-05 L0206102-04 REF	Unknown	44	25.0	9056	9056	Finished	6/6/2002 15:01:27
18	WG119311-06 L0206102-05 MS	Unknown	44	25.0	9056	9056	Finished	6/6/2002 15:12:56
19	WG119311-07 L0206102-06 MSD	Unknown	43	25.0	9056	9056	Finished	6/6/2002 15:24:26
20	WG119311-03 L0206102-07 REF	Unknown	43	25.0	9056	9056	Finished	6/6/2002 15:35:57
21	WG119310-02 CCV	Unknown	44	25.0	9056	9056	Finished	6/6/2002 15:47:27
22	WG119311-04 L0206102-08 DUP	Unknown	45	25.0	9056	9056	Finished	6/6/2002 16:01:14
23	L0206102-09 (EB)	Unknown	46	25.0	9056	9056	Finished	6/6/2002 16:12:44
24	L0206101-01	Unknown	46	25.0	9056	9056	Finished	6/6/2002 16:24:14
25	L0206101-03 (ER)	Unknown	47	25.0	9056	9056	Finished	6/6/2002 16:35:44
26	L0205665-01	Unknown	45	25.0	9056	9056	Finished	6/6/2002 16:47:14
27	L0205665-03	Unknown	46	25.0	9056	9056	Finished	6/6/2002 16:58:44
28	L0205665-05	Unknown	47	25.0	9056	9056	Finished	6/6/2002 17:10:14
29	L0205665-07	Unknown	47	25.0	9056	9056	Finished	6/6/2002 17:21:44
30	L0205665-09	Unknown	48	25.0	9056	9056	Finished	6/6/2002 17:33:14
31	L0205665-11	Unknown	48	25.0	9056	9056	Finished	6/6/2002 17:44:44
32	WG119310-03 CCV	Unknown	46	25.0	9056	9056	Finished	6/6/2002 17:56:15
33	L0206006-01	Unknown	47	25.0	9056	9056	Finished	6/6/2002 18:07:44
34	L0206006-02	Unknown	48	25.0	9056	9056	Finished	6/6/2002 18:19:15
35	L0206006-03	Unknown	48	25.0	9056	9056	Finished	6/6/2002 18:30:45
36	MRL @1/2 (ANION STD #2)	Unknown	49	25.0	9056	9056	Finished	6/6/2002 18:42:15
37	WG119310-04 CCV	Unknown	53	25.0	9056	9056	Finished	6/6/2002 18:53:45
38	END	Unknown	41	25.0	DX-320 OFF	9056	Finished	6/6/2002 19:05:15

PeakNet © Dionex Corporation, Version 6.30 SP1 Build 587

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320 Created: 6/6/2002 12:38:55 by Analyst
#Samples: 38 Last Update: 6/6/2002 16:49:59 by Analyst

No.	Name	Dil. Factor	Sample ID	Comment
1	ANION STD #1	1.0000	✓	1,1 RDC ANION STD SOS0059-46
2	ANION STD #2	1.0000	✓	1,1 RDC ANION STD SOS0059-46
3	ANION STD #3	1.0000	✓	1,1 RDC ANION STD SOS0059-46
4	ANION STD #4	1.0000	✓	1,1 RDC ANION STD SOS0059-46
5	ANION STD #5	1.0000	✓	1,1 RDC ANION STD SOS0059-46
6	ANION STD #6	1.0000	✓	1,1 RDC ANION STD SOS0059-46
7	ELUENT BLANK	1.0000	✓	1,1 RDC
8	ANION ALT STD	1.0000	✓	1,1 RDC ANION ALT STD SOS0059-44
9	ELUENT BLANK	1.0000	✓	1,1 JWR
10	WG119310-01 CCV	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
11	MRL @1/2 (ANION STD #2)	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
12	WG119311-01 ANION BLANK	1.0000	✓	1,1 JWR 06/06/02
13	WG119311-02 ANION LCS	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
14	L0206102-01	1.0000	✓	1,1 JWR
15	L0206102-02	1.0000	✓	1,1 JWR
16	L0206102-03	1.0000	✓	1,1 JWR
17	WG119311-05 L0206102-04 REF	1.0000	✓	1,1 JWR REF for MS/MSD
18	WG119311-06 L0206102-05 MS	1.0000	✓	1,1 JWR MS of L0206102-04
19	WG119311-07 L0206102-06 MSD	1.0000	✓	1,1 JWR MSD of L0206102-04
20	WG119311-03 L0206102-07 REF	1.0000	✓	1,1 JWR REF for DUP
21	WG119310-02 CCV	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
22	WG119311-04 L0206102-08 DUP	1.0000	✓	1,1 JWR DUP of L0206102-07
23	L0206102-09 (EB)	1.0000	✓	1,1 JWR
24	L0206101-01	1.0000	RR 10,50	1,1 JWR
25	L0206101-03 (ER)	1.0000	✓	1,1 JWR
26	L0205665-01	1.0000	RR 5X	1,1 JWR
27	L0205665-03	1.0000	RR 4X	1,1 JWR
28	L0205665-05	1.0000	RR 2X	1,1 JWR
29	L0205665-07	1.0000	RR 2X	1,1 JWR
30	L0205665-09	1.0000	RR 2X	1,1 JWR
31	L0205665-11	1.0000	RR 100, 1000	1,1 JWR
32	WG119310-03 CCV	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
33	L0206006-01	1.0000	RR 4X	1,1 JWR
34	L0206006-02	1.0000	RR 4X	1,1 JWR
35	L0206006-03	1.0000	✓	1,1 JWR
36	MRL @1/2 (ANION STD #2)	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
37	WG119310-04 CCV	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
38	END	1.0000		1,1 JWR

Cl < RL (RR @ dil'n. not needed)

RDC 6/18/02
mdc 6/18/02

KEMRON ENVIRONMENTAL SERVICES
IC Laboratory Maintenance Log

Analysis Date/Time June 6, 2002 Instrument ID IC 2 Column ID AG4A-SC AS4A-SC Data Subdirectory 060602
Analyst Initials JWR SOP # IC01 Rev. # 2 ✓ 9056 SOP # IC02 Rev. # ____ 314.0

Daily Check
- ☑ Mobile phase reservoir
- ☑ System pressure 1324 psi
- ☑ Waste container

Returned to Control?
Yes ____ No ____

Additional Maintenance
Problem: _____

Action Taken: _____

Comments

Several samples to RR @ dil'n.

L0205665-05, 07, 09 are LRL for Cl

L0205665-11 chloride peak not identified due to its intensity, will RR @ dil'n.

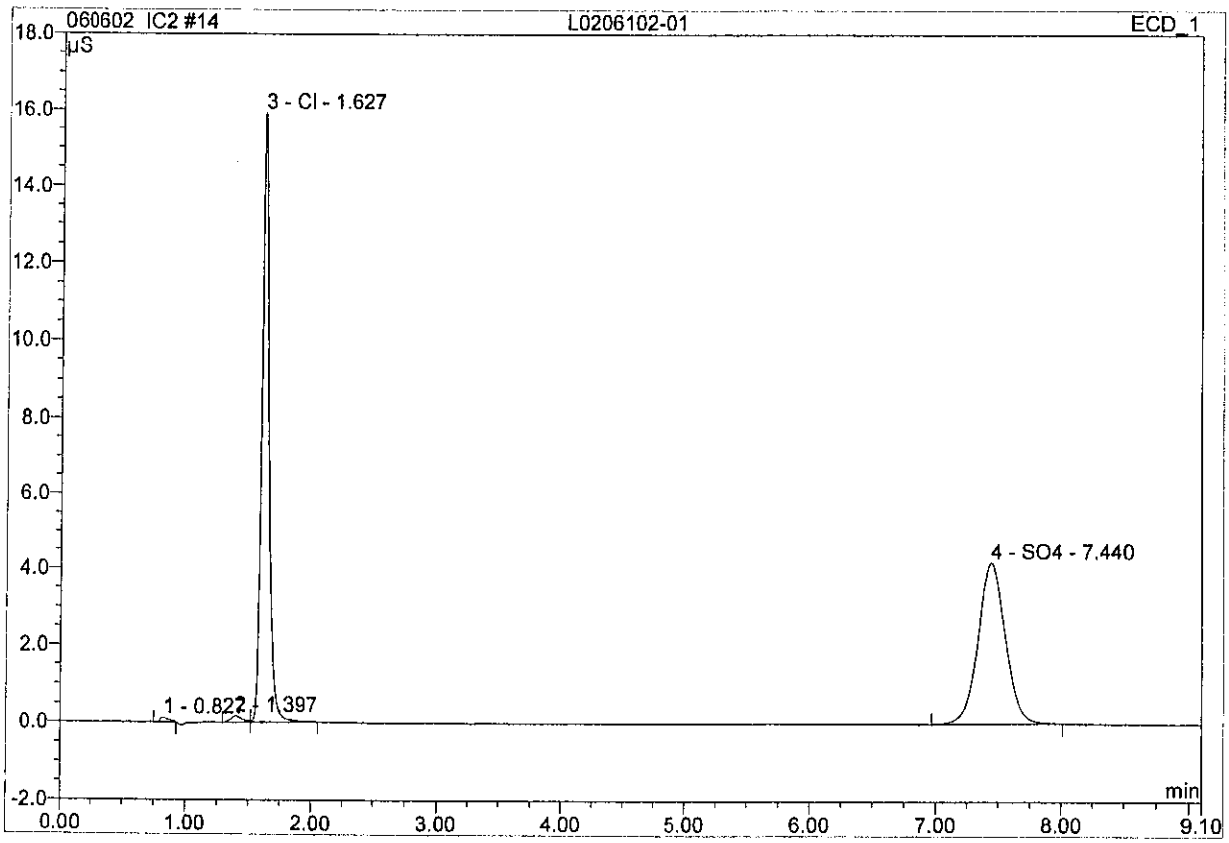
Reviewed By: dc 6/8/02

2.4.5.2 Sample Data

14 L0206102-01

1,1 JWR

Sample Name:	**L0206102-01**	*Injection Volume:*	**25.0**
Vial Number:	**44**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 14:26**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

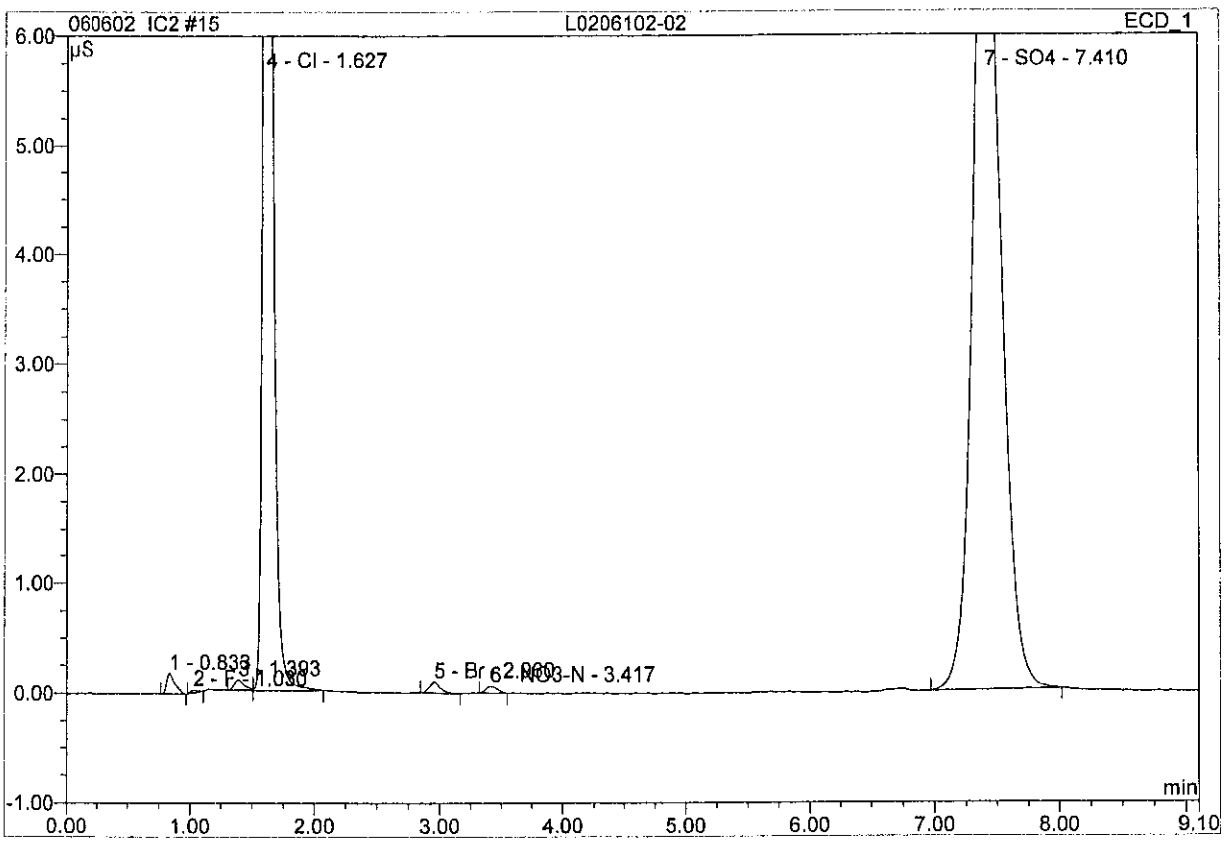


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.83	n.a.	0.122	0.010	0.45	n.a.	BM
2	1.40	n.a.	0.172	0.018	0.85	n.a.	BM
3	1.63	Cl	15.929	1.051	49.02	11.204	MB
4	7.44	SO4	4.192	1.065	49.68	15.708	BMB
Total:			20.417	2.144	100.00	26.911	

15 L0206102-02

1,1 JWR

Sample Name:	**L0206102-02**	*Injection Volume:*	**25.0**
Vial Number:	**44**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 14:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

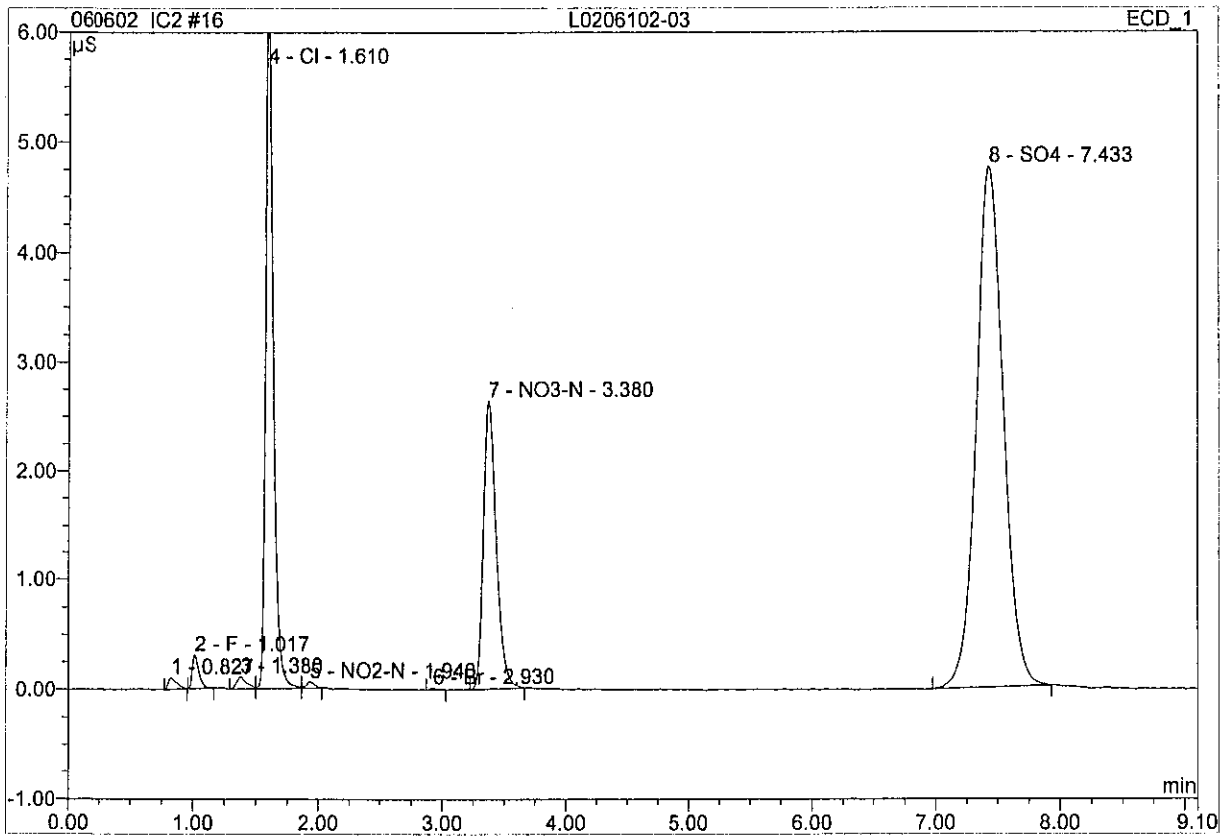


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.83	n.a.	0.179	0.015	0.43	n.a.	BMB
2	1.03	F	0.023	0.001	0.04	0.161	BMB
3	1.39	n.a.	0.089	0.009	0.26	n.a.	BM
4	1.63	Cl	20.473	1.360	40.08	14.457	MB
5	2.96	Br	0.097	0.010	0.30	0.294	BMB
6	3.42	NO3-N	0.058	0.006	0.19	0.108 F	BMB
7	7.41	SO4	7.959	1.991	58.69	28.637	BMB
Total:			28.879	3.392	100.00	43.657	

16 L0206102-03

1,1 JWR

Sample Name:	**L0206102-03**	*Injection Volume:*	**25.0**
Vial Number:	**45**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 14:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

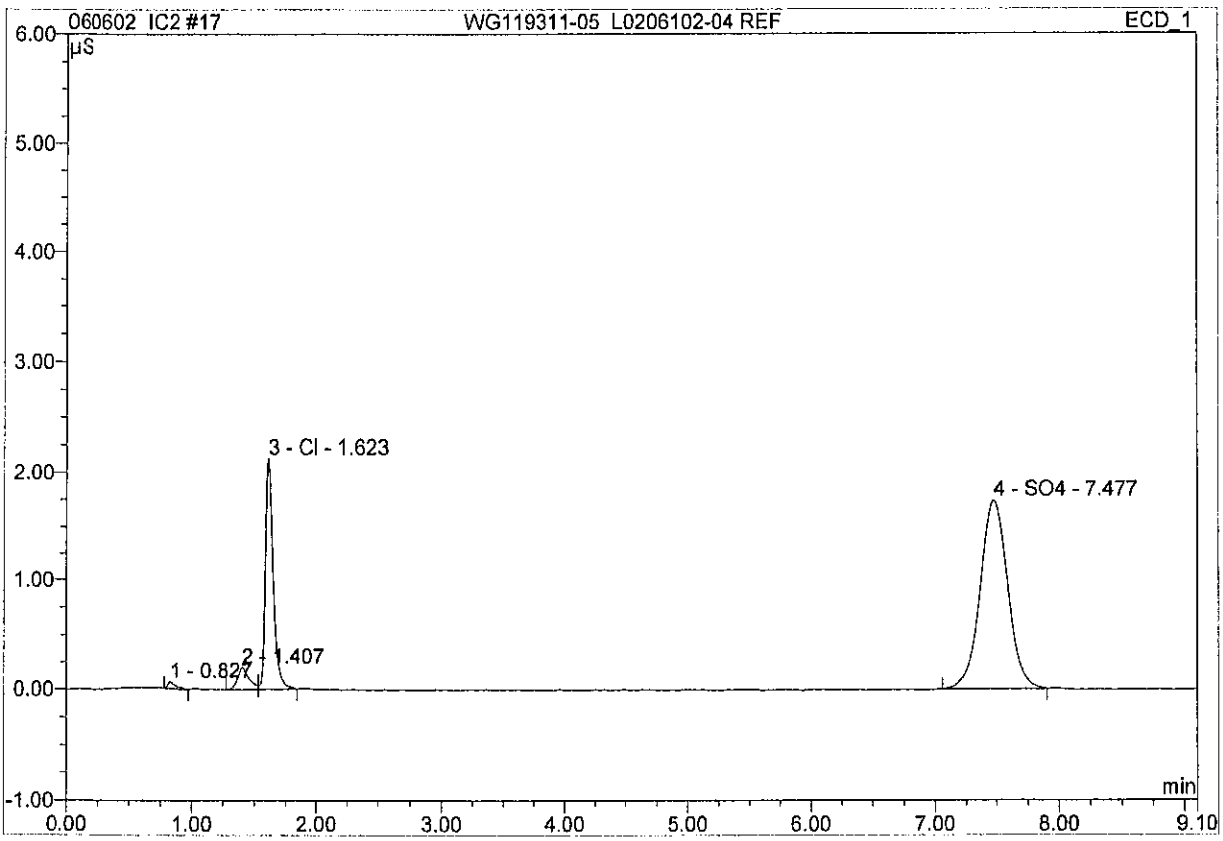


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.83	n.a.	0.103	0.008	0.42	n.a.	BMB
2	1.02	F	0.306	0.019	0.95	0.281	BMB
3	1.38	n.a.	0.108	0.011	0.53	n.a.	BM
4	1.61	Cl	6.393	0.438	21.93	4.745	M
5	1.94	NO2-N	0.057	0.004	0.22	0.096 F	MB
6	2.93	Br	0.015	0.001	0.06	0.047	BMB
7	3.38	NO3-N	2.637	0.319	15.97	1.473 ✓	BMB
8	7.43	SO4	4.754	1.197	59.93	17.552	BMB
Total:			14.373	1.997	100.00	24.194	

17 WG119311-05 L0206102-04 REF

1,1 JWR REF for MS/MSD

Sample Name:	**WG119311-05 L0206102-04 REF**	*Injection Volume:*	**25.0**
Vial Number:	**44**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 15:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

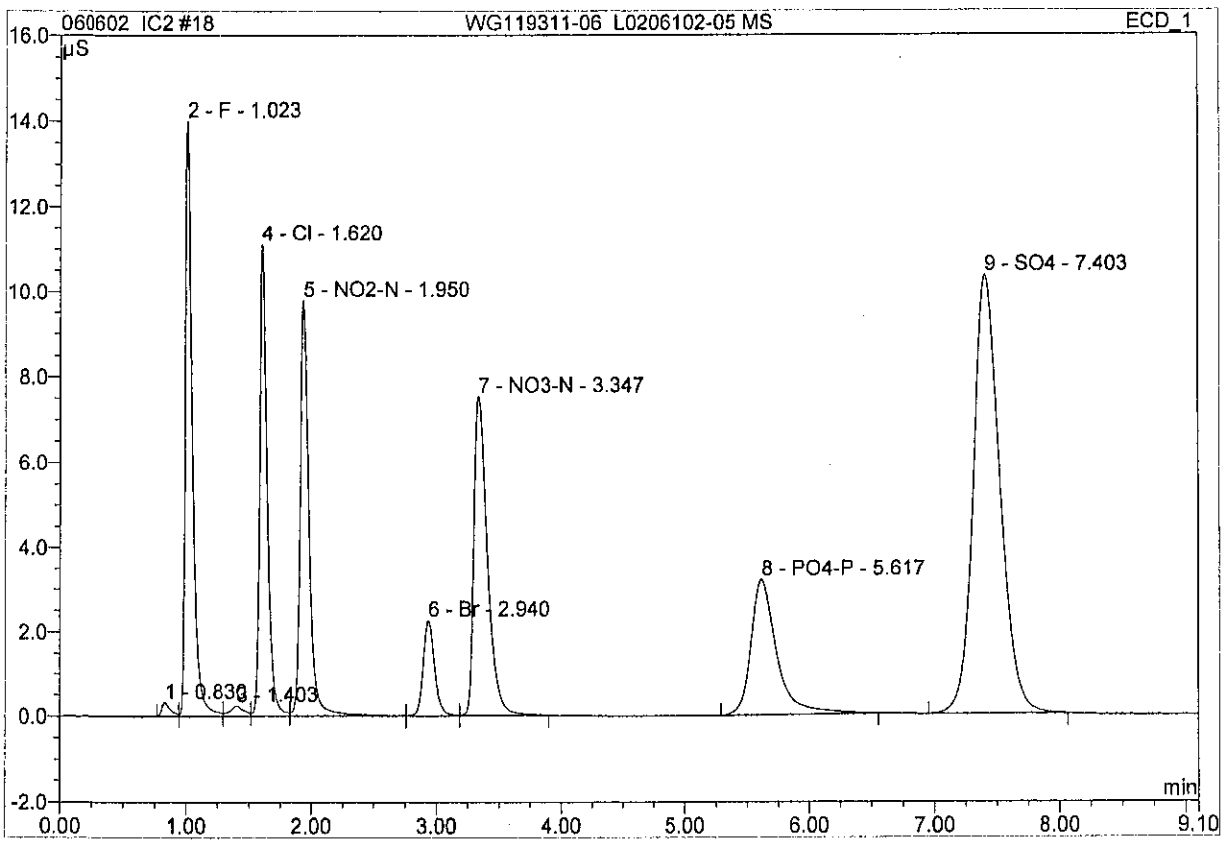


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.83	n.a.	0.061	0.004	0.72	n.a.	BMB
2	1.41	n.a.	0.202	0.022	3.50	n.a.	BM
3	1.62	Cl	2.126	0.148	23.95	1.690	MB
4	7.48	SO4	1.735	0.444	71.83	7.037	BMB
Total:			4.123	0.618	100.00	8.727	

18 WG119311-06 L0206102-05 MS

1,1 JWR MS of L0206102-04

Sample Name:	**WG119311-06 L0206102-05 MS**	*Injection Volume:*	**25.0**
Vial Number:	**44**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 15:12**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

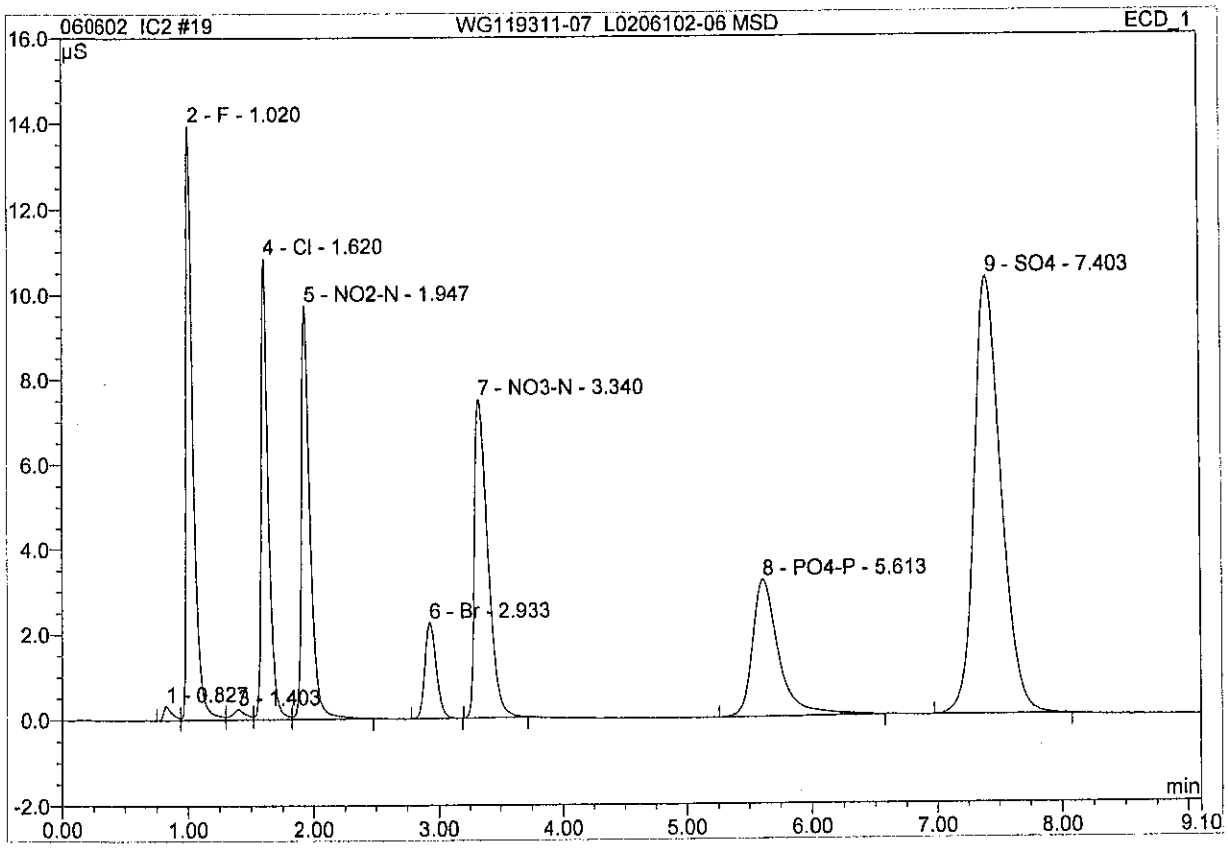


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.83	n.a.	0.319	0.025	0.36	n.a.	BM
2	1.02	F	13.992	0.914	12.94	6.423	M
3	1.40	n.a.	0.233	0.030	0.43	n.a.	M
4	1.62	Cl	11.100	0.755	10.70	8.086	M
5	1.95	NO2-N	9.778	0.800	11.33	3.831	M
6	2.94	Br	2.250	0.233	3.31	6.320	M
7	3.35	NO3-N	7.515	0.947	13.42	4.219	MB
8	5.62	PO4-P	3.198	0.767	10.86	10.680	BMB
9	7.40	SO4	10.322	2.588	36.66	36.981	BMB
Total:			58.706	7.060	100.00	76.540	

19 WG119311-07 L0206102-06 MSD

1,1 JWR MSD of L0206102-04

Sample Name:	**WG119311-07 L0206102-06 MSD**	*Injection Volume:*	**25.0**
Vial Number:	**43**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 15:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

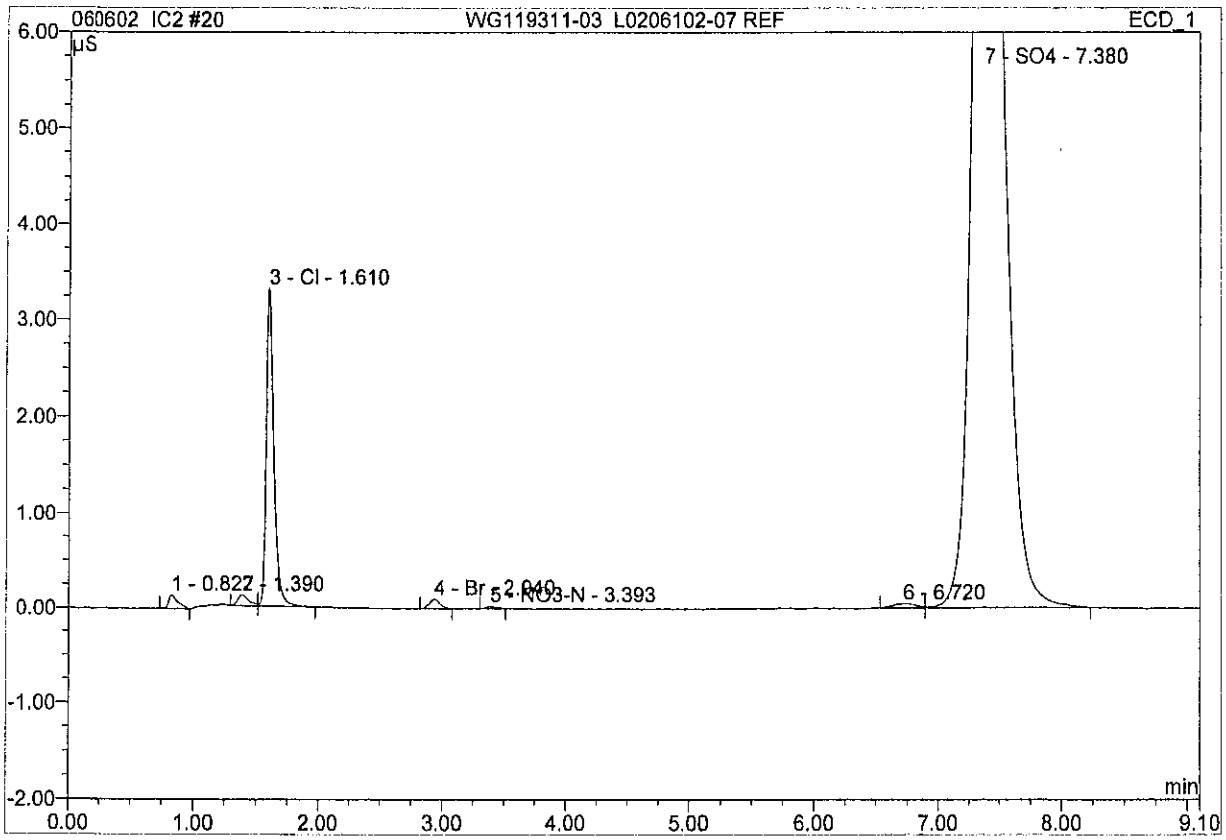


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.83	n.a.	0.326	0.026	0.37	n.a.	BM
2	1.02	F	13.939	0.909	13.02	6.391	M
3	1.40	n.a.	0.239	0.030	0.43	n.a.	M
4	1.62	Cl	10.827	0.733	10.49	7.849	M
5	1.95	NO2-N	9.727	0.785	11.25	3.765	MB
6	2.93	Br	2.236	0.229	3.28	6.207	BMB
7	3.34	NO3-N	7.487	0.930	13.32	4.144	BMB
8	5.61	PO4-P	3.195	0.769	11.01	10.713	BMB
9	7.40	SO4	10.275	2.573	36.84	36.771	BMB
Total:			58.250	6.985	100.00	75.839	

20 WG119311-03 L0206102-07 REF

1,1 JWR REF for DUP

Sample Name:	**WG119311-03 L0206102-07 REF**	*Injection Volume:*	**25.0**
Vial Number:	**43**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 15:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

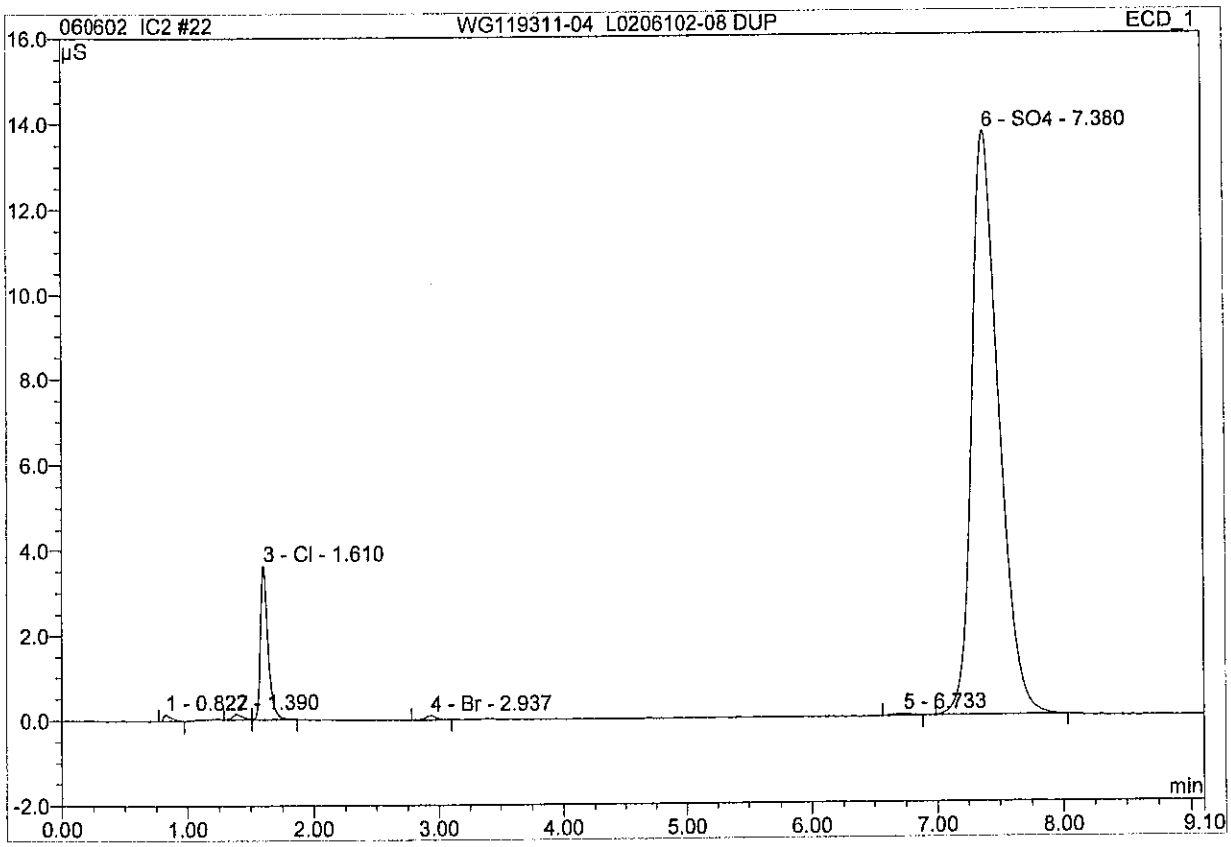


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.83	n.a.	0.142	0.012	0.31	n.a.	BMB
2	1.39	n.a.	0.111	0.011	0.30	n.a.	BM
3	1.61	Cl	3.307	0.232	6.14	2.570	MB
4	2.94	Br	0.096	0.010	0.26	0.283	BMB
5	3.39	NO3-N	0.022	0.002	0.06	0.089	BMB
6	6.72	n.a.	0.043	0.009	0.24	n.a.	BM
7	7.38	SO4	13.851	3.496	92.69	49.664	MB
Total:			17.573	3.772	100.00	52.606	

22 WG119311-04 L0206102-08 DUP

1,1 JWR DUP of L0206102-07

Sample Name:	**WG119311-04 L0206102-08 DUP**	*Injection Volume:*	**25.0**
Vial Number:	**45**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 16:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

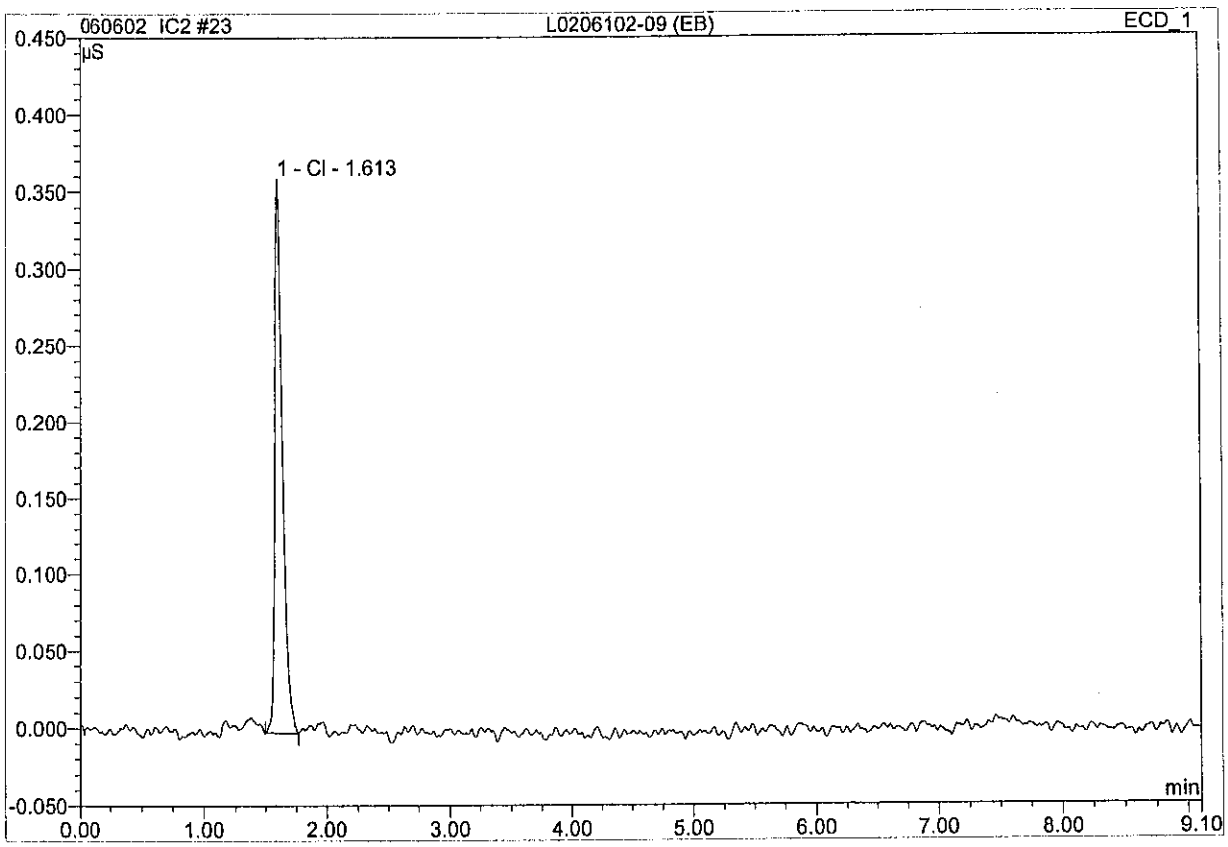


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.83	n.a.	0.145	0.011	0.30	n.a.	BMB
2	1.39	n.a.	0.124	0.012	0.32	n.a.	BM
3	1.61	Cl	3.616	0.251	6.73	2.773	MB
4	2.94	Br	0.101	0.010	0.28	0.300	BMB
5	6.73	n.a.	0.041	0.007	0.19	n.a.	BMB
6	7.38	SO4	13.686	3.433	92.16	48.774	BMB
Total:			17.714	3.724	100.00	51.847	

23 L0206102-09 (EB)

1,1 JWR

Sample Name:	**L0206102-09 (EB)**	*Injection Volume:*	**25.0**
Vial Number:	**46**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 16:12**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	1.61	Cl	0.361	0.026	100.00	0.408	BMB
Total:			0.361	0.026	100.00	0.408	

2.4.5.3 Standards Data

100ml Total	1/10 #2	2 ML STD	4 ML STD	CCV 6 ML STD	8 ML STD	12 ML STD	CCV 3ML ALT STD
ANALYTE	LEVEL #1	LEVEL #2	LEVEL #3	LEVEL #4	LEVEL #5	LEVEL #6	ALT SORCE STD
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
FLUORIDE	0.2000	2.0000	4.0000	6.0000	8.0000	12.0000	6.0000
CHLORIDE	0.2000	2.0000	4.0000	6.0000	8.0000	12.0000	6.0000
NITRITE-N **	0.1218	1.2178	2.4356	3.6534	4.8714	7.3070	3.6534
BROMIDE	0.2000	2.0000	4.0000	6.0000	8.0000	12.0000	6.0000
NITRATE-N **	0.1355	1.3554	2.7108	4.0662	5.4216	8.1322	4.0662
PHOSPHATE-P *	0.3261	3.2614	6.5228	9.7842	13.0456	19.5682	9.7842
SULFATE	1.0000	10.0000	20.0000	30.0000	40.0000	60.0000	30.0000

* as phosphorous ** as nitrogen

NO2 -N $\frac{14.0067}{46.0055}$ = % 30.446 nitrogen

NO3-N $\frac{14.0067}{62.0049}$ = % 22.590 nitrogen

PO4-P $\frac{30.97376}{94.97136}$ = % 32.614 phosphorous

ANALYTE	LEVEL #1	LEVEL #2	LEVEL #3	LEVEL #4	LEVEL #5	LEVEL #6	ALT SORCE STD
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
FLUORIDE	0.200	2.000	4.000	6.000	8.000	12.000	6.000
CHLORIDE	0.200	2.000	4.000	6.000	8.000	12.000	6.000
NITRITE	0.400	4.000	8.000	12.000	16.000	24.000	12.000
BROMIDE	0.200	2.000	4.000	6.000	8.000	12.000	6.000
NITRATE	0.600	6.000	12.000	18.000	24.000	36.000	18.000
PHOSPHATE	1.000	10.000	20.000	30.000	40.000	60.000	30.000
SULFATE	1.000	10.000	20.000	30.000	40.000	60.000	30.000

Note: Calibration standard amounts are as indicated. To convert to calibration levels for extracted soils multiply amounts by 10 (nominal extraction is 1 part soil extracted into 10 parts water).

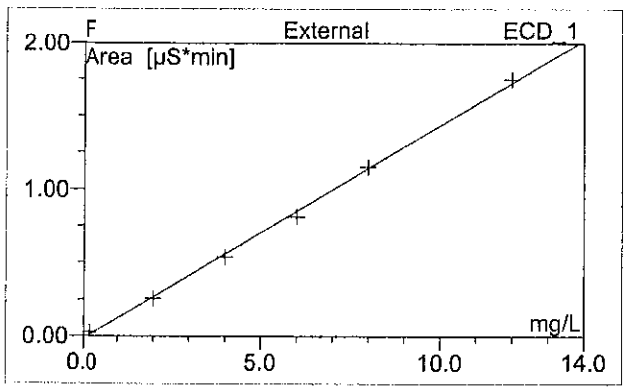
Primary Intermediate Std. Conc Br, Cl, and F are at 100 mg/L
NO2 is at 200 mg/L
NO3 is at 300 mg/L
PO4 and SO4 are at 500 mg/L

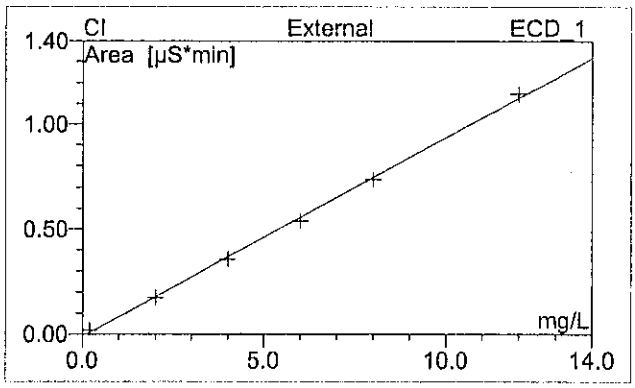
Alternate intermediate standard concentrations are twice the amount of the primary standard.

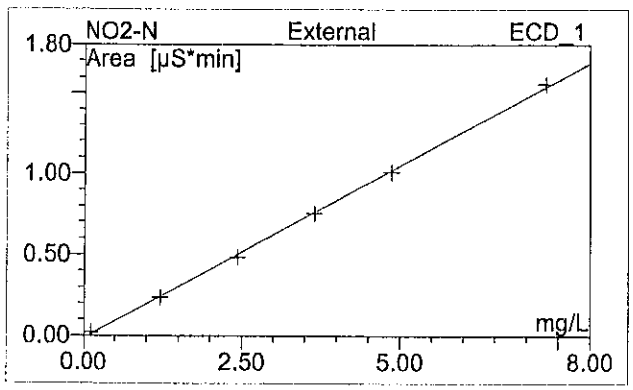
6 ANION STD #6

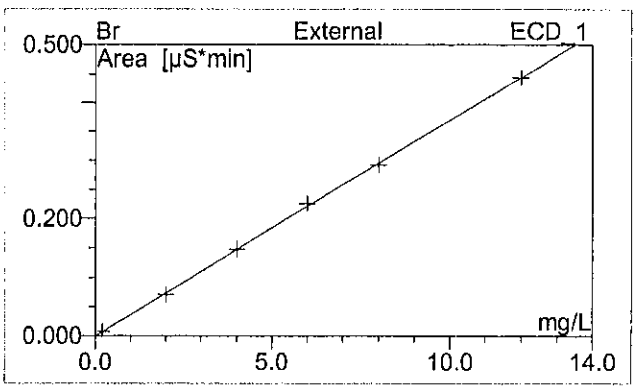
1,1 RDC ANION STD SOS0059-46

Sample Name:	**ANION STD #6**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/21/2002 18:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**







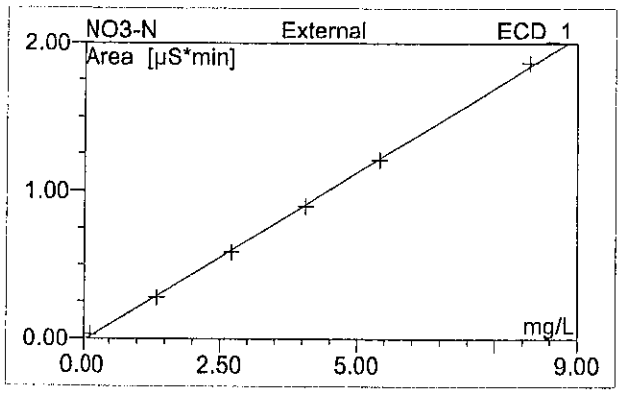


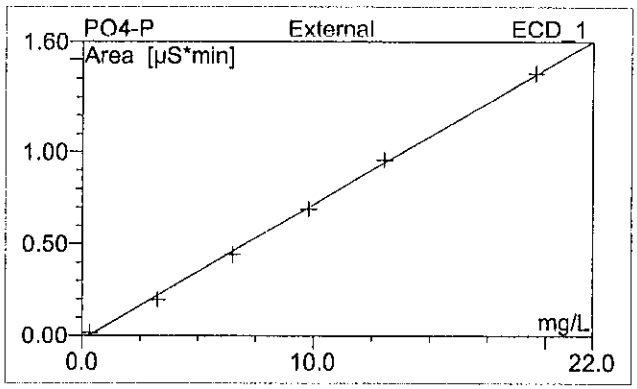
No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	0.89	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	1.11	F	0LOff	6	99.9254	-0.0220	0.1457	0.0000
3	1.45	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1.71	Cl	0LOff	6	99.9378	-0.0123	0.0949	0.0000
5	2.05	NO2-N	0LOff	6	99.9668	-0.0159	0.2129	0.0000
6	3.06	Br	0LOff	6	99.9829	-0.0006	0.0370	0.0000
7	3.46	NO3-N	0LOff	6	99.9712	-0.0182	0.2288	0.0000
8	5.78	PO4-P	0LOff	6	99.9603	-0.0203	0.0737	0.0000
9	7.70	SO4	0LOff	6	99.9246	-0.0599	0.0716	0.0000
Average:					99.9527	-0.0213	0.1235	0.0000

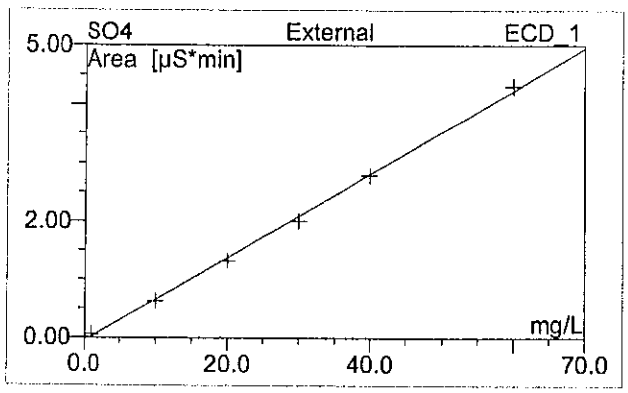
6 ANION STD #6

1,1 RDC ANION STD SOS0059-46

Sample Name:	**ANION STD #6**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/21/2002 18:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**





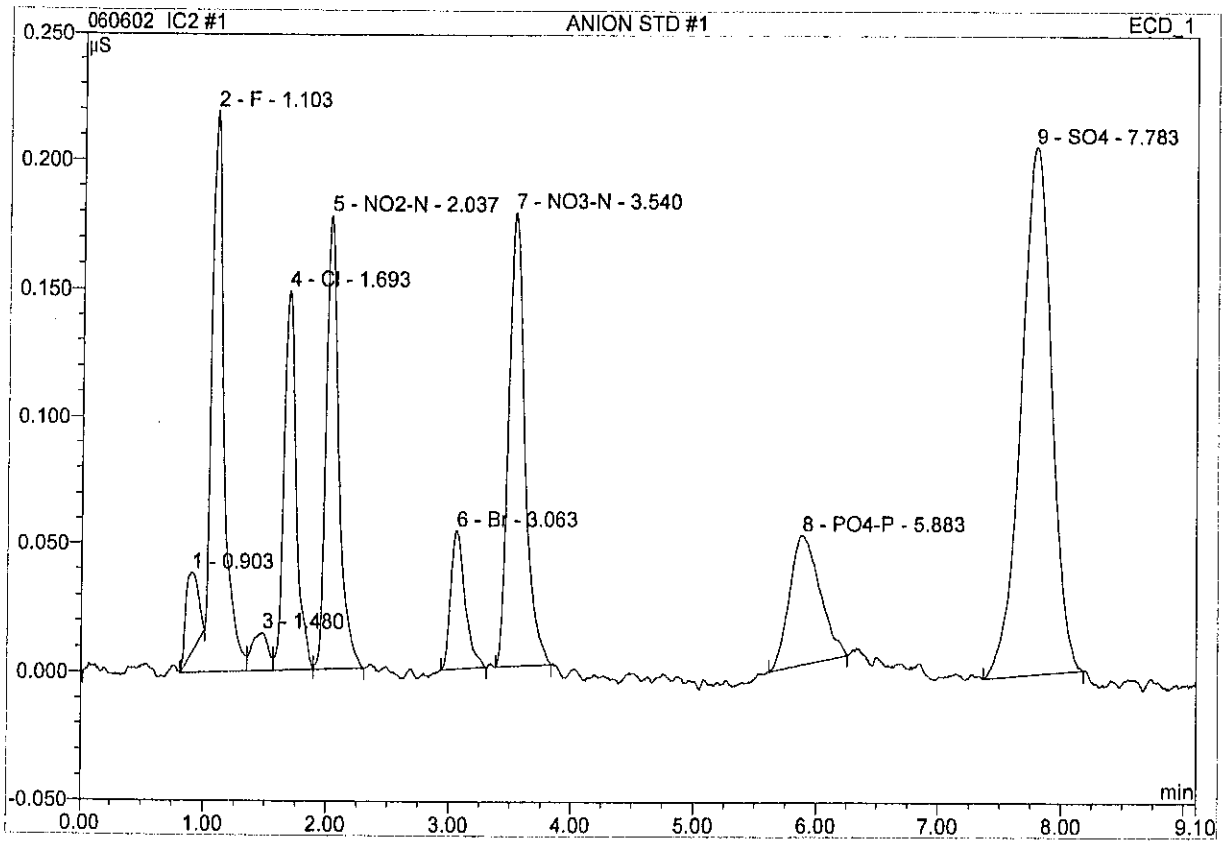


No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	0.89	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	1.11	F	0LOff	6	99.9254	-0.0220	0.1457	0.0000
3	1.45	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1.71	Cl	0LOff	6	99.9378	-0.0123	0.0949	0.0000
5	2.05	NO2-N	0LOff	6	99.9668	-0.0159	0.2129	0.0000
6	3.06	Br	0LOff	6	99.9829	-0.0006	0.0370	0.0000
7	3.46	NO3-N	0LOff	6	99.9712	-0.0182	0.2288	0.0000
8	5.78	PO4-P	0LOff	6	99.9603	-0.0203	0.0737	0.0000
9	7.70	SO4	0LOff	6	99.9246	-0.0599	0.0716	0.0000
Average:					99.9527	-0.0213	0.1235	0.0000

1 ANION STD #1

1,1 RDC ANION STD SOS0059-46

Sample Name:	**ANION STD #1**	*Injection Volume:*	**25.0**
Vial Number:	**1**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/21/2002 17:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

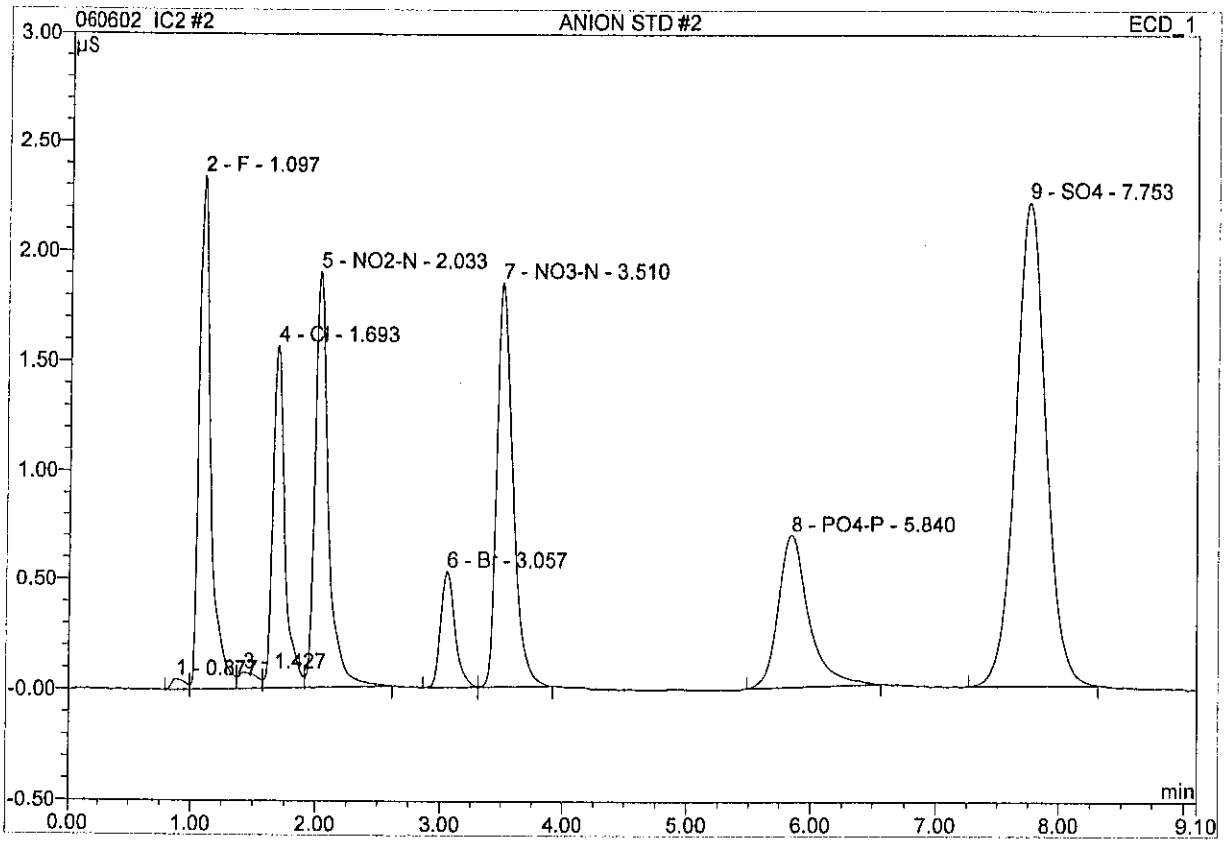


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.90	n.a.	0.031	0.004	1.99	n.a.	Ru
2	1.10	F	0.219	0.027	15.07	0.338	BM
3	1.48	n.a.	0.015	0.002	1.24	n.a.	M
4	1.69	Cl	0.149	0.017	9.60	0.312	M
5	2.04	NO2-N	0.177	0.022	11.98	0.176	MB
6	3.06	Br	0.054	0.007	4.07	0.215	BMB
7	3.54	NO3-N	0.177	0.027	14.93	0.197	BMB
8	5.88	PO4-P	0.050	0.015	8.08	0.473	BMB
9	7.78	SO4	0.206	0.060	33.03	1.667	BMB
Total:			1.078	0.180	100.00	3.379	

2 ANION STD #2

1,1 RDC ANION STD SOS0059-46

Sample Name:	**ANION STD #2**	*Injection Volume:*	**25.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/21/2002 17:25**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

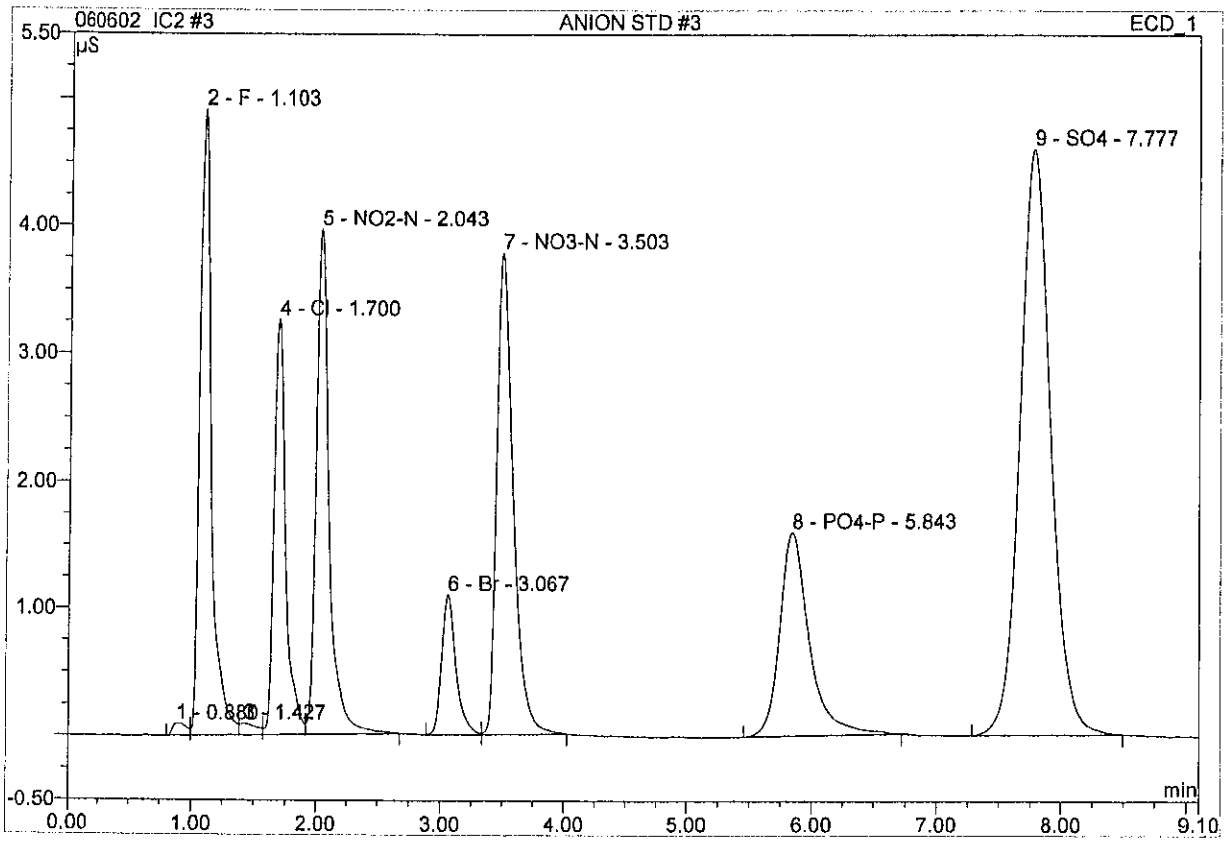


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.88	n.a.	0.048	0.006	0.32	n.a.	BM
2	1.10	F	2.339	0.258	13.84	1.922	M
3	1.43	n.a.	0.073	0.013	0.67	n.a.	M
4	1.69	Cl	1.563	0.175	9.38	1.972	M
5	2.03	NO2-N	1.894	0.235	12.63	1.180	MB
6	3.06	Br	0.527	0.071	3.79	1.922	BM
7	3.51	NO3-N	1.842	0.279	15.00	1.301	MB
8	5.84	PO4-P	0.692	0.196	10.54	2.941	BMB
9	7.75	SO4	2.205	0.630	33.82	9.638	BMB
Total:			11.182	1.863	100.00	20.875	

3 ANION STD #3

1,1 RDC ANION STD SOS0059-46

Sample Name:	**ANION STD #3**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/21/2002 17:36**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

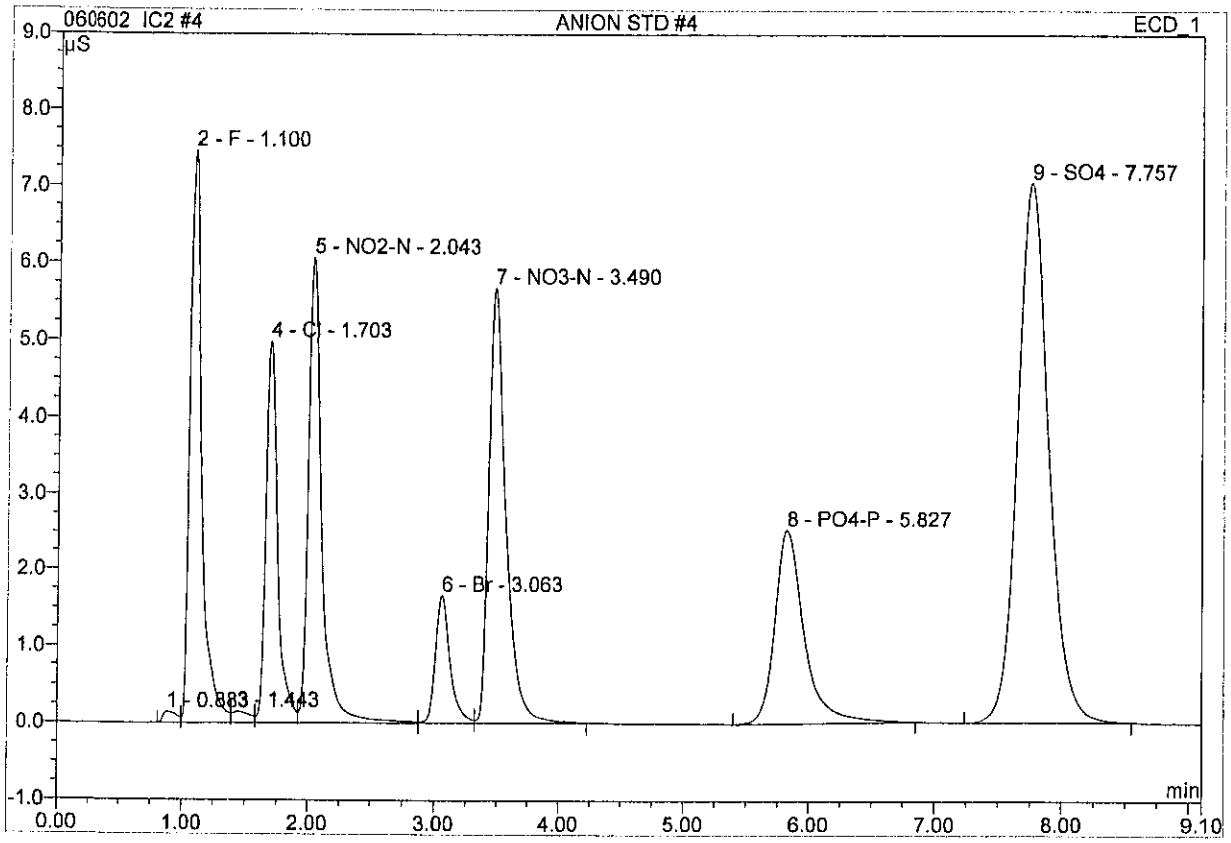


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.88	n.a.	0.094	0.012	0.31	n.a.	BM
2	1.10	F	4.912	0.537	13.77	3.836	M
3	1.43	n.a.	0.092	0.014	0.37	n.a.	M
4	1.70	Cl	3.254	0.355	9.11	3.872	M
5	2.04	NO2-N	3.956	0.484	12.42	2.350	MB
6	3.07	Br	1.095	0.148	3.79	4.002	BM
7	3.50	NO3-N	3.775	0.586	15.03	2.641	MB
8	5.84	PO4-P	1.602	0.443	11.36	6.282	BMB
9	7.78	SO4	4.598	1.320	33.85	19.266	BMB
Total:			23.380	3.899	100.00	42.249	

4 ANION STD #4

1,1 RDC ANION STD SOS0059-46

Sample Name:	**ANION STD #4**	*Injection Volume:*	**25.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/21/2002 17:48**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

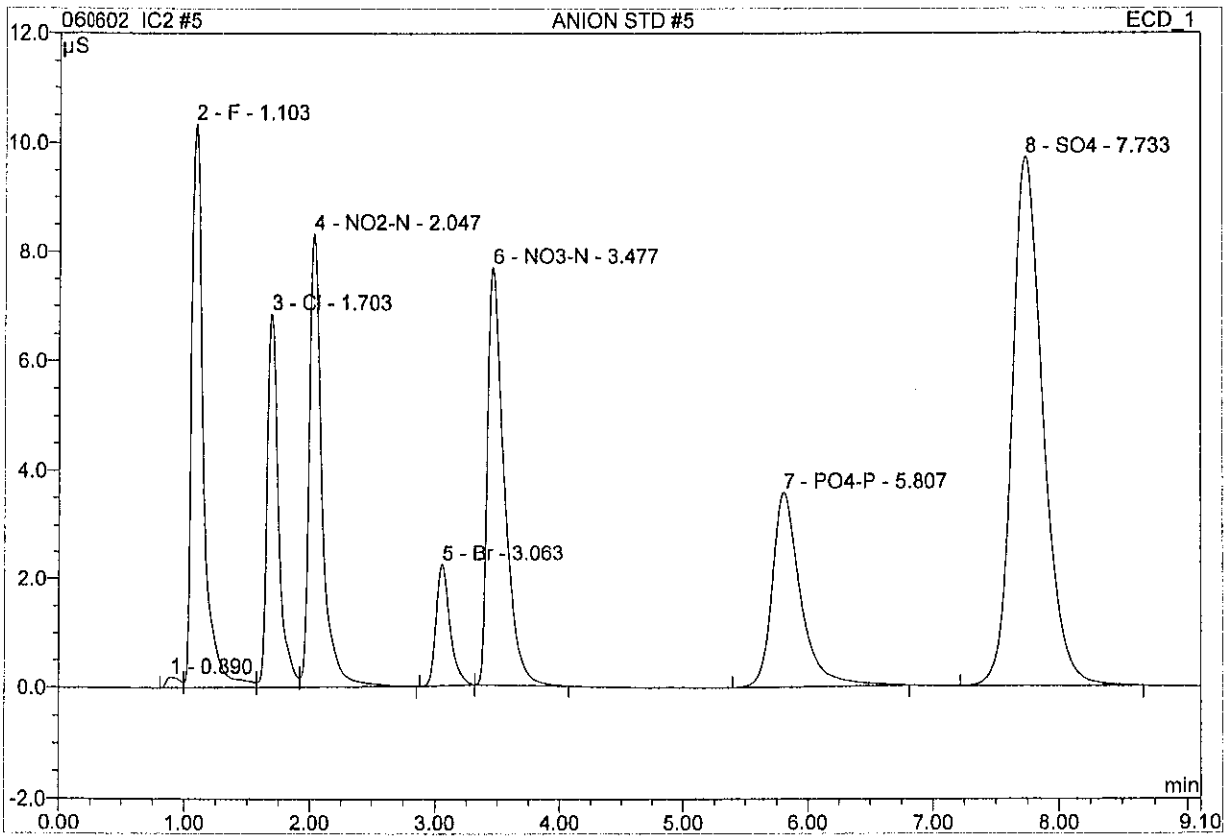


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.88	n.a.	0.142	0.018	0.30	n.a.	BM
2	1.10	F	7.465	0.814	13.64	5.737	M
3	1.44	n.a.	0.148	0.024	0.40	n.a.	M
4	1.70	Cl	4.985	0.539	9.03	5.812	M
5	2.04	NO2-N	6.061	0.753	12.63	3.614	M
6	3.06	Br	1.660	0.226	3.79	6.127	M
7	3.49	NO3-N	5.673	0.898	15.05	4.005	MB
8	5.83	PO4-P	2.536	0.693	11.61	9.675	BMB
9	7.76	SO4	7.031	2.003	33.56	28.804	BMB
Total:			35.700	5.968	100.00	63.774	

5 ANION STD #5

1,1 RDC ANION STD SOS0059-46

Sample Name:	**ANION STD #5**	*Injection Volume:*	**25.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/21/2002 17:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

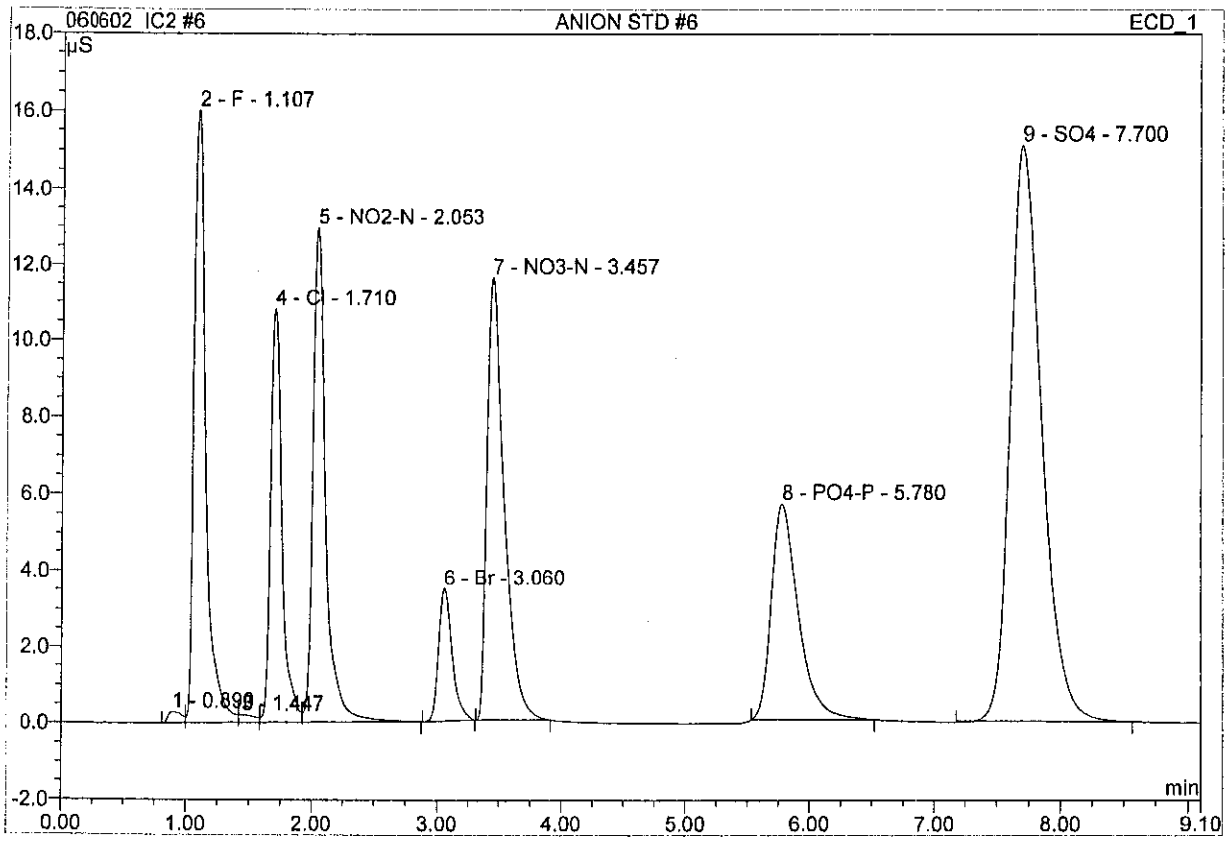


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.89	n.a.	0.194	0.024	0.30	n.a.	BM
2	1.10	F	10.342	1.152	14.12	8.059	M
3	1.70	Cl	6.851	0.736	9.02	7.889	M
4	2.05	NO2-N	8.312	1.008	12.36	4.811	MB
5	3.06	Br	2.237	0.292	3.58	7.906	BMB
6	3.48	NO3-N	7.654	1.210	14.83	5.369	BMB
7	5.81	PO4-P	3.586	0.955	11.70	13.232	BMB
8	7.73	SO4	9.708	2.782	34.09	39.690	BMB
Total:			48.884	8.161	100.00	86.958	

6 ANION STD #6

1,1 RDC ANION STD SOS0059-46

Sample Name:	**ANION STD #6**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/21/2002 18:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

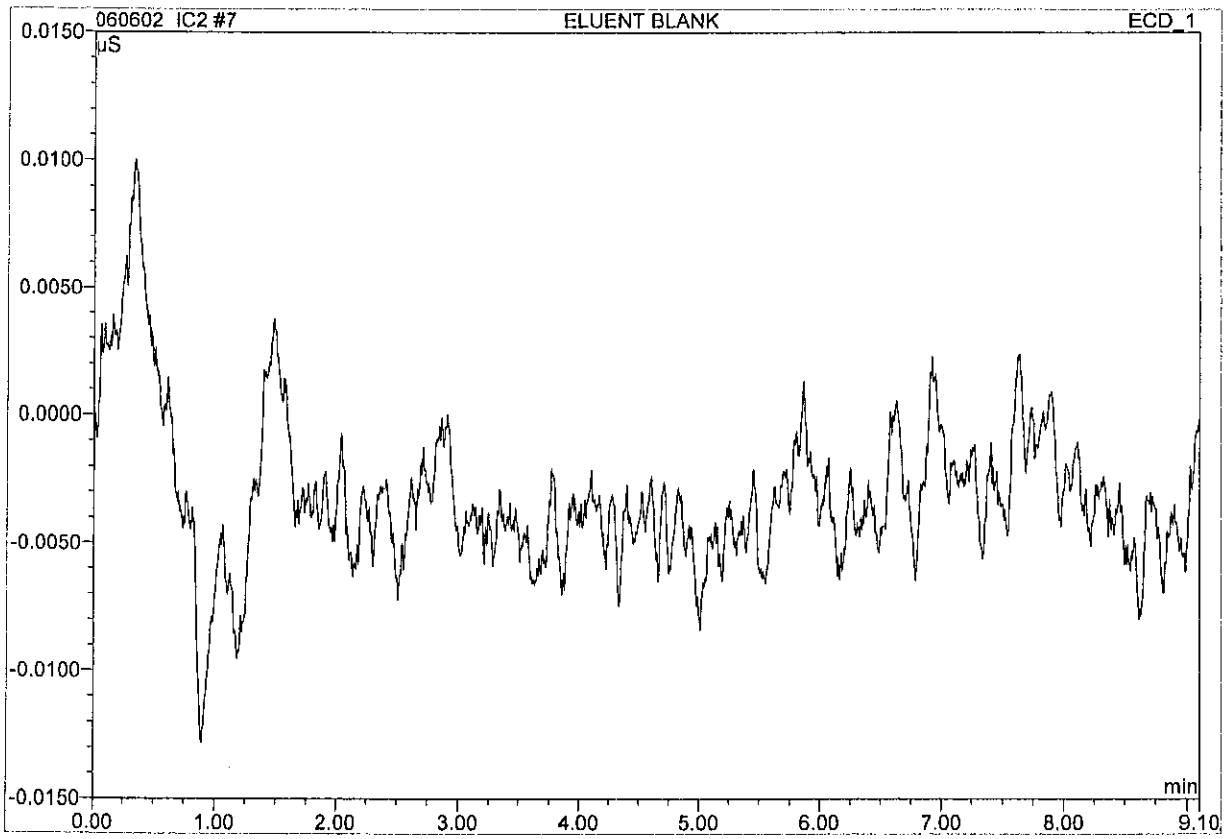


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.89	n.a.	0.291	0.037	0.29	n.a.	BM
2	1.11	F	16.013	1.749	13.92	12.158	M
3	1.45	n.a.	0.209	0.029	0.23	n.a.	M
4	1.71	Cl	10.807	1.147	9.12	12.214	M
5	2.05	NO2-N	12.949	1.559	12.40	7.400	MB
6	3.06	Br	3.465	0.444	3.53	12.011	BMB
7	3.46	NO3-N	11.570	1.865	14.83	8.229	BM
8	5.78	PO4-P	5.651	1.427	11.35	19.630	BM
9	7.70	SO4	15.063	4.315	34.32	61.098	MB
Total:			76.018	12.572	100.00	132.740	

7 ELUENT BLANK

1,1 RDC

Sample Name:	**ELUENT BLANK**	*Injection Volume:*	**25.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/21/2002 18:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

8 ANION ALT STD

1,1 RDC ANION ALT STD SOS0059-44

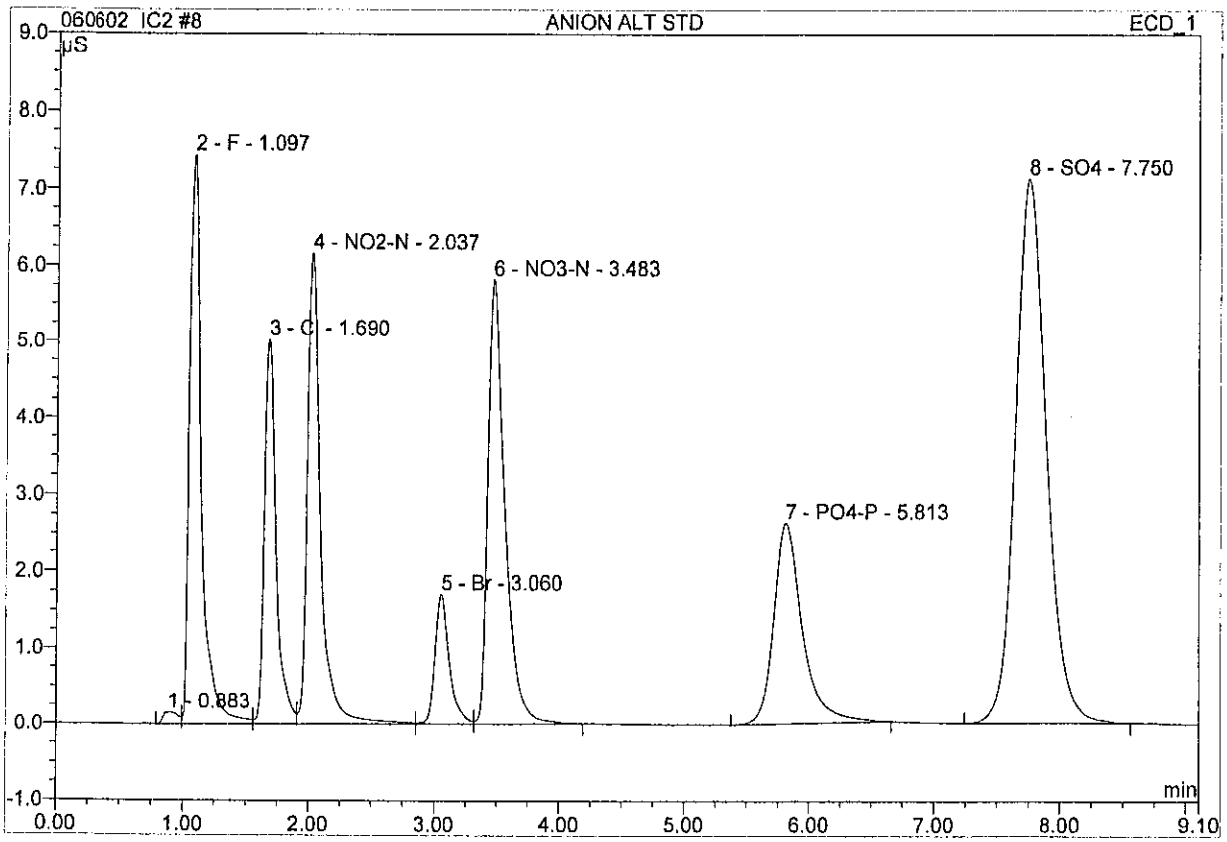
Sample Name:	**ANION ALT STD**	*Injection Volume:*	
Vial Number:	**36**	*Channel:*	
Sample Type:	**unknown**	*Wavelength:*	
Control Program:	**9056**	*Bandwidth:*	
Quantif. Method:	**9056**	*Dilution Factor:*	
Recording Time:	**5/21/2002 18:41**	*Sample Weight:*	
Run Time (min):	**9.10**	*Sample Amount:*	

ANION ALT STD	Actual mg/L	Recoved mg/L	%Difference	
F	6.00	5.8089	-3.19	PASS
Cl	6	5.9068	-1.55	PASS
NO2-N	3.65	3.6652	0.42	PASS
Br	6	6.3346	5.58	PASS
NO3-N	4.07	4.1408	1.74	PASS
PO4-P	9.78	9.8359	0.57	PASS
SO4	30	29.3113	-2.30	PASS

8 ANION ALT STD

1,1 RDC ANION ALT STD SOS0059-44

Sample Name:	**ANION ALT STD**	*Injection Volume:*	**25.0**
Vial Number:	**36**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/21/2002 18:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.88	n.a.	0.154	0.020	0.33	n.a.	BM
2	1.10	F	7.438	0.824	13.59	5.809	M
3	1.69	Cl	5.032	0.548	9.04	5.907	M
4	2.04	NO2-N	6.164	0.764	12.60	3.665	M
5	3.06	Br	1.704	0.234	3.86	6.335	M
6	3.48	NO3-N	5.819	0.929	15.32	4.141	MB
7	5.81	PO4-P	2.622	0.705	11.62	9.836	BMB
8	7.75	SO4	7.115	2.039	33.62	29.311	BMB
Total:			36.049	6.064	100.00	65.003	

10 WG119310-01 CCV

1,1 JWR SOS0059-46 06/06/02

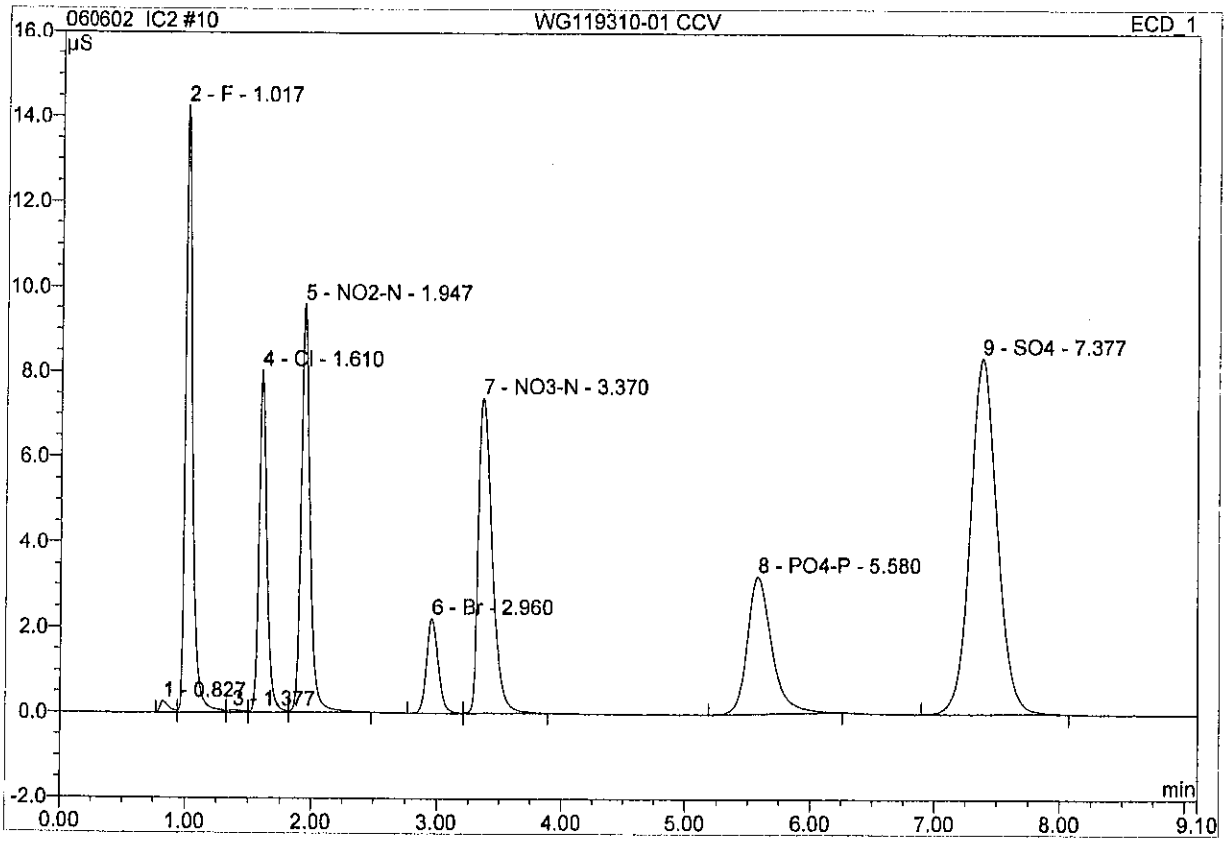
Sample Name:	**WG119310-01 CCV**		*Injection Volume:*
Vial Number:	**41**		*Channel:*
Sample Type:	**unknown**		*Wavelength:*
Control Program:	**9056**		*Bandwidth:*
Quantif. Method:	**9056**		*Dilution Factor:*
Recording Time:	**6/6/2002 13:39**		*Sample Weight:*
Run Time (min):	**9.10**		*Sample Amount:*

WG119310-01 CCV	Actual mg/L	Recoved mg/L	%Difference	
F	6.00	6.4606	7.68	PASS
Cl	6	6.1330	2.22	PASS
NO2-N	3.65	3.7795	3.55	PASS
Br	6	6.3366	5.61	PASS
NO3-N	4.07	4.2274	3.87	PASS
PO4-P	9.78	10.2680	4.99	PASS
SO4	30	30.1723	0.57	PASS

10 WG119310-01 CCV

1,1 JWR SOS0059-46 06/06/02

Sample Name:	**WG119310-01 CCV**	*Injection Volume:*	**25.0**
Vial Number:	**41**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 13:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.83	n.a.	0.267	0.021	0.33	n.a.	BM
2	1.02	F	14.267	0.919	14.53	6.461	M
3	1.38	n.a.	0.057	0.008	0.12	n.a.	M
4	1.61	Cl	8.034	0.570	9.00	6.133	M
5	1.95	NO2-N	9.605	0.789	12.47	3.779	MB
6	2.96	Br	2.224	0.234	3.70	6.337	BM
7	3.37	NO3-N	7.411	0.949	15.00	4.227	MB
8	5.58	PO4-P	3.225	0.737	11.64	10.268	BMB
9	7.38	SO4	8.349	2.101	33.20	30.172	BMB
Total:			53.438	6.327	100.00	67.377	

21 WG119310-02 CCV

1,1 JWR SOS0059-46 06/06/02

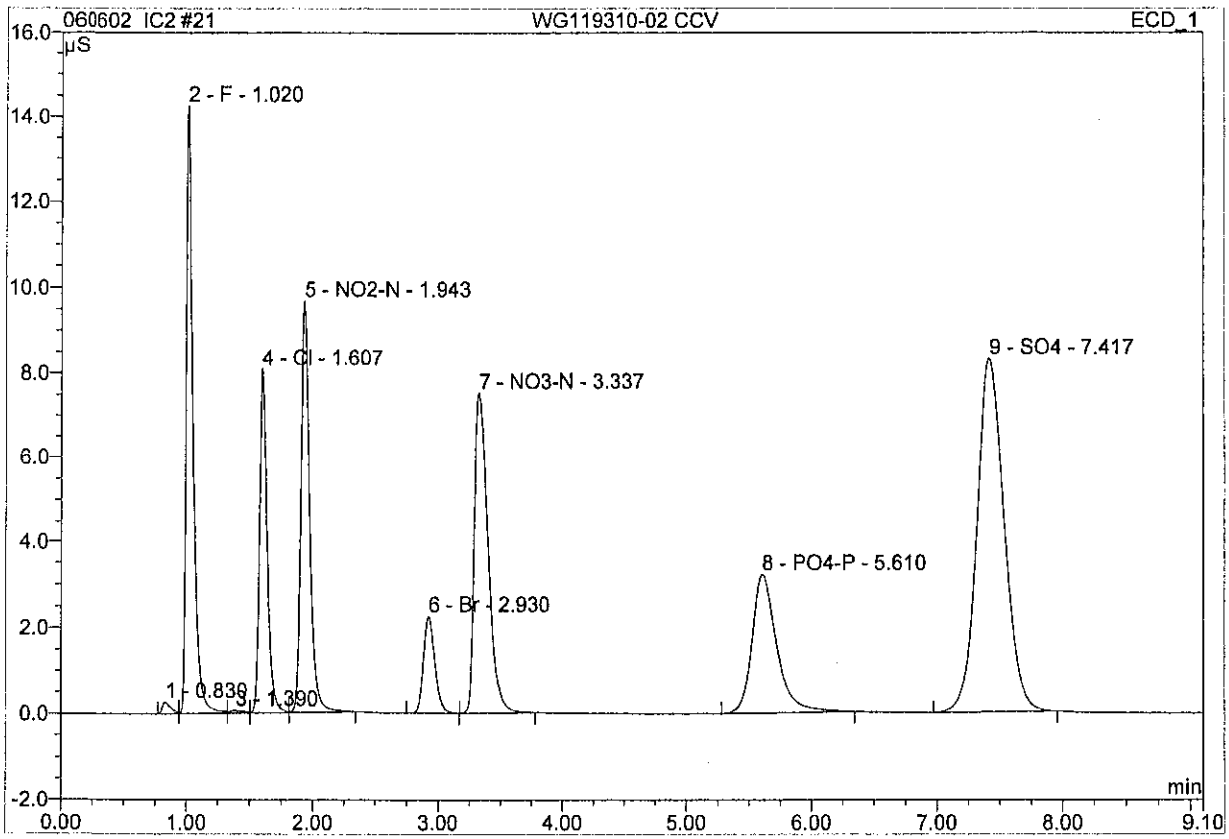
Sample Name:	**WG119310-02 CCV**		*Injection Volume:*
Vial Number:	**44**		*Channel:*
Sample Type:	**unknown**		*Wavelength:*
Control Program:	**9056**		*Bandwidth:*
Quantif. Method:	**9056**		*Dilution Factor:*
Recording Time:	**6/6/2002 15:47**		*Sample Weight:*
Run Time (min):	**9.10**		*Sample Amount:*

WG119310-02 CCV	Actual mg/L	Recoved mg/L	%Difference	
F	6.00	6.4071	6.79	PASS
Cl	6	6.0646	1.08	PASS
NO2-N	3.65	3.7087	1.61	PASS
Br	6	6.2688	4.48	PASS
NO3-N	4.07	4.1894	2.93	PASS
PO4-P	9.78	10.2414	4.72	PASS
SO4	30	29.7988	-0.67	PASS

21 WG119310-02 CCV

1,1 JWR SOS0059-46 06/06/02

Sample Name:	**WG119310-02 CCV**	*Injection Volume:*	**25.0**
Vial Number:	**44**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 15:47**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.83	n.a.	0.263	0.020	0.32	n.a.	BM
2	1.02	F	14.252	0.912	14.57	6.407	M
3	1.39	n.a.	0.059	0.007	0.11	n.a.	M
4	1.61	Cl	8.067	0.563	9.00	6.065	M
5	1.94	NO2-N	9.648	0.774	12.37	3.709	MB
6	2.93	Br	2.251	0.231	3.70	6.269	BMB
7	3.34	NO3-N	7.519	0.940	15.03	4.189	BMB
8	5.61	PO4-P	3.204	0.735	11.74	10.241	BMB
9	7.42	SO4	8.297	2.074	33.15	29.799	BMB
Total:			53.561	6.256	100.00	66.679	

32 WG119310-03 CCV

1,1 JWR SOS0059-46 06/06/02

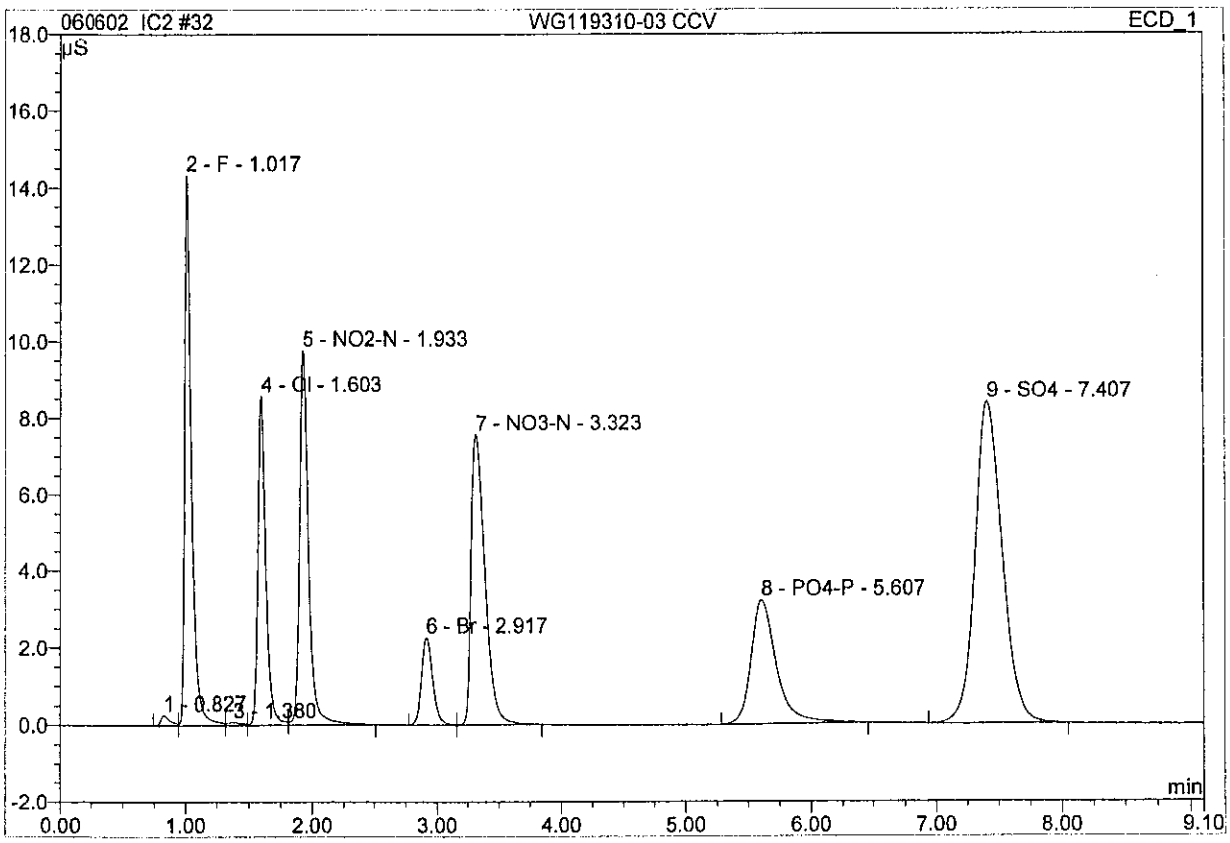
Sample Name:	**WG119310-03 CCV**		*Injection Volume:*
Vial Number:	**46**		*Channel:*
Sample Type:	**unknown**		*Wavelength:*
Control Program:	**9056**		*Bandwidth:*
Quantif. Method:	**9056**		*Dilution Factor:*
Recording Time:	**6/6/2002 17:56**		*Sample Weight:*
Run Time (min):	**9.10**		*Sample Amount:*

WG119310-03 CCV	Actual mg/L	Recoved mg/L	%Difference	
F	6.00	6.4815	8.02	PASS
Cl	6	6.5062	8.44	PASS
NO2-N	3.65	3.8852	6.44	PASS
Br	6	6.3562	5.94	PASS
NO3-N	4.07	4.2588	4.64	PASS
PO4-P	9.78	10.4342	6.69	PASS
SO4	30	30.3341	1.11	PASS

32 WG119310-03 CCV

1,1 JWR SOS0059-46 06/06/02

Sample Name:	**WG119310-03 CCV**	*Injection Volume:*	**25.0**
Vial Number:	**46**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 17:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.83	n.a.	0.263	0.022	0.34	n.a.	BM
2	1.02	F	14.334	0.922	14.36	6.481	M
3	1.38	n.a.	0.075	0.010	0.15	n.a.	M
4	1.60	Cl	8.578	0.605	9.42	6.506	M
5	1.93	NO2-N	9.762	0.811	12.63	3.885	MB
6	2.92	Br	2.261	0.235	3.66	6.356	BM
7	3.32	NO3-N	7.566	0.956	14.89	4.259	MB
8	5.61	PO4-P	3.199	0.749	11.66	10.434	BMB
9	7.41	SO4	8.377	2.112	32.89	30.334	BMB
Total:			54.415	6.422	100.00	68.256	

RETENTION TIME WINDOWS

Lab Name: Kemron Environmental Services

Instrument ID: IC2

IC Column: AG4A-SC/AS4A-SC

	STANDARD #1	STANDARD #2	STANDARD #3
Date Run	10/30/2001	11/1/2001	11/2/2001
File #	IC2_019	IC2_022	IC2_012
Time	15:32	11:59	7:55

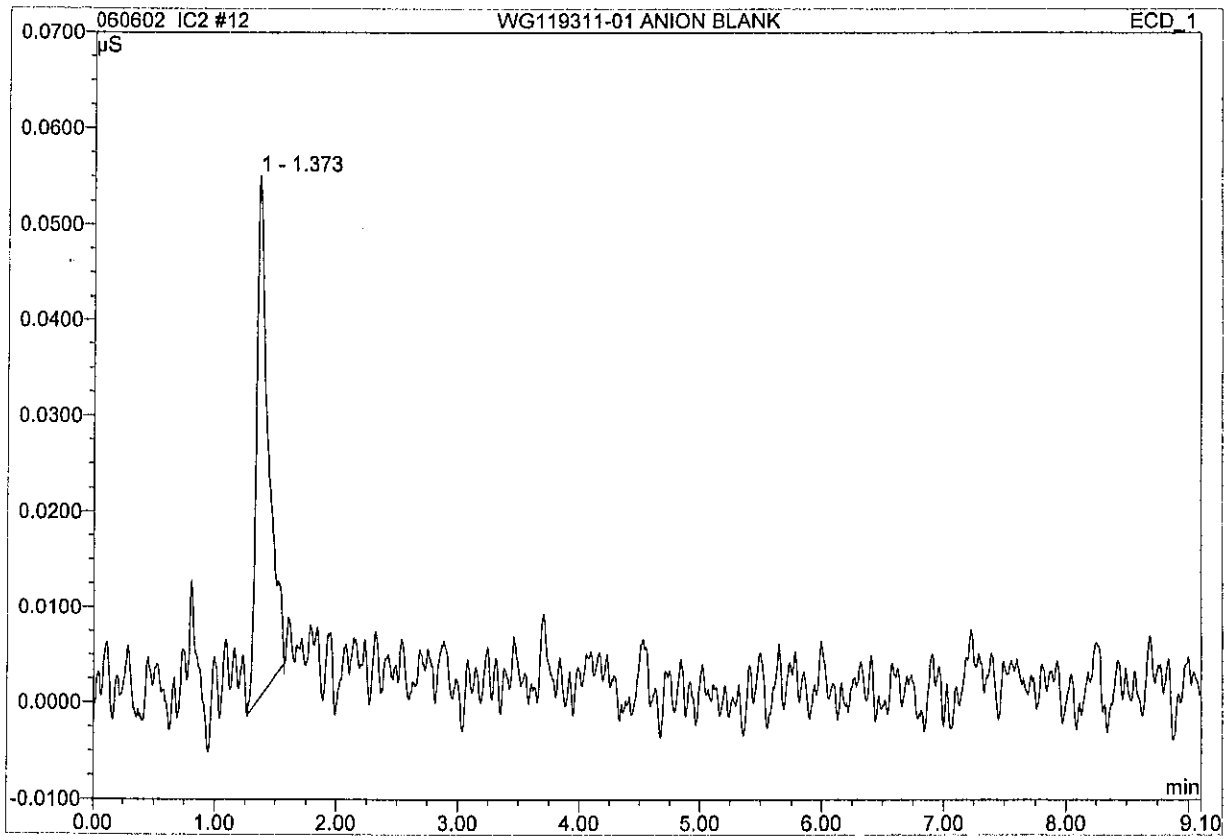
COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
F	1.07	1.07	1.08	0.017
Cl	1.69	1.69	1.70	0.017
NO2-N	2.05	2.04	2.06	0.030
Br	3.12	3.11	3.16	0.079
NO3-N	3.55	3.53	3.58	0.075
PO4-P	5.85	5.83	5.76	0.142
SO4	7.59	7.58	7.51	0.131

2.4.5.4 Raw QC Data

12 WG119311-01 ANION BLANK

1,1 JWR 06/06/02

Sample Name:	**WG119311-01 ANION BLANK**	*Injection Volume:*	**25.0**
Vial Number:	**43**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 14:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**

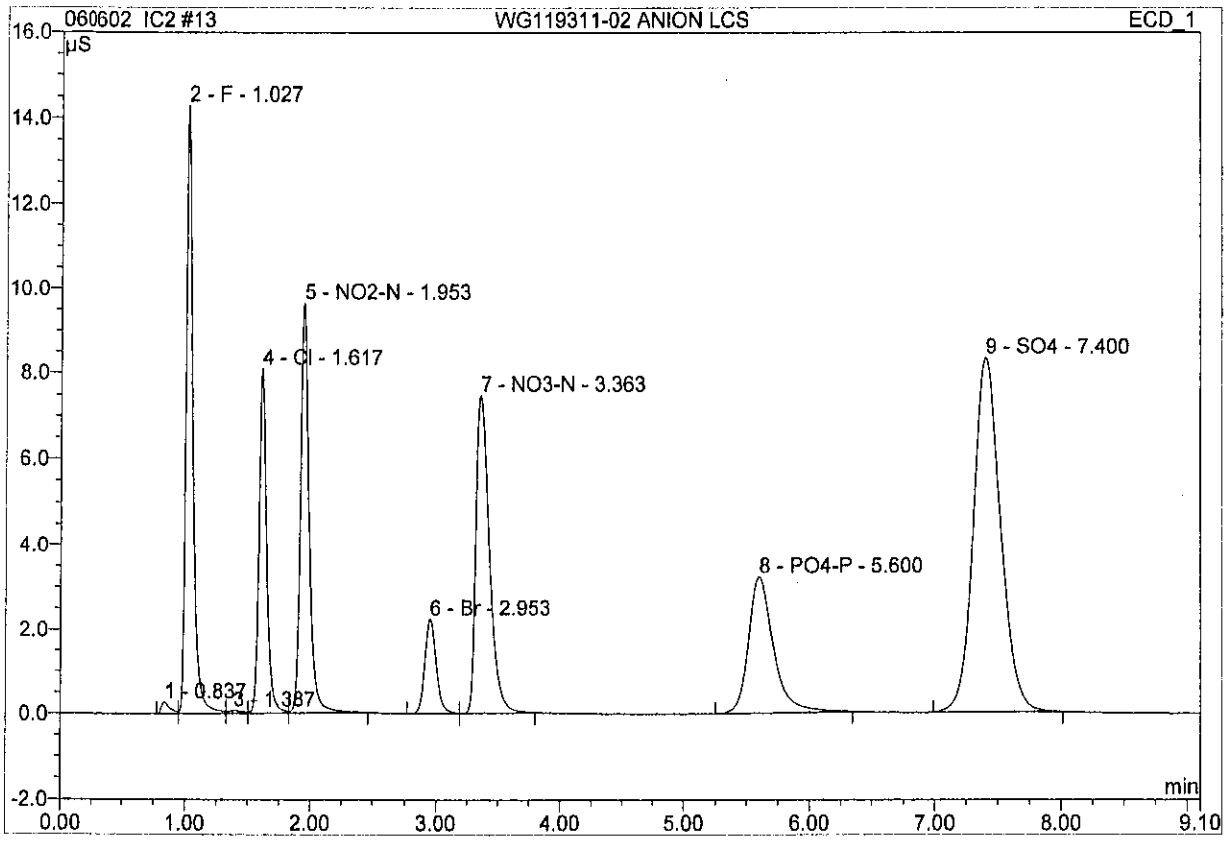


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	1.37	n.a.	0.054	0.006	100.00	n.a.	BMB
Total:			0.054	0.006	100.00	0.000	

13 WG119311-02 ANION LCS

1,1 JWR SOS0059-46 06/06/02

Sample Name:	**WG119311-02 ANION LCS**	*Injection Volume:*	**25.0**
Vial Number:	**43**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**9056**	*Bandwidth:*	**n.a.**
Quantif. Method:	**9056**	*Dilution Factor:*	**1.0000**
Recording Time:	**6/6/2002 14:15**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.10**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	0.84	n.a.	0.264	0.021	0.34	n.a.	BM
2	1.03	F	14.289	0.918	14.55	6.449	M
3	1.39	n.a.	0.062	0.008	0.13	n.a.	M
4	1.62	Cl	8.082	0.570	9.04	6.141	M
5	1.95	NO2-N	9.636	0.786	12.46	3.768	MB
6	2.95	Br	2.234	0.232	3.69	6.295	BM
7	3.36	NO3-N	7.456	0.943	14.94	4.199	MB
8	5.60	PO4-P	3.220	0.740	11.73	10.315	BMB
9	7.40	SO4	8.319	2.090	33.13	30.020	BMB
Total:			53.563	6.308	100.00	67.186	

Sequence: 060602 IC2
Operator: Analyst
Printed: 6/18/2002 09:52:17

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 38

Created: 6/6/2002 12:38:55 by Analyst
Last Update: 6/6/2002 16:49:59 by Analyst

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
1	ANION STD #1	Standard	1	25.0	9056	9056	Finished	5/21/2002 17:13:47
2	ANION STD #2	Standard	2	25.0	9056	9056	Finished	5/21/2002 17:25:17
3	ANION STD #3	Standard	3	25.0	9056	9056	Finished	5/21/2002 17:36:47
4	ANION STD #4	Standard	5	25.0	9056	9056	Finished	5/21/2002 17:48:17
5	ANION STD #5	Standard	5	25.0	9056	9056	Finished	5/21/2002 17:59:47
6	ANION STD #6	Standard	6	25.0	9056	9056	Finished	5/21/2002 18:11:17
7	ELUENT BLANK	Unknown	7	25.0	9056	9056	Finished	5/21/2002 18:30:18
8	ANION ALT STD	Unknown	36	25.0	9056	9056	Finished	5/21/2002 18:41:48
9	ELUENT BLANK	Unknown	44	25.0	9056	9056	Finished	6/6/2002 13:28:29
10	WG119310-01 CCV	Unknown	41	25.0	9056	9056	Finished	6/6/2002 13:39:59
11	MRL @1/2 (ANION STD #2)	Unknown	42	25.0	9056	9056	Finished	6/6/2002 13:52:28
12	WG119311-01 ANION BLANK	Unknown	43	25.0	9056	9056	Finished	6/6/2002 14:03:58
13	WG119311-02 ANION LCS	Unknown	43	25.0	9056	9056	Finished	6/6/2002 14:15:28
14	L0206102-01	Unknown	44	25.0	9056	9056	Finished	6/6/2002 14:26:57
15	L0206102-02	Unknown	44	25.0	9056	9056	Finished	6/6/2002 14:38:27
16	L0206102-03	Unknown	45	25.0	9056	9056	Finished	6/6/2002 14:49:57
17	WG119311-05 L0206102-04 REF	Unknown	44	25.0	9056	9056	Finished	6/6/2002 15:01:27
18	WG119311-06 L0206102-05 MS	Unknown	44	25.0	9056	9056	Finished	6/6/2002 15:12:56
19	WG119311-07 L0206102-06 MSD	Unknown	43	25.0	9056	9056	Finished	6/6/2002 15:24:26
20	WG119311-03 L0206102-07 REF	Unknown	43	25.0	9056	9056	Finished	6/6/2002 15:35:57
21	WG119310-02 CCV	Unknown	44	25.0	9056	9056	Finished	6/6/2002 15:47:27
22	WG119311-04 L0206102-08 DUP	Unknown	45	25.0	9056	9056	Finished	6/6/2002 16:01:14
23	L0206102-09 (EB)	Unknown	46	25.0	9056	9056	Finished	6/6/2002 16:12:44
24	L0206101-01	Unknown	46	25.0	9056	9056	Finished	6/6/2002 16:24:14
25	L0206101-03 (ER)	Unknown	47	25.0	9056	9056	Finished	6/6/2002 16:35:44
26	L0205665-01	Unknown	45	25.0	9056	9056	Finished	6/6/2002 16:47:14
27	L0205665-03	Unknown	46	25.0	9056	9056	Finished	6/6/2002 16:58:44
28	L0205665-05	Unknown	47	25.0	9056	9056	Finished	6/6/2002 17:10:14
29	L0205665-07	Unknown	47	25.0	9056	9056	Finished	6/6/2002 17:21:44
30	L0205665-09	Unknown	48	25.0	9056	9056	Finished	6/6/2002 17:33:14
31	L0205665-11	Unknown	48	25.0	9056	9056	Finished	6/6/2002 17:44:44
32	WG119310-03 CCV	Unknown	46	25.0	9056	9056	Finished	6/6/2002 17:56:15
33	L0206006-01	Unknown	47	25.0	9056	9056	Finished	6/6/2002 18:07:44
34	L0206006-02	Unknown	48	25.0	9056	9056	Finished	6/6/2002 18:19:15
35	L0206006-03	Unknown	48	25.0	9056	9056	Finished	6/6/2002 18:30:45
36	MRL @1/2 (ANION STD #2)	Unknown	49	25.0	9056	9056	Finished	6/6/2002 18:42:15
37	WG119310-04 CCV	Unknown	53	25.0	9056	9056	Finished	6/6/2002 18:53:45
38	END	Unknown	41	25.0	DX-320 OFF	9056	Finished	6/6/2002 19:05:15

Sequence: 060602 IC2
Operator: Analyst
Printed: 6/18/2002 09:52:17

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 38

Created: 6/6/2002 12:38:55 by Analyst
Last Update: 6/6/2002 16:49:59 by Analyst

No.	Name	Dil. Factor	Sample ID	Comment
1	ANION STD #1	1.0000	✓	1,1 RDC ANION STD SOS0059-46
2	ANION STD #2	1.0000	✓	1,1 RDC ANION STD SOS0059-46
3	ANION STD #3	1.0000	✓	1,1 RDC ANION STD SOS0059-46
4	ANION STD #4	1.0000	✓	1,1 RDC ANION STD SOS0059-46
5	ANION STD #5	1.0000	✓	1,1 RDC ANION STD SOS0059-46
6	ANION STD #6	1.0000	✓	1,1 RDC ANION STD SOS0059-46
7	ELUENT BLANK	1.0000	✓	1,1 RDC
8	ANION ALT STD	1.0000	✓	1,1 RDC ANION ALT STD SOS0059-44
9	ELUENT BLANK	1.0000	✓	1,1 JWR
10	WG119310-01 CCV	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
11	MRL @1/2 (ANION STD #2)	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
12	WG119311-01 ANION BLANK	1.0000	✓	1,1 JWR 06/06/02
13	WG119311-02 ANION LCS	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
14	L0206102-01	1.0000	✓	1,1 JWR
15	L0206102-02	1.0000	✓	1,1 JWR
16	L0206102-03	1.0000	✓	1,1 JWR
17	WG119311-05 L0206102-04 REF	1.0000	✓	1,1 JWR REF for MS/MSD
18	WG119311-06 L0206102-05 MS	1.0000	✓	1,1 JWR MS of L0206102-04
19	WG119311-07 L0206102-06 MSD	1.0000	✓	1,1 JWR MSD of L0206102-04
20	WG119311-03 L0206102-07 REF	1.0000	✓	1,1 JWR REF for DUP
21	WG119310-02 CCV	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
22	WG119311-04 L0206102-08 DUP	1.0000	✓	1,1 JWR DUP of L0206102-07
23	L0206102-09 (EB)	1.0000	✓	1,1 JWR
24	L0206101-01	1.0000	RR10, 50	1,1 JWR
25	L0206101-03 (ER)	1.0000	✓	1,1 JWR
26	L0205665-01	1.0000	RR5X	1,1 JWR
27	L0205665-03	1.0000	RR4X	1,1 JWR
28	L0205665-05	1.0000	RR2X	1,1 JWR
29	L0205665-07	1.0000	RR2X	1,1 JWR
30	L0205665-09	1.0000	RR2X	1,1 JWR
31	L0205665-11	1.0000	RR100, 1000	1,1 JWR
32	WG119310-03 CCV	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
33	L0206006-01	1.0000	RR4X	1,1 JWR
34	L0206006-02	1.0000	RR4X	1,1 JWR
35	L0206006-03	1.0000	✓	1,1 JWR
36	MRL @1/2 (ANION STD #2)	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
37	WG119310-04 CCV	1.0000	✓	1,1 JWR SOS0059-46 06/06/02
38	END	1.0000		1,1 JWR

Cl < RL (RR @ dil'n. Not needed)

RDC 6/18/02
mk 6/18/02

KEMRON ENVIRONMENTAL SERVICES
IC Laboratory Maintenance Log

Analysis Date/Time June 6, 2002 Instrument ID IC 2 Column ID AS4A-SC AG4A-SC Data Subdirectory 060602
Analyst Initials JWR SOP # IC01 Rev. # 2 ✓ 9056 SOP # IC02 Rev. # ____ 314.0

Daily Check
- ☑ Mobile phase reservoir
- ☑ System pressure 1324 psi
- ☑ Waste container

Returned to Control?
Yes ____ No ____

Additional Maintenance
Problem: _____

Action Taken: _____

Comments

Several samples to RR @ dil'n.

L0205665-05, 07, 09 are LRL for Cl

L0205665-11 chloride peak not identified due to its intensity, will RR @ dil'n.

Reviewed By: dc 6/8/02

Semi-Volatile 9056 Checklist

Run Date: 6/6/2002

Analyst: JWR

Instrument: IC2

Workorders:	Due Date:	Priority:
WG119311 05-665	6/14/2002	
WG119311 06-006	6/17/2002	
WG119311 06-101	6/12/2002	
WG119311 06-102	6/13/2002	

		Analyst
System Performance Check:	ELUENT CHK	√
Initial Calibration:	Average RF	
	Linear	√
	Alt Source Check	√
Continuing Calibration:	Continuing Calibration	√
	Client Specific Requirements	√
	Special Standards	
Blanks:	Quant Report/Chromatogram	√
Laboratory Control Sample:	Quant Report/Chromatogram	√
	Spike Compounds	√
	MS/MSD	√
	Excel Spreadsheet	√
Samples:	TCL Hits	√
	Correct Factors	√
	Check Sample Histories	
Data Package:	Level 2	
	Level 3	
	Level 4	

	Supervisor
Case Narrative:	
Corrective Action:	
Results Reporting/Data Qualifiers:	
Client Data Package Assembly:	
Check for Completeness:	
Check for compliance with method and project requirements:	
Check the reasonableness of results:	

Π = Checked & OK

NA = Not Applicable

Comments:

RR at dilution needed for :

06-101-01

05-665-01,03,11

06-006-01,02

Primary Reviewer: RQC 6/18/02

Secondary Reviewer: 6/18/02

Supervisor Review: 6/18/02

Example 9056 Calculations

1.0 Software determines Linear Regression and area counts by the following calculation through operator entered concentrations:

Where: area=slope(concentration)+offset

area in uS/min. of the compound being measured in the standard
slope(concentration)+offset = Concentration of the compound being measured (mg/ml).

2.0 Calculating the concentration of an anion in water using (area-(offset)/slope:

amt=(area-(offset)/slope

Area of the compound being measured in uS/min.
Offset = axis of chromatogram corresponding to calibration table
Slope = the ascending calib.curve where amt/area=slope (linear regression).

Where: amt = area 0.382-(offset -0.0113)/slope 0.0622

0.382-(-0.0113)/0.0622= 6.323